



Regional Accreditation

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Notice of Non-Discrimination Policy

Carroll College does not discriminate in any manner contrary to law or justice on the basis of race, color, sex, age, religion, sexual orientation, national origin, disability or veteran's status in administration of its educational, admission, financial aid, athletic or other college policies and programs nor in the employment of its faculty and staff.

Carroll College Address and Phone Numbers

Carroll College, 100 N. East Ave., Waukesha, Wisconsin 53186

For general information, call 262-547-1211
To contact the admission office, call 262-524-7220 locally
or toll-free at 1-800-CARROLL (1-800-227-7655)
FAX: 262-524-7139

Visits to Carroll College are encouraged. The admission office is open from 8 a.m. to 4:30 p.m., Monday through Friday. During the school year, the office is open from 9 a.m. to noon on Saturdays. Visits should be arranged in advance by calling or writing the admission office.

The offices of admission, part-time studies and student financial services are located in Voorhees Hall, at the northwest corner of East and College avenues.

Note to Students

This catalog provides general information about Carroll College, and it summarizes important information about the college's policies, requirements for graduation, regulations and procedures. It is not intended to establish, nor does it establish, a contractual relationship with students. Rather, the catalog is published to acquaint students with information that will be helpful to them during their college careers.

It is necessary in the general administration of the college to establish requirements and regulations governing the granting of degrees. Academic advisers, other faculty and academic staff members are available to aid students in understanding the requirements and regulations. It is the students' responsibility, however, to meet them. Students are encouraged to keep this catalog as a reference, should questions arise.

Changes in curricular requirements may occur between catalog publications. Students will be informed of such changes. When this occurs, students may follow the requirements in effect at the time they entered or they may follow the changed requirements. Students must choose to follow one catalog or the other; they may not pick and choose from the various requirements outlined in two or more catalogs. Students must follow the curriculum requirements of any one catalog in effect during their enrollment. Students returning to the college after an absence of one academic year or more must meet the degree requirements of the catalog in effect upon their return or of a subsequent catalog. Reasonable substitutions will be made for discontinued and changed courses.

The college reserves the right to make other necessary changes without further notice.

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INTRODUCTION

Wisconsin's Oldest College

In 1841, settlers living in the Wisconsin Territory community of Prairieville established the academy that five years later would become Carroll College. Soon after its founding, Carroll affiliated with the Presbyterian Church and adopted the motto, "Christo et Litteris," which means "for Christ and Learning." The college's early patrons believed that higher education would serve as an instrument for civilizing the wilderness, spreading the Gospel and planting the roots of democracy deep in the prairie soil. They also sought to provide for the prosperity of their children and future generations. As Wisconsin's oldest institution of higher learning, Carroll is known today as the "Pioneer College."

Throughout its history, the hallmarks of the Carroll educational experience have been teaching excellence and individualized attention. These values find expression in four important mission documents: The Mission Statement, the "Four Pillars," the Statement of Educational Goals and The Carroll Compact.

Carroll College Mission Statement

"We will provide a superior educational opportunity to our students, one grounded in the liberal arts tradition and focused on career preparation and lifelong learning.

We will demonstrate Christian values by our example.

We shall succeed in our mission when our graduates are prepared for careers of their choice and lives of fulfillment, service and accomplishment."

The Four Pillars

Today, the institution draws upon its rich liberal arts tradition to prepare students to achieve their full potential in our ever-changing society. The college's educational philosophy is sustained by the four pillars of integrated knowledge, lifelong skills, gateway experiences and enduring values.

Integrated Knowledge is the very foundation of a quality liberal arts program. The Carroll curriculum emphasizes breadth and depth of learning. Our purpose is to encourage students to recognize the interrelationships among ideas. We believe that students with this understanding will continue to learn, grow and succeed long after they leave the campus.

Lifelong Skills help students prepare for life and work in a world of rapid and constant change. We believe that graduates will continue to evolve and contribute to their communities long after they earn their degrees. To that end, our mission is to help students learn to think critically and creatively, adapt to changing technologies, work efficiently and effectively, collaborate with others, and communicate clear, compelling ideas.

Enduring Values help students to consider always the impact of their actions on the world around them. We believe that effective leaders draw their inspiration from strong personal value systems. Our goal, therefore, is to offer students multiple opportunities to make decisions and then to reflect upon their consequences.

Gateway Experiences occur both upon entering and upon leaving Carroll College. We believe that our educational responsibility extends beyond the classroom into every aspect of our students' lives. That is why we place a special emphasis on preparing incoming students for college life and on helping graduates make successful transitions into their first jobs, or graduate and professional schools.

The four pillars undergird all that we do at Carroll College. They are integral to our undergraduate curriculum and guide our post-baccalaureate and graduate programs. In other words, they provide the broad inspiration for the Carroll experience and the many relationships we nurture with other organizations and institutions.

Statement of Educational Goals

An education at Carroll College offers a student alternatives from which to choose a worthwhile personal, professional and civic life. It promotes intellectual growth which culminates in the capacity for serious and creative thinking. Based on a core of studies in the liberal arts and sciences complemented by career preparation and co-curricular programs, a Carroll education encourages growth in international and cultural awareness, social responsibility, moral sensitivity and spiritual reflection.

A Carroll education begins with the acquisition of fundamental skills and bodies of knowledge. These skills include critical inquiry, effective communication, aesthetic understanding, quantitative reasoning and the capacities to gather and assimilate information and to identify and solve problems. The core of basic studies brings coherence and order to the task of learning about oneself and one's culture. It provides students with the opportunity to know the literature, philosophy, art and institutions of the world, as well as its history, science and technology.

The most essential consequence of a Carroll education is that students develop their capacity and desire to continue learning. This is best achieved through a curriculum which demonstrates the value of individual and group efforts in interdisciplinary and multidisciplinary settings while it provides students with those bodies of knowledge vital for further learning. They are then prepared for discovery, creation and application of knowledge and aesthetic forms.

Our goal is to provide an educational foundation which enables graduates to participate effectively and confidently in a diverse and changing world. Persons with a Carroll education have opportunities for fulfillment and happiness and are liberated in a true and meaningful sense.

The Carroll Compact

Carroll College is a community for learning. As individuals, we come to the campus from different homes and cultures. We bring with us our distinctive perspectives, traditions and experiences. Here we become participants in a community dedicated to the pursuit of academic excellence, personal fulfillment and spiritual meaning. Choosing to join such a community obligates each member to consider thoughtfully the values espoused by the larger group. We therefore invite you to contemplate these ideals and strive toward their realization. We ask that you enter into a voluntary compact with the other members of the community which is Carroll College to live and work according to these values.

I will value the human diversity and dignity of all people and will respect their ideas, opinions and traditions. This ideal requires openness of mind, a willingness to affirm the differences which exist among us, and a desire to develop shared understanding. Dedication to the ideal is inconsistent with behaviors which compromise or demean individuals and groups.

I will practice personal academic integrity. This ideal requires a commitment to honesty, a regard for the rights and feelings of others, and the courage to speak one's convictions. It obligates each member of the community to support creation of a positive learning and living environment and is inconsistent with cheating in classes, games or sports; lying, excuse making or plagiarizing; and infidelity, coercion or disloyalty in personal relationships.

I will care for the physical environment of the campus and its neighborhood setting. This ideal requires stewardship of the resources allocated to us and a commitment to upholding the natural ecology of the campus and the larger community of Waukesha. Devotion to this ideal is inconsistent with all forms of theft, vandalism and misappropriation; wastefulness or destruction; and violation of the rights of others to live, learn and work in a clean and healthy environment.

I will support and enhance the development of others. This ideal requires a commitment to creation of an empowering learning and working environment, where collaboration, trust and cooperation are favored over suspicion and excessive competition. Dedication to this ideal is inconsistent with blaming or inhibiting the growth of others.

I will encourage creativity, artistic expression and excellence in all areas of our lives. This ideal requires the understanding that beauty and boldness are inherent to the human spirit. A commitment to this ideal is inconsistent with devaluing the work, performance or expressions of another person.

I will seek to understand my purpose in the world. This ideal requires the development of a global vision, an understanding that one is a citizen of the international community. Dedication to this idea is inconsistent with parochialism, bigotry and selfish use or allocation of shared resources.

INTRODUCTION

I will dedicate myself to exploration of personal values and the spiritual quest for meaning. This ideal requires the willingness to explore one's inner life through reflection, study and inquiry.

The Carroll Advantages

Since its establishment in 1846, the well-being of the college and the surrounding community of Waukesha have been linked. Today, the city at the center of one of the state's fastest growing counties boasts a population of more than 65,000 residents. Waukesha is located in one of Wisconsin's most beautiful areas at the doorstep of the Kettle Moraine. The college, which occupies a 40-acre campus in the center of the city, benefits from a setting that offers proximity to Milwaukee (15 miles east), Madison (60 miles west), and Chicago (100 miles south). We draw upon the advantages of our location to offer students access to a wide range of internship and career opportunities.

Faculty commitment to individualized attention and student learning are the hallmarks of the Carroll experience. We know that learning occurs when gifted faculty and staff engage dedicated, talented students in our classrooms, laboratories, the Learning Commons, athletics and arts facilities, residence halls and campus organizations. Our students come to the campus from diverse backgrounds and bring with them a rich array of talent, ambition and perspectives. On campus, they meet the college's faculty and staff, who are experts in their fields and are dedicated to helping students reach their full potential as professionals and as human beings. Together, our students, faculty and staff create the high-energy community for learning known as Carroll College.

ACADEMIC PROGRAM AND POLICIES

The Carroll academic program draws its inspiration from the college's rich liberal arts and sciences tradition. As Wisconsin's oldest institution of higher learning, Carroll continues to fulfill its mission of preparing graduates for lives of achievement, meaning, service and fulfillment by providing a student-centered educational program that promotes breadth of knowledge and responsible intellectual inquiry.

The purpose of this portion of the catalog is to provide clear information about the college's requirements and academic policies. It is the responsibility of all students to be knowledgeable about the curriculum requirements and academic policies of their particular catalog.

The Curriculum

The curriculum for all undergraduates at Carroll consists of 1) coursework associated with the College's General Education Program, 2) completion of a course of study leading to one or more majors (and often a minor) including support courses, and 3) elective courses that complete the undergraduate's educational experience. Carroll students earn the baccalaureate degree appropriate to their major field of study and are required to fulfill the degree requirements specified by the various academic programs and detailed in subsequent sections of this catalog. Graduates of the college must fulfill the requirements of a major and its associated degree requirements, the general graduation requirements and a minimum of 128 credit hours.

General Graduation Requirements

1. Students must earn a minimum of 128 credits, with the last 32 credits completed while enrolled at Carroll.
2. To graduate, students must earn a minimum 2.0 cumulative grade point average and a minimum 2.0 Carroll College grade point average.
3. An Application for Graduation form must be filed with the registrar's office one year before the expected date of graduation. Forms are available on-line and at the registrar's office. After the application is filed, a degree audit is sent to the student indicating remaining requirements to be completed.
4. As part of the General Education curriculum, all degree candidates must complete one of the approved courses in each of the seven Liberal Studies Program areas. Only two courses from the student's major, including required support courses, may satisfy LSP requirements, and only two courses from the student's minor may satisfy an LSP requirement. It is the responsibility of the student to make sure he or she completes one course from each area. Each LSP course may satisfy only one LSP area. See below.

ACADEMIC PROGRAM AND POLICIES

5. Because mathematical literacy is relevant to both liberal learning and the practical demands of contemporary society, all students must demonstrate a knowledge of and proficiency in mathematics. Math 106 or higher is required for all students pursuing a Bachelor of Arts degree or a Bachelor of Science in Nursing degree. Students pursuing the Bachelor of Science degree are required to complete either Math 112, or Math 140 or higher. This requirement can also be met by Advanced Placement credit in statistics or calculus.

6. Each discipline offers its own Senior Capstone to serve as a bridge to graduate study and/or career. See below.

7. Each year the academic community gathers to consider contemporary issues and enduring questions, to honor individual and collective achievement, and to celebrate shared vision and values. Attendance at two of the college's convocations is required of all full-time students each year.

The General Education Program

The General Education Program includes the First Year Program, the Liberal Studies Program, the Senior Capstone Experience, the Mathematics Competency Requirement, and the Convocation Program. Through its General Education Program, Carroll fulfills its ongoing commitment to prepare all of its graduates to reach their full potential as educated citizens in dynamic and diverse communities. Carroll's program draws on the tradition of liberal studies which has been a cornerstone of higher learning for nearly 2,500 years by requiring students to explore a wide range of academic disciplines, examine the modes of inquiry appropriate to each, and develop essential skills they will draw upon over the course of their lifetimes.

First Year Program

This gateway experience transitions students from high school to college by introducing students to the skills needed for academic achievement. The First Year Program consists of a First Year Seminar and the Writing Seminar.

First Year Seminar (FYS 100)

The First Year Seminar (FYS) serves to initiate students into the academic life of Carroll College. FYS courses offer intellectually rigorous topics that engage students in responsible inquiry. FYS strengthens a range of skills needed for academic achievement including effective written and oral expression, the ability to work with others to solve problems, the productive use of library resources, and basic information literacy skills.

Writing Seminar (ENG 170)

The Writing Seminar focuses on improving students' ability to make the essential connection between critical and creative thinking and effective written communication. Writing Seminar offers students further opportunities and strategies for discovering and communicating ideas through the creation of focused, well-structured, and well-developed essays.

Liberal Studies Program

The Liberal Studies Program (LSP) is part of every student's course of study, regardless of his or her major, because it cultivates attitudes and imparts common knowledge and intellectual concepts that college-educated persons should possess. In addition, the Liberal Studies Program coursework helps students improve their written and oral communication skills and their ability to think critically and understand the contemporary relevance of academic inquiry.

To ensure exposure to a variety of disciplines and the bodies of knowledge they represent, undergraduates complete a minimum of one approved course in each of the seven areas listed below.¹

I. Understanding the Scientific Way of Knowing

Courses focus on how we gather new information about our world and lives through the use of the scientific method. Courses emphasize involvement in the scientific way of knowing through hypothesis posing and testing via qualitative and quantitative methods.

BIO 131: Human Genetics

BIO 150: Organismal Biology I

BIO 160: Organismal Biology II

BIO 385/NCEP 305: Reefs, Rainforests and Ruins of Belize

CHE 101/101L: General Chemistry

CHE 102/102L: Biological Chemistry

CHE 104: Forensic Science

CHE 106: Drug Discovery

CHE 109/109L: Principles of Chemistry I

CHE 110/110L: Principles of Chemistry II

COM 150: Research Methodology

ECO 212: Applied Statistics for Business

ENV 105: Introductory Physical Geography

ENV 120/ENV 120H: Conservation and Environmental Improvement

MAT 112: Introduction to Statistics

MAT 212H: Introduction to Statistics and Experimental Design

PHI 105: Introduction to Logic

PHY 101: Introductory Physics

PHY 102: Introductory Physics

PHY 105: Astronomy

PHY 203: General Physics

PHY 204: General Physics

SOC 311: Methods of Social Research

¹. Course descriptions listed in this catalog that satisfy a Liberal Studies Program area requirement are noted by the designation L1, L2, etc. Courses that satisfy more than one LSP area requirement have both designations but can satisfy only one LSP requirement.

II. Understanding the Natural World

Courses examine the physical and/or biological worlds by focusing on important information about the natural world and human life. Each course addresses the impact of scientific knowledge on contemporary issues and has a laboratory component that focuses on learning the scientific method through using it.

BIO 100: Introductory Human Biology
BIO 131: Human Genetics
BIO 150: Organismal Biology I
BIO 160: Organismal Biology II
BIO 200H: Human Biology; Health and Disease
BIO 252: Vertebrate Zoology
BIO 385/NCEP 305: Reefs, Rainforests and Ruins of Belize
CHE 101/101L: General Chemistry
CHE 102/102L: Biological Chemistry
CHE 104: Forensic Science
CHE 106: Drug Discovery
CHE 109/109L: Principles of Chemistry I
CHE 110/110L: Principles of Chemistry II
ENV 105: Introductory Physical Geography
ENV 120/ENV 120H: Conservation and Environmental Improvement
PHY 101: Introductory Physics
PHY 102: Introductory Physics
PHY 105: Astronomy
PHY 203: General Physics
PHY 204: General Physics
PSY 250H: Brain, Mind and Behavior: An Evolutionary Synthesis

III. Understanding Human Behavior

Courses focus on the relationship between persons and their society. Concepts from the behavioral and social sciences are used to examine social, political, economic, or psychological issues.

BUS 265: Human Resource Management
COM 101: Principles of Communication
COM 250: Society and Mass Media
ECO 110: Introduction to Economics
ECO 124: Principles of Economics I-Microeconomics
ECO 125: Principles of Economics II-Macroeconomics
ENG 222H: Playing Crazy: Cultural Constructions of Madness
HSC 103: Personal and Community Health
POL 141: Introduction to American Politics
POL 255: Contemporary Global Politics
POL 335: Public Administration
PSY 101: Introductory Psychology
PSY 316: Thinking, Problem Solving, and Cognition
SOC 101: Introduction to Sociology
SOC 102: Sociology of Social Problems

SOC 110: Cultural Anthropology
SOC 305: Marriage and Family in Contemporary Society

IV. Encountering the Cultures of The World - Past and Present

Courses focus on non-western cultural traditions to better understand and appreciate differences among people. Students examine the history of these cultures and relate them to present circumstances. Direct experiences are encouraged.

BUS 250: Culture and Diversity in Organizations
COM 207: Intercultural Communication
ENG 162: Gender and Literature
ENG 165: Readings in Race and Gender
ENG 210: African American Literature
ENG 225: South Africa: Culture and History of the Rainbow Nation
ENG 255/255H: Postcolonial Literature
ENV 138: Cultural Geography
ENV 160: World Regional Geography
HIS 108: Understanding Our Contemporary World
HIS 110: The History of Modern China
HIS 224H: The World Since 1945
PHI/REL 308: Philosophy of Religion
POL 201: Politics of the World's Nations
POL 301: Politics of Developed Nations
REL 106: Understanding Religion
REL 210: Suffering and Hope
REL 306: Asian Religions
SOC 110: Cultural Anthropology

V. Understanding the Aesthetic Mode of Knowing

Courses focus on understanding of the fine arts in order to develop aesthetic awareness, creativity and respect for artistic expression. The "arts" are understood in their cultural context and where possible related to other artistic expression.

ART 101: Drawing and Composition
ART 103: Art History: Prehistoric to A.D. 1500
ART 104: Art History: A.D. 1500 to Early 20th Century
ART 107: Beginning Design 2D and 3D
ART 110: Ceramics I
ART 209: Photography I
ART 300: Twentieth Century Art
ENG 211: Introduction to Literary Study I: Poetry
ENG 212: Introduction to Literary Study II: Short Fiction and Drama
MUS 151: History of Jazz
MUS 156: Listening to Classical Music
MUS 157: Beethoven
MUS 158: Rock Music: Roots and History
MUS 231H: Fin de Siècle: Birth of the Modern Age in Paris and Vienna
MUS 312: Music History II: Classic and Romantic Periods
THE 101: Playgoers

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THE 215: European Theatre History and Literature to 1750

THE 216: Global Theatre History and Literature from 1750

VI. Critical Encounters with Great Ideas of Western Culture

Courses focus on the history of Western culture, with special emphasis on influential ideas and great literature. Students use historical evidence to make intellectually responsible decisions and have experiences enabling them to freely develop their personal identity.

ECO 105: History of Economic Thought

HIS 103: Roots of the Western World

HIS 104: Europe and the Modern World

HIS 105: America to 1877

HIS 106: America since 1877

HIS 112: Introduction to Latin American History

HIS 202WW: The Iron Brigade of the West

HIS 203/203H/203WW: The American Civil War

HIS 204WW: The Iron Brigade in the Wilderness

PHI 101: Introduction to Philosophy

PHI 320: Ancient and Mediaeval Philosophy

PHI 321: Modern and Contemporary Philosophy

POL 210H: The Origins of Democratic Thinking

POL 275: Political Theory

REL 102: Introduction to the Hebrew Bible

REL 230: Formative Christianity: The Development of Core Christian Beliefs and Values from 100 to 1650 C.E.

REL 231: From Puritanism to Drive-in Churches: Christianity from 1650 to the Present

REL 316: Judaism, Christianity, and Islam

VII. Perspectives We Live By: Decisions We Make

Courses focus on issues of moral and ethical responsibility, engage central issues of belief, and encourage students to develop their own spiritual and ethical identity.

BIO 224: Bioethics

BUS 260: Ethics in Business, Government, and Society

ENG 210: African American Literature

ENG 222H: Playing Crazy: Cultural Constructions of Madness

ENG 225: South Africa: Culture and History of the Rainbow Nation

ENG 255/255H: Postcolonial Literature

ENV 292: Environmental Ethics

PHI 206/206H: Ethics

REL 103: Introduction to the New Testament

REL 201: Jesus of Nazareth

REL 202: Religious Traditions in America

REL 215: Women in Religion

REL 310: Power, Politics, and Pluralism in Biblical Interpretation

Senior Capstone Experience

Each student completes a Senior Capstone that is part of both the major and the general education requirements. The Capstone helps students prepare for transition to the workplace or graduate school and involves a major project that allows students to integrate knowledge in the major discipline and to exercise academic skills acquired through the general education program. Students must complete a Senior Capstone in each of their majors.

Majors

In order to be eligible for a bachelor of arts, bachelor of science or bachelor of music education degree, a student must complete one major and earn a minimum 2.00 grade point average (Carroll and transfer credit) in all courses attempted for the major.¹ Generally majors require no more than 64 credits within a program (exclusive of credit for internships).² This regulation does not prevent a student from earning more than 64 credits, which would then permit the student to earn additional course credit in the major. The requirements for satisfying a specific major may be found under each program listing in the course descriptions section of this catalog. When a student has decided on a major field, he/she should consult with a faculty member in that program and make the necessary arrangements with the registrar's office to have that faculty member serve as his/her adviser. A student who elects to complete a second major should have an adviser from that program also. Students declaring more than one major must declare one major as the primary major.³ This declaration must be specified when a student applies for graduation.

The primary major will determine if a student earns a bachelor of science or bachelor of arts degree. One course may count toward two majors as long as the majors are in different programs. If a student has more than one major, however, each major must have 32 credits unique to each major. The student also may select a minor. A student may also count the same course in the major toward a minor as long as the minor is in a different program. The major must have a minimum of 32 unique credits in the major, and the minor must have 16 unique credits. In programs that have multiple emphases, a student may declare only one emphasis. A transfer student is expected to complete in residence at Carroll at least one-fourth of the number of credits required for the stated major field(s) of study.

Minors

Students may also decide to select one or more minors from a broad range of fields. While a minor typically requires fewer credits than a major, it provides students with a coherent course of study in the field. Descriptions and course requirements are listed in the program sections. At least one-fourth of the total credits required must be taken at Carroll with a minimum of a 2.00 grade point average. A student may not select a major and minor in the same field. A course in the minor may also count toward another minor as long as each minor has 16 unique credits.

¹. Some majors that must meet outside standards for accreditation may require a higher GPA.

². Required supporting courses are included within the 64-credit limit. Majors within professional programs may exceed 64 credits.

³. Specific programs designate major support courses that are required for primary majors only.

Individually-Designed Major

A student interested in designing such a major will, in consultation with an adviser qualified and willing to assist, work out a program of study based primarily on regularly-taught courses at Carroll. The degree requirements of either the bachelor of arts or bachelor of science will be incorporated into this plan. The entire plan must be submitted to the Academic Steering Committee for review. It will reject any plan that creates staffing problems, violates the principle of the need for balance between concentration and breadth of study, or for any other reason is judged to be academically unsound. It will not impose a general rule about the number of courses in the major, except that no student will be permitted to take more than 40 credits within a program, except in professional programs. All proposals for individually-designed majors must be submitted to the Academic Steering Committee no later than one year prior to the intended date of graduation. A planning and approval form for the Individually Designed Major is available in the Registrar's Office.

Electives

Students also have the opportunity to complete elective courses to broaden their knowledge in areas outside the major. Electives are generally free of restrictions, other than prerequisites, and fulfill neither major nor general education requirements.

International and Off-Campus Programs

The International and Off-Campus Program (IOP) provides Carroll students with opportunities to enhance the awareness of their own cultural conditioning, assumptions and perspectives by bringing them in contact with people who have backgrounds significantly different from their own. Two types of benefits result from such an experience: (1) Students develop a more vivid consciousness of the kinds of social, political, economic and religious forces that have contributed to the formation of their own self-concepts, and to the structure of American society as a whole; and (2) students develop a growing understanding of other cultures and customs.

IOP offers a variety of short-term study abroad options, with a worldwide geographic scope that spans all continents but Antarctica.

Carroll's NCEP (New Cultural Experiences Program) courses are developed and led by Carroll faculty; NCEP is Carroll's signature short-term study abroad program. A description of approved NCEP courses can be found on page 280 of this catalog.

Carroll's Language Credit Abroad Program allows students in the Spanish program at Carroll to study at approved language schools in Mexico, Guatemala or Costa Rica. Each of these programs can accommodate students for several weeks (over summer or winter break) or during an entire semester. Students need approval from Dr. Robert Black before they can be accepted into this program.

Many semester and academic year study abroad opportunities exist for students who want longer, in-depth academic experiences in another country. Students who have earned 16 Carroll College credit hours, have sophomore standing and a cumulative grade

point average of 3.0 or higher may apply for enrollment in study abroad. Most students study abroad during their junior or senior year. Students who are approved for study abroad must have a grade point average of at least 3.0 when the planned study abroad is to begin. Approved students will remain enrolled full-time at Carroll College during the time they are abroad. A listing of exchange and affiliated study abroad programs can be found on page 277.

Carroll students also have the opportunity to participate in two Washington, D.C., based programs. The Washington Semester program at American University emphasizes course work at American University with a four-credit internship in the public, private or nonprofit sectors of the capital. The Washington Center program includes a hands-on internship experience of at least 30 hours per week supplemented by enrollment in a single course in a semester.

Additionally, students may explore international relations in depth by participating in a program based at the United Nations. The Wisconsin Universities program, conducted during a six-week summer term, concentrates the study of the U.N. in a two-week intensive course at the University of Wisconsin - Milwaukee followed by a four-week session in New York City. Students participating in this program earn six credits that may be transferred to Carroll.

Additional information about each of the options, including costs, is available from the IOP Office in Voorhees 301.

Honors Program

The Carroll College Honors Program was established to provide an enriched curriculum for the academically talented student. This interdisciplinary program offers intensive sections of courses distributed over the arts and sciences and culminates in the senior year with a scholarly study within, or related to, the student's major. The Honors Program also provides special cultural and social activities on and off campus.

Upon completion of normal Carroll College admission, all freshman applicants are considered for the Honors Program. Following a comprehensive review, the Honors Committee invites selected candidates to apply to the program. Late applicants, as well as transfer students and students currently enrolled at Carroll, are considered for the program on the basis of available openings.

Students participating in the Honors Program are expected to complete a six-course curriculum including an Honors First Year Seminar, four honors courses that may fulfill general education requirements and a senior honors experience (a research project, independent study or creative work). In order to complete the program successfully, a student must attain a grade point average of at least 3.40 with grades of B or better in each honors course.

Alternative Methods of Obtaining Credit

Carroll College recognizes that learning can occur in a variety of environments and through diverse experiences. At Carroll, there are several ways of obtaining credit for prior college-level learning in addition to satisfactory course completion. Students may earn up to 64 credits in a baccalaureate program through any combination of the following types of credit:

1. **Advanced Placement Credit** may be granted to students who are enrolled in a degree program at Carroll and obtain an appropriate score through Advanced Placement examinations. A copy of the current AP requirements is available from the registrar or on-line. Qualified students may be granted credit following successful completion of a college-level course in secondary schools provided the course is submitted on a college transcript. A maximum of 48 credits may be obtained through advanced placement.

2. **The College Level Examination Program (CLEP)** grants credit to qualified students enrolled in a degree program at Carroll for up to seven courses (28 credits) on the General Examination when the qualifying level of the 75th percentile has been achieved in each test written. This credit will be divided in the following manner: English, four; mathematics, four; natural sciences, four; humanities, eight; and social sciences/history, eight. Credit for the General Examinations will count as elective credit toward graduation; some credits may meet liberal studies program requirements. Credit also may be granted for subject examinations when the scores are at the recommended qualifying level. No more than 48 credits of CLEP credit will be granted for the general and subject matter examinations combined. Additional information and registration forms are available from the office of part-time studies. This credit must be approved in advance.

3. **Credit by Examination** allows qualified students enrolled in a degree program at Carroll to take examinations for credit in selected courses. Such examinations are developed and administered by programs. In some instances, placement without credit might be recommended. Interested students may consult with program faculty about policies and procedures. Contact the registrar's office for the necessary form. A \$125 per credit fee is charged for each examination. A student who does not complete the examination with satisfactory results may not repeat the examination.

4. **The International Baccalaureate Diploma** is recognized by Carroll College for purposes of admission, course credit and advanced standing or placement. Sixteen credits will be granted to holders of the International Baccalaureate diploma. Additional credit may be granted when more than four higher-level examinations have been taken and scores of four or higher have been earned. For students in the program who have not earned the diploma, four credits will be granted for each higher-level examination when a score of four or higher is earned. These credits will be declared to meet core and liberal studies requirements when the subjects validated by examination appear to be reasonably comparable to the subjects taught at Carroll College. Otherwise, the credits will be regarded simply as elective credit toward a Carroll degree. The student must enroll as a degree-seeking student at Carroll.

5. **Credit for Prior Learning** is possible when college-level learning, which relates to a degree program offered by the college, has occurred outside the normal educational setting. Credit for prior learning may be given when verified by employment records and the American Council on Education guidebook and transcripts or when verified by a program for credit within that program. A maximum of 24 credits may be obtained through this method. Carroll College uses the course-equivalency method with the portfolio model for assessment of prior learning that is not easily measured via standardized testing or transfer procedures. Such competency is expected to be related to the student's present degree program. The evaluation of such credit requires consideration by faculty. Students are required to demonstrate their learning, competencies and skills. Evidence will usually consist of a portfolio. However, a performance test, an essay examination, or an interview with an internal or outside expert may also be required. A brochure explaining Prior Learning Assessment is available through the office of part-time studies.

6. **Correspondence Courses**, up to 12 credits from an accredited institution, may be accepted in transfer and may be applied to a Carroll College degree. The course credit must be letter graded C or better. (D graded credit will not meet any graduation requirement.) Students must obtain written approval in advance from their adviser and the registrar prior to registering for any correspondence or extension course. Forms are available in the registrar's office. A copy of the course description for each course to be taken must accompany the Transfer Credit Approval form when it is filed with the registrar's office. A maximum of eight semester hours of correspondence or extension course credit may be applied to major or minor requirements with the written approval of the appropriate area chair or divisional dean. It must be filed in the registrar's office. Any correspondence or extension work taken prior to matriculation at Carroll College will be reviewed by the appropriate area coordinator or divisional dean to determine its acceptance and application to graduation, major or minor requirements.

7. **D.A.N.T.E.S. (Defense Activity for Nontraditional Education Support)** course work will be considered on an individual case basis.

8. **P.O.N.S.I. (The National Program on Noncollegiate Sponsored Instruction)** credits will be evaluated on an individual basis.

9. **Proficiency Testing in Foreign Languages:** Students who have extensive background in a language other than English may be able to earn up to 16 credits in one language by demonstrating proficiency. The proficiency exam is intended for students with a more extensive background than high school foreign language study only. Carroll College grants credit to qualified degree-seeking Carroll students through the Proficiency Testing Program in Foreign Languages sponsored by New York University. The office of part-time studies administers the test during the fall and spring semesters.

10. **Retroactive Credit for Modern Languages** allows students who are enrolled in a degree program to earn a maximum of 16 hours of credit in a modern language upon completion of one 300-level course with a grade of B or higher, or four, eight or twelve credits upon completion of 102, 201, or 202, respectively, with a grade of B or higher.

ACADEMIC PROGRAM AND POLICIES

This must be the student's first enrollment in an advanced college-level modern language course. Please see the modern languages and literatures section for competency and test requirements.

11. Retroactive Credit for Mathematics

A student who takes Math 161 and receives a grade of BC or above will receive retroactive credit for Math 160, Calculus I, if Advanced Placement credit has not been awarded for the course. A student who takes Math 207, Calculus III, and receives a grade of BC or above will receive retroactive credit for Math 160 and Math 161, if Advanced Placement credit has not been awarded for those courses.

12. OCICU

Carroll College has approved for degree credit several online courses offered through the Online Consortium of Independent Colleges and Universities (OCICU). Credits earned in an approved OCICU course are posted to a student's transcript as the equivalent Carroll College course. OCICU courses have different add/drop policies, pricing, refund policies, and start and end dates. OCICU courses meet during six eight-week terms throughout the year. Information on all of Carroll College's web-based courses is available at www.cc.edu/academics/online.

Attendance

The college expects students to be prompt and regular in attendance at all scheduled classes. Records of attendance are maintained by each individual professor, and official attention is given any student with excessive absences. Attendance at clinical experiences is mandatory for all health sciences majors.

Credits

The unit of credit is the semester hour. It is defined as one 50-minute class period per week (or its equivalent) for one semester. Thus a lecture-discussion course that meets four 50-minute periods a week ordinarily carries four semester credits. One credit is granted at the completion of a semester for each applied music lesson (one half-hour per week), ensemble or practicum course for which a student is registered.

Course/Credit Load

The college year is divided into two semesters, a winter session and three summer sessions. The first summer session runs for three weeks and the other two for six weeks each. A student's normal class load is 16 credits of academic work each semester, with a total of 128 credits required for graduation. Any student with a cumulative grade point average of 3.00 or higher is permitted, with consent of the adviser, to take a fifth four-hour course each semester at an additional charge. A student may take no more than 21 credits each semester. A student on academic probation normally may not register for more than 12 credits. A student who enrolls for fewer than 12 credits is classified as a part-time student. Students must register for all course work in the semester/term in which the work is done. A student may take a maximum of four credits for the winter session and the three-week summer session and eight credits for each six-week summer session, with not more than 20 credits total for the summer.

Classification of Students

To be a sophomore, a student must have completed 28 credits; to be a junior, 60 credits; to be a senior, 92 credits.

Grading System

A system of letter grades is used in courses for which degree credit may be earned. A 4.00 grade point system is used under which a student earns grade points for each credit completed.

Letter	Grade points	Description
A	4.00	Excellent
AB	3.50	Intermediate grade
B	3.00	Good
BC	2.50	Intermediate grade
C	2.00	Average
D	1.00	Low, merely passing
F	0.00	Failure
AU		Audit
I		Incomplete
IP		In progress
NC		No credit allowed
NR		Grade not received
S		Satisfactory (A, A/B, B, B/C, C level)
U		Unsatisfactory (D or F level)
W		Withdrawal

Grade Point Calculation

The grade point values when multiplied by the number of course credits give the total number of grade points earned for that particular course. In a four-credit course, for example, a grade of B yields 12 grade points; a grade of A yields 16 grade points. The grade point average is the ratio between total academic grade points and total academic hours: that is, the quotient obtained by dividing the total number of academic grade points earned by the total number of academic hours attempted. For example, a program of 16 academic credits in which 48 grade points are earned will yield a grade point average of 3.00 or an average of B (48 divided by 16 = 3.00).

Incomplete Grading

A report of incomplete means that the student has been unable to complete the required work for a valid reason; it is not given for neglected work. In order to receive an incomplete, the student must initiate the request by submitting a properly completed form (available on-line and from the registrar's office) to the instructor. If the instructor agrees with the request, the completed form is signed by the student and the instructor and submitted by the instructor to the registrar at the time the final grades are reported. An incomplete must be removed by the end of the eighth week of the next semester or it automatically becomes a failure. (An extension of no more than one year may be granted only with written consent from the instructor.)

Academic Honesty

Cheating on examinations, plagiarism, improper acknowledgment of proper sources in written material, and inaccurate claims of work done are serious offenses in an academic setting. These forms of unethical behavior will be subject to severe disciplinary action.

The Carroll College Policies and Procedures on Student Academic Integrity can be found in the Student Handbook (available on the college's Web site) under the section entitled Academic Policies and Procedures. Instructors indicate penalties for academic dishonesty in their course syllabi.

Adding or Dropping Courses

A student may add a course only during the first week of the fall or spring semesters. For winter session, summer sessions, and other specially timed courses, refer to the published timetables for deadline dates to add courses. With the written consent of the instructor and the adviser, a student may drop a registered course through the eighth complete week of the fall or spring semester. For winter session, summer sessions, and other specially timed courses, refer to the published timetables for deadline dates to drop courses. The course will appear on the transcript as attempted credits; however, the grade will be a W (withdrawal) and will not affect the grade point average. Courses improperly dropped will be designated by the grade of F.

Auditing Courses

With the instructor's permission, students generally may audit all courses at Carroll, except for studio art courses, applied music, music ensembles and laboratories. The minimum requirement to receive an audit (AU) grade is regular attendance, but individual instructors may have higher requirements. No credit is received for these courses. There are no restrictions for taking the same course for credit at a later date. However, students may not receive credit through "credit by examination" after auditing a course. Students taking the course for credit have priority enrollment over students who wish to audit.

Independent Study

Independent study is offered by most programs and is subject to the same general college regulations that govern any course offering. Such courses are taken for academic credit (one to four credits) with the appropriate grading from an assigned instructor. The format of study may vary and is formulated in consultation with the assigned instructor. An independent study may be taken only with consent of the instructor and the divisional dean and must be arranged with the instructor before registering. In general, a student may count a maximum of four independent study credits toward graduation. An approved Permit for Independent Study form, available at the registrar's office, and a syllabus, must be presented at the time of registration.

Internships or Work-Oriented Experiences

Students are urged to participate in a work-oriented gateway experience to prepare for their work in the world. Most work-oriented experience will be related to the student's

major or minor field and generally will be taken during the senior year. Internships and work-oriented experiences are under the direct supervision of a member of the Carroll College faculty. Such courses are taken for academic credit with the appropriate grading (letter grades or S/U) from an assigned instructor. Each program will determine whether an internship or work-oriented experience will be offered. These courses are subject to the general regulations that govern any course offered, including registration within the time period allowed for an on-campus course. A student must have permission for an internship or work-oriented experience and present an approved Permit for Internship upon registration.

Repeating Coursework Graded D or F at Carroll College

Any Carroll College credit earned with a D or F grade may be retaken at Carroll. Both the D or F grade and the repeated grade will be recorded on the Carroll College transcript, but only the last grade awarded will be used in the appropriate grade point calculations. A student may not replace a Carroll College-earned D or F with transfer credit.

Repeating Transfer Coursework Graded D or F

Any transfer credit with an earned D or F may be retaken for credit with a similar course at Carroll College or at another accredited institution as approved by the registrar. Upon matriculation at Carroll College, the student must obtain permission in advance from the registrar to retake a transfer course graded D or F with a similar transfer course or with a Carroll College course. Both the D or F grade and the repeated grade will be recorded on the Carroll College transcript, but only the last grade awarded will be used in the appropriate grade point calculations.

Satisfactory Grading Option for Juniors and Seniors

Juniors and seniors have the choice of taking any or all elective courses on a satisfactory/unsatisfactory (S/U) basis. A student shall not be permitted to alter the decision after the first four weeks of the semester. No student may take any course to complete a general education or liberal studies requirement on an S/U basis. No student may take any course within the major or minor fields, including required supporting courses, on an S/U basis, with one exception: internships or work-oriented experiences may count toward the major or minor even if taken S/U. Students are advised that graduate or professional schools often give less consideration to applicants whose records show this grade option. Satisfactory/unsatisfactory grades will not be included in computing the grade point average.

Transfer Credit Policy After Enrollment

It is necessary to obtain permission in advance from the Carroll College registrar's office in order to have coursework from another institution accepted in transfer. All coursework must be graded C or better to be accepted as credit earned toward graduation. However, core distribution and/or liberal studies courses, major and minor requirements may be fulfilled with a D. Grade point deficiencies at Carroll College cannot be made up with transfer course credit. NOTE: Students are required to complete their final 32 hours at Carroll College.

ACADEMIC PROGRAM AND POLICIES

Official transcripts of all coursework from every post-secondary institution attended must be sent immediately following completion of the course to the Carroll College registrar's office, 100 N. East Ave., Waukesha, Wis. 53186. Failure to have transcripts sent, even if the course cannot be accepted for credit, may result in the student being dismissed or the degree being rescinded.

Transcripts

The registrar's office supplies official transcripts of records of those students who make a written request and who have no outstanding obligations to the college. In accordance with the Family Educational Rights and Privacy Act (1974), transcripts cannot be released without the express written consent of the student. Transcripts cost \$4 per copy. A check made payable to Carroll College for the amount of the fees must accompany the written transcript request and be mailed to Registrar's Office, Carroll College, 100 N. East Ave., Waukesha, WI 53186.

Policy on Student Records

Several information sources are maintained concerning each student at Carroll College: the admission file, the permanent academic record, the student personnel file, the placement file, the alumni file, the publicity file, and the financial aid file for students applying for aid. A student may review the applicable files, except for material provided in confidence, with a professional staff member under the provisions of the Family Educational Rights and Privacy Act of 1974 (FERPA) as amended.

FERPA¹ gives certain rights to parents regarding their children's educational records. These rights transfer to the student who has reached the age of 18 or is attending school beyond the high school level. Generally the school must have the student's written permission to release any educational information to anyone, including the student's parents. The law does allow for the following exceptions: school employees who have a need to know; other schools to which a student is transferring; certain government officials to carry out lawful functions; accrediting organizations; persons who need to know in cases of health and safety concerns.

Schools may disclose "directory information" or information published in the student directory unless the student signs a Right to Privacy form provided each time a student registers. Carroll College has adopted a policy that will only allow the disclosure of directory information if the party asking for the information can identify himself/herself in writing (this Carroll College policy is within FERPA regulations, which allow individual institutions to determine their own policies concerning directory information).

FERPA also grants the student the right to review those records, files, etc., that are maintained by the college. The student must make an appointment with the College Registrar to do so. Students may challenge any information they believe to be inaccurate. If the college official does not agree to modify the information, the student may file a written appeal and has a right to a hearing.

¹ Furnished by the United States Department of Education, fact sheet.

Student Consumer Information

Campus Security Act of 1990: Requires the disclosure of data on crimes committed on campus and campus safety policies and procedures.

Equity in Athletics Disclosure Act: Requires disclosure of data on participation rates and financing men's and women's sports in intercollegiate athletic programs at coeducational schools. It also requires data on revenues, total expenses, and operating expenses of intercollegiate athletic programs.

Current and prospective students have the right to request the institution's graduation rates. These rates are available in the office of admission.

Academic Standing

Good Standing

All students are expected to maintain at least a C (2.00) overall grade point average in Carroll College course work. Any student who does not maintain at least a 2.00 cumulative average in Carroll course work is subject to academic action following a review by the Academic Steering Committee. Some programs, as noted in the program sections of this catalog, have higher standards for progression.

Probation

As soon as a student's Carroll College grade point average drops below 2.00, that student is placed on academic probation. For a student on academic probation, the class load is normally limited to 12 credits. A student cannot be removed from probation until a 2.00 grade point average is attained.

A full-time student also may be placed on academic probation for inadequate progress toward a degree. Inadequate progress is considered to be less than 20 credits after one year; 40 credits the second year; 62 credits the third year and 84 credits the fourth year.

Suspension

A student on probation for one or more semesters or a student who received no passing grades the previous semester may be considered for suspension as a full-time student for the following two terms (i.e., fall, spring, summer) or be considered for dismissal. At the end of the suspension period, a student must apply for readmission as a matriculated student. (Upon suspension, a student may no longer live in on-campus housing or participate in college-related activities.)

Dismissal

A student on probation, after careful review, may be dismissed at the close of any semester because of failure to achieve an acceptable level of academic work. Students who are dismissed will be withdrawn from any registered courses at the college and will no longer be eligible to attend Carroll College.

Health Sciences Programs

Policies applying to academic standing, progression, and the appeals process for Health Sciences programs are presented on page 158 of this catalog.

Academic Appeals

The Academic Steering Committee (ASC) acts as the appeal body for questions related to academic policy, probationary questions, exemptions, etc. An academic petition form (available on-line or from the registrar's office) must be completed and returned to the registrar's office to initiate the appeal process. The petition form should carefully explain the nature of the request and include the adviser's signature. All appeal decisions by the Academic Steering Committee are final.

Course grade appeals and appeals of sanctions for academic dishonesty are heard by the Student/Faculty Ethics Committee. Appeals should be made through the Academic Affairs Office. The procedure for appeals is found in the Student Handbook.

Returning Students

Students returning to Carroll after the lapse of one or more semesters and students who have been suspended from the college and have become eligible to apply for readmission must do so through the office of admission. The Admission Committee reviews each application and determines the current status of the student and the conditions of readmission.

Awarding of Diplomas

Diplomas are awarded three times a year (May, August and December) to seniors who have completed all degree requirements. The formal conferring of diplomas for the year occurs at the May commencement ceremony. All graduating seniors are expected to attend. Permission to graduate in absentia must be requested in writing from the registrar's office before May 1.

Seniors who have all degree requirements completed but wish to defer graduation, and those with specific academic deficiencies, will be allowed to participate in commencement as long as the deficiencies are within the following parameters:

1. A need for one to four additional credits or student teaching.
2. A deficiency of eight or fewer academic grade points.
3. Incomplete grades of from one to four credits.

These students will not be eligible to participate in another commencement. Notice of intent to participate in the May commencement ceremony without the degree being awarded should be filed with the registrar's office at the time the application for graduation is submitted or by April 15. All students who choose not to receive their degree and those with academic deficiencies will receive their diplomas at the next issuance following completion of all required work.

Additional Undergraduate Degree

With the recommendation of the divisional dean, a student already holding a baccalaureate degree from Carroll College or another institution may under certain conditions qualify for and be awarded an additional baccalaureate degree. Those conditions are as follows:

- At least 32 credits beyond those used to achieve the initial degree must be undertaken and successfully completed at Carroll.
- All of the college general education and liberal studies requirements in effect at the time of the enrollment for a second undergraduate degree must be met, either through transfer or in subsequent study at Carroll.
- All of the program requirements for an additional major field of study must be met either through transfer or in subsequent study at Carroll.

Honors

The **dean's list** is determined twice each year at the end of the fall and spring semesters. It includes the names of all full-time degree candidates who earned at least a 3.50 grade point average the previous semester in a minimum of 12 credits with letter grades with the exception of junior- and senior-level nursing students who need seven of the 12 credits with letter grades. The names of students on the dean's list are sent to the student's local newspaper if all of the student's grades are available at the time of the list's release and if the student has authorized the release of this information. Achievement of the dean's list is noted on the student's transcript. Dean's list for part-time students will be determined after a student has earned 12 Carroll credits. Thereafter, a student who completes fewer than 12 credits per semester and earns at least a 3.500 GPA is designated as being on the dean's list for that semester.

Delta Sigma Nu is the college's honorary scholastic society. Students in the upper 10 percent of the senior class who have completed by graduation 64 letter-graded credits at Carroll and a total of 100 letter-graded credits are elected to membership. The only exception is students on approved off-campus programs where letter grades are not given. Members of the junior class with an overall grade point average of 3.900 or higher who have completed 64 letter-graded credits at Carroll and have been enrolled at Carroll College for at least four semesters are elected to membership.

Graduation honors based on the cumulative grade point average (GPA)* are awarded to those students who have completed all requirements for the degree: summa cum laude requires a GPA starting at 3.900; magna cum laude requires a GPA starting at 3.600; cum laude requires a GPA starting at 3.400. The complete record is considered, and there must be a minimum of 64 credits of letter grades. In order to be eligible for honors, a student must complete at Carroll, in letter-graded courses, one-half of the hours (currently 64) required for graduation. Students with transfer work must meet two criteria:

1. The student must have 64 letter-graded credits earned at Carroll.
2. Since a student with transfer work has a Carroll and an overall GPA, the lower of the two GPAs determines eligibility for honors and placement into one of the above three honors categories.

*The GPA is not rounded up.

ACADEMIC PROGRAM AND POLICIES

Second degree graduation honors will be awarded to students who have completed all requirements for the degree. There must be a minimum of 32 letter-graded credits completed at Carroll College. The entire undergraduate record is considered and, if there is transfer work, the lower of the Carroll or overall grade point average (GPA)* determines eligibility for honors and placement into one of the three following categories: summa cum laude requires a GPA starting at 3.900; magna cum laude requires a GPA starting at 3.600; cum laude requires a GPA starting at 3.400.

*The GPA is not rounded up.

Academic Support

The college recognizes that the academic development of students is a top priority. Therefore, Carroll provides a wide variety of programs and services intended to help students achieve their full intellectual potential. Academic advisers meet regularly with students to select courses and to assess academic progress.

The Learning Commons, located on the lower level of the library, is the center for several academic support activities including the Writing Center, course-related tutoring, and the college's Supplementary Instruction Program.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

ART

Amy A. Cropper	Associate Professor
Peggy Thurston Farrell	Assistant Professor
Philip L. Krejcarek	Professor
Pacia Sallomi	Associate Professor
Thomas F. Selle	Associate Professor

The Art Program offers several directions for the student who has an interest and talent in the visual expressive arts. Individualized advising helps the student choose

a) an Art Major with one of the following three emphases:

1. Fine Arts with a specialized media emphasis
2. Art education which prepares the student for K-12 teaching certification
3. Commercial art with either advertising and layout or illustration skills

or

b) a Photography Major.

All majors are encouraged to attend art exhibition openings and/or workshops and field trips sponsored or approved by the art program. All majors are required to have a senior show and portfolio to be approved by the art faculty.

ART MAJOR

Learning Outcomes for Art

Upon graduation, the art student will be able to demonstrate:

1. Mastery of skills in his/her chosen area of emphasis.
2. Familiarity with the history of art and the ability to discuss it within the context of their work.
3. Ability to write articulately about art.
4. Ability to present self and work professionally.
5. Ability to develop a cohesive body of work.

Core Courses

Art 101, Drawing and Composition
Art 103, 104, Art History
Art 107, Beginning Design 2D and 3D
Art 202, Intermediate and Life Drawing
Art 300, Twentieth Century Art
Art 490, Capstone in Art

The following emphases are available for the major:

Fine Arts Emphasis

Bachelor of Arts

Core Courses, plus

Art 201, Painting I

Art 209, Photography I or Art 303, Printmaking I

Art 302, Advanced and Life Drawing

Art 305, Sculpture I

Art 110, Ceramics I, or Art 307, Art Metals

Two additional courses in the same area at an advanced level:

Example: Art 301, Painting II and Art 398, Independent Study (in Painting)

In addition, Fine Arts students are encouraged to take Theatre Arts 105, Stagecraft and Drafting.

Required Support Courses (Required for primary majors only)

Completion of a Modern Language through 202

Art Education Emphasis*

Bachelor of Science

Core Courses, plus

Art 110, Ceramics I

Art 201, Painting I

Art 209, Photography I

Art 211, Gallery/Museum Experience (1 credit)

Art 223, Creative Arts for Children (2 credits; does not count toward major)

Art 258, Visual Communication

Art 303, Printmaking I

Art 305, Sculpture I

Art 307, Art Metals

Art 353, Methods of Teaching Secondary Art (2 credits; does not count toward major.)

One 4-credit elective course in Art

Required Support Courses (Required for all majors)

Mathematics 112, or Mathematics 140 or higher

2 credits of Computer Science: 107 or higher

Environmental Science 120

*Students preparing for teaching must meet state licensing requirements through enrollment in the Teacher Education Program.

Commercial Art Emphasis

Bachelor of Science

Core Courses, plus

Art 201, Painting I

Art 209, Photography I

Art 258, Visual Communication

Art 303, Printmaking I

Art 304, Illustration
Art 305, Sculpture I
Art 311, Electronic Imaging
Graphic Communication 320, Introduction to Multimedia Production
Art 480, Internship in Art

Required Support Courses (Required for all majors)

Mathematics 112, or Mathematics 140 or higher
2 credits of Computer Science: 107 or higher
Business 101, Principles of Small Business

In addition, students are encouraged to select courses in computer science; Communication 101, Principles of Communication; Communication 203, Advertising; and Communication 254, Photojournalism

Photography Major
Bachelor of Science

Photography is a separate major within the Art Program. Students seeking an in-depth study of photography as a fine art may choose this major.

All majors are encouraged to attend art exhibition openings and/or workshops and field trips sponsored or approved by the art program. All majors are required to have a senior show and portfolio to be approved by the art faculty.

Learning Outcomes for Photography

Upon graduation, the photography student will be able to demonstrate:

1. Proficiency in the use of a variety of cameras, including digital and video.
2. Mastery in the creation and analysis of photographic images.
3. Mastery in the development of film and printing and in the presentation of the final image.
4. Knowledge of the history of photography.
5. Proficiency in the use of software to edit and manipulate images.
6. Ability to write articulately about art.
7. Ability to develop a cohesive body of work.

Core Courses

Art 101, Drawing and Composition
Art 103 or 104, Art History
Art 107, Beginning Design 2D and 3D
Art 215, History of Photography
Art 209, Photography I
Art 258, Visual Communication
Art 300, Twentieth Century Art
Art 309, Photography II – Fine Art
Art 310, Photography II – Commercial
Art 311, Electronic Imaging

ART

Art 312, Video Art
Art 340, Advanced Media Studies
Art 480, Internship in Art
Art 490, Capstone in Art

Required Support Courses (Required for all majors)

Mathematics 112, or Mathematics 140 or higher
2 credits of Computer Science: 107 or higher
Graphic Communication 320, Introduction to Multimedia Production

In addition, students are encouraged to select from the following courses: Business 101, Principles of Small Business; Communication 101, Principles of Communication; Communication 203, Advertising; Communication 246, Video Production; Communication 254, Photojournalism.

Art Minor

Art 101, Drawing and Composition
Art 103 or 104, Art History
Art 107, Beginning Design 2D and 3D
Three 4-credit elective courses in art

History of Art

103. Art History: Prehistoric to A.D. 1500 L5 4 credits
Survey of painting, sculpture and architecture from 15,000 BC through the 14th Century. (*Fa*)

104. Art History: A.D. 1500 to Early 20th Century L5 4 credits
Survey of the major artists and styles from the 14th Century to the 1950s. (*Sp*)

215. History of Photography 4 credits
Students will study the origins and traditions of photography in both artistic and technological terms. The course will trace the evolution of photography from its beginnings in 1839 to the present. Through reading, writing, research, and oral assignments, students will learn the major figures in photography and examine important critical, cultural and social issues. Primary emphasis will be placed on cultural and aesthetic concerns of key figures in the history of photography. (*Fa*)

300. Twentieth Century Art L5 4 credits
A study of important styles and works of individual artists represented in a variety of media with an emphasis on contemporary art. (*Sp*)

Studio Art

Studio courses may require students to pay a lab fee or purchase materials.

- 101. Drawing and Composition** L5 4 credits
An introduction to drawing with emphasis on developing representational skills using a limited variety of materials. (Required course fee) (*Fa, Sp, Su*)
- 107. Beginning Design 2D and 3D** L5 4 credits
A multi-imagery approach to solving design problems as related to fine and commercial art. (Required course fee) (*Fa, Sp, Su*)
- 110. Ceramics I** L5 4 credits
A serious exploration of clay as an artistic medium. This class introduces the beginner to a variety of techniques with an emphasis on hand-building. (Required course fee) (*Fa, Sp, Su*)
- 201. Painting I** 4 credits
An introduction to the study of painting. Acrylic, watercolor or oil painting, with emphasis on creative exploration and self-development. (Required course fee) (*Fa, Sp*)
Prerequisites: Art 101, 107.
- 202. Intermediate and Life Drawing** 4 credits
This course continues development of composition ideas in drawing with an emphasis on drawing as a visual expression requiring thought, visual clarity and imagination. A minimum of one third of the course will be drawing from the nude model. (Required course fee) (*Fa, Sp*) Prerequisite: Art 101.
- 209. Photography I** L5 4 credits
The student learns basic skills in photography plus darkroom procedures and directs this knowledge toward creative expression with strong emphasis on design and composition. Adjustable camera required. (Required course fee) (*Fa, Sp*)
- 210. Ceramics II** 4 credits
Individually created problems in ceramics as well as advanced study in glazing and firing. (Required course fee) (*Sp*)
- 211. Gallery/Museum Experience** 1 credit
Preparing gallery space, scheduling exhibitions and arranging and hanging shows. Working with the Carroll College permanent collection of Wisconsin artists gaining restoration experience in matting, framing and repairing. (*Fa, Sp*) Prerequisite: Art major/minor or consent of instructor.
- 223. Creative Arts for Children** 2 credits
Focus is on children's creative expression and integration of art with curricular needs in K-6 education. This course does not count toward an art major. (Required course fee) (*Fa, Sp, Su, Wn*)

- 258. Visual Communication** 4 credits
Studies design as applied in the commercial and graphic arts field, including lettering, layout, preparing art for printing and package design. Also offered as Communication 258. Prerequisite: Graphic Communication 106 (*Fa, Sp*)
- 298/398. Independent Study** 1-4 credits
Independent study of selected areas already covered by a studio course. (Required course fee) (*Fa, Sp*) Prerequisite: Approval of divisional dean and consent of instructor.
- 301. Painting II** 4 credits
Advanced study of painting with emphasis on self-expression and stylistic development. (Required course fee) (*Sp, even years*) Prerequisites: Art 201, 202.
- 302. Advanced and Life Drawing** 4 credits
A continuation of Art 202 with more thematic development. A minimum of one third of the course will be drawing from the nude model. Taught simultaneously with Art 202. (Required course fee) (*Fa, Sp*) Prerequisite: Art 202.
- 303. Printmaking I** 4 credits
A study of drawing and composition applied to the making of multiples. The course introduces the media of relief cut, serigraphy, etching and lithography, with some opportunity for the student to specialize. (Required course fee) (*Fa*) Prerequisite: Art 101 or 107.
- 304. Illustration** 4 credits
Studies designed to develop portfolio-quality illustration in graphic design. Manual and computer techniques are explored. (Required course fee) (*Fa*) Prerequisites: Art 101, 202 and 258, or consent of instructor.
- 305. Sculpture I** 4 credits
An introduction to a variety of materials, shop equipment, and contemporary sculptors in order to expose students to the broad possibilities of sculptural expression. (Required course fee) (*Sp*) Prerequisite: Art 101, 107 or consent of instructor.
- 307. Art Metals** 4 credits
This course covers some fundamentals of jewelry and metalsmithing including basic hand-tool knowledge fabrication techniques, soldering, stone setting and an introduction to the history of jewelry and contemporary metalwork. (Required course fee) (*Fa, Su*)
- 309. Photography II – Fine Art** 4 credits
Advanced photographic techniques in both black and white and color with further development of creative expression. Adjustable camera required. (Required course fee) (*Sp, odd years*) Prerequisite: Art 209.
- 310. Photography II – Commercial** 4 credits
Advanced photographic techniques in both black and white, color and digital with emphasis in commercial photography. Adjustable camera required. (Required course fee) (*Sp, even years*) Prerequisite: Art 209.

311. Electronic Imaging**4 credits**

A study of the computer as a tool for the making and manipulation of images. Although this course includes graphic designing techniques on the computer, it emphasizes photography in an electronic context. (*Fa, Sp*)

312. Video Art**4 credits**

This course provides an introduction to the basic practices of time-based media, including animation, with emphasis on narrative, planning of action, and sequencing of images. (Required course fee) (*Sp*)

340. Advanced Media Studies**4 credits**

This course is designed so that students who have had the beginning and intermediate courses in a specific medium can continue their study in this area with specific focus. Students are expected to develop a body of work in a series. (*Fa, Sp*) Prerequisites: The beginning and intermediate course in the same media, or consent of the instructor. (*Fa*)

353. Methods of Teaching Secondary Art**2 credits**

This course is not included in an art major or minor but is part of the professional education program. (*Fa*) Prerequisite: Admission to the Teacher Education Program

403. Printmaking II**4 credits**

This course is taught simultaneously with Art 303. Advanced study in graphics with opportunity for self-direction in a concentration on one or two media. (Required course fee) (*Fa*) Prerequisite: Art 303.

405. Sculpture II**4 credits**

This course is taught simultaneously with Art 305. Individually created problems in sculpture that focus on continued development of skills and on thematic development. (Required course fee) (*Sp*) Prerequisite: Art 305.

480. Internship in Art**4 credits**

Supervised professional work experience. Written report required. Limited to two semesters (8 credits) which will apply toward degree. (*Fa, Sp, Su*) Prerequisite: Consent of instructor.

490. Capstone in Art

Preparation for senior exhibitions through regular critiques and research into contemporary art issues. Professional development in writing and speaking about art as well as portfolio preparation. (*Fa*) Prerequisite: Senior standing.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

COMMUNICATION

Joseph M. Dailey	Associate Professor
Joseph J. Hemmer Jr.	Professor
Rebecca Imes	Assistant Professor
Barbara L. King	Associate Professor

The Communication Program offers a major with four emphases as well as two minors to prepare students for careers in journalism, public relations, advertising, teaching, management, human resources and for advanced education in graduate school. The curriculum follows a sequence for student development. As freshmen, students learn the principles of, and have experiences in, various contexts of communication. They also become familiar with the methods of communication research (100-level courses). As sophomores, students become acquainted with specialized subject matters primarily through lecture/discussion classes (200-level courses). As juniors, students engage in critical thinking and improve writing skills in courses conducted in seminar style (300-level courses). As seniors, students prepare a thesis and take comprehensive exams as part of a capstone seminar. They also participate in advanced research and/or work-oriented experiences (400-level courses).

Learning Outcomes for Communication

Upon successful completion of major requirements students should:

1. Possess communication competence in both theory and performance through a personalized, broad-based approach conducted in an environment that fosters cognizance of contemporary social milieu.
2. Understand and appreciate skilled communication.
3. Understand and appreciate social responsibility and ethical conduct.
4. Understand and appreciate insightful criticism, healthy inquiry and life-long learning.

Communication Major

Core Courses

Communication 101, Principles of Communication
Communication 150, Research Methodology
Communication 207, Intercultural Communication
Communication 499, Senior Capstone Seminar

Journalism Emphasis

Bachelor of Science

Core Courses, plus

Communication 110, Media Practicum (2 credits)
Communication 137, Newswriting and Reporting

Communication 250, Society and Mass Media
Communication 328, Communication Ethics
Communication 350, Communication Law
Communication 380, Internship in Communication, or
Communication 396, Research in Communication
Two of the following:
Communication 254, 275, or 278

Required Support Courses (Required for primary majors only)

Politics 141
Mathematics 112, or Mathematics 140 or higher
Graphic Communication 106 and a Computer Science course numbered 107 or
higher
Recommended Support Courses
Sociology 102
English 305
Philosophy 105
Philosophy 206

Liberal Arts Emphasis

Bachelor of Arts

Core Courses, plus

Three of the following:
Communication 317, Communication Criticism
Communication 319, Communication Theory
Communication 328, Communication Ethics
Communication 350, Communication Law
Communication 370, Communication Technology and Society
Three elective four-credit courses in communication

Required Support Courses (Required for primary majors only)

Option 1
Completion of a Modern Language through 202, or
Option 2
History 103 or 104
English 255
History 108 or Religious Studies 106

Public Relations Emphasis

Bachelor of Science

Core Courses, plus

Communication 137, Newswriting and Reporting
Communication 203, Advertising
Communication 208, Introduction to Public Relations
Communication 227, Technical Writing in Organizations
Communication 350, Communication Law

COMMUNICATION

Communication 380, Internship in Communication, or
Communication 396, Research in Communication

One of the following:

Communication 317, Communication Criticism
Communication 319, Communication Theory
Communication 328, Communication Ethics
Communication 370, Communication Technology and Society

Required Support Courses (Required for primary majors only)

Mathematics 112, or Mathematics 140 or higher

Graphic Communication 106 and a Computer Science course numbered 107 or
higher

One of the following: Art 107, Business 301, English 305,
Politics 141, Psychology 228, Sociology 217

Relational Communication Emphasis **Bachelor of Science**

Core Courses, plus

Communication 200, Interpersonal Communication
Communication 202, Small Group Communication
Communication 227, Technical Writing in Organizations
Communication 230, Organizational Communication
Communication 250, Society and Mass Media
Communication 241, Communication and Conflict, or Communication 290,
Health Communication
Communication 319, Communication Theory, or Communication 317,
Communication Criticism
Communication 328, Communication Ethics, or Communication 350,
Communication Law
Communication 380, Internship in Communication, or Communication 396,
Research in Communication
One of the following:
Communication 241, 290, 317, 319, 328, 350

Required Support Courses (Required for primary majors only)

Mathematics 112

4 credits of Computer Science numbered 107 or above

Liberal Arts Communication Minor

Communication 101, Principles of Communication

One of the following:

Communication 317, 319, 328, 350, 370

Three elective four-credit courses in Communication

Secondary Education Speech Communication Minor

Communication 101, Principles of Communication
 Communication 111, Debate and Forensic Activities (one credit)
 Communication 200, Interpersonal Communication, or
 Communication 202, Small Group Communication
 Communication 250, Society and Mass Media
 Communication 317, Communication Criticism
 Communication 319, Communication Theory
 One elective four-credit course in communication

- | | | |
|---|-----------|--------------------|
| 101. Principles of Communication | L3 | 4 credits |
| Introduction to human communication process. Application of principles in relational, public and mass media contexts. <i>(Fa, Sp)</i> | | |
| 110. Media Practicum | | 1-2 credits |
| Communication-related work on the campus newspaper, radio station, or television club. Weekly meeting required. Students may earn a maximum of eight credits. <i>S/U</i> graded. <i>(Fa, Sp)</i> Prerequisite: Consent of instructor. | | |
| 111. Debate and Forensic Activities | | 1 credit |
| <i>(Fa)</i> Prerequisite: Consent of instructor. | | |
| 137. Newswriting and Reporting | | 4 credits |
| Basic journalism for the print media. <i>(Fa, Sp)</i> | | |
| 150. Research Methodology | L1 | 4 credits |
| Study of the principles of experimental, survey, textual and naturalistic methodologies. <i>(Fa, Sp)</i> | | |
| 200. Interpersonal Communication | | 4 credits |
| Study of dyadic relationships. Topics include intimacy, uncertainty, disclosure, identity, competence, transactional paradigms and goals. <i>(Fa)</i> | | |
| 202. Small Group Communication | | 4 credits |
| Study of small group process, models and theories. Participation in casual, cathartic, therapeutic, learning and decision-making groups. <i>(Fa, even years)</i> | | |
| 203. Advertising | | 4 credits |
| Examines the components of an advertising campaign. Includes units on persuasion, market research, target analysis, creative strategy and media planning. <i>(Fa)</i> | | |
| 207. Intercultural Communication | L4 | 4 credits |
| Identifies parameters which affect communication across cultures. Research project which focuses on specific cultural group. <i>(Fa, Sp)</i> | | |

COMMUNICATION

- 208. Introduction to Public Relations** 4 credits
Examines theory, scope, techniques, and influence of public relations in society. Includes units on public opinion, message preparation, media selection, and ethics. (*Sp*)
- 227. Technical Writing in Organizations** 4 credits
Provides understanding of principles related to audience adaptation, format, style, research, and writing in various organizational settings. Includes extensive writing experience. (*Fa, Sp*)
- 230. Organizational Communication** 4 credits
Examines theoretical history, structures, functions, systems, analysis and management of communication processes in complex organizations. (*Fa, odd years*)
- 241. Communication and Conflict** 4 credits
Study of interpersonal conflict processes. Emphasis on application of theory; analysis of ongoing conflict and management. (*Sp, even years*)
- 246. Video Production** 4 credits
Intensive experience in the process of television field production; focuses on single camera, field/remote production style. (*Fa, odd years*)
- 250. Society and Mass Media** L3 4 credits
Surveys the history and influence of print, radio, film and television in society. Examines the political theories that relate to government control over the media. (*Sp*)
- 254. Photojournalism** 4 credits
An introduction to digital photography with an emphasis on photography for publications. (*Fa, odd years*)
- 258. Visual Communication** 4 credits
Studies basic graphic processes for print. Emphasizes principles of design and typography. Also offered as Art 258. (*Fa, Sp*) Prerequisite: Consent of instructor, Graphic Communication 106.
- 275. Feature Writing** 4 credits
Planning and writing feature stories for newspapers and magazines. (*Sp, even years*) Prerequisite: Communication 137 or similar experience.
- 278. Broadcast News Reporting** 4 credits
Principles and techniques of broadcast news reporting, writing and editing. (*Sp, odd years*) Prerequisite: Communication 137 or similar experience.
- 290. Health Communication** 4 credits
Explore concepts and theories of communication and health. Examine interpersonal issues including clinician-patient, family, and social support as well as topics of mass communication including health communication campaigns and how the news/entertainment media present and affect health information. (*Sp*)

- 296/396. Research in Communication** 1-4 credits
Supervised research of significant problem area within communication field.
Prerequisites: Senior standing, approval of the divisional dean and consent of instructor.
- 298/398. Independent Study in Communication** 1-4 credits
Prerequisite: Approval of the divisional dean and consent of instructor.
- 317. Communication Criticism** 4 credits
Studies various approaches to criticism. Provides experience in criticism of diverse messages. (*Sp*) Prerequisite: Junior standing or consent of instructor.
- 319. Communication Theory** 4 credits
Consideration of theoretical ideas about the psychology of communication, language, manipulation, information, communication effects and other subjects. (*Fa*)
Prerequisite: Junior standing or consent of instructor.
- 328. Communication Ethics** 4 credits
Considers a variety of frameworks for the evaluation of communication ethics. Students examine controversial issues and cases. (*Sp*) Prerequisite: Junior standing or consent of instructor.
- 350. Communication Law** 4 credits
Examines First Amendment communication freedoms. Considers dissent, association, academic freedom, obscenity, defamation, privacy, copyright, news gathering, electronic media regulation and other topics. Uses moot-court format. (*Fa, Sp*) Prerequisite: Junior standing or consent of instructor.
- 370. Communication Technology and Society** 4 credits
Considers personal, ethical, legal, social and other impacts of communicating in an information-technical based society. Involves an intensive research project culminating in a reviewed presentation. (*Sp*) Prerequisite: Junior standing or consent of instructor.
- 380/480. Internship in Communication** 4 credits
Student intern experience. Approval of adviser required prior to registration. S/U graded.
- 383/483. Prior Work Experience in Communication** 4 credits
Professional work experience can substitute for required internship. S/U graded.
- 499. Senior Capstone Seminar** 4 credits
Review of important topics and current research in the field of communication. Preparation of thesis. Completion of comprehensive examinations. (*Fa*) Prerequisite: Communication 150

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
ENGLISH

BJ Best	Instructor
Peter Byrne	Visiting Assistant Professor
William Jablonsky	Instructor
Lara Karpenko	Assistant Professor
Deirdre M. Keenan	Associate Professor
Lori Duin Kelly	Professor
Michael Kula	Assistant Professor and Writer-in-Residence
Susan Nusser	Assistant Professor

English Program Goals

To provide students with a body of knowledge about literature that will allow them to recognize the interrelationship among ideas and provide them with the skills to be life-long learners.

To teach students the critical reading, writing and thinking skills that enable them to develop a personal value system and that will inform their understanding of their impact on the world around them.

**English Major (44 credits)
Bachelor of Arts**

Learning Outcomes for English

Upon successful completion of major requirements students will be able to:

1. Develop strategies for originating and answering questions about literature.
2. Employ a variety of critical approaches to literature.
3. Use language specific to the discourses of poetry, drama and fiction.
4. Demonstrate their knowledge of literary canonicity as part of their preparation for citizenship in a diverse community.
5. Analyze and respond critically to literature using research and bibliographic materials appropriate to the discipline.

Core Courses

- I. English 211, Introduction to Literary Study I: Poetry
English 212, Introduction to Literary Study II: Short Fiction and Drama
- II. Three of the following core literature surveys:
English 240, British Literature I: Mediaeval to 1780
English 241, British Literature II: 1780 to Contemporary
English 242, American Literature I: 1620 to 1865
English 243, American Literature II: 1865 to Contemporary

III. One of the following diversity or world literature courses:

- English 162, Gender and Literature
- English 164, American Indian Literature and Cultures
- English 165, Readings in Race and Gender
- English 210, African American Literature
- English 255, Postcolonial Literature

IV. One of the following Great Figures courses:

- English 300, Great Authors
- English 301, Chaucer
- English 303, Milton and Moral Choice: His Age and Ours
- English 304, Shakespeare

V. Three additional 300 level English courses

VI. English 499, Capstone: Advanced Literature Seminar

Required Support Courses (Required for primary majors only)

Completion of a Modern Language through 202

Students seeking education certification must take English 305 and English 319 to fulfill two of the three electives in part V. Students seeking certification must take either English 240 or English 304.

Professional English Minor (24 credits)

English 211, 212, Introduction to Literary Study I, II
English 305, Advanced Exposition and the Rhetorical Tradition
English 319, Introduction to Linguistics
Two courses from the following: English 210, 243, 255, 314, at least one of which must be either 210 or 255.

Liberal Arts English Minor (24 credits)

At least two 300-level courses in English.
Four additional English courses, no more than two of which may be at the 100-level.

Writing Major (40 credits)

Bachelor of Arts

Learning Outcomes for Writing

Upon successful completion of major requirements students will be able to:

1. Develop and demonstrate the ability to use their own unique writing process effectively.
2. Demonstrate the ability to create effective, final texts in multiple genres.
3. Interpret advanced theoretical approaches to understanding the principles and practices of writing in genres of their specialization.

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4. Evaluate how their own writing is situated within both literary traditions and larger cultural contexts.
5. Apply writing skills to professional careers related to writing and publishing.

Core Courses:

- I. Any three of the following foundational level writing courses: (12 Credits)
 - English 190, Introduction to Creative Writing
 - English 206, Fiction Writing
 - English 207, Poetry Writing
 - English 208, Creative Nonfiction Writing
 - English 209, Playwriting
 - Communication 227, Technical Writing in Organizations
- II. English 211 or English 212, Introduction to Literary Study I, II
- III. Any two of the following advanced level courses: (8 Credits)
 - English 305, Advanced Exposition and the Rhetorical Tradition
 - English 306, Advanced Fiction Writing Workshop
 - English 307, Advanced Poetry Writing Workshop
 - English 308, Advanced Creative Nonfiction Writing Workshop
 - Communication 275, Feature Writing
- IV. Any additional English literature course at 200 or 300 level
- V. English 380, Internship
- VI. English 496, Writing Capstone: Advanced Revision and Writing for Publication (2 Cr)
- VII. English 497, Guided Senior Thesis (2 Cr)

Required Support Courses

- A. Completion of a Modern Language through 202
- B. One of the following:
 - Option 1**
 - Any two additional 200 or 300 level English courses (at least one of which must be literature).
 - Option 2**
 - Completion of any non-English minor to be approved in consultation with Writing Major advisor.
 - Option 3**
 - Any three additional 200 or 300 level non-English courses which do not satisfy any other degree requirement and which have been selected and approved in advance through consultation with advisor.

Writing Minor (24 credits)

The same course options as indicated for the major but outlined as follows:

Foundational Writing Level	12 credits
Three of the listed/selected foundational level writing courses	
Advanced Writing Level	4 credits
One of the listed/selected advanced level writing courses	

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- Support Courses** **8 credits**
 Any two additional electives of literature or writing courses
 at 200 level or higher
- 140. Introductory Language Skills for Liberal Studies** **4 credits**
 An intensive review of the basic skills required by a Liberal Arts education—reading, writing and critical thinking. (Enrollment by assignment only.) (*Fa, Su*)
- 162. Gender and Literature** **L4 4 credits**
 In this course, students will interrogate literature's role in shaping cultural constructions of gender; in addition, this course will acquaint students with the questions, critical conversations and controversies that dominate contemporary gender studies. (*Sp, Su*)
- 164. American Indian Literature and Cultures** **4 credits**
 An introduction to the study of American Indian literature and cultures, representing select geographical locations, through literature, film, and primary sources.* Students will examine the importance of storytelling in reflecting, maintaining, and shaping tribal cultures, identities, histories, and traditions. *Course texts will represent a selection of geographically diverse American Indian cultures that will always include a Great Lakes Indian tribe to promote understanding of local cultural diversity. (*Sp*)
- 165. Readings in Race and Gender** **L4 4 credits**
 An approach to gender issues using the perspective of race. This courses uses seminal texts in minority and women's literature to explore the origins of sexism and racism in society, their similarities and differences, and their impact on individuals as depicted in narrative art. Formerly WST101. (*Fa*)
- 170. Writing Seminar** **4 credits**
 Through critical reading – and with special attention to language, audience, purpose and structures – students develop effective approaches to writing. (*Fa, Sp, Su*)
- 190. Introduction to Creative Writing** **4 credits**
 In this workshop, students will learn the conventions of three major genres of creative writing—fiction, non-fiction and poetry—as they develop their own process of creating these texts. This course is designed as an ideal introduction to creative writing and the workshop format for those students who are curious about, yet perhaps unfamiliar with, the area. (*Fa*)
- 206. Fiction Writing** **4 credits**
 By studying master works of short fiction selected from contemporary authors and by participating in writing workshops, students will work to develop and refine their skills of writing fiction. (*Sp, odd years*)
- 207. Poetry Writing** **4 credits**
 In this workshop, students will learn the conventions of poetry writing by studying master works of poetry and writing their own poems. (*Fa, even years*)
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- 208. Creative Nonfiction Writing** 4 credits
This workshop will focus on multiple forms of writing that fall into the broad category of creative non-fiction, such as literary journalism, the essay, nature writing, and others. Students will read master works and practice their skills in their own non-fiction assignments. (*Fa, even years*)
- 209. Playwriting** 4 credits
Students will read contemporary playwrights to familiarize themselves with the practices and principles of playwriting. Workshops will focus on mastering those principles by writing new, original plays. Selected scripts will be eligible to receive either a staged reading or a limited production with the theatre arts program. (*Fa*)
- 210. African American Literature** L4, L7 4 credits
Students will read and respond to a variety of African-American literature - novels, poems, plays, autobiographies, short stories, and commentaries. The goal is that students will be able to write thoughtfully about the ethics and aesthetics of these works, and will more fully appreciate and understand the relationship between literature, history, and cultural values. (*Fa*)
- 211. Introduction to Literary Study I: Poetry** L5 4 credits
By examining numerous classic and contemporary examples, students will consider how poems are constructed to achieve their meanings. Numerous poetic elements and forms of analysis will be defined and discussed, and students will have the opportunity to analyze poetry in discussions and in writing. (*Fa*)
- 212. Introduction to Literary Study II: Short Fiction and Drama** L5 4 credits
This course teaches students to originate questions about literature and to formulate strategies to answer those questions. In addition to reading a wide variety of authors, students will have practice with using various methods of literary analysis. (*Sp*)
- 222H. Playing Crazy: Cultural Constructions of Madness** L3, L7 4 credits
An interdisciplinary exploration of the ways in which cultural institutions like the medical and legal establishments and organized religion shape our understanding of concepts like madness, eccentricity, and the normal. (*Fa, even years*)
- 225. South Africa: Culture and History of the Rainbow Nation** L4, L7 4 credits
This course uses the lens of literature with which to explore in depth the political and historical complexities of this rich and diverse country.
- 240. British Literature I: Mediaeval to 1780** 4 credits
Course content focuses on major movements, authors, and texts in English Literature, beginning with the works of early Anglo-Saxon writers and continuing through the mid 18th century. (*Fa*)

- 241. British Literature II: 1780 to Contemporary** 4 credits
Course content focuses on major movements, authors, and texts in English Literature, beginning with the works of the late 18th century and continuing through the present day. (*Sp*)
- 242. American Literature I: 1620 to 1865** 4 credits
Course content focuses on major movements, authors and texts from the early 1600's to the Civil War with particular attention to their contributions to defining American values and identities. (*Fa*)
- 243. American Literature II: 1865 to Contemporary** 4 credits
Course content focuses on major movements, authors, and texts in American Literature from the end of the Civil War to the present day. (*Sp*)
- 255/255H. Postcolonial Literature** L4, L7 4 credits
Literature of indigenous world cultures (non-Western-Eurocentric literature), to consider relationships between place and cultural identity, constructions of cultural difference, relationships between cultures, and operations of domination and resistance. The course also looks at the roles writers play in establishing or reestablishing cultural identity and addresses issues of ethics and morality in crossing cultures. (*Fa, Sp, Su*) (*255H: Fa, odd years*)
- 298/398. Independent Study** 1-4 credits
Prerequisites: Junior standing, approval of the divisional dean and consent of the instructor.
- 300. Great Authors** 4 credits
Intensive study of a body of work by an author deemed "great" by scholars and critics. This study will include relevant critical and biographical readings and discussion of what, ultimately, makes the author "great." (*Fa, odd years*) Prerequisite: Junior standing or consent of the instructor.
- 301. Chaucer** 4 credits
An exploration of the art and literature of the Middle Ages, with particular attention to the ways in which politics and religion shaped the content and vision of the mediaeval literature. (*Sp, odd years*) Prerequisite: Junior standing or consent of the instructor.
- 303. Milton and Moral Choice: His Age and Ours** 4 credits
Study of John Milton's poetry and prose, supplemented by other seventeenth century writers, concentrating on issues of the nature of Good and Evil, Moral Choice, Free Will, Guilt and Innocence, Gender, Desire, War, and Censorship. Discussion focuses on how these issues represent some of the most pressing anxieties of Milton's time and our own. (*Fa, even years*) Prerequisite: Junior standing or consent of the instructor.
- 304. Shakespeare** 4 credits
Intensive study of representative histories, comedies, tragedies and late plays. (*Sp, even years*) Prerequisite: Junior standing or consent of the instructor.

305. Advanced Exposition and the Rhetorical Tradition 4 credits
Students will study classical rhetoric in order to understand its tradition and purpose and then use those concepts to analyze contemporary non-fiction. (*Fa*)

306. Advanced Fiction Writing Workshop 4 credits
Students in this workshop will focus more specifically on the foundational skills they studied in English 206. Readings will focus on understanding and analyzing the conventions of fiction, such as dialog, narration, theme, language and character, and using that knowledge to write and revise short stories. (*Sp, even years*) Prerequisite: English 206.

307. Advanced Poetry Writing Workshop 4 credits
Study of the theory and art of poetry. Extensive practice in writing both traditional and experimental poems. Student work discussed and analyzed in writing workshop format. Attention to the formal and prosodic elements of poetry and to contemporary and historical poetics. (*Sp, odd years*) Prerequisite: English 207 or consent of the instructor.

308. Advanced Creative Nonfiction Writing Workshop 4 credits
Students will build on their foundational knowledge of the nonfiction genre by focussing on one form. Reading in the genre will be more challenging, and students will be expected to analyze the components of nonfiction writing and apply those to their own pieces. (*Fa, odd years*) Prerequisite: English 208.

309. Romantic and Victorian Literature 4 credits
Students will read major writers of the nineteenth century in their historical context with emphasis on major poetry and prose, including the novel, in relation to literary and cultural history. (*Sp, even years*) Prerequisite: Junior standing or consent of the instructor.

312. Modernism 4 credits
Students read major works of modernism in relation to prevailing cultural constructions of self, art, and the nature of reality. Students will also consider the causes and consequences of the widening gulf between highbrow literature and popular fiction. (*Fa, odd years*) Prerequisite: Junior standing or consent of the instructor.

313. Revising Italy: Travel Writing in the Italian Tradition - NCEP 313 4 credits
In this course, students will spend the semester exploring readings in the tradition of the Italian travel narrative, including "classic" works by authors such as Twain and James, as well as more contemporary examples. Students will work to practice their own skills in writing travel essays, and at the completion of the semester-study portion of the course, we will travel to Italy for approximately three weeks and explore several distinct regions of the country (city, country and sea) and reflect on how our experiences there have been shaped by the major authors we have read during the semester. At the completion of the off-campus portion of the course, students will produce their own major travel essay.

319. Introduction to Linguistics

4 credits

Students develop their own view on language policy, both in the classroom and in public arenas. Beginning with language production, students will piece together the fascinating story of human language development. In papers, discussions, and presentations, students will investigate social, psychological, and historical implications of language study. (*Sp, odd years*)

323. Renaissance English Literature

4 credits

Verse, prose and drama of the Early Modern Period, including works by Behn, Donne, Herbert, Jonson, Marlowe, Marvell, Milton, Spenser, Sidney and others. The course studies sixteenth and seventeenth century literary traditions as they reflect and construct culture, as well as the ways the Early Modern Period anticipates and resists issues such as power, gender, love and faith in our time. (*Sp, even years*) Prerequisite: Junior standing or consent of the instructor.

**326. The Age of Exuberance: Restoration and
Eighteenth Century British Literature**

4 credits

A study of the artistic and moral values of the important writers of literature from 1660-1800. Themes of the course include: the evolving attitudes toward the emotions, reason, and the imagination; the ideas of order and control; the art and effect of comedy; the impact of the new science and the emerging middle class; the changing definitions of man and nature. (*Sp, odd years*) Prerequisite: Junior standing or consent of the instructor.

380/480. Internship in English

4 credits

Work experience under professional supervision with opportunities to observe and question. Written report required. Only four credits may be applied toward completion of the major. Recommended as 10th course in the major. Prerequisite: Consent of the instructor.

**496. Writing Major Capstone: Advanced Revision and
Writing for Publication**

2 credits

The course will focus on advanced revision skills and include an exploration of the publishing markets in the students' chosen genre. Students will refine their skills by producing one major piece of writing of the quality needed for publication, or application to graduate school. Prerequisite: Senior standing as a writing major.

497. Guided Senior Thesis

2 credits

The thesis will be completed under the guidance of a selected faculty member. Students will create a unified thesis of revised and polished work that will be used for final assessment. Prerequisite: Senior standing as a writing major.

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499. English Major Capstone: Advanced Literature Seminar **4 credits**

In the capstone, students are expected to demonstrate mastery of the five English Program Learning outcomes. Course will be conducted as an advanced literature seminar and students will read primary as well as secondary materials in order to understand and insert themselves into a contemporary critical discussion. At the end of the seminar, students will submit a senior thesis project which demonstrates scholarly research, critical engagement and literary analysis. Note: Students will be expected to take the Comprehensive Reading Exam during the capstone course. (*Fa*) Prerequisite: Senior standing as an English major.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

EUROPEAN STUDIES

Kimberly Redding Associate Professor and Director

The European Studies Program offers a major (Bachelor of Arts) and a minor. The interdisciplinary major prepares students for a variety of opportunities in an ever-increasingly international professional community, by encouraging them to develop both a broad understanding of European culture and in-depth knowledge of a particular country/region.

Learning Outcomes for European Studies

Upon completion of the European Studies major, students will demonstrate the ability to:

1. Explain the recentness of European identity (and the historical developments preceding it).
2. Interact proficiently with a specific European culture (perform day to day tasks, conduct research in field of capstone, participate in informal discussion of current events and culture).
3. Appreciate the European arts as expressions of cultural identity and context.
4. Demonstrate functional proficiency in English and one other European language.
5. Articulate how the past informs contemporary intercultural relationships and conflicts.
6. Engage in informed dialogue about political and social issues confronting contemporary Europe.

European Studies Major Bachelor of Arts

Core Courses

I. Breadth Component

History 103, Roots of the Western World
History 104, Europe and the Modern World
European Studies Program 200, Workshop in European Studies (1 credit each of 4 semesters)
Politics 201, Politics of the World's Nations

II. Depth Component

One of the following:
History 227, Tudor-Stuart England
History 254, Topics in Medieval European History
History 328, Modern British Experience
History/Politics 329, The German Experience
Politics 301, Politics of Developed Nations

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Politics 365, Commerce and Politics in a Global Environment

European Studies Program 391, Special Topics

European Studies Program 400, Senior Capstone

III. Cultural Component

Three approved courses, with no more than one from each group counting toward the major:

- A. NCEP in Europe (or comparable independent study with approval of the European Studies Program coordinator)
- B. Music 156, Listening to Classical Music; Music 157, Beethoven; Music 231H, Fin de Siècle: Birth of the Modern Age in Paris and Vienna; or relevant study abroad
- C. English 301, Chaucer; English 309, Romantic and Victorian Literature; English 312, Modernism; English 323, Renaissance English Literature; English 326, The Age of Exuberance: Restoration and Eighteenth Century British Literature; or relevant study abroad
- D. Art 104, Art History: A.D. 1500 to early 20th Century; Art 300, Twentieth Century Art; or relevant study abroad
- E. Theatre Arts 215, European Theatre History and Literature to 1750; or relevant study abroad

IV. Study Abroad (1 semester)¹

Required Support Courses

I. Three of the following:

Economics 124, Principles of Economics - Microeconomics

Economics 125, Principles of Economics - Macroeconomics

Philosophy 207, History and Philosophy of Science

Philosophy 320, Ancient and Mediaeval Philosophy

Philosophy 321, Modern and Contemporary Philosophy

Politics 255, Contemporary Global Politics

(or approved alternatives taken during study abroad)

II. Minor in a European language other than English or demonstrated functional proficiency.²

European Studies Minor

I. Foundational Level

History 103, Roots of the Western World

History 104, Europe and the Modern World

¹ Three of the required courses will be taken during the semester abroad.

² "Demonstrated proficiency" means:

- A grade of C or better in a 300-level course.
- A letter of support from a foreign language instructor at a recognized educational institution.
- B2 level competency on TELC (The European Language Certificate) as established by CERF (Common European Framework of References for Languages: Learning, Teaching, Assessment).
- Level II UNlcert competency.
- Equivalent score on a language placement exam (often associated with study abroad programs)

European Studies Program 200, Workshop in European Studies (1 credit each of 4 semesters)

Politics 201, Politics of the World's Nations

II. Advanced Level

Two courses from among those listed under II and III (advanced and cultural components) in the European Studies Major. Students are advised to select *either* a political *or* a cultural focus, and choose advanced courses appropriately.

III. NCEP in Europe or equivalent educational experience

200. Workshop in European Studies

1 credit

A discussion-based course exploring the interrelated nature of political, historical, social and artistic realms of human experience within the European context. Current events, cultural developments, and individual experience provide thematic foci. The course also provides a forum through which to prepare for and reflect upon the required study abroad component of the European Studies major and minor. 4 semesters required of all European Studies majors and minors. Open to other students with permission of the instructor. (*Fa, Sp*)

391. Topics in European Studies

4 credits

This advanced course uses a comparative approach to explore contemporary topics impacting the European experience. A single theme (immigration, education, the arts, etc.) provides a common thread throughout the semester, while guided research in students' cultures and languages of study lead to a greater depth of understanding. (*Fa, even years*)

400. European Studies Capstone

4 credits

Intended to facilitate students' transition from college into the professional world, the Capstone requires a cross-disciplinary project dealing with some historical, social, scientific, political and/or artistic aspect of European thought. The project demonstrates a proficiency in at least two European languages and cultures, as well as a mature understanding of a topic relevant to those cultures/countries. A concrete transition plan to graduate study or career of choice is also required. (*Sp, even years*)

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
**HISPANIC HEALTH AND
HUMAN SERVICE**

Robert G. Black Assistant Director and Professor of Spanish
Claudette McShane Director

The Hispanic Health and Human Service (HHHS) minor is open to all students who are interested in combining knowledge and skills related to health and human services with an emphasis on serving Hispanic communities.

The interdisciplinary HHHS minor is an excellent companion minor for students who are pursuing careers in health (nursing, pre-med, physical therapy, health science, biology, chemistry) or human services (criminal justice, psychology, sociology, communication). It is also relevant to Spanish majors and minors who wish to acquire skills to work in health and human service fields.

The goals of the HHHS minor are to educate students who will:

1. Function competently in a professional capacity within a Hispanic/Latino health and human service delivery setting.
2. Recognize and respond to cultural characteristics that affect health and human service delivery in the Hispanic/Latino community.
3. Demonstrate ability to communicate effectively using Spanish terminology in reading, writing and speaking.

**Hispanic Health and Human Service Minor
(Major not offered)**

Courses required for the Minor

Spanish 201 and 202, Intermediate Spanish I, II

Communication 207, Intercultural Communication

Note: The research project that is a part of this course must focus on a specific Latino cultural group for this course to be accepted in this minor.

History 112, Introduction to Latin American History

Health Science 290, Cultural Influences in Hispanic Health Care

Spanish 290, Spanish for Health and Human Services

NCEP 318, Mexico: Culture, Health and Human Services

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

HISTORY

Charles A. Byler	Professor
Scott Hendrix	Assistant Professor
Abigail M. Markwyn	Assistant Professor
Kimberly A. Redding	Associate Professor
Nicholas Roberts	Visiting Assistant Professor

The History Program offers a major and a minor. The nine-course major has broad appeal for students who not only seek an education in the liberal arts, but who also realize the value of history for understanding themselves and their world. Because the study of history enhances analytical, communicative and critical thinking skills, and because our courses often encourage an interdisciplinary approach, a history major prepares students for careers in research, public service, education and/or the private sector, while also offering a strong foundation for advanced study.

Learning Outcomes for History

Upon successful completion of major requirements students will be able to:

1. Employ tools of historical analysis such as cause and effect, sequence and change over time to explain past experiences and developments.
2. Define a historical question and use appropriate methodologies to develop and evaluate possible answers.
3. Find evidence and evaluate primary and secondary sources to form sustainable conclusions in a well-argued paper.
4. Articulate and/or resolve conflicting interpretations and explain the changing nature of historical inquiry.
5. Communicate original, convincing ideas in well-organized oral and written formats.
6. Identify and explain central themes and problems of the Western World.
7. Identify and explain central themes and problems of a non-western culture.

History Major Bachelor of Arts

Core Courses

- I. Three courses, with one course in each area, from the following:
 - A. History 103, Roots of the Western World
History 104, Europe and the Modern World
 - B. History 105, America to 1877
History 106, America since 1877
 - C. History 108, Understanding Our Contemporary World
History 110, The History of Modern China
History 112, Introduction to Latin American History

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- II. History 200, Workshop for Historians
- III. Two courses at the 200 level from the following:
 - History 203, The American Civil War
 - History 210, History of American Foreign Relations
 - History 213, Women in American History
 - History 224H, The World since 1945
 - History 227, Tudor - Stuart England
 - History 254, Topics in Medieval European History
 - History 291, Topics in History
- IV. Two courses at the 300 level from the following:
 - History 301, The Forging of a Nation: The Colonial and Revolutionary Experience
 - History 303, The American Civil War
 - History 305, Recent America
 - History 328, The Modern British Experience
 - History 329, The German Experience
 - History 391, Topics in History

All 300-level classes are conceived as research courses in which the major focus will be on research methodology and utilization of primary sources to produce a work of serious scholarship.
- V. History 499, Capstone: Senior Seminar for Historians

Required Support Courses (Required for primary majors only)
Completion of a Modern Language through 202

History Minor

- I. Three courses, with one course in each area, from the following:
 - A. History 103, Roots of the Western World
 - History 104, Europe and the Modern World
 - B. History 105, America to 1877
 - History 106, America Since 1877
 - C. History 108, Understanding Our Contemporary World
 - History 110, The History of Modern China
 - History 112, Introduction to Latin American History
- II. Three additional courses at the 200- and 300-course levels. One of those three courses must be a 300-level research course and not all of them may be taken in United States History.

Teacher Certification

The history program recommends that students majoring in history who seek certification to teach at the early adolescence through adolescence (formerly 6-12) level should complete the requirements for the Broad Field Social Studies license. Please contact a program advisor regarding these requirements.

The state of Wisconsin requires content area examinations (Praxis II) in order to receive certification to teach at the early adolescence through adolescence level and to adequately

demonstrate competence. For this reason, students seeking to teach history at this level are urged to take History 103, 104, 105, 106 and 108.

103. Roots of the Western World L6 4 credits
This survey course traces the Western experience from our classical heritage to the French Revolution. It examines the major political, social, economic and religious institutions which worked to shape the world we live in today. (*Fa, Sp*)

104. Europe and the Modern World L6 4 credits
This survey course complements History 103 by exploring ideas and events that have shaped European society and Europe's relations with other parts of the world since the French Revolution. (*Fa, Sp*)

105. America to 1877 L6 4 credits
A survey of American History from settlement through the Civil War and Reconstruction. (*Fa, Sp*)

106. America since 1877 L6 4 credits
A study of the American experience since Reconstruction. (*Fa, Sp*)

108. Understanding Our Contemporary World L4 4 credits
An examination of non-western societies from 1500, their development, their responses to the West, and their contributions to the making of the modern world. (*Fa*)

110. The History of Modern China L4 4 credits
This course examines Chinese history and culture with an emphasis on China in the 19th and 20th centuries. Specific attention is given to China's reformers and revolutionaries and their attempts to transform Chinese political, economic, and social institutions. (*Sp, even years*)

112. Introduction to Latin American History L6 4 credits
A thematic survey that focuses on the historical roots of prominent contemporary issues in Latin America such as poverty, racial conflict, foreign influences and cultural mixing. To explore these themes the class studies and discusses the rich cultural production of Latin America including their literature, visual arts, and cinema. (*Sp*)

200. Workshop for Historians 4 credits
This course prepares students for independent research in 300 level courses, the capstone, and beyond. Students discuss and apply tools, methods and interpretative approaches used in historical research. (*Sp, even years*)

HISTORY

202WW. The Iron Brigade of the West

L6

4 credits

The Iron Brigade of the West was one of the most celebrated organizations of the Union Armies during the Civil War. Made up of the 2nd, 6th, 7th Wisconsin, 19th Indiana and 24th Michigan, it was the only all-Western brigade in the East and gained the terrible distinction of suffering the highest percentage of deaths in battle. This course examines the beginnings of the role of citizen-soldiers in American culture and how the concept evolved from idealistic "Minute Men" to today's modern volunteer army. Prerequisite: History 105 or permission of Social Sciences Area Chair.

203/203H/203WW. The American Civil War

L6

4 credits

Examines the multiple origins of the American Civil War and the two cultures swept up in the conflict. Traces the political, social, diplomatic and military history of the war years. (Fa) Prerequisite: History 105 or permission of Social Sciences Area Chair.

204 WW. The Iron Brigade in the Wilderness

L6

4 credits

This course involves using evaluation techniques of today's military to examine the effectiveness of a military organization. It concerns the role of the Iron Brigade of the Union Army in the fighting under U.S. Grant at the Battle of the Wilderness in 1864. After examining the brigade's part in the pivotal battle, students write a final paper using a modern U.S. Army evaluation guide to grade the brigade's overall performance. Prerequisite: History 105 or permission of Social Sciences Area Chair.

210. History of American Foreign Relations

4 credits

A historical survey of American foreign policy from colonial times to the Cold War. (Sp, even years)

213. Women in American History

4 credits

A comprehensive investigation of the shared past of women in America. Specific attention is given to women's distinctive intellectual and social accomplishments and their common efforts to create a culture of their own. (Fa, even years)

224H. The World since 1945

L4

4 credits

An overview of major themes and conflicts that have shaped the world since the end of World War II. Students use primary documents, autobiographies, oral histories and other sources of their own choosing to examine the Cold War, the developing world, genocide and other topics. Peer teaching encourages students to pursue their own interests. (Fa, even years) Prerequisite: Honors student or permission of instructor.

227. Tudor-Stuart England

4 credits

A study of English life during a period of dramatic change. From 1485 to the Glorious Revolution of 1688, England was remarkably transformed by the triumph of Protestantism, capitalism, parliamentary government and successful expansion overseas.

254. Topics in Medieval European History**4 credits**

This reading seminar typically examines Western Europe during the Middle Ages. The period from 500 to 1500 is studied for its own sake as well as for its contributions to the making of the modern world.

280. Internship in History**2 - 4 credits**

An opportunity for majors to earn elective credit for work experiences related to history. Examples of potential internships include: research work at local historical societies, museum experience at Old World Wisconsin, work in public history, in non-profit organizations, or with various government agencies. Other work-oriented experiences may be designed by the student with the approval of the instructor. Internship credits will apply toward the degree but not toward the history major. The work is S/U graded, requires the consent of the instructor, and has a prerequisite of junior or senior standing. (*Fa, Sp*)

291/391. Topics in History**2 - 4 credits**

Intensive investigations of special subject matter. Recent topics include: Britain and Ireland; World War II: Experiences and Legacies; America in the 1960s. Topics courses may be offered also at the 300 research course level. Students may take more than one of these topic courses. (*Fa, Sp*) Prerequisite (for 300-level): Junior standing or consent of the instructor.

298/398. Independent Study**2 - 4 credits**

Generally permitted only in areas where the student has some background. (*Fa, Sp*) Prerequisite: Approval of the divisional dean and consent of the instructor.

**301. The Forging of a Nation: The Colonial and
Revolutionary Experience****4 credits**

Beginning with an investigation of the political, socio-economic, intellectual and religious forms which shaped our nation, this course concludes with an examination of the American Revolution and the achievement of the Constitution, the central events in our history. (*Sp, even years*) Prerequisite: Junior standing or consent of the instructor.

305. Recent America**4 credits**

A comprehensive examination of significant themes in the recent American past with particular attention to the interplay among political, economic, intellectual, cultural and social factors. (*Sp, odd years*) Prerequisite: Junior standing or consent of the instructor.

328. The Modern British Experience**4 credits**

This course examines the British achievement in the 19th and 20th centuries. It investigates the basis for British world domination and the reasons for Britain's recent decline from that position of world leadership. (*Sp, even years*) Prerequisite: Junior standing or consent of the instructor.

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329. The German Experience

4 credits

A research-oriented course examining German history from the 18th century to the present. Emphasis is placed on the process of unification, the Nazi era, the GDR and unification. Independent research allows students to explore a specific topic using primary and secondary sources. Also offered as Politics 329. (*Fa, odd years*) Prerequisite: Junior standing or consent of the instructor.

495. Kennan Seminar

1 credit

This course provides our Kennan Scholars with the opportunity to discuss historical literature with history faculty in a small group setting. This is an S/U graded course. (*Fa, Sp*) Prerequisite: Open only to Kennan Scholars.

499. Capstone: Senior Seminar for Historians

4 credits

This course requires students to produce a high-quality research paper based largely on primary sources and to formally present their work before other students and the history faculty. Students will also complete a portfolio including a representative sample of their previous written work in history courses, and prepare an intentional plan for their transition from Carroll to a career and/or further education. (*Fa*) Prerequisites: History 200 and one 300-level research course.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
**MODERN LANGUAGES
AND LITERATURES**

Robert G. Black	Professor
Elena M. De Costa	Associate Professor
Marie Fossier	Instructor

Global interdependence is an indisputable factor in our time. The degree of understanding, tolerance, and cooperation among nations of diverse cultures and political philosophies will determine the fate of the world. It is also clear that within the United States linguistic fluency in more than one language can enhance one's effectiveness in the professions, business, the non-profit sector, and government. Within the framework of a liberal arts education, the program in modern languages and literatures provides students with direct linguistic contact with a culture different from their own. A culture expresses itself primarily through its language and its literature, and to comprehend another's, one must be able to communicate with the peoples of that culture. As a general rule, courses are conducted in the target language. All majors should spend a summer, semester or year abroad.

To begin in any course other than 101 in Modern Languages, students need to take the placement test in French, German, or Spanish prior to the start of the semester. Placement tests will also be administered during the first weeks of classes, and placement can be changed. Any student who needs the placement test at other times should contact the program faculty to arrange a time for administration of the test. Please consult program faculty for guidance in registering for the first language course.

Either placement into a course numbered 301 or higher in any of the three languages, or completion of French 202, German 202 or Spanish 202 will demonstrate competency in that language and will satisfy the language requirement for the Bachelor of Arts degree.

A student enrolled at Carroll in a degree program, who has completed work in French, German, or Spanish language courses in high school and then enrolls in the appropriate course at Carroll (as determined by the program) and completes that course with a grade of A, AB, or B will receive credit toward graduation for the previously completed work. Therefore, a student who has completed two years of a high school language and enters the intermediate course in that language and meets the grade qualification will be awarded eight additional credits. If the student has completed four years in one language and enters the proper 300-level course and meets the grade qualification, he or she will be awarded 16 additional credits. This must be the student's first enrollment in an advanced college-level course. Special provisions are made for native and near-

MODERN LANGUAGES AND LITERATURES

native speakers of French, German, and Spanish. (Please see page 19 of this catalog for an explanation of the method by which retroactive credits in any of the languages may be earned.)

Students may choose to study abroad during a summer, semester, or full academic year by applying to the International and Off-Campus Programs Office. Recent graduates have studied in Costa Rica, Ecuador, Guatemala, France, Germany, Mexico, and Spain.

Teaching majors and minors consist of the specific modern language courses listed below plus (1) an immersion experience, e.g., New Cultural Experiences Program [NCEP] or study abroad, (2) successful completion of a language competency exam in the semester prior to the semester of student teaching, and (3) the requirements in the Teacher Education Program.

Modern Language Learning Outcomes

A student successfully completing a Spanish major at Carroll College:

1. Attains advanced-level speaking, listening, writing, reading proficiency through the required courses taken in the Spanish program.
2. Is able to communicate in written and spoken Spanish in a diversity of formal and informal situations with minimal linguistic errors.
3. Understands Spanish speakers from a variety of backgrounds and locales in diverse situations, as well as written materials in Spanish in a variety of formats.
4. Is knowledgeable regarding Hispanic culture, history, customs, major political and literary events and movements as well as contemporaneous social issues.
5. Participates in a wide range of academic, cultural, social, or community-service activities concerning the rich Hispanic presence in our surrounding communities.
6. Ideally, every student participates in study abroad experience, or when this is not feasible, participates in a department-approved immersion experience appropriate to an advanced level of proficiency in the target language.
7. Develops a knowledge base and a high level of critical thinking skills in an interdisciplinary context of historical, literary, political, social, and cultural frameworks of Spanish-speaking societies.
8. Applies the Spanish language to a diversity of professions and develops a vocabulary and discourse at an advanced level in at least one of the professions.

A student successfully completing a French or German Minor at Carroll College:

1. Attains intermediate/advanced to advanced-level speaking, listening, writing, reading proficiency as evidenced in the French or German program.
2. Is able to express her/himself in written and spoken French or German in most everyday situations with mistakes that do not hinder meaning.
3. Understands French-speaking or German-speaking individuals in most everyday situations, as well as written materials in French or German covering topics in various genres.

4. Is knowledgeable with regard to histories, cultures, customs, major political and literary events and movements, and contemporary society and issues in countries where French or German is the dominant language.
5. Has participated throughout her/his studies in academic, cultural or social activities off-campus, in and beyond the Carroll College and Waukesha communities.
6. Ideally, students successfully completing a French or German minor at Carroll College have a study abroad or substantial immersion experience in the target language.

Spanish Major (38 credits)
Bachelor of Arts

Core Courses

Spanish 201, 202, Intermediate Spanish I, II
Spanish 301, 302, Conversation and Composition I, II
Spanish 305, Spanish for the Professions
Spanish 307, Latin American Civilization
Spanish 308, Hispanic Civilization
Spanish 318, Topics in Hispanic Cultures, Literature, History, Politics
Spanish 401, Advanced Conversation (2 cr.)
One elective course in Spanish (Usually satisfied with Spanish 480 or Spanish 498)

Capstone Experience:

Spanish 480 or Spanish 498

Required Support Courses (Required for primary majors only)

History 103, 104 or 112
English 255
Religious Studies 106

Spanish Minor (22 credits)

Spanish 201, 202, Intermediate Spanish I, II
Spanish 301, 302, Conversation and Composition I, II
Spanish 307, Latin American Civilization, or
Spanish 308, Hispanic Civilization, or
Spanish 305, Spanish for the Professions (not available to teaching majors or minors)
Spanish 401, Advanced Conversation (2 cr.)

101, 102. Elementary Spanish I, II

4 credits each

A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the Spanish language. Weekly out-of-class discussion sections. Conducted primarily in Spanish. (*101-Fa, 102-Fa, Sp*)

201, 202. Intermediate Spanish I, II

4 credits each

Review of basic phonetic elements and syntax as an aid to improvement and expansion of good pronunciation and composition. Introduction to Hispanic cultures. Weekly out-of-class discussion sections. Conducted in Spanish. (*201-Fa; 202-Sp*) Prerequisites: Spanish 102 for Spanish 201, Spanish 201 for Spanish 202, or consent of instructor.

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290. Spanish for Health and Human Services

2 credits

Focus on health and human service vocabulary, language skills for professional communication, and cross-cultural awareness in order to communicate effectively, both formally and informally. Students participate in hands-on, experiential learning opportunities in the community. Conducted in Spanish. (*Sp*) Prerequisites: Spanish 202, or consent of instructor.

298/398. Independent Studies in Spanish

4 credits each

Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (*Fa, Sp*)

301, 302. Conversation and Composition I, II

4 credits each

Practice in conversation and composition with emphasis on new and technical vocabulary. Functional grammar review. Reading, discussion and interpretation of more challenging literary texts. Reinforcement of basic linguistic elements such as phonetics and syntax as an aid to further refinement of the four language skills. Conducted in Spanish. (*301-Fa; 302-Sp*) Prerequisites: Spanish 202 for Spanish 301, Spanish 301 for Spanish 302, or consent of instructor.

305. Spanish for the Professions

4 credits

This course introduces students to the vocabulary and discourse appropriate to the professions. It develops communicative skills for professional situations (speaking, listening, comprehension, reading, writing, translation, interpretation, and computer skills) and provides cultural and cross-cultural awareness. Students prepare oral and written reports. Conducted in Spanish. (*Sp*) Prerequisites: Spanish 301 or consent of the instructor. Spanish 302 recommended.

307. Latin American Civilization

4 credits

Lectures and discussion on Latin American cultural history and trends, particularly as they relate to the arts, political thought, and economics. Conducted in Spanish. (*Fa, alt. years*) Prerequisites: Spanish 302 or consent of instructor.

308. Hispanic Civilization

4 credits

Lectures and discussion on Hispanic cultural trends, particularly as they relate to the arts, political thought, and economic conditions. Topics will focus on social movements in Spain or Spain's impact on Latin America, the Caribbean, and the United States. Conducted in Spanish. (*Fa, alt years*) Prerequisites: Spanish 302 or consent of instructor.

318. Topics in Hispanic Cultures, Literature, History, Politics

4 credits

Focuses on a particular aspect of Hispanic culture, literature, history, or politics. Students analyze and discuss literary and/or historical and (socio)political texts. Includes topics on Spain, Latin America, and/or the Caribbean. Conducted in Spanish. May be repeated with change of topic. (*Sp*) Prerequisites: Spanish 307 or 308, or consent of instructor.

401. Advanced Conversation

2 credits

A panorama of customs, life styles, attitudes, and cultural achievements of the Spanish-speaking peoples today. Emphasis on informal conversation with individual interests and projects encouraged. Includes oral and written reports as well as grammar and syntax review. Conducted in Spanish. (*Sp*) Prerequisite: Spanish 307 or 308, or consent of instructor. (May be taken twice.)

480. Internship/Capstone Internship in Spanish

2-4 credits

Applications of foreign language and culture using language skills in professional settings. This course may also serve as a culminating capstone experience. Facilitates transition from college to career or graduate school through the creation of a résumé and portfolio, as well as experience with employment interviews and/or submission of application to graduate school. *S/U* graded. (*Fa, Sp*) Prerequisites: Spanish 307 or 308, 318 and senior standing.

498. Independent Directed /Capstone Study

2-4 credits

Intensive reading in a specific area of Spanish or Spanish-American literature or culture. Weekly conference conducted in Spanish. Eight credits maximum may apply toward degree. This course may also serve as a culminating capstone experience for seniors. Facilitates transition from college to career or graduate school through the creation of a résumé and portfolio, as well as experience with employment interviews and/or submission of application to graduate school. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (*Fa, Sp*) Prerequisites: Spanish 307 or 308, 318.

French Minor (20 credits)

French 201, 202, Intermediate French I, II
French 301, Conversation and Composition
French 307, French Civilization
One elective course in French

101, 102. Elementary French I, II

4 credits each

Introduction to French as a spoken and written language. Systematic acquisition of vocabulary and grammar, as well as basic phonetic elements to develop correct pronunciation. Written exercises, and regular practice in understanding and using spoken language. Initiation to French culture through elementary reading materials and discussion. Conducted primarily in French. (*101-Fa; 102-Sp*)

201, 202. Intermediate French I, II

4 credits each

Review of basic phonetic elements and syntax as an aid to improvement and expansion of good pronunciation and composition. Informal conversation. Basic grammar structures reviewed. Introduction to French and Francophone cultures. Conducted in French. (*201-Fa; 202-Sp*) Prerequisites: French 102 for French 201, French 201 for French 202, or equivalent.

MODERN LANGUAGES AND LITERATURES

298/398. Independent Studies in French

2-4 credits

Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (*Fa, Sp*)

301. Conversation and Composition

4 credits

Emphasis on active use of the language, and functional grammar review, including interaction in social and general conversations, vocabulary building, syntactic structures and sentence patterns. Constant focus on pronunciation and diction, with introduction to basic phonetic and linguistic principles. Reading of literary and cultural texts. Discussions of contemporary topics. Conducted in French. (*Fa*) Prerequisites: French 202 or equivalent.

307. French Civilization

4 credits

Acquaints students with the major events of French history, including the various artistic, cultural and social elements which have contributed to making France what it is today, in order to better understand the French, their customs and their lifestyle. Oral and written reports. Conducted in French. (*Sp, alt years*) Prerequisite: French 301, or consent of instructor.

318. Topics in French and Francophone Literatures

4 credits

This course is designed to address questions of culture, history, politics, art and thought through the study of French language/literature. Students will discuss, analyze and develop their own critical approach and ideas around the texts in class and through oral, written and research reports and papers. Topics are drawn from the literature of French-speaking Europe, Africa, and the Caribbean. Conducted in French. May be repeated with change of topic. Prerequisites: French 301 or consent of the instructor. (*Sp, alt years*)

German Minor (20 credits)

German 201, 202, Intermediate German I, II

German 301, Conversation and Composition

German 318, Topics in German Culture and Literature

One elective course in German

[Although not required, students are strongly encouraged to enroll in History 329, The German Experience.]

101, 102. Elementary German I, II

4 credits each

Basic phonetic elements are introduced as an aid to developing good pronunciation. Regular practice in understanding and using the spoken language. Written exercises and elementary reading materials aid in vocabulary building and discussion. Conducted primarily in German. (*101-Fa; 102-Sp*)

201, 202. Intermediate German I, II

4 credits each

Continued practice in comprehension, speaking, reading, and writing. Review of and elaboration in grammatical structures, composition, and vocabulary building serve as aids in the development of conversational ability. Growth in reading skills and cultur-

al enrichment produced through readings on contemporary German life. Conducted in German. (201-Fa; 202-Sp) Prerequisites: German 102 for German 201, German 201 for German 202, or equivalent.

298/398. Independent Studies in German

2-4 credits

Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

301. Conversation and Composition

4 credits

An advanced German language course, which provides continued practice in conversation and composition with emphasis on new vocabulary. This course includes functional grammar review. Readings and discussions of literary as well as non-literary texts introduce students to more complex topics in German life, history, and culture. Reinforcement of basic phonetic elements and syntax to further refine pronunciation and composition. Conducted in German. (Fa) Prerequisites: German 202 or equivalent.

318. Topics in German Culture and Literature

4 credits

This course surveys specific time periods and/or movements in German cultural history, including art, architecture, music, and literature. Students develop their ideas and improve their written and spoken communication skills through essays, oral reports, and a research paper. May be repeated with change of topic. Conducted in German. (Sp) Prerequisites: German 301, or consent of instructor.

498. Independent Directed Study

2-4 credits

Reading in a specific area of German literature, culture, or history. Weekly conferences conducted in German. Eight credits maximum will apply toward the degree. (Fa, Sp) Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the the instructor prior to registration.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

MUSIC

Timothy Cloeter	Assistant Professor
Larry D. Harper	Professor
Hugo J. Hartig	Professor

The Music Program offers professional degrees as a preparation for a variety of careers, including music performance, music education, and music business. The music program also offers a liberal arts degree as well as coursework and performance experience for students who wish a deeper understanding of music to be part of their education.

Learning Outcomes for Music

Students studying music will:

1. Be prepared to effectively contribute to the professional work of a musician in education, performance, and music business.
2. Understand and articulate the historical perspective of musical expression and the theoretical base upon which this expression rests.
3. Understand and articulate the skills for experiencing, both as an individual and as part of the group, the aesthetic experience of performance.
4. As a non-major, learn the skills and related knowledge necessary to experience the communication potential of art.

All majors must attend a specified number of concerts and recitals sponsored or approved by the music faculty for eight semesters; minors, four semesters. In addition, a proficiency in piano must be passed by all majors except liberal arts and music business majors. This competency should be completed by the end of the sophomore year. A voice competency is required of all instrumental music education majors. Acceptance into the performance emphasis requires a special audition.

For the Bachelor of Music Education degree, two half-hour recitals are required in successive years, usually during the junior and senior year. For the Performance Emphasis, two one-hour recitals are required in successive years, usually during the junior and senior year. The Liberal Arts Music degree requires a half recital in the final semester of study.

Each music degree has its own capstone course requirement that is to be completed in the final semester of coursework.

Performing organizations are open to all students by audition. Qualified students may also receive ensemble credit by performing in the Waukesha Symphony, the Waukesha Choral Union, or the Waukesha Area Symphonic Band.

Bachelor of Music Education

Students in the BME degree program must meet all requirements of the Secondary Education minor (except Education 100, Education 209, and Education 304) and meet state licensing requirements through enrollment in the Teacher Education Program at the college.

Core Courses

Applied Lessons (13 credits)
Ensemble (7 semesters required)
Music 100, Concert Music (7 semesters required)
Music 105, Class Piano I
Music 106, Class Piano II
Music 107, Class Piano III
Music 108, Class Piano IV
Music 111, Music Theory I
Music 112, Music Theory II
Music 113, 114, 213, 214 Aural Skills
Music 140, Foundations of Music Education
Music 141, Introduction to Education Workshop
Music 211, Music Theory III
Music 212, Form & Analysis
Music 241, Workshop: Education in a Multicultural Context
Music 303, Conducting I
Music 307, Practical Keyboard Harmony
Music 310, Music Technology
Music 311, 312, 313, Music History I, II, III
Music 470, Junior Recital
Music 471, Senior Recital

Instrumental Emphasis

Core Courses, plus

Music 117, Class Voice
Music 251, String Methods
Music 252, Percussion Methods
Music 253, Woodwind Methods I
Music 254, Woodwind Methods II
Music 255, Brass Methods I
Music 256, Brass Methods II
Music 305, Conducting II: Instrumental
Music 355, Instrumental Methods
Music 358, Wind Literature and Performance Practice
Music 405, Orchestration

Choral Emphasis

Core Courses, plus

Secondary Applied Instrument (3 credits)

MUSIC

Music 304, Conducting II: Choral
Music 323, Diction (English & German)
Music 324, Diction (French & Italian)
Music 353, Choral Methods
Music 357, Choral Literature and Performance Practice
Music 366, Voice Pedagogy
Music 405, Orchestration

General Emphasis

Core Courses, plus

Secondary Applied Instrument (3 credits)
Music 304, Conducting II: Choral, or Music 305, Conducting II: Instrumental
Music 354, General Music in the Schools
Music 359, Orff/Kodaly Methods

Music - Performance Emphasis Bachelor of Arts

Eight semesters of Music 100, Concert Music
Music 111, 112, Music Theory I, II
Music 113, 114, 213, 214, Aural Skills
Music 156, Listening to Classical Music
Music 211, Music Theory III
Music 212 (412), Form and Analysis
Music 303, Conducting I
Music 307, Practical Keyboard Harmony
Music 311, 312, Music History I, II
Eight semesters in a major ensemble
(Wind Symphony, Concert Choir, or Women's Ensemble)
(Piano performance majors may elect Music 190 as a major ensemble.)
Music 366, Voice Pedagogy, or two credits of
Instrumental Techniques (Music 251, 252, 253, 254, 255, 256)
Music 430, Vocal Literature
Applied Music
Major instrument (fifteen credits, including Music 497, Capstone: Music
Performance Emphasis)
Minor instrument (4 credits)
Music 470 and 471, Junior and Senior Recital
The following diction classes for the vocal performance major only:
Music 323 (English, German)
Music 324 (French, Italian)
Required Support Courses
Option 1
Completion of a Modern Language through 202 or
Option 2
History 103 or 104
Religious Studies 106
English 255

Music - Liberal Arts Emphasis
Bachelor of Arts

Eight semesters of Music 100, Concert Music
Music 111, 112, Music Theory I, II
Music 113, 114, 213, 214, Aural Skills
Music 156, Listening to Classical Music
Music 211, Music Theory III
Music 311, 312, Music History I, II
Applied Music (Nine credits including Music 499, Capstone: Liberal Arts Emphasis, in final semester)
Ensemble (eight semesters in Music 185, 187, 188)
Music 471, Senior Recital
Five credits of electives to be chosen from the following:
 Music 105, 106, 107, Class Piano
 Music 212 (412), Form and Analysis
 Music 303, Conducting I
 Music 304 or 305, Conducting II, Choral or Instrumental
 Music 310, Music Technology
 Music 323, 324, Diction
 Music 353, Choral Methods
 Music 355, Instrumental Methods
 Music 357, Choral Literature and Performance Practice
 Music 358, Wind Literature and Performance Practice
 Music 405, Orchestration
 Music 430, Vocal Literature

Required Support Courses

Option 1
 Completion of a Modern Language through 202 or
Option 2
 History 103 or 104
 Religious Studies 106
 English 255

Music - Business Emphasis
Bachelor of Science

Eight semesters of Music 100, Concert Music
Music 111, 112, Music Theory I, II
Music 113, 114, Aural Skills
Music 156, Listening to Classical Music
Music 310, Music Technology
Music 311, 312, Music History I, II
Music 251, 252, 253 or 254, 255 or 256, Instrumental Methods
Music 480, Music Business (Capstone course)
Applied Music: six semesters, at least 1 credit per semester
Ensemble: six credits

MUSIC

Required Support Courses (Required for all majors)

Mathematics 112, or Mathematics 140 or higher

Computer Science 107

All courses for one of the three Business minors

Music Minor

Four semesters of Music 100, Concert Music

Music 111, 112, Music Theory I, II

Music 113, 114, Aural Skills

Music 156, Listening to Classical Music

Applied Music (four credits)

Ensemble: four semesters, at least 1 credit per semester

Four additional elective credits from the 200-400 level (500 level courses do not qualify)

100. Concert Music

0 credits

Attendance at concerts and recitals sponsored or approved by the music faculty. Eight semesters required of all majors and four semesters required of minors. (*Fa, Sp*)

105, 106*, 107*, 108*. Class Piano

1 credit

Fundamental piano skills to establish basic piano proficiency. May be taken a maximum of four semesters. (Does not count toward major or minor.) *106, 107 and 108 need consent of instructor. (*105 & 107 — Fa; 106 & 108 — Sp*)

111. Music Theory I

3 credits

Study of the basic fundamentals of music, including rhythm and meter, keys, scales, intervals and triads. (*Fa*)

112. Music Theory II

3 credits

Study of basic part-writing, development of theoretical and analytical skills. (*Sp*)
Prerequisite: Music 111.

113, 114, 213, 214. Aural Skills I, II, III, IV

1 credit

This course is intended to be taken concurrently with the Music Theory sequence (Music 111, 112, 211, and 212). The goal and emphasis of the course is on developing the aural skills necessary for success in the performing or teaching fields of music. Written dictation of melodies, rhythms and harmonies will be expected, as well as singing melodies at sight. The four-semester sequence is graduated in difficulty.

117. Class Voice

1 credit

Class lessons to learn basic vocal skills. May be taken a maximum of two semesters. (*Fa, even years*)

140. Foundations of Music Education

2 credits

The purpose of this course in Music Education is to introduce students to the profession in a way that will give them focus and motivation in the rest of their academic

work. By understanding the role that music will play in the transformation of education in the future, students will become clear about why they are undertaking the curriculum of music study designed to result in mastery of the discipline. Students will gain a working knowledge of the Department of Public Instruction's Wisconsin Model Standards for Teacher Development and Licensure as well as the K-12 Standards in Music. Particular emphasis will be given to the role of schools within the society, curriculum development, assessment strategies, pedagogy, financial and legal aspects of schooling and governance in the public schools. (*Sp*)

141. Workshop: Introduction to Education**0 credits**

This one-day (8-hour) workshop is designed to introduce students to the philosophy and requirements of the Carroll College Teacher Education Program and the Wisconsin Department of Public Instruction (DPI). The Workshop provides students with a working knowledge of the Wisconsin Model Standards for Teacher Development and Licensure and the Guiding Principles of Carroll College's Education Department. It also introduces students to topics that connect schooling and society including the social context of schooling and teaching, curriculum, financial and legal aspects of schooling, and governance in schools. It also promotes self-reflection, critical thinking and the development of a teaching philosophy. (*Sp, even years*)

151. History of Jazz**L5****4 credits**

Origins and evolution of jazz to the present, emphasizing various performance styles and improvisational techniques. (*Sp*)

156. Listening to Classical Music**L5****4 credits**

This course is intended as an introductory course and focuses on the development of perceptive listening skills and a broad understanding of Western concert literature. (*Fa*)

157. Beethoven**L5****4 credits**

Designed for the general student, the course examines the life, stylistic development and importance of Beethoven within the context of the times in which he lived. (*Sp, odd years*)

158. Rock Music: Roots and History**L5****4 credits**

Designed for the general student, the objective of this course is to understand the origins, development, and significance of one of the most popular musical forms in the modern world. (*Sp*)

211. Music Theory III**3 credits**

A continuation of Music 112, this course presents chromatic harmony with particular emphasis in how it is used by composers in selected music literature. (*Fa*) Prerequisite: Music 112.

212(412). Form and Analysis**3 credits**

This course involves detailed harmonic and formal analysis of representative works from the Baroque through the present. (*Fa*) Prerequisites: Music 211, or consent of instructor.

MUSIC

231H. Fin de Siècle: Birth of the Modern Age in Paris and Vienna L5 4 credits

This interdisciplinary honors course traces the fine arts between 1885 and 1914. While concentrating on music and visual arts, the course also presents an intellectual, literary, and social portrait of Europe. (*Sp, even years*)

241. Workshop: Education in a Multicultural Context 0 credits

This one-day (8-hour) workshop is designed to satisfy the current DPI requirements for education in cultural diversity for K-12 certification in the state of Wisconsin. The Workshop on Education in a Multicultural Context provides students with an overview of multicultural education as it stands within our current society and educational system. It specifically focuses on how issues of race, ethnicity and gender impact choices made in the classroom. The workshop engages students in critical thinking about the theoretical, conceptual, and political opinions that fuel and influence the debate over multicultural education. (*Sp, odd years*)

251. String Methods 1 credit

Development of basic performance skills, maintenance methods, and materials for the teaching of strings in the public schools. Violin, viola, cello, and bass will be covered. (*Every third year beginning in Fa07*)

252. Percussion Methods 1 credit

Development of basic performance skills, maintenance methods, and materials for the teaching of percussion in the public schools. Snare and bass drums, timpani, drum set, all mallet instruments and auxiliary percussion will be covered. (*Every third year beginning in Sp08*)

253, 254. Woodwind Methods I & II 1 credit

This course is designed to provide students with the skills necessary to teach the woodwind instruments in large and small group settings in the public schools. Students will learn to perform on each of the major woodwind instruments. Woodwind Methods I will cover flute and the single reed instruments (clarinet and saxophone) whereas Woodwind Methods II will cover the more complicated double reed instruments (bassoon and oboe). Instruments will be provided for students' use during the course. (*253-every third year beginning in Fa08; 264-every third year beginning in Sp09*)

255, 256. Brass Methods I & II 1 credit

This two-course sequence is designed to provide students with the skills necessary to teach the brass instruments in large and small group settings in the public schools. Students will learn to perform on each of the major brass instruments. Brass Methods I will cover the high brass (trumpet and horn) whereas Brass Methods II will cover the lower brass (trombone, euphonium and tuba). Instruments will be provided for students' use during the course. (*255-every third year beginning in Fa09; 256-every third year beginning in Sp10*)

291/391. Topics in Music 2-4 credits

- 298/398. Independent Study in Music** 1-4 credits
Prerequisite: Junior standing, approval of the divisional dean and consent of instructor.
- 303. Conducting I** 2 credits
Fundamentals of conducting including baton technique, score reading and rehearsal procedures. (*Sp*) Prerequisite: Music 211.
- 304. Conducting II: Choral** 2 credits
(*Fa, even years*) Prerequisite: Music 303.
- 305. Conducting II: Instrumental** 2 credits
(*Fa, even years*) Prerequisite: Music 303.
- 307. Practical Keyboard Harmony** 1 credit
Practical keyboard facility, including harmonic progressions, modulation, figured bass realization, transposition and score reading. (*Fa*) Prerequisite: Music 211.
- 310. Music Technology** 2 credits
An overview of educational music software with hands-on experience. Integrating and planning software lessons into the existing music curriculum will be stressed. Both Mac and Windows are used. (Music education majors may use this course as a substitute course for Education 265.) (*Sp*)
- 311. Music History I: Early Music through the Baroque Period** 4 credits
Surveys Western music from Antiquity to the Classical period, with particular emphasis on music literature and identification of stylistic characteristics of each period. Prerequisite: Music 211 or consent of instructor. (*Sp, odd years*)
- 312. Music History II: Classic and Romantic Periods** L5 4 credits
Designed for the music major as well as the general student, this course traces the development of Western music from the Classical period through the Romantic period (1750-1900). Ability to read music required. Prerequisite: English 170. (*Fa, odd years*)
- 313. Music History III: The 20th Century** 2 credits
This course continues with the study of music history begun in Music 311 and 312, concentrating on 20th century style characteristics, major composers, "isms," forms, techniques, terminology, and actual music from 1900 until the present. Study of the social, philosophical, and political background against which all this music unfolded will also be a focus of the course. Prerequisite: Music 312 (*Sp08*)
- 323, 324. Diction** 1 credit
Develops a basic understanding of the International Phonetic Alphabet as applied to the mastery of foreign language pronunciation for singing. 323 is English and German diction and is a prerequisite for Music 324; 324 is French and Italian diction. (*323–Fa, even years; 324–Sp, odd years*)

MUSIC

350. Materials and Techniques of Elementary Music 2 credits
Fundamental music skills, methods and materials for the elementary classroom teacher. (*Fa, Sp, Su*)

353. Choral Methods 4 credits
Organization and administration of choral music curricula. Observation and participation in the classroom. Investigation of historical and contemporary philosophies of choral music education. (*Fa, odd years*) Prerequisite: Admission to the Teacher Education Program.

354. General Music in the Schools 2 credits
Organization and administration of general music curricula in grades K-12. Survey and application of European and American trends in teaching methodology and materials. Observation and participation in the classroom. (*Sp, odd years*) Prerequisite: Admission to the Teacher Education Program.

355. Instrumental Methods 4 credits
Explores methods and materials used in teaching instrumental music in grades K-12. Observation and participation in the classroom. (*Fa, odd years*) Prerequisite: Admission to the Teacher Education Program.

356. Folk and Classroom Instruments 1 credit
Development of basic performance skills, methods and materials for guitar, autoharp, recorder and Orff instruments in the classroom and concert setting. (*Fa, odd years*)

357. Choral Literature and Performance Practice 2 credits
This course provides students with broad knowledge of representative repertoire for all levels and sizes of ensembles from the 5th-grade choir to the professional ensemble. The course will introduce students to a viable philosophy of music and establish why the choice of quality repertoire in educational settings is of critical importance to the success of music teaching. Traditional interpretations of core repertoire will be studied through various recordings. Prerequisite: MUS211. (*Sp, odd years*)

358. Wind Literature and Performance Practice 2 credits
This course provides students with broad knowledge of representative repertoire for all levels and sizes of ensembles from the 5th-grade band to the professional wind ensemble. The course will introduce students to a viable philosophy of music and establish why the choice of quality repertoire in educational settings is of critical importance to the success of music teaching. Traditional interpretations of core repertoire will be studied through various recordings. Prerequisite: MUS211. (*Sp, odd years*)

359. Orff/Kodaly Methods 4 credits
This is a course designed to increase each student's knowledge and understanding of music teaching materials, methodologies, and techniques of teaching general music at the elementary school level using the methodologies of Orff and Kodaly. Systems of teaching developed by others, such as Dalcroze, will be studied and put into practice as well. Prerequisite: MUS354. (*Fa, odd years*)

366. Voice Pedagogy

2 credits

The study of voice production and how to recognize and solve vocal problems. Students have the opportunity to teach voice lessons under the guidance of the instructor. (*Fa, odd years*)

405. Orchestration

2 credits

A study of modern orchestral and band instruments; practical application through scoring exercises for various ensembles. (*Sp, odd years*) Prerequisite: Music 211.

430. Vocal Literature

2 credits

A study of literature available for the voice, including the art song and oratorio and operatic literature beginning with the Baroque period. (*Sp, even years*) Prerequisite: Music 211.

470, 471. Junior/Senior Recital

1 credit

This course is taken in conjunction with applied lessons in the semester in which the student is presenting a junior (470) or senior (471) recital, resulting in an applied lesson worth three credits for those semesters. Additional rehearsals outside of regular lessons are required.

480. Capstone: Music Business

3 credits

The capstone course for the music business major. This course is usually taken at White House of Music and includes all aspects of the music business including retail, instrument repair and operating private lessons as part of a retail store. Other experiences, depending on the student's interests, may be substituted.

497. Capstone: Music Performance Emphasis

2 credits

During the semester in which the senior lecture/recital is presented, students will enroll in 497 in lieu of the regular Applied Music number. Students will work with the applied teacher in the presentation of a public lecture/recital. This will include research, developing an ability to communicate with an audience, and demonstration of a high level of mastery of the voice/instrument. Prerequisite: Senior standing.

499. Capstone: Liberal Arts Emphasis

2 credits

During the semester in which the senior recital is presented, students will enroll in 499 in lieu of the regular Applied Music number. Students will work with the applied teacher in the presentation of a public recital. This will include research and development of the ability to communicate clearly in writing, with the eventual goal of writing appropriate program notes for the recital. Further, demonstration of a high level of mastery of the voice/instrument is expected. Prerequisite: Senior standing.

Applied Music

Individual instruction is available for voice, piano, organ, strings, winds and percussion for one semester credit or two semester credits. See the section on Applied Music Fees (charged in addition to full tuition) in the current catalog. (*Fa, Sp*)

161. Violin	168. Organ	175. Horn
162. Viola	169. Voice	176. Trumpet
163. Cello	170. Flute	177. Trombone
164. Bass	171. Oboe	178. Tuba
165. Guitar	172. Clarinet	179. Percussion
166. Harp	173. Bassoon	
167. Piano	174. Saxophone	

Lesson times are arranged with the individual instructor. Lessons begin the second week of the semester and then follow the regular college calendar for classes. Missed lessons will not be made up except in case of illness or when excused by the instructor.

All students taking applied music lessons are expected to practice at least one hour a day for each lesson per week. Available practice rooms will be assigned to applied music students by the music program. Local students may practice at home and will be assigned a practice room only if requested.

Ensembles

Open to all students. Attendance at rehearsals and performances is required. Students who are not music majors or minors may earn a maximum eight credits in ensemble work, one credit per semester per ensemble. Ensemble credit may be interchanged among groups. (*Fa, Sp*)

185. Concert Choir **1 credit**

Prerequisite: Placement audition and approval of conductor.

186. Vocal Collective **1 credit**

Prerequisite: Placement audition and approval of conductor.

187. Women's Ensemble **1 credit**

Prerequisite: Placement audition and approval of conductor.

188. Wind Symphony **1 credit**

Prerequisite: Placement audition and approval of conductor.

189. Jazz Ensemble **1 credit**

Prerequisite: Placement audition and approval of instructor.

190. Chamber Music **1 credit**

Section A-Brass, Section B-Strings, Section C-Flute Choir, Section D-Woodwinds, Section E-Piano, Section F-Handbell Choir

MUSIC

191. Chamber Orchestra Prerequisite: Permission of the conductor.	1 credit
192. The Carroll Chorale Prerequisite: Permission of the conductor.	1 credit
193. Choral Union (community chorus) Prerequisite: Placement audition and approval of music faculty.	1 credit
194. Waukesha Area Symphonic Band Prerequisite: Permission of the conductor	1 credit

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
**POLITICS AND
INTERNATIONAL RELATIONS**

Jason Badura	Visiting Assistant Professor
Lynne L. Bernier	Associate Professor
Lilly Goren	Associate Professor
Lelan McLemore	Professor

Politics courses prepare students for a lifetime of informed and active citizenship while teaching the skills necessary to succeed in our knowledge-based, globalized economy.

International Relations is an interdisciplinary major that gives students a global perspective on political and economic problems, preparing them for careers in government, business and nonprofit sector. Students are encouraged to become fluent in a modern foreign language, and the faculty works to arrange for students to spend a semester or year of study abroad.

**Politics Major
Bachelor of Arts**

Learning Outcomes for Politics

Politics majors at Carroll College will develop a general knowledge of the following:

1. Major institutions (e.g., legislatures, executives, judiciaries, bureaucracies) and processes (e.g., voting, policy-making) of American governments.
2. The main theories used to understand the global arena as well as the impact of the phenomenon of globalization on global and national politics.
3. The major institutions (e.g., legislatures, executives, judiciaries, bureaucracies) and processes (e.g., voting, policy-making) found in diverse national political systems.
4. The structure and functions of political theorizing as well as an overview of the history of its occupations.
5. Important processes and agencies within public organizations and the ethical dimensions of public service.
6. Students develop strong communication skills (reading, writing, listening) as well as analytical and critical skills, which enable them to dissect and solve complex problems effectively.
7. Students develop the capacity to conduct independent research (identify a problem, design research strategies, access and interpret information from print and electronic sources, write and present a critical and analytical argument).

8. Students are strongly encouraged to develop an understanding of the world of work by completing an internship or by participating in an off-campus program that involves contact with governments or non-governmental organizations engaged in the public policy process.

Core Courses

Politics 141, Introduction to American Politics

Politics 201, Politics of the World's Nations

Politics 255, Contemporary Global Politics

Politics 275, Political Theory

At least one of the following:

Politics 330, Congress and the Presidency

Politics 332, Public Policy

Politics 335, Public Administration

Politics 344, Constitutional Law and Politics

At least one of the following:

Politics 301, Politics of Developed Nations

Politics 303, Politics of Developing Nations

Politics 365, Commerce and Politics in a Global Environment

Politics 399, Capstone

Three additional Politics courses

Required Support Courses (Required for primary majors only)

Option 1

History 108 or 110 or 112

Environmental Science 160, World Regional Geography

English 255

Mathematics 112 or

Option 2

Completion of a Modern Language through 202

Mathematics 112

Politics Minor

Politics 141, Introduction to American Politics

Politics 201, Politics of the World's Nations

Three additional Politics courses

**International Relations Major
Bachelor of Arts**

Learning Outcomes for International Relations

Upon completing the International Relations major students should:

1. Possess a global perspective on political, economic, legal, and social problems.
2. Be aware of the primary theoretical frameworks social scientists and other thinkers use to understand the global arena.

POLITICS AND INTERNATIONAL RELATIONS

3. Understand important state and non-state actors (multinational corporations, international and non-governmental organizations), their relations, and the issues confronting them in the global system.
4. Possess strong communications skills (reading, writing, and listening) as well as analytical and critical skills which enable them to dissect and solve complex problems effectively.
5. Possess the capacity to conduct independent research (identify a problem, design research strategies, access and interpret information from print and electronic sources, write and present a critical and analytical argument).

Core Courses

Politics 141, Introduction to American Politics

Politics 201, Politics of the World's Nations

Politics 255, Contemporary Global Politics

Politics 275, Political Theory

Politics 301, Politics of Developed Nations

Politics 303, Politics of Developing Nations

Politics 365, Commerce and Politics in a Global Environment

Politics 399, Capstone

Two of the following:

Economics 125, Principles of Economics II - Macroeconomics

Environmental Science 160, World Regional Geography

History 112, Introduction to Latin American History

History 210, History of American Foreign Relations

History 224H, The World Since 1945

Politics 382, Internship in International Relations

Required Support Courses (Required for primary majors only)

Option 1

History 103 or 104

Religious Studies 106

English 255

Mathematics 112 or

Option 2

Completion of a Modern Language through 202

Mathematics 112

International Relations Minor

Politics 141, Introduction to American Politics

Politics 201, Politics of the World's Nations

Politics 255, Contemporary Global Politics

Politics 365, Commerce and Politics in a Global Environment

Politics 301, Politics of Developed Nations, or

Politics 303, Politics of Developing Nations

POLITICS AND INTERNATIONAL RELATIONS

- 141. Introduction to American Politics** L3 4 credits
A broad survey of American national politics and Wisconsin state government. Politics majors should take this course before taking any other course in politics. (*Fa, Sp, Su*)
- 201 (142). Politics of the World's Nations** L4 4 credits
A survey of political systems that introduces students to fundamental concepts and their applications in many nations. The course examines public institutions (legislatures, executives, courts) and political processes (voting, policy-making). (*Sp*)
- 210H. The Origins of Democratic Thinking** L6 4 credits
An examination of democratic thinking in fifth century BC Athens through the study of some of its greatest literature. The course focuses on Thucydides' History of the Peloponnesian War and several works for the theater. For honors students. (*Sp, even years*)
- 230. Managing Nonprofit Organizations** 2 credits
A broad survey of the role of managers in nonprofit organizations. Topics include fund raising, board development, planning, financial management, personnel policies, and managing change. May not be counted toward a Politics major or minor.
- 231. Financial Management in Nonprofit Organizations** 2 credits
A survey of the major financial management concepts and techniques required for effective management of nonprofit organizations. Topics include fund accounting, budgeting, revenue forecasting, financial statements and reports, cash-flow management, portfolio management, and capital financing. May not be counted toward a Politics major or minor.
- 232. Resource Development in Nonprofit Organizations** 2 credits
An examination of the types of organizations served by fund raising, the major sources of funds, and the fund raising manager's role in planning and implementing fund raising strategies. May not be counted toward a Politics major or minor.
- 233. The Law and Governance of Nonprofit Organizations** 2 credits
This course examines laws affecting the operations of nonprofit organizations and the roles of boards of trustees in their governance. Topics include relations between trustee boards, professional managers, and program staff. May not be counted toward a Politics major or minor.
- 234. Critical Issues in Nonprofit Management** 1-4 credits
This seminar deals with nonprofit management and policy issues of current or continuing interest. Changing topics may be drawn from any area of nonprofit management. Course may be repeated for credit. May not be counted toward a Politics major or minor.

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- 255. Contemporary Global Politics** L3 4 credits
An analysis of the dynamics of global politics including such topics as states and non-state actors, foreign policy, conflict in the post Cold War world and the roles of power and morality. Much of this course will center on contemporary problems as they illustrate theories of international relations. (*Fa*)
- 275. Political Theory** L6 4 credits
A broad survey of the concerns, problems and achievements of recent political thought. Topics include democratic theory, African-American political thought, Feminist political theory, and post modernism. (*Fa*)
- 291/391. Topics in Politics** 4 credits
Focused study of a topic of special concern to political scientists. Changing topics may be drawn from any area of politics. Course may be repeated for credit.
- 298/398. Independent Study in Politics** 1-4 credits
Prerequisite: Junior standing, approval of divisional dean and consent of instructor. (*Fa, Sp, Su*)
- 301. Politics of Developed Nations** L4 4 credits
A comparative treatment of political systems in several advanced democratic nations. The course focuses on the policy problems that governments of developed countries face as they attempt to regulate "post-industrial" economies and societies. (*Fa, odd years*) Prerequisite: Politics 201 or consent of instructor.
- 303. Politics of Developing Nations** 4 credits
Through an examination of the political systems in a number of non-western countries in Africa, Latin America, Asia and the Middle East, this course studies the problems of political development in an environment of domestic and international challenges. (*Fa, even years*) Prerequisite: Politics 201 or consent of instructor.
- 329. The German Experience** 4 credits
A research-oriented course examining German history from the 18th century to the present. Emphasis is placed on socio-political developments and conflicts, as well as interactions among both state and non-state actors. Independent research allows students to explore a specific topic using primary and secondary sources. Also offered as History 329. (*Fa, odd years*) Prerequisite: Junior standing or consent of the instructor.
- 330. Congress and the Presidency** 4 credits
This course provides an understanding of the relationship between Congress and the presidency. Students will explore the different institutional responsibilities attached to Congress and the presidency and the ways in which these institutions have developed historically, how they are organized, the particular powers of each branch, and the way they operate in the policy arena. (*Sp, even years*)

332. Public Policy

4 credits

This course focuses on the formulation, implementation and evaluation of public policy. Emphasis is given to the variety of ways public goals are pursued by governments and to the role of intergovernmental relations and nonprofit organizations in shaping public policy. (*Sp, even years*)

335. Public Administration

L3

4 credits

A broad survey of the whole area of administrative politics and processes at the national, state and local levels while focusing on the work of public agencies and nonprofit organizations in implementing public policy. (*Sp, odd years*)

344. Constitutional Law and Politics

4 credits

A study of the interpretation of the United States Constitution by the Supreme Court; the role of politics on judicial interpretations and their influence in American government and society. (*Fa, even years*)

365. Commerce and Politics in a Global Environment

4 credits

Provides an overview of the global economy and its increasing importance for businesses and governments while helping students develop the skills necessary for analyzing current economic issues and trends. Topics include globalization, trade and international monetary policy, multinational corporations, international economics, and the north/south system. Also offered as Economics 365. (*Sp, odd years*)
Prerequisite: Economics 124 or 125 and Politics 255 or consent of instructor.

381. Internship in Politics

4 credits

Prerequisites: Senior standing and at least a 2.5 grade point average in courses in the major. S/U graded. (*Fa, Sp, Su*)

382. Internship in International Relations

4 credits

Prerequisites: Senior standing, completion of Politics 255 or equivalent, at least a 2.5 grade point average in courses in the major. S/U graded. (*Fa, Sp, Su*)

399. Capstone

4 credits

This course provides an overview of the disciplines of politics and international relations and familiarizes students with the central intellectual conundrums of these disciplines. Students will further develop their abilities to do research using contemporary information processing skills as well as improve their communication skills. (*Sp*)
Prerequisite: Senior standing in the Politics or International Relations major.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

RELIGION AND PHILOSOPHY

Kim Boykin	Assistant Professor
James Grimshaw	Assistant Professor
Kevin Guilfooy	Assistant Professor
Melvin Vance	Instructor

The Religion and Philosophy Program offers a major in religious studies and minors in religious studies and philosophy. The program provides a foundation for liberal education and prepares students to be citizens in a complex and pluralistic world.

The religious studies major provides an in-depth study of Christian traditions and a basic understanding of religious traditions such as Judaism, Islam, Buddhism, Hinduism and Native American traditions. The major prepares students for ministry, graduate school, or leadership in the community.

Religious Studies Major (36 credits) **Bachelor of Arts**

Learning Outcomes for Religious Studies

Upon successful completion of major requirements students should be able to:

1. Articulate how religion has the power to shape individual lives and social values.
2. Be conversant with the foundational texts, significant ideas, concepts and questions in the study of religions.
3. Demonstrate an in-depth knowledge of Christian traditions including critically reflecting on the Hebrew Bible, New Testament, Christian history and theologies.
4. Show basic understanding of a breadth of religious traditions including Judaism, Islam, Buddhism, Hinduism and Native American traditions.
5. Read texts critically and efficiently for relevant information.
6. Write thesis-driven essays supported by critically-considered evidence.
7. Use proficiently library research tools and religious studies research methodologies to construct papers, essays and class presentations.
8. Demonstrate listening and conversational skills necessary to consider a variety of religious perspectives.
9. Use these perspectives and skills to become a responsible citizen in a religiously plural world.

Core Courses

- A. Two introductory courses (100 level):
Religious Studies 106, Understanding Religion
Religious Studies 102, Introduction to the Hebrew Bible or Religious Studies 103,
Introduction to the New Testament
- B. Six intermediate courses (200 and 300 level); at least two must be from 300 level:
Two in Christian Tradition
Choose one from:
Religious Studies 230, Formative Christianity
Religious Studies 231, From Puritanism to Drive-In Churches
Choose one from:
Religious Studies 201, Jesus of Nazareth
Religious Studies 202, Religious Traditions in America
Religious Studies 210, Suffering and Hope
Religious Studies 291/391, Topics Courses
Religious Studies 310, Power, Politics and Pluralism in Biblical
Interpretation
Two in Religious Traditions
Religious Studies 215, Women in Religion
Religious Studies 306, Asian Religions
Religious Studies 316, Judaism, Christianity, and Islam
Two electives
Religious Studies courses, 200 level or above
Philosophy 206, Ethics
Philosophy 308, Philosophy of Religion
- C. One advanced course (400 level)
Religious Studies 499, Capstone Seminar

Required Support Courses (Required for primary majors only)

Option 1

Completion of a Modern Language through 202, or

Option 2

History 103 or 104
Politics 201
English 255
English 305

Religious Studies Minor (20 credits)

- Two introductory courses (100 level):
Religious Studies 106, Understanding Religion
Religious Studies 102, Introduction to the Hebrew Bible or Religious Studies 103,
Introduction to the New Testament
- One course in Christian Tradition
Religious Studies 201, Jesus of Nazareth
Religious Studies 202, Religious Traditions in America
Religious Studies 210, Suffering and Hope
Religious Studies 230, Formative Christianity
-

RELIGION AND PHILOSOPHY

Religious Studies 231, From Puritanism to Drive-In Churches
Religious Studies 291/391, Topics Courses
Religious Studies 310, Power, Politics and Pluralism in Biblical Interpretation
One in Religious Traditions
Religious Studies 215, Women in Religion
Religious Studies 306, Asian Religions
Religious Studies 316, Judaism, Christianity, and Islam
One elective in Religion or Philosophy, 300 or above

Philosophy Minor (20 credits)

Required Courses

Philosophy 101, Introduction to Philosophy
Philosophy 105, Introduction to Logic
Philosophy 206, Ethics
Two additional philosophy courses; at least one must be at the 300 level:

Religious Studies Courses

- 102. Introduction to the Hebrew Bible** L6 4 credits
An introduction to the history and literature of the Old Testament. The course includes a study of the historical and cultural traditions of the ancient Israelites and the use of archaeological, historical, and literary methods in studying the Hebrew Bible literature. (*Fa, Sp*)
- 103. Introduction to the New Testament** L7 4 credits
Introduction to the literature and history of the New Testament. The course includes the study of the Jewish and Greco-Roman historical backgrounds of Jesus and the earliest church and the use of historical, sociological, and literary methods to examine the New Testament writings. (*Fa, Sp*)
- 106. Understanding Religion** L4 4 credits
We can describe religion; we can compare our own experiences with one another; we can watch other people when they are being 'religious'; we can see films, listen to music, look at advertising and watch news reports to discover where religion shows up, but what does it take to actually define religion? To begin the task of defining religion in this course, we will consider what religious people do, including: creating rituals, reading sacred texts, making sacred spaces, using special language, behaving ethically and sometimes behaving violently. We will look at ideas and practices across religious traditions but this is not a course in religions of the world. Rather, it is an introduction to the big ideas and common practices that help define what religion is. (*Fa, Sp*)
- 201. Jesus of Nazareth** L7 4 credits
A study of Jesus in his first-century historical context as a Jew and in the different literary contexts of the New Testament (e.g. the Gospels, Paul, Revelation). The course will also include an examination of how Jesus is interpreted in today's global context (e.g. Africa, Latin America, Asia, and North America). (*Fa*)

202. Religious Traditions in America

L7 4 credits

A variety of religious traditions has played and continues to play important roles in our communities, small and large. This course focuses on the origins of contemporary religious traditions in the US, their basic beliefs, and their impact on life. The course includes presentations by local representatives of traditional faiths as well as more recent developments, and two required visits for participants' exposure to new religious experiences. (*Sp*)

210. Suffering and Hope

L4 4 credits

An in-depth examination of the theme of suffering and hope through a survey of foundational texts (i.e. Hebrew Bible, Deuterocanon, and New Testament) and contemporary theologies in the Christian tradition. Students will learn several major perspectives on suffering and hope, explore assumptions that are made regarding suffering, and examine the ethical implications of the different views of suffering. (*Fa, odd years*)

215. Women in Religion

L7 4 credits

In what religious traditions can women be considered "gentlemen"? How can the human created by God in Genesis 1 be bisexual? Why can't fifty million widows in India remarry? These are some of the questions we will answer in reading world religions through the lens of women's experience. In studying Hinduism, Islam, Buddhism, Christianity, Native American traditions and more, we will not only discuss the essential teachings of the religion but we will consider how women have changed those teachings and the backlash against them for it. (*Fa, even years*)

**230. Formative Christianity: The Development of Core
Christian Beliefs and Values from 100 to 1650 C.E.**

L6 4 credits

This course introduces students to the core beliefs and values of the main branches of Christianity (Eastern Orthodox, Roman Catholic, and Protestant) as these were developed in worship forms, spiritual disciplines, ethical practices, hagiographical and theological literature, creeds, council decisions, and confessions from 100 to 1650 C. E. The study of concepts and concerns from this formative period is background for the critical understanding of Christianity in the modern world. (*Fa*)

**231. From Puritanism to Drive-in Churches:
Christianity from 1650 to the Present**

L6 4 credits

Should the average person be able to read Scriptures for themselves? How did African slaves turn the Bible from a text promoting slavery to a text liberating them from slavery? Is Christian Science really Christian or science? Why did a Christian try to assassinate Hitler? These are some of the questions we will think about as we read our way from the age of Puritanism to last Sunday's New York Times (1650-present). This course will consider what theological and historical influences contribute to Christianity as practiced today by reading historical texts alongside Time, Newsweek, The Washington Post, The Chicago Tribune and contemporary religious thinkers. (*Sp*)

291/391. Topics in Religious Studies

4 credits

A study of a selected topic in religious studies that is not covered in regular course offerings. Different topics in the fields of Bible, theology, history, ethics and current issues in culture and religion will be offered.

RELIGION AND PHILOSOPHY

298/398. Independent Study

4 credits

A course for students who are interested in working with a faculty member on a specific area of study. Prerequisites: Junior standing, approval of divisional dean and consent of instructor. (*Fa, Sp*)

306. Asian Religions

L4

4 credits

In this course, students will explore the sacred literature, practices and cultures of Islam, Buddhism, Hinduism, Jainism, Sikhism, Confucianism, Taoism, and the religions of Japan. (*Fa, odd years*) Prerequisite: Jr. standing or consent of the instructor.

308. Philosophy of Religion

L4

4 credits

This is an advanced introduction to the main issues in the philosophy of religion. Topics that may be covered are the rationality of religious belief, cognitive experience of the divine, the compossibility of divine attributes, the efficacy of prayer, the problem of evil, and other issues that arise in philosophical theology. (*Sp, odd years*)

310. Power, Politics, and Pluralism in Biblical Interpretation

L7

4 credits

This class examines how the Bible has been interpreted to support certain positions regarding politics, class, race, gender, and sexual orientation. The class will explore how the Bible has been interpreted in global contexts and will focus in particular on how those in the United States have read and lived out the Bible through history. Topics may include slavery, roles of women, same-sex relations, class relations, post-colonialism, anti-Semitism, end-time beliefs, and religious cults. (*Sp, odd years*)

316. Judaism, Christianity, and Islam

L6

4 credits

In this course students will explore the foundational texts, histories, beliefs, and practices of the three western monotheistic religions: Judaism, Christianity, and Islam. An emphasis will be placed on learning each of the three traditions on their own as well as the variety of perspectives expressed within each tradition. A comparative study on several topics will also be included. Contemporary issues and conflicts involving these traditions will be explored. (*Sp, even years*)

362. New Testament Greek Tutorial

2 credits

Independent study with instructor. Specifically offered for those planning to attend graduate school in religious studies. Does not count toward major or minor. *S/U* graded. (*Offered when requested*)

364. Hebrew Tutorial

2 credits

Independent study with instructor. Specifically offered for those planning to attend graduate school in religious studies. Does not count toward major or minor. *S/U* graded. (*Offered when requested*)

380/480. Internship in Religious Studies

1-4 credits

An opportunity for majors to work in local churches and related institutions under faculty supervision. The program provides practical experience supported by study and reading. The student may choose to participate in the program for a semester or a year. Prerequisite: Consent of the instructor.

499. Capstone: Senior Seminar

4 credits

Seniors research and write a substantial research paper which demonstrates their competency in religious studies and their ability to incorporate general education skills. Students will also give an oral presentation of the paper to faculty and interested students. As part of the seminar, students are required to complete an intentional plan for their transition from undergraduate school to a career and/or to graduate/professional school. Prerequisite: Senior standing.

Philosophy Courses

101. Introduction to Philosophy

L6

4 credits

A historical introduction to the major fields of Western philosophy including logic, metaphysics, epistemology, and ethics. This course helps students better understand the world by studying significant interpretations of self, the world, and morality that have been offered by thinkers, past and present. (*Fa, Sp*)

105. Introduction to Logic

L1

4 credits

A study of the principles and methods of logical reasoning. The class will focus primarily on formal mathematical deductive logic but will also include principles of inductive logic and Aristotelian syllogistic logic. (*Fa*)

206/206H. Ethics

L7

4 credits

An introductory investigation of alternative systems for determining and justifying ethical values. The course explores both theories of conduct (What should I do?) and theories of character (Who should I be?) through an exploration of the contemporary significance of theorists such as Aristotle, Kant, and Mill. (*Fa, Sp, Su*)

207. History and Philosophy of Science

4 credits

A study of the philosophical foundations of science. The class will discuss the nature, purpose and methodologies of scientific inquiry starting with Aristotelian science and tracing the development to the modern period. The class will also discuss the nature of scientific proof, the evaluation of evidence for scientific claims, and the formation and evaluation of scientific theories. (*Fa, odd years*)

298/398. Independent Study in Philosophy

1-4 credits

Qualified students will undertake an independent study project. Prerequisites: Junior or senior standing, approval of the divisional dean and consent of instructor.

308. Philosophy of Religion

L4

4 credits

This is an advanced introduction to the main issues in the philosophy of religion. Topics that may be covered are the rationality of religious belief, cognitive experience of the divine, the compossibility of divine attributes, the efficacy of prayer, the problem of evil, and other issues that arise in philosophical theology. (*Sp, odd years*)

RELIGION AND PHILOSOPHY

320. Ancient and Mediaeval Philosophy L6 4 credits

An advanced survey of philosophical thought from the Pre-Socratics to Late Scholasticism. The course will trace the development of western philosophical thought and the seminal ideas of western civilization as found in the work of the leading thinkers of the ancient and mediaeval world. (*Fa, even years*)

321. Modern and Contemporary Philosophy L6 4 credits

An advanced survey of philosophical thought from the modern period beginning with Descartes through key 20th century and current philosophers. The course will trace the development of western philosophical thought and the seminal ideas of western civilization as found in the work of the leading thinkers since approximately 1600. (*Sp, even years*)

DIVISION OF HUMANITIES AND SOCIAL SCIENCES
**SOCIOLOGY AND
CRIMINAL JUSTICE**

Richard H. Coon	Associate Professor
Timothy J. Fiedler	Associate Professor
Robert J. Friebus	Associate Professor

Sociology is the study of social life and the social causes and consequences of human behavior. The major enables students to understand the impact of a variety of social forces, social interactions, values, beliefs, groups and social contexts. The major helps students better understand who they are and how communities, work settings and relationships shape their lives and in turn how students can have a greater impact in determining their future life-course.

The Criminal Justice major is designed to meet the needs of students considering a career in the criminal justice system, including law enforcement, law and the courts and corrections. Students will examine the criminal justice system and how that system operates within American society. The major has an interdisciplinary liberal arts focus, emphasizing social science knowledge as well as basic communication and intellectual skills. We offer courses that help students understand the structure and philosophy of the American criminal justice system including the dimensions and causes of crime and delinquency, theories of crime prevention and control, the history, nature and theories of law enforcement, the basis and operation of criminal courts, and the philosophies and practices of various correctional institutions and programs, including corrections in the community.

**Sociology Major
Bachelor of Science**

Learning Outcomes for Sociology

Upon successful completion of major requirements students will be able to:

1. Demonstrate an awareness of the scope and diversity of societal/cultural elements addressed by the field of sociology.
2. Use and apply sociological concepts and theoretical perspectives to make sense of their world.
3. Recognize and describe how institutional patterns and social structural forces shape many aspects of individual life.

Core Courses

Sociology 101, Introduction to Sociology
Sociology 308, Sociological Theory
Sociology 311, Methods of Social Research

SOCIOLOGY AND CRIMINAL JUSTICE

Sociology 399, Capstone in Sociology

Six elective courses in sociology

Required Support Courses (Required for primary majors only)

4 credits of computer science including Computer Science 107

Mathematics 112, Introduction to Statistics

Philosophy 207, History and Philosophy of Science

Sociology Minor

Sociology 101, Introduction to Sociology

Sociology 308, Sociological Theory or Sociology 311, Methods of Social Research

Three elective courses in sociology

Criminal Justice Major Bachelor of Science

Learning Outcomes for Criminal Justice

Upon successful completion of major requirements students will be able to:

1. Gain a basic understanding of the structure and philosophy of the criminal justice system.
2. Learn how American society impacts the criminal justice system.
3. Develop and utilize social science knowledge and skills to understand the components of the system.
4. Develop and practice critical thinking and communication skills as preparation for a possible career in criminal justice.

Core Courses

Sociology 102, Sociology of Social Problems

Sociology 103, Introduction to Criminal Justice

Sociology 211, Juvenile Delinquency, or Sociology 212, Criminology

Sociology 230, Fundamentals of Interviewing

Sociology 304, Introduction to Criminal Law, or Sociology 307, Corrections in American Society

Sociology 311, Methods of Social Research

Sociology 481, Capstone: Internship in Criminal Justice

Four elective courses from the following:

Communication 241, Communication and Conflict

Communication 350, Communication Law

History 305, Recent America

Psychology 201, Abnormal Psychology or Psychology 221, Life Span Psychology

Sociology 211, Juvenile Delinquency, or Sociology 212, Criminology (whichever is not taken as a part of the core above)

Sociology 213, Minority Group Studies

Sociology 220, Police in Society

Sociology 301, Social Change and the Future of Society

Sociology 303, Criminal Procedure, Evidence and Investigation

SOCIOLOGY AND CRIMINAL JUSTICE

Sociology 304, Introduction to Criminal Law, or Sociology 307, Corrections in American Society (whichever is not taken as a part of the core above)
Politics 335, Public Administration

Required Support Courses (Required for primary majors only)

4 credits of computer science including Computer Science 107
Mathematics 112, Introduction to Statistics
Politics 141, Introduction to American Politics

Criminal Justice Minor

Sociology 103, Introduction to Criminal Justice
Sociology 211, Juvenile Delinquency or Sociology 212, Criminology

Three elective courses from among the following:

Sociology 211 or Sociology 212 (whichever not taken from above)
Sociology 213, Minority Group Studies
Sociology 220, Police in Society
Sociology 303, Criminal Procedure, Evidence and Investigation
Sociology 304, Introduction to Criminal Law
Sociology 307, Corrections in American Society

101. Introduction to Sociology L3 4 credits

An introduction to sociological concepts, explanations, and research findings to enable students to better understand the society in which they live and their place in that society. Topics include: culture, inequality, social relationships, deviance, membership in groups and social institutions such as education, religion and the family. *(Fa, Sp)*

102. Sociology of Social Problems L3 4 credits

A survey and analysis of major problem areas in contemporary American society, including areas such as drug use and abuse, family issues, poverty, crime, delinquency, environmental issues and war. *(Fa, Sp)*

103. Introduction to Criminal Justice 4 credits

A survey of the history, structure, functions and operations of the primary components in the criminal justice system in the United States including law enforcement, courts and corrections. Includes an analysis of current issues such as discretion, sentencing practices, disparities in sentencing, and alternatives to incarceration. May not be counted toward a sociology major or minor. *(Fa, Sp)*

110. Cultural Anthropology L3, L4 4 credits

The study of literate and nonliterate cultures from throughout the world using basic anthropological concepts. Explores descriptive data from a variety of cultures and the general patterns that exist across cultures. Includes topics such as culture, language, subsistence, stratification, family, kinship, descent, religion, social control and cultural change. *(Fa, Sp, Su)*

202. Society and Ecology 4 credits

This course examines the relationships between the cultural and structural patterns of society and the ecosystem. The course focuses on a critical examination of contempo-

rary social systems and their relationships to the natural environment. It investigates the role culture plays in affecting human relationships with the earth and how the belief systems of a people shape their perspective regarding the role of humans in the natural world. Students identify and examine parameters of sustainable social systems. (Sp) Prerequisite: Sociology 101 or 102.

211. Juvenile Delinquency

4 credits

A general survey and analysis of juvenile delinquency. Includes explanations of juvenile delinquency as deviant behavior with an emphasis on the nature, extent and causes of delinquency. Explores factors such as social structure, school, family and peers that have a major impact on juveniles. Also explores the role of police courts and the nature and history of attempts to control, prevent and treat delinquents. (Fa) Prerequisite: Sociology 101, 102 or 103.

212. Criminology

4 credits

A general survey and analysis of crime. Explores criminological theory, societal values with respect to crime, criminal behavior systems and criminal processing systems including police, courts and correctional procedures. (Sp) Prerequisite: Sociology 101, 102 or 103.

213. Minority Group Studies

4 credits

Analysis of what minority groups are, how they are formed, persist and change. Includes the study of a variety of minority groups such as ethnic, racial, sexual and other minority groups and the relationships between minority groups and majority groups in society. (Fa) Prerequisite: Sociology 101 or 102.

217. Social Psychology

4 credits

The study of how people are influenced by and relate to one another. Explores how membership in groups and organizations influences the thoughts, feelings, and actions of people. Includes topics such as socialization, attitudes, conformity, leadership, power, persuasion, aggression, attraction and collective behavior. (Sp) Prerequisite: One course in sociology or psychology.

220. Police in Society

4 credits

A study of the history, goals, organization, structure and role of police in American society. Addresses a range of critical issues facing police and society including police culture, discretion, ethics, use of force, legal boundaries, police work and community relations. This course is not a how-to training course for police officers. May not be counted toward a sociology major or minor. (Sp) Prerequisite: Sociology 103.

230. Fundamentals of Interviewing

4 credits

Students will learn and practice techniques and skills to increase their effectiveness in interviewing. Included is the ability to effectively understand verbal and nonverbal communication. Students will learn how to structure an interview through the introductory, developmental and termination phases. Challenges posed by diverse interview subjects will be addressed. Special emphasis will be placed on active listening and

practicing interviewing skills. May not be counted toward a sociology major or minor. (Fa) Prerequisite: Sociology 103.

291/391. Special Topics in Sociology **4 credits**
Study of a selected topic in sociology that is not covered in regular course offerings. Generally takes a lecture and discussion format. The topic will be announced prior to registration. Prerequisite: Sociology 101 or 102.

296/396. Reading and Research in Sociology **1-3 credits**
Research conducted under the supervision of a faculty member and designed to permit individual students or groups of students to research special areas in sociology related to their educational interests and goals. Prerequisites: Sociology major or minor, junior standing, approval of divisional dean and consent of instructor.

298/398. Independent Study in Sociology **4 credits**
A course for students who have completed the necessary background courses in a specific area and wish to work with a faculty member to extend their study in that area. Students considering this course must get the approval of the divisional dean and consent of the instructor during the previous semester at least two weeks prior to registering for the course. Results of the study will be presented to the sociology faculty. Prerequisites: Sociology major, junior standing, approval of the divisional dean and consent of the instructor. (Fa, Sp, Su)

301. Social Change and the Future of Society **4 credits**
A general examination of the topic of social change. This course studies the role of social change in the development of societies, the consequences of social change for contemporary societies, and how change in various areas of society might affect life in the future. (Fa, odd years) Prerequisite: Sociology 101 or 102.

302. Complex Organizations and Work Life **4 credits**
Explores structures and processes within organizations and the meaning and conduct of work. Includes analysis of types of organizations, changes in occupations, work/family conflicts and how organizations have an impact on workers. (Sp, even years)

303. Criminal Procedure, Evidence and Investigation **4 credits**
Introduces principles of evidence and techniques of investigation. Includes constitutional limitations on arrest, search and seizure, the exclusionary rule, interrogation and confessions. Identifies problems of evidence gathering and presentation as well as basic skills and procedures of criminal investigation. May not be counted toward a sociology major or minor. (Fa) Prerequisites: Sociology 103, and 211 or 212.

304. Introduction to Criminal Law **4 credits**
An examination of the nature, variety and sources of criminal law and the relationship of criminal law to theories of punishment and social control. Includes the classification of crimes, as well as the creation, organization and content of criminal law. May not be counted toward a sociology major or minor. (Sp) Prerequisites: Sociology 103, and 211 or 212.

SOCIOLOGY AND CRIMINAL JUSTICE

305. Marriage and Family in Contemporary Society L3 4 credits
The study of the changing nature of marriage and family life in the United States. An emphasis on processes and issues that challenge modern family life. Topics include mate selection, sexuality, communication, parenting styles and divorce. (*Sp*) Prerequisite: Junior standing.

307. Corrections in American Society 4 credits
A study of the history, trend, purpose, organization and practice of corrections in American society. Includes jails, probation, intermediate sanctions, corrections in the community, prisons and supervision after release. Includes issues such as restorative justice, offender rights and incarceration of women, juveniles, special needs populations and members of minority groups. May not be counted toward a sociology major or minor. (*Fa*) Prerequisites: Sociology 103; 211 or 212.

308. Sociological Theory 4 credits
An examination of the foundations and development of sociological theory from its beginning to the present. Explores the major theories and schools of thought and the relationship between theory and research through the works of important classical and contemporary sociological theorists. (*Sp*) Prerequisites: Sociology 101 or 102.

311. Methods of Social Research L1 4 credits
A study of the ways sociologists use data to explore, describe and explain human social life. The focus will be on learning, evaluating and applying the techniques and methodology used in generating, gathering and analyzing social scientific data. (*Fa, Sp*) Prerequisite: Sociology 101 or 102.

318. Sociology of Sex Roles 4 credits
Examines how gender and gender differences are created and the consequences of gender-based behavior. Considers how gender issues are involved in a variety of areas including: power, intimacy, sexuality, family and work. Also examines the origins and structure of both the women's and men's liberation movements. (*Fa, even years*)

380. Internship in Applied Sociology 4 credits
An opportunity for majors to work as a sociologist in a designated institution or agency under faculty supervision. Students considering this course must consult with their program adviser during the semester preceding the internship. (*Fa, Sp*) Prerequisites: Junior standing, Sociology 311, and consent of the instructor.

399. Capstone in Sociology 4 credits
(*Sp*)

481. Capstone: Internship in Criminal Justice

4 credits

The internship course serves as the capstone experience for the study of criminal justice. It provides an opportunity for criminal justice majors to work in a designated agency or institution under faculty and agency supervision. Includes seminar meetings during the term. Students considering this course for a given semester must consult the instructor during the preceding semester. (*Sp*) Prerequisites: Sociology 311, Senior standing, criminal justice major, and a minimum of 2.5 grade point average in courses in the major.

DIVISION OF HUMANITIES AND SOCIAL SCIENCES

THEATRE ARTS

Scott M. Boyle Assistant Professor
Thomas Bruno Assistant Professor

Through traditional classroom and participation in a fully produced theatre season, the theatre arts program offers a pre-professional, liberal arts major and minor intended for careers in theatre or theatre education.

Learning Outcomes for Theatre Arts

Upon successful completion of major requirements students will be able to:

1. Develop the skills necessary to take part in the collaborative theatre process.
2. Learn and retain an understanding of theatre history and literature.
3. Demonstrate an appreciation of professional expectations and standards in the professional marketplace.

The core is supplemented by two emphasis area courses and four credits of capstone in production experiences.

In the acting/directing emphasis learning goals include:

- Learning basic performance terminology and practices
- Developing the skills necessary to explore the components of characterization
- Developing performance skills relevant to period style acting requirements
- Demonstrating the fundamental principles of the theatre director's perspective of the creative process

In the technical/design emphasis learning goals include:

- Learning the basic terminology and practices associated with technical theatre
- Developing an artistic sensibility to successfully incorporate those artistic and technical elements within a theatrical production

Majors and minors enrolled in lecture-based courses are required to participate in production areas (scenery, lighting, properties, costume or promotions) associated with program sponsored shows within the semester. Students already enrolled in practicum courses or a work-study job are exempt from this requirement.

Directors, actors, designers, and theatre teachers active in the professional and international theatre are contracted to supplement faculty in productions and workshops.

**Theatre Arts Major
Bachelor of Arts**

Core Courses

Theatre Arts 101, Playgoers

Theatre Arts 105, Stagecraft and Drafting

Theatre Arts 106, Costume Construction (2 credits)

Theatre Arts 107, Basic Stage Electrics (2 credits)

Theatre Arts 108/108L, Acting I/Stage Makeup Lab

Theatre Arts 120/121, Theatre Crew (2 credits)

Theatre Arts 123, Technical Theatre Practicum (4 credits for technical emphasis students; 2 credits for acting, direction and theatre education emphases)

Theatre Arts 124, Acting Theatre Practicum (2 credits for acting, direction, theatre education emphases)

Theatre Arts 200, Theatre Workshops – 2 credits of Stage Management and 2 credits of either Theatre Management or Technical Theatre Management (technical theatre emphasis only)

Theatre Arts 215, European Theatre History and Literature to 1750

Theatre Arts 216, Global Theatre History and Literature from 1750

Theatre Arts 307, Principles of Theatre Direction

Two additional required courses in an emphasis area selected in consultation with the theatre arts adviser and four credits of applied theatre capstone experiences in Mainstage and Studio Season productions.

Acting Emphasis: Theatre Arts 301, 302; 4 credits of 365, Applied Acting

Direction Emphasis: Theatre Arts 280; 301 or 302; 2 credits of 366,

Applied Direction, and 2 credits of either 364, Applied Stage Management, or an additional 2 credits of 366.

Technical Theatre and Design Emphasis: Theatre Arts 280; 305, Advanced Technical Theatre; and 4 credits in any combination of 362, Applied Theatre Design; 364, Applied Stage Management; or 367, Applied Technical Direction

Required support courses for all majors:

Completion of a Modern Language through 202

Theatre Arts Minor

Theatre Arts 101, Playgoers

Theatre Arts 105, Stagecraft and Drafting

Theatre Arts 106, Costume Construction (2 credits)

Theatre Arts 107, Basic Stage Electrics (2 credits)

Theatre Arts 108/108L, Acting I/Stage Makeup Lab

Theatre Arts 120, 121, Theatre Crew (2 credits)

Theatre Arts 123, Technical Theatre Practicum (4 credits for technical, emphasis students; 2 credits for acting, direction and theatre education emphases)

Theatre Arts 200, Theatre Workshops – Stage Management (2 credits)

Theatre Arts 216, Global Theatre History and Literature from 1750

THEATRE ARTS

Theatre Arts 301, Acting II, or Theatre Arts 302, Acting III, or
Theatre Arts 280, Principles of Theatre Design
Theatre Arts 307, Principles of Theatre Direction

Students applying the theatre arts major to licensing in theatre education must enroll in Theatre Arts 280, Principles of Theatre Design, and elect either Theatre Arts 301 or 302, Acting II, III. Both majors and minors in theatre education must enroll in two credits of 366, Applied Direction, as part of their capstone, and in Education 353, Special Methods in Teaching Secondary School Subjects (Theatre/Drama), 2 credits, as part of their secondary education minor.

100. Theatre Participation **1 credit**
Participation in either Mainstage or Studio Season theatre productions as an actor or technician. Course does not count toward the major or minor. (*Fa, Sp*)

101. Playgoers **L5 4 credits**
Survey of the theatre arts in order to develop standards of theatre appreciation. Course activity includes theatre performance field trips, reading of plays, and oral and/or written theatre criticism. (Required course fee) (*Fa, Sp*)

105. Stagecraft and Drafting **4 credits**
An intensive introduction to life backstage, this course covers scenery construction, installation, painting, and Computer Aided Drafting (CAD) skills. A lab component is part of the course. (*Sp*)

106. Costume Construction **2 credits**
An intensive introduction to the procedures, personnel, theories, tools and techniques of costume construction. Instruction is provided through lecture, laboratory and required production work. (*Fa, odd years*)

107. Basic Stage Electrics **2 credits**
A basic introduction to the practices and use of stage lighting and sound. Topics include equipment choice, implementation and programming. (*Fa, odd years*)

108. Acting I and **4 credits**
108L. Stage Makeup Lab
Fundamentals of acting and rehearsal processes are developed in preparation for acting on the stage through improvisation, monologues and scene work. Course must be completed in the freshman year by majors and minors. (*Fa*)

120/121. Theatre Crew **1 credit**
Student participation in running the technical aspects of program Mainstage or Studio shows. Two credits should be completed by the end of sophomore year. (*Fa, Sp*)

123. Technical Theatre Practicum **1 credit**
Supervised weekly production work in the areas of scenery, lighting, costuming, or administration. Technical and design emphasis students must complete 4 credits; acting, direction, theatre education emphases 2-4 credits. (*Fa, Sp*)

- 124. Acting Theatre Practicum** 1-2 credits
Following completion of Acting I, subject to auditions and demands of a specific role, students may enroll in 1-2 credits of rehearsal/performance in a Mainstage or Studio production. Acting or direction emphases require 2 credits of 124; theatre education majors/minors 1-2 credits. (*Fa, Sp*)
- 200. Theatre Workshops** 1-2 credits
Stage Management is a 2-credit workshop (*Fa, odd years*), required of all majors and minors, which presents stage rehearsal and performance management. Acting or direction emphases majors are required to complete 2 credits of Theatre Management (*Sp, even years*). Technical theatre/design emphasis students are required to complete 2 credits of Technical Theatre Management. (*Fa, even years*)
- 215. European Theatre History and Literature to 1750** L5 4 credits
The traditions of the Euro-American theatre from origins to 1750 are investigated in terms of theatre conventions and drama of the various periods. (*Fa, even years*)
Prerequisite: Theatre Arts 101 or consent of instructor.
- 216. Global Theatre History and Literature from 1750** L5 4 credits
Concentration upon North American and European drama, Asian, Latin American and African theatre conventions and drama are presented. (*Sp, odd years*) Prerequisite: Theatre Arts 101 or consent of instructor.
- 280. Principles of Theatre Design** 4 credits
An introduction to the basic principles of scenic, costume, and lighting design. (*Fa, even years*) Prerequisites: Art 101; Theatre Arts 105, 106, 107.
- 291/391. Special Studies/Topics in Theatre** 1-4 credits
Study of a selected topic not covered in regular course offerings. The topic will be announced prior to registration. Four credits maximum will apply toward degree. (*Fa, Sp*)
- 296/396. Special Studies/Research in Theatre** 1-4 credits
Advanced research allows individual students or groups of students to undertake special projects related to their program emphasis. Four credits maximum will apply toward degree. (*Fa, Sp*) Prerequisite: Approval of the divisional dean and consent of instructor.
- 298/398. Independent Study in Theatre** 1-4 credits
Independent study of selected areas under the supervision of one or more members of the faculty. Required for program honors. (*Fa, Sp*) Prerequisite: Approval of the divisional dean and consent of the instructor.
- 301. Acting II - Characterization** 4 credits
Builds on work begun in Theatre Arts 108; explores different methods of creating a character for the stage through animal studies, physical alignment and improvisational exercises. (*Sp, even years*) Prerequisite: Theatre Arts 108.

THEATRE ARTS

302. Acting III - Period Styles

4 credits

Advanced introduction to acting styles of common historical genres, including: Shakespeare, Moliere and Restoration Comedy. (*Fa, even years*) Prerequisites: Theatre Arts 108, 301 or consent of instructor.

305. Advanced Technical Theatre

2 credits

A continuation of theories and practices first covered in Theatre Arts 105 and 107. The emphasis will be placed on further advancement of skills in the areas of scene painting, scenic carpentry and rigging. (*Fa, Sp*) Prerequisites: Theatre Arts 105, 106, 107, and at least 2 credits of Theatre Arts 123 or consent of instructor.

307. Principles of Theatre Direction

4 credits

Fundamentals of direction related to production, organization, script analysis and rehearsal techniques are presented. (*Sp, odd years*) Prerequisites: Theatre Arts 105, 106 or 107, 108, 200, 215, 216, 301, 302, or consent of instructor.

Applied Theatre Course as Capstone

Subject to audition for performance or faculty assignment to production areas, applied theatre courses confirm in Mainstage and Studio Season production and rehearsal the learnings from advanced courses in the emphasis areas – acting, direction, technical theatre and design. Under faculty or contracted-artist supervision, the student completes four credits in the applicable area(s) as his/her capstone experience. Theatre education majors and minors must complete two credits of 366, Applied Direction, and may select their additional two credits from any of the Applied Theatre areas.

360, 361. Applied Theatre

1-4 credits

Four credits in any combination from areas below. Prerequisite: Completion of any course numbered above 280.

362 . Applied Theatre Design

1-4 credits

Lighting, costume, properties, sound or scenery design for Mainstage or faculty-directed Studio productions. Prerequisite: Theatre Arts 280, 390.

363. Applied Theatre Management

1-4 credits

Producing, publicity, budget accounting, house management, box office, touring management for Mainstage or faculty-directed Studio productions. Prerequisite: Theatre Arts 200 (Theatre Management Section).

364. Applied Stage Management

1-4 credits

Stage management for Mainstage or faculty-directed Studio productions. Prerequisite: Theatre Arts 200 (Stage Management Section).

365. Applied Acting

1-4 credits

Acting for Mainstage or faculty-directed Studio productions. Prerequisite: Theatre Arts 301, 302.

366. Applied Direction

1-4 credits

Direction of Mainstage or Studio productions. Prerequisite: Theatre Arts 280, 301 or 302.

367. Applied Technical Direction

1-4 credits

Technical direction (Technical Director, Props Designer, Costumier, Sound Engineer, etc.) for Mainstage or faculty-directed Studio productions.

Prerequisites: Theatre Arts 200 (Technical Direction section).

368. Applied Theatre Education

1-4 credits

Teaching of creative dramatics or theatre arts related workshops or productions with an educational emphasis. Prerequisite: Education 353 in Theatre Arts.

380/480. Internship in Theatre Arts

1-4 credits

Professional work experience under supervision of selected theatre faculty and professionals; written report required. Instructor approval required prior to registration. (*Fa, Sp, Su*)

390/490. Theatre Projects

1-4 credits

Special theatre production or tour experiences established by the program. Announcements of specific projects to be offered are made as they are developed.

DIVISION OF NATURAL AND HEALTH SCIENCES

ACTUARIAL SCIENCES

John Symms

Associate Professor of Mathematics

Broadly speaking, actuaries are professionals who analyze financial risks of future events. Trained in mathematics, statistics, economics and finance, actuaries quantify these risks by building and evaluating mathematical models. Such analyses are essential for the success of businesses in areas such as insurance, investment, and employee benefits. The Carroll College Actuarial Sciences Major gives students a broad and in-depth background in these core disciplines in preparation for entry into the actuarial sciences profession.

Carroll College has internship programs with Northwestern Mutual and the Assurant insurance companies. Each year, representatives from Northwestern Mutual and Assurant select interns from among Carroll College Actuarial Science majors for full-time (or part-time) paid internships. Selected student interns receive an authentic experience in the actuary profession while earning Carroll College credit. The full-time internships also include 100 hours of paid study time for the intern's next actuarial sciences exam.

Actuarial Science Learning Outcomes

Students majoring in actuarial science are expected to

- 1...develop an understanding of the actuarial profession, what actuaries do, and how they do it.
- 2...develop a knowledge base and proficiency in the core subjects needed for entry into the profession.
- 3...develop an appreciation for the linkages between these core subjects.
- 4...develop the critical and analytical thinking skills necessary for success in the profession.
- 5...develop the communication skills that are essential in the business environment.
- 6...develop the learning skills necessary for continued success in the profession.

Actuarial Sciences Major (76 credits)

Bachelor of Science

Required Major Courses

Accounting 205, Financial Accounting
Accounting 206, Managerial Accounting
Business 101, Principles of Small Business
Business 304, Principles of Finance

Business 341, Applied Risk Management or
Business 342, Investment Management or
Computer Science 351, Database Design
Economics 124, Principles of Economics I - Microeconomics
Economics 125, Principles of Economics II - Macroeconomics
Economics 212, Applied Statistics for Business
Mathematics 112, Introduction to Statistics
Mathematics 160, 161, 207, Calculus I, II and III
Mathematics 208, Linear Algebra
Mathematics 210, Theory of Interest
Mathematics 312, Theory of Probability and Statistics
Actuarial Sciences 490, Actuarial Science Senior Capstone.

Required Support Courses: (Required for all majors)

Computer Science 107, Problem Solving Using Information Technology
Computer Science 110, Problem Solving through Programming
Computer Science 211, Database, Web Creation and Networks

380/480. Internship in Actuarial Science **4-16 credits**

Professional work experience in the actuarial sciences under the supervision of faculty and professional actuaries. Course requirements will depend on the type of internship. S/U graded. (Fa, Wn, Sp, Su) Prerequisites: Junior or senior standing and approval of instructor are required prior to registration.

391/491. Independent Study for Professional Exams **4 credits**

Intended for majors who plan to take professional exams prior to the senior capstone. Students complete a comprehensive exam-prep curriculum and take the exam upon conclusion of the course. S/U graded. (Fa, Sp) Prerequisite: Approval of the divisional dean and consent of the instructor.

490. Actuarial Science Senior Capstone **4 credits**

Review and problem-solving sessions for actuarial science exams. Students will meet with an instructor or outside professional to work on various concepts and problems in preparation for the actuarial science exams. Students will be required to take an exam both as a completion to the capstone experience and for program assessment. (Sp) Prerequisites: Senior standing.

DIVISION OF NATURAL AND HEALTH SCIENCES

ATHLETIC TRAINING

Thomas Pahnke	Assistant Professor of Athletic Training and Physical Therapy
Steven M. Staab	Assistant Athletic Trainer and Instructor

The athletic training program at Carroll College is accredited by the Commission on Accreditation of Athletic Training Education.

The aim of the athletic training program is to train qualified health care professionals at the baccalaureate level who are educated and experienced in the management of health care problems associated with physical activity across the life span as defined by the National Athletic Trainers' Association. Students are educated to work with athletic and physically active populations in a variety of settings including, but not limited to, secondary schools, colleges, professional sports programs, sports medicine clinics, prevention and wellness settings, and industrial settings.

The graduate athletic trainer is competent in the delivery of athletic training. The graduate possesses the knowledge and skills needed for risk management and prevention of injuries associated with physical activity, the pathology of injuries and illnesses, assessment and evaluation, and acute care of injury and illnesses for the physically active. The graduate applies knowledge and skills concerning pharmacology, therapeutic modalities, therapeutic exercise, general medical conditions and disabilities, and nutritional aspects of injury and illness for the physically active population. The athletic trainer demonstrates the ability to carry out psychosocial intervention and referral, perform health care administration, and uphold professional development and responsibilities as outlined by the National Athletic Trainers' Association. To ensure that the program is reflective of the development of athletic trainers at the baccalaureate level in a changing health care environment, ongoing student, faculty, program, institutional, and professional assessments occur regularly.

To meet the education mission for service and scholarly activity, the program utilizes a variety of individuals including, but not limited to, academic and clinical athletic trainers; basic, behavioral, and social scientists; other health care professionals; athletes and coaches; and community members. The athletic training academic faculty is responsible for design, implementation, and evaluation of the professional curriculum. In addition to the academic training of future athletic trainers, the program is committed to intra- and interdisciplinary service and scholarly activity in the delivery of athletic training.

Athletic Training Program Objectives

Upon graduation and entry into the field of athletic training, the individual:

1. will possess the knowledge and skills of an entry-level athletic trainer in the six practice domains of athletic training set forth by the National Athletic Trainers' Association Board of Certification: Prevention of Injuries; Recognition, Evaluation & Assessment of Injuries; Immediate Care of Injuries; Treatment, Rehabilitation & Reconditioning of Injuries; Organization & Administration; and Professional Development & Responsibility.
2. will have experience with multiple athletic training and health care settings including interactions with health care providers from various disciplines.
3. will be able to think critically to effectively solve problems in a variety of dynamic athletic training environments.
4. will understand the importance and process of becoming life-long learners in order to contribute to the field of athletic training.
5. will be an effective communicator among health care providers, administrators, coaches, athletes, family, and community in their delivery of athletic training.
6. will practice with professionalism and integrity and adhere to the professional code of ethics outlined by the National Athletic Trainers' Association.

Academic Progression Standards

The academic progression standards for the athletic training program are presented in the Health Sciences section of this catalog.

Admission Requirements

The admission requirements for the athletic training program are presented in the Admission section of the catalog.

Technical Standards for Admission to and Progression in the Athletic Training Program

Successful participation in the Athletic Training Program requires that a student possess the ability to meet the requirements of the program. Though the program may modify certain course requirements in order to provide a handicapped person (handicapped is defined by the federal government pursuant to SS 504 of the Rehabilitation Act of 1973) with an equivalent opportunity to achieve results equal to those of a non-handicapped person, there are no substitutes for the following essential skills. The applicant must initially meet these requirements to gain admission to the program, and must also continue to meet them throughout participation in the program.

1. **Physical requirements:** The applicant/student must be willing and capable of performing physical assessments (e.g. range of motion, manual muscle testing, visual observations) of patients using various evaluative and therapeutic instruments and equipment. The applicant/student must also be able to perform athletic training skills (e.g. taping, splinting, ambulatory aid, rehabilitative and treatment techniques, activities of daily living). In addition, an applicant/stu-

dent must successfully complete and maintain certification in first aid and cardiopulmonary resuscitation.

2. **Communication:** An applicant/student must be able to elicit information, describe changes in health, mood, and activity and perceive non-verbal communication. An applicant/student must be able to communicate effectively and efficiently with patients and all members of the health care team.

3. **Intellectual abilities:** Problem solving, a critical skill of athletic trainers, requires abilities in measurement, calculation, reasoning and analysis.

4. **Behavioral and social attributes:** The applicant/student must be able to tolerate physically active taxing workloads and to function effectively under stress, must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in athletic training care provided to people. The applicant/student must possess the qualities of integrity, concern for others, compassion, skills in interpersonal relationships and motivation for a career in health care.

The athletic training program can require that an applicant/student undergo a physical examination. A handicapped applicant/student shall not, on the basis of his or her handicap (except those which would preclude the essential skills outlined above) be excluded from participation in, denied benefits of, nor be subjected to discrimination in the athletic training program.

Policies for students with disabilities can be found in the Student Life section of the academic catalog.

Caregiver Background and Criminal History Check

On October 1, 1998, the State of Wisconsin Department of Health and Family Services mandated that all persons who seek to be employed and/or licensed in the caregiver industry must fulfill the caregiver and background check requirements in Section 50.065 of the Wisconsin State Statute. Professional phase athletic training students are required to complete a background and criminal history check and abide by state regulations and college policies pertaining to any findings.

Insurance

Health: Athletic Training students are required to have medical insurance. Those who are covered by a family or personal policy must provide the insuring company's name and the policy number on a waiver form that is sent to the student by the college business office. For students without their own coverage, a group insurance policy is available through the college. Athletic Training students are also required to have a personal health history and physical form completed and on file in the administrative area of the Health Sciences.

Professional Liability: Students are required to purchase on an annual basis professional liability insurance through a college-endorsed company.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Curriculum

Throughout the curriculum, subject matter progresses from the basic sciences to clinical sciences to professional content.

In coordination with academic coursework, learning over time occurs by interaction with clinical instructors through field experiences in traditional athletic training settings, other health care settings, and practice and athletic event coverage. Students can expect to travel to off site clinical rotations/laboratory sessions or field experiences in the professional phase of the program. Throughout the program, students are evaluated on the attainment of knowledge to include psychomotor, cognitive, and affective competencies as outlined by the National Athletic Trainers' Association Education Council. Outcomes are measured through ongoing self, student-athlete, peer, and clinical instructor assessments.

Ongoing program assessments include student evaluations and feedback, peer review, curriculum evaluations, institutional self study assessment and site visits by the Joint Review Committee for Athletic Training Educational Programs.

Athletic Training Major Bachelor of Science

Major Courses (39 credits)

Athletic Training 301, Assessment and Evaluation I (4 credits)
Athletic Training 302, Assessment and Evaluation II (4 credits)
Athletic Training 304, Therapeutic Modalities (4 credits)
Athletic Training 311, Athletic Training Practicum I (1 credit)
Athletic Training 312, Athletic Training Practicum II (1 credit)
Athletic Training 403, Applied Exercise for Musculoskeletal Injuries (4 credits)
Athletic Training 405, Administration of Athletic Training (2 credits)
Athletic Training 407, Athletic Training Seminar III (2 credits)
Athletic Training 411, Athletic Training Practicum III (1 credit)
Athletic Training 499, Capstone Internship (14 credits)
Health Sciences 300, Pharmacology (3 credits) [ATH 303]

Required Support Courses (51 credits)

Physics 101, Introductory Physics (4 credits)
Physics 102, Introductory Physics (4 credits)
Health Sciences 101, Introduction to Health Care Skills (1 credit) or equivalent of First Aid and CPR for the Professional Rescuer Certification with AED certification
Athletic Training 101, Athletic Training Seminar I (2 credits)
Athletic Training 102, Athletic Training Seminar II (2 credits)
Chemistry 101, General Chemistry (4 credits)
Chemistry 102, Biological Chemistry (4 credits)

ATHLETIC TRAINING

Health Education 201, Nutrition (2 credits) or Chemistry 208, Nutrition (3 credits)
Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
Health Sciences 103, Personal and Community Health (4 credits)
Health Sciences 110, Basic Weight Training Instruction (1 credit) [HSC 112]
Health Sciences 120, Fundamental Motor Development (4 credit)
Health Sciences 322, Kinesiology (4 credits) [AHS 322]
Health Sciences 303, Exercise Physiology (4 credits) [AHS 303]
Exercise Science 324, Exercise Science Laboratory (2 credits)

General Education and Liberal Studies Courses (28 credits)

FYS 100, First Year Seminar (4 credits)
English 170, Writing Seminar (4 credits)
Psychology 101, Introduction to Psychology (4 credits, LSP III)
Communication 207, Intercultural Communication (4 credits, LSP IV)
LSP V, VI, VII

Degree Support Courses (6 credits)

Mathematics 112, Introduction to Statistics (4 credits)
Computer Science 107, Problem Solving Using Information Technology (2 credits)

101. Athletic Training Seminar I 2 credits

An introductory course that examines and develops basic skills and knowledge needed in the profession of athletic training and coaching. (Required course fee) (*Sp*)

102. Athletic Training Seminar II 2 credits

Students further develop basic skills and knowledge used in the athletic training profession. (Required course fee) (*Fa*)

301. Assessment and Evaluation I 4 credits

This course provides students with the knowledge and skills for musculoskeletal assessment and evaluation of the upper and lower extremities. Topics for the course include patient care, patient interviewing skills, history taking, subjective and objective findings, and assessment and evaluation skills using problem solving/scientific methods. (Required course fee) (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor

302. Assessment and Evaluation II 4 credits

This course provides students with the knowledge and skills for assessment and evaluation of the trunk and thorax, general medical conditions for systemic illnesses including viruses and skin conditions. Topics for the course include patient care, patient interviewing skills, history taking, subjective and objective findings, and assessment and evaluation skills using problem solving/scientific methods. (Required course fee) (*Sp*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor

304. Therapeutic Modalities**4 credits**

This course uses the application of assessment and evaluation skills to develop treatment plans with the use of therapeutic modalities. Students relate the physiologic effects of musculoskeletal injury, medical conditions, and therapeutic modalities to achieve their patient goals. (Required course fee) (*Sp*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor

311. Athletic Training Practicum I**1 credit**

Students will gain experience in the field of athletic training and be expected to apply and perform competencies previously taught in the curriculum. Students will gain experience working with high risk sports to include football, soccer, wrestling and basketball; equipment intensive sports including football at the youth, high school or college level; attend a surgical experience for the extremities and orthopedic round experience for the extremities. (Required course fee) (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing

312. Athletic Training Practicum II**1 credit**

Students will gain experience in the field of athletic training and be expected to apply and perform competencies previously taught in the curriculum. Students will gain experience working with upper/lower extremity sports to include baseball, softball, track, soccer, wrestling, and basketball; attend a surgical experience and orthopedic rounds for the spine; orthopedic treatment and rehabilitation experience; and general medicine experience. (Required course fee) (*Sp*) Prerequisites: Professional phase of Athletic Training Program standing

403. Applied Exercise for Musculoskeletal Injuries**4 credits**

The course explores the foundation for rehabilitation and reconditioning for musculoskeletal injuries. (Required course fee) (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor

405. Administration of Athletic Training**2 credits**

This course highlights the administrative roles and responsibilities of the certified athletic trainer in multiple health care settings. (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor

407. Athletic Training Seminar III**2 credits**

This course provides an overview of the domains of athletic training and the implications that clinical proficiencies have in athletic training and serves as a forum to discuss and review skills and topics relevant to the entry-level athletic trainer. (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing

411. Athletic Training Practicum III**1 credit**

Students will gain experience in the field of athletic training and be expected to apply and perform competencies previously taught in the curriculum. Students will gain experience working with fall/winter sports to include football, soccer, basketball, and cross country at the college and/or high school level; football game coverage; professional sports; outpatient rehabilitation clinic; health and fitness setting; industrial set-

ATHLETIC TRAINING

ting; general medicine; emergency settings. (Required course fee) (*Fa*) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor

499. Capstone Internship

14 credits

Students will gain experience in the field of athletic training and perform competencies and display knowledge expected of the entry-level certified athletic trainer outlined by the National Athletic Trainers' Association. This internship experience is directly supervised by a licensed athletic trainer. (*Sp, Fa*) Prerequisites: Professional phase of Athletic Training Program standing

See Health Sciences in the Carroll College Catalog for descriptions of Health Sciences (HSC) courses in the Athletic Training Program curriculum.

Athletic Training Four-Year Curriculum Model		
Class Standing	Fall Semester	Spring Semester
Freshman	CHEM 101 FYS 100 LSP V, VI, or VII LSP V, VI, or VII HSC 101 17 credits	CHEM 102 ENG 170 LSP V, VI, or VII PSY 101 ATH 101 18 credits
Sophomore	PHY 101 BIO 130 COM 207 HSC 103 ATH 102 18 credits	PHY 102 BIO 140 HSC 110 HSC 120 CSC 107 15 credits
Junior	HSC 300 HSC 303 HSC 322 ATH 301 ATH 311 HED 201* 17 credits	MAT 112 ESC 324 ATH 302 ATH 304 ATH 312 15 credits
Senior	ATH 403 ATH 405 ATH 407 ATH 411 Elective 13 credits	ATH 499 14 credits

*Students enroll in either Chemistry 208 or HED 201

DIVISION OF NATURAL AND HEALTH SCIENCES

BIOLOGY

Monika G. Baldrige	Assistant Professor
John S. Bennett	Assistant Professor
Cynthia J. Horst	Associate Professor
Carol M.C. Hurst	Instructor
Susan E. Lewis	Professor
Lynn M. Peterson	Instructor
Julie A. Rapps	Assistant Professor
Eric T. Thobaben	Assistant Professor

The biology program is home to four distinct majors: Biology, Human Biology, Clinical Laboratory Sciences (in partnership with the University of Wisconsin, Milwaukee) and Marine Sciences (in partnership with Hawaii Pacific University). Each major provides students with an excellent foundation in the life sciences that can lead to professional careers, graduate study, or professional school (e.g., medical, dental, or veterinary school). The requirements for the Biology and Human Biology majors are described below. The Clinical Laboratory Sciences and Marine Sciences programs are described in other parts of the catalog.

Learning Outcomes for Biology

Students in the biology program will receive training in how to:

- Think critically about biology
- Understand basic biological principles
- Communicate biological information
- Consider ethical implications
- Develop career awareness
- Understand experimental design
- Execute empirical procedures
- Develop life skills

Students in the biology program may apply for graduation with program honors if they complete the following requirements:

GPA, Biology courses: 3.6 or higher

GPA, Overall: 3.4 or higher

Presentation of research project results at a regional or national meeting

(e.g., BBB or Wisconsin Academy of Sciences) or submission of a manuscript to a peer-reviewed journal

Demonstrated commitment to the biology profession, broadly defined, above and beyond that of the average student. Evidence of such commitment will come from one or more of the following:

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- Active membership in Beta Beta Beta, the Biological Honor Society
- Active membership in a professional/scholarly organization related to biology (e.g., Ecological Society of America, American Society for Microbiology, etc.)
- Significant educational activity/outreach (e.g., tutoring, mentoring) at the college or other level.
- Consistent and sustained volunteer activity in an organization working on environmental, health, or other issues relevant to biology.
- Significant research activity separate from or above and beyond the capstone.
- Sustained activity in science-related policy/consulting in communication, journalism, government, public policy, business, industry or education.

Applications will be available in spring semester each year and will be reviewed by faculty.

Fees

Specific courses that require use of transportation, equipment or disposable supplies are assigned a course fee.

Biology Major Bachelor of Science

The biology major is designed to give students excellent preparation for graduate study or professional careers in the life sciences. Within the major, students select one of several emphases (e.g., pre-medicine, pre-physical therapy, secondary education, animal behavior) that best matches their particular interests and career goals. All students have opportunities to develop excellent research skills beginning in the core courses and culminating in the capstone research project.

Core Courses

Biology 150, Organismal Biology I

Biology 160, Organismal Biology II

Biology 250, Introduction to Genetics

Biology 260, Introduction to Ecology and Evolution

(note: Bio 250 and 260 may be taken in either order)

Biology 396, Capstone: Introduction to Biological Problem Solving

Required Support Courses (*Required for primary majors only)

Chemistry 109 and 110

Mathematics 112, 140, or higher*

Computer Science 107 or higher*

Plus completion of an emphasis, below

General Biology Emphasis

Core courses, plus

Five elective courses in Biology (minimum 18 credits above the 100-level; at least

2 electives must be 300 level or higher, excluding Biology 380 – Internship, and

Biology 385 – NCEP trip to Belize)

Biology 496, Biological Problem Solving I

Biology 497, Biological Problem Solving II

**Pre-Medical, Pre-Dental, Pre-Veterinary,
Other Healing Arts Emphasis**

Core courses, plus

Five elective courses in Biology (minimum 18 credits above the 100-level; at least 2 electives must be 300 level or higher, excluding Biology 380 – Internship, and Biology 385 – NCEP trip to Belize)
Biology 496, Biological Problem Solving I
Biology 497, Biological Problem Solving II
Chemistry 203, 204, Organic Chemistry (Pre-Med, Pre-Dent) or Chemistry 203, Organic Chemistry, and Chemistry 308, Biochemistry (Pre-Vet)
Physics 101, 102, Introductory Physics

Students may need additional courses as required by the specific professional school. Pre-professional students should consult with the appropriate pre-professional adviser regarding requirements.

Pre-Physical Therapy Emphasis

Core courses, plus

Biology 221, Comparative Anatomy, and
Five elective courses in Biology (minimum 16 credits above the 100-level; at least 8 credits must be 300 level or higher, excluding Biology 380 - Internship)
Physics 101, 102, Introductory Physics
Students may need to take additional courses as required by the specific professional school.

Secondary Education Emphasis

Core courses, plus

Biology 212, Microbiology
Biology 221, Comparative Anatomy
Biology 223, Invertebrate Zoology
Biology 301, Animal Physiology
One elective course in Biology (2-4 credits; 300 level or higher, excluding Biology 380 – Internship, and Biology 385 – NCEP trip to Belize)
Biology 496, Biological Problem Solving I
Biology 497, Biological Problem Solving II
Students should be prepared to demonstrate mastery of biological concepts on the ETS Praxis II exam, required for licensure.

Animal Behavior Emphasis

Core courses, plus

Biology 223, Invertebrate Zoology
Biology 252, Vertebrate Zoology
Biology 380, Internship in Biology
Biology 417, Behavioral Ecology
Biology 496, Biological Problem Solving I

BIOLOGY

Biology 497, Biological Problem Solving II

One elective course in Biology (2-4 credits; 300 level or higher, excluding Biology 380

– Internship, and Biology 385 – NCEP trip to Belize)

Plus Psychology Minor (16 credits):

Psychology 101, Introductory Psychology

Psychology 205, Statistics and Experimental Design

Psychology 314, Learning and Animal Behavior

One elective course in Psychology

Human Biology Major

Bachelor of Science

The Human Biology major is designed to give students excellent preparation for professional careers in business, medicine, government, and environmental fields. With appropriate supporting coursework, graduates with a Human Biology major will also be prepared to enter graduate school in any of the biomedical sciences, medical school, dental school, or veterinary school. All students have opportunities to develop excellent research skills beginning in the core courses and culminating in the capstone research project.

Core Courses

Biology 130, Introduction to Human Anatomy and Physiology I

Biology 140, Introduction to Human Anatomy and Physiology II

Biology 212, Microbiology

Biology 250, Introduction to Genetics

Biology 301, Animal Physiology or Biology 403, Human Physiology

Biology 396, Capstone: Introduction to Biological Problem Solving

Biology 496, Biological Problem Solving I

Biology 497, Biological Problem Solving II

Required Support Courses (*Required for primary majors only)

Chemistry 101 OR 109

Chemistry 110

Mathematics 112, 140, or higher*

Computer Science 107 or higher*

Core courses, plus

Four elective courses (14-16 credits above the 100-level) in Biology (or other select elective areas – see below). At least four credits must be a Biology course that is 300 level or higher (excluding BIO 380 – Internship, and Biology 385 – NCEP trip to Belize)

Two of the four electives must be selected from the following:

Biology 221, Comparative Anatomy

Biology 224, Bioethics

Biology 314, Histology

Biology 321, Developmental Biology

Biology 373, Hematology
Biology 402, Human Anatomy
Biology 432, Gene Manipulation and Genomics
Biology 452, Cell Biology
Biology 471, Immunology
Chemistry 208, Nutrition
Health Sciences 300, Pharmacology
Health Sciences 303, Exercise Physiology
Nursing 236, Human Pathophysiologic Responses
Psychology 340, Sensation and Perception
Note: BIO 150 and 160 can be substituted for BIO 130 and 140 if the student completes BIO 402.

Biology Minor

Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 250, Introduction to Genetics, OR
Biology 260, Introduction to Ecology and Evolution
Two Elective Courses in Biology (2-4 credits 200-level or higher; 4 credits 300 level or higher)

Human Biology Minor

Biology 130, Introduction to Human Anatomy and Physiology I AND Biology 140, Introduction to Human Anatomy and Physiology II; OR Biology 150, Organismal Biology I AND Biology 160, Organismal Biology II
Three Electives in Biology (10 credits minimum) selected from the following (at least four credits must be 300 level or higher):
Biology 212, 221, 224, 250, 301, 314, 321, 373, 402, or 403

100. Introductory Human Biology L2 4 credits

The basic principles and concepts of biology are presented in this course with an emphasis on human biology. Cellular function, genetic and developmental concerns, and physiological regulation are studied throughout the semester. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Fa, Su)

130. Introduction to Human Anatomy and Physiology I 4 credits

This is the first of two courses which present the unifying concepts of anatomy and physiology required for understanding the human body as a structural and functional unit. This course emphasizes the mechanisms that underlie the normal functions of cells, tissues, organs, and organ systems. This course includes the study of basic biochemistry and inheritance and the structure and function of the integumentary, skeletal, muscular, nervous and endocrine systems. Four hours lecture and three hours laboratory. (Required course fee) (Fa, Su)

131. Human Genetics L1, L2 4 credits

This course will introduce non-science majors to human genetics and the scientific way of knowing. Students will learn how DNA determines traits and how traits are inherited.

BIOLOGY

Students will also learn how modern genetic technologies influence the products we buy, our health and, potentially, our genetic futures. The relationship between the scientific method and our understanding of human genetics will be stressed and students will have the opportunity to propose and perform an experiment of their own design. Four hours of lecture/discussion and one three-hour laboratory (Required course fee). (*Sp*)

140. Introduction to Human Anatomy and Physiology II 4 credits

This is the second of two courses which present the unifying concepts of anatomy and physiology required for understanding the human body as a structural and functional unit. This course includes the study of the structure and function of the cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproductive systems. A body systems approach is used to emphasize the interrelationships between structure and function of the gross and microscopic levels of organization of the human body. Four hours lecture and three hours laboratory. (Required course fee) (*Sp, Su*) Prerequisite: Biology 130 or equivalent is strongly recommended.

150. Organismal Biology I L1, L2 4 credits

This course is designed to introduce the student to the structure and function of the biomes within which organisms live, and the living organisms themselves: their needs and the means of meeting these needs, their basic classification, and an evolutionary survey of plants and fungi. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa*)

160. Organismal Biology II L1, L2 4 credits

This course is designed to introduce the student to the structure and function of cells, basic genetic mechanisms, the structure and function of animals and plants: their needs and the means of meeting these needs, and an evolutionary survey of animals. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp*)

200H. Human Biology: Health and Disease. L2 4 credits

This honors course is intended to generate understanding of basic biochemistry, cell biology, select human anatomy and physiology, and genetics and then to allow students to use this understanding to delve deeper into biomedical topics. Students build their literacy in the field of biomedical science and then use this literacy to independently investigate, learn about, and then share practical information about current topics related to cancer, cardiovascular disease, and the role of genetics in medicine. A primary objective of this course is to improve students' ability to access scientific information and use this information to make informed decisions regarding personal and social health issues. BIO 200H can not be counted as an elective course for a biology or human biology major. (Required course fee) (*Fa, odd years*)

210. The Science of Sleep 2 credits

This course will introduce students to the subject of sleep. There is a large body of information about circadian rhythms and the biological clock, what constitutes normal sleep, the myriad of sleep disorders, and the costs to society of sleep deprived individuals. Special emphasis will be placed on the lack of sleep some professionals routine-

ly accrue, including medical doctors, airline pilots, truck drivers, as well as shift workers. Basic polysomnography (brain waves, breathing, heart rate and movement recorded during a sleep study) will also be covered. A variety of methods including lecture, movies, group work and discussion will be employed. (Wn)

212. Microbiology**4 credits**

This course examines the fundamentals of microbiology (structure, metabolism, genetics, and growth) and surveys the microbial world. The interaction between microbe and host, and the diseases caused by microbes is examined. Four hours of lecture/discussion and two two-hour laboratory periods. (Required course fee) (Fa, Sp, Su) Prerequisites: Biology 130 or 150; Chemistry 102 or 110 or concurrent registration; or consent of the instructor.

217. Field Ornithology**2 credits**

This course emphasizes field identification of local bird species by sight and sound, as well as a variety of aspects of the ecology of birds. Topics to be discussed include: the evolution of birds; avian diversity; specializations for feeding and locomotion; the mechanics of flight; populations and community ecology; and avian behavior. Daily field trips will be combined with lectures, readings, discussions, and laboratory activities. At least one Saturday field trip is required. Each student will complete a final research project on some aspect of avian ecology. Because this is a field course, students should be prepared for moderately strenuous exercise in a variety of weather conditions. (Su, odd years)

219. Field Botany**4 credits**

This course emphasizes field identification of local plant species. Students will become proficient in the use of taxonomic keys, plant preservation, and the classification and ecology of plants. Daily field trips will be combined with lectures and laboratory activities. Because this is a field course, students should be prepared for moderately strenuous exercise in a variety of weather conditions. (Su, even years)

221. Comparative Anatomy**4 credits**

Presentation of the gross structure of vertebrate animals as a logical approach to the subject of human anatomy. Ontogeny and phylogeny of the vertebrates are related to structure and function. Four hours of lecture/discussion and two 2-hour laboratory periods. (Sp) Prerequisite: Biology 130 or 160.

223. Invertebrate Zoology**4 credits**

Investigates the diversity of invertebrate animals by identifying basic characteristics of each phylum as well as comparing structural, reproductive, ecological, and behavioral characteristics within an evolutionary framework. Laboratories emphasize identification of phyla and common aquatic and terrestrial organisms, as well as research techniques using invertebrates. Students will have the opportunity to design their own research projects in lab. Four hours lecture/discussion plus a three-hour laboratory; optional weekend field trips. (Required course fee) (Fa, even yrs) Prerequisite: Biology 130 or 160.

224. Bioethics**L7****4 credits**

An interdisciplinary course dealing with the problems and conflicts created by the impact of biological research and other technological advances on human values. Encounter with these conflicts in an attempt to approach some resolution is the goal of this course. (*Fa, Su*)

250. Introduction to Genetics**4 credits**

This course will introduce students to the fields of cell biology and genetics. Students will gain an understanding of the synthesis and function of cellular components, the organization and function of genetic material, and Mendelian genetics. Students will have the opportunity to propose and perform an experiment of their own design. Four hours of lecture/discussion and one three-hour lab. (Required course fee) (*Fa, Sp*) Prerequisites: Biology 160 or 212; Chemistry 101 or 109. Note: Biology 250 and Biology 260 may be taken in either order.

252. Vertebrate Zoology**L2****4 credits**

Surveys the biology of vertebrate animals, with an emphasis on biodiversity, ecology and behavior. These topics are viewed within the framework of vertebrate evolution. Laboratories focus on the identification of Wisconsin's fish, amphibians, reptiles, birds, and mammals, using a community-based approach with extensive field research. Four hours lecture/discussion plus a three-hour laboratory; optional weekend field trips. (Required course fee) (*Fa, odd yrs*) Prerequisite: Biology 160 recommended.

260. Introduction to Ecology and Evolution**4 credits**

This course investigates the mechanisms of biological evolution and how these mechanisms shape and are shaped by the ecology of organisms, populations, and communities. Students will learn the theoretical foundations of ecology and evolution, as well as practical applications such as what factors influence human population growth, why small population size threatens many species, or how agriculture and forestry impact terrestrial and aquatic ecosystems. The course will involve lecture, discussion of case studies, and laboratory and field investigations. (Required course fee) (*Fa, Sp*) Prerequisites: Biology 150 and 160; or consent of instructor. Note: Biology 250 and Biology 260 may be taken in either order.

301. Animal Physiology**4 credits**

A comprehensive study of animal function. Organ and system physiological activity is related to basic cellular phenomena: surface membrane activity, energy requirements, intermediary metabolism, nutritional requirements, etc. Current research methods are emphasized. Four hours of lecture/discussion, one three-hour laboratory period. (Required course fee) (*Sp*) Prerequisites: Biology 130 and 140 OR Biology 150 and 160; Chemistry 110; or consent of instructor. Students cannot count both Biology 301 and Biology 403 towards the biology or human biology major.

314. Histology**4 credits**

Microanatomy of tissues. Four hours of lecture/discussion and one three-hour laboratory period. (Required course fee) (*Fa, odd yrs*) Prerequisite: Biology 130 or 160.

321. Developmental Biology**4 credits**

Study of morphogenesis of selected animal and plant species at the molecular, cellular, tissue, organ, and organ system levels, with emphasis on vertebrate systems. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, even yrs*) Prerequisite: Biology 130 or 160.

373. Hematology**4 credits**

An introduction to the science of hematology. Topics include origin and development of blood cells and their biochemistry, physiology and pathology. Laboratory includes microscopic examination of normal and abnormal erythrocytes and leukocytes morphology, as well as manual assays pertinent to clinical hematology. Four hours lecture/discussion and three hours of laboratory. (Required course fee) (*Sp, odd yrs*)

380. Internship in Biology**1-4 credits**

A program of placement in industry, hospital, field, health agency, laboratory, school, etc., for on-the-job experience and observation. Program approval required prior to registration. Four credits maximum will apply toward the major. (*Fa, Sp, Su*)

BIO 385/NCEP 305. Reefs, Rainforests and Ruins of Belize L1,L2 4 credits

This course focuses on tropical reef biology and rainforest ecology. While in Belize, students explore the world's second largest barrier reef and trek through a tropical rainforest to observe bullet trees, howler monkeys and exotic birds. While at these sites, students design and perform investigative experiments to gain an understanding of the scientific method. In addition, students experience the ancient Mayan civilization visiting the ruins at Lamanai, and Tikal. Students are introduced to these topics in Fall semester followed by a three-week experience in Belize in Winter term. (*Fa, even yrs; Wn, odd yrs*)

396. Capstone: Introduction to Biological Problem Solving**2 credits**

A team-taught course on principles and practices of biological investigation. Students are taught the basic skills needed to plan and initiate a biological investigation including problem identification, information science, and considerations of instrumentation, experimental design and analysis. Working in close cooperation with a faculty mentor, students will familiarize themselves with a specific biological problem and prepare a formal research proposal in preparation for Biology 496 and 497. In addition to regular class meetings, students are required to attend seminars and laboratory meetings. (*Sp*) Prerequisite: Junior standing or consent of instructor.

402. Human Anatomy**4 credits**

The microanatomy and gross anatomy of muscle, bone and cartilage and the integumentary, nervous, cardiovascular, lymphatic, respiratory, renal, digestive, endocrine, and reproductive systems are studied. Using multi-media software, male and female bodies are dissected from anterior, posterior, medial, lateral, and medial/lateral views and histologies, radiologies, cross-sections, and MRIs are linked to the anatomy. Models are also employed to study the structure of the human body. In addition, palpation laboratories are integrated into the course. (*Fa*) Prerequisites: Biology 130 and 140 OR Biology 150 and 160; Biology 221 is strongly recommended.

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403. Human Physiology

4 credits

Fundamental concepts related to the normal function of the human body are presented. The normal functioning of the human body is discussed across gender, race, and life span. Basic pathophysiological concepts are introduced. Resources used include physiology laboratories, computer simulations, and videos. (*Fa*) Prerequisites: Biology 130 and 140 OR Biology 150 and 160; Chemistry 110 OR a C or better in Chemistry 101 and Chemistry 102. Students cannot count both Biology 301 and Biology 403 toward the Biology or Human Biology major.

406. Applied Physiology I

4 credits

See HSC406

412. Advanced Microbiology

4 credits

This course will present a study of biological entities collectively known as "Microbes" and include bacteria, viruses, protozoans, fungi and certain invertebrates. These organisms may be food sources at the bottom of the food chain, may be actually edible for humans or be involved in decomposition and recycling of nutrients for various food chains. A large number of these organisms, although a minority, are capable of causing disease in other organisms including humans. We will investigate the properties of the biological entities including the structure, biochemistry, physiology, molecular biology and pathogenicity of various microbes. (*Sp, odd yrs*) Prerequisite: Biology 212 or 250.

417. Behavioral Ecology

4 credits

Investigates the biological bases of animal behavior, focusing particularly on the evolution of social behavior in non-human animals. Theoretical foundations of the field as well as their practical applications are studied through lecture/discussion. Experience in experimental design and observation techniques are developed through studies of animal behavior. These experiences culminate in a final research project of the student's own design. Four hours lecture/discussion plus a three-hour laboratory. (Required course fee) (*Sp, odd yrs*) Prerequisite: Biology 260 or Psychology 314; or consent of instructor.

432. Gene Manipulation and Genomics

4 credits

Introduces students to the fields of gene manipulation and genomics through an integrated laboratory/lecture/discussion approach. Students will gain hands-on experience with the basic methods, the biological basis for those methods, and a practical understanding of how they are applied in the fields of medicine, basic science research, environmental science, ethics, and law. (Required course fee) (*Fa, even yrs*) Prerequisite: Biology 250.

452. Cell Biology

4 credits

Basic principles of cell physiology, molecular biology, biochemistry, and biophysics are studied in relation to the structure and function of cells and their organelles through an integrated laboratory/lecture/discussion approach. Four hours of lecture/discussion. (Required course fee) (*Sp, even yrs*) Prerequisite: Biology 250.

460. Restoration Ecology**4 credits**

An interdisciplinary course that introduces students to the philosophy, theory, and practice of restoration ecology. Students will develop skills in all aspects of restoration ecology, including goal identification, site assessment, grant writing, and the planning, execution, monitoring, and evaluation of restoration projects. Laboratory activities center on visiting, evaluating, and participating in local restoration projects. Because the laboratory portion of the course is field-based, students should be prepared for moderately strenuous exercise in a variety of weather conditions. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp, even yrs*) Prerequisite: Biology 260; or consent of the instructor.

471. Immunology**4 credits**

Fundamentals of the immune system in the human body, including development, events of the immune response, immunological deficiencies, cancer immunology, autoimmune disease, and transplant biology. Modern techniques of immunoassay and clinical immunodiagnosis are covered. Four hours of lecture and one three-hour laboratory. (Required course fee) (*Fa, odd yrs*) Prerequisites: Biology 212; Chemistry 110.

491 (or 291). Special Topics in Biology**1-4 credits**

Study of a selected topic not covered in regular course offerings. Lecture and discussion. The topic will be announced prior to registration. Four credits maximum will apply toward the major.

496. Biological Problem Solving I**2 credits**

The first of two semesters of problem solving experiences with a faculty member selected by the student. During this semester students will initiate the investigation designed in Biology 396. Working in close cooperation with a faculty mentor, students will develop sufficient mastery of their system of interest to allow them to acquire data appropriate for the resolution of their specific problem. Students are required to spend a minimum of six hours per week in this experience under the direction of their faculty mentor. In addition, students are required to attend seminars and laboratory meetings. (Required course fee) (*Fa*) Prerequisite: Biology 396.

497. Biological Problem Solving II**2 credits**

The second of two semesters of problem solving experiences with a faculty member. During this semester students will complete the investigation designed in Biology 396. Working in close cooperation with a faculty mentor, the student will complete data collection and analysis, and develop a final written report and poster presentation summarizing the investigation. Students are required to spend a minimum of six hours per week in this experience under the direction of their faculty mentor. In addition, students are required to attend seminars and laboratory meetings. (*Sp*) Prerequisite: Biology 496.

498. (or 398) Independent Study**1-4 credits**

Independent study of selected areas in biology under supervision of a faculty member. Usually does not involve laboratory work. Four credits maximum will apply toward the major. Prerequisite: Approval of the divisional dean and consent of the instructor.

BIOLOGY

499H. Honors Biological Problem Solving

2 credits

The second of two semesters of problem solving experiences with a faculty member. During this semester students will complete the investigation designed in Biology 396. Working in close cooperation with a faculty mentor, the student will complete data collection and analysis, and develop a final written report summarizing the investigation. Students are strongly encouraged to present their results at a regional or national scientific meeting. Students are required to spend a minimum of six hours per week in this experience under the direction of their faculty mentor. In addition, students are required to attend seminars and laboratory meetings. (*Sp*) Prerequisite: Biology 496.

DIVISION OF NATURAL AND HEALTH SCIENCES

CHEMISTRY

and BIOCHEMISTRY

Kathleen M. Kiedrowicz	Instructor
Gregory T. Marks	Assistant Professor
Kevin McMahon	Associate Professor
Joseph J. Piatt	Associate Professor
Michael D. Schuder	Associate Professor

The chemistry and biochemistry program is approved by the Committee on Professional Training of the American Chemical Society. This approval means that the program has the faculty, curriculum and instrumentation necessary to provide a quality education for undergraduate students.

Learning Outcomes for Chemistry and Biochemistry

Upon successful completion of the Chemistry or Biochemistry major, students will:

- understand the basic definitions, concepts and relationships of chemistry,
- develop advanced skills in evaluating library searches for primary and other literature,
- understand fundamental laboratory analyses and safety protocols,
- perform quantitative and qualitative scientific analyses,
- understand the basic theory of and use of modern instrumentation,
- use computers for chemical applications including technical writing, modeling, data collecting and processing, and database searching,
- prepare effective written scientific reports and oral presentations for professional audiences,
- work cooperatively in problem solving situations,
- understand the benefits and problems of modern chemistry for our society.

Recognizing the individuality of students and that chemistry can be a strong preparation for a variety of careers, the program offers two majors, chemistry and biochemistry, each with multiple emphases. Each of these majors offers courses in the basic areas of inorganic, organic, analytical, physical, and biochemistry, and is supplemented by special opportunities such as industrial internships and independent research. Modern scientific instrumentation is available and incorporated into all courses of the curriculum. Students are encouraged to consult with chemistry faculty about the various emphases and opportunities associated with each.

Chemistry Major

1. ACS-Approved Emphasis is especially suited for students planning on graduate work or desiring the best preparation for industrial employment.
Upon completion of this emphasis, students will
 - develop an advanced understanding in multiple fields of chemistry,
 - develop an independent research project, acquire and analyze data, and present the results at an off-campus professional meeting,
2. Forensic Science Emphasis is a multidisciplinary program designed to train students in the analysis of physical and chemical case evidence and the associated legal implications.
Upon completion of this emphasis, students will
 - understand the basic definitions, concepts and relationships of criminalistics
 - understand intake, transport and biochemical processes of toxins in the human body
 - gain expertise in the collection and analysis of evidence specific to forensic science
 - understand the relationship of science and the legal system in the criminal justice system
3. Pre-Health Science / Professional Emphasis is for those students who plan to pursue professional work in an allied health field such as medicine, dentistry, optometry, or veterinary science or pursue an industrial career.
Upon completion of this emphasis, students will
 - develop an advanced understanding in a particular field of chemistry,
 - obtain work-related career experience in an industrial, corporate or medical setting.
4. Pre-Pharmacy Emphasis is a three year program for students who plan to obtain an advanced degree in Pharmaceutical Sciences.

Chemistry Major Bachelor of Science

Chemistry Major Core Courses

Chemistry 109/109L, Principles of Chemistry I
Chemistry 110/110L, Principles of Chemistry II
Chemistry 203/203L, Organic Chemistry I
Chemistry 204/204L, Organic Chemistry II
Chemistry 303, Quantum Mechanics and Spectroscopy
Chemistry 308, Biochemistry I
Chemistry 401, Advanced Chemical Analysis and Instrumentation
Chemistry 402, Capstone: Modern Chemistry

Required Support Courses:

Math 160 and 161, Calculus
Physics 203 and 204, General Physics
Computer Science 107 or higher

ACS-Approved Emphasis**Core Courses plus**

Chemistry 302, Advanced Inorganic Chemistry

Chemistry 304, Thermodynamics and Kinetics

One of the following courses:

Chemistry 306, Synthesis and Structure

Chemistry 309, Biochemistry II

Pre-Health Science - Professional Emphasis**Core Courses plus**

Two chemistry courses numbered 300 or greater (8 credits)

Forensic Science Emphasis**Core Courses plus**

Chemistry 104, Forensic Science

Biology 100, Introductory Human Biology (Recommended) or any 100 level
biology course

Sociology 103, Introduction to Criminal Justice

Sociology 303, Criminal Procedure, Evidence and Investigation

Pre-Pharmacy Emphasis

This emphasis is a three-year program designed to prepare students for direct admission to a pharmacy program. A student can readily extend this program by one year and obtain a chemistry major.

Three-Year Program

	Fall Semester	Spring Semester
Year 1	Chemistry 109 Math 160 FYS 100 Humanities Elective	Chemistry 110 Math 161 Psychology 101 English 170
Year 2	Chemistry 203 Biology 150 English 305 LSP Area V	Chemistry 204 Biology 160 History Elective LSP Area VII
Year 3	Chemistry 308 Physics 203 Sociology 110 Humanities Elective	Chemistry 303 Physics 204 Economics 124 Computer Science 107 (2 cr.)

Chemistry Minor¹

Courses in the Minor

Chemistry 109/109L, Principles of Chemistry I
Chemistry 110/110L, Principles of Chemistry II
Chemistry 203/203L, Organic Chemistry I
Chemistry 308, Biochemistry I
One course numbered 300 or greater (2-4 credits)

Biochemistry Major

1. ACS-Approved Emphasis is designed to prepare students for graduate school in chemistry or biochemistry or employment in biomedical sciences.
Upon completion of this emphasis, students will
 - develop an advanced understanding in multiple fields of chemistry and biological chemistry
 - develop an independent research project, acquire and analyze data, and present the results at an off-campus professional meeting.
2. Pre-Health Science / Professional Emphasis provides a mixture of chemistry and biology courses and is designed for students who are interested in biology but want to solidify their understanding of the molecular view of it. Graduates will be prepared for professional school, graduate school, or employment in biological and biomedical sciences.
Upon completion of this emphasis, students will
 - develop an advanced understanding in a particular field of biological chemistry
 - develop an advanced understanding of medical biology

Biochemistry Major

Bachelor of Science

Biochemistry Major Core Courses

Chemistry 109/109L, Principles of Chemistry I
Chemistry 110/110L, Principles of Chemistry II
Chemistry 203/203L, Organic Chemistry I
Chemistry 204/204L, Organic Chemistry II
Chemistry 308, Biochemistry I
Chemistry 309, Biochemistry II
Chemistry 401, Advanced Chemical Analysis and Instrumentation
Chemistry 402, Capstone: Modern Chemistry
Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 250, Introduction to Genetics
Math 160 and 161, Calculus
Physics 203 and 204, General Physics
Computer Science 107 or higher

¹ Satisfies secondary teaching education minor for Department of Public Instruction.

ACS-Approved Emphasis

Core Courses plus

Chemistry 302, Advanced Inorganic Chemistry
Chemistry 303, Quantum Mechanics and Spectroscopy
Chemistry 304, Thermodynamics and Kinetics
Biology 432, Gene Manipulation and Genomics, or Biology 452, Cell Biology

Pre-Health Science / Professional Emphasis

Core Courses plus

Biology 452, Cell Biology
Choose one course from the following:
Biology 212, Microbiology
Biology 301, Animal Physiology
Biology 432, Gene Manipulation and Genomics
Biology 471, Immunology

Biochemistry Minor

Chemistry 109/109L, Principles of Chemistry I
Chemistry 110/110L, Principles of Chemistry II
Chemistry 203, Organic Chemistry I
Chemistry 308, Biochemistry I
Biology 130 and Biology 140, Human Anatomy and Physiology I & II
or
Biology 150 and Biology 160, Organismal Biology I and II

Fees

Specific courses that require use of equipment and disposable supplies are assigned a fee.

098. Introduction to Chemistry

No credit

A course designed to provide students with an introduction to the fundamental mathematics and chemistry necessary for Chemistry 101 or Chemistry 109. This is an appropriate starting point for students who need a review of high school chemistry. (*Su*)

101. General Chemistry¹ and

101L. General Chemistry Laboratory

L1, L2 4 credits

A health science oriented survey course that introduces the basic concepts of inorganic and organic chemistry. Specific topics include: atomic theory, nuclear chemistry, compounds, chemical reactions, energy and organic functional groups. Chemistry 101 and 101L must be taken simultaneously. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Sp*) Prerequisite: Chemistry 098 or demonstrated proficiency in high school chemistry and algebra.

¹ Both Chemistry 101 and 102 are survey courses, which cover a wide range of topics but lack the depth of the more traditional chemistry courses; therefore, they do not count toward the major or minor in chemistry.

102. Biological Chemistry¹ and**102L. Biological Chemistry Laboratory** L1, L2 4 credits

A survey of organic chemistry and biochemistry that considers the structure and function of biomolecules (carbohydrates, lipids, proteins and nucleic acids) and their metabolism. Chemistry 102 and 102L must be taken simultaneously. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp, Su*)

Prerequisite: Chemistry 101/101L with a grade of C or better.

104. Forensic Science L1, L2 4 credits

A course that focuses on the application of scientific principles to the analysis of forensic data. The analysis and interpretation of physical, chemical, and biological tests is discussed utilizing a firm grounding in basic science. The laboratory utilizes simulated crime data and includes both basic and instrumental analyses. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp*)

106. Drug Discovery L1, L2 4 credits

A general survey of drug design and development of pharmaceuticals. This course examines the methods used in drug discovery. Topics include: the role of the FDA, clinical trials, drug action, and the pharmaceutical industry. Various sources of new drugs will be explored and several case studies will be discussed. Laboratory work will introduce students to methods and instrumentation used to develop new drugs. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa*)

109. Principles of Chemistry I and**109L. Principles of Chemistry I Laboratory** L1, L2 4 credits

An introduction to the basic concepts of modern chemistry. The topics in the first semester include units and measurements, stoichiometry, behavior of gases, liquids, and solids, atomic structure, the periodic table, chemical properties of the elements, and chemical bonding. Chemistry 109 and 109L must be taken concurrently. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Su*)

110. Principles of Chemistry II and**110L. Principles of Chemistry II Laboratory** L1, L2 4 credits

A continuing discussion of modern chemistry. The topics in the second semester include thermodynamics, equilibrium, kinetics, nuclear chemistry, acid-base theory, and oxidation-reduction reactions. Chemistry 110 and 110L must be taken concurrently. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp, Su*) Prerequisite: Chemistry 109/109L.

203. Organic Chemistry I**203L. Organic Chemistry I Laboratory** 4 credits

An introduction to the study of carbon and its compounds. Emphasis is placed on the simpler aliphatic and aromatic compounds, and functional groups. The course examines the underlying chemical principles and the mechanistic nature of organic reactions. Associated laboratory work is devoted to chemical and physical properties, as well as synthetic techniques. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, Su*) Prerequisite: Chemistry 110/110L.

204. Organic Chemistry II**204L. Organic Chemistry II Laboratory****4 credits**

A continuation of Chemistry 203. Major emphasis is placed upon carbonyl chemistry. The use of spectroscopic techniques is explored. The latter part of the course is devoted to the study of carbonyl compounds and modern synthetic strategies. Laboratory work consists of synthetic techniques, chromatography, and structural analysis. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp, Su*) Prerequisite: Chemistry 203/203L

208. Nutrition**3 credits**

This course investigates the biochemistry of food, that is, the chemical structures and functions of the six classes of nutrients: carbohydrates, lipids, proteins, vitamins, minerals, and water. The study of these nutrients will be extended to human physiological requirements, energy balance, food sources and labeling, and deficiency symptoms. Students will be expected to apply their nutrition knowledge to their own lives (or a patient's life) to assess dietary adequacy and compatibility with optimal health. Three hours of lecture/discussion. (*Fa, Sp*) Prerequisite: Chemistry 102/102L and Biology 140.

302. Advanced Inorganic Chemistry**4 credits**

This course emphasizes structure, bonding, reactivity, and periodicity of inorganic compounds. The laboratory includes the preparation of metal and non-metal compounds and their characterization by chemical and physical methods. Four hours of lecture/discussion and one three-hour laboratory. (*Sp, odd years*) Prerequisite: Chemistry 204/204L, and 303 or 304.

303. Quantum Mechanics and Spectroscopy**4 credits**

Thorough introduction to the principles of physical chemistry providing the theoretical basis of reaction dynamics, quantum chemistry, and atomic and molecular spectroscopy. Laboratory experiments incorporate modern instrumental design and data analysis. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Sp*) Prerequisite: Mathematics 160, Physics 204 and Chemistry 110/110L

304. Thermodynamics and Kinetics**4 credits**

Study of reaction kinetics and the thermodynamic treatment of equilibrium in chemical systems. Topics include kinetic theory of gases, classical and statistical thermodynamics, phase equilibria, reaction rates and mechanisms. The laboratory relies on original student experimental design and data analysis of physical measurements that yield quantitative results of chemical interest. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa, even years*) Prerequisite: Mathematics 161, Physics 204 and Chemistry 110/110L

306. Synthesis and Structure**4 credits**

The course will consider advanced topics in organic chemistry including selected topics from advanced spectroscopy, reaction mechanisms, synthetic methodology and photochemistry. Emphasis will be on reading, understanding, and orally presenting articles from the original literature. Four hours of lecture/discussion. (*Fa, odd years*) Prerequisite: Chemistry 204/204L.

308. Biochemistry I

4 credits

The course investigates the properties of buffers and the related chemistry of amino acids, the structure and function of proteins including an intensive look at hemoglobin, and the structure of lipids and carbohydrates. The course also focuses on the kinetics, thermodynamics, and mechanisms of enzymatic reactions, the structure of nucleic acids, and the regulation of nucleotide biosynthesis. The laboratory serves to strengthen the understanding of these topics and includes the purification and/or characterization of several classes of biomolecules. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (*Fa*) Prerequisite: Chemistry 203/203L.

309. Biochemistry II

4 credits

The course focuses on the investigation of basic topics in metabolism, including bioenergetics, carbohydrate metabolism, and lipid metabolism. Additional topics include the biosynthesis of amino acids, nucleotides, and heme. Four hours of lecture/discussion. (*Sp*) Prerequisites: Chemistry 204/204L and 308.

390. Projects in Chemistry

1-4 credits

Students work on a project under the direction of a faculty member. It is highly advisable for every student to participate in research projects during their educational experience. Course credit is assigned on the basis of one credit per 40 hours of laboratory work. (*Fa, Sp*) Prerequisite: Approval of the divisional dean and the consent of the instructor.

401. Advanced Chemical Analysis and Instrumentation

4 credits

This course will complete the student's introduction to modern chemical analysis and instrumentation. The theory and applications of chromatography and separation science will be emphasized, to include gas and liquid chromatographic instrumentation. The laboratory focuses on configuring, operating, and maintaining instruments while conducting quantitative and qualitative analyses. The course will also serve to initiate student research projects that are completed and presented in Chemistry 402. The course meets for two 3-hour periods per week. (Required course fee) (*Fa*) Prerequisites: Chemistry 303 and 308

402. Capstone: Modern Chemistry

4 credits

This capstone course will involve the implementation and completion of a research project proposed and approved in Chemistry 401. The research project will involve the development of an experimental plan, the use of integrative laboratory analysis using a wide range of equipment and instrumentation, the collection, analysis, and interpretation of data, and the presentation of results in written and oral formats. The course will also formally review current trends in chemical research and the future of the chemical enterprise. The course meets for two 3-hour periods per week. (*Sp*) Prerequisite: Chemistry 401

480. Internship in Chemistry

1-4 credits

A cooperative arrangement with industries or governmental organizations that provides students with “real world” experiences in chemistry. The student must spend time at the company working on a specific project. The student must also be involved in answering some educational questions regarding industrial chemistry. This experience is strongly recommended for students who will be seeking an industrial position after graduation. Plans should be discussed with the instructor during the junior year. (*Fa, Sp, Su*) Prerequisite: Senior standing and consent of the instructor.

DIVISION OF NATURAL AND HEALTH SCIENCES
**CLINICAL LABORATORY
SCIENCES**

Cindy Brown	Clinical Associate Professor and Education Coordinator, University of Wisconsin-Milwaukee
Lynn M. Peterson	Instructor, CLS Advisor

Carroll College offers an opportunity to major in Clinical Laboratory Sciences through a partnership with the University of Wisconsin- Milwaukee (UWM). The partnership allows students the benefits of close, personal attention during the first two and one-half years at Carroll while still providing access to the advanced clinical training facilities at UWM in the final stages of the program.

Clinical Laboratory Science students can select one of several emphases at UWM:

- Medical Technology
- Cytotechnology
- Public Health Microbiology

These emphases provide a range of career opportunities in settings including hospitals, independent laboratories, public health facilities, industries, research laboratories, or sales and marketing centers. Long-term employment prospects in these areas are forecasted to be excellent.

Entry into the professional training phase of the program is competitive and dependent upon completion of general education requirements, a minimum GPA of 2.50 (overall and in required science courses), a grade of 'C' or better in courses transferring from Carroll and in all junior-level courses, and completion of all required and elective courses (90 credits) by second semester of the junior year.

Clinical Laboratory Sciences Major
Bachelor of Science

Science and mathematics courses taken at Carroll College

Biology 130, Introduction to Human Anatomy and Physiology I
Biology 140, Introduction to Human Anatomy and Physiology II
Biology 212, Microbiology
Biology 250, Introduction to Genetics
Biology 471, Immunology
Chemistry 109, Principles of Chemistry I
Chemistry 110, Principles of Chemistry II
Chemistry 203, Organic Chemistry I

CLINICAL LABORATORY SCIENCES

Chemistry 204, Organic Chemistry II
Chemistry 308, Biochemistry I
Nursing 236, Human Pathophysiologic Responses
Computer Science 107, Problem Solving Using Information Technology

Other Carroll College courses required in this transfer program

FYS 100, First Year Seminar
English 170, Writing Seminar
LSP area 3 course emphasizing social sciences
LSP area 4 course emphasizing cultural diversity
LSP area 5 course emphasizing fine arts
LSP area 6 course emphasizing humanities
LSP area 7 course emphasizing humanities
An additional social science elective satisfying UWM's Diversity requirement

Students must also demonstrate completion of UWM's language requirement by achieving one of the following:

- complete with passing grades (prior to entering college) at least two years of high school level instruction in a single foreign language, or
- complete with passing grades at least two semesters (minimum of 6 credits) of college level instruction in a single foreign language, or
- demonstrate foreign language ability at least equivalent to the above by means of a satisfactory score on an approved placement, proficiency, program or other appropriate examination.

Because of the specialized requirements of this program, students should work closely with the CLS Advisor.

Sample Program at Carroll College

	<u>Fall</u>	<u>Spring</u>	<u>Winter/Summer</u>
Freshman	Bio 130 Chem 109 LSP 3 FYS 100	Bio 140 Chem 110 LSP 4 Eng 170	Social Science Elective
Sophomore	Bio 212 Chem 203 Math 112 LSP 5	Bio 250 Chem 204 Nurs 236 LSP 6	CSC 107
Junior	Bio 471 Chem 201 Chem 308 LSP 7	[at UWM]	

CLINICAL LABORATORY SCIENCES

Sample Program for Medical Technology at UWM

	<u>Fall</u>	<u>Spring</u>	<u>Summer</u>
Junior	[at Carroll College]	Hematology Clinical Chemistry Medical Microbiology Molecular Diagnostics	Clinical Hematology Hemostasis Clinical Microbiology Medical Parasitology Urinalysis Clinical Chemistry
Senior	Adv. Hematology Immunochemistry Blood Banking Lab Diagnosis Lab Practicum Toxicology	Adv. Hematology Practicum Adv. Clinical Lab Science Adv. Immunochemistry Adv. Microbiology Practicum Adv. Chemistry Practicum Professional Development	

DIVISION OF NATURAL AND HEALTH SCIENCES

ENVIRONMENTAL SCIENCE

David A. Block	Associate Professor of Environmental Science
Jason G. Freund	Assistant Professor of Environmental Science
Susan E. Lewis	Professor of Biology
Joseph J. Piatt	Associate Professor of Chemistry and Environmental Science
Eric Thobaben	Assistant Professor of Biology

The Environmental Science Program houses one academic major with three emphases: (1) Resource Conservation and Management, (2) Environmental Monitoring and Site Assessment, and (3) Mapping and Geographic Analysis. It also administers two related minors: Earth Science and Geography and Environmental Studies.

In addition, a student can earn a Master of Science in Environmental Science via a partnership with Alaska Pacific University (APU). Students who enroll at Carroll for three years and then transfer to APU for two years can earn both a Bachelor of Science degree from Carroll College and a Master of Science degree from APU.

The program manages the 65-acre Greene Scientific Field Station located in the Kettle Moraine region just west of Waukesha. This site features a pristine trout stream, several surface springs, and associated wetland vegetative communities. The site provides students with opportunities for outdoor laboratory and research activities, and also provides work experience for students interested in hands-on management of private resource conservancy sites.

Environmental science as a career includes such professions as: water/soil/air quality analyst, natural resource manager, environmental protection agent, environmental planner, soil scientist, hydrologist, park ranger, conservation warden, resource mapping specialist, government researcher, environmental educator and private environmental consultant.

The environmental science major provides students with a solid academic background from which they can effectively contribute to environmental issues that are central to the quality of human life on earth as well as to the conservation and protection of the planet's natural resources.

Objectives of the Environmental Science Major

To provide students with an integrated awareness and understanding of the global natural resource base, various measures of environmental quality, and the resulting societal impacts and implications.

To provide students with in-depth training in one of the following areas: (1) Resource Conservation and Management, (2) Environmental Monitoring and Site Assessment, and (3) Mapping and Geographic Analysis.

To provide students with an academic experience that facilitates advanced graduate study or career work in environmentally related fields.

Key Elements of the Major

A. Several required core courses that provide students not only with a broad introduction to the field of environmental science, but also with upper-level research or internship experiences in environmental analysis and assessment. Upon completion of the major students will:

- recognize the interrelated biophysical components and processes (i.e., structure and function) of the natural environment.
- understand how physical/chemical processes dynamically shape the earth's surface and how such phenomena are distributed globally.
- correlate a broad understanding of environmental science with a specific/correlative understanding of related scientific fields.
- cultivate a set of personal values and attitudes concerning the environment, which will then prepare oneself to actively address environmental problems and participate in their solutions.
- understand how human activities and physical systems affect one another, and how to assess the impacts and implications of these interrelationships.
- apply appropriate scientific methods and techniques to the acquisition, analysis, and evaluation of environmental data.
- analyze environmental variables in measurable (quantitative/objective) and perceptual (qualitative/subjective) ways using modern equipment and instrumentation.
- acquire and analyze environmental samples and variables in outdoor settings using field equipment and instrumentation.
- utilize computers for acquiring, organizing, analyzing, and displaying valid environmental information and research results.
- demonstrate competency in written and oral communication by preparing effective written reports and oral presentations for peer and professional audiences.
- work cooperatively and purposefully with others in research and problem-solving situations.

B. Several elective courses selected from one of the following emphases:

1. Resource Conservation and Management Emphasis — prepares students for professional work or graduate study in various earth and life science fields, including conservation biology, soil and water conservation, fish and wildlife management, environmental policy and planning, wetland ecology, environmental education, conservancy site management, and habitat assessment. Students in this emphasis will:

- understand the biological complexity and diversity of various terrestrial and marine ecosystems, as well as the classification schemes used to identify individual components of plant and animal communities.
- apply an integrated understanding of climate, soils, water resources, and landforms to the proper management of wetland, prairie, and forest environments.
- assess the nature and extent of natural resources in the United States, as well as the manner in which local, state, and federal agencies legislate and manage their use.

2. Environmental Monitoring and Site Assessment Emphasis — prepares students for work or study in various environmental monitoring fields, including air, soil and water quality monitoring; solid waste and hazardous waste management; pollutant risk assessment; environmental remediation and restoration; environmental health and toxicology. Students in this emphasis will:

- utilize field and laboratory instrumentation and equipment in the sampling, preparation, analysis, and detection of various environmental site parameters, with particular emphasis on the chemical analysis of soil and water samples.
- spatially analyze environmental variables to assess defined environmental problems.
- understand the natural and anthropogenic chemistry of the environment, especially as related to contaminant fate, transport, and remediation.

3. Mapping and Geographic Analysis Emphasis – prepares students for work or study in various geographic fields, including environmental mapping, land use planning, cultural resource analysis, ecotourism, and economic development. Students in this emphasis will:

- understand how one's culture and personal experience influence the perception of regions and places and how various regions are objectively defined in order to simplify and interpret complex global phenomena.
- use appropriate geographic tools (e.g. computer maps and satellite images) to acquire, analyze and display spatially-defined environmental information.
- understand the diversity of global cultures and environments through off-campus field study experiences.

C. Correlative Minor - The following minors complement any emphasis in the Environmental Science major. A student must complete a correlative minor from the list below or a second major in any field. The requirements are listed in this catalog under the program in which they are administered.

Biology	Education*	Sociology/Criminal Justice
Chemistry	Mathematics	
Computer Science	Physics	

*Note: See program faculty for listing of certification minors in Education that support the environmental science major.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

**Environmental Science Major
Bachelor of Science**

Core Courses

Environmental Science 105, Introductory Physical Geography
Environmental Science 120, Conservation and Environmental Improvement
Environmental Science 220, Weather and Climate
Environmental Science 230, Chemistry of the Environment
Environmental Science 251, Map and Aerial Photo Interpretation (2 credits)
Environmental Science 292, Environmental Ethics
Environmental Science 380, Work-Oriented Internship (2-4 credits) or
Environmental Science 396, Research in Environmental Science (2-4 credits)
Environmental Science 499, Capstone Seminar in Environmental Assessment

Resource Conservation and Management Emphasis

Core courses, plus

Environmental Science 325, Soil and Water Resources
Biology 260, Introduction to Ecology and Evolution

In addition, four courses (minimum 14 credits) from the following list. At least three of these courses must be at the 200-level or higher.

Environmental Science 215, Natural Hazards (2 credits)
Environmental Science 223, Geologic Landscapes of North America
Environmental Science 255, Environmental Resources of Wisconsin
Environmental Science 267, Geographic Information Systems
Environmental Science 354, Remote Sensing of the Environment
Environmental Science 290/490, Workshop in Environmental Science (2-4 credits)
Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 217, Field Ornithology (2 credits)
Biology 219, Field Botany
Biology 223, Invertebrate Zoology
Biology 252, Vertebrate Zoology
Biology 460, Restoration Ecology
Physics 105, Astronomy

Required Supporting Courses

Computer Science 107, Problem Solving Using Information Technology, or higher
Mathematics 112, or Mathematics 140 or higher
Plus select a correlative minor from the aforementioned list.

Environmental Monitoring and Site Assessment Emphasis

Core courses, plus

Environmental Science 267, Geographic Information Systems
Environmental Science 325, Soil and Water Resources

In addition, four courses (minimum 14 credits) from the following list. At least three of these courses must be at the 200-level or higher.

Environmental Science 255, Environmental Resources of Wisconsin
Environmental Science 354, Remote Sensing of the Environment
Environmental Science 290/490, Workshop in Environmental Science
(2-4 credits)
Biology 212, Microbiology
Chemistry 109, Principles of Chemistry I
Chemistry 110, Principles of Chemistry II
Chemistry 203, Organic Chemistry I
Chemistry 204, Organic Chemistry II

Required Supporting Courses

Computer Science 107, Problem Solving Using Information Technology, or higher
Mathematics 112, or Mathematics 140 or higher
Plus a correlative minor from the list on page 130.

Mapping and Geographic Analysis Emphasis

Core courses, plus

Environmental Science 160, World Regional Geography
Environmental Science 267, Geographic Information Systems

In addition, four courses (minimum 14 credits) from the following list. At least three of these courses must be at the 200-level or higher.

Environmental Science 223, Geologic Landscapes of North America
Environmental Science 249, Regional Land-Use Planning (2 credits)
Environmental Science 255, Environmental Resources of Wisconsin
Environmental Science 325, Soil and Water Resources
Environmental Science 354, Remote Sensing of the Environment
Environmental Science 290/490, Workshop in Environmental Science
(2-4 credits)
Biology 260, Introduction to Ecology and Evolution
NCEP 300, New Cultural Experiences Program (NCEP) course elective, with approval by Environmental Science Program (2-4 credits)

Required Supporting Courses

Computer Science 107, Problem Solving Using Information Technology, or higher
Mathematics 112, or Mathematics 140 or higher
Plus a correlative minor from the list on page 141.

**Environmental Science Minors
Earth Science¹**

Environmental Science 105, Introductory Physical Geography
Environmental Science 220, Weather and Climate
Environmental Science 223, Geologic Landscapes of North America
Environmental Science 251, Map and Aerial Photo Interpretation (2 credits)
Physics 105, Astronomy

¹ Meets DPI certification requirements as an approved minor for secondary education.

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In addition, two or three courses (minimum 6 credits) from the following:

- Environmental Science 215, Natural Hazards (2 credits)
- Environmental Science 252, Contemporary Issues in Geography and the Environment (2 credits)
- Environmental Science 255, Environmental Resources of Wisconsin
- Environmental Science 325, Soil and Water Resources
- Environmental Science 354, Remote Sensing of the Environment
- Environmental Science 290/490, Workshop in Environmental Science (2-4 credits)

Geography & Environmental Studies¹

- Environmental Science 105, Introductory Physical Geography
- Environmental Science 120, Conservation and Environmental Improvement or
Environmental Science 252, Contemporary Issues in Geography and the Environment (2 credits)
- Environmental Science 138, Cultural Geography
- Environmental Science 160, World Regional Geography
- Environmental Science 292, Environmental Ethics

In addition, two or three courses (minimum 8 credits) from the following offerings:

- Environmental Science 215, Natural Hazards (2 credits)
- Environmental Science 220, Weather and Climate
- Environmental Science 223, Geologic Landscapes of North America
- Environmental Science 249, Regional Land-Use Planning (2 credits)
- Environmental Science 251, Map and Aerial Photo Interpretation (2 credits)
- Environmental Science 255, Environmental Resources of Wisconsin
- Environmental Science 267, Geographic Information Systems
- Environmental Science 290/490, Workshop in Environmental Science (2-4 credits)
- Biology 260, Introduction to Ecology and Evolution
- Sociology 202, Society and Ecology

Graduate Degree in Environmental Science in Alaska

Three years of undergraduate coursework are completed at Carroll College followed by two years of graduate study at Alaska Pacific University (APU). The first year of APU courses transfer back to Carroll to complete the Bachelor of Science degree in Environmental Science with a minor in biology or chemistry. The agreement with APU specifies that students should be able to complete the Master of Science degree after two years of study in Alaska.

¹ Meets DPI certification requirements as an approved minor for secondary education.

In preparation for this graduate program, students must complete a minimum of 104 credits, all LSP courses, plus the following math and science courses during their first three years at Carroll:

Environmental Science 105, Introductory Physical Geography
Environmental Science 120, Conservation and Environmental Improvement
Environmental Science 220, Weather and Climate
Environmental Science 223, Geologic Landscapes of North America
Environmental Science 230, Chemistry of the Environment
Environmental Science 251, Map and Aerial Photo Interpretation (2 credits)
Environmental Science 267, Geographic Information Systems
Environmental Science 292, Environmental Ethics
Environmental Science 354, Remote Sensing of the Environment
Environmental Science 499, Capstone in Environmental Assessment
Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Biology 260, Introduction to Ecology and Evolution
Chemistry 109, Principles of Chemistry I
Chemistry 110, Principles of Chemistry II
Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and its Applications

105. Introductory Physical Geography L1, L2 4 credits

Introduction to the basic concepts in physical geography and earth science, including the description, analysis, and interpretation of the major components of the earth's natural environment. The first part of the course focuses on the structure and processes of the atmosphere, along with resulting global patterns of climate. The second part of the course introduces map use and earth material identification and emphasizes the formation and distribution of the earth's landforms. Weekly laboratory exercises complement key lecture topics. (Required course fee) (*Fa, Sp*)

120. Conservation and Environmental Improvement L1, L2 4 credits

A study of global natural resources and methods used in their conservation. The course includes the basic concepts of ecological biology including interactions between the living and the non-living elements of the environment, concepts of energy transformation in physical and biological systems, the nature of the Earth's ecosystems, and the implications of continued growth of the human population. Emphasis is placed on human environmental concerns and methods to be used to study and alleviate human environmental problems. Laboratory, lectures, discussions, and field trips. (Required course fee) (*Fa, Sp, Su*)

120H. Conservation and Environmental Improvement L1, L2 4 credits

This course investigates the science behind environmental issues ranging from waste management to conservation biology to water quality to renewable and nonrenewable energy. Through lectures, discussions, field trips, and laboratory investigations, we explore environmental problems and their potential solutions. (*Sp, even years*)

138. Cultural Geography

L4

4 credits

Emphasizes the spatial variations among human groups by describing and analyzing ways in which cultural phenomena such as language, religion, politics, agriculture, urbanization, and ethnicity vary from place to place over the face of the earth. Attention is given to how these phenomena are revealed in various cultural landscapes, which are defined by different cultural groups occupying different places. (*Sp*)

160. World Regional Geography

L4

4 credits

An introduction to basic geographic concepts concerning spatial relationships between human populations and their natural environments. Investigates the role of regional geography in analyzing the cultural and physical characteristics of the earth. Surveys the landscapes of Europe, the former Soviet Union, the Middle East, Asia, Africa, and the Americas. (*Fa*)

215. Natural Hazards

2 credits

A survey of key natural hazards affecting the global environment today, including severe storms, floods, drought, volcanoes, earthquakes, erosional processes, fire, and climate change. Human perception of and response to these hazards will be considered. (*Sp, even years, Su*)

220. Weather and Climate

4 credits

The first part of this course involves a survey of the physical processes and disturbances of the atmosphere, featuring common daily weather phenomena as well as selected hazardous storms. The second part investigates various controlling factors that influence the distribution of long-term global climate patterns. Emphasis is also placed on the influences of climate on surface vegetation, soils, water resources, health and human comfort, and economic activity. Historic climate change theories and contemporary global issues are both addressed. Laboratory exercises supplement lecture topics and emphasize local atmospheric observations and forecasts as well as regional climate data analyses. (*Sp*) Prerequisite: Environmental Science 105 or consent of the instructor

223. Geologic Landscapes of North America

4 credits

The major landform regions of the U.S. and Canada are examined with respect to their geologic structures, origins, stages of development, and defined spatial patterns. Course exercises supplement lecture topics through the use of topographic maps, geologic maps, aerial photographs and related local field trips. (*Fa, odd years*) Prerequisite: Environmental Science 105 or consent of the instructor.

230. Chemistry of the Environment

4 credits

This course introduces the basic concepts regarding the chemistry of the Earth's three major environmental components: air, water, and soil. The environmental chemistry of elements and compounds will be presented in terms of the natural biogeochemical cycles and in terms of human-caused pollutant transport and reactivity within and between environmental components. Laboratory experiments and field trips are designed to illustrate the chemical processes discussed in class and introduce various principles regarding environmental monitoring and sample analysis. Four hours of lecture/discussion and one three-hour laboratory. (*Sp, even years*) Prerequisite: Environmental Science 105 or Environmental Science 120, and Mathematics 101 or higher.

- 249. Regional Land-Use Planning** **2 credits**
An introduction to the nature of urban and regional planning. The course examines the basic concepts and problems underlying the design and planning of appropriate and desirable land uses. Special emphasis is placed on urban growth and development, strategies for mapping and inventorying land-use changes, and associated environmental impacts. (*Fa, odd years*)
- 251. Map and Aerial Photo Interpretation** **2 credits**
This course explores a number of tools and techniques used by geographers to assess the patterns, distribution, and characteristics of various earth surface features, such as aerial photo and satellite image interpretation, geologic and topographic map interpretation, field mapping, computer mapping, and spatial data acquisition and analysis. (*Fa*)
- 252. Contemporary Issues in Geography and the Environment** **2 credits**
This course highlights various contemporary issues relating to the global environment with a focus on the distributional patterns of environmental problems such as natural resource depletion, food production, overpopulation, energy use, water pollution, and global climate change. This course may be used with a prior general biology course to satisfy the environmental science requirement for teachers. (*Wn, Su*)
- 255. Environmental Resources of Wisconsin** **4 credits**
This course investigates the spatial patterns of Wisconsin's varied physical and cultural landscapes, including such topics as climate, natural vegetation, geologic landforms, water resources, agriculture, and historic settlement patterns. (*Sp, odd years, Su*)
- 267. Geographic Information Systems** **4 credits**
Students are introduced to various computer overlay mapping techniques for analyzing spatial data and investigating geographic, demographic, and environmental problems. Lectures provide a conceptual background on geographic information systems. Hands-on computer laboratory exercises enable students to map terrain surfaces, conduct site suitability, feasibility, and desirability studies, investigate environmental impacts of human activity, and assess demographic and land-use patterns using ArcGIS software and available databases. (*Sp*)
Prerequisite: Environmental Science 251 or consent of the instructor.
- 290/490. Workshop in Environmental Science** **2-4 credits**
Topical workshops, field studies, or short courses are established in various areas of interest as recognized/needed by the program. Under this listing, the program offers a "Geography of Alaska" field study during May term (odd years), which is also offered for NCEP credit.
- 292. Environmental Ethics** **L7** **4 credits**
This course addresses historic philosophical and religious perspectives on the natural environment, including contemporary ethical responses to such global concerns as resource stewardship and management, technological change and impact, ecological diversity and sustainability, environmental politics and economics, and population growth/overconsumption. (*Sp*)
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ENVIRONMENTAL SCIENCE

325. Soil and Water Resources

4 credits

This course develops both a qualitative and quantitative understanding of what soil and water are, how we use and affect the quality of these vital resources, and how we manage and conserve them for future generations. Topics include soil classification, soil physics, soil chemistry, soil fertility, water chemistry, hydrology, and contaminant transport. (*Fa, even years*) Prerequisites: Environmental Science 105 or Environmental Science 120, and MAT 112 or MAT 140 or higher

354. Remote Sensing of the Environment

4 credits

This course introduces the student to modern and sophisticated methods of aerial photo interpretation and remote sensing. The student is instructed in the interpretation of natural and cultural features by analyzing aerial photos and space images of various scales. Color infrared, thermal infrared, microwave, radar and multispectral imagery are used to study landforms, agriculture, forestry, water resources, weather and regional planning. Laboratory work includes a low altitude aerial photography flight. (*Sp, even years*) Prerequisite: Environmental Science 251 or consent of the instructor.

380/480. Work-Oriented Internship

2-4 credits

Prerequisite: Junior or senior standing and consent of major adviser.

396/496. Research in Environmental Science

2-4 credits

Prerequisite: Junior or senior standing and consent of major adviser.

398/498. Independent Study in Environmental Science

1-4 credits

Prerequisite: Junior or senior standing, approval of the divisional dean and consent of the instructor.

499. Capstone Seminar in Environmental Assessment

4 credits

Examines some of the key tools and techniques used to effectively analyze and assess the impact of various human activities on environmental quality, and provides a capstone research/field experience in environmental science. Contemporary issues and career opportunities in environmental management and monitoring are also addressed. (*Fa*) Prerequisites: Environmental major status and senior standing.

DIVISION OF NATURAL AND HEALTH SCIENCES

EXERCISE SCIENCE

Brian P. Edlbeck	Assistant Professor
David B. MacIntyre	Assistant Professor
Kimberly M. White	Assistant Professor

The purpose of the exercise science program at Carroll College is to develop entry-level professionals who can assess, interpret, prescribe, intervene, and manage health and fitness in apparently healthy individuals across the life span and promote positive lifestyle changes through basic interventions and referrals. The program is also designed to prepare students for appropriate professional organization certification exams and for post-graduate study in exercise science or other health related disciplines such as medicine, physical therapy, and physician assistant.

The exercise science program emphasizes the area's body of knowledge, research, and practice. Constant reinforcement of content through practical experiences occurs through observations, exposure to clients in academic courses, practicum experiences, and full-time internships. Graduates are qualified professionals who are liberally educated and possess the foundations for lifelong learning.

Individuals interested in health/fitness management are prepared to provide exercise and general wellness programs to apparently healthy individuals across the life span in safe and effective environments. Those interested in strength and conditioning are prepared to provide training programs to improve athletic performance across the life span. Individuals interested in advanced study in either graduate school or a clinical health field will be prepared well in the applied science emphasis. Students who intend to advance into Carroll College's Entry-level Doctor of Physical Therapy Program must also satisfy the physical therapy program progression requirements described in the Admission section of this catalog.

To meet the college's and the exercise science program's educational mission, a variety of academic and professional disciplines are utilized. The curriculum includes core courses in health sciences, exercise science, and physical education as well as courses in supporting academic areas such as chemistry and biology.

Exercise Science Program Objectives

Upon completion of the exercise science program, the individual:

1. will possess the knowledge and skills for physical activity programming and lifestyle modification techniques and be prepared to work in a variety of health and fitness fields.
2. will be able to collaborate with a variety of health care professionals through consultations and referrals in a multi-disciplinary approach to wellness.

EXERCISE SCIENCE

3. will be able to think critically to effectively solve problems in a variety of dynamic environments.
4. will understand the importance and process of becoming life-long learners in order to contribute to the fields of health and fitness
5. will be an effective communicator among health care providers, fitness professionals, clients, administrators, family, and community in the delivery of life-long health and wellness.
6. will practice with professionalism and integrity in their respective health and fitness field.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Exercise Science Major Bachelor of Science Minor Not Offered

Core courses (33 credits)

Health Sciences 101, Introduction to Health Care Skills (1 credit) [AHS 101]
Health Sciences 103, Personal and Community Health (4 credits) [AHS 103]
Health Sciences 105, Group Exercise Instruction (1 credit) (AHS 105/107)
Health Sciences 110, Basic Weight Training Instruction (1 credit) [AHS 110/112]
Health Sciences 120, Fundamental Motor Development (4 credits) [AHS 120], or
HSC 405, Neuroscience (4 credits) for pre-physical therapy
Health Sciences 303, Exercise Physiology (4 credits) [AHS 303], or HSC 406,
Applied Physiology 1 (4 credits) for pre-physical therapy
Health Sciences 322, Kinesiology (4 credits) [AHS 322], or HSC 404 Biomechanics
(4 credits) for pre-physical therapy
Exercise Science 210, Exercise Testing and Prescription (3 credits)
Exercise Science 302, Exercise in Health and Disease (3 credits)
Exercise Science 315, Exercise Science Practicum I (1 credit)
Exercise Science 324, Exercise Science Laboratory (2 credits) [AHS 324], or HSC 414
Biomechanics (4 credits) for pre-physical therapy
Exercise Science 435, Exercise Science Practicum II (1 credit)
Physical Education 421, Psycho-Social Aspects of Physical Activity (4 credits)

Capstone Experience (4-12 credits)

Exercise Science 480, Capstone: Internship in Exercise Science

Required Supporting Courses (29 credits)

Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
Chemistry 101, General Chemistry (4 credits)
Chemistry 102, Biological Chemistry (4 credits)
Chemistry 208, Nutrition (3 credits)
Physics 101, Introductory Physics I (4 credits) Pre-physical therapy students must also
take Physics 102, Introductory Physics II (4 credits)

Computer Science 107, Problem Solving Using Information Technology (2 credits)
 Mathematics 112, Introduction to Statistics (4 credits)

Sports Nutrition Minor

Program Goals: The overall goal of the Sports Nutrition minor is to provide the student with information on the combination of sound nutrition and exercise principles to improve both sports performance and health. A further goal is to give the student tools to make decisions on sports nutrition information presented in the popular media and effectively work with a client on unique sports related needs.

Objectives

Upon completion of the sports nutrition minor program, the individual:

1. will be able to effectively evaluate popular nutrition claims.
2. will be able to identify and evaluate related research.
3. will be able to effectively assess a client's needs and prescribe appropriate nutrition and exercise programs.
4. will be able to communicate effectively to the client.

Required courses:	Credits
CHE 208 Nutrition	3
OR	
HED 201 Nutrition	2
ESC 210 Exercise Testing and Prescription	3
ESC 201 Sports Nutrition	4
ESC 202 Advanced Sports Nutrition	4
ESC 303 Nutrition Assessment and Prescription	3
ESC 304 Nutrition and Fitness for Special Populations	3
ESC 305 Supplements for Sport Performance	2
Total Credits	21-22

Sports Nutrition Minor Timetable

Year	Fall	January	Spring	May
Freshman			BIO 140*	
Sophomore	CHE 208 (or HED 201)		ESC 210	
Junior	ESC 201	ESC 303	ESC 202	ESC 304
Senior		ESC 305**		

*Prerequisite for ESC 210 and Advanced Sports Nutrition

**ESC 305 may be taken concurrently with ESC 303

***The Sports Nutrition/Advanced Sports Nutrition sequence may also be taken sophomore year, concurrently with CHE 208/HED201 and ESC 210, as not to interfere with senior practicum/internship/or capstone courses

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ESC 201. Sports Nutrition

4 credits

The goal of this course is to develop an understanding of the interaction of good nutrition and exercise habits for optimal functioning of the human body. Focus will be on nutritional strategies to maximize energy and recovery. (*Fa*) Prerequisites: CHE 208 or HED 201 (may be taken concurrently)

ESC 202. Advanced Sports Nutrition

4 credits

This course offers an in-depth study of acute and chronic metabolic adaptations to exercise, followed by a study of diet manipulations to optimize exercise metabolism and improve performance. (*Sp*) Prerequisites: BIO 140, ESC 201, or consent of instructor

ESC 210. Exercise Testing and Prescription

3 credits

This course examines the evaluation of fitness levels and the components of fitness applicable to the development of exercise programs. Exposure to exercise prescription is also included in this course. (Required course fee) (*Sp*) Prerequisites: Biology 130 and 140 or consent of instructor.

ESC 302. Exercise in Health and Disease

3 credits

This course examines and applies the principles of exercise prescription for normal and special cases. Development of exercise strategies for the apparently healthy, elderly, obese, hypertensive, and cardiac patients are discussed. In addition, exercise considerations for diabetes, asthma, arthritis, osteoporosis and pregnancy are explored. (*Sp*) Prerequisites: Health Sciences 303, Exercise Science 210 or consent of instructor.

ESC 303. Nutrition Assessment and Prescription

3 credits

This course is designed to give the student knowledge and tools to assess the current diet and exercise habits of an athlete. Students will be able to use the assessment results to prescribe an eating plan. (*Wn*) Prerequisites: ESC 201

ESC 304. Nutrition and Fitness for Special Populations

3 credits

The objective of this course is to apply the principles of sports nutrition to improve the health and functionality of special populations, including athletes with eating disorders. (*Su I*) Prerequisites: ESC 210 and ESC 303

ESC 305. Supplements for Sport Performance

2 credits

The goal of this course is to provide the student with information on both safe and harmful supplementation for athletes. Specifically, the students will understand the proposed mechanism of action of a supplement, learn to evaluate the claim of effectiveness and evaluate its potential as an ergogenic aid. (*Wn*)

ESC 315. Exercise Science Practicum I

1 credit

This course provides students with an opportunity to observe and apply skills learned in exercise science and recreational management programs under the direction and supervision of the Exercise Science faculty. (Required course fee) (*Fa*) Prerequisites: Exercise Science 210 for exercise science students, junior standing, current CPR & First Aid certification. (Grading is on an S/U basis).

ESC 324. Exercise Science Laboratory**2 credits**

This course further develops knowledge, skills, and abilities that exercise professionals need to possess in order to function competently in commercial, corporate, and clinical health and fitness settings. (Required course fee) (*Sp*) Prerequisites: Health Sciences 303, Health Sciences 322.

ESC 391. Strength and Conditioning for Sport**2 credits**

This course presents advanced strength training and conditioning theory and practice. Designed primarily for students that may be involved in strength and conditioning for athletes at any age, the course explores periodization models and their utilization, mastery and analysis of explosive lifts, plyometric programming, speed and agility drills and programming, facility design, and ergogenic aids. (Required course fee)

Prerequisites: Health Sciences 303, Health Sciences 322, Health Sciences 110 or permission from instructor.

ESC 407. Facility Operation**3 credits**

This course is designed to bridge the gap between business administration theory and practical application in the fitness and recreation fields. Information provided in this course prepares students for their internship and first professional work experiences.

Prerequisites: Junior or Senior status (Exercise Science and Recreation Management majors) or permission from instructor.

ESC 435. Exercise Science Practicum II**1 credit**

This course provides students with an opportunity to develop practical, hands-on skills and experiences in exercise science and recreation management under the direction and supervision of the Exercise Science faculty. (Required course fee) (*Sp*)

Prerequisites: Exercise Science 315, current CPR and First Aid certification. (Grading is on an S/U basis).

ESC 480. Capstone: Internship in Exercise Science**4-12 credits**

This course is an opportunity for students to apply theories and concepts to actual work experiences under the supervision of an external supervisor and the Director of Internships. The purpose of the internship is to provide opportunities to improve skills, reach goals, and adapt to the world of work. (*Fa, Sp, Su*)

Prerequisites: Senior standing, major requirements completed, and approval of the instructor.

See Health Sciences in the Carroll College Catalog for descriptions of Health Sciences (HSC) courses in the Exercise Science Program curriculum.

EXERCISE SCIENCE

Exercise Science Four Year Curriculum Model

	Fall		Winter	Spring	
FRESHMAN	FYS 100	4		ENG 170	4
	BIO 130	4		BIO 140	4
	HSC 101	1		HSC 110	1
	HSC 103	4		CSC 107	2
	LSP 3-7	4		LSP 3-7	4
	or Math (101, 130)			or Math (101, 130)	
Credits		17			15
SOPHOMORE	CHE 101 (LSP 1)	4		CHE 102 (LSP 2)	4
	PHY 101	4		HSC 120	4
	HSC 105	1		ESC 210	3
	MAT 112	4		ATH 101-elective	2
	LSP 3-7	4		LSP 3-7	4
Credits		17			17
JUNIOR	HSC 303	4	ESC 391-	ESC 302	3
	HSC 322	4	elective	ESC 324	2
	ESC 315	1	2	Elective	4
	CHE 208	3		Elective	4
	LSP 3-7	4		Elective	4
Credits		16	2		17
SENIOR	ESC 407-elective	3		ESC 480	12
	ESC 435	1			
	PED 421	4			
	Elective	4			
	Elective	4			
Credits		16			12

Exercise Science (Pre-Physical Therapy) Four-Year Curriculum Model

(Pre-physical therapy students can find the necessary requirements for the Physical Therapy Program in the admissions section of the catalog)

<u>YEAR</u>	<u>FALL</u>		<u>SPRING</u>		<u>SUMMER</u>
FRESHMAN	FYS 100	4	ENG 170	4	
	BIO 130 (LSP 1)	4	BIO 140	4	
	CHE 101 (LSP 2)	4	CHE 102	4	
	PSY 101 (LSP 3)	4	HSC 110	1	
	HSC 101	1	LSP 4-7	4	
	Credits	17	Credits	17	
SOPHOMORE	HSC 103 (LSP 3)	4	MAT 112	4	
	HSC 105	1	PHY 102	4	
	PHY 101	4	ESC 210	3	
	CHE 208	3	LSP 4-7	4	
	LSP 4-7	4	CSC 107	2	
	Credits	16	Credits	17	
JUNIOR	HSC 402	4	HSC 403	4	ESC 480
	ESC 315	1	ESC 435	1	
	LSP 4-7	4	ESC 302	3	
	Elective	4	Elective	4	
	PED 421	4	Elective	4	
	Credits	17	Credits	16	
SENIOR	PTH 400	4	PTH 401	4	
	HSC 404	4	HSC 407	4	
	HSC 405	4	HSC 414	4	
	HSC 406	4	HSC 416	4	
	Credits	16	Credits	16	

DIVISION OF NATURAL AND HEALTH SCIENCES

HEALTH SCIENCES

The Health Sciences Area offers bachelor of science degree programs in athletic training, exercise science, health science, nursing, physical and health education, and recreation management, a licensure program in adapted physical education, and an entry-level doctor of physical therapy degree program.

This section of the catalog presents: 1) the academic standing and progression standards and policies for the health sciences programs, 2) the health science major, and 3) interdisciplinary courses for the bachelor of science degree programs in athletic training, exercise science, health science, nursing, physical and health education, and recreation management. The athletic training, exercise science, nursing, physical and health education, and recreation management majors and pre-physical therapy emphasis are presented separately in this catalog.

Academic Standing and Progression in Health Sciences

Athletic Training, Nursing and Physical Therapy Programs

Satisfactory progress in the athletic training, nursing, and physical therapy programs is contingent upon satisfying the following academic requirements:

- 1) A grade of C or better is required in all athletic training, nursing, and physical therapy courses. A letter grade of D, F, or U in any athletic training, nursing, or physical therapy course requires the student to repeat the course before progressing to subsequent courses for which the failed course is a prerequisite. When repeating an athletic training, nursing, or physical therapy course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate theoretical knowledge. If a student is unable to take further courses in the next occurring semester as a result of this policy, the student is placed on academic suspension and repeats the course during the next appropriate semester. A course may be repeated only one time. A student receiving a D, F, or U twice in one athletic training, nursing, or physical therapy course or in two athletic training, nursing or physical therapy courses is dismissed from the program.
- 2) Grade Point Averages (GPA) Requirements:
 - a) Athletic Training Program: A cumulative GPA of 2.5 and pre-professional (natural, behavioral, and social sciences) GPA of 2.0 during the freshman and sophomore years is required for admission to the professional phase (junior and senior years) of the program. A student must maintain a cumulative college GPA and a session GPA of 2.5 throughout the professional phase. A student who gets below a 2.5 cumulative and/or session GPA will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.5 cumulative and/or session GPA or higher in the subsequent semester. If a student fails to attain a 2.5 cumulative

and/or session GPA, s/he will be dismissed from the program. Grades of C or better are required in all ATH, ESC, and HSC professional phase courses. A satisfactory (S) is required in all completed practica. If a grade below a C is achieved or an S is not achieved, the student may not progress to subsequent courses in the program if the course is a prerequisite of another. When repeating a professional phase athletic training, health science, or exercise science course a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate theoretical knowledge. If a student is unable to take further courses in the next occurring semester as a result of this policy, the student is placed on academic suspension and repeats the course during the next appropriate semester. A course may be repeated only one time.

- b) Nursing Program: grades of C or better are required in all nursing, chemistry, biology and health science courses. A satisfactory (S) is required in all completed practica. A student must maintain a cumulative GPA of 2.75. A student whose cumulative GPA is below a 2.75 will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.75 cumulative GPA in the subsequent semester. If a student fails to attain a 2.75 cumulative GPA in the subsequent semester, s/he will be dismissed from the program.

A transfer student who takes NRS 100 and 230 concurrently and earns lower than a C in Nursing 100 must retake NRS 100 in the subsequent semester. In this case, the student may register for NRS 236 in the subsequent semester but may not register for NRS 232 or 234.

A student who withdraws from any nursing course twice will be dismissed from the program.

Any student who is not accepted to the nursing program may only enroll in NRS 100.

- c) Physical Therapy Program:
Pre-Physical Therapy Program: To proceed to the professional phase of the physical therapy program in the senior year, a student must have a cumulative and pre-professional (natural, behavioral, and social sciences) GPA of 3.0 or higher. Carroll College Academic Standing policies apply to pre-physical therapy students.

Professional Phase of the Physical Therapy Program: In the professional phase of the professional program (400-, 500-, and 600-level health sciences and physical therapy courses) student must attain a grade point average of 3.0 or better each semester. If a student earns a semester grade point average between 2.0 and 2.99, s/he is placed on academic probation. To be removed from academic probation, the student must earn a grade point average of 3.0 or better in the following semester. If a clinical internship course is scheduled

during the next semester, the student must earn a satisfactory (S) in the clinical internship course and a semester grade point of 3.0 or better in the semester following the clinical internship course to be removed from academic probation. If a student is on academic probation during the last semester of the program, the student must earn an S in the clinical internship course and in PTH 612: Clinical Research II, to graduate. A student will be dismissed from the program if 1) s/he is placed on academic probation a second time during his or her tenure in the program, 2) s/he fails to meet the criteria for the removal from academic probation, or 3) if s/he earns a semester GPA of 1.99 or less.

Physical and Health Education Program

To complete a major in Physical Education with Health, the student must be admitted to the Teacher Education Program (TEP) in the Education Program. The TEP requires that a student 1) maintain a minimum cumulative GPA of 2.5, 2) maintain a combined GPA of 2.75 in the physical education major, the health education minor, and Department of Public Instruction approved secondary teaching education minor and 3) demonstrate professional behavior throughout his/her college career. The physical education with health student must make application to the TEP, including submission of the TEP Portfolio and passing scores on the PPST (PRAXIS I) examination, during the fall semester of his/her sophomore year. In the spring semester of the junior year, the student must successfully complete the Praxis II Content Knowledge Exam for health and physical education. Copies of the TEP Handbook are available from the Education Office.

Exercise Science and Recreation Management Programs

Carroll College academic standing policies apply to students enrolled in the Exercise Science and the Recreation Management programs.

Evaluation of Academic Standing and Progression

An interdisciplinary health science committee consisting of health sciences administrators and program directors, the Registrar, and the Office of Admission will conduct evaluation of academic progression at the end of each semester. Health sciences students may appeal a probation or dismissal decision by filing an Academic Affairs Petition with the Registrar's Office. The decision of the college regarding the appeal is final. During the appeal process, a student may participate in courses.

Policy on Reapplication to a Health Sciences Program

The Policy on Reapplication defines the process by which students may seek readmission to a health sciences program following dismissal of the student from the program for failing to maintain good academic standing. Readmission candidates may apply for readmission to the program no sooner than one year and no later than three years from the date of dismissal. Readmission candidates may exercise their reapplication option only once. Readmission candidates applying to the program must submit the materials required of all applicants for admission. In addition, they must provide transcripts relating to any education experiences completed since leaving the program. A letter

indicating why the readmission candidate believes s/he will succeed academically and technically in the program must accompany application materials.

Medical or Personal Leave

If a student must be absent from a health sciences program for an extended period of time for medical or personal reasons or jury duty, written notice must be given to the respective program director prior to the leave, if possible. Written notice must also be given to the program's director prior to the student's return to the program. If applicable, the student may be asked to verify that s/he has complied with the program's technical standards with previously imposed conditions for leave. In addition, remediation or course repetition may be required of the student dependent on the length of the absence. Any course, laboratory, outside learning experience, or clinical practicum/internship make-up or remediation is dependent upon academic and clinical faculty and facility availability.

Health Sciences Program

Sara M. Deprey	Assistant Professor of Physical Therapy
Mark R. Erickson	Assistant Professor of Physical Therapy
Jane F. Hopp	Associate Professor of Physical Therapy
Edward J. Maher	Assistant Professor of Physical Therapy
Tom G. Pahnke	Assistant Professor of Physical Therapy
Kathleen A. Shields	Assistant Professor of Physical Therapy

The aims of the health science major are to 1) prepare students for the professional physical therapy program at Carroll College, 2) facilitate professional advancement for health care providers who currently hold a technical degree in a health-related profession, and 3) provide a program of study that is common to several health science majors at Carroll College as a way to facilitate career decision making. Emphases in the major include 1) pre-physical therapy and 2) health science degree completion (based on earned associate degree).

This major provides depth and breadth within the basic and behavioral sciences to prepare students for the balanced integration of critical thinking, basic science knowledge application, and interpersonal skills necessary to provide best care in a variety of health science disciplines. To meet the educational missions of the College and of the health science major, students study in a variety of academic and professional disciplines including biology, psychology, chemistry, health science, physics, mathematics, and physical therapy.

Health Science Major Bachelor of Science

Major Core Courses (49 credits)

BIO130, Introduction to Human Anatomy and Physiology I (4 credits)

BIO140, Introduction to Human Anatomy and Physiology II (4 credits)

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PSY101, Introductory Psychology (4 credits)
PSY201, Abnormal Psychology (4 credits)
PSY221, Life-Span Psychology (4 credits)
PSY260, Health Psychology (4 credits)
CHE101, General Chemistry (4 credits)
CHE102, Biological Chemistry (4 credits)
CHE208, Nutrition (3 credits)
MAT112, Introduction to Statistics (4 credits)
PHY101, Introductory Physics I (4 credits)
PHY102, Introductory Physics II (4 credits)
CSC107, Problem Solving Using Information Technology (2 credits)

Capstone (4 credits)

PTH401, Clinical Research I

*Note: This course will be offered for the first time as a capstone Spring semester 2009.

Physical Therapy Emphasis (36 credits)

PTH400, Foundations of Professional Practice (4 credits)
HSC402, Human Anatomy (4 credits)
HSC403, Human Physiology (4 credits)
HSC405, Neuroscience (4 credits)
HSC406, Applied Physiology I (Exercise Physiology I*)* (4 credits)
HSC416, Exercise Physiology II*** (4 credits)
HSC404, Biomechanics (Biomechanics I*)* (4 credits)
HSC414, Biomechanics II** (4 credits)
HSC407, Human Learning and Behavior (4 credits)

*Courses offered for the first time in Spring 2008

** Courses offered for the first time in Fall 2008.

*** Courses offered for the first time in Spring 2009.

Bachelor of Science Degree Completion Emphasis

For students who have earned, or might be currently earning an Associate Degree in a health related profession such as surgery technician, radiology, etc., the Health Science major provides an avenue for professional growth and advancement. Students are awarded thirty credits by Carroll College for course work taken at either Waukesha County Technical College (WCTC) or Milwaukee Area Technical College (MATC) in conjunction with their respective degree.

The remaining required courses will vary depending on the degree program. For example, students with a surgical technician degree from MATC would be required to complete 36 of the above 48 core credits while a student with a radiography degree from WCTC would be required to complete 44 of the 48 core credits above. Students with a degree from either WCTC or MATC who wish to pursue the Health Science major would have an opportunity to take between ten and twenty-six elective credits. Additional course work focuses on preparing the individual for enhanced personal and professional development. Recommended options include a minor in a desired area of

interest such as Hispanic Health and Human Services or Organizational Leadership, or a broad course of study within the liberal arts and sciences.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Academic Policies

Policies on academic standing and progression, readmission to the health sciences program, and medical or personal leave are presented under Academic Standing and Progression in Health Sciences in this section of the catalog. Policies on admission, technical standards, caregiver background and criminal history check, insurance, and academic progression, as well as the professional program phase I (senior year) for the physical therapy program are presented in the pre-physical therapy section of this catalog.

If, for any reason, a student does not advance into the entry-level physical therapy program, career counseling through the Walter Young Center is available.

Interdisciplinary Health Sciences Courses

Health Sciences 101, Introduction to Health Care Skills (1 credit) [PED 106, AHS 101]

Health Sciences 103, Personal and Community Health (4 credits) [HED 222, AHS 103]

Health Sciences 105, Group Exercise Instruction (1 credit) [PED 109, AHS 105/107]

Health Sciences 110, Basic Weight Training Instruction (1 credit)

[PED 109, AHS 110/112]

Health Sciences 120, Fundamental Motor Development (4 credits)

[PED 120, AHS 120]

Health Sciences 300, Pharmacology (3 credits) [ATH 303]

Health Sciences 303, Exercise Physiology (4 credits) [PED 413, AHS 303]

Health Sciences 322, Kinesiology (4 credits) [PED 301, AHS 322]

Entry-level Physical Therapy Degree Courses

Health Sciences 402, Human Anatomy (4 credits)

Health Sciences 403, Human Physiology (4 credits)

Health Sciences 404, Biomechanics (Biomechanics I as of Fa 2007) (4 credits)

Health Sciences 405, Neuroscience (4 credits)

Health Sciences 406, Applied Physiology I (Exercise Physiology I as of Fa 2007)

(4 credits)

Health Sciences 407, Human Learning and Behavior (4 credits)

Health Sciences 414, Biomechanics II (Offered for the first time in Sp 2008) (4 credits)

Health Sciences 416, Exercise Physiology II (Offered for the first time in Sp 2008)

(4 credits)

HSC 101. Introduction to Health Care Skills

1 credit

The purpose of this course is to provide the knowledge and skills that are necessary to become First Aid and Professional Rescuer CPR/AED (Automated External Defibrillator) certified in accordance with the American Red Cross. These skills

HEALTH SCIENCES

include the ability to call for help, to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until advanced medical care arrives. Students will also be trained on policies and standards regarding blood borne pathogens and occupational exposure in accordance with the Occupational Safety and Health Administration (OSHA) guidelines. (Required course fee) (*Fa, Wn, Sp*)

HSC 103. Personal and Community Health L3 4 credits

Studies the dynamics of health in modern life with special emphasis on health concepts relevant to personal and community living. (*Fa, Sp*)

HSC 105. Group Exercise Instruction 1 credit

This course provides training for the entry-level Group Exercise instructor. This course will cover basic cardiorespiratory physiology, aerobic program design and group exercise class development using activity and application to develop instructional skills. (Required course fee) (*Fa, Sp*)

HSC 110. Basic Weight Training Instruction 1 credit

This course provides training for the entry-level resistance-training instructor, introducing basic strength training techniques, basic training principles, functional anatomy, and exposure to a variety of forms of resistance training. Students learn to apply basic physiology, biomechanics, weight room safety, and basic program design. (Required course fee) (*Sp*)

HSC 120. Fundamental Motor Development 4 credits

Introductory course exploring the growth and development of basic motor skills from infancy to adulthood and changes which occur in skills with advanced age. This course will also explore different learning theories and variables associated with mastering motor skills. (*Sp*) Prerequisites: Biology 130

HSC 290. Cultural Influences in Hispanic Health Care 2 credits

This course will focus on the impact of cultural influences in Hispanic populations as people make health care decisions. The learning objectives will be based on the need for students to obtain an understanding of Hispanic culture as it affects the clinician/patient relationship. The topics covered will enhance the effectiveness of the students to develop better research questions and to be able to anticipate the most appropriate ways of interacting with Hispanic populations. This course will be taught in English as a main language but also will introduce students to bilingual terminology. (*Fa*)

HSC 300. Pharmacology 3 credits

Addresses pharmacology for the licensed athletic trainer and nurse. Students explore basic knowledge about major drug groups, physiological effects of pharmacotherapeutic agents, utilization of pharmacotherapeutic agents, and storage, dispensing, and tracking protocols for pharmacotherapeutic agents. (*Fa, Sp*) Prerequisites: Chemistry 101/102 or higher, Biology 103/104 or 130/140 or higher

HSC 303. Exercise Physiology**4 credits**

Students explore the functions and the underlying mechanisms of action of the body's physiological systems, their acute response to physical activity, and their adaptation to chronic physical activity. This course also explores means by which physical performance can be enhanced. (Fa) Prerequisite: Biology 130 and 140.

HSC 322. Kinesiology**4 credits**

The anatomical and mechanical bases of normal human movement are studied in this course. Biomechanical terminology and principles are introduced. Students examine the laws of nature that govern movement and how they can be applied to human movement in a manner designed to enhance performance. The course also explores the roles and functions of the nervous and musculoskeletal systems in human movement and performance and the manner in which they work individually and collectively during movement. (Fa) Prerequisite: Biology 130 and 140.

HSC 402. Human Anatomy**4 credits**

The microanatomy and gross anatomy of muscle, bone and cartilage and the integumentary, nervous, cardiovascular, lymphatic, respiratory, renal, digestive, endocrine, and reproductive systems are studied. Using multi-media software, male and female bodies are dissected from anterior, posterior, medial, lateral, and medial/lateral views and histologies, radiologies, cross-sections, and MRIs are linked to the anatomy. Models are also employed to study the structure of the human body. In addition, palpation laboratories are integrated into the course. (Required program fee) (Fa) Prerequisites: Entry-Level Physical Therapy Program Standing and Biology 103/104 OR Biology 150/160 and 221.

HSC 403. Human Physiology**4 credits**

Fundamental concepts related to the normal function of the human body are presented. The normal functioning of the human body is discussed across gender, race, and life span. Basic pathophysiological concepts are introduced. Resources used include physiology laboratories, computer simulations, and videos. (Required program fee) (Fa) Prerequisites: Entry-Level Physical Therapy Program standing, Biology 103/104 OR 150/160, Chemistry 110 OR a C or better in Chemistry 101 and 102.

HSC 404. Biomechanics (Biomechanics I as of Fa 2007)**4 credits**

The anatomical and mechanical bases of movement are integrated to study normal regional human kinesiology. Human anatomy, physiology, and biomechanical terminology, principles, and instrumentation are integrated and applied to physical therapy clinical practice. When applicable, differences due to age, gender, and race are explored. (Required program fee) (Sp) Prerequisites: Entry-Level Physical Therapy Program Standing, Physics 101/102 and Health Sciences 402, 403.

HSC 405. Neuroscience**4 credits**

The structure, chemistry, and functioning of the brain in relation to learning, memory, emotion, personality, and complex human behaviors, including thought and language, are emphasized. Brain disorders are discussed. Resources used to study the structure, chemistry, and the function of the human brain include laboratories and CD ROM pro-

grams. (Required program fee) (*Fa*) Prerequisites: Entry-Level Physical Therapy Program Standing. Students cannot take PSY 401: Behavioral Neuroscience

HSC 406. Applied Physiology I (Exercise Physiology I as of Fa 2007) 4 credits

The fundamental principles of exercise physiology and their applications in rehabilitation are introduced and explored. Anatomical, biochemical, psychological, and physiological effects of exercise in different human body systems in trained and untrained healthy individuals are studied. Factors that affect exercise performance are presented. Cardiovascular and skeletal muscle assessment and training techniques are emphasized. Explorations of the role of physical activity in wellness and primary prevention programs are initiated. As appropriate, information is presented across gender, race, and life span. (Required program fee) (*Sp*) Prerequisites: Entry-Level Physical Therapy Program Standing and Health Sciences 402, 403, 405.

HSC 407. Human Learning and Behavior

4 credits

The basic principles of human learning and behavior will be explored across gender, culture, and lifespan. An emphasis will be placed on classical and instrumental learning, the concepts of motor learning, and on information-processing approaches to learning. The experimental bases for these areas of learning will be stressed throughout. Specific applications of basic research will be made to behavioral medicine, physical therapy, education, behavior modification, and behavior dysfunction. (Required program fee) (*Sp*) Prerequisites: Entry-Level Physical Therapy Program Standing and Health Sciences 405. Students cannot take PSY 314, Learning and Animal Behavior

HSC414. Biomechanics II

4 credits

In this course, biomechanical and kinesiological knowledge is advanced to incorporate whole-body motion analysis through qualitative and quantitative methodology consistent with physical therapy clinical practice. For each piece of instrumentation, the student will learn essential operation, data collection, and data analysis. The course will culminate with a small-group project where students use biomechanical technology to collect and analyze desired data, and present findings to faculty and peers. (Required program fee) (*Offered for the first time Spring 2009*) Prerequisites: Good standing in the Entry-Level Physical Therapy Program, HSC 404.

HSC416. Exercise Physiology II

4 credits

This course advances the fundamental principles of exercise physiology in rehabilitation. Emphasis is on 1) the application and integration of fundamental exercise physiology knowledge acquired in HSC 406, Applied Physiology I, 2) exercise assessment and testing, and 3) investigating exercise physiology applications using standard methodology. Therapeutic exercise emphasizing cardiovascular and skeletal muscle training, and the role of physical activity in wellness and primary prevention programs is studied. Students learn to develop and apply individualized exercise prescriptions to healthy untrained and trained individuals across the life span, gender, and race. (Required program fee) (*Offered for the first time Sp 2009*) Prerequisites: Good standing in the Entry-Level Physical Therapy Program, HSC 406.

DIVISION OF NATURAL AND HEALTH SCIENCES

MARINE SCIENCES

Susan E. Lewis Professor of Biology
Christopher D. Winn Associate Professor and Director of Marine Science, Hawaii Pacific University

Carroll College offers access to majors in marine biology and oceanography via a cooperative arrangement with Hawaii Pacific University (HPU). The objective of the Marine Science Program at HPU is to help students gain a scientific understanding of the world's oceans and the life they contain, and a sense of appreciation for their beauty and fragility. Students are given a theoretical framework in the basic and applied sciences as well as ample opportunities to get hands-on experience conducting laboratory and field observations and experiments. Lecture and laboratory facilities are located on the Hawaii Loa Campus of Hawaii Pacific University. The campus is only a twenty-minute drive from Kaneohe Bay, a large natural embayment protected from the open ocean by the only true barrier reef in the Hawaiian Islands. This bay serves as one of the finest natural laboratories in the world for studying the marine sciences, and its protected nature allows HPU students to do field work in almost any type of weather.

Students desiring to major in marine biology or oceanography will spend two years at Carroll College taking basic science and liberal arts courses. After the two years, students transfer to Hawaii Pacific University and complete the requirements for a Marine Biology/Oceanography degree from Hawaii Pacific University.

Marine Biology or Oceanography Major **Bachelor of Science**

Science and mathematics courses taken at Carroll College

Biology 150, Organismal Biology I
Biology 160, Organismal Biology II
Chemistry 109, Principles of Chemistry I
Chemistry 110, Principles of Chemistry II
Environmental Science 105, Introductory Physical Geography
Mathematics 112, Introduction to Statistics
Mathematics 160, Calculus I
Mathematics 161, Calculus II
Physics 101 or 203, Physics I (may be taken at HPU)
Physics 102 or 204, Physics II (may be taken at HPU)

Other Carroll College courses required in this transfer program

FYS 100, First Year Seminar
English 170, Writing Seminar
English: any literature course
Computer Science 107, Problem Solving Using Information Technology
History 103, Roots of the Western World

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History 104, Europe and the Modern World
Politics 141, Introduction to American Politics

Sample program at Carroll College

	<u>Fall</u>	<u>Spring</u>
Freshman	First Year Seminar Organismal Biology I Roots of the Western World Elementary Functions (Math 130)	Writing Seminar Organismal Biology II Europe and the Modern World Calculus I
Sophomore	Principles of Chemistry I Calculus II Introduction to American Politics Problem Solving using IT Introductory Physics	Principles of Chemistry II Introduction to Physical Geography Introduction to Statistics Introductory Physics

Sample program for Marine Biology at Hawaii Pacific University

Summer at HPU before Junior Year - Field Work Safety Techniques and Oceanographic Field Techniques or other relevant courses

	<u>Fall</u>	<u>Spring</u>
Junior	Evolutionary Genetics Argument, Research, Writing from Sources Oceanography Ecology	Comparative Animal Physiology Marine Biology Marine Ecology Upper-Division Elective
Senior	Hawaiian Natural History Marine Invertebrate Zoology Cell and Molecular Biology Physics I	Environmental Microbiology Seminar: Marine Biology The World Problematique Physics II

Sample program for Oceanography at Hawaii Pacific University

Summer at HPU before Junior Year - Field Work Safety Techniques and Oceanographic Field Techniques or other relevant courses

	<u>Fall</u>	<u>Spring</u>
Junior	General Oceanography I Argument, Research, Writing from Sources Aquatic Chemistry Upper-Division Elective	General Oceanography II Physical Geology Geochemistry Geological Oceanography

Summer before senior year: Physics I and II

Senior	Chemical Oceanography Mineralogy Sedimentology The World Problematique	Descriptive Regional Oceanography Seminar: Oceanography Dynamic: Physical Oceanography Upper-Division Elective
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DIVISION OF NATURAL AND HEALTH SCIENCES

MATHEMATICS

Heather Evans	Instructor
David A. Feil	Associate Professor
Darrel A. Johnson	Visiting Instructor
Christopher Kuster	Assistant Professor
Kristen A. Lampe	Associate Professor
John C. Symms	Associate Professor

The major in mathematics includes courses in pure and applied mathematics, offering a broad and in-depth foundation for students with diverse interests and backgrounds. All courses in the curriculum develop logical thinking, quantitative reasoning, and deductive analysis, making majors and minors highly attractive to graduate schools and employers in industry.

Combined with complementary course work, a mathematics major gives strong preparation for graduate study in an increasingly wide variety of disciplines. These include biostatistics, computer science, economics, forestry, genetics, meteorology, operations research, physics, psychology, pure and applied mathematics, sociology, and most engineering fields.

Career opportunities for those with a mathematics major are equally varied. These include positions in the fields of actuarial science, banking and financial services, communications, computer science, consulting, government, health services, management, public policy, research organizations, utilities, and transportation.

The major in mathematics is approved by the Wisconsin Department of Public Instruction for certification in mathematics.¹

Please see page 20 of this catalog for information about how retroactive credits in calculus may be earned.

Mathematics Learning Outcomes

Students majoring in mathematics are expected to

- 1...learn to read, write, speak and do mathematics.
- 2...demonstrate competence in the use of appropriate technology in support of mathematical calculation, symbolic manipulation and graphical analysis.
- 3...demonstrate their understanding of the nature of mathematical proof.
- 4...apply mathematics to a variety of problems in the natural, computational and social sciences.

¹ Students must normally maintain a 2.75 grade point average in the major to remain in good standing in the Teacher Education Program.

- 5...learn the contributions of mathematics and mathematicians to the growth of knowledge.
- 6...prepare for advanced studies in mathematics or for a profession.
- 7...develop an appreciation for mathematics as an art.

Mathematics Major (B.A.) Bachelor of Arts

Courses in the Major

Mathematics 160, 161, 207, Calculus I, II, III
Mathematics 206, Transition to Advanced Mathematics
Mathematics 208, Linear Algebra
Two of the following five courses:
 Mathematics 250, Mathematics Seminar
 Mathematics 305, Modern Geometry*
 Mathematics 312, Theory of Probability and Statistics*
 Mathematics 324, Numerical Analysis
 Mathematics 350, Mathematics Seminar
Mathematics 320, Abstract Algebra
Mathematics 409, Mathematical Analysis
Mathematics 450, Senior Capstone

Required Support Courses (Required for primary majors only)

Completion of a Modern Language through 202

*To be certified by the DPI, student must take Mathematics 305 and 312.

Mathematics Major (B.S.) Bachelor of Science

Courses in the Major

Mathematics 160, 161, 207, Calculus I, II, III
Mathematics 206, Transition to Advanced Mathematics
Mathematics 208, Linear Algebra
Mathematics 305, Modern Geometry
Mathematics 312, Theory of Probability and Statistics
Mathematics 320, Abstract Algebra
Mathematics 324, Numerical Analysis
Mathematics 409, Mathematical Analysis
Mathematics 450, Senior Capstone

Required Support Courses (Required for primary majors only)

Computer Science 110, Problem Solving through Programming

Physics 203, General Physics

Physics 204, General Physics, or Biological Science*

*To be certified by the DPI, students must take a biological science. All students not minoring in secondary education must take Physics 204.

Mathematics Minor

Mathematics 160, 161, Calculus I, II
Mathematics 206, Transition to Advanced Mathematics
Mathematics 208, Linear Algebra
Two additional courses in Mathematics at the 200-level or higher excluding
Mathematics 201, 205

Secondary Education

Mathematics Minor

Mathematics 160, 161, Calculus I, II
Mathematics 206, Transition to Advanced Mathematics
Mathematics 207, Calculus III
Mathematics 305, Modern Geometry
Mathematics 312, Theory of Probability and Statistics

Elementary Education

Mathematics Minor

Required Courses

Mathematics 104, Foundations of Elementary Mathematics I
Mathematics 140, Calculus and Its Applications or
Mathematics 160, Calculus
Mathematics 112, Introduction to Statistics
Mathematics 201, Foundations of Elementary Mathematics II
Mathematics 206, Transition to Advanced Mathematics
Mathematics 305, Modern Geometry

091. Special Topics Course: Mathematics Review

4 Credits

This is a course for students not yet ready for Math 101. The course reviews basic arithmetic, algebra, and geometry with an emphasis on study skills. Topics include: whole numbers, signed numbers and variables, fractions, decimals, linear equations, measurement, proportion, percent, perimeter, area, volume; and an introduction to solving linear and systems of equations, exponents, radical, and polynomials. Credits earned in this course do not count toward the 128 credits needed for graduation. (Fa)
Pre-requisites: one year of high school algebra and one year of high school geometry.

098. Pre-Algebra

No Credit

This is a non-credit course for students not yet ready for Mathematics 101. The course reviews basic arithmetic, algebra, and geometry with an emphasis on study skills. Topics include: whole numbers, signed numbers and variables, fractions, decimals, linear equations, measurement, proportion, percent, perimeter, area, volume; and an introduction to solving linear and systems of equations, exponents, radical, and polynomials. (Su) Pre-requisites: one year of high school algebra and one year of high school geometry.

MATHEMATICS

- 101. College Algebra** 4 credits
101L College Algebra Laboratory
Number systems, theory of equations and inequalities, introduction to functions and their graphs, applications of algebra. This course is intended for students who lack the mathematical preparation required for Mathematics 102, 106, 112 or 130. (*Fa, Sp*) Prerequisites: one year of high school algebra and one year of high school geometry.
- 102. Review of Algebra** 2 credits
This course is an accelerated format of College Algebra intended for students with stronger math skills who need a review of basic algebra concepts and skills to prepare for Mathematics 104, 106, 112 or 130. This course is not available to students who have failed Mathematics 101. (*Su*) Prerequisites: one year of high school algebra and one year of high school geometry.
- 104. Foundations of Elementary Mathematics I** 4 credits
An introduction to problem solving, sets, number theory, numeration systems, and the structure of the real number system. Course material will be presented in a manner consistent with the NCTM Principles and Standards for School Mathematics. Recommended for education students only. (*Fa, Sp*) Prerequisite: MAT 101 or two years of algebra in high school.
- 106. Mathematics for the Liberal Arts** 4 credits
This elementary course in contemporary mathematics introduces the non-mathematics major to the usefulness of mathematics. Real current-day problems are presented along with some of the mathematics techniques which have been used to solve them. Problems discussed will involve such topics as "the traveling salesman problem," exponential growth, voting systems, analysis of arguments and fractal geometry. (*Fa, Sp, Su*) Prerequisites: MAT 101 or placement recommendation.
- 112. Introduction to Statistics** L1 4 credits
An introductory statistics course emphasizing applications to business, science and the social sciences. Topics include: statistical description of data, distributions, random variables and sample spaces, probability, sampling and sampling distributions, the Central Limit Theorem, estimation of parameters, hypothesis testing, confidence intervals, and use of a statistical calculator. On occasion, on-line sections of this course will be offered. (*Fa, Sp, Su*) Prerequisite: Math 101 or placement recommendation and FYS level computer literacy.
- 130. Elementary Functions** 4 credits
A study of rational, radical, exponential, logarithmic, and trigonometric functions designed to prepare students for Mathematics 140 or 160 (*Fa, Sp, Su*) Prerequisites: Math 101 or placement recommendation

140. Calculus and Its Applications

4 credits

A compact version of Calculus I, II stressing problem-solving techniques and applications. Designed for students who need only one semester of calculus. Numerous examples are presented from accounting, biology, business, economics, and other fields.

(*Fa, Sp; Su*) Prerequisite: Math 130 or placement recommendation

May not be taken for credit by those who have completed Mathematics 160.

160. Calculus I

4 credits

A brief review of inequalities, functions and plane analytic geometry; limits and continuity; the derivative and the differential; applications of differentiation; introduction to the Riemann integral. Includes differentiation of logarithmic and exponential functions, and indeterminate forms. History of selected topics is studied. Four hours of lecture and one hour of laboratory/recitation. (*Fa, Sp*) Prerequisite: Math 130 or placement recommendation

161. Calculus II

4 credits

Applications of the Riemann integral; calculus of the natural logarithm and exponential functions; formal techniques of integration; improper integrals; differential equations; L'Hospital's Rule; series and sequences. History of selected topics is studied. Four hours of lecture and one hour of laboratory/recitation. (*Fa, Sp*) Prerequisite: Mathematics 160 or placement recommendation

201. Foundations of Elementary Mathematics II

4 credits

A study of introductory geometry, measurement, algebra, coordinate and transformation geometry, statistics and probability. Students will also be introduced to geometry computer software. Designed for the elementary education major. (*Fa, Sp*) Prerequisite: Mathematics 104.

205. Discrete Mathematics

4 credits

A study of set theory, propositional calculus, algorithms, relations, functions, combinatorics, recursion, discrete graphs, trees, automata. Intended for Computer Science majors only. (*Sp*) Prerequisites: Computer Science 226, Mathematics 140 or 160

206. Transition to Advanced Mathematics

4 credits

An introduction to fundamental concepts, structures and style of mathematics. Core topics are logic, sets, mathematical induction, relations, functions and graph theory. Special topics may include number theory, cardinality, or the construction of the real numbers. Special emphasis will be placed on developing and communicating mathematical arguments. (*Fa*) Prerequisites: Mathematics 140 or 161

207. Calculus III

4 credits

Vectors in the plane and in space, solid analytic geometry; calculus of functions of two variables; partial derivatives; divergence and gradient; multiple integrals, line integrals, and surface integrals. History of selected topics is studied. (*Fa*) Prerequisite: Mathematics 161 or placement recommendation

MATHEMATICS

208. Linear Algebra

4 credits

Vector spaces; linear transformations and matrices; systems of linear equations; applications. (*Sp*) Prerequisite: Mathematics 161 or 206.

210. Theory of Interest

4 credits

Workshop-style course to develop student skills in compound interest and insurance function; discrete and continuous compound interest; force of interest function; annuities payable discretely and continuously; bonds and yield rates; life tables, life annuities, single and annual premiums for insurance and annuities; reserves. (*Sp, even years*) Prerequisite: Mathematics 161

212H. Introduction to Statistics and Experimental Design L1

4 credits

An introductory statistics and experimental design course emphasizing analyses and designs frequently applied in the life and behavioral sciences. Topics include: hypothesis testing, confidence intervals, and regression. Computing experience with a statistical package is an integral part of this course. (*Sp, odd years*) Prerequisites: For honors students with at least sophomore standing, MAT101 or higher preparation, and FYS level computer literacy.

250. Mathematics Seminar

4 credits

Mathematics Seminar topics vary by year. The course meets concurrent with MAT 350 and MAT 450, the Capstone Experience. The course is designed to give students exposure to the Capstone Experience and to give all mathematics students the opportunity to increase their breadth of study. (*Sp*) Prerequisite: Mathematics 206 or instructor approval

305. Modern Geometry

4 credits

A study of elementary geometry from an advanced standpoint; includes distance and congruence axioms, parallelism, incidence and order, and non-Euclidean geometries. History of selected topics is studied. (*Sp*) Prerequisite: Mathematics 206.

312. Theory of Probability and Statistics

4 credits

An introduction to the mathematical theory of probability and statistics. Topics include: sample spaces; probability distribution functions; regression and correlation; hypothesis testing. History of selected topics is studied. (*Sp, odd years*) Prerequisite: Mathematics 207.

320. Abstract Algebra

4 credits

An introduction to modern abstract algebra to include topics in the theory of groups, rings and fields. Required of all mathematics majors. History of selected topics is studied. (*Fa, odd years*) Prerequisites: Mathematics 206 and 208.

324. Numerical Analysis**4 credits**

Introduction to the numerical methods and algorithms fundamental to mathematical and scientific analysis. Error analysis and efficient programming techniques are stressed. Includes solving equations, linear and nonlinear systems, curve fitting, function approximation, interpolation, differentiation, integration and numerical solutions to differential equations. (*Fa, odd years*) Prerequisites: Mathematics 161 and 208, Computer Science 110.

350. Mathematics Seminar**4 credits**

Mathematics Seminar topics vary by year. The course meets concurrent with MAT 350 and MAT 450, the Capstone Experience. The course is designed to give students exposure to the Capstone Experience and to give all mathematics students the opportunity to increase their breadth of study. (*Sp*) Prerequisite: Mathematics 206 or instructor approval

391/491. Advanced Topics in Mathematics**2-4 credits**

These courses are designed to meet the special needs of students who have completed the prescribed courses for a major and wish to extend their study in specific areas. Students planning on graduate study should take courses in topology and other appropriate topics. Students interested in actuarial science should arrange for additional study in probability and statistics. Courses in applied mathematics can also be arranged. These courses may not be taken in lieu of courses specified for the major or minor. (*Fa, Sp, Su with instructor consent*) Prerequisites: Junior or senior standing, approval of the divisional dean and consent of the instructor.

409. Mathematical Analysis**4 credits**

The study of theory and applications of analysis on the real line. Limits; continuity; differentiation; sequences and series of functions; integration. (*Fall, even years*) Prerequisites: Mathematics 206 and 207.

450. Mathematics Senior Capstone**2-4 credits**

All majors will complete a mathematics-related project. Projects may involve original or expository research in applied mathematics, pure mathematics, or mathematics education. Applied mathematics projects may involve mathematical consultancy work for area businesses. (*Sp*) Prerequisite: 80 credit hours completed.

DIVISION OF NATURAL AND HEALTH SCIENCES

NURSING

Julie A. Averbek	Assistant Professor
Angie Brindowski	Assistant Professor
Genee A. Brukwitzki	Assistant Professor
Cathy Goodale	Assistant Professor
Karen L. Gorton	Assistant Professor
Lisa Green	Assistant Professor
Karie M. Ruekert Kobiske	Assistant Professor
Laurie Kunkel-Jordan	Assistant Professor
Janet H. McClintock	Assistant Professor
Tammy L. Ostroski	Assistant Professor
Linda M. Phillips	Assistant Professor
Susan V. Saucier	Assistant Professor
Diane S. Sokolowski	Assistant Professor
Jill Switalski	Lab Coordinator

Carroll College offers a program leading to a Bachelor of Science in Nursing degree. Established in fall of 2002, the program has ongoing approval of the Wisconsin State Board of Nursing, is a member of the American Association of Colleges of Nursing and the National League for Nursing. Carroll College is accredited by the Commission on Collegiate Nursing Education, the Higher Learning Commission and is a member of the North Central Association.

The Higher Learning Commission
North Central Association
30 North LaSalle St., Suite 2400
Chicago, IL 60602
Phone: 800-621-7440

Department of Regulation and Licensing
Wisconsin State Board of Nursing
1400 E. Washington Ave., Room 166
Madison, WI 53708

National League for Nursing (NLN)
61 Broadway, 33rd Floor
New York, New York 10006

NLN Accrediting Commission
61 Broadway, 33rd floor
New York, New York 10006
Phone: 800-669-1656

American Association of Colleges
of Nursing
One Dupont Circle NW, Suite 531
Washington, DC 20036

Commission on Collegiate
Nursing Education (CCNE)
One Dupont Circle NW, Suite 530
Washington, DC 20036
Phone: 202-887-6791

Mission of the Nursing Program

The Carroll College nursing program builds on Carroll College's mission of providing a superior educational opportunity to our students, one grounded in the liberal arts tradition and focused on career preparation and lifelong learning. Nursing practice is built on nursing knowledge, theory, and research. Nursing practice derives knowledge from a wide array of other fields and disciplines, adapting and applying this knowledge as appropriate to professional practice. It is the mission of the Carroll College nursing program to prepare nurses for professional practice in a variety of settings, preparing them to take on the characteristics that will allow them to function in the generalist professional nursing role.

Philosophy of the Nursing Program

Nursing - Guided by professional standards and ethics, the nurse functions as a provider of care, designer, manager and coordinator of care and as a member of a profession. We believe that society needs nursing to advocate for wellness. We believe that to understand wellness requires that one know about illness. We believe that nurses in wellness settings, such as community centers, parish, and school sites, must understand the physiologic and psychosocial changes that occur with acute and chronic illness before it is possible for them to provide primary and secondary prevention strategies. Therefore, acute care experience is a necessary background for any practice setting. We believe in the model exemplified by the Henry Street settlement nurses. These nurses were educated in hospitals to become a social force in the community.

Person - Nursing views persons in society in the context of relationships with other persons, family groups and community; therefore each person is viewed as a holistic system affected by the world around and within. The person who is a student of nursing must be able, in social situations, to expound coherently on their nursing role in society, and explain how nursing is unique in its interaction with persons anywhere on the health continuum. That is, nurses can differentiate their personal role and contribution to health care from that of other health care disciplines such as physicians and other therapists.

Health - We believe health incorporates all levels of wellness and illness. Wellness is a state of integrity of mind, body and spirit. Illness is a lack of that integrity. Health, therefore, is meaningful to each individual in terms of the unique demands of the individual's sociocultural and natural environment. Persons who need nursing are at some point on the health continuum. Nursing must be able to recognize the point on the health continuum at which patients are found, and provide the care necessary to move the patient toward higher levels of health, or to allow a peaceful and dignified death.

Environment - The environment or community of interest for this nursing program is internal as well as external, immediate as well as global. The program of nursing interacts and is interdependent with the immediate community, its health care agencies, resources and policies. The global environment interfaces with the nursing program in terms of the diversity of its students, faculty and health care recipients. Nursing has a responsibility to promote and maintain environmental integrity as a means to higher lev-

els of health for individuals and populations. Nurses provide care to diverse populations across all environments. We expect our students to recognize diversity in all persons in all settings. Students must recognize that individual differences within a culture are as important as major environmental separation of culture, race and ethnicity.

Faculty – We believe that clinical experts should direct our students in clinical practice, and faculty with the terminal degree will direct the didactic pedagogy and supervise the clinical faculty. Therefore, the MSN advanced practice degree is considered appropriate for the clinical faculty role. The clinical nursing faculty, full-time and adjunct, are expected to role-model life-long learning and contribute to the students' career preparation while advancing the student in knowledge and application of a liberal education. We further expect all faculty members to model the skills expected of the students. Faculty are hired and evaluated, in part, on their ability to evidence critical thinking skills, communication skills and skill in therapeutic intervention. The clinical faculty are directed by faculty members who have the terminal degree and who are experientially qualified for the direction and evaluation of curriculum in the position they hold.

Curriculum - Our philosophy requires that the curriculum be responsive to the community of interest. To accomplish our mission, we consider it necessary to be flexible, to change quickly as society needs and technology change. The conceptual framework, developed by nursing faculty, organizes the curriculum in a logical progression over the length of the program. The overviews in each course syllabus will illustrate how the essential components of professional nursing education are used in that course to prepare students to take on the characteristics that will allow them to function in the professional nursing role. Course objectives demonstrate the achievement necessary for the student, at each level of the curriculum, to evidence competency as they progress.

Nursing education - Our philosophy, in preparing professional nurses at the generalist level, is to provide grounding in the liberal arts in addition to career preparation and to provide choices in selected specialty areas. The educational process must allow for diversity, curiosity, and difference of opinion, but must not allow for indifference or neglect of academic rigor. We expect nursing students to focus on and connect nursing to every general education or liberal studies course. However, it is in clinical practice that the student will demonstrate patterns of professional behaviors that follow the legal and ethical codes of nursing and promote the actual or potential well being of clients. The promotion of health and wellness is a focus of all nursing practice, but nurses, more than any other health care discipline, take care of the sick; therefore, acute care experience is a necessary background for any generalist practice setting and is a focus of generalist education. We believe nursing students are best served when they are educated in a variety of settings to provide care to diverse populations across all environments. The promotion of health and wellness, the prevention of injury and restoration of health are accomplished for a diversity of socio-economic, racial and ethnic populations in all the settings.

Admission

Carroll admits qualified students regardless of race, color, creed, sex, age, sexual orientation, national or ethnic origin or handicap that does not interfere with the performance of professional nursing as provided by law. High school applicants must meet the Technical Standards, have successfully completed one year each of high school biology and chemistry, and at least Algebra II, as well as attain an ACT score of 21 or higher. Transfer students must meet the Technical Standards, have a cumulative grade point average of 2.75 and have completed Biology 130 and Chemistry 101. Applicants who have English as a Second Language are required to take the TOEFL and achieve a score of 550, unless satisfactory SAT/ACT scores are available. Applicants must be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.

Academic Progression Standards

The academic progression standards for the nursing program are presented in the Health Sciences section of this catalog.

Technical Standards for Admission to and Progression in the Carroll College Bachelor of Science in Nursing Program

Successful participation in the Carroll College Bachelor of Science in Nursing program requires that a candidate possess the ability to meet the requirements of the program. Though the program may modify certain course requirements in order to provide a handicapped¹ person with an equivalent opportunity to achieve results equal to those of a non-handicapped person, there are no substitutes for the following essential skills. The applicant/candidate must initially meet these requirements to gain admission to the program and must also continue to meet them throughout participation in the program.

1. **Physical requirements:** The applicant/candidate must be willing to and be capable of performing physical examination of patients; venipuncture; administering medication and reading a wide variety of gauges, monitors, medications, and medication vials. The applicant/candidate must also be able to differentiate among the full spectrum of colors. All applicants/candidates also are expected to successfully complete and maintain certification in cardiopulmonary resuscitation. The applicant/candidate must be able to tolerate physically taxing workloads, including lifting and moving patients.
2. **Communication:** The applicant/candidate must be able to elicit information, describe changes in mood, activity and posture and perceive non-verbal communication. The applicant/candidate must be able to communicate effectively and sensitively with patients. The applicant/candidate must also be able to communicate effectively and efficiently with all members of the health care team.
3. **Intellectual abilities:** To succeed in the complex health care settings of the 21st century, the applicant/candidate must be able to make decisions that evidence the ability to think and reason critically. Such ability requires skills in calculation, measurement, analysis and the use of sophisticated vocabulary. The ability to use

¹. Handicapped as defined by the federal government pursuant to SS 504 of the Rehabilitation Act of 1973.

computers and to interpret and evaluate information is also necessary for the problem-solving that is a critical skill demanded of nurses.

4. **Behavioral and social attributes:** The applicant/candidate must possess the emotional health, maturity and self-discipline for successful participation and completion of the program. The applicant/candidate must exercise good judgment for the prompt completion of all responsibilities pertinent to relationships with patients and others. The applicant/candidate must be able to function effectively under stress, must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties inherent in the care of patients and must possess the qualities of integrity, honesty, concern for others, compassion, skills in interpersonal relationships and motivation for a career in health care.
5. **Evaluation:** Carroll College may require that the applicant/student undergo a physical examination and/or an occupational skills evaluation. The college will endeavor to select and administer evaluations which accurately reflect the applicant's/candidate's aptitude or achievement level rather than the applicant's/candidate's handicap. A handicapped applicant/candidate shall not, on the basis of his or her handicap (except those which would preclude the essential skills outlined above) be excluded from participation in, denied the benefits of, nor be subjected to discrimination in the program.

Criminal Background Check

The applicant/candidate/student must complete a Background Information Disclosure Form prior to clinical placement in the program. The college intends to fully comply with the requirements of the Wisconsin Caregiver Background Check Law which requires hospitals and other health care and treatment entities to perform background checks on all persons who have direct, regular contact with clients or patients. Certain convictions may prevent or significantly limit the ability of the College to place a student in a clinical program resulting in a student being unable to meet the College's graduation requirements. The college reserves the right to reject the application of a candidate or remove a student from the program if the College determines that the results of the criminal background check demonstrate that the applicant/student does not exhibit behavior and social attributes consistent with the program's Technical Standards.

Nursing Health Information

Policy:

- Prior to the first clinical placement, a student must show evidence that s/he is able to meet the health requirements of the nursing program.
- These health requirements include 1) current health history, 2) immunization data, and 3) physical examination data.
- In addition, all students must have on file 1) current CPR certification (American Heart Association), 2) current criminal background check, and 3) professional liability insurance.

Procedure:

- The completed health history and physical examination information must be on file before any student can attend the first clinical experience and subsequent clinical experiences. A summary form for nursing students is available on BlackBoard®.

- The cost of the physical examination is the responsibility of the student.
- Students can have the physical examination completed with either a private physician or nurse practitioner.
- It is not necessary for a student to repeat the physical examination every year if there is no change in the student's health status. However, such tests as the TB skin test will need to be done on an annual basis in order to meet the clinical site requirements.
- A student who does not comply with the health policy will not be allowed into any clinical site.
- Any costs associated with making up clinical time because of non-compliance with this policy are the responsibility of the student.

Time Commitment

The Nursing Program is rigorous, labor intensive, and requires more time and commitment than many other areas of study. Clinical nursing courses require a minimum of 3 hours of direct clinical experience per semester credit hour. This does not include the time that is required for travel, clinical preparation at the assigned clinical agency or study prior to and after the clinical experience. Therefore, it is strongly recommended that students in the Nursing Program limit their employment and/or involvement in non-student related activities. Students are expected to be available Monday through Friday throughout the academic year. Students will be expected to participate in clinical experiences that occur on weekends and on shifts other than day shifts (0700-1530). Students in the capstone experience must understand that their clinical experience may be evening or night shifts and/or weekend shifts.

Clinical Nursing Course Requirements

All applicants must be in good health and free from communicable diseases and be able to carry out the functions of a professional nurse as specified in the Technical Standards. Students must maintain current immunizations, CPR certification and professional liability insurance. Additional tests may be required by specific agencies in which students have clinical experiences. The program will notify students when such tests are required. Students who fail to comply will not be allowed in clinicals. All costs associated with the clinical requirements are the responsibility of the student.

Nursing courses begin during the freshman year allowing early participation in clinical service learning activities. Students will have diverse service learning experiences in a variety of clinical settings.

The number of hours spent in laboratory (including clinical) experience varies from semester to semester and is based on one (1) semester credit being equal to three (3) hours of clinical per week. Approximation of the hours of clinical practice follow:

- Sophomore year — 6 hours/week for one semester
- Junior year — 15 hours/week during both semesters
- Senior year — 15 hours/week during both semesters

Policy Statement on Student Attendance at Clinical

Policy: The college reserves the right to require a student to repeat all or any part of a clinical course when, in the opinion of the course instructor, the time that the student has been absent from clinical makes it impossible to evaluate the student's level of attainment of course objectives. Make-up time is not guaranteed and is dependent upon faculty and clinical availability. The student is responsible for any costs involved in repeating the course and/or making up time lost.

Rationale: Nursing is a practice profession involved with the assessment and care of human beings; all clinical contact hours allotted to courses contribute meaningfully to enabling students to meet course objectives and become competent practitioners in the delivery of nursing care.

Learning and Study Resources

Learning resources centers for student learning and testing are available. The nursing laboratory provides space and resources for students to practice and test their mastery of psychomotor skills used in patient care. The Carroll library has a range of resources to support the nursing curriculum. The Walter Young Center provides personal counseling and the Study Center offers students opportunities to strengthen academic skills. All students should work closely with their adviser in planning their programs.

Fees

Undergraduate tuition and other fees apply to nursing students. A program fee of \$335 per year is also assessed for proficiency testing, disposable supplies, and equipment maintenance.

Licensure Examination

Upon completion of all program requirements, the graduate is eligible to sit for the National Council Licensure Examination for Registered Nurses (NCLEX-RN). A graduate must pass this examination to be licensed and practice as a registered nurse (RN). However, no nursing program can guarantee success on the NCLEX-RN examination.

Bachelor of Science in Nursing Major (58 credits)

Nursing courses build on the knowledge gained from the liberal arts background in humanities, fine arts, social sciences and natural sciences. The overall objective of the program is to provide students with the ability to critically apply knowledge of nursing art and science to improve the quality of health and health care for the communities they serve.

Courses in the Major

- Nursing 100, Health Care and Nursing (4 credits)
- Nursing 230, Health Assessment (4 credits)
- Nursing 232, Foundations of Nursing Practice (2 credits)
- Nursing 234, Foundations: Practicum (2 credits)
- Nursing 236, Human Pathophysiologic Responses (4 credits)
- Nursing 300, Critical Inquiry in Nursing Research (2 credits)

Nursing 312, Family Centered Obstetric Nursing Care (2 credits)
Nursing 315, Family Centered Nursing Care of the Adult–Chronic (3 credits)
Nursing 317, Adult and Pediatric Nursing Care Practicum (5 credits)
Nursing 318, Family Centered Nursing Care of the Adult–Acute (3 credits)
Nursing 319, Adult and Childbirth Nursing Care Practicum (5 credits)
Nursing 320, Family Centered Pediatric Nursing Care (2 credits)
Nursing 414, Family Centered Mental Health Nursing Care (3 credits)
Nursing 416, Community Health Nursing Care (4 credits)
Nursing 418, Mental Health and Community Health Practicum (5 credits)
Nursing 429, Health Care Policy and Administration (3 credits)
Nursing 430, Nursing Capstone Practicum (5 credits)

Nursing electives in specialty clinical areas may be offered occasionally. If these courses are elected the nursing student may accomplish a nursing major of 62 or 66 credits.

Required Support Courses

Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
Biology 212, Microbiology (4 credits)
Chemistry 208, Nutrition (3 credits)
Chemistry 101, General Chemistry (LSP I) and Chemistry 101L, General Chemistry Laboratory (4 credits)
Chemistry 102, Biological Chemistry (LSP II) and Chemistry 102L, Biological Chemistry Laboratory (4 credits)
Health Sciences 300, Pharmacology (3 credits)
Mathematics 106 or higher (4 credits)
Psychology 101, Introductory Psychology (LSP III) (4 credits)
Psychology 221, Life-Span Psychology (4 credits)
Communication 207, Intercultural Communication (LSP IV) (4 credits) or
Sociology 110, Cultural Anthropology (LSP IV) (4 credits)

100. Health Care and Nursing**4 credits**

This is the first course in the nursing major. It is designed to acquaint the student with the three broad areas that encompass the professional nursing role. Students acquire a foundational ability to use appropriate professional language including the terms and abbreviations that are necessary for professional communication. The process of nursing is studied from the context in which the program is offered, including consideration of global, regional and institutional needs and expectations of the practicing nursing professional. (*Fa, Sp*)

230. Health Assessment**4 credits**

The foundational concepts, scientific basis and theoretical constructs of effective therapeutic communication, interviewing, health history and physical assessment across the life span are presented. Laboratory practice is designed to produce the cognitive and psychomotor skills necessary to conduct a systematic and accurate assessment of an individual's health status. The ability to collect, organize, document and analyze health history and physical assessment data, as well as the ability to recognize and promote adap-

tive human responses are the expected outcomes of this course. (*Fa, Sp*) Prerequisite: Admission to the Nursing Program, Biology 130. Co-requisite: Nursing 100, Chemistry 102.

232. Foundations of Nursing Practice

2 credits

This course is an introduction to the scientific basis and theoretical foundations of professional nursing practice. Nursing theory is incorporated with the nursing process to enable the student to identify basic health responses and intervene appropriately at the foundational level of care. The student learns to use a systematic framework to implement the nursing process and begins to recognize and apply nursing research to practice. A continued development of an attitude of inquiry is expected. (*Fa, Sp*) Prerequisites: Admission to the Nursing Program, Nursing 230. Co-requisite: Nursing 236.

234. Foundations: Practicum

2 credits

This course focuses on the application and integration of the nursing process to promote physical wellness. Simulated and actual client-care experiences provide an opportunity for student development and practice in the roles of professional nursing that assist the individual to regain or maintain an optimal health state. Therapeutic interventions related to fundamental needs across the life span are addressed and a basic skill level is expected as an outcome of the course. *S/U* graded. (*Fa, Sp*) Prerequisite: Nursing 230. Co-requisite: Nursing 236 This course is concurrent with Nursing 232.

236. Human Pathophysiologic Responses

4 credits

This course is focused on the alterations in cell, tissue and system mechanisms that manifest as health problems throughout the life span and prevent or limit individuals from making adaptive responses. Although the focus of the course is on the systemic pathophysiology of the individual, the responses of the family are acknowledged as inseparable from the health state of a family member. (*Fa, Sp*) Prerequisite: Nursing 230. Co-requisite: Bio 212.

300. Critical Inquiry in Nursing Research

2 credits

This course examines the concepts and the process of research. A systematic and critical inquiry into published nursing research and an understanding of its practice application(s) provide the course emphases. (*Fa, Sp*) Prerequisite: Admission to the Nursing Program, Nursing 100

312. Family Centered Obstetric Nursing Care

2 credits

The course focuses on the specialized health care needs of the childbearing family. The health responses of the family unit are emphasized as essential to the promotion and maintenance of health of mother and child. Students develop the necessary knowledge base and learn the importance of collaboration with others of the health care delivery team to provide care and teaching for pregnancy, delivery and newborn nursing. (*Fa, Sp*) Prerequisites: Chemistry 208, Nursing 232, 234, and 236. Co-requisite: HSC 300.

315. Family Centered Nursing Care of the Adult-Chronic 3 credits

318. Family Centered Nursing Care of the Adult-Acute 3 credits

These courses are designed to provide the student with an understanding of the effects of selected physiological acute and chronic health care issues on adults and their families in acute care settings, and the relevant nursing interventions to address those problems. The content explores ways to promote physical and emotional health in the hospitalized individual. (*Fa, Sp*) Prerequisites: Nursing major-junior standing; Chemistry 208, Nutrition; Nursing 232, 234, and 236; Psychology 221. Co-requisite: HSC 300.

317. Adult and Pediatric Nursing Care Practicum 5 credits

319. Adult and Childbirth Nursing Care Practicum 5 credits

This sequence (317/319) continues and expands the concepts of patient care from Nursing 315 and Nursing 318 through clinical practice. The courses focus on implementing the nursing process with individuals in a variety of hospital settings. *S/U* graded. (*Fa, Sp*) Prerequisites: Same as Nursing 315 and 318. These courses are concurrent with Nursing 315 and 318.

320. Family Centered Pediatric Nursing Care 2 credits

The course focuses on the specialized health care needs of the child in the family. The course provides the necessary knowledge base to maintain optimal health in the pediatric population through developmentally and culturally competent care of acute and chronic illness and through the promotion of wellness behaviors in the child and family. (*Fa, Sp*) Prerequisites: Nursing major, Chemistry 208, Nursing 232, 234, and 236, and Health Sciences 300.

398. Independent Study 1-4 credits

Prerequisite: Approval of the divisional dean and consent of the director of nursing and instructor.

414. Family Centered Mental Health Nursing Care 3 credits

This course focuses upon the theoretical principles of psychiatric/mental health nursing and on practical foundations for assessing, planning, intervening, and evaluating within psychiatric/mental health situations to promote health. The course examines measures for supporting and fostering a family's ability to cope and to assist mentally unhealthy family members to higher levels of function. (*Fa, Sp*) Prerequisites: Nursing major — senior standing and Nursing 312, 315, 317, 318, 319 and 320.

416. Community Health Nursing Care 4 credits

This course provides a body of knowledge that allows the student to view the community as a complex system of forces. Community systems have the potential for controlling community/aggregate health issues and problems. Students focus on the community as client, and learn to assess and analyze data from community systems in order to plan community nursing interventions for primary, secondary and tertiary prevention strategies. (*Fa, Sp*) Prerequisites: Nursing major — senior standing and Nursing 312, 315, 317, 318, 319 and 320.

418. Mental Health and Community Health Practicum 5 credits

This course is designed to provide the nursing student with opportunities to apply the theoretical principles of mental health and community health nursing in the clinical setting. Care is focused on aggregate populations and families across the life span in a variety of community and mental health settings. *S/U* graded. (*Fa, Sp*) Prerequisites: Nursing major – senior standing and Nursing 312, 315, 317, 318, 319 and 320.

429. Health Care Policy and Administration. 3 credits

The course provides an opportunity for the student to synthesize knowledge from all previous coursework and clinical experiences. This interdisciplinary course allows students to work together to understand regional, national and global health care policy. The course presents leadership concepts and management skills as a basis for implementing change at the policy level. (*Fa, Sp*) Prerequisites: Senior standing in nursing and Nursing 312, 315, 317, 318, 319 and 320.

430. Nursing Capstone: Practicum 5 credits

The course provides an opportunity for the student to synthesize knowledge from all previous course work and clinical experiences. The student is provided with the opportunity to practice professionally through delegation of tasks, supervision of non-professional staff, and management of patient groups. Students provide direct patient care for clients and families with complex health needs. Capstone: students apply critical and creative thinking skills to synthesize and integrate knowledge from coursework into an oral and/or written presentation of a project. *S/U* graded. Prerequisites: Senior standing and Nursing 312, 315, 317, 318, 319 and 320. Nursing 429 is taken concurrently.

498. Independent Study in Nursing 1-4 credits

Prerequisite: Approval of the divisional dean and consent of the director of nursing and instructor.

Nursing Four-Year Curriculum Model

Cohort A*	Cohort B*
Fall Semester Freshman year	Fall Semester Freshman Year
FYS 100 BIO 130 CHE 101 NRS 100 <u>16 credits</u>	FYS 100 BIO 130 CHE 101 PSY 101 <u>16 credits</u>
Spring Semester Freshman Year	Spring Semester Freshman Year
ENG 170 BIO 140 CHE 102 NRS 230 <u>16 credits</u>	ENG 170 BIO 140 CHE 102 NRS 100 <u>16 credits</u>
Fall Semester Sophomore Year	Fall Semester Sophomore Year
BIO 212 NRS 232 NRS 234 NRS 236 PSY 101 <u>16 credits</u>	SOC 110 or COM 207 PSY 221 NRS 230 CHE 208 <u>15 credits</u>
Spring Semester Sophomore Year	Spring Semester Sophomore Year
SOC 110 or COM 207 PSY 221 CHE 208 MAT 106 (112) HSC 300 <u>18 credits</u>	NRS 232 NRS 234 NRS 236 BIO 212 LSP 5, 6, 7 <u>16 credits</u>
Fall Semester Junior Year	Fall Semester Junior Year
NRS 315 NRS 317 NRS 320 NRS 300 LSP 5, 6, or 7 <u>16 credits</u>	NRS 312 NRS 318 NRS 319 HSC 300 MAT 106/ 112 <u>17 credits</u>
Spring Semester Junior Year	Spring Semester Junior Year
NRS 312 NRS 318 NRS 319 LSP 5, 6, or 7 <u>14 credits</u>	NRS 315 NRS 317 NRS 320 LSP 5, 6, or 7 NRS 300 <u>16 credits</u>

* Students are placed in Cohort A or B when they are admitted into the nursing program.

Cohort A* (continued)	Cohort B* (continued)
Fall Semester Senior Year	Fall Semester Senior Year
NRS 414 NRS 416 NRS 418 LSP 5, 6, or 7 <u>16 credits</u>	NRS 429 NRS 430 LSP 5, 6, or 7 Elective or Special Clinical <u>16 credits</u>
Spring Semester Senior Year	Spring Semester Senior Year
NRS 429 NRS 430 LSP 5, 6, 7 Elective or Special Clinical <u>16 credits</u>	NRS 414 NRS 416 NRS 418 Elective or Special Clinical <u>16 credits</u>

* Students are placed in Cohort A or B when they are admitted into the nursing program.

Curricular Modifications for the Registered Nurse

Students who are registered nurses through an associate degree program will follow the same degree requirements as all other Carroll College students with the following curricular modifications to acknowledge the scholarship and competence the Registered Nurse already possesses. Completion students may earn up to 34 nursing credits from previous nursing course work upon successful completion or challenge of Nursing 236: Human Pathophysiologic Responses and Nursing 230: Health Assessment.

A registered nurse student applying for admission to Carroll College submits a written plan for completion of the BSN. The plan will comment on his/her self-identified professional and academic strengths and weaknesses and further indicate his/her current professional interest area(s) and area of employment. The written statement assists the nurse adviser in helping the student create the most meaningful curricular plan. Registered Nurse students are required to select course groupings that lead to some focus of career interest. They should select an appropriate emphasis in the liberal studies to enhance their chosen area of nursing practice. Students will consult with their assigned nursing adviser regarding the most appropriate course selections. The nursing faculty will attempt to work closely with the RN student in focusing their clinical experiences in an area of interest to the RN.

Major, 58 Credits for the Registered Nurse Student

34 credits earned as previously stated, plus

- Nursing 230, Health Assessment (4 credits)
- Nursing 236, Human Pathophysiologic Responses (4 credits)
- Nursing 300, Critical Inquiry in Nursing Research (2 credits)
- Nursing 414, Family Centered Mental Health Nursing Care (3 credits)
- Nursing 416, Community Health Nursing Care (4 credits)
- Nursing 418, Mental Health Community Health Practicum (5 credits)
- Nursing 429, Health Care Policy and Administration (3 credits)
- Nursing 430, Synthesis/Capstone Practicum (5 credits)

Required Support Courses

- Biology 130, Introduction to Human Anatomy and Physiology I (4 credits)
- Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
- Biology 212, Microbiology (4 credits)
- Mathematics 106 or higher (4 credits)
- Psychology 101, Introductory Psychology (4 credits)
- Psychology 221, Life-Span Psychology (4 credits)
- Two semesters of college chemistry
- One semester of college sociology

DIVISION OF NATURAL AND HEALTH SCIENCES
**PHYSICAL AND HEALTH
EDUCATION**

Stephen J. Dannhoff Assistant Professor and Director
Pamela Pinahs-Schultz Professor
Henny J. Hiemenz Instructor

The physical education with health major and adapted physical education licensure are designed for students who wish to acquire the diverse competencies needed to teach physical education, health education, and adapted physical education at the Pre-K-12 level. This program provides students with competencies necessary to meet Wisconsin Department of Public Instruction (DPI) requirements.

**Physical and Health Education (K-12) Major
Bachelor of Science**

Descriptions of Health Science courses in the Physical and Health Education major and the major's academic progression standards are in the Health Sciences section of this catalog. Descriptions of Education Program courses in the Physical and Health Education program are in the Education Program section of this catalog.

All physical education majors must be proficient to the intermediate level in swimming; a Water Safety Instructor and/or Lifeguarding certificate is strongly recommended.

Program Objectives

Upon graduation and entry into the profession of Physical and Health Education, the individual:

1. Articulates basic physical education and health knowledge, central concepts, and pedagogical practices that promote healthy lifestyles.
2. Develops a professional philosophy consistent with current national and state physical education/health standards
3. Identifies the role, function and responsibility of a physical education and health teacher and physical education and health program coordinator
4. Assesses informally student health and physical education needs based on fitness level, past experiences and interests
5. Identifies and articulates the concepts and skills contained in the current state and NASPE and national health education standards
6. Designs and delivers instructional programs based on stated goals and objectives.
7. Analyzes and articulates the factors that affect physical education/health engagement, home-school connections, and instructional strategies.
8. Identifies the structure, function, principles and effects of movement and activity on the human body.

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9. Articulates the physical, cognitive, social, and emotional development of students using diagnostic methods, teaching techniques, prescriptive programming, and evaluation.
10. Articulates an understanding of the behavioral and social sciences in order to create a learning environment that encourages social interaction, active engagement in learning and self-motivation.
11. Evaluates commercial health and physical education programs and resources.
12. Implements effective instructional approaches including the use of media and technology
13. Applies formal and information assessment strategies.
14. Reflects on and evaluates the impact of one's instructional capacity on others and classroom management skills.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Academic Progression Standards

The academic progression standards for the physical and health education major are presented in the Health Sciences section of this catalog.

Courses in the Physical and Health Education Major (70 Credits)

- Health Science 101, Introduction to Health Care Skills (1 credit)
[PED 106, AHS 101]
- Health Science 103, Personal and Community Health (4 credits)
[HED 222, AHS 103]
- Health Science 105, Group Exercise Instruction (1 credit) [PED 109, AHS 105/110]
- Health Science 110, Basic Weight Training Instruction (1 credit)
[PED 109, AHS 110/112]
- Health Science 120, Fundamental Motor Development (4 credits)
[PED 120, AHS 120]
- Health Science 303, Exercise Physiology (4credits) [PED 413, AHS 303]
- Health Science 322, Kinesiology (4credits) [PED 301, AHS 322]
- Athletic Training 101, Athletic Training Seminar I (2 credits) [PED 322]
- Physical Education 101, Dance (1 credit)
- Physical Education 102, Basic and Intermediate Swim (2 credits)
- Physical Education 103, Philosophy, Principles, and History of Physical and Health Education/Athletics (3 credits)
- Physical Education 208, Organization and Administration of Physical Activities/Athletics (2 credits)
- Physical Education 214, Teaching Outdoor Activities in Physical Education (2 credits)
- Physical Education 310, Elementary Physical Education Activities (3 credits)
[PED 328]
- Physical Education 311, Team Sports and Officiating (3 credits)
- Physical Education 312, Individual/Dual and Lifetime Activities (3 credits)

PHYSICAL EDUCATION AND HEALTH EDUCATION

Physical Education 324, Physical Education Laboratory (2 credit)

[PED 210, ESC 324]

Physical Education 353, Capstone: Special Methods in Teaching Physical Education (4 credits)

Physical Education 411, Adapted Physical Education (4 credits)

Physical Education 421, Psycho-Social Aspects of Physical Activity (4 credits)

Health Education 201, Nutrition (2 credits)

Health Education 202, Drugs, Society and Human Behavior (2 credits)

Health Education 203, Consumerism in Health (2 credits)

Health Education 204, Human Sexuality (2 credits)

Health Education 323, School Health Programs (4 credits)

Health Education 353, Special Methods in Teaching Health Education (4 credits)

Courses toward the Adapted Physical Education License

Health Sciences 120, Fundamental Motor Development (4 credits)

Physical Education 411, Adapted Physical Education (4 credits)

Education 336, Collaborating with Parents of Exceptional Children and Community Agencies (3 credits)

Physical Education 412, Assessment and Program Evaluation in Adapted Physical Education (2 credits)

Physical Education 414, Field Experience in Adapted Physical Education (1 credit)

Refer to the Education Program—Secondary Education Minor for additional course requirements necessary for Wisconsin Department of Public Instruction licensure.

Required Support Courses (14 credits)

Biology 130, Introduction to Human Anatomy and Physiology I (4 credits) [BIO 103 and 106]

Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)

Computer Science 107, Problem Solving Using Information Technology (2 credits)

Math 112, Introduction to Statistics (4 credits)

Physical Education

101. Dance

1 credit

Theory and methods of teaching age appropriate rhythms and dance activities for students in grades K-12. Emphasis is on skill progressions, teaching techniques and assessment methods. (Required course fee) (*Fa*)

102. Basic and Intermediate Swim

2 credits

This course is open to Physical Education majors only. Emphasis is placed on the improvement of the individual student's swimming skill. Course content ranges from the non-swimmer level through American Red Cross intermediate skill level. Physical education teaching majors and minors are required to enroll in this class unless they hold one of the following American Red Cross certifications: Water Safety Instructor or Lifeguard Training. (*Sp*)

103. Philosophy, Principles, and History of

Physical and Health Education/Athletics 3 credits

This course gives the student a broad historical, philosophical, and futuristic view of the physical education/athletics field. Principles of physical education/athletics are also introduced with emphasis on curricular development and design. (Required course fee) (*Sp*)

208. Organization and Administration of Physical Activities/Athletics 2 credits

In this course, students study the organization and administration of physical education/fitness and athletic programs. Course content addresses organizational issues at various levels of administration K-12 through adult. (Required course fee) (*Fa*)

214. Teaching Outdoor Activities in Physical Education 2 credits

This course is designed to offer undergraduate students an in-depth experience with various outdoor skills for orienteering, outdoor survival, canoeing, mountain (wall) climbing, all season camping, safety outdoors, outdoor fitness (trail running, backpacking, hiking, mountain biking) and ropes course. (Required course fee) (*Fa*)

310. Elementary Physical Education Activities 3 credits

In this course, students study basic movement patterns in games of lower and higher organization as well as tumbling and individual activities. Fitness activities are incorporated throughout as well as early childhood assessment. (Required course fee) (*Fa*)

311. Team Sports and Officiating 3 credits

This course gives students a background in the history, rules, equipment, values and the fundamental skills and techniques necessary to participate in and enjoy team sports. Officiating techniques in team sports are also included. (Required course fee) (*Sp*)

312. Individual/Dual and Lifetime Activities 3 credits

This course gives students a background in the history, rules, equipment, values and the fundamental skills and techniques necessary to participate in and enjoy individual and lifetime activities. (Required course fee) (*Sp*)

324. Physical Education Laboratory 2 credits

This course further develops knowledge, skills, and abilities that exercise professionals must possess in order to function competently in the Pre-K-12 educational setting. HSC 303 and HSC 322 taken concurrently. (Required course fee) (*Fa*)

328. Elementary Physical Education Activities and Health Education 3 credits

The course is specifically designed for elementary education majors to introduce both the content and techniques for delivering appropriate school health and physical education programs at the K-9 level. Content reflects Wisconsin's Model for Academic Standards for Physical Education and Health. (Required course fee) (*Fa, Sp, Su*)

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353. Capstone: Special Methods in Teaching Physical Education 4 credits
Applications of general principles and methods of teaching physical education are presented in this course. Special emphasis is placed upon selection, use and preparation of equipment, materials, teaching aids and other resources especially designed for the physical education setting (Pre-K-12). Prerequisites: Successful completion of the PPST, admission to TEP or instructors permission and junior standing (Required course fee) (*Sp*)

391. Special Problems and Research 4 credits
Prerequisite: Approval of the divisional dean and consent of instructor.

398. Special Studies in Physical Education 1-3 credits
Prerequisite: Approval of the divisional dean and consent of instructor.

411. Adapted Physical Education 4 credits
This course introduces the student to skills, knowledge, and competencies necessary to evaluate, plan and organize educational and recreational activities for students with exceptional educational needs. A laboratory experience with students is also required. (Required course fee) (*Fa*)

421. Psycho-Social Aspects of Physical Activity 4 credits
This course presents an introduction to basic issues and current research in the psychology and sociology of American sport, physical activity, rehabilitation and leisure. Specific emphasis is placed on the social and psychological factors affecting an individual's performance in motor activities. (Required course fee) (*Fa*)

Health Education

201. Nutrition 2 credits
Basic principles of nutrition are covered as well as current problems and topics regarding both personal and world nutrition today. Designed for the public school teacher, the community health educator or those in related fields. (*Fa*)

202. Drugs, Society and Human Behavior 2 credits
This course is directed at introducing social, psychological, pharmacological and cultural aspects of drug use, misuse and abuse. In addition, the methods, materials and theories of drug abuse prevention in the school and community are introduced. (*Wn*)

203. Consumerism in Health 2 credits
The aim of this course is to identify content, resources, materials and instructional strategies for providing consumer education to various populations. (*Wn*)

204. Human Sexuality 2 credits
This course reviews current information on health and human sexuality. Emphasis is given to cognitive and affective components of human sexuality. Major issues and topics in human sexuality are covered with particular attention to gender as it affects these issues. (*Sp*)

323. School Health Programs

4 credits

Studies the importance of well-organized and planned school health programs with special emphasis on the importance of health to the school. Graduate credit available. (Sp) Prerequisite: HSC 103

353. Special Methods in Teaching Health Education

4 credits

Applications of general principles and methods of teaching health education. Special emphasis upon selection, use, and preparation of equipment, materials, teaching aids, and other resources especially designed for the health education setting (Pre-K-12). (Sp) Prerequisites: HED 323 and HSC103

Adapted Physical Education

412. Assessment and Program Evaluation in Adapted Physical Education 2 credits

This course introduces the core theoretical and practical background necessary to assess and evaluate the motor development and physical fitness needs of persons with disabilities. Students are able to administer various psychomotor assessment tools and apply the results in the design of an individualized motor program. (Required course fee) (Sp) Prerequisites: PED 120, 411 Co-requisite: PED 414

414. Field Experience in Adapted Physical Education

1 credit

This experience provides the student with an opportunity to work with students in an adapted physical education setting under the supervision of a Wisconsin 860 licensed physical education teacher. Attendance at a monthly seminar and a minimum of 40 clock hours must be spent at early childhood, elementary, and secondary levels. (Sp) Prerequisites: 411; Co-requisite: PED 412

PHYSICAL EDUCATION AND HEALTH EDUCATION

Physical Education/Health Education/Adapted Physical Education Four- and One-Half-Year Curriculum Model

Class Standing	Fall Semester	Winter Term	Spring Semester	Summer Term
Freshman	FYS 100 HIS 103, 104, 105 or 106 BIO 130 HSC 103 HSC 101 17 Credits		PED 103 ATH 101 BIO 140 ENG 170 HSC 110 EDU 100 16 Credits	
Sophomore	PED 208 PED 310 EDU 203 EDU 210 HSC 105 ENV 105 17 credits Take PPST*	HED 202 2 credits Take PPST*	EDU 209 CSC 107 PED 102 HSC 120 MAT 112 16 credits Take PPST*	Take PPST*
Junior	PED 214 HSC 303 HSC 322 EDU 301 PED 101 PED 324 LSP #5 HED 201 17 credits Apply to Teacher Education Program	HED 203 2 credits	PED 311 PED 312 EDU 265 EDU 306 HED 323 HED 204 18 credits Take PRAXIS Physical Education/ Health Education Content Standards Tests**	EDU 336 3 credits
Senior	PED 411 LSP 5 ENG 255 EDU 311 PED 421 17 credits		PED 353 HED 353 LSP 4 or add PED 412 PED 414 12/15 credits	LSP 4 4 credits
Year 5	EDU 409 EDU 410 12 credits			

*PPST must be successfully completed during sophomore year

**PRAXIS Physical Education and Health Education Content Standards Tests must be successfully completed during spring semester of or summer term following junior year.

DIVISION OF NATURAL AND HEALTH SCIENCES

PHYSICS

David B. MacIntyre Assistant Professor
Akhtar H. Mahmood Assistant Professor
Kevin Ross Lecturer

Physics minors are encouraged to select additional supporting courses in the other sciences. The minor provides excellent preparation for a career in many fields including mathematics, chemistry, biology, medicine and physical therapy.

A certification program to teach physics at the secondary level, with a minor in physics, is available. Details of this program can be obtained from either the physics or the education faculty.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Physics Minor

Physics 203, 204, General Physics (Recommended)
or Physics 101,102, Introductory Physics
Physics 303, Modern Physics
Physics 304, Mechanics

101. Introductory Physics I L1, L2 4 credits

The first course of a non-calculus two-course sequence in the basic principles of physics covering the general areas of mechanics and wave motion (oscillations, waves and sound, and fluids). The mathematical proficiency expected for this course is algebra and introductory trigonometry. This course satisfies the physics requirement for some majors, pre-health professional requirements, and can be used to satisfy a liberal studies program requirement. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 101 and 203.) (Required course fee) (*Fa, Su*)

102. Introductory Physics II L1, L2 4 credits

The second course of a non-calculus two-course sequence in the basic principles of physics covering the general areas of heat (thermal physics), light, electromagnetism, and optics. The mathematical proficiency expected for this course is algebra and introductory trigonometry. This course satisfies the physics requirement for some majors, pre-health professional requirements, and can be used to satisfy a liberal studies program requirement. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 102 and 204.) (Required course fee) (*Sp, Su*) Prerequisite: PHY 101. Instructor consent is necessary for enrollment in 102 without completion of 101.

PHYSICS

- 105. Astronomy** L1, L2 4 credits
The course includes the study of the motions and structures of the earth, the moon, the sun, planets, stars and galaxies, and consideration of cosmological theories. The laboratory includes telescopic observational astronomy. Four hours of lecture/discussion and three hours of laboratory/observation per week. (Required course fee) (*Fa, Sp, Su*)
Prerequisites: Satisfaction of the mathematics competency requirement for graduation.
- 203. General Physics I** L1, L2 4 credits
The first course of a calculus level two-course sequence in the basic principles of physics covering the general areas of mechanics and wave motion. This course satisfies the physics requirement for some majors, pre-health professional requirements, and can be used to satisfy a liberal studies program requirement. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 101 and 203.) (Required course fee) (*Fa*) Prerequisites: Mathematics 160 and 161.
- 204. General Physics II** L1, L2 4 credits
The second course of a calculus level two-course sequence in the basic principles of physics covering the general areas of heat, light, electricity, magnetism and atomic physics. This course satisfies the physics requirement for some majors, pre-health professional requirements, and can be used to satisfy a liberal studies program requirement. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 102 and 204.) (Required course fee) (*Sp*) Prerequisites: Mathematics 160 and 161. Instructor consent is necessary for enrollment in 204 without the successful completion of 203.
- 303. Modern Physics** 4 credits
A course in the basic principles of modern physics treating the general subjects of atomic and nuclear physics, relativity, and quantum physics. Four hours of lecture/discussion and three hours of laboratory per week. (Required course fee) (*Fa, Even Years*)
Prerequisites: Physics 204 or 102 and Mathematics 160 and 161.
- 304. Mechanics** 4 credits
An intermediate course in mechanics including vector calculus, conservation laws of mechanics, and dynamics of a particle and of a rigid body. Four hours of lecture/discussion and three hours of laboratory per week. (*Sp, Even Years*)
Prerequisites: Physics 204 or 102 and Mathematics 160 and 161.
- 380/480. Work-Oriented Experience** 4 credits
A work-oriented experience in applied physics. This is to be planned in advance with a physics faculty member. It does not count toward a minor in physics. *S/U* graded.
- 396/496. Special Problems and Research** 4 credits
Prerequisite: Approval of the divisional dean and consent of instructor.
- 398. Independent Studies in Physics** 1-4 credits
Prerequisites: Junior standing, approval of divisional dean and consent of the instructor.

DIVISION OF NATURAL AND HEALTH SCIENCES

PRE-PHYSICAL THERAPY

Sara M. Deprey	Assistant Professor
Mark R. Erickson	Assistant Professor
Jane F. Hopp	Associate Professor
Edward J. Maher	Assistant Professor
Thomas G. Pahnke	Assistant Professor
Kathleen A. Shields	Assistant Professor

The aim of the professional phase of the Doctor of Physical Therapy Program is to produce clinicians, trained for general practice in a dynamic health care environment, who provide best care, respectful of patient/client values, grounded in evidence-based practice and clinical reasoning, and contribute to the profession and their community.

The Entry-level Doctor of Physical Therapy Program is fully accredited by the Higher Learning Commission/North Central Association, and the Commission on Accreditation of Physical Therapy Education.

Curriculum

The Carroll College Entry-level Physical Therapy Program consists of a six-year course of study, divided into pre-professional and professional phases.

During the pre-professional phase (freshman, sophomore and junior years), students complete their undergraduate course work while fulfilling the requirements to enter the professional phase. Pre-physical therapy education at Carroll College is grounded in the humanities and the natural, behavioral and social sciences. For pre-Physical Therapy students pursuing an undergraduate degree at Carroll College, a Bachelor of Science degree in any of the following five majors is required to complete the Physical Therapy Program in six years: Biology, Human Biology, Exercise Science, Health Science or Psychology. These majors, achieved with a physical therapy emphasis, and the recommended minors — in biology, business, chemistry, communication, ethics, Hispanic health and human services, psychology, or sociology — give students a strong foundation for the professional program.

The professional phase begins the senior year, lasts eight semesters, and is subdivided into two phases, Phase I and Phase II. During Phase I of the professional phase, fall and spring terms of senior year, course work in physical therapy begins at the 400 level. The 400 level courses present the basic, behavioral, professional, and applied science foundations that are subsequently applied in the 500 and 600 level courses taken during Phase II of the professional program. Bachelor's degrees are awarded at the conclusion of the senior year to those individuals satisfying all Carroll undergraduate requirements.

PRE-PHYSICAL THERAPY

Immediately following Commencement, students begin the graduate segment of Phase II course work within the professional program. Here the 500 and 600 level courses in physical therapy are offered in a developmental sequence that integrates knowledge throughout the student's professional education. Upon successful completion of Phase I and II of the professional curriculum, an Entry-level Doctor of Physical Therapy degree is awarded. Graduates participate in the College's Commencement ceremony in May of year six.

Admission

The physical therapy program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, marital status, national or ethnic origin or handicap that does not interfere with the performance of professional physical therapy practice as provided by law. Students can enter the physical therapy program in one of three ways:

- 1) Direct admission - Individuals matriculate directly from high school into one of six undergraduate majors with a pre-physical therapy emphasis. If the student qualifies for admission into the Physical Therapy Program, s/he automatically enters the professional phase during the senior year. Requirements for advancement into the professional program phase for direct admission applicants are described below in the Academic Progression section and in the Admission section of this catalog. Students who choose the direct admission option must meet these requirements to enter the professional phase of the Physical Therapy program.
- 2) Transfer admission - During the junior year, individuals can apply to enter the professional phase of the program, and, upon acceptance, would begin Phase I the senior year. Applicants completing a bachelor's degree at Carroll College receive a calculated preference in consideration for Phase I admission. Applicants must be free of academic and disciplinary probation for all institutions previously attended. Selection criteria for transfer applicants are described below and in the Admission section of this catalog.
- 3) Non-traditional admission - An individual who has completed an undergraduate degree can apply for the professional phase of the program. Applicants must be free of academic and disciplinary probation for all institutions previously attended. Selection criteria for non-traditional applicants are described under the program's information found in the Carroll College Graduate Catalog.

Applications and credentials for admission to the physical therapy program must be submitted to the Office of Admission. Decisions are made on applications by a selection committee in the program, and applicants are notified through the Office of Admission.

Technical Standards for Admission to and Progression in the Physical Therapy Program

Successful participation in the Entry-level Physical Therapy Program requires that a student possess the ability to meet the requirements of the program. Though the program may modify certain course requirements in order to provide persons who are handicapped with an opportunity to achieve results equal to those of a person who is not handicapped, there are no substitutes for the following essential skills. The applicant must initially meet these requirements to gain admission to the program, and must also continue to meet them throughout participation in the program.

1. **Physical requirements:** The applicant/student must be willing and capable of performing patient examinations including a review of systems, history, and tests and measures including, but not limited to, range of motion, manual muscle testing, visual observations. The applicant/student must also be willing and capable of performing physical therapy interventions such as transferring, treatment techniques using manual skills and therapeutic equipment, activities of daily living, education, and documentation. In addition, an applicant/student must successfully complete and maintain certification in first aid and cardiopulmonary resuscitation.
2. **Communication:** The applicant/student must be able to elicit information, describe changes in health, mood, and activity, and perceive non-verbal communication. The applicant/student must be able to communicate effectively and sensitively with patients and all members of the health care team.
3. **Intellectual abilities:** Problem solving, clinical decision making, and evidence-based practice, critical skills of physical therapists, require abilities in measurement, calculation, reasoning and analysis.
4. **Behavioral and social attributes:** The applicant/student must be able to tolerate physically taxing workloads, function effectively under stress, adapt to changing environments, display flexibility, learn to function in the face of uncertainties inherent in the evaluation and treatment of patients, and must possess integrity, compassion, effective interpersonal skills and be motivated for a career in health care.

The physical therapy program may require that the applicant/student undergo a physical examination. A handicapped applicant/student shall not, on the basis of his or her handicap (except those which would preclude the essential skills outlined above) be excluded from participation in, denied the benefits of, nor be subjected to discrimination in the physical therapy program.

Caregiver Background and Criminal History Check

On October 1, 1998, the State of Wisconsin Department of Health and Family Services mandated that all persons who seek to be employed and/or licensed in the caregiver industry must fulfill the caregiver and background check requirements in Section 50.065 of the Wisconsin Statute. On the first day of class in the professional phase of

PRE-PHYSICAL THERAPY

the program, students are required to complete a background and criminal history check and abide by college and state regulations pertaining to findings.

Insurance

Health: Pre-physical therapy students are required to have medical insurance. Those who are covered by a family or personal policy must provide the insuring company's name and the policy number on a waiver form sent to the student by the Carroll College Business Office. For students without their own coverage, a group insurance policy is available through the college. Pre-physical therapy students are also required to have a personal health history form completed and on file in the administrative area of the Health Sciences.

Academic Progression

To proceed into the professional phase of the Physical Therapy Program in the senior year, a Carroll College direct admit or transfer student must satisfy all of the following requirements:

- 1) A college cumulative GPA of 3.0 or higher during the freshman, sophomore, and junior years. Any Carroll undergraduate credit with an earned D or F grade can be retaken at Carroll prior to the direct admit student's senior year with the most recent grade awarded used in the GPA calculations.
- 2) A pre-professional GPA of 3.0 or higher during the freshman, sophomore and junior years.
- 3) Completion of courses fulfilling Carroll's general education core, the majority of required and elective courses in the undergraduate major, and pre-professional courses required by the Physical Therapy Program. See the Admission section of this catalog for specific requirements.
- 4) Bachelor's degree to be awarded at the completion of the senior year, which is the first year of the Physical Therapy Program.
- 5) Graduate Records Examination (GRE) scores.
- 6) Participation in a clinical experience, and college or community service activities.
- 7) Submission of three letters of reference, one from a physical therapist, one from a college professor, and one that attests to the student's character.

The academic progress of the direct admit and transfer students is evaluated by the professional phase admissions committee during the direct admit or transfer student's junior year. Under certain circumstances admission on probation is possible. Any direct admit student who withdraws from the program during his/her freshman, sophomore or junior year must inform the program director in writing. If, for any reason, a direct admit student does not advance into the professional phase of the physical therapy program, career counseling through the Walter Young Center is available.

Academic Progression Standards

The academic progression standards for the professional phase of the physical therapy program are presented in the Health Sciences section of this catalog.

Pre-Physical Therapy Majors (96 credits)

Biology Major, Human Biology Major (Bachelor of Science)

Exercise Science Major (Bachelor of Science)

Health Science Major (Bachelor of Science)

Psychology Major (Bachelor of Science)

Suggested Minors: Biology, Business, Chemistry, Hispanic Health and Human Service, Psychology, Sociology

Professional Program

Senior year for Direct Admission and Transfer Students (32 credits)

Phase I

Fall Semester 16 credits

PTH 400, Foundations of Professional Practice (4 credits)

HSC 404, Biomechanics I (4 credits)

HSC 405, Neuroscience (4 credits)

HSC 406, Applied Exercise Physiology I (4 credits)

Spring Semester 16 credits

PTH 401, Clinical Research I (4 credits)

HSC 414, Biomechanics II (4 credits)

HSC 416, Applied Exercise Physiology II (4 credits)

HSC 407, Human Learning and Behavior (4 credits)

Summary of Credits

- Pre-Physical Therapy Emphasis
with undergraduate major 128 credits
- Pre-Professional Phase 96 credits
- Professional Phase I 32 credits

PTH 400. Foundations of Professional Practice 4 credits

Fundamental concepts related to professionalism and the roles and responsibilities of the physical therapist are introduced. Emphasis is placed on professional practice and practice management expectations. The health care delivery system, including cost, quality, and access, and the policies and legislation which drive these forces, is introduced. (Fa) Prerequisite: Good standing in the Entry-level Physical Therapy Program.

PRE-PHYSICAL THERAPY

PTH 401. Clinical Research I

4 credits

The concepts of critical inquiry, reflective thinking, and evidence based practice in physical therapy are introduced. The components and processes of qualitative and quantitative research in physical therapy are emphasized. Students access and analyze a variety of health care and physical therapy literature. (*Sp*)

Prerequisites: Good standing in the Entry-Level Physical Therapy Program, Computer Science 107 and Math 112 or Psychology 205.

See Health Sciences in the Carroll College Catalog for descriptions of Health Sciences (HSC) courses in Phase I of the Entry-level Doctor of Physical Therapy Program curriculum. See the Carroll College Graduate Catalog for descriptions of Physical Therapy (PTH) courses in Phase II of the Entry-level Physical Therapy Program.

DIVISION OF NATURAL AND HEALTH SCIENCES
PSYCHOLOGY

Denise D. Guastello	Associate Professor
Margaret Kasimatis	Assistant Professor
Christopher May	Assistant Professor
Matthew Scheel	Assistant Professor
Tara Schmidt	Assistant Professor
David D. Simpson	Professor

Psychology is a life science that focuses upon the physical and mental processes that underlie individual behavior. This definition provides a focus for the objectives of the psychology program at Carroll College. The program numbers among its liberal learning objectives those of enriching students' understanding of scientific methods and giving students a thorough knowledge of the subject matter central to their better comprehending people.

In addition to its emphasis upon liberal learning, the program strives to offer a major that provides an excellent foundation for those who wish to pursue graduate studies. The program takes great pride in its strong track record of launching psychology majors into academic and professional careers. Academic careers include teaching and research in biological, cognitive, or social psychology; professional careers include serving people in clinical, counseling, or industrial/organizational settings.

Psychology Program Learning Objectives

- Majors will understand psychology as a scientific discipline with regard to its content and research methods
- Majors will demonstrate intellectual skills in thinking, communication, information gathering and synthesis, as well as in quantitative and scientific methodology
- Majors will demonstrate personal development in ethics, values, and career plans

Students may take up to 12 psychology courses plus Psychology 480 (Internship); however, only 10 4-credit, graded courses (i.e., 40 credits) are required for the major. In addition to Psychology 101, 205 and 307, and the senior capstone course 403*, students complete additional requirements by selecting any six remaining psychology courses (excluding 398 and 480). Suggested groupings:

Clinical/Counseling (201; 206; 303; 306 or 321; 314 or 316; and 340 or 401)

Industrial/Organizational (211, 228, 303, 306, 316, and 321)

Research (303, 314, 316, 340, 401, and 492)

PSYCHOLOGY

*Pre-physical therapy psychology majors must complete the following courses in the psychology program: 101, 201, 205, 206, 307, 316, either 303 or 321, and 340 as well as health science courses HSC 405 and HSC 407. In addition, pre-physical therapy psychology majors must complete all other course requirements for progression into the Pre-Physical Therapy (PT) Program. Those pre-physical therapy psychology majors denied continuation into Phase II of the PT Program must take the required psychology capstone course (PSY 403), offered only during the fall semester, and complete a 40-credit psychology major.

Fees

Specific courses that require use of equipment and disposable supplies including certain types of psychological tests are assigned a course fee.

Psychology Major Bachelor of Science

Psychology 101, Introductory Psychology
Psychology 205, Statistics and Experimental Design
Psychology 307, Research Methods in Experimental Psychology
Psychology 403, Historical and Modern Viewpoints of Psychology plus
Six elective courses in Psychology or completion of an area grouping.
Forty credits are required as a minimum.

Required Support Courses (For primary majors only)

CSC 107 or higher

Math 112 or higher than Math 130 **plus** any additional 8 credits from the following:

Communication 101

English 305

Business 250 or Sociology 110

Chemistry 101 and 102

Psychology Minor

Psychology 101, Introductory Psychology, **plus**

Three additional Psychology courses, excluding 398 and 480. Sixteen credits are required as a minimum.

101. Introductory Psychology

L3

4 credits

An introduction to the life science of behavior and mental processes. Emphasis is placed upon methods of inquiry as well as such topics as: perception and consciousness; learning, memory and thinking; biological and developmental processes; motivation and emotion; personality and individuality; social determinants of behavior, conflict, maladjustment and mental health. (*Fa, Sp, Su*)

201. Abnormal Psychology

4 credits

A study of major and minor psychological disorders. Consideration of classification issues and theoretical perspectives precedes an examination of research on genetic, biobehavioral and psychosocial determinants of stress reactions and psychological disorders. Consideration is also given to healthy adjustment and coping strategies as well as prevention and therapy options. (*Fa, Su*) Prerequisite: Psychology 101.

205. Statistics and Experimental Design

4 credits

Required for the psychology major and highly recommended for many others, this course teaches the data analysis procedures most widely used by researchers in the social and behavioral sciences. Instructional emphasis will be on learning which statistic to use, how to perform the data analyses and how best to communicate one's results. Students will gain extensive experience collecting, analyzing, thinking about and using statistical data. Computations will be done both by calculator and by computer. Four hours of lecture-discussion and one two-hour laboratory. (Lab fee required) (*Fa, Sp, Su*) Prerequisite: Psychology 101 and at least sophomore standing or special permission from the instructor.

206. Developmental Psychology

4 credits

A study of the theories, research, and issues related to physical, intellectual, social and emotional development from birth through adolescence. Observational strategies for behavioral assessment of infants and children are included. Credit cannot be received for both 206 and 221. (*Sp, Su*) Prerequisite: Psychology 101.

211. Industrial and Organizational Psychology

4 credits

The psychological study of factors related to people at work. Employee selection methods such as testing and interviewing, performance evaluations, job descriptions, statistical validation and decision techniques, motivation, leadership, satisfaction, job redesign and organizational development are examined. (*Fa, Su*)

Prerequisite: Psychology 101.

221. Life-Span Psychology

4 credits

A comprehensive course with an applied emphasis which examines individual development throughout life. Topics such as genetic inheritance, intellectual change and social adjustment are viewed as processes that extend from the neonatal period through very old age. Credit cannot be received for both 206 and 221. (*Fa, Sp, Su*)

Prerequisite: Psychology 101.

228. Consumer Behavior

4 credits

An applied psychology course focusing upon the behavior of the individual consumer. Concepts derived from perception, motivation, personality, learning and cognition are developed in the analysis of consumer decision-making. (*Sp, Su*)

Prerequisite: Psychology 101.

**250H. Brain, Mind and Behavior:
An Evolutionary Synthesis**

L2

4 credits

Designed for students who are interested in achieving an overview of neuroscience, a multidisciplinary field that seeks to understand brain structure and function and its relation to behavior. Students will learn how genes and experience have shaped the development of brains over millions of years to create a structure (the human brain) that lies at the core of our ability to perceive, learn, remember, care and be aware. Lectures, guest speakers, discussions, and laboratories will be used to introduce students to current methods and findings. Four hours of lecture/discussion and one three-hour laboratory. Honors course or consent of instructor. (Lab fee required) (*Sp*)

260. Health Psychology

4 credits

Based on the research of clinical, experimental social and experimental health psychologists, this course examines how psychological, social, and biological factors affect health and illness. Topics include coping with stress and pain, psychoneuroimmunology, and living with chronic illness, such as diabetes, cardiovascular disease, or cancer. Emphasis is also placed on models of adherence to medical advice and to the modification of health-related behaviors. (*Sp*) Prerequisite: Psychology 101.

303. Experimental Social Psychology

4 credits

This course reviews and critically examines the research findings of experimental social psychologists. Among the topics explored are attitude change, prejudice, conformity, altruism, aggression and group dynamics. Instructional emphasis will be on developing ideas for further needed social psychological research. (*Fa*)

Prerequisite: Psychology 101 and 205.

306. Psychological Testing and Assessment

4 credits

This course gives students a strong foundation in the technical and methodological principles of test construction and in the social and ethical implications of psychological testing. Students will learn criteria for selecting and critically evaluating tests. In addition, students will actually take and study in depth a number of widely used tests of personality, occupational interests, intelligence and values. (Course fee required) (*Sp*) Prerequisite: Psychology 101 and 205.

307. Research Methods in Experimental Psychology

4 credits

A research methods course in experimental science. Knowledge gained from PSY 205 is combined with laboratory exercises in physical control and measurement of variables. A class component covers experimental and quasi-experimental research methods. In addition, students learn how to write research reports and how to conduct an individual experimental project. Four hours of lecture/discussion and one three-hour laboratory. (Lab fee required) (*Fa, Sp, Su*) Prerequisite: Psychology 101 and 205.

314. Learning and Animal Behavior

4 credits

A systematic survey of basic principles of learning and behavior in animals including humans. In the context of evolutionary psychology, attention is directed toward Pavlovian and instrumental conditioning, information-processing approaches to behavior, species-specific concerns, and motivation. Basic research is related to applied efforts in behavior modification and educational technologies. (*Sp*) Prerequisite: Psychology 101. Credit cannot be received for both 314 and HSC 407.

316. Thinking, Problem Solving, and Cognition

L3

4 credits

A study of human intelligence. This course focuses upon cognitive processes and structures involved in perception, memory, critical thinking, problem-solving and creativity. Applications to effective study and reading comprehension are also examined. (*Sp*) Prerequisite: Psychology 101.

- 321. Personality: Theory and Assessment** **4 credits**
 The personality theories of Freud, Jung, Erikson, Rogers, Allport, Cattell and others are examined using both textbook treatments and original works of the psychologists. Various psychological testing instruments are used to assess aspects of personality. (Course fee required) (*Fa*) Prerequisite: Psychology 101.
- 340. Sensation and Perception** **4 credits**
 A study of the ways in which we come to understand and appreciate the world around us through the functioning of our sensory systems. The primary emphasis is on the role of biological, developmental and cognitive processes in vision and audition. (*Sp*) Prerequisite: Psychology 101.
- 391. Special Studies in Psychology** **2 credits**
 (*Fa, Sp, Su*) Prerequisite: Psychology 101.
- 398. Independent Study in Psychology** **1-4 credits**
 (*Fa, Sp, Su*) Prerequisites: Psychology 101, Junior standing, approval of divisional dean and consent of instructor.
- 401. Behavioral Neuroscience** **4 credits**
 This course emphasizes the structure, chemistry and functioning of the brain in relation to learning, memory, emotion, personality and complex human behaviors, including thought and language. Four hours of lecture/discussion and one three-hour laboratory. (Lab fee required) (*Fa*) Prerequisite: Psychology 101. Credit cannot be received for both 401 and HSC 405.
- 403. Capstone: Historical and Modern Viewpoints of Psychology** **4 credits**
 This capstone course prepares the psychology senior for a career in or related to the major. It also integrates traditional subject matter of perception, learning, social and developmental processes, as well as intelligence, motivation and personality. Historical roots, contemporary issues, as well as career opportunities, form the bases of class activities. Each student also completes career and major project portfolios. (Course fee required) (*Fa*) Prerequisite: Senior standing in the psychology major.
- 480. Internship in Psychology** **4 credits**
 Provides majors contemplating a career in psychology or in related areas with supervised field experience. *S/U* graded. (*Fa, Sp, Su*) Prerequisite: Psychology 101, Junior standing and consent of instructor.
- 492. Research Seminar** **4 credits**
 This course is required for those psychology majors who are in the college-wide honors program and is recommended for all psychology majors. Students conduct systematic empirical research in the context of a seminar directed and coordinated by a faculty member. Seminar discussion is focused upon a current topic and is largely confined to asking researchable questions, exploring the feasibility of student-generated research proposals and evaluating student research reports. (*Sp*) (Lab fee required) Prerequisite: Psychology 101, 205 and 307.
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DIVISION OF NATURAL AND HEALTH SCIENCES

RECREATION MANAGEMENT

Stephen J. Dannoff	Assistant Professor and Director of Physical and Health Education/ Recreation Management
Pamela Pinahs-Schultz	Professor of Physical Education
Annie Glieber	Staff

The purpose of the Recreation Management program at Carroll College is to prepare entry-level professionals who can develop, implement, and administer recreation and outdoor adventure programs across the life span in a variety of settings including community Parks and Recreation Departments, fitness facilities, resorts, and cruise ships.

Recreation Management Major

Bachelor of Science

Many of the teaching and planning skills utilized in teaching physical and health education are also essential for successful recreation program management. Descriptions of Physical Education Program courses in the Recreation Management Program are in the Physical Education/Health Education/Adapted Physical Education Program section of this catalog. Descriptions of Health Sciences and Exercise Science Program courses in the Recreation Management program are contained in the Health Sciences and Exercise Sciences Program sections, respectively, of this catalog.

Program Objectives for Recreation Management

1. Train our students in management skills associated with middle management line positions.
2. Instill in our students a sense of ethical principles and professional responsibility.
3. Prepare our students so that they may identify and access the most relevant research materials.
4. Foster those skills necessary to seek out partnerships in the delivery of recreational services.
5. Cultivate an attitude of lifelong professional participation.
6. Implement effective instructional approaches including the use of media and technology.
7. Apply formal and informal assessment strategies.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

Core Courses (56 Credits)

Health Science 101, Introduction to Health Care Skills (1 credit)

[PED 106, AHS 101]

Health Science 103, Personal and Community Health (4 credits)
[HED 222, AHS 103]
Health Science 105, Group Exercise Instruction (1 credit) [PED 109, AHS 105/107]
Health Science 110, Basic Weight Training Instruction (1 credit)
[PED 109, AHS 110/112]
Health Science 120, Fundamental Motor Development (4 credits)
[PED 120, AHS 120]
Health Science 303, Exercise Physiology (4 credits) [PED 413, AHS 303]
Health Science 322, Kinesiology (4 credits) [PED 301, AHS 322]
Exercise Science 324, Exercise Science Laboratory (2 credits) or
Physical Education 324, Physical Education Laboratory (2 credits)
Exercise Science 315, Exercise Science Practicum I (1 credit)
Exercise Science 407, Facility Operations (3 credits)
Exercise Science 435, Exercise Science Practicum II (1 credit)
Physical Education 208, Organization and Administration of Physical
Education/Athletics (2 credits) [PED 210]
Physical Education 214, Teaching Outdoor Activities in Physical Education
(2 credits)
Physical Education 311, Team Sports and Officiating (3 credits)
Physical Education 312, Individual/Dual and Lifetime Activities (3 credits)
Physical Education 411, Adapted Physical Education (4 credits)
Physical Education 421, Psycho-Social Aspects of Physical Activity (4 credits)
Recreation 405, Recreational Programming (4 credits)
Recreation 410, Recreation Administration and Supervision (4 credits)

Capstone Course (12 Credits)

Recreation 480, Recreation Management Internship (12 credits)

Required Support Courses (28 Credits)

Biology 130, Introduction to Human Anatomy and Physiology I (4 credits) [BIO 103
or 106]
Biology 140, Introduction to Human Anatomy and Physiology II (4 credits)
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Math 112, Introduction to Statistics (4 credits)
Athletic Training 101, Athletic Training Seminar I (2 credits) [PED 322]
Business 101, Principles of Small Business (4 credits)
Business 301, Introduction to Marketing (4 credits)
Business 302, Introduction to Management (4 credits)

REC 405. Recreational Programming

4 credits

This course provides students with the skills to lead and administer a variety of recreation programs. This course involves budgeting and marketing programs designed for various populations and situations. (*Fa*) Prerequisite: Senior status in Recreation Management or consent of instructor.

RECREATION MANAGEMENT PROGRAM

REC 410. Recreation Administration and Supervision 4 credits

This course introduces students to special topics in the field of recreation. The course explores current trends in the field of recreation, management in recreation and professional writing for recreational management. (Sp) Prerequisite: Senior status in Recreation Management or consent of instructor.

REC 480. Recreation Management Internship 12 credits

The purpose of this course is to enhance and develop personal growth in recreation management knowledge, ethical behaviors, career development, interpersonal skills, problem solving abilities, and personal responsibilities through participation in an internship at a recreation facility. During a 15-week internship, students will spend 30 hours/per week (450 total hours) developing, implementing, and administering recreation and outdoor adventure programs in a college affiliated recreation program. During the 15-week internship, students participating in the internship will come together for seminars. (Su, Fa) Prerequisites: REC 405 and 410.

Recreation Management Four-Year Curriculum Model

Class Standing	Fall Semester	Winter Term	Spring Semester	Summer Term
Freshman	FYS 100 HIS 103, 104, 105 or 106 BIO 130 HSC 103 HSC 101 17 Credits		PED 103 ATH 101 BIO 140 ENG 170 HSC 110 Elective 15 Credits	
Sophomore	PED 208 PED 310 Elective Elective HSC 105 ENV 105 15 credits		Elective CSC 107 PED 102 HSC 120 MAT 112 16 credits	
Junior	HSC 214 HSC 303 HSC 322 Elective PED 101 16 credits		PED 311 PED 312 BUS 101 LSP 5 LSP 7 PED 324 18 credits	
Senior	PED 411 ESC 315 ESC 407 BUS 302 REC 405 16 credits		PED 421 LSP 4 ESC 435 BUS 301 REC 410 17 credits	REC 480 12 credits

DIVISION OF NATURAL AND HEALTH SCIENCES

SOFTWARE ENGINEERING AND

APPLIED MATHEMATICS

John Symms

Associate Professor of Mathematics

This interdisciplinary major is designed for students with a strong interest both in Computer Science and in Mathematics. Thus, the learning outcomes for the programs are those of the Computer Science and Mathematics programs (see pages 231 and 167). The program provides an in-depth foundation in both software engineering and the mathematics that underpins it, showcasing the links between the two disciplines. Students who pursue this major graduate and work in the field of software development or they may decide to pursue further education in graduate school in either computer science or industrial mathematics.

Bachelor of Science

Computer Science 110, Problem Solving through Programming

Computer Science 111, Introduction to Java

Computer Science 226, Data Structures Using Java

Computer Science 323, Programming Languages

Computer Science 341, Software Design and Development

Computer Science 351, Database Design

Computer Science 420, Computer Architecture

Computer Science 437, Computer Graphics

Computer Science 440, Software Engineering

Computer Science 450, Projects for Computer Science Majors

Mathematics 160 and 161, Calculus I and II

Mathematics 205, Discrete Mathematics or

Mathematics 206, Transition to Advanced Mathematics

Mathematics 207, Calculus III

Mathematics 208, Linear Algebra

Mathematics 312, Theory of Probability and Statistics

Mathematics 324, Numerical Analysis

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

ACCOUNTING

Jeffrey T. Kunz

Assistant Professor

Gary L. Olsen

Associate Professor

Preparing Professionals One Student at a Time

The Accounting Program provides superior educational opportunities to increase students' professional effectiveness and career success in a complex business environment.

Learning Outcomes

Graduates of the Accounting Program are able to:

1. Define and describe accounting-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective presentation skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.

Carroll College offers two tracks in accounting for students interested in preparing for a position of leadership and responsibility in accounting in the public, private or governmental sectors of our economy.

Track #1 is designed for students wishing to complete an accounting major which will enable them, upon graduation, to obtain a position in a corporate or not-for-profit organization. Students complete the major as outlined below.

Track #2 is designed for students interested in meeting the requirements for obtaining a Certified Public Accountant designation. Students wishing to meet the requirements for sitting for the CPA exam can do so in four years by following a specified curriculum. This curriculum involves completing the required 150 credit hours, and with careful planning additional competencies can be gained that will allow the student to consider other certifications (see below). Students should carefully coordinate with their advisor if they wish to complete this track in four years.

With careful planning, the requirements for either TRACK #1 OR TRACK #2 can be completed within a four-year period (not the traditional five-year period).

Accounting Major

Bachelor of Science

NOTE: Transfer students must complete a minimum of 20 credits of accounting at Carroll College.

Core Requirements - Accounting Requirements (50 Credits)

Accounting 205, Financial Accounting

Accounting 207, 208, Intermediate Accounting I,II

Accounting 305, 306, Advanced Accounting I,II

Accounting 310, Advanced Cost Accounting and Budgeting

Accounting 324, Advanced Business Law
Accounting 375, Pre-Internship Seminar (2 credits)
Accounting 405, 406, Tax Accounting I, II
Accounting 407, Auditing
Accounting 414, Accounting Theory
Accounting 480, Internship (minimum of 4 credits are required)

Required Support Courses: (52 Credits)

Business 101, Principles of Small Business
Economics 124, Principles of Economics I - Microeconomics
Economics 125, Principles of Economics II – Macroeconomics
Business 301, Principles of Marketing
Business 302, Principles of Management
Business 303, Principles of Business Law
Business 304, Principles of Finance
Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and its Applications
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Computer Science 109, Technological Productivity (2 credits)
Computer Science 211, Database, Web Creation and Networks
Computer Science 220, Information Systems
Economics 212, Applied Statistics for Business

Accounting Minor (20 credits)

Accounting 205, Financial Accounting
Accounting 207, 208 Intermediate Accounting I, II
Two of the following:
 Accounting 206, Managerial Accounting
 Accounting 305, Advanced Accounting I
 Accounting 310, Advanced Cost Accounting and Budgeting
 Accounting 324, Advanced Business Law
 Accounting 405, Tax Accounting I
 Accounting 406, Tax Accounting II

ACCOUNTING

TRACK #1 ACCOUNTING EMPHASIS					
Class Standing	Fall Term	Jan/Winter Term	Spring Term	Summer term	Total Hours
Freshman	BUS 101 FYS 100 ECO 124 MAT 130/140 16 credits +	(optional)	ACC 205 ECO 125 ENG 170 LSP 16 credits =	(optional)	32 credits
Sophomore	ACC 207 LSP LSP MAT 112 CSC 109 18 credits +	(optional)	ACC 208 BUS 301 ECO 212 BUS 302 CSC 109 18 credits =	(optional)	36 credits
Junior	ACC 310 ACC 305 BUS 303 CSC 220 ACC 375 18 credits +	(optional)	BUS 304 ACC 306 ACC 324 CSC 211 16 credits =	(optional)	34 credits
Senior	ACC 405 ACC 407 ACC 480 LSP 16 credits +	(optional)	ACC 406 ACC 414 LSP 12 credits =	(optional)	28 credit

= 130 hours

SUGGESTED 150 HOUR CPA EMPHASIS TIME TABLE –TRACK #2					
Class Standing	Fall Term	Jan/Winter Term	Spring Term	Summer term	Total Hours
Freshman	BUS 101 FYS 100 ECO 124 MAT 130/140 16 credits +	CSC 107 2 credits +	ACC 205 ECO 125 ENG 170 LSP 16 credits +	CSC109 2 credits =	36 credits
Sophomore	ACC 207 CSC 220 MAT 112 BUS 301 16 credits +	Elective 2 credits +	ACC 208 BUS 302 ECO 212 CSC 211 16 credits +	LSP 4 credits =	38 credits
Junior	ACC 310 ACC 305 BUS 303 LSP ACC 375 18 credits +	Elective 2 credits +	BUS 304 ACC 306 ACC 324 LSP 16 credits +	ACC 480 4 credits =	40 credits
Senior	ACC 405 ACC 407 ACC 480 LSP 18 credits +	ACC 480 or Elective 2 credits +	ACC 406 ACC 414 ACC 480 LSP 16 credits =		36 credits

= 150 hours

- 100. Personal Finance** **2 credits**
The objective of the course is to provide the student with the necessary information and decision-making tools needed to manage his/her financial plan. Open to all majors. (*Fa*)
- 105. Introduction to Accounting Basics** **2 credits**
Course emphasizes what accounting information is, why it is important and how it is used by decision-makers. (Course does not cover the details of bookkeeping). (*Sp*).
- 205. Financial Accounting** **4 credits**
A study of the accounting cycle and extensive coverage of various financial topics (cash, receivables, inventory, liabilities, equity, plant/equipment, and financial statements). (*Fa, Sp, Su*)
- 206. Managerial Accounting** **4 credits**
Study of the accounting data to aid in management decision-making. Topics covered include budgeting, break-even, costing methods, ratio analysis, cash flow, pricing, and inventory control. (*Fa, Sp, Su*) Prerequisite: Accounting 205
- 207. Intermediate Accounting I** **4 credits**
Study of the development of accounting standards underlying the financial statements. An in-depth review of the income statement and balance sheet. Recognition, measurement and reporting of cash, receivables, inventory, plant assets, intangibles, liabilities, revenue recognition and present value analysis. (If not completed within the past five years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (*Fa*) Prerequisite: Accounting 205.
- 208. Intermediate Accounting II** **4 credits**
Recognition, measurement and reporting of stockholders' equity, earnings per share, cash flow, income tax allocation, pensions, leases, accounting changes, accounting errors and disclosure reporting. (If not completed within the past five years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (*Sp*) Prerequisite: Accounting 207.
- 305, 306. Advanced Accounting I, II** **4 credits, 4 credits**
A study of the principles, concepts, and procedures applied to mergers and consolidations, foreign exchange, governmental, non-profit organizations, estates and trusts, insolvency and partnerships. (*305 Fa, 306 Sp*) Prerequisite: Accounting 208.
- 310. Advanced Cost Accounting and Budgeting** **4 credits**
Study of various costing methods and management tools to aid in the decision-making process. Topics covered are job costing, process costing, activity-based costing, standard costing, inventory planning/control, budgeting/responsibility accounting, variable/absorption costing, cost-volume-profit analysis, cost allocation, transfer pricing, capital budgeting and product/service pricing. (*Fa*) Prerequisite: Accounting 205.

ACCOUNTING

324. Advanced Business Law

4 credits

An advanced study of the current legal environment of businesses and focused for accounting students taking the CPA exam or those students interested in a career in law. (If not completed within the past five years, no credit is available. To earn credit, the course must be repeated or an examination may be taken to show mastery of the current subject matter). Required for accounting majors. (*Sp*) Prerequisite: Business 303 or equivalent.

375 (470). Pre-Internship Seminar - Capstone Course

2 credits

This course introduces students to the skills and knowledge needed to successfully compete for available internship opportunities. Students develop their own action plan, resumes, network, interview techniques, critical thinking and self-assessment skills – all crucial preparation for the job market. Junior or senior standing. (Grading will be on an *S/U* basis) (*Fa*)

405. Tax Accounting I

4 credits

Federal and Wisconsin income tax laws and their application to individuals. (If not completed within the past two years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (*Fa*) Prerequisite: Accounting 205.

406. Tax Accounting II

4 credits

Federal income tax laws and their applications to partnerships, corporations, estates, trusts, and gift and inheritance taxes. (If not completed within the past two years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (*Sp*) Prerequisite: Accounting 405 or consent of instructor.

407. Auditing - Capstone Course

4 credits

The study of general audit procedures, preparation of working papers, various types of reports, professional ethics and legal responsibility. Student will be expected to successfully participate in and complete a comprehensive simulated financial audit project. (*Fa*) Prerequisites: Senior standing and Accounting 305, 306 or consent of instructor.

414. Accounting Theory - Capstone Course

4 credits

Comprehensive analysis of the basic theoretical structure underlying financial and managerial accounting topics. Students must integrate prior knowledge and demonstrate mastery of complex FASB/CASB issues and updates. Case methodology, oral presentations and written summaries will be used in the course. (*Sp*) Prerequisites: Senior standing and Accounting 305, 306 or consent of the instructor.

480. Internship in Accounting - Capstone Course

1-12 credits

An opportunity for students to apply theories and concepts to actual work experience under the supervision of an external supervisor and the instructor. The purpose of the internship is to provide opportunities for students to improve managerial and leadership skills while adapting to the world of work. Consent of the instructor. Junior or senior standing. (Grading will be on an *S/U* basis). The course may be repeated for a

maximum of 12 credits given the student has substantially different work experiences. 40 hours of work is needed for each credit.

481. Internship Option - Course Substitution **1-4 credits**
An additional 400 level course may be substituted for the internship when placement is not available. Senior standing and consent of the instructor.
(Grading will be on an S/U basis).

483. Internship Option - Prior Work Experience **1-4 credits**
Prior entry-level accounting experience may be substituted for the internship. Senior standing and consent of the instructor. (Grading will be on an S/U basis).
Meets Accounting 375 or 470 requirement.

398/498. Independent Study **1-4 credits**
A course designed to widen the student's knowledge of accounting theory, develop the ability to study independently, and demonstrate aptitude in planning and production of original work. (*Fa, Sp, Su*) Prerequisite: Approval of the divisional dean and consent of instructor.

Additional certifications for accountants

With careful planning, the accounting 150-credit curriculum (CPA Emphasis) can provide a basis of professional competency needed to sit for professional examinations that can lead to the following professional designations:

CIA-CERTIFIED INTERNAL AUDITOR:

Major: Accounting (CPA) Emphasis
Electives: CSC 111, CSC 351, CSC 409, CSC 341 or 455.

For more information contact:
Institute of Internal Auditors
249 Maitland Avenue
Altamonte Springs, FL 32701
407-830-7600
www.theiiianet.org

CMA-CERTIFIED MANAGEMENT ACCOUNTANT:

Major: Accounting (CPA) Emphasis
Electives: Bus 260, Bus 341, Bus 342, Eco 343 or Bus 344 and Bus 361 or Bus/Eco 365.

CFM-CERTIFIED FINANCIAL MANAGER:

Major: Accounting (CPA) Emphasis
Electives: Acc 100, Bus 341, Bus 342, Eco 343 or Bus 344, and Bus 346.

For more information on the CMA/CFM contact:
Institute of Certified Management Accountants
10 Paragon Drive

ACCOUNTING

Montvale, NJ 07645-1759
800-638-4427
www.imanet.org

CFE-CERTIFIED FRAUD EXAMINER:

Major: Accounting (CPA) Emphasis

Electives: Soc 103, Soc 212, Soc 303, Soc 304, Com 350, and Che 104.

For more information contact:

Association of Certified Fraud Examiner
Gregor Building
716 West Avenue
Austin, TX 78701
800-245-3321
www.cfenet.com

Students seeking multiple certifications are encouraged to add specific electives to the CPA Emphasis (150-credit) major in preparation for the national exams.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES
**BUSINESS ADMINISTRATION
AND ECONOMICS**

William F. Bauer	Assistant Professor
Dennis M. Debrecht	Associate Professor
Catherine E. Jorgens	Instructor
Gregory A. Kuhlemeyer	Associate Professor
Michael G. Levas	Assistant Professor
Richard J. Penlesky	Professor
Debra R. Schultz	Assistant Professor
Gregory J. Schultz	Assistant Professor
Elizabeth R. Towell	Associate Professor

Preparing Leaders One Student at a Time

The Business Program provides superior educational opportunities to increase students' professional effectiveness and career success in a complex business environment.

Learning Outcomes

Graduates of the Business Program are able to:

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.

A major in business administration helps prepare students for a variety of fulfilling and challenging careers. In a free market society evolving at an increasing pace, all organizations, from not-for-profit to local businesses to international corporations, need articulate, well-reasoning and effective business leaders.

A Carroll College business degree allows you to integrate knowledge, develop lifelong skills, prepare for careers, and develop enduring personal value systems that enhance your ability to succeed. You may choose no more than one emphasis from among the following: management, marketing, finance, human resources, and management information systems. Each emphasis allows you to focus your learning in a specialized area that provides the skill sets to be successful. As always, the program believes in the fundamental basis of a liberal education and future success is grounded in the liberal arts. The faculty focus on meeting these ever changing business needs by providing excellence in teaching, opportunities for leadership, and interaction with business leaders through mentoring, internships and classroom visits and other contacts.

BUSINESS ADMINISTRATION AND ECONOMICS

The mentoring and internship programs are required elements of your Carroll College business program. During your junior year, you are matched with a Carroll College alumnus or business person in your area of interest. Mentoring activities are very broad and involve discussions on issues such as career preparation, setting work expectations, networking and discussing professionalism and ethics. You then move on to an internship placement. Internships help you continue the networking element that is necessary for career success, as well as providing you an opportunity to work in an organization consistent with your career path choice. Internships may lead to full-time offers of employment upon graduation.

The program also participates in bringing to campus contemporary leaders in business and economics to talk about possible career paths for students. The purpose of this event is for prospective freshman, sophomore and junior students to learn about careers in various areas of business, network with business professionals and start planning for future career aspirations.

The business program puts a strong emphasis on creating an educational experience that combines theoretical with practical components and applied knowledge to be successful in your career. Individual student success is the goal of the business program and is the reason that faculty prepare leaders one student at a time.

The three unique business minors are intended for students with liberal arts and/or professional majors who will likely be working in the private or public sector. The minors incorporate a basic understanding of the facets of business management, marketing, and finance in a free market economy.

The economics minor is intended for students who wish to concentrate their attention on an understanding of economic institutions in our society and the application of economics to decision-making in the business and public sectors of the economy. It is meant to complement majors such as Accounting and Politics.

Business Administration Major

Bachelor of Science

Core Courses for the Major (34 credits)

Business 101, Principles of Small Business

Business 301, Principles of Marketing

Business 302, Principles of Management*

Business 303, Principles of Business Law**

Business 304, Principles of Finance

Business 305, Principles of Operations Management

Business 375, Pre-Internship Seminar (2 credits)

Business 480, Internship

Business 496, Business Policy

* CSC 409 Information Technology Management should be taken in place of BUS302 for the MIS emphasis

** BUS 310 should be taken in place of BUS303 for the Human Resource emphasis

BUSINESS ADMINISTRATION AND ECONOMICS

Required Support Courses (34 credits)

Accounting 205, Financial Accounting
Accounting 206, Managerial Accounting
Economics 124, Principles of Economics I - Microeconomics (LSP 3)
Economics 125, Principles of Economics II - Macroeconomics (LSP 3)
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Computer Science 220, Information Systems
Communication 227, Technical Writing in Organizations
Mathematics 112, Introduction to Statistics (LSP 1)
Economics 212, Applied Statistics for Business (LSP 1)

Human Resource Emphasis (16 credits)

Core, support courses plus 16 credits

Business 265, Human Resource Management (LSP 3)
Business 315, Organization Behavior
Communication 241, Communication and Conflict
One elective from:
 Leadership 191, Leadership: Theory and Practice
 Business 250, Culture and Diversity in Organizations (LSP 4)
 Communication 230, Organizational Communication

Management Emphasis (16 credits)

Core, support courses plus 16 credits

Leadership 191, Leadership: Theory and Practice
Business 315, Organization Behavior
Business 390, Organizations in Action
One elective from:
 Business 250, Culture and Diversity in Organizations (LSP 4)
 Business 260, Ethics in Business, Government, and Society (LSP 7)
 Business 265, Human Resource Management (LSP 3)

Marketing Emphasis (18-20 credits)

Core, support courses plus 18-20 credits

Business 320, Promotion Management
Business 327, Business-to-Business Marketing
Business 335, Marketing Research

Management track (choose two)

 Communication 203, Advertising
 Communication 208, Introduction to Public Relations
 Psychology 228, Consumer Behavior

Advertising track (choose two)

 Art 311, Electronic Imaging or Graphic Communication 106, Introduction to
 Communication Technology
 Communication 203, Advertising
 Communication/Art 258, Visual Communication

BUSINESS ADMINISTRATION AND ECONOMICS

General track (choose two)

Art 311, Electronic Imaging or Graphic Communication 106, Introduction to Communication Technology
Communication 203, Advertising
Communication 208, Introduction to Public Relations
Communication/Art 258, Visual Communication
Psychology 228, Consumer Behavior

Management Information Systems Emphasis (18 credits)

Core, support courses plus 18 credits (CSC)

CSC 111, Introduction to Java
CSC 220, Information Systems
CSC 311, Introductory Web Programming (2 cr.)
CSC 341, Software Design and Development
CSC 351, Database Design

Finance Emphasis (16 credits)

Core, support courses plus 16 credits

Business 341, Applied Risk Management
Business 342, Investment Management
Business 344, Management of Financial Institutions
Business 356, Applied Financial Management

Business Marketing Minor (20 credits)

Business 101, Principles of Small Business
Business 301, Principles of Marketing
Business 302, Principles of Management
Business 320, Promotion Management
Business 327, Business-to-Business Marketing or Psychology 228, Consumer Behavior¹

Business Management Minor (20 credits)

Business 101, Principles of Small Business
Business 265, Human Resource Management (LSP 3)
Business 302, Principles of Management
Business 315, Organization Behavior
Leadership 191, Leadership: Theory and Practice

Business Finance Minor (20 credits)

Business 101, Principles of Small Business
Business 304, Principles of Finance²
Business 342, Investment Management
Business 344, Management of Financial Institutions

¹ Note that PSY228 has a prerequisite of PSY101

² Note that BUS304 has prerequisites of ACC206 or ACC310 and co-requisites of ECO212 or MAT312. This minor best fits Accounting and Actuarial Science majors.

One elective from:

- Business 341, Applied Risk Management
- Business 346, Applied Portfolio Management
- Business 356, Applied Financial Management
- Business 361, International Business
- Economics 343, Money and Banking

101. Principles of Small Business

4 credits

A study of the various elements of a business system with primary focus on small firms and entrepreneurship. Emphasis is placed on the knowledge and skills necessary for small business success. The various business disciplines, such as finance, management, marketing, MIS and human resources, will be covered from a small business perspective. (*Fa, Sp, Su, WW*)

250. Culture and Diversity in Organizations

L4

4 credits

This course aids in understanding the complexities of diversity and cultural differences, increasingly important components for success in organizations. It examines the elements of managing and understanding diversity in foreign environments where cultural difference is the norm for international business. The course looks at diversity at home and abroad in an attempt to better understand, appreciate, and value the variety of differences. (*Fa, Sp, Su, WW*)

260. Ethics in Business, Government, and Society

L7

4 credits

An interdisciplinary course that deals with the nature and scope of business/government relationships. The emphasis is on ethical and social issues affecting society's stakeholder groups (consumers, owners, employees, communities, and environmentalists) and the challenges for business in the future. It encourages comparative analysis of business ethics with the moral standards of the world community. (*Fa, Sp, Su, WW*)

265. Human Resource Management

L3

4 credits

The study of managerial responsibilities for human resources in the areas of productivity, quality of work life, compensation, and job design. The course material deals with the growing recognition that an organization's most valuable resource is its personnel. The course is consistent with the systems orientation of human resource management, which recognizes the interrelationship of the personnel functions. (*Fa, Sp*)

291/391. Special Topics

1-4 credits

A study of selected processes, developments, problems or issues in business administration or economics that are not covered in other courses. Changing topics may be drawn from any area of business administration. Courses may be repeated for credit with changed topics.

301. Principles of Marketing

4 credits

The marketing process is analyzed as part of our socio-economic system that anticipates and satisfies consumer needs, adjusts to demand and sales, and procurement of goods and services. Topics include the marketing concept, new product development, channels of

distribution, pricing, promotion, and Internet marketing. (*Fa, Sp, Su, WW*) It is highly recommended that students take Business 101 prior to taking this course.

302. Principles of Management

4 credits

Examines the theory, techniques, and applications of management systems. Planning, organizing, leading, and controlling are issues addressed. Topics include environmental influences, organization design and structure, motivation, total quality management, ethics, production and international management. Emphasis is on learning through application. (*Fa, Sp, Su, WW*) It is highly recommended that students take Business 101 prior to taking this course.

303. Principles of Business Law

4 credits

A study of the legal environment including the nature and sources of law, court systems, litigation, and alternative dispute resolution; constitutional and administrative law, tort law and product liability, contract law, agency law; business organizations; business ethics and social responsibility; international law; and selected topics of government regulation of business including antitrust law, employment law, environment law, and securities regulation. (If not completed within the past five years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (*Fa, Sp, Su*) It is highly recommended that students take Business 101 prior to taking this course.

304. Principles of Finance

4 credits

An analysis of the three functional and interrelated areas of finance: (1) financial institutions and markets, (2) corporate financial management, and (3) the investment management environment. The purpose of this course is to give all business students an expansive as well as applied understanding of the role of finance in business. Greater emphasis is placed on corporate financial management. (*Fa, Sp, Su*) Prerequisites: Accounting 206 or Accounting 310; Co-requisites: Economics 212 or Mathematics 312.

305. Principles of Operations Management

4 credits

This course provides a survey of the operations function within a variety of enterprises and an understanding of how the design, operation and control of systems can most effectively provide goods and services. Topics include operations strategy, process selection, quality management and control, supply chain management, forecasting, scheduling, inventory planning and control, and just-in-time systems. (*Fa, Sp, Su*) Prerequisite: Business 101 and Math 112.

310. Employment and Labor Law

4 credits

A study of labor law as it affects labor relations and the total work environment. Legal areas covered include federal legislation, judicial rulings and federal agency guidelines as they pertain to human resource decisions. A portion of the semester will be spent on labor negotiations. The National Labor Relations Act is studied in detail. (*Sp - offered only in the evening*). It is highly recommended that students take Business 101 prior to taking this course.

315. Organization Behavior**4 credits**

An experiential approach to current theory, research, and practices regarding variables that influence behavior in complex organizations. Emphasis is placed on self-managed work teams, total quality management, motivation, development, change and other models relevant to the human condition in organizations. (*Fa, Sp*) Prerequisite: Business 101.

320. Promotion Management**4 credits**

Development and control of the managerial structure for the basic elements involved in the marketing promotion function. Areas of concern will be the relationship between the customer's needs and behavior, the corporation's approach to promotion, and the analysis of organizational structure alternatives in the marketing promotional area. An integrated marketing perspective is utilized. (*Sp*) Prerequisite: Business 301.

327. Business-to-Business Marketing**4 credits**

Analysis of the problems of marketing industrial goods. Particular attention given to acquiring market information, marketing planning, methods of distribution, pricing, and the promotional challenges of industrial marketing. Personal selling techniques and sales management will also be covered. (*Sp*) Prerequisite: Business 301.

335. Marketing Research**4 credits**

Study of the research process as an aid to data analysis in marketing management. Emphasis on the planning of research and the gathering, quantitative analysis, and interpretation of information with emphasis on net based research and primary data collection. (*Fa*) Prerequisites: Business 301 and Economics 212.

341. Applied Risk Management**4 credits**

An introductory course covering the basics of business risk management. This course provides an overview of the nature, process, and methods of dealing with risk. Students will study traditional insurance contracts as well as all other forms of transference (non-insurance) as a risk management tool in the business world. (*Sp*) Prerequisite: Business 304.

342. Investment Management**4 credits**

A study of financial instruments, the markets in which they trade, and their use in developing basic portfolios. A key emphasis and component of this course involves the valuation decision process of fundamental analysis and its application towards portfolio management. In addition, topics such as investing risks, efficient markets, and the use of fixed-income securities in portfolio management are examined. (*Fa*) Prerequisite: Business 304.

344. Management of Financial Institutions**4 credits**

A study of the decision making process of depository financial intermediaries such as commercial banks, credit unions, insurance companies, and savings and loan associations. A primary emphasis will be on commercial bank management. Topics covered in the course are related to asset and liability management, capital formation, bank regulation, interest rate risks, and other banking innovations and functions. (*Fa*) Prerequisite: Business 304.

346. Applied Portfolio Management 4 credits
The application of investment theories and practices towards the effective creation and management of portfolios. The course will cover key topics ranging from modern portfolio theory, fixed-income and equity portfolio management, the use of derivative securities, and risk management. Students are required to create and maintain hypothetical portfolios for specific institutional client purposes. (*Sp, odd years*) Prerequisites: Business 304 and Business 342.

356. Applied Financial Management 4 credits
A case-study format that applies the principles and models of financial management to current business problems. All students are expected to be involved in detailed discussions of the case issues on a daily basis. In addition, ethical, moral, and social issues are addressed, where appropriate, with topics related to working capital management, capital budgeting, dividend, capital structure, financing decisions, and firm valuation. Computer technologies are used extensively to analyze issues related to case studies and the presentation of those results. (*Sp*) Prerequisites: Business 304 and senior standing.

361. International Business 4 credits
Every person has three roles in a global economy: consumer, worker, and citizen. International Business provides a foundation for becoming informed about the global business environment. Important topics in this course include economic, cultural and political factors that affect international business. Students gain an understanding and appreciation for a diverse society. Business structures, trade relations, international financial transactions, legal agreements, and global entrepreneurship are highlighted. The course focuses on the challenges of managing global organizations. (*Fa, even years*) Prerequisites: Business 101. It is also recommended that Business 301-305 be completed.

375 (470). Pre-internship Capstone Seminar 2 credits
Course is open to any student contemplating an internship or field experience. The course will introduce students to the skills and knowledge needed to successfully compete for available internship opportunities. Students develop their own career action plan, resumes, networks, interview techniques, team work, critical thinking, and self-assessment skills - all crucial preparation for the job market. (*Fa, Sp*) Prerequisite: Junior standing.

390. Organizations in Action 4 credits
An integrative course intended to give students the opportunity to solve actual management problems in organizations. Class members form teams and establish a "work world" symbiotic relationship with a local business firm while acting as consultants to the assigned client. Total quality management and a team approach are emphasized. (*Fa, Sp*) Prerequisites: Business 302.

480. Internship in Business 1-12 credits
An opportunity for students to apply theories and concepts to actual work experiences under the supervision of an external supervisor and the instructor. The purpose of the internship is to provide opportunities for students to improve managerial and leadership skills while adapting to the world of work. Students may substitute equivalent work

experience or complete a work project with prior written approval of the instructor. (*Fa, Sp, Su*) Prerequisites: Junior standing required, Senior standing recommended, and approval of the instructor. The course may be repeated for a maximum of 12 credits given the student has substantially different work experiences. 40 hours of work is needed for each credit.

483. Internship Option – Prior Work Experience **4 credits**

Sufficient prior managerial experience may be substituted for the internship. Prerequisites: Senior standing and approval of the Director of Internships. Meets Business 375 or 470 requirement.

496. Business Policy **4 credits**

A study of the process of decision-making and the development of business policies and strategies through the use of a business simulation game in a team-building environment. (*Fa, Sp*) Prerequisites: Business 101, 301-305, senior standing, or consent of instructor.

398/498. Independent Study **1-4 credits**

A course of study designed to widen the student's knowledge of business, organizational, and system theory. This develops the ability to study independently, and demonstrate aptitude in the planning and production of original work. (*Fa, Sp, Su*) Prerequisites: Junior/Senior standing respectively, approval of the divisional dean and consent of instructor.

Economics Minor

Economics 124, Principles of Economics I – Microeconomics
Economics 125, Principles of Economics II – Macroeconomics
Economics 306, Microeconomic Theory
Economics 307, Macroeconomic Theory
One elective in Economics numbered above 300

105. History of Economic Thought **L6** **4 credits**

A survey of major schools of economics and trends in economic thought from the time of mercantilism to the present. Emphasis is on the ideas and writings of Smith, Malthus, Ricardo, Marx, Keynes, and selected contemporary economists such as Galbraith and Friedman. (*Fa*)

110. Introduction to Economics **L3** **4 credits**

This is a survey course designed to give the student a basic understanding of microeconomics and macroeconomics. The course provides an overview of the important topics of these two broad fields of economics. This course is open to non-business majors or to anyone interested in a basic understanding of economics. This course cannot be taken after a student has completed both Economics 124 and Economics 125. (*Sp*)

124. Principles of Economics I - Microeconomics **L3** **4 credits**

An intensive analysis of the microeconomics theory that explains the market's determination of prices, resource allocation, and distribution of goods and services. (*Fa, Sp, Su, WW*)

BUSINESS ADMINISTRATION AND ECONOMICS

- 125. Principles of Economics II - Macroeconomics** L3 4 credits
An intensive analysis of the macroeconomics theory that explains the aggregate behavior of our economy and its public and private policy implications. (*Fa, Sp, Su, WW*)
- 212. Applied Statistics for Business** L1 4 credits
This course builds on subject matter covered in Math 112. Topics include one-sample and two-sample hypothesis testing, decision-making using payoff tables, ANOVA, non-parametric hypothesis testing, and regression. (*Fa, Sp, Su*) Prerequisite: Computer Science 107 and Math 112 or equivalent
- 306. Microeconomic Theory** 4 credits
An examination of modern price theory with specific emphasis on consumer demand, production and cost, the firm and market organization, and theory of distribution. (*Fa, odd years*) Prerequisite: Economics 124.
- 307. Macroeconomic Theory** 4 credits
A study of the analytical core and the central issues of the measurement and determination of the level of national income, fluctuations, and growth. Fiscal and monetary policy effects on unemployment and inflation are examined. (*Sp, even years*) Prerequisite: Economics 125.
- 308. Economics for Business** 4 credits
The major emphasis of this course is to provide the theory and tools necessary for the analysis and solution of problems that have significant economic consequences for the business firm. Economic theory is applied in a way that would enable the decision-maker to understand the effect of the economic environment on resource allocation within the organization. (*Fa, even years*) Prerequisite: Economics 212.
- 343. Money and Banking** 4 credits
The nature of money, the behavior of commercial banks, and the function of the Federal Reserve System are examined. The role of money in the economy is analyzed within the framework of the classical, Keynesian, and monetarist theories of the demand for money. (*Sp, odd years*) Prerequisite: Business 304.
- 365. Commerce and Politics in a Global Environment** 4 credits
Provides an overview of the global economy and its increasing importance for businesses and governments while helping students develop the skills necessary for analyzing current economic issues and trends. Topics include trade and international monetary policy, multinational corporations, international economics, international law and aid to developing countries. Also offered as Politics 365. (*Sp, odd years*) Prerequisite: Economics 124 or 125 and Politics 255 or consent of instructor.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

BUSINESS AND INFORMATION

TECHNOLOGY

Gregory Schultz Assistant Professor of Business

Preparing Professionals One Student at a Time

The Business and Information Technology Program provides superior educational opportunities to increase students' professional effectiveness and career success in a complex business environment.

Learning Outcomes

Graduates of the Business and Information Technology Program are able to:

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.
7. Problem-solve (for business, scientific, Web, and recreational problems) through programming using multiple programming paradigms, enterprise resources, different software development frameworks, sound software design techniques and software engineering practices.
8. Be competitive in the net-centric world of computing in terms of being knowledgeable about architecture of the Internet and capable of developing and maintaining web software.
9. Successfully work in or be adapted to an organization in any business setting to meet technology challenges.
10. Further their academic pursuits and meet challenges in graduate schools by having the necessary body of theory that underpins the discipline of computer science.

Students in this program can expect to develop the robust problem solving and programming skills of the Computer Science major as well as the communication and decision-making expertise of the Business major. Object-oriented and traditional SDLC design as well as web development are stressed in the technical courses. The functional areas of business: marketing, management, finance, and operations management, are emphasized within the business curriculum. A typical entry position for these graduates is "systems analyst." Students with this major may act as the liaison between IT and the business functions of the organization because they have expertise in both.

Systems analysts are architects of information systems. Considered "agents of change," systems analysts must be aware of both existing and emerging technologies and tech-

BUSINESS AND INFORMATION TECHNOLOGY

niques. Systems analysts must be able to communicate with business experts and formally document their problems and needs. They must also have the problem solving skills necessary to translate business needs into system specifications. They must be able to defend technical solutions that address the bottom-line value returned to a business.

Business and Information Technology Major (106 credits)

Bachelor of Science

Business Courses (42 credits)

Business 101, Principles of Small Business
Business 301, Principles of Marketing
Business 303, Principles of Business Law
Business 304, Principles of Finance
Business 305, Principles of Operations Management
Business 375, Pre-Internship Capstone Seminar (2 credits)
Economics 124, Principles of Economics I - Microeconomics
Economics 125, Principles of Economics II - Macroeconomics
Economics 212, Applied Statistics for Business
Accounting 205, Financial Accounting
Accounting 206, Managerial Accounting

Computer Science Courses (44 credits)

Computer Science 107, Problem Solving Using Information Technology (2 credits)
Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 111, Introduction to Java
Computer Science 211, Database, Web Creation and Networks
Computer Science 220, Information Systems
Computer Science 226, Data Structures Using Java
Computer Science 311, Introductory Web Programming (2 credits)
Computer Science 312, Advanced Web Programming (2 credits)
Computer Science 341, Software Design and Development
Computer Science 351, Database Design
Computer Science 409, Information Technology Management in an
E-commerce World
Computer Science 450, Projects for Computer Science Majors

Other Courses Required (20 credits)

Communication 101, Principles of Communication
Communication 227, Technical Writing in Organizations
Mathematics 140, Calculus and Its Applications
Mathematics 205, Discrete Mathematics
Computer Science 480 or Business 480, Internship

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

COMPUTER SCIENCE

Chenglie Hu	Professor
Gerald L. Isaacs	Professor
Michael G. Konemann	Associate Professor
Elizabeth R. Towell	Associate Professor
John F. Towell	Associate Professor

Mission Statement

The Computer Science Program (CSC) provides an excellent, state-of-the-art educational opportunity for students based on their individual skill sets, interests and career goals including: concentrated programming, business problem solving, Internet computing, and graphical-technological tracks.

Learning Outcomes

Graduates of the Computer Science Program are able to:

1. Problem-solve (for business, scientific, Web, and recreational problems) through programming, using multiple programming paradigms, enterprise resources, different software development frameworks, sound software design techniques and software engineering practices.
2. Be competitive in the net-centric world of computing in terms of being knowledgeable about architecture of the Internet and capable of developing and maintaining web software.
3. Successfully work in or be adapted to an organization in any business setting to meet technology challenges.
4. Further their academic pursuits and meet challenges in graduate schools by having the necessary body of theory that underpins the discipline of computer science.
5. Demonstrate an understanding of ethics as it applies to the discipline of computer science.
6. Demonstrate the ability to work effectively as part of a team.

The CSC program is grounded in the liberal arts tradition, balances theory and practice, and focuses on the problem solving skills necessary for life-long learning in a field characterized by rapid technological change. We succeed in our mission by preparing our students through classroom work and appropriate external internships to secure fulfilling careers in the field of their choosing.

The world has entered an era of technological revolution. The Internet and World Wide Web have become critically important in corporate strategies and personal development. CSC has recognized this by integrating these new technologies with e-business throughout the curriculum. The Object Oriented paradigm is used throughout the curriculum. The curriculum is based upon problem solving and higher order thought processes which will always be needed by corporate America regardless of off-shoring.

COMPUTER SCIENCE

Several emphases and minors are available within the computer science program. Each allows students to begin their studies during the fall semester of the freshman year.

Students may select the:

- Software Engineering emphasis if interested in developing the skills necessary to design and build large, reliable software systems.
- Information Systems emphasis if they desire to work in business and e-commerce.
- Internet Software Development emphasis if they wish to work in e-commerce and e-business as network administrators or develop web applications software.
- Secondary Education emphasis if they wish to teach computer science at the secondary level. This emphasis is approved by the Wisconsin Department of Public Instruction.
- Minors in software engineering, information systems, secondary education, and web development.

Additionally, two interdisciplinary majors in Software Engineering and Applied Mathematics (SEAM) and Business and Information Technology (BIT) are available and described in separate sections of the catalog. SEAM presents the student with an in-depth foundation in software engineering, grounded in a mathematical infrastructure. Students with a strong interest in business may consider BIT.

CSC has close ties with industry and offers students the opportunity to participate in paid internships or cooperative programs with various companies for college credit.

Computer science students at Carroll work on state-of-the-art technology in a Microsoft Windows environment. They also have access to Macintosh, Unix/Linux machines, and Oracle or Microsoft SQL Server Database Management Systems via the campus-wide network. There is equipment exclusively available for the use of computer science majors.

One of the major strengths of Carroll's computer facilities is their accessibility. All students are encouraged to use computer-based technologies to solve problems in any discipline.

Computer Science Major (64 to 72 credits)

Bachelor of Science

Students must complete 24 credit hours of common courses for the CS major along with the CSC support and required support courses of their chosen emphasis in addition to all other college requirements.

Common Courses for the Computer Science Major (24 credits)

Computer Science 107, Problem Solving Using Information Technology

Computer Science 109, Technological Productivity

Computer Science 110, Problem Solving through Programming

Computer Science 211, Database, Web Creation and Networks

Computer Science 351, Database Design

Computer Science 450, Projects for Computer Science Majors

Computer Science 480, Internship in Computer Science*

*CSC480 is not required for secondary education emphasis

Software Engineering Emphasis (40 additional credits)

CSC Support Courses for the Emphasis (24 credits)

Computer Science 111, Introduction to Java
Computer Science 226, Data Structures Using Java
Computer Science 323, Programming Languages
Computer Science 341, Software Design and Development
Computer Science 420, Computer Architecture
Computer Science 440, Software Engineering

Required Support Courses (16 credits)

Communication 101, Principles of Communication
Mathematics 160 and 161, Calculus I and II or
Mathematics 140 and Mathematics 112
Mathematics 205, Discrete Mathematics

Information Systems Emphasis (48 additional credits)

CSC Support Courses for the Emphasis (20 credits)

Computer Science 111, Introduction to Java
Computer Science 220, Information Systems
Computer Science 226, Data Structures Using Java
Computer Science 341, Software Design and Development
Computer Science 409, Information Technology Management in an
E-Commerce World

Required Support Courses (28 credits)

Accounting 205, Financial Accounting
Business 101, Principles of Small Business
Communication 101, Principles of Communication
Economics 110, Introduction to Economics
Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and its Applications
Mathematics 205, Discrete Mathematics

Internet Software Development Emphasis (40 additional credits)

CSC Support Courses for the Emphasis (20 credits)

Computer Science 112, Advanced Programming with C#
Computer Science 311, Introductory Web Programming (2 credits)
Computer Science 312, Advanced Web Programming (2 credits)
Computer Science 315, Advanced Web Design (2 credits)
Computer Science 306, Operating Systems and Web Master Fundamentals:
Microsoft-IIS, or Computer Science 307, Operating Systems and Web Master
Fundamentals: Unix/Linux-Apache

COMPUTER SCIENCE

Computer Science 352, Advanced Business Web Applications
Computer Science 432, Networking

Required Support Courses (18 credits)

Accounting 105, Introduction to Accounting Basics (2 credits)
Art 107, Beginning Design 2D and 3D
Business 101, Principles of Small Business
Communication 101, Principles of Communication
Mathematics 112, Introduction to Statistics

Secondary Education Emphasis¹ (48 additional credits)

CSC Support Courses for the Emphasis (28 credits)

Computer Science 111, Introduction to Java
Computer Science 226, Data Structures Using Java
Computer Science 250, Educational Techniques in Computer Science
Computer Science 323, Programming Languages
Computer Science 341, Software Design and Development
Computer Science 420, Computer Architecture
Computer Science 432, Networking

Required Support Courses (20 credits)

Mathematics 112, Introduction to Statistics
Mathematics 140, Calculus and its Applications
Mathematics 205, Discrete Mathematics
Physics 101 and 102 or 203 and 204, Introductory or General Physics

Computer Science Minor (22 to 34 credits)

Software Engineering Minor (26 credits)

Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 111, Introduction to Java
Computer Science 211, Database, Web Creation and Networks
Computer Science 226, Data Structures Using Java
Computer Science 341, Software Design and Development², or
Computer Science 455, Projects for Computer Science Minors

Information Systems Minor (28 credits)

Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 112, Advanced Programming with C#
Computer Science 211, Database, Web Creation and Networks
Computer Science 220, Information Systems

¹ Refer to the Education program in a separate section of the catalog for additional information.

² Requires CSC351, Database Design as a prerequisite.

Computer Science 351, Database Design
Computer Science 409, IT Management in an E-Commerce World

Secondary Education Minor¹ (34 credits)

Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Computer Science 111, Introduction to Java
Computer Science 211, Database, Web Creation and Networks
Computer Science 226, Data Structures using Java
Computer Science 250, Educational Techniques in Computer Science
Computer Science 341, Software Design and Development
Computer Science 351, Database Design
Computer Science 455, Projects for Computer Science Minors

Web Development Minor (26 credits)

Computer Science 110, Problem Solving through Programming
Computer Science 112, Advanced Programming with C#
Computer Science 211, Database, Web Creation and Networks
Computer Science 311, Introductory Web Programming (2 credits)
Computer Science 312, Advanced Web Programming (2 credits)
Computer Science 315, Advanced Web Design (2 credits)
Computer Science 306, Operating Systems and Web Master Fundamentals:
 Microsoft-IIS, or Computer Science 307, Operating Systems and Web Master
 Fundamentals: Unix/Linux-Apache
Computer Science 351, Database Design

107. Problem Solving Using Information Technology **2 credits**

This course provides a foundation in problem-solving skills using information technology. Students will use Microsoft Excel 2007 to solve “real-world” problems. (*Fa, Wn, Sp, Su*)

109. Technological Productivity **2 credits**

This course uses Microsoft Windows and Office 2007 suite of application software as a foundation for personal and organizational productivity. Students will be presented with an overview of computing specifics at Carroll College (how to access the servers, e-mail basics, etc.), how to use the features of Windows (Windows Vista when it is installed, and Windows XP until then), and when/how to take advantage of the tools available in the Office 2007 applications (Word, Access, Powerpoint). Note that Microsoft Excel is currently the focus of the CSC 107 course. (*Fa, Wn, Sp, Su*)

110. Problem Solving through Programming **4 credits**

This course is designed as a first-semester foundation course for those students planning to major or minor in computer science and for others with an interest in the area. The course is about developing problem solving and structured programming skills, using the

¹ Refer to the Education program in a separate section of the catalog for additional information.

computer as a tool for solving problems. It covers the development of computer programs while focusing on the use of Dijkstra's structural programming principles with sequence, iteration, selection, and top-down structural program decomposition at its core. (*Fa, Sp*)

111. Introduction to Java

4 credits

This course studies the Java programming language, which is used to promote the student's understanding of object-oriented concepts (classes, methods, abstraction, inheritance, polymorphism, and encapsulation) in conjunction with algorithm design, style, debugging and testing. (*Sp*) Prerequisite: CSC110

112. Advanced Programming with C#

4 credits

The course has essentially the same objectives as that for CSC111 but uses the programming language C#.NET. The course is designed to be a continuation of CSC110, in which more advanced programming concepts, constructs, and problem solving skills are addressed. Topics include, but are not limited to, object-orientation, inheritance, polymorphism, exception handling, string processing, files and streams, and collections. Fundamentals of the .NET framework may also be covered. (*Sp*) Prerequisite: CSC110

181. Introduction to Machine Organization and Networking

4 credits

This course increases the student's knowledge of previously introduced computer concepts, including: machine representation of data, hardware, CPUs, networking principles and wiring. The course is practical in nature and involves students in networking and setup problems on the Carroll campus. Prerequisite: consent of the instructor and consent of ITS before registration.

211. Database, Web Creation and Networks

4 credits

The primary objectives of this course are to develop database skills using Microsoft Access 2002 and Web Development using HTML and Microsoft Front Page 2002. E-commerce business models will be solved using a web front end and database back end. A secondary objective is an introduction to networks concentrating on Ethernet and TCP/IP. Also covered is understanding the internals of personal computers to aid their purchase for home or organizational use. This course also continues the discussion on ethical use of technology. (*Fa, Sp, Su*) Prerequisite: CSC107 or CSC109

220. Information Systems

4 credits

This course will provide the student with an understanding of the fundamental aspects of Information Systems. The student will be exposed to the various types of information systems found in a business environment; encompassing operational, tactical and strategic systems. The student will also learn of the developmental processes involved in creating, implementing and securing an information system. This class was formerly the two-credit CSC201 and will meet this requirement from previous catalogs. (*Fa, Sp*)

226. Data Structures Using Java

4 credits

This course focuses on the object-oriented paradigm, with particular reference to the design and implementation of data structures such as: stacks, queues, linked lists, and trees. Java collections framework and searching algorithms may also be introduced. The

course builds on the concepts introduced in CSC111 to allow students to use and write their own classes and objects. *(Fa)* Prerequisite: CSC111 or equivalent

250. Educational Techniques in Computer Science **4 credits**

This course presents the student with the various methods of computer education including simulation, drill and practice, Computer Assisted Instruction (CAI), Computer Managed Instruction (CMI), electronic blackboard and the WWW as an education tool. The student is also asked to create a project in an authoring language and evaluate courseware from various sources. Current courseware offerings, using multimedia and World Wide Web, are studied. Prerequisite: Consent of instructor.

270. Introduction to Security Technologies **4 credits**

This course addresses the issues of security of computer, data and networks as it impacts organizational policy and confidentiality. *(Fa, even years)* Prerequisite: CSC211 and CSC220

306. Operating Systems & Web Master **4 credits**

Fundamentals: Microsoft IIS

This class covers the elements and design of Win32 operating systems, the fundamentals of system administration, and the installation, configuration and maintenance of the Microsoft IIS Server. Problems such as concurrence, communication, and security will be addressed. *(Sp)* Prerequisite: CSC211.

307. Operating Systems and Web Master **4 credits**

Fundamentals: Unix/Linux-Apache

This class covers the elements and design of UNIX/Linux operating systems, the fundamentals of system administration, and the installation, configuration and maintenance of the Apache Web Server. Problems such as concurrence, communication, and security will be addressed. *(Fa)* Prerequisite: CSC211.

311. Introductory Web Programming **2 credits**

This hands-on course introduces the development of dynamic Web sites. It focuses on the use of the Microsoft .NET framework and ASP.NET in particular. Commonly seen user interaction models are stressed such as form processing, user validation, and dynamic interface switches. Other topics include 3-tier architectural model, XML (Extensible Markup Language) Document Object Model, as well as client side authoring of web pages using MS Visual Studio built-in design tools. *(Fa, Sp)* Prerequisite: CSC211 and either CSC111 or CSC112.

312. Advanced Web Programming **2 credits**

This hands-on course assumes that students have a fundamental understanding of HTML, XML, and dynamic web pages. It stresses distributed Web development in an object-oriented environment using an ORB (Object Request Broker) model by focusing on the advanced use of the Microsoft .NET framework and ADO.NET in particular. Topics include data-driven applications involving interaction with enterprise databases, state management, Web services, and component development. *(Fa, Sp)* Prerequisite: CSC311

315. Advanced Web Design**2 credits**

This course is designed to teach advanced web design techniques using Macromedia Flash MX. Students attending this course will learn how to integrate video, text, audio, and graphics into their web sites. Creating an effective web site also requires careful planning. You not only need to decide what the main focus of the site will be from an informational point of view, but you also need to lay out the theme for the site. The theme includes the page flow (navigation), icons, graphics, background images, bullets, buttons, fonts and banners. This course will also focus on the use of effective web design techniques. (*Sp*) Prerequisite: CSC211

320. Programming Using C++**4 credits**

This course assumes the student has had programming experience in some other language, and wishes to learn the C/C++ environment. It focuses on the object-oriented paradigm in the language C++, real-time programming, and provides an introduction to creating Windows Applications using Microsoft Visual Studio .NET. This class was formerly CSC313 and CSC314 and will meet those requirements from previous catalogs. (*Sp, even years*) Prerequisite: CSC110 or equivalent

323. Programming Languages**4 credits**

The objective of this course is to develop in students an understanding of the organization and uses of different kinds of programming languages. C++ will be the foundation of this experience. Issues considered include: the formal specification of programming language syntax, language design, translator design, and run time behavior of programs. Representatives of various kinds of languages such as assembly level, object-oriented, functional, logical, etc., are examined and students have the opportunity to solve problems in these languages. In addition, students may focus on a particular language of their choice to gain deeper understanding of its design issues. (*Sp, odd years*) Prerequisite: CSC226

341. Software Design and Development**4 credits**

This course presents a formal approach to state-of-the-art techniques in software design and development, and the means for students to apply the techniques. Formal models for capturing requirements for object-oriented and procedural designs are presented and used in the course. Other topics include planning and managing projects, design and code reviews, measuring software size, and software quality management. Team projects include the design of e-business applications. (*Sp*) Prerequisites: CSC226 and CSC 351

351. Database Design**4 credits**

The emphasis in this course is on the design and construction of databases as tools in business. Concepts covered include entity-relationship modeling, normalization, and efficient table design. Programming exercises using an Oracle DMS include experience with Oracle SQL, embedded SQL, PL/SQL and Oracle JDBC. The role of databases in e-commerce is considered. (*Fa*) Prerequisites: CSC111 or CSC112 and CSC211

352. Advanced Business Web Applications**4 credits**

Students learn how to build web-based e-business applications by using Microsoft ASP.NET, and SQL Server. Students develop Web-based applications linking Web sites to

back-end databases while also learning how to build distributed, component-based web applications. Web services issues will also be discussed. Applications which scale are stressed in the context of performance, business goals, security, and other relevant topics. This class was formerly CSC330 and CSC331 and will meet those requirements from previous catalogs. (*Sp*) Prerequisite: CSC312 and CSC351

390/490. Workshop in Computer Science 4 credits

Prerequisite: Approval of the divisional dean and consent of instructor.

391/491. Special Studies/Topics 1-4 credits

Study of a selected topic not covered in regular curriculum. Lecture and discussion. The topic will be announced prior to registration. Prerequisite: Consent of instructor

392/492. Seminar 4 credits

An advanced course of study involving individual research. Discussion of this research takes place through informal group participation. Prerequisite: Approval of the divisional dean and consent of instructor.

396/496. Research in Computer Science 4 credits

Advanced research designed to permit individual students or groups of students to undertake special projects related to their educational interests and goals. Prerequisite: Approval of the divisional dean and consent of instructor.

398/498. Independent Study 1-4 credits

Independent study of selected areas under the supervision of one or more faculty. Four credits maximum applied toward degree. Prerequisite: Approval of divisional dean and consent of instructor.

409. Information Technology Management in an E-Commerce World 4 credits

The emphasis of this class is on the management of information technology within an organization and the use of information technology from a strategic, tactical and operational perspective. The current trends towards e-business and e-commerce are integrated throughout. The class is concerned with the management issues surrounding information technology today. Topics include technology trends, IT planning and strategy, management of end-user computing, network management, asset protection, ethical considerations, in-house or outsourcing the hosting of a Web site, choosing a suitable host, Web site privacy issues/statements, and people management skills. (*Sp, odd years*) Prerequisite: Junior standing

420. Computer Architecture 4 credits

This course familiarizes the student with a broad range of computer hardware and systems. Upon completion of this course, a student should be able to make a knowledgeable decision about the appropriateness of a computer system for a given application. Different types of computers, from micros and minis to the large-scale machines, are discussed, as well as different types of memory, peripherals, and storage media. This topic is covered from a high-level point of view and does not require previous hardware knowledge. (*Sp, even years*) Prerequisites: CSC211 and MAT205

431. Artificial Intelligence

4 credits

This course provides an introduction to the basic theoretical concepts of artificial intelligence, emphasizing the role of AI techniques for game programming. Topics: history of AI, programming languages used in AI research, knowledge representation, expert systems, neural networks and learning. (*Sp, odd years*) Prerequisite: CSC111

432. Networking

4 credits

This course provides a unified view (both theoretical and applied) of the broad field of data communications and networking. Topics: data transmission, data encoding, data link control, multiplexing, circuit switching, packet switching, radio and satellite networks, local area networks (LANs), wide area networks, and protocols. Networking trends for the future will be covered. (*Fa*) Prerequisite: CSC211

436. Theory of Computation

4 credits

This course is concerned with the theory of computers, i.e., the forming of several abstract mathematical models that describe computers and similar machines and their capabilities. Topics covered include: Finite Automata, Pushdown Automata, Turing machines, the Chomsky Hierarchy and P and NP problems. (*Fa, odd years starting 2007*) Prerequisite: Consent of instructor.

437. Computer Graphics

4 credits

For those students who wish to understand how graphics are used and created, fundamentals, transformations of objects, shape modeling, 3-D viewing, rendering for realism, curve and surface design are studied. The OpenGL programming platform will be used. A major project is required with the student choosing either from traditional graphics application areas or from game applications. (*Sp, even years*) Prerequisite: CSC226 and one of the following: MAT207, or MAT208

440. Software Engineering

4 credits

This course presents state-of-the art techniques in software design and development. Topics will include the software engineering lifecycle and current approaches to software development management, including formal verification, software teams, CASE tools and other innovative techniques. In addition the course will cover version control, roll out and software maintenance and quality assurance. (*Fa*) Prerequisite: CSC341

450. Projects for Computer Science Majors

4 credits

This course gives students a real world project to solve and is a very demanding course open only to majors in their senior year. The course allows students to select, design, code, document and formally present a substantial project of their own choosing. Students should coordinate with an instructor of their choice to provide guidance and receive consent prior to registration. (*Sp, Su*) Prerequisites: Completion of ALL required CSC prefix coursework

455. Projects for Computer Science Minors

4 credits

This course gives the student a real world experience in a computer-related project and is designed for minors only. (*Sp, Su*) Prerequisites: Completion of ALL other minor requirements

480. Internship in Computer Science

1-12 credits

Professional work experience in computer science under the supervision of faculty and industry personnel. Written report required. *S/U* graded. (*Fa, Sp, Su*) Prerequisites: Junior or senior standing and consent of instructor required prior to registration. The course may be repeated for a maximum of 12 credits given the student has substantially different work experiences. 40 hours of work is needed for each credit.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

EDUCATION

Mary Lee Danielson	Assistant Professor
Rose Ann Donovan	Assistant Professor
Kimberly K. Hofkamp	Assistant Professor
Kathrine A. Kramer	Assistant Professor
Elise Riepenhoff	Assistant Professor
Wilma J. Robinson	Assistant Professor
Sally J. Schumacher	Assistant Professor
Bruce L. Strom	Associate Professor
Janice L. Weigman	Assistant Professor and Director, Undergraduate Program in Education
Mary Ann Wisniewski	Associate Professor, Area Chair, and Director of the Graduate Program in Education

The Wisconsin Department of Public Instruction (DPI) approves the teacher education program at Carroll. The number of students in the teacher preparation program at Carroll during 2005-2006 was 217. The average number of hours per week of supervised practice teaching required for those in the program was 41.66 with a student/faculty ratio of 36.67/1.

The Education program believes that the combination of a strong liberal arts background with the scholarly application of theory, methods, and skills related to learning is integral to the program. We foster in students a commitment to the idea that all children can learn. Students are expected to demonstrate the following guiding principles as learning outcomes throughout their coursework and clinical experiences:

- *Constructivism; Cultural Sensitivity; Curricular Integration; Multiculturalism; and Reflection*

In addition, students are expected to demonstrate proficiency in:

- Knowledge of subjects they are teaching
- Knowledge of how children grow
- Understanding that children learn differently
- Knowledge of how to teach
- Ability to effectively manage a classroom
- Effective verbal and nonverbal communication techniques
- Ability to plan different kinds of lessons
- Knowledge of formal and informal assessment strategies
- Ability to self-evaluate
- Fostering relationships with school colleagues, parents, and community agencies.

Because DPI may revise its requirements for teacher licensing at any time, the Teacher Education programs are subject to change. Students must maintain contact with their education adviser to learn about changes related to licensure requirements.

Admission and Retention in the Teacher Education Program (TEP)¹

The Wisconsin Department of Public Instruction requires all teacher education students in the state of Wisconsin to meet certain standards to be admitted and retained in a TEP and to be admitted to a student teaching semester. Admission to the Carroll College TEP requires formal application by all students seeking licensure. Full-time Carroll undergraduate students should apply in the spring of the sophomore year. All other students should apply as soon as they have completed 40 credits, including at least 12 credits in Carroll College courses. An appointment should be made with an education adviser to obtain information regarding policies and procedures for the application process. Students are cautioned that early application to the program and careful planning are necessary to avoid the addition of extra summers or semesters to finish the program.

Program Admission

To be eligible for program admission, students need to have completed at least 40 undergraduate credits with a minimum grade point average of 2.50. Students will need 150 clock hours of work with children documented with the Education Office as well as a grade of C or better in English 170 and a minimum of four LSPs (or equivalent) completed with a C or better. Students also need to have completed the Pre-Professional Skills Tests (PPST) in mathematics, reading, and writing with passing scores in all three areas. Students submit their first portfolio to provide initial evidence of their development as a teacher and learner. Students are admitted to the TEP before enrolling in upper-level education courses beyond Education 301. Students who leave the college for one year or more are required to reapply for admission to the TEP. The criteria for readmission will be those in effect at the time of reapplication. Application deadlines are October 1 or March 1 each year. A small percentage of students may be admitted to the program or to the student teaching semester on probationary status if they do not meet minimum GPA or PPST standards.

Students who have already completed a bachelor's degree and who are attending Carroll only for teacher certification may obtain a waiver from the PPST, provided their cumulative undergraduate grade point average is 2.75 or above. The course requirements for Wisconsin teaching licensure are the same, but transfer and prior course work are evaluated and considered in the overall plan for certification. All students are required to successfully complete the PRAXIS II Content Exam for their certification area(s) prior to application to student teach.

Program Guidelines

Students who plan to enter and complete the TEP are expected to demonstrate appropriate ethical and professional behavior throughout their college years, and particularly during their course work, fieldwork, and other professional experiences in education. In their first portfolios, submitted upon application to enter the TEP, students are asked to demonstrate evidence of their existing commitments to the field of education.

¹ Admission, retention and student teaching requirements are summarized here. [The Teacher Education Handbook](#), available from the Education Office, contains all specific requirements.

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This is accomplished, in part, by documenting high school and/or college experiences with children prior to entering the TEP. One hundred fifty clock hours of involvement are required. Experiences may include teaching, coaching, tutoring, or other forms of educational service to children or to schools. Volunteer and service work that is done to benefit children is also considered evidence of existing commitment. The Education Office maintains a bulletin board that lists a variety of opportunities for Carroll students to obtain these kinds of experiences. The TEP Handbook contains further information on this requirement and its documentation. A pattern of ethical lapses might affect admission to or retention in the TEP in respective stages.

All students are expected to:

- Engage in formal or informal experiences, service work with children or in schools prior to applying to the TEP.
- Present all required program application materials by established deadlines.
- Submit satisfactory TEP, student teaching, and presentation portfolios, each with a maximum of one revision.
- Pass each segment of the PPST on either the first or the second attempt.
- Complete EDU 210, 311, and 312 (optional with the adaptive education minor) with an overall maximum of one unsatisfactory experience.
- Undergo a background and criminal history check in EDU 100 and prior to every field experience and student teaching placement.
- Demonstrate punctuality, dependability, and professional courtesy in the completion of courses and course assignments, and in all field placements.
(Note: Students should be aware that deadlines for field experience forms occur the semester prior to placement/enrollment: Fall enrollment – May 15, Winter Session Enrollment – November 15, Spring Enrollment – December 15, Summer I Enrollment – March 30)
- Follow college rules pertaining to social conduct, classroom conduct, and academic integrity.
- Maintain ethical, professional, and respectful behavior in all contacts with school children, school personnel, college peers and faculty, and professional colleagues.

Students who are denied admission to, or continuation in, any part of the TEP have the right of appeal, using the grade appeal procedure contained in the Student Handbook. Students who reapply to the program have the right to appear at an education faculty meeting to request readmission, if they so request. All students who are unsuccessful in the TEP have access to alternative career counseling through their education advisers or through the Walter Young Center, or both.

Program Retention

The TEP requires that students demonstrate knowledge, skills and dispositions toward teaching. All major/minor course work must be completed with a grade of C or better. In addition to a minimum overall GPA of 2.50 and a combined 2.75 in the major and in any required teachable minor, students must demonstrate professional behavior throughout their college years. Reference to these criteria can be found in the Teacher Education Handbook. The education program reserves the right to counsel students out of the program when appropriate.

Student Teaching Admission

Admission to the student teaching semester requires a grade of C or better in all major/minor courses, and a minimum overall GPA of 2.75 or a combined 2.75 in the major and the DPI-Approved Teaching Minor. All students are required to successfully complete the PRAXIS II Content Exam for their certification area(s) prior to application to student teach. Students applying for student teaching submit their TEP Portfolio with modifications, amendments and updates that reflect new learning. The education program may admit a small percentage of students to the program on probationary status if they do not meet all the required criteria. Admission deadlines are September 1 or February 1 each year. Those students who are not accepted into student teaching and who wish to complete an elementary major may add coursework in early childhood courses to earn the major in Elementary Educational Studies. No teaching license is granted with this major.

One semester in the senior year must be reserved solely for student teaching. All required coursework for the major and minor must be completed prior to student teaching. No other courses may be taken during any part of the student teaching semester. The Coordinator of Field and Student Teaching placements arranges student teaching assignments in schools within approximately a 30 mile radius of the campus. Students must provide their own transportation to the placement site(s). No more than three placements can be made in a single semester. Students needing more than three placements to complete licensing requirements will need time beyond a single semester to complete the additional placement(s).

The student teaching semester is a full-time, semester-length experience, which follows the semester calendar used by the school in which the student is placed. School calendars are frequently very different from the college calendar. Fall student teachers may begin as early as mid-August and finish in late January. Seniors who student teach in the spring may participate in the graduation ceremony in May and receive their diplomas when student teaching is completed. Students who complete their student teaching during the spring semester are required to teach into June to be recommended for a Wisconsin teaching license.

Due to the complexities of both college and state requirements, students need to meet with an education adviser very early in their college programs in order to develop a workable program plan of coursework. Carroll College TEPs may be completed in four years only with very careful and early planning. Because education students engage in significant amounts of fieldwork in conjunction with the coursework in education, the planning process is also extremely important to permit scheduling of fieldwork. Students need to maintain continual contact with an education adviser in order to update their plans and to ensure that any changes in the DPI requirements are incorporated into the student's program.

To obtain a Wisconsin teaching license, students must meet all applicable DPI requirements, including any new requirements, which may be introduced by the DPI while the student is enrolled in a Carroll College program. Any substitutions of courses or variations in a student's program must be approved by the Registrar and by the Area

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Chair to assure eligibility for a teaching license. Students must complete all TEP requirements and all college degree requirements to receive any teaching license.

Two majors and three minors are offered within the education program:

Major, Elementary Education, 52 credits

Major, Elementary Educational Studies, 40-43 credits

(This major excludes the student teaching term and does not lead to a teaching license)

Minor, Adaptive Education, 23 credits

Minor, Early Childhood Education, 22 credits

Minor, Secondary Education, 43-44 credits

Students may complete coursework leading to a Carroll College degree and to a Wisconsin license in any of the following areas:

License including Early Childhood through Middle Childhood levels (approximate ages - birth through 11)

Students major in elementary education and minor in Early Childhood (see below). This minor, combined with successful completion of placements in both early childhood and elementary settings during the student teaching semester, permits students to earn a license to teach in pre-kindergarten through sixth grades. An extended student teaching semester is required for completion of this certification.

License including Middle Childhood through Early Adolescence level (approximate ages - 6 through 12 or 13)

Students major in elementary education and extend their license to include the middle school level (grades 7 through 9). This extension requires completion of a DPI-Approved Teaching Minor in French, German, health, language arts, mathematics, science, social studies, or Spanish. Students seeking certification in an international language must also successfully pass the PRAXIS II Content Knowledge Exam for that language. The extended license also requires completion of Education 304, Secondary School Methods, and successful placements in both elementary and middle school settings during the student teaching semester.

License in Early Adolescence through Adolescence level (approximate ages - 10 through 21)

Students who wish to earn a license in early adolescence through adolescence complete the minor in secondary education and an approved major in another Carroll College program. They are placed at both middle and high school sites during their student teaching semester. Currently, approved majors for secondary licensure are available in biology, chemistry, computer science, English, environmental science, and mathematics. Students majoring in a science area are encouraged to do the additional coursework required to earn the Broad Field license. There are also approved majors in history, politics, psychology, and sociology, but students earning majors in these areas are urged to do the additional coursework required to earn the Broad Field Social Studies license, which will significantly improve their hiring potential upon graduation. See

your Education adviser for additional information regarding the Broad Field Science and Social Studies licenses.

The Early Adolescence through Adolescence level license allows students to teach secondary school subjects in their approved major after successful completion of student teaching. Students may extend the subject areas they are licensed to teach by completing one or more DPI-Approved Teaching Minors or Concentrations in Broad Field Areas. (See available DPI Minors - Secondary, listed on page 252). In addition, students seeking additional licenses will need to successfully complete the PRAXIS II Content Knowledge Exam in the teaching area.

Additional License in Adaptive Education

Students who wish to earn an additional license in adaptive education complete the initial requirements in their major/minor certification areas and the DPI-Approved minor in Adaptive Education. This additional license better prepares the student to meet the needs of all students within the regular classroom who have special needs. Careful planning allows this certification addition to be completed within four years. Summer attendance may be necessary.

License in Art, Music, Theatre Arts, Spanish, or Physical Education

(early childhood through adolescence level - a wide range of all ages in public schools)

Students who wish to earn a license in any of these areas complete the Secondary Education Minor and an approved major in Spanish, art, music, theatre arts, or physical education. Successfully completed placements in both elementary and secondary school settings are required during the student teaching semester.

Elementary Education Major (57 credits)

Bachelor of Science

Courses in the Major

Education 100, Introduction to Education (2 credits)

Education 203, Educational Psychology

Education 209, Education in a Multicultural Context

Education 210, Field Experience in Education I (1 credit)

Education 261, Education of the Exceptional Child (4 credits)

Education 265, Applying Educational Technology to K-12 Instruction¹

Education 301, Democracy, Schools, and Society

Education 304, Secondary School Methods (required for MC-EA licensure)

Education 311, Field Experience in Education II (1 credit)

Education 321, Teaching Social Studies in the Elementary School (3 credits)

Education 323, Language Arts and Children's Literature

Education 324, Literacy in the Elementary/Middle School

Education 326, Teaching Mathematics in the Elementary School (3 credits)

¹ Computer Science 107 is a prerequisite for this course

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Education 327, Teaching Science and Environmental Education
in the Elementary School (3 credits)
Education 419, 420, Student Teaching in Elementary Education (12 credits)

Required Support Courses

Art 223, Creative Arts for Children (2 credits)
Music 350, Materials and Techniques of Elementary Music (2 credits)
Physical Education 328, Elementary Physical Education Activities and Health
Education (3 credits)

Required Core and Liberal Studies Program Area Courses

FYS 100 or FYS 100H, First Year Seminar
English 170, Writing Seminar
Computer Science 107, Problem Solving Using Information Technology
Mathematics 104, Foundations of Elementary Mathematics
Mathematics 201, Foundations of Elementary Mathematics II¹
Environmental Science 120, Conservation and Environmental Improvement
(LSP I or II)
One laboratory course in Biology, Chemistry, Environmental Science 105 or
Physics (LSP I or LSP II)
Politics 141, Introduction to American Politics (LSP III)
One English Literature course from LSP IV and any course from LSP VII or one English
Literature course from LSP VII and any course from LSP IV
Any Art, Music or Theatre course from LSP V
History 105, America to 1877, or History 106, America Since 1877 (LSP VI)
One core or LSP distribution course, or an elective course must be a Non-Western
course from:

Art 103, Art History (LSP V)
English 165 (Formerly WST 101), Readings in Race and Gender (LSP IV)
English 255, Postcolonial Literature (LSP IV or VII)
Environmental Science 138, Cultural Geography (LSP IV)
Environmental Science 160, World Regional Geography (LSP IV)
History 108, Understanding Our Contemporary World (LSP IV)
History 110, The History of Modern China (LSP IV)
Politics 201, Politics of the World's Nations (LSP IV)
Religious Studies 106, Understanding Religion (LSP IV)
Religious Studies 306, Asian Religions (LSP IV)
Sociology 110, Cultural Anthropology (LSP III or IV)
A non-Western NCEP course approved by the education program

Elementary Educational Studies Major (40-43 credits)

Bachelor of Science

Students in this major complete all requirements for the Elementary Education Major as shown above, except for the student teaching semester. Education 248, Home, School, and Community Relationships, and an Early Childhood Field Experience are also required.

¹ Mathematics 104 is a prerequisite for this course

DPI-Approved Teaching Minors - Elementary

A student majoring in Elementary Education must complete one of the elementary minors listed below. Each elementary minor requires a minimum of 22 credits of coursework.

Caution: The course requirements in most elementary DPI-Approved Teaching Minors are different from those listed in the Catalog for Carroll College minors in the same areas. Therefore, students are strongly advised to obtain information on course requirements in DPI minors from the Education Office.

The DPI Teaching Minors certify the Elementary Education Major to teach either at the early childhood through middle childhood level (ages birth through 11) or at the middle childhood through early adolescence level (ages 6 through 12 or 13):

Early Childhood Education Teaching license includes early childhood
through middle childhood level

These minors license students to teach at the middle childhood through early adolescence level (the student teaching semester must include placement at both the elementary and middle school levels to complete eligibility for the license):

English-Language Arts
Mathematics
Science
Social Studies

The following licenses require successful completion of PRAXIS II Content Knowledge Exam in addition to the PRAXIS II Middle School Content Knowledge Exam

French
German
Health
Spanish

Adaptive Education Minor (23 credits)

The Adaptive Education Minor prepares a student for an additional license to meet the needs of all students within the regular education classroom who have special needs. This minor is in addition to the first license and at this time does not require an additional PRAXIS II Content Knowledge Exam.

Courses in the Minor

Education 261, Education of the Exceptional Child (4 credits)
Education 312, Field Experience in Adaptive Education (1 credit)
Education 330, Introduction to Diagnostic Assessment of
Students with Exceptional Needs
Education 332, Instructional Strategies for an Inclusive Classroom
Education 334, Language Development and Disorders of the Exceptional Child
Education 336, Collaborating with Parents of Exceptional Children and Community
Agencies (3 credits)

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Education 338, Career and Vocational Education Development
of Students with Exceptional Needs (3 credits)

Early Childhood Education Minor (22 credits)

Students who complete coursework for the Elementary Education Major elect the Early Childhood Education Minor to be licensed to teach pre-kindergarten through grade 6 (early childhood through middle childhood level). The student teaching semester must include placement at both early childhood and elementary school levels to complete eligibility for the license. This licensure requires an extended student teaching semester.

Courses in the Minor

Education 246, Development, Observation, and Assessment in Early Childhood

Education 248, Early Childhood Education: Home, School, and Community
Relationships

Education 341, Integrated Curriculum in Early Childhood I:
Physical and Logico-Mathematical Knowledge (5 credits)

Education 342, Integrated Curriculum in Early Childhood II:
Social and Socially Constructed Knowledge (5 credits)

Education 347, Seminar in Contemporary Issues in Early Childhood Education

Secondary Education Minor (43-44 credits)

Students complete the Secondary Education Minor and one of the approved majors listed for the license for early adolescence through adolescence level. This qualifies the student to teach school subjects related to their major in grades 6 to 12 (early adolescence through adolescence level - approximate ages of 10 through 21). Students who complete the Secondary Education Minor with an approved major in art, music, physical education, Theatre Arts, or Spanish and who have placements in both elementary and secondary school settings during the student teaching semester are eligible for licensure in their subject area in pre-kindergarten through grade 12 (early childhood through adolescence level - a wide range of all ages in public schools).

Courses in the Minor

Education 100, Introduction to Education (2 credits)

Education 203, Educational Psychology

Education 209, Education in a Multicultural Context

Education 210, Field Experience in Education I (1 credit)

Education 261, Education of the Exceptional Child (4 credits)

Education 265, Applying Educational Technology to K-12 Instruction (Music majors
substitute 310) (CSC 107 is a prerequisite for EDU 265)

Education 301, Democracy, Schools, and Society

Education 304, Secondary School Methods

Education 306, Literacy in Secondary School Content Areas (2-3 credits)

Education 311, Field Experience in Education II (1 credit)

Education 353, Special Methods in Teaching Secondary School Subjects (2 credits)

Education 409, 410 Student Teaching (12 credits)

Required Core and Liberal Studies Program Area Courses

FYS 100 or FYS 100H, First Year Seminar

English 170, Writing Seminar

Competency in Math: BA degree – MAT 106 or higher; BS degree – either MAT 112, or MAT 140 or higher

Computer Science 107

One physical lab science course (Chemistry, Environmental Science or Physics) from either LSP I or LSP II and one course in Biology from the other LSP area. Students planning to teach in a science or social science subject must take Environmental Science 120, Conservation and Environmental Improvement, and one lab course in Biology, Chemistry, Environmental Science or Physics from LSP I or LSP II

Politics 141, Introduction to American Politics (LSP III)

One English Literature course from LSP IV and any course from LSP VII or one English Literature course from LSP VII and any course from LSP IV

Any Art, Music or Theatre course from LSP V

Any American or European History course from LSP VI

One core or LSP distribution course, or an elective course, must be a Non-Western course from:

Art 103, Art History (LSP V)

English 165, Readings in Race and Gender (LSP IV)

English 255, Postcolonial Literature (LSP IV or VII)

Environmental Science 138, Cultural Geography (LSP IV)

Environmental Science 160, World Regional Geography (LSP IV)

History 108, Understanding Our Contemporary World (LSP IV)

History 110, The History of Modern China (LSP IV)

Politics 201, Politics of the World's Nations (LSP IV)

Religious Studies 106, Understanding Religion (LSP IV)

Religious Studies 306, Asian Religions (LSP IV)

Sociology 110, Cultural Anthropology (LSP III or IV)

A non-Western NCEP course approved by the education program

DPI-Approved Teaching Minors - Secondary

Students can increase the number of subject areas in which they are licensed and enhance their employment prospects by completing either an additional DPI-approved secondary minor or a set of approved courses, which lead to a DPI Broad Field License. Broad Field licensure is available in either social studies or science. The course requirements for broad field licensure are available from the Education office.

Caution: Since many secondary DPI-Approved Teaching Minors must be matched with particular Carroll College majors, students should also contact the Education faculty for advice regarding selection of teaching minors. Students majoring or minoring in any natural science subject, or in any social science subject which they intend to teach, must take Environmental Science 120. Students seeking licensure in a minor must also successfully complete the PRAXIS II Content Knowledge Exam for that area.

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DPI-Approved secondary minors may be chosen from those listed below:

Biology ¹	Health Education ²
Chemistry ²	History ¹
Communication (Speech Education) ²	Mathematics ²
Computer Science ²	Physics ¹
Earth and Space Science ²	Politics ¹
English ¹	Psychology ¹
Environmental Studies ²	Sociology ¹
French ¹	Spanish ²
Geography ²	Theatre Arts ²
German ¹	

Any education course taken more than seven years prior to enrollment at Carroll College will be subject to the approval of the area chair.

100. Introduction to Education

2 credits

An overview of the field of education that includes a historical context of education in the United States as well as information about the current organization and administration of schools at the local, state and federal levels. The education program's Guiding Principles and the Model Academic Standards will be introduced in this course. The qualities needed by teachers will be explored and students will analyze their personal suitability to be a teacher. Open only to second semester freshmen, sophomores, or with the consent of the instructor. A background and criminal history check will be conducted which must be deemed satisfactory. (Required course fee). (*Fa, Wn, Sp, Su*)

203. Educational Psychology

4 credits

Study of physical, mental, emotional, and social development of children and youth; individual differences; principles and theories of learning; testing and evaluating; research; technological literacy as applied to education. Concurrent enrollment in Education 210 is strongly suggested. (*Fa, Sp, Su*) Prerequisite: EDU 100 or 101.

209. Education in a Multicultural Context

4 credits

Study and analysis of knowledge, attitudes, skills, and techniques in human relations, including inter-group relations in the schools. Focus on issues of race, ethnicity, and gender at the cultural/societal and individual/personal levels. A required component of this course is a ten-hour experience in an approved multicultural setting. (*Fa, Sp, Su*) Prerequisite: EDU 100 or 101.

210. Field Experience in Education I

1 credit

A pre-student teaching practicum in an assigned classroom in an area school. Grade level or subject is determined by the student's certification intentions. Throughout the semester, students complete a minimum of 40 clock hours in the assigned classroom. Seminars

¹ The courses required in these DPI-approved Teaching Minors are not listed in this catalog. See the Education office for current lists of course requirements.

² These are college-and DPI-approved secondary minors. Course requirements for these minors are listed in this catalog by their respective programs.

accompany experiences in the school. Students must attend all seminars to receive course credit. An urban placement, determined by the Coordinator of Field and Student Teaching Placements, is required in either Education 210 or Education 311. Students may choose whether the urban placement occurs in 210 or 311. Students are responsible for their own transportation to urban (and other) placements not within walking distance of campus. With permission, students may register for additional credit and complete extended hours in field experiences. *S/U* graded. (*Fa, Wn, Sp, Su*) Prerequisites: EDU 100. Completion of or concurrent enrollment in Education 203 is strongly suggested, and satisfactory results of a T.B. test and background and criminal history check.

246. Development, Observation, and Assessment in Early Childhood 4 credits

The study of principles and theories of child development from birth to age eight in cognitive, affective, psychomotor, social, and language domains. Cross-cultural perspectives of development are considered. Includes strategies for observation and its uses both as a curriculum guide and as an assessment tool. Offers an overview of other forms of assessment, including criterion referenced and standardized tests. Students use developmentally appropriate assessment tools. (*Fa, Sp*) Prerequisite: Education 203.

248. Early Childhood Education: Home, School, and Community Relationships 4 credits

Focuses on development of skills in communicating with, working with, and educating parents, families, advisory groups, community resource agencies, pupil services, and support staff. Surveys early childhood program alternatives including Montessori schools, Headstart programs, Waldorf schools, family day care, and infant day care. Explores day care administration and policy issues, nutrition and safety. Includes study of career explorations, practical applications of basic skills, and employability dispositions, as appropriate for children. Examines home and classroom behavior management strategies appropriate for young children. (*Fa, Sp*) Prerequisites: Education 203.

261. Education of the Exceptional Child 4 credits

Introduction to special education and teaching students with exceptional needs. This course provides an overview of legal issues, identification and assessment of students with special needs. Emphasis is placed on teaching strategies used to educate students who have diverse learning and behavioral needs. (*Fa, Sp, Su*) Prerequisite: Education 203.

265. Applying Educational Technology to K-12 Instruction 4 credits

Provides opportunities for students to become proficient in technology skills and apply these skills to lesson creation. Students will also become familiar with and have a hands-on experience of K-12 software. Students will have a working knowledge of differentiation of instruction and the Wisconsin Model Teaching Standards to develop classroom lessons that integrate technology and assess student learning. The Internet and BlackBoard will be used extensively in this course. (*Fa, Sp, Su*) Prerequisites: Computer Science 107, Education 203

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301. Democracy, Schools, and Society

4 credits

The study of social, political, philosophic, and historical issues and antecedents of K-12 schooling and curriculum. Consideration of traditional, alternative, and innovative approaches to curriculum. Study of social concerns affecting the schools; the organization, administration, and financing of schools; alternative schooling; the world of work and the future of education. (*Fa, Sp, Su*) Prerequisite: Education 203.

304. Secondary School Methods

4 credits

This course is designed for pre-service teachers who will work with early adolescents and/or adolescents. Students will examine teaching methods appropriate for the middle and high school levels based on development needs and research. A repertoire of strategies for curriculum development, implementation and evaluation will be explored. Other topics emphasized include classroom management, motivation, providing for individual needs and cooperatives. (*Fa, Sp*)

Prerequisites: Education 203 and admission to the TEP. Concurrent enrollment in Education 311 is strongly suggested.

306. Literacy in Secondary School Content Areas

2-3 credits

The study of methods which middle school and high school teachers can use to guide their students in interaction with textual materials in secondary school content areas and in other functional reading contexts. Includes study and experience with both teacher-directed and learner-centered strategies which scaffold instruction to guide and support content literacy. Examines materials appropriate to the varied interests and reading levels of secondary students. Develops skills in authentic assessment of student learning, particularly through the use of portfolios. (Two credits for K-12 specialist students in art, music, and physical education, and three credits for all other secondary education students, including Spanish and theatre arts—includes a practicum in schools). (*Fa, Sp, Su*) Prerequisite: Education 203, 209, and admission to the TEP.

311. Field Experience in Education II

1 credit

A pre-student teaching practicum in an assigned classroom in an area school. Grade level or subject is determined by the student's certification intentions. Throughout the semester, students complete a minimum of 40 clock hours in the assigned classroom. Seminars accompany experiences in the school. Students must attend all seminars to receive course credit. The 311 field experience is distinguished from the 210 experience by an added measure of student responsibility for active involvement in classrooms. Seminars will emphasize preparation for and discussion of the added involvement. An urban placement, determined by the Coordinator of Field and Student Teaching Placements, is required in either Education 210 or Education 311. Students may choose whether the urban placement occurs in 210 or 311. Students are responsible for their own transportation to urban (and other) placements not within walking distance of campus. With permission, students may register for additional credit and complete extended hours in field experiences. *S/U* graded. (*Fa, Wn, Sp, Su*) Prerequisites: Successful completion of Education 210 and concurrent enrollment in a methods course, satisfactory results of a T.B. test, a background and criminal history check and admission to the TEP.

312. Field Experience in Adaptive Education
1 credit

A pre-student teaching practicum in a non-categorical special education setting where children are also in inclusive classrooms. Students work between four and six hours per week for a semester total of 40 clock hours. Monthly seminars accompany experiences in the school. This course is to be taken in the final semester of course work for the adaptive education minor. (*Fa*) Prerequisites: Education 100, 203, 210, 261, 330, 332, 334, 336, 338, satisfactory results of a T.B. test, a criminal history and background check, and admission to the TEP.

321. Teaching Social Studies in the Elementary School
3 credits

This course is an examination of the objectives and techniques of teaching social studies in the elementary/middle school. Instruction includes the study of curriculum materials, methods, assessment and evaluation. Students are challenged to develop lessons and use instructional strategies that help prepare children for active citizenship in a democratic and multicultural society. (*Fa, Sp, Su-occasionally*) Prerequisites: Completion of History 105 or 106 and Politics 141 recommended, Education 203, 209, and admission to the TEP.

323. Language Arts and Children's Literature¹
4 credits

Study of the principles of language development and learning, curricular materials, and teaching practices for elementary/middle school language and literature programs. Emphasis on planning, organizing, and evaluating instruction in the communication arts, and in selecting and using appropriate literature for pupils of primary through middle school age throughout the elementary and middle school curriculum. Includes a handwriting module designed to develop the personal writing competencies needed by prospective teachers. Concurrent enrollment in Education 311 is advised either at this point or during EDU 324. (*Fa, Sp*) Prerequisites: Education 203, 209, and admission to the TEP.

324. Literacy in the Elementary/Middle School
4 credits

Study of the development of language from childhood through adolescence, and how this development relates to the acquisition of literacy. Develops knowledge about the language learning of elementary and middle school children: about the nature of reading instruction as a self-monitoring process; about diagnosis and prescription of reading ability; about programs, materials, and methods for literacy instruction; about the assessment of student progress, and how phonics fits into literacy development for the pre-service teacher concerned with literacy learning. A ten-hour tutoring practicum in an elementary school is required. (*Fa, Sp*) Prerequisites: Education 323 and admission to the TEP. Education 311 or concurrent enrollment in Education 311 suggested.

326. Teaching Mathematics in the Elementary School
3 credits

Students will develop ways to initiate, implement, and institutionalize an elementary/middle school math curriculum based on standards and student appropriate/effective assessments. Emphasis will be on incorporating manipulatives, technology, litera-

¹ A transfer student who has satisfied the Children's Literature portion of Education 323 may register for an independent study to complete the language arts portion. See the instructor concerning this option.

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ture (integrated curriculum) in investigative/problem based lesson planning. (*Fa, Sp, Su-occasionally*) Prerequisites: Education 203, Mathematics 201, and admission to the TEP.

**327. Teaching Science and Environmental Education
in the Elementary School** **3 credits**

This course is designed to develop competencies in selecting methods, resources and assessment strategies for teaching elementary and middle level science. All strands of science including environmental education will be explored. Students will gain knowledge and skills to successfully develop science lessons appropriate for various grade levels based on state and national academic standards. An emphasis is placed on assessment and effective instructional strategies. (*Fa, Sp, Su-occasionally*) Prerequisites: Education 203, 209, admission to the TEP, and completion of LSP I and LSP II (ENV 120) courses recommended.

**330. Introduction to Diagnostic Assessment of Students
with Exceptional Needs** **4 credits**

This introductory course provides core theoretical and practical background necessary to evaluate students having exceptional educational needs. An overview of educational assessment and diagnosis of individuals with disabling conditions will be provided. Emphasis will be placed upon testing for IEP development and teaching. (*Fa*) Prerequisites: Education 261 and admission to the TEP.

332. Instructional Strategies for an Inclusive Classroom **4 credits**

This course is designed to facilitate the education student's knowledge, skills and disposition to increase the effectiveness of teaching for the inclusion of children with special needs in the classroom. This will include content, strategies, and structuring the environment to make inclusion a viable experience for the special needs student. Classroom management will also be explored as it relates to the special needs of the students. (*Fa*) Prerequisites: Education 261 and admission to the TEP.

334. Language Development and Disorders of the Exceptional Child **4 credits**

This course is designed to present background information about normal language development as a foundation for evaluating speech and language disorders in children. Emphasis will be placed on current techniques for the identification of language disorders in school-age children as well as methods for enhancing their language skills. (*Sp*) Prerequisites: Education 261 and admission to the TEP.

**336. Collaborating with Parents of Exceptional Children
and Community Agencies** **3 credits**

This course is designed to facilitate the education student's knowledge, skills and disposition to increase the effectiveness of interactions with parents and community agencies for the purpose of serving children in the context of a learning environment. (*Sp, Su-occasionally*) Prerequisites: Education 261 and admission to the TEP.

338. Career & Vocational Education Development of Students with Exceptional Needs **3 credits**

This course will explore effective practices for assisting individuals with disabilities in making successful transitions between grade levels and from school to post-secondary training and/or employment. Emphasis will be placed on career development, assessment, self-advocacy and self-determination. (*Sp, Su-occasionally*) Prerequisites: Education 261 and admission to the TEP.

341. Integrated Curriculum in Early Childhood I: Physical and Logico-Mathematical Knowledge **5 credits**

Focuses on facilitating the development of physical and logico-mathematical knowledge in young children based on their developmental and cultural characteristics. Considers curricular areas of science, physical education, mathematics, and the creative arts, and their integration. Presents models for curriculum planning, instructional strategies, and assessment including inquiry, project approaches, direct instruction, constructivism, center based learning, and experiential learning. Explores the use of technology in curriculum delivery. Examines children's interests and readiness as opportunities to employ emergent curriculum and incidental teaching. (*Fa, Sp*) Prerequisites: Education 246, and admission to the TEP.

342. Integrated Curriculum in Early Childhood II: Social and Socially Constructed Knowledge **5 credits**

Focuses on facilitating the development of social and socially constructed knowledge in young children based on their developmental and cultural characteristics. Considers curricular areas of social studies, environmental education, literacy (reading, language arts, children's literature), and affective/social behavior, and their integration. Examines epistemological issues of curriculum construction and decision making: What knowledge is of most worth? Who decides? Whose purposes does it serve? Includes perspectives on hidden curriculum, integrated curriculum, and lived experience curriculum. Explores the use of technology in curriculum delivery. Provides experiences in curriculum development and assessment. (*Fa, Sp*) Prerequisites: Education 246, 341 and admission to the TEP.

347. Seminar in Contemporary Issues in Early Childhood Education **4 credits**

A study of current issues, and historical and philosophical perspectives on classroom practice and on social and educational policy affecting young children. Includes examination of developmentally appropriate practice, culturally responsive pedagogy, readiness, the nature and practice of play in the curriculum, technology in the early childhood classroom, and school to work issues. (*Fa, Sp*) Prerequisites: Education 246, 248, 341, and admission to the TEP.

353. Special Methods in Teaching Secondary School Subjects **2 credits**

Daytime clinical experiences in a secondary school required. Examination of models of learning and instruction in specific subject-matter areas, including 25 hours of clinical field work to directly apply methodology while working with high school students. Special emphasis upon selection, use, and preparation of

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equipment, materials, teaching aids, and other resources especially designed for the various areas. Attention given to evaluating pupil progress, working with pupil services, the use of media in schools, educational research in curriculum development and evaluation. Required in student's certifiable major and minor. (*Fa*) Prerequisite: Education 203, 301, 304, 306 or permission from the Area Chair, and admission to the TEP.

355. Special Methods in Teaching Elementary and Secondary 3 credits

Subjects: Modern Languages

Application of general principles and methods to specific subject-matter areas. Special emphasis upon selection, use, and preparation of equipment, materials, teaching aids, and other resources especially designed for the various resource areas. Attention given to evaluating pupil progress, working with pupil services, the use of media in schools, educational research in curriculum development and evaluation. (*Fa*) Prerequisite: Education 203, 301, 304, 306 or permission from the Area Chair, and admission to the TEP.

398. Independent Study in Education 1-4 credits

Extensive study of an approved subject area, or problem in education, in which the student has a special interest or need. (*Fa, Sp, Su*) Approval of divisional dean and consent of instructor.

409, 410. Secondary and K-12 Student Teaching 12 credits

A supervised practicum in which students engage in planned teaching and various other duties as designated by the cooperating teacher. Placement is limited to schools in Milwaukee or Waukesha counties that are within 30 minutes driving distance from Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. Student teaching is considered a full load; no other courses should be added. Because of state requirements several weeks will be added to the Carroll semester to coincide with school district semesters. Fall student teachers will begin in August and teach into January. Spring student teachers will begin in January and teach after Carroll's graduation ceremony. (*Fa, Sp*) Prerequisites: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), admission to the student teaching program, education faculty approval, satisfactory physical exam, TB test, and criminal history and background check.

419, 420. Early Childhood (optional) Elementary Student Teaching 12 credits

A supervised practicum in which students engage in planned teaching and various other duties as designated by the cooperating teacher. Placement is limited to schools in Milwaukee or Waukesha counties that are within 30 minutes driving distance from Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. Student teaching is considered a full load; no other courses should be added. Because of state requirements several weeks will be added to the Carroll semester to coincide with school district semesters. Fall student teachers will begin in August and teach into January. Spring student teachers will begin in January and teach after Carroll's graduation ceremony. (*Fa, Sp*) Prerequisite: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), admission to the student teaching program, education faculty approval, satisfactory physical exam, T.B. test, and background and criminal history check.

422. Special Student Teaching Practicum

5 credits

A practicum for the licensed student who is extending teaching certification beyond his/her present license. College supervised student teaching at the level(s) and/or subject for which additional certification is desired. (*Fa, Sp*) Prerequisite: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), admission to student teaching program, successful background and criminal history check, and education faculty approval.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

GRAPHIC COMMUNICATION

Daniel M. Becker

Coordinator

Preparing Professionals One Student at a Time

Goals for Student Learning:

- Provide coherent and broad-based coverage of the interdisciplinary program of graphic communication
- Provide an environment in which students are exposed to the ethical and societal issues of the field
- Function effectively within the larger intellectual framework of the college
- Expose students to the theory that underlies the discipline
- Develop the ability to think critically, problem solve, and to generate creative solutions
- Understand and develop the necessary skills to effectively integrate technology to present information and express ideas

Graphic Communication at Carroll College is an interdisciplinary major from the graphic communication, art, business, communication, and computer science programs. This major is offered in conjunction with a required 160-hour internship and a capstone experience in which students independently create a real world project with an award given to the most outstanding project.

The graphic communication program has numerous offerings which teach students the use of various tools needed in graphic communication in the 21st century. The art and communication programs use these tools to develop students' talents and the business program's courses cover the use of graphic communication in the world of organizations. Each course within the curriculum uses the technology of the 21st century to achieve its objectives.

There are four emphases within graphic communication:

- The *design emphasis* is for students who are interested in using their artistic skills in a technology-oriented setting. They may work as graphic artists, as web page designers or as desktop publishing professionals. Students may also consider a second major or a minor in commercial art or computer science.
- The *management emphasis* is for students who wish to evolve their graphic communication skills into management positions or start their own company. Students wishing to excel in this area may consider a second major or minor in business.

- The *print management* emphasis is for students wishing to enter the print industry and is a collaborative program with Waukesha County Technical College. The print management emphasis is based upon both the actual operation of print presses as well as design/management/business concepts.
- The *technology emphasis* is for students who particularly wish to develop applications on the World Wide Web. Students wishing to excel in this area may consider a second major or minor in business or computer science.

**Graphic Communication Major
Bachelor of Science**

Design Emphasis (70 credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Computer Science 211, Database, Web Creation and Networks
Art 107, Beginning Design 2D and 3D
Art 258/Communication 258, Visual Communication
Art 304, Illustration
Art 311, Electronic Imaging
Business 301, Principles of Marketing
Communication 227, Technical Writing in Organizations
Communication 370, Communication Technology and Society
Graphic Communication 480, Internship (4 credit hours required)
Graphic Communication 450, Projects for Graphic Communication Majors

Two of the following courses:

Business 320, Promotion Management;
Communication 203, Advertising;
Communication 246, Video Production; or,
Graphic Communication 320, Introduction to Multimedia Production

Required Support Courses:

Math 112, Introduction to Statistics
Computer Science 109, Technological Productivity
Accounting 105, Introduction to Accounting Basics (2 credits)
Business 101, Principles of Small Business
Graphic Communication 200, Print Production: Understanding Color (2 credits)
Art 101, Drawing and Composition

Management Emphasis (62 credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Computer Science 211, Database, Web Creation and Networks
Art 258, Visual Communication
Art 311, Electronic Imaging
Communication 203, Advertising

GRAPHIC COMMUNICATION

Communication 227, Technical Writing in Organizations
Communication 370, Communication Technology and Society
Business 301, Principles of Marketing
Business 302, Principles of Management
Business 320, Promotion Management
Graphic Communication 480, Internship (4 credit hours required)
Graphic Communication 450, Projects for Graphic Communication Majors

Required Support Courses:

Math 112, Introduction to Statistics
Computer Science 109, Technological Productivity (2 credits)
Accounting 105, Introduction to Accounting Basics (2 credits)
Business 101, Principles of Small Business
Graphic Communication 200, Print Production: Understanding Color (2 credits)

Print Management Emphasis (91 credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)
Graphic Communication 200, Print Production: Understanding Color (2 credits)
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Art 258, Visual Communication
Art 311, Electronic Imaging
Computer Science 211, Database, Web Creation and Networks
Communication 227, Technical Writing In Organizations
Communication 370, Communication Technology and Society
Business 301, Principles of Marketing
Business 302, Principles of Management
Business 305, Principles of Operations Management
Graphic Communication 480, Internship (4 credit hours required)
Graphic Communication 450, Projects For Graphic Communication Majors
GRC 110 (WCTC204-110) Print Media/Digital Publishing I
GRC 120 (WCTC204-120) Print Media II
GRC 121 (WCTC204-121) Digital Illustration
GRC 122 (WCTC204-122) Post Press/Distribution
GRC 130 (WCTC204-130) Print Media III
GRC 135 (WCTC204-139) Digital Workflows
GRC 140 (WCTC204-140) Print Materials and Estimating
GRC 141 (WCTC204-141) Production Coordination/Customer Service
GRC 142 (WCTC204-142) Color Management

Required Support Courses:

Accounting 205, Financial Accounting
Computer Science 109, Technological Productivity (2 credits)
Economics 212, Applied Statistics for Business
Business 101, Principles of Small Business
Math 112, Introduction to Statistics

Technology Emphasis (70 credits)

Graphic Communication 106, Introduction to Communication Technology (2 credits)
Computer Science 107, Problem Solving Using Information Technology (2 credits)
Computer Science 112, Advanced VB.Net
Computer Science 211, Database, Web Creation and Networks
Computer Science 311, Introductory Web Programming (2 credits)
Computer Science 312, Advanced Web Programming (2 credits)
Computer Science 315, Advanced Web Design (2 credits)
Computer Science 306, Operating Systems & Web Master Fundamentals: Microsoft IIS
or Computer Science 307, Operating Systems & Web Master Fundamentals:
Unix/Linux
Art 311, Electronic Imaging
Business 301, Principles of Marketing
Communication 227, Technical Writing in Organizations
Communication 370, Communication Technology and Society
Graphic Communication 320, Introduction to Multimedia Production
Graphic Communication 480, Internship (4 credit hours required)
Graphic Communication 450, Projects for Graphic Communication Majors

Required Support Courses:

Math 112, Introduction to Statistics
Computer Science 109, Technological Productivity (2 credits)
Computer Science 110, Problem Solving through Programming
Business 101, Principles of Small Business
Art 107, Beginning Design 2D and 3D
Graphic Communication 200, Print Production: Understanding Color (2 credits)

106. Introduction to Communication Technology 2 credits

This class provides an introduction to numerous computer applications (Adobe Creative Suite) used within the field of digital communication. Special emphasis will be placed on desktop publishing software, history of graphic design, inter-environment communications, graphics formats and file handling software. (*Fa, Sp, Su, WW*¹)

200. Print Production: Understanding Color 2 credits

Graphic communication students will learn the key aspects of color within the worlds of print and web. Students will be introduced to color theory, digital color management and color science. Additionally, basic printing concepts will be covered to provide a foundation for exploring some of the more complex factors that influence print quality. (*Sp*) Prerequisites: GRC106, ART107.

320. Introduction to Multimedia Production 4 credits

This course is designed as a Graphic Communication course, emphasizing artistic production using multimedia software, including, but not limited to: animation, digital video, and creating multimedia presentations and artworks. Multimedia, for the purposes of this course, means utilizing more than one of the following media elements:

¹ WW indicates that an online offering of this course is available. See <http://cscserver.cc.edu/ti> for details.

GRAPHIC COMMUNICATION

sound, images, text, video, animation, and/or interactivity, in all projects. Emphasis will be on the marriage of sound design, sophisticated content and visual interest. (Sp)
Prerequisite: ART311, GRC106, sophomore standing.

371. Essential Elements of the Print Environment **2 credits**

This class introduces the student to the elements of the print environment. Students will learn about the history of the industry, safety and print processes. There will be tours of sales, imaging, press, finishing, distribution and mailing. Unique workflows and processes of the printing industry will be viewed and discussed. Color theory and how it is applied to the printing industry through the use of computers will be examined. Prerequisite: GRC200.

372. Advanced Process Management - PrePress **4 credits**

This class expands on GRC371 with a focus on the pre-press process. Topics covered will center on how a document comes to press and the necessary tools for its production. Prerequisite: GRC371.

373. Advanced Process Management - Press **4 credits**

This class expands on GRC371 with a focus on the actual press process. Topics covered will center on what happens as a document moves through the printing press. Prerequisite: GRC372.

374. Advanced Process Management - PostPress **2 credits**

This class expands on GRC371 with a focus on the processes involved after a document has moved through the printing press. Topics covered will include: finishing, binding, mailing and distribution. Prerequisite: GRC373.

391/491. Special Topics **1-4 credits**

Study of a selected topic not covered in the regular curriculum. The topic will be announced prior to the beginning of the semester. Four credits maximum will apply toward degree. Prerequisite: Consent of instructor.

450. Capstone: Projects for Graphic Communication Majors **4 credits**

A seminar intended to consolidate and expand your experience and education as well as a foundation for continued research as you prepare to enter your chosen field. (Sp)
Prerequisites: All program requirements completed.

480. Internship in Graphic Communication **1-12 credits**

Professional work experience in your field under the supervision of faculty and industry personnel. Course is repeatable to a maximum of 12 credits. Each four credits should have substantially different learning experiences. 160 hours of internship work experience is expected for every 4 credit hours attempted. (Fa, Sp, Su) Prerequisites: Junior or senior standing and director approval. Grading is S/U.

Courses offered at Waukesha County Technical College

- GRC 110 (WCTC204-110) Print Media/Digital Publishing I** 3 credits
Study offset lithography, flexography, and digital printing. Compare and contrast the advantages and disadvantages of the printing methods of gravure, and screen-printing. Produce single, two- and four-color printed pieces. Acquire knowledge relating to CTP, the PMS system, screens, halftones, print careers, print economics and the four-color process.
- GRC 120 (WCTC204-120) Print Media II** 3 credits
Print single and multicolored projects using primarily Heidelberg Printmaster GTO-2 color 20-inch presses. Study the common elements of all presses - the feeder, registration, printing, and delivery systems. Learn basic press maintenance and problem solving, pressroom chemistry, and safety. Become familiar with paper of various kinds, weights, textures, and sizes, as well as various types of ink.
- GRC 121 (WCTC204-121) Digital Illustration** 3 credits
Enhance ability to draw on the computer with Adobe Illustrator. Learn how to apply various filters and colors to objects; create masks around objects; use the transformation tools (rotate, scale, reflect, shear, blend); create compounds and make special dashed lines to create many special effects. Prerequisites: ART 311.
- GRC 122 (WCTC204-122) Post Press/Distribution** 3 credits
Explore current and emerging technologies for binding, finishing, and distributing printed materials. Learn the basic operations of commercial bindery and finishing equipment.
- GRC 130 (WCTC204-130) Print Media III** 3 credits
Use a computerized press console to set up and operate a Heidelberg SM74-2 color perfecting press. Reproduce high quality line and halftone copy in multiple colors on a Komori Sprint 26-2 color, a Heidelberg Printmaster GTO 52-5 color and other two-color presses. Discuss flexographic printing and platemaking.
- GRC 135 (WCTC204-139) Digital Workflows** 3 credits
This course will address computer integrated manufacturing technologies as they are applied to commercial printing production problems. Additional time will also be spent on topics relating to preflighting, trapping, and imposition. Students will learn how to properly prepare and analyze digital files for output to eliminate problems that can occur during the printing production process. Prerequisites: 204-121 Digital Illustration and 204-131 Image/Editing/Photoshop.
- GRC 140 (WCTC204-140) Print Materials and Estimating** 3 credits
Examine the scope and functions of printing estimating. Estimate, cost, and price various printing services. Discuss topics including computers for production and management, developing a cost estimating system, estimating paper, ink electronic pre-press, press and finishing operations, and marketing and management issues. Analyze various operations within the printing industry.

GRAPHIC COMMUNICATION

GRC 141 (WCTC204-141) Production Coordination/Customer Service 3 credits

Explore the commercial printing manufacturing process. Examine the role and function of the customer service representative, electronic workflows, and time requirements for production of commercially printed products that are within budget.

GRC 142 (WCTC204-142) Color Management 3 credits

Combine math, physics, and chemistry concepts with measurement and statistical process control methods to appraise, control, and improve color reproduction. Learn to use and work with densitometers, spectrodensitometers, spectrophotometers, tone reproduction control software, and color measurement software.

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

ORGANIZATIONAL LEADERSHIP

Gregory Schultz Assistant Professor of Business

Preparing Leaders One Student at a Time.

The organizational leadership program provides superior educational opportunities to increase students' leadership effectiveness and career success in a complex organizational environment.

Learning Outcomes

Graduates of the Organizational Leadership Program are able to:

1. Define and describe leadership-related terminology and concepts.
2. Evaluate and formulate effective leadership and not-for-profit organization policies and strategies.
3. Solve complex leadership problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in leadership situations.

Both the public and the private sectors are demanding competent leadership for their increasingly complex organizations. Change is constant, and corporate boardrooms, public agencies, and government offices are looking for an effective, constructive force for their organizations.

This program integrates the study of effective leadership to provide students with a broad perspective on the challenges and opportunities related to leadership. The program is designed to strengthen students' abilities to create a compelling vision, translate that vision into action, and lead others in creating new ventures or in revitalizing existing ones. In short, the program is designed to create a new generation of leaders—characterized by passion, integrity and competence.

Organizational leadership enhances students' potential for leadership positions in careers such as public management, community service, health promotion, law, and human resource management.

Organizational Leadership majors are not eligible to earn the Business Management minor.

Organizational Leadership Major (64 credits)

Bachelor of Science

Core Courses

Leadership 191, Leadership: Theory and Practice
Leadership 480, Internship
Leadership 499, Capstone—taken concurrently with 480 (2 credits)
Business 101, Principles of Small Business
Business 260, Ethics in Business, Government and Society
Business 265, Human Resource Management
 or Business 250, Culture and Diversity in Organizations
Business 301, Principles of Marketing
Business 302, Principles of Management
Business 315, Organization Behavior
Politics 231, Financial Management in Nonprofit Organizations (2 credits)
Politics 232, Resource Development in Nonprofit Organizations (2 credits)
Politics 233, The Law and Governance of Nonprofit Organizations (2 credits)
Politics 234, Critical Issues in Nonprofit Management (2 credits)
Politics 332, Public Policy
Politics 335, Public Administration

Support Courses

Computer Science 107, Problem Solving Using Information Technology (2 credits)
Economics 110, Introduction to Economics
 or Economics 124, Principles of Economics I-Microeconomics
Mathematics 112, Introduction to Statistics
Accounting 205, Financial Accounting

Organizational Leadership Minor (20 credits)

Politics 332, Public Policy
Politics 335, Public Administration
Business 302, Principles of Management
Leadership 191, Leadership: Theory and Practice
Business 260, Ethics in Business, Government and Society

191. Leadership: Theory and Practice

4 credits

This course facilitates the development of the student's capacity to become an effective leader in a business, public/government organization, or nonprofit agency. Through an examination of various approaches to leadership, students will identify the key principles, competencies, and qualities characteristic of effective leaders and integrate these concepts into a personal leadership style. (*Fa, Sp*)

480. Leadership Internship

1-12 credits

This course is an opportunity to apply leadership theories and concepts to actual work experiences under the supervision of an external supervisor and the Director of the Organizational Leadership program. The purpose of the internship is to provide opportunities for the students to improve leadership skills while adapting to the world of work. Prerequisites: LEA 191, POL 335, BUS 101, BUS 315, BUS 260, completion

of emphasis and senior standing, within one year of graduation. To be taken concurrently with LEA 499. (*Fa, Sp, Su, Wn*) The course may be repeated for a maximum of 12 credits given the student has substantially different work experiences. 40 hours of work is needed for each credit.

499. Leading Change: Capstone

2 credits

This course will integrate the academic experiences of the past four years and will provide students with an experimental, comprehensive approach to leadership. The processes of developing a vision, strategic thinking and planning, communicating the vision, empowering the employees, and appreciating differences are applied and utilized within an actual organizational setting as a means of integrating academic knowledge with leadership skills. Prerequisites: LEA 191, Politics 335, Business 101, Business 302, Business 315, Business 260, completion of emphasis and senior standing, within one year of graduation. (*Fa, Sp, Su, Wn*)

DIVISION OF PROFESSIONAL AND GRADUATE STUDIES

SMALL BUSINESS MANAGEMENT

Dennis M. Debrecht Associate Professor of Economics

Preparing Entrepreneurs One Student at a Time

The Small Business Program provides superior educational opportunities to increase students' professional effectiveness and career success in a complex business environment.

Learning Outcomes

Graduates of the Small Business Program are able to:

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex entrepreneurial business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in an entrepreneurial environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.

The Small Business Management (SBM) major is designed for students who are seeking to go into business for themselves by starting, expanding or purchasing an entrepreneurial venture. The interdisciplinary nature of the program begins with the fundamentals of a liberal arts education and the building blocks of business. This unique curriculum is then designed around the skill sets necessary to manage and build a successful entrepreneurial endeavor. This includes the final components, an interdisciplinary set of courses, which allow the student to specialize their program toward their specific area of interest.

Throughout the SBM program the student is learning beyond the theoretical academic building blocks and will be involved in several practicums. Advisers will work with students to position them with entrepreneurs running their own small businesses. These practicums will allow students to address questions about and understand the material that was studied during the course as it relates directly to the entrepreneur and his/her personal experiences.

During the junior year, students will complete an internship that places them in a controlled small business atmosphere that allows them to understand what is involved in the rigors of managing a small business on a day-to-day basis. The entrepreneurs running these businesses will impress upon students the hard work, skill, and motivation necessary to compete as a small business owner.

The internship flows directly into the capstone experience as the student completes a final business plan that integrates all of the knowledge gained over their Carroll career. In addition, local entrepreneurs will lecture on topics related to success and failure in the world of entrepreneurship which will allow the student the ability to ask questions and implement these ideas into their own business plan. The student-completed business plan will be presented to and critiqued by outside entrepreneurs. Students will graduate having been provided the skill sets to manage and effectively run an entrepreneurial endeavor and having a finely honed business plan.

This SBM major combines the rigors of the business curriculum with the flexibility to create tracks in Fine Arts, Health Sciences, Social Entrepreneurship, General Business, Technology Services, and Liberal Arts. These broad tracks are simply a few of the many options available. Students are recommended to meet with an adviser to discuss their possibilities.

**Small Business Management Major
Bachelor of Science**

Core Courses for the Major (40 credits)

- SBM101, Principles of Small Business (Cross-listed with BUS101)
- LEA191, Leadership, Theory, and Practice
- SBM200, Entrepreneurial Studies
- SBM201, Entrepreneurial Studies Practicum I
- BUS265, Human Resource Management
- BUS301, Principles of Marketing
- BUS302, Principles of Management
- BUS303, Principles of Law
- SBM350, Financing Start-ups and the Growing Firm
- SBM351, Entrepreneurial Studies Practicum II
- SBM480, Applying the Small Business Experience (Cross-listed with BUS480)
- SBM495, Entrepreneurial Studies Capstone

Required Support Courses (20 Credits)

- ECO110, Introduction to Economics (LSP 3)
- ACC205, Financial Accounting
- MAT112, Introduction to Statistics (LSP 1)
- CSC211, Networks, Database, and Web Creations
- CSC220, Information Systems

Prerequisite course: (2 credits)

- CSC107, Problem Solving Using Information Technology

Required Track (28 Credits)

- | | |
|------------------------|---|
| Fine Arts Track | Track advisers in programs such as Art, Theatre Arts, Music |
| General Business Track | Track advisers in programs such as Business, Economics and Accounting |
| Health Services Track | Track advisers in programs of Health Sciences |
| Liberal Arts Track | Track advisers in any program |

SMALL BUSINESS MANAGEMENT

Social Entrepreneurship Track	Track advisers in programs of Sociology, Psychology, and Politics
Technology Services Track	Track advisers in programs of Computer Science or Information Systems

Each major may have two advisers. The primary adviser will be the director of the Small Business Management Major while the track adviser will guide the student in appropriate decisions with respect to that track. Requirements for completion of a track are:

- Minimum of 28 credits
- Maximum of 8 credits toward completion at each of the 100- and 200-levels
- Minimum of 8 credits at the 300-level and above.

SBM101. Principles of Small Business

4 Credits

A study of the various elements of a business system with a primary focus on small firms and entrepreneurship. Emphasis is placed on the knowledge and skills necessary for small business success. The various business disciplines such as finance, management, marketing, MIS, and human resources will be covered from the small business perspective. (*Fa, Sp*)

SBM200. Entrepreneurial Studies

3 credits

This course expands upon SBM101 by exploring how to determine and develop entrepreneurial opportunities. Students will continue to refine their Business Plan from SBM101. Students will engage in discussions related to innovation, the creation of new ideas, and new product development. In addition, business sustainability is examined from the perspectives of managing the family business, assessing one's entrepreneurial talents and potential through self assessment. (*Fa, odd years*)

Prerequisites: SBM101 and ECO110. Co-requisite: SBM201

SBM201. Entrepreneurial Studies Practicum I

1 credit

Students will learn about the realities of running a small business enterprise through partnerships with local entrepreneurial mentors. Students will travel to meet with their local mentors on their job for a minimum of 20 hours. This is not an internship nor is it paid. (*Fa, odd years*) Co-requisites: SBM200

SBM350. Financing Start-ups and the Growing Firm

3 credits

Students will learn about the alternative forms of financing a start-up such as community banks, asset-backed borrowing, and SBA loans. These financing needs change and evolve as the firm grows and will include information on angel investors, LBOs, limited partnerships, acquisition and other private equity investors. (*Fa, even years*)

Prerequisites: ACC105 and SBM200/201. Co-requisite: SBM351

SBM351. Entrepreneurial Studies Practicum II

1 credit

Students will learn about the realities of running a small business enterprise through partnerships with local entrepreneurial mentors. Students will travel to meet with their local mentors on their job for a minimum of 20 hours. This is not an internship nor is it paid. (*Fa, even years*) Co-requisites: SBM350

SBM399. Special Topics: Small Business Management 1-4 credits

This course is a study of selected processes, developments, problems, or issues in small business management that are not covered in other areas. Courses may be repeated for credit with change of topics. A course at this level is considered more advanced and may have designated prerequisites as determined by the instructor.

Prerequisites: Consent of instructor.

SBM480. Applying the Small Business Experience 1-12 credits

Students consult in an internship-based format with an external small business organization approved by the instructor. Students apply their skills and knowledge in a controlled entrepreneurial environment. Course may be repeated for credit with director approval and acceptable academic standing. Prerequisites: Senior status or consent of the instructor. (*Fa, Sp*) Cross-listed with BUS480. The course may be repeated for a maximum of 12 credits given the student has substantially different work experiences. 40 hours of work is needed for each credit.

SBM495. Entrepreneurial Studies Capstone 4 credits

This capstone course applies two specific elements. First, students will present a Business Plan to an instructor developed Board of Directors. The business plan represents their compilation of knowledge and student learning during the program. Second, this course will involve guest speakers (primarily small business owners), who will present important issues facing small businesses and engage in an interactive discussion including student Business Plan ideas. Student groups will then be given project questions based on these issues which they will analyze/critique and present to the class in a seminar setting. This allows for peer evaluation of these issues. (*Sp, odd years*)

SPECIAL ACADEMIC PROGRAMS

HONORS

Lynne L. Bernier Associate Professor of Politics and Director

A description of the Honors Program is in the Academic Program and Policies section, page 17.

Biology 200H. Human Biology: Health and Disease L2 4 credits

The course is intended to generate understanding of basic biochemistry, cell biology, select human anatomy and physiology, and genetics and then to allow students to use this understanding to delve deeper into biomedical topics. A primary objective of this course is to improve students' ability to access scientific information and use this information to make informed decisions regarding personal and social health issues. (Fa, odd years)

English 222H. Playing Crazy: Cultural Constructions of Madness L3, L7 4 credits

An interdisciplinary exploration of the ways in which cultural institutions like the medical and legal establishments and organized religion shape our understanding of concepts like madness, eccentricity, and the normal. (Fa, even years)

English 255H. Postcolonial Literature L4, L7 4 credits

An approach to human relations in a turbulent global village through study of contemporary literature representing Africa, Latin America, Asia and American minority cultures. (Fa, odd years)

Environmental Science 120H Conservation and Environmental Improvement L1, L2 4 credits

This course investigates the science behind environmental issues ranging from waste management to conservation biology to water quality to renewable and nonrenewable energy. Through lectures, discussions, field trips, and laboratory investigations, we explore environmental problems and their potential solutions. (Sp, even years)

First Year Seminar 100H. 4 credits

Required for all first year students. Initiates students into the academic life of Carroll, introducing intellectual ideas at the heart of Liberal Studies and developing abilities needed for academic achievement. Topics vary. (Fa)

History 203H. The American Civil War L6 4 credits

Examines the origins of the American Civil War and looks at the two cultures swept up in the conflict while tracing the political, social, diplomatic and military history of the war years. Attention is focused also on the lives, experiences and perceptions of soldiers and civilians. (Fa, even years)

History 224H. The World since 1945**L4****4 credits**

An overview of major themes and conflicts that have shaped the world since 1945. Students use primary documents, autobiographies, oral histories and other sources to examine the Cold War, the developing world and the practice of genocide. Peer teaching encourages students to pursue their own interests. (*Fa, even years*)

Math 212H. Introduction to Statistics and Experimental Design **L1** **4 credits**

Emphasizes analyses and designs frequently applied in the life and behavioral sciences. Topics include: hypothesis testing, confidence intervals, and regression. Computing experience with a statistical package is an integral part of this course. (*Sp, odd years*) Prerequisites: Sophomore standing, MAT 101 or higher, computer literacy.

Music 231H. Fin de Siècle:**Birth of the Modern Age in Paris and Vienna****L5****4 credits**

This interdisciplinary course traces the fine arts-music and visual arts- between 1880 and 1920, presenting an intellectual, literary, and social portrait of Europe. Methods of instruction include viewing videotapes and slides of visual arts, listening to musical examples, lecturing by guest speakers. (*Sp, even years*)

Philosophy 206H. Ethics**L7****4 Credits**

An introductory investigation of alternative systems for determining and justifying ethical values. The course explores both theories of conduct (What should I do?) and theories of character (Who should I be?) through a study of the contemporary significance of the- orists such as Aristotle, Kant, and Mill. (*Sp, odd years*)

Politics 210H. The Origins of Democratic Thinking**L6****4 credits**

An examination of democratic thinking in 5th century BC Athens by studying some of its greatest literature. The course focuses on Thucydides' History of the Peloponnesian War and several works for the theater and explores the complex relationship between literary works and political events. (*Sp, even years*)

Psychology 250H. Brain, Mind, and Behavior:**An Evolutionary Synthesis****L2****4 credits**

Designed for students interested in achieving an overview of neuroscience, a multidisciplinary field that seeks to understand brain structure and function and its relation to behavior. Students learn how genes and experience have shaped the development of brains over millions of years to create a structure (the human brain) that lies at the core of our ability to perceive, learn, remember, care, and be aware. Lectures, guest speakers, discussions, and laboratories introduce students to current methods and findings. Four hours of lecture-discussion and one 3-hour laboratory. (*Sp, odd years*)

Honors 400H. Senior Honors Colloquium**1 credit**

Required of seniors. To be taken concurrently with a Senior Honors Experience (coordinated by the student with a faculty mentor). Three Sunday evenings each semester, the Colloquium brings together Honors Scholars for discussion of the topics, methods, and challenges of conducting research in various fields. At the last meeting, students formally present the results of their learning experiences to the Honors Committee and faculty mentors. (*Fa and Sp*)

HONORS

Honors Contract Course

L1-7 (varies)

4 credits

With specific approval, a student may arrange to contract with the instructor of an existing LSP course to take it for honors credit. Completed applications for contract courses must be submitted to the Honors Committee for approval no later than the second week of classes, and should clearly state how the course has been modified to fit honors program criteria. Only one of the four required general education honors courses may be taken as a contract course, and students are strongly encouraged to make every effort to enroll in honors courses before submitting a contract course application. (*Fa, Sp with approval of the Honors Committee and instructor*)

SPECIAL ACADEMIC PROGRAMS

INTERNATIONAL AND OFF-CAMPUS PROGRAMS

Katherine Carr Study Abroad Coordinator
Katherine Hammett Director

International and Off-campus Programs (IOP) are an integral part of Carroll's academic offerings. IOP directs semester and academic-year study abroad programs, as well as NCEP (New Cultural Experience Program) courses.

Study Abroad Programs

Students with a cumulative grade point average of 3.0 or higher, sophomore status and at least 16 completed Carroll College credits may apply for approval to enroll in a study abroad program.

Approved study abroad students remain enrolled at the College during the semester or academic-year study abroad period. Applications for study abroad are due at least one semester prior to the academic year in which the student intends to study; however, students are advised to apply for study abroad a full year ahead of their intended study. Details about the programs, eligibility, applications and costs are available on the Carroll College webpage under Academic Programs or from the Study Abroad Coordinator in Voorhees 301.

International study abroad opportunities include three types of programs: exchange, affiliated and non-affiliated.

1. Exchange Programs

Exchange programs are programs in which the school abroad sends us their students and we, in turn, send our students for a semester or academic year.

University of Wales-Aberystwyth (UWA): Founded in 1872, Aberystwyth was the first university to be established in Wales. UWA is located on the coast in central Wales and has over 7,000 registered students. All courses are taught in English. Aberystwyth has excellent academic and cultural opportunities; students can take courses in any discipline.

Burgundy School of Business (BSB), France: BSB, located in Dijon, is an international business school that attracts students from all over the world. It provides students with an opportunity to study business in a town and region known for its cultural and historical contributions to Europe. BSB courses that are taught in English include business law, economics, marketing, entrepreneurship, sociology, psychology, finance and market research.

INTERNATIONAL AND OFF-CAMPUS PROGRAMS

Ewha Womans University, Korea: Located in Seoul, With over 120 years of rich history, Ewha is Korea's oldest all-women's university. Carroll students, both men and women, can study in English at Ewha. Over 20% of undergraduate courses are taught in English. These include art history, Asian studies, business, ceramics, economics, international studies, Korean studies, literature, media studies, politics, psychology, religion and women's studies. Carroll students are housed on the beautiful Ewha campus in the newly built International House dormitory.

Institut d'Etudes Politiques de Bordeaux (IEP), France: IEP enrolls 1,300 students who study history, political science, economics and law. Visiting international students may choose courses from any discipline. All IEP courses are taught in French, hence the student needs to be approved by faculty in French, as well as by the IOP committee.

Universidad de La Salle Bajío (ULS), Mexico: Located in León, ULS is a private school that offers a wide range of coursework including psychology, education, communication, business and information technology. Carroll students may take courses in any discipline. All ULS courses are taught in Spanish; therefore, Carroll students must receive a recommendation from the Spanish faculty, as well as the IOP committee.

2. Affiliated Programs

Huron University USA in London, England: Huron is a small school of less than 1,000 students, with primarily an international enrollment. It is particularly strong in international relations and business. Huron is noted for its internship opportunities.

Lancaster University, England: Lancaster is in the northwest of England, 250 miles from London. It is the preferred location to study environmental and natural sciences. Other coursework for international students includes applied sciences, arts, humanities, business and social sciences.

University of Hull, England: Hull is located about 3 hours from London. The university has 14,000 students and is noted for its excellence in teaching and research. Study abroad students can choose coursework from many disciplines including the humanities, social sciences, sciences, business, and the arts.

Macquarie University, Sydney, Australia: Macquarie has 24,000 students including 4,000 international students. They offer a wide range of courses including humanities, social sciences, biology, psychology and business.

University of Canterbury, New Zealand: Canterbury is located in Christchurch, the largest city on New Zealand's South Island. A range of subjects is taught by the 38 departments which are grouped into seven faculties: arts, commerce, engineering, forestry, law, music & fine arts and science. There are many services on campus available for the 1,600 international students.

National University of Ireland - Galway, Ireland: NUI Galway has 13,000 students and nearly 1,000 international students attend the University each year. Because of its dynamic and pioneering role in theatre, arts and culture, Galway has earned the title 'Cultural Capital of Ireland'.

National University of Ireland - Maynooth, Ireland: NUI Maynooth is an innovative university of 5,500 students from every county in Ireland, as well as an increasing number of international students. Situated 25km west of Dublin, it is located in Ireland's only university town, Maynooth.

University of Stirling – Scotland: The highly rated University of Stirling offers international students the chance to receive a quality Scottish education. The University is proud of its international community which comprises 12 to 15% of the student population.

Foundation for International Education (FIE): With programs in London, Dublin and Madrid, FIE offers students a number of highly selective learning opportunities. FIE's specialized academic and internship programs provide opportunities for Carroll students in all academic disciplines.

Study Abroad Italy (SAI) - Florence: In affiliation with Florence University of the Arts (FUA), SAI offers students the opportunity to study in one of the leading educational and cultural centers of Europe. FUA is located in the historic center of Florence and offers English-taught courses in areas such as business, economics, liberal arts, environmental studies, human services, natural sciences, mathematics, fine and visual arts.

Study Abroad Italy (SAI) - Sicily: SAI offers Carroll students opportunities to study in English-speaking programs at the Mediterranean Center for Arts and Sciences. The Center specializes in Greek and Roman history, art, architecture and archeology; philosophy; environmental studies; European history; creative writing; drawing; photography; and Italian studies. The school is located in a restored 17th century palace that is adjacent to the Mediterranean Sea.

3. Non-affiliated Programs

Non-affiliated programs are programs that students independently identify as a preferred study abroad option. Students sometimes want a study abroad experience that is not available through our Exchange or Affiliated Programs. Students need approval for a non-affiliated program in order to remain a Carroll College student while abroad.

Other Off-campus Opportunities

The **Washington Semester** program at **American University** includes a four-credit internship in the public, private or nonprofit sectors of Washington D.C.

The **Washington Center** program includes an internship of at least 30 hours per week supplemented by enrollment in a single course during the semester.

INTERNATIONAL AND OFF-CAMPUS PROGRAMS

The **Wisconsin Universities** program, conducted during a six-week summer term, concentrates the study of the United Nations in a two-week intensive course at the University of Wisconsin - Milwaukee followed by a four-week session in New York City. Students participating in this program earn six credits which may be transferred to Carroll.

Language Credit Abroad

Carroll's Language Credit Abroad program allows currently-enrolled Carroll students to receive academic credit for pre-approved language study abroad. Students study in a language program that has been academically approved by Carroll College. Credit may not be received for language programs that are not on the approved list. The three approved Spanish language programs are: Cemanahuac in Cuernavaca, Mexico; Casa Xelajú in Quetzaltenango, Guatemala; and La Escuela de Idiomas D'Amore in Manuel Antonio, Costa Rica.

Generally, Carroll students schedule their language abroad study over winter break or during the summer. All approved language schools offer intensive language classes of 4-5 hours per day (20-25 hours week), homestays and cultural activities. Language Credit Abroad students must receive prior approval from Dr. Black, Professor of Spanish.

New Cultural Experience Programs (NCEP)

Since the 1970s, Carroll College has offered short-term study abroad courses led by Carroll faculty. NCEP courses carry academic credit and generally take students abroad during the January interim or in the summer. Prior to going abroad, students spend a full semester in academic preparation. Each NCEP course has a specific academic focus along with a particular emphasis on understanding new cultures.

Eligibility: Students interested in NCEP courses must submit an NCEP application and have a minimum of 16 completed credit hours from Carroll College and sophomore status. Some NCEP courses may have additional eligibility requirements. Enrollment is determined by the course instructor and IOP who review student records to ensure that the applicant is in good standing related to both academics and conduct. Tuition for NCEP courses varies according to the program. Applications and additional information for NCEP courses are available on the college's Web page under Academic Programs or from the IOP office in Voorhees 301.

NCEP Course Offerings

NCEP course offerings are announced each spring for the next academic year. NCEP courses may vary from those listed below depending on availability of faculty.

NCEP 302. Russia and Central Asia: History, Environment and Geography Halfway Around the World

This course is designed to provide students the opportunity to study and have first-hand experience in Russia and Central Asia. Students will have a better understanding of the region's culture, history, geography and environment. We visit St. Petersburg and Moscow in Russia and Kokshetau, Kazakstan and their surrounding regions. We study

the interrelationship of historical events, cultural characteristics and environmental quality. We will be working with St. Petersburg University, Moscow State University, Kokshetau State University, the Peace Corps, and the Waukesha Area Sister City Association. (*Sp, Travel in May*). 4 credits

NCEP 305/BIO 385 Reefs, Rainforests and Ruins of Belize

This course focuses on tropical reef biology and rainforest ecology. Students are introduced to these topics in the fall followed by a three-week winterim experience in Belize. While in Belize, students explore the world's second largest barrier reef and trek through a tropical rainforest to observe bullet trees, howler monkeys and exotic birds. While at these sites, students design and perform investigative experiments to gain an understanding of the scientific method. In addition, students experience the ancient Mayan civilization visiting the ruins at Lamanai, Caracol and Tikal. This course meets the LSP I or LSP II requirement. (*Fall, Travel in January*) 4 credits

NCEP 309 Germany, Poland and Hungary

This course examines personal and communal treatment of "the other" in Eastern Europe, where recent history has left not only deep scars, but also a strong commitment to social justice and tolerance. Guided by visits to historical sites, guest speakers, one-on-one conversations and individual observations, students examine how questions of tolerance and intolerance have shaped and still inform Eastern European culture and society. (*Spring, Travel in May*) 4 credits

NCEP 312 China: Its Modern Reality

This course examines Chinese culture with an emphasis on the roles China currently plays on the international stage. Specific attention is given to China's reform that has brought about great changes taking place in its economy and the social lives of the people. Important current issues in semi-capitalism, U.S. business outsourcing and internationalism in education will be stressed. (*Spring, Travel in May*) 4 credits

NCEP 313 Revising Italy: Travel Writing and the Italian Tradition

This course is designed as an advanced-level writing class intending to explore various craft elements related to the subgenre, and allow students to create their own new travel essays within the Italian tradition. By subsequently traveling to Italy and interacting with the "place," the people, and the other aspects of the culture, students will be able to reflect on the works they read during the semester as they seek their own "meaning" of the place/self. (*Spring, Travel in May*) 4 credits

NCEP 314 Playgoers in London

This course surveys the theatre arts and cultural experiences in London, England. Students are introduced to several different genres and styles of theatre. Students will have the opportunity to supplement their understanding of theatre by participating in backstage tours, play readings and contextual analysis, pre-show talks and both written and oral post-show critiques. (*Fall, Travel in January*) 4 credits.

INTERNATIONAL AND OFF-CAMPUS PROGRAMS

NCEP 315 Australia: The Land and the People Down Under

This course explores the geographic and demographic forces that have shaped Australia by focusing on the amazing geographic diversity and how the peoples of Australia have left their mark on contemporary culture. The course will review the economic, political, religious, environmental and social realities of Australia and its neighboring Oceanic Islands. (*Spring, Travel in May*) 4 credits

NCEP 316 Multicultural South Africa

This course builds on the material covered in the prerequisite course. A truly interdisciplinary experience, the course incorporates discussions of politics, history, economics and language in an attempt to understand the nature of power, particularly as it is exercised within the context of racial and ethnic oppression of indigenous peoples. (*Spring, Travel in May*) 4 credits. Prerequisite: ENG 225, South Africa: Culture & History of the Rainbow Nation

NCEP 317 / ENV 490 The Cultural and Environmental Geography of Alaska

The purpose of this academic field study is to explore the environmental resources and cultural heritage of America's final frontier. Spring coursework will ground students in an understanding of Alaska's history, physical landscape, Native American heritage, and current natural resource base. The three-week May itinerary will include cultural activities in Sitka, Fairbanks and Anchorage involving Tlingit, Athabascan and Inuit Indian groups, plus environmental field investigations that include Denali National Park and the historic Yukon mining region. (*Spring, Travel in May*) 4 credits

NCEP 318 Mexico: Culture, Health and Human Services

This course has been designed for students who are interested in careers where they will work in health or human service settings that serve Hispanic populations. Using Mexico as a central focus, students will gain an understanding of Mexican and Mexican-American culture and customs. In May students will study in Cuernavaca, Mexico, where they will live with families, participate in seminars related to health, social services, migration, medical anthropology and politics. Intensive language classes are optional for those with near-native fluency. (*Spring, Travel in May*) 4 credits

NCEP 319 Research in Art: Art and Culture of the Ancient and Modern Maya

In this course, students will spend the first half of the spring semester at Carroll studying ancient Mayan history, culture and art/architecture. Over spring break, students will spend 10 days in Mexico exploring the world they have studied. Upon return to Carroll, the second half of the semester will involve developing written and artistic projects that reflect what they have learned on campus and abroad. (*Sp, Travel over Spring Break*) 4 credits

NCEP 320 Paris: Art and Culture

This course traces the civilization and culture of France through the centuries, beginning with the Gallo-Roman times and progressing to the present. While in Paris, students will experience first-hand the wealth of art and architecture which Paris has to offer. Students will be introduced to various artistic movements born in France and will investigate how history is reflected by the many monuments in the "City of Light." Previous knowledge of French is not required. (*Fa, Travel in Winter*) 4 credits

ADMISSION

Admission to Carroll College is offered to those for whom academic and personal success seems likely. Each candidate is evaluated individually. Evidence of good character and demonstrated ability to do college-level work is essential.

Options for Attending Carroll

Students who wish to attend Carroll College may choose from two basic options.

Full-time — students who carry 12 credits or more per semester.

Part-time — students who carry 11 credits or fewer per semester. There are two types of part-time students.

Degree seeking — students working toward a bachelor of arts, bachelor of science, bachelor of science in music education, bachelor of science in nursing, master of education, entry-level doctor of physical therapy or master of software engineering degree.

Non-degree seeking — students taking courses for enrichment or skill-building purposes. Courses may be taken for credit or audited (students do not receive college credit for their work).

Note: Students may move between full-time and part-time status. However, they should be aware of implications for tuition and fees, financial aid, housing, etc. **Part-time students who wish to attend the college as full-time students must apply through the office of admission. Questions should be directed to the appropriate offices.**

Students come to Carroll from different environments. Some matriculate directly from secondary schools or transfer from other institutions. Other students enroll at Carroll as working adults.

Carroll offers classes during the day, in the evening and on Saturdays, and online. Students at Carroll may choose from more than 40 areas of study or they may design their own major. Nine majors can be completed through evening and Saturday courses. For more information, contact the Office of Admission.

Procedures for Admission - Full-Time Freshmen

The following credentials must be submitted to the office of admission:

1. **Application for admission**, which may be submitted at any time following the successful completion of the junior year in secondary school.
2. **Transcript from an accredited secondary school** that shows progress toward, or the completion of, graduation requirements.

3. **School Report Form**, which consists of a personal evaluation by the secondary school guidance counselor.
4. **SAT or ACT scores**; these tests are administered by the College Entrance Examination Board and the American College Testing Program, respectively.
5. **Nursing students** must submit a transcript from an accredited secondary school that shows satisfactory completion of coursework in algebra, chemistry and biology.

Decisions are made on applications when they are complete, and applicants are notified promptly through the office of admission. In some instances, the files of prospective students are referred to the Admission Committee for review and action. That body may grant admission to the college provided certain conditions are met or may require the student to satisfy specified criteria. Final admission to the Carroll athletic training, nursing, and physical therapy programs is contingent upon the ability of the applicant to comply with the technical standards as listed in the catalog under each area of study as well as the health standards listed on the Carroll College health forms.

Following acceptance, students intending to enroll must pay a \$200 **confirmation deposit** and submit a statement of medical insurance coverage. All students are required to have medical insurance coverage as listed in the catalog under Student Life, Health Insurance.

Those who also apply for financial aid are not required to declare their intention to enroll until after they have been notified of their final financial aid award.

Application Deadline

Students are **encouraged** to file applications for admission to the first semester (fall) before March 15. Applications will be considered and qualified candidates will be accepted as long as there are openings in the entering class. Applications and all supporting documents for admission to the second semester should be filed before November 1.

To assure early notification of admission, either the ACT or SAT should be taken before March 15. Ordinarily, the SAT is administered seven times a year in October, November, December, January, April, May and June. The ACT is administered five times a year in October, December, February, April and June.

Test scores obtained in the junior year may be submitted. Students should contact their guidance counselor or write the testing agency to obtain test registration forms.

Admission Options

Carroll recognizes the varying needs of individual students with the following options:

Early admission may be granted following the completion of three years of secondary school, provided the secondary school indicates that it is in the applicant's best interest to do so. The applicant may or may not have completed the coursework required for secondary school graduation at the time of admission, but must show unusual promise and achievement.

ADMISSION

Deferred admission may be offered to students who want to delay college study for a semester or full year after graduating from secondary school.

Advanced Placement

Applicants will be considered for advanced placement according to the policies established by Carroll College. The applicant's advanced standing is determined individually and is based on an evaluation of all prior academic work. Options for advanced placement are:

1. Advanced placement exams administered in high school
2. Retroactive credit for modern languages and math
3. CLEP exams (College Level Examination Program)
4. Program exams
5. Challenge exams to complete requirements in specified nursing courses or portions of courses.
6. Credit for prior learning application.

Procedures for Admission - Full-Time Transfer

Transfer students must submit the following credentials:

1. **Transfer application** for admission, which may be submitted at any time. Transfer applicants to the Bachelor of Science in Nursing program should contact the office of admission regarding application deadlines.
2. **Official transcripts** of coursework taken at all post-secondary institutions attended.
3. **College Academic Report Form** from the post-secondary institution most recently attended.
4. **Transcript from the last secondary school attended.**

Students must normally be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.

All transfer students must complete the last 32 credits at Carroll. Students must complete at least one-fourth of their major credits and at least one-fourth of the courses in their declared minor at Carroll.

All transfer students from a two-year accredited college-level institution may receive up to 64 credits provided:

1. These transfer courses at least parallel courses offered at Carroll College.
2. All courses accepted in transfer and applied to graduation hours are graded C or better.

Transfer credit will be evaluated under the following provisions:

1. A course in which a student received a grade of D may be used to complete a general education, liberal studies, major or minor requirement, but the credit hours will not count as hours toward graduation. All D and F graded courses normally acceptable for transfer credit will be figured into the calculation of the cumulative grade point average.

2. A course in which a student received a D or F grade may be repeated for credit and only the last grade earned will be used in the grade point average calculation.
3. Transfer students with an associate of arts or an associate of science degree with at least 52 hours of acceptable transfer credit will meet all general education and liberal studies program requirements, except for one course in LSP VII.
4. A student who completes an advanced modern language course with a grade of B or better may be eligible for retroactive credit. See the modern language section of the current catalog for specific information.
5. Technical college programs, other than general education programs, are evaluated on a course by course basis. General education and liberal studies program requirements must be completed by either transfer or Carroll College credit.
6. If a student repeated a course in which s/he initially received a grade of C or better and the repeated course had an unsatisfactory grade (D or F), s/he will receive the last grade earned. The final grade will be used in the grade point average calculation.

Transfer credit policy after enrollment at Carroll College: It is necessary to obtain permission **in advance** from the Carroll College registrar's office in order to have coursework from another institution accepted in transfer. All coursework must be graded at C or better to be accepted. Grade point deficiencies at Carroll College cannot be made up with transfer course credit. Note: Full-time and part-time students are required to complete their final 32 hours at Carroll.

The Carroll Nursing Program requires that C/D grades or any grade less than a C in nursing from another accredited college of nursing must be repeated. The Nursing Program requires the student to repeat practicum courses in which the corollary theory course transfers with less than a satisfactory grade (less than C).

USAFI credits and/or any other accredited correspondence experiences are evaluated against course offerings at Carroll, and credit is assigned accordingly. Ordinarily, not more than two such courses may receive credit toward a degree at the college.

Procedures for Admission - Part-Time Students

All students carrying 11 credits or fewer are considered part-time students. An application for admission and official transcripts from institutions of higher learning are required of all part-time students interested in earning a degree. Students interested in taking credit courses but not earning a degree must submit a part-time student application. Part-time applicants to the Carroll Nursing Program are required to submit high school transcripts and a college academic report form.

Part-time students who wish to apply to the college as full-time students must do so through the office of admission. If possible, this process should be completed one full semester prior to anticipated full-time enrollment.

Returning Students

After the lapse of one or more semesters, students returning to Carroll on a full-time basis must reapply. Students who have been suspended from the college and have

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become eligible to apply for readmission must do so through the office of admission. The Admission Committee reviews each application and determines the current status of the student and the conditions of readmission.

On-Track Program

Students from UW-Waukesha who want to transfer to Carroll at the end of two years may wish to consult their UW-Waukesha counselor about On-Track programs. These cooperative programs allow UW-Waukesha students to be enrolled concurrently in selected courses at Carroll College in order to complete their required courses in the desired sequence and time span.

Carroll College maintains articulation agreements with a number of Wisconsin institutions of higher learning. More information is available from the office of admission.

Athletic Training Program Admission

The athletic training program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, marital status, national or ethnic origin or handicap that does not interfere with the performance of professional athletic training practice as provided by law.

Applications and credentials for admission to the athletic training program must be submitted for processing to the Carroll College office of admission. Applicants must be in good standing (be free of academic and or disciplinary probation) at all institutions previously attended. Decisions on applications are made by a selection committee comprised of the athletic training faculty/staff members. Applicants are notified of their status through the office of admission.

Students who meet the admission and prerequisite professional phase criteria are granted admission to the professional phase of the athletic training program. Students must also fulfill technical standards and caregiver background and criminal history check to be admitted to the professional phase of the athletic training program.

Students who fail to meet the professional phase admission criteria, who fail to meet technical standards requirements, or who do not pass the caregiver and background criminal history check can be denied admittance to the professional phase of the athletic training program.

Students can enter the athletic training program in one of two ways:

Direct Admission: Individuals can be admitted to the program as freshmen. Selection decisions for direct admission are based on evaluation of the following:

- a. Carroll College application form
- b. Transcript from an accredited secondary school that shows seven semesters of coursework. In addition, the following high school courses must be completed by graduation:
Required:

1. Three or more years of mathematics
2. One or more years of high school biology
3. One or more years of high school chemistry
4. One or more years of high school English
5. One or more years of high school history
6. Two or more years of high school foreign language

Recommended:

1. One or more years of high school physics
- c. ACT composite score of 21 or SAT total score of 990

To advance to the professional phase of the program in their junior and senior year, direct admission students must satisfy all of the following requirements during their freshman and sophomore years at the college:

- a. A cumulative grade point average (GPA) of 2.5 or higher
- b. A pre-professional science courses (PHY 101 and 102, CHE 101 and 102, BIO 130 and 140, PSY 101) GPA of 2.0 or higher
- c. Completion of the following courses prior to the beginning of the professional phase of the program in the students' junior year:
 1. First Year Seminar 100
 2. English 170
 3. Physics 101 and 102
 4. Chemistry 101 and 102
 5. Athletic Training 101 and 102
 6. Psychology 101
 7. Biology 130 and 140
 8. Health Sciences 101 or the equivalent of First Aid and CPR for the Professional Rescuer certification with AED certification, HSC103, HSC120
 9. Communication 207
- d. Submission of transcripts, cover letter, résumé, and three letters of reference: one from a professor, one from an athletic trainer, and one character reference.
- e. Completion and submission of technical standards form and criminal history check.
- f. Participation in college, community service, or athletic training activities.

Delayed Admission. Students who enroll at Carroll, not having been admitted to the program through direct admission, can be accepted by meeting the athletic training program progression standards including:

- a. A cumulative GPA of 2.5 or higher
- b. A pre-professional course (PHY 101 and 102, CHE 101 and 102, BIO 130 and 140, PSY 101) GPA of 2.0 or higher
- c. Completion of the following courses or equivalent prior to the beginning of the professional phase of the program:
 1. First Year Seminar 100
 2. English 170
 3. Physics 101 and 102
 4. Chemistry 101 and 102
 5. Athletic Training 101 and 102

6. Psychology 101
7. Biology 130 and 140
8. Health Sciences 101 or the equivalent of First Aid and CPR for the Professional Rescuer certification with AED certification, HSC103, HSC120
9. Communication 207
- d. Submission of transcripts, cover letter, résumé, and three letters of reference: one from a professor, one from an athletic trainer, and one character reference.
- e. Completion and submission of technical standards form and criminal history check for athletic training.
- f. Participation in college, community service, or athletic training activities.

Bachelor of Science in Nursing Degree Admission

The nursing program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, national or ethnic origin or handicap that does not interfere with the performance of professional nursing as provided by law. Students can enter the nursing program in one of two ways:

Direct Admission - Individuals matriculate directly from high school into the nursing major with successful completion of the following:

- 1) At least high school Algebra II, biology and chemistry (grade C or better)
- 2) Attain an ACT of 21 or higher and high school cumulative GPA 2.75 or higher
- 3) Applicants who have English as a Second Language are required to take the TOEFL and achieve a score of 550, unless satisfactory SAT/ACT scores are available.
- 4) Submission of the Technical Standards for Admission to and Progression in the Nursing Program and the Background Information Disclosure forms
- 5) In some instances, applicant files are referred to a Selection Committee for review and action. That body may grant admission provided certain conditions are met or may require the student to satisfy specified criteria.

Delayed Admission - Students who enroll at Carroll, not having been admitted to the program through direct admission, including pre-nursing, change of major and transfer student applicants, may be accepted to the nursing program by meeting the nursing program admission and progression standards as listed below.

- 1) Submission of an application for the Nursing Program, and if a transfer student, submission of a Carroll College application.
- 2) Submission of transcripts from an accredited secondary school and all post-secondary institutions attended. Applicants must be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended as documented on the Academic Report Form.
- 3) A cumulative GPA of 2.75 or higher
- 4) Successful completion (grade C or better) of the following courses:
 - a. Biology 130
 - b. Chemistry 101
- 5) Submission of the Technical Standards for Admission to and Progression in the Nursing Program and the Background Information Disclosure forms

Applications and credentials for admission to the nursing program must be submitted to the Office of Admission. Decisions are made by a selection committee and applicants are notified through the Office of Admission.

Registered Nurse Admission

Registered nurses who have graduated from accredited associate degree nursing programs are admitted to the nursing program as transfer students. These students may receive transfer credit for applicable college courses provided they were completed in an accredited junior or senior college and are accompanied by an official transcript from the institution(s).

Registered nurses who wish to enter the nursing program to earn their Bachelor of Science in Nursing degree must meet the following requirements:

1. Graduation from an accredited associate degree program
2. Current RN license in the state of Wisconsin
3. A cumulative GPA of 2.75 or higher.
4. Grades of C or better in all required science courses

The following credentials are required:

1. Submission of a Carroll College application
2. Submission of transcripts from an accredited secondary school and all post-secondary institutions attended
3. Current RN license, State of Wisconsin
4. Submission of a Carroll Health History Physical Evaluation Form
5. Submission of the Technical Standards for Admission to and Progression in the Nursing Program form
6. Written statement to include:
 - a. Reason for seeking the bachelor's degree
 - b. Self identified professional and academic strengths and weaknesses
 - c. Professional interest area(s) and area of employment

Completion students may earn up to 34 block nursing credits from previous nursing coursework upon successful completion or challenge of Nursing 230, Health Assessment and Nursing 236, Human Pathophysiologic Responses. Please contact the director of the nursing program to obtain a syllabus of the material covered on the challenge examinations. The nursing program reserves the right, in special circumstances, to require the student to successfully complete an evaluation process to validate the probability of successful program completion. Special circumstances include, but are not limited to, a GPA below 2.75 and /or no recent work history as a registered nurse.

Pre-Physical Therapy and Entry-Level Doctor of Physical Therapy Program Admission

The entry-level Doctor of Physical Therapy Program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, national or ethnic origin, or disability that does not interfere with the performance of professional physical therapy practice as provided by law. Applications and credentials for admission to the physical

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therapy program must be submitted for processing to the Carroll College office of admission. As decisions are made on applications, applicants are notified through the office of admission. Students can enter the physical therapy program in one of three ways: direct admission, transfer admission, or non-traditional admission.

1. Direct Admit Student Option

Carroll College will admit freshmen, matriculating directly from high school, to an existing undergraduate major with a pre-physical therapy emphasis and the Physical Therapy Program. Selection decisions will be based on evaluation of the following:

- a. Carroll College application form
- b. The Safety and Technical Standards Form
- c. ACT composite score of 23 or higher and high school cumulative GPA 2.75 or higher
- d. Transcript from an accredited secondary school which shows six semesters of coursework. In addition, the following high school courses must be completed by graduation:

Required

1. Three or more years of mathematics
2. One or more years of high school biology
3. One or more years of high school chemistry
4. One or more years of high school English
5. One or more years of high school history
6. Two or more years of high school foreign language

Recommended

1. One or more years of high school physics

During their freshman, sophomore and junior years at the college, direct admit students earn credits toward undergraduate degrees in existing Carroll majors which have a pre-physical therapy emphasis and participate in activities in the Physical Therapy Program. To advance into the professional phase of the program in their senior year, direct admission students must satisfy all of the following requirements during their freshman, sophomore and junior years at the college:

- a. A college cumulative grade point average of 3.0 or higher
- b. A pre-professional course grade point average of 3.0 or higher. Courses include:
 1. 4 semesters of Biology, including BIO/HSC 402 and 403
 2. 2 semesters of Chemistry, either CHE101/102 or CHE109/110
 3. 2 semesters of Physics, either PHY101/102 or PHY203/204
 4. Up to 2 semesters of Psychology, at least one course 200-level or higher
- c. Completion of the following courses prior to beginning of the professional phase of the program in the student's senior year:
 1. First Year Seminar
 2. Writing Seminar
 3. 4 semesters of biology including one semester of human anatomy (HSC 402) and one semester of human physiology (HSC 403)
 4. 2 semesters of physics (Physics 101, 102)
 5. 2 semesters of chemistry (Chemistry 109, 110 or Chemistry 101, 102)
 6. Computer Science 107
 7. One course from each of the seven LSP areas

8. One semester of statistics (Math 112 or Psychology 205)
9. The majority of required and elective courses in the undergraduate major
- d. Evidence that the bachelor's degree will be awarded at the completion of the senior year
- e. GRE total score (Verbal, Quantitative and Writing)
- f. Participation in a clinical observation experience. A Clinical Experience Documentation Form must be submitted to the program
- g. Submission of three letters of reference: one from a physical therapist, one from a college professor, and one that attests to the student's character
- h. Participation in college or community service activities

If, for any reason, a direct admission student does not advance into the professional phase of the program, career counseling will be provided through the Walter Young Center.

2. Transfer Student Option

If a high school senior is not admitted directly to the physical therapy program as a freshman or if a high school senior is uncertain that he/she wants to pursue an Entry-Level Doctor of Physical Therapy degree, another option is available. The individual will be able to apply, anytime during his/her junior year, for one of the transfer slots in the professional phase of the program. Applicants completing a bachelor's degree at Carroll College receive a calculated preference in consideration for Phase 1 admission. Selection decisions will be based on evaluation of the following:

- a. The Application for Admission to the Entry-Level Doctor of Physical Therapy Program Professional Phase which includes:
 1. Clinical Experience Documentation Form
 2. Three letters of reference: one from a physical therapist, one from a college professor, and one that attests to the student's character
 3. Two essay questions
 4. Course Work in Progress Form
 5. Participation in college or community service activities
 6. The Safety and Technical Standards Form
- b. A college cumulative grade point average of 3.0 is required to make application to the program.
- c. A 3.0 GPA or higher in pre-professional course work is required to make application to the program. Courses include:
 1. 4 semesters of Biology, including BIO/HSC 402 and 403
 2. 2 semesters of Chemistry, either CHE101/102 or CHE109/110
 3. 2 semesters of Physics, either PHY101/102 or PHY203/204
 4. Up to 2 semesters of Psychology, at least one course 200-level or higher
- d. A college transcript that includes five semesters of coursework. In addition, the following courses must be completed prior to beginning the professional phase of the program in the senior year:
 1. First Year Seminar
 2. Writing Seminar
 3. 4 semesters of biology including one semester of human anatomy (HSC 402) and one semester of human physiology (HSC 403)
 4. 2 semesters of physics (Physics 101/102)

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5. 2 semesters of chemistry (Chemistry 109, 110 or Chemistry 101, 102)
 6. Computer Science 107
 7. 1 course from each of the seven LSP areas
 8. 1 semester of statistics (Math 112 or Psychology 205)
 9. The majority of required and elective courses in the undergraduate major
- e. Evidence that the bachelor's degree will be awarded at the completion of the senior year
- f. GRE total score (Verbal, Quantitative and Writing).

Air Force ROTC Information

Carroll College students have the opportunity to fully participate in the Air Force Reserve Officers Training Corps program. Students enrolled in the Air Force ROTC program attend AFROTC courses at Marquette University.

Through this program, Carroll College offers its students the opportunity to prepare for initial active duty assignments as Air Force Commissioned Officers. In order to receive a commission, AFROTC cadets must complete all university requirements for a degree and courses specified by the Air Force. AFROTC offers four-, three-, and two-year programs leading to a commission as an Air Force officer. Four-year program students complete the general military course and the professional officer course, in addition to a four-week summer field training between their second and third years in the program. Two-year students complete only the professional officer course, but have a five-week summer field training before entering the professional officer course. General qualifications:

- be a full-time student
- be a United States citizen (for scholarship appointment)
- be in good physical condition
- be of good moral character
- for pilot or navigator training, fulfill all commissioning requirements before age 26 1/2
- for scholarship recipients, fulfill commissioning requirements before age 27 on June 30 in the estimated year of commissioning
- for non-scholarship students, fulfill all commissioning requirements before age 30

General Military Course: The first- and second-year educational program in Air Force Aerospace Studies consists of a series of one-hour courses designed to give students basic information on world military systems and the role of the U.S. Air Force in the defense of the free world. All required textbooks and uniforms are provided free. The general military course is open to all students at Carroll College without advance application and does not obligate students to the Air Force in any way.

Field Training: AFROTC Field Training is offered during the summer months at selected Air Force bases throughout the U.S. and provides leadership and officer training in a structured military environment. Major areas of study include physical training, drill and ceremony, marksmanship, and survival training. The Air Force pays all expenses associated with field training.

Professional officer course: The third and fourth years of Air Force Aerospace Studies are designed to develop skills and attitudes vital to the professional officer. Students completing the professional officer course are commissioned as officers in the U.S. Air Force upon college graduation. All students in the professional officer course receive a nontaxable subsistence allowance of \$200 per month during the academic year. Students wanting to enter the professional officer course should apply early in the spring semester in order to begin this course of study in the following fall semester.

Leadership Laboratory: Leadership laboratory is a cadet-centered activity. It is largely cadet planned and directed, in line with the premise that it provides leadership training experience that will improve a cadet's ability to perform as an Air Force officer. The freshman and sophomore leadership laboratory program introduces Air Force customs and courtesies, drill and ceremonies, wearing the uniform, career opportunities in the Air Force, education and training benefits, the life and work of an Air Force officer, and opportunities for field trips to Air Force installations throughout the U.S. Initial experiences include preparing the cadet for individual squadron and flight movements in drill and ceremonies and for the field training assignment prior to the junior year.

The junior and senior leadership laboratory program involves the cadets in advanced leadership experiences. Cadet responsibilities include planning and directing the activities of the cadet corps, preparing briefings and written communications, and providing interviews, guidance, information and other services which will increase the performance and motivation of other cadets.

AFROTC College Scholarship and Scholarship Actions Programs: These programs provide scholarships to selected students participating in AFROTC. While participating in AFROTC, students receive \$200 per month along with paid tuition, fees, and a fixed textbook reimbursement. To be eligible for either of these programs, students must:

- be a U.S. citizen
- be at least 17 years of age on the date of enrollment and under 27 years of age on June 30 of the estimated year of commissioning
- pass an Air Force physical exam
- be selected by a board of Air Force officers
- have no moral objections or personal convictions that prevent bearing arms and supporting and defending the Constitution of the United States against all enemies, foreign and domestic (applicants must not be conscientious objectors)
- achieve a passing score on the Air Force Officer Qualifying Test
- maintain a quality grade point average

High school students can apply for scholarships late in their junior year or early in their senior year; pre-applicant questionnaires are available from high school guidance counselors or any Air Force recruiting office. Completed pre-applicant questionnaires should be mailed as soon as possible (to meet the earliest selection board) but will not be accepted if mailed after December 1 of the year before entering college. For students already enrolled at Carroll, three- and two-year scholarships are available. Submit applications directly to the Department of Aerospace Studies at Marquette University. For more information call (414) 288-7682.

FEES

Full-Time (12-19 credits)

The charges listed are for the academic year beginning in September and ending in May, composed of two semesters. Full-time status is determined at the end of the first week of classes on the date indicated in the calendar as the last day to add classes.

Tuition

Tuition\$20,400

Residence Hall Room

Carroll College Room Plans

Double room\$3,450
Single room 4,030
Triple room2,400
New Hall 4,150
Charles House double room 3,450
Charles House single room4,030
College Apartments double (9 months)4,150
Carroll Apartments double (9 months)4,700
Carroll Apartments triple (9 months).....4,230
College Apartments triple (9 months)3,580
Wright House single4,030
Wright House double3,450
Wright House triple.....2,400
Hartwell double.....3,950
Hartwell triple3,950
Barney triple3,950
Barney double4,150
Hartwell single4,500

Board

Carroll College Board Plans

All freshmen and sophomores living in college housing are required to participate in the board program. Other students may elect to purchase a board plan or may purchase food points in \$25 increments. Meals are paid for with points. Points are not refundable and not transferable.

Plan I is ideal for commuters or upperclassmen with off-campus jobs, student teaching or internship responsibilities. (Not available to freshmen and sophomores living on campus)\$1,880
Plan II is for the student who is off campus frequently on weekends and generally eats two meals a day2,580
Plan III will serve a student who eats three meals a day and spends about half of the weekends on campus2,900

Plan IV is for the student who eats most meals on campus and purchases convenience items3,070
 Plan V is for the athlete and the student who eats all meals on campus.3,460

The board plan selected in the fall will automatically be charged to the student's account second semester unless a different meal plan is selected. The deadline for changing food plan options is the end of the first week of classes in the semester. Any unused food points from the first semester will automatically be carried over to the second semester. Bulk food may be purchased with unused points at the end of the semester. Additional points may be purchased in \$25 increments regardless of the plan chosen. Only currently enrolled students may participate in a food plan. Individuals who withdraw from the college must stop using campus-dining services immediately or be financially responsible for charges incurred beyond the last date of attendance.

Other Fees and Deposits

Residential deposit (credited to student's account)\$200
 This sum is required to be submitted with the housing contract. When this deposit is paid, residence hall reservations are confirmed. It will not be refunded except in cases of illness or exceptional circumstances that make it impossible for a student to attend college the semester for which the student has been accepted.
 Residential cancellation penalty 500
 This fee will be assessed if a student withdraws from a housing contract.
 Confirmation deposit (credited to student's account) 200
 This sum is due and payable within 30 days after the date the applicant is notified of admission to the college or after financial aid is determined for those who are aid applicants. This deposit is collected only from new full-time students or from part-time students moving to full time status. It is generally not refundable.
 Registration and Orientation fee 135
 New full-time students will be assessed this fee on their first billing. It is generally not refundable.
 Comprehensive fee..... 350
 This fee is collected from full-time undergraduate students and is used directly by the college to address needs common to the student body.
 Activity fee 150
 This fee is collected by the college at the request of the Student Senate and is distributed by the Senate to eligible student organizations.
 Security deposit for Carroll College students 75
 New students are required to post a \$75 deposit which is held as security against unpaid damages and fines. The deposit is refunded when a student graduates or when a student withdraws after at least one full semester. Security deposits are nonrefundable for disciplinary or academic dismissals. While students are continuing at Carroll, damages, fines and special charges are to be paid within 10 days of notification; otherwise such amounts will be added to the billing for the semester. Damages, fines, and

FEES

special charges which remain unpaid will be charged against the security deposit if the student is not returning.	
Nursing program fee	335
This fee is assessed to all full- and part-time nursing students enrolled in a nursing course.	
Professional liability insurance	20
This fee is assessed to Health Sciences majors who are required to carry professional liability insurance when enrolled in any clinical course.	
Completion fee	65
The fee will be charged whether a student participates in the graduation ceremony or not, to cover diplomas, diploma covers, degree audits and other associated costs.	
Parking permit for resident Carroll students - residence hall lots	130
Parking permit for resident Carroll students - other lots	75-130
Parking Garage (Carroll Apts)	210
Resident students may apply for parking permits for residence hall lots. Because parking spaces are limited, they are assigned by the safety office according to established criteria.	
Payment plan application fee for students on an approved payment plan	
Automatic withdrawal option	45
Payment by check	45
Payment plan late payment fee per month	15
Stop Payment Fee (subject to change based on bank fees)	26
NSF Fee (subject to change based on bank fees)	10
Late Fee	50
Transcripts (per copy).....	4
Records Request – per hour	40
Non-refundable registration fee	
for International and Off-Campus Programs	200
NCEP Course Fee	250
Study Abroad Fee (per semester)	500
Auditing (per credit)	62
Auditing (Nursing-per credit).....	81
Credit for work experience (per credit)	125
Credit for work experience (Nursing-per credit)	165
Internship(per credit)	250
Internship (Nursing-per credit)	325
Internship: Written Project (per credit)	125
Internship: Written Project (Nursing-per credit)	165
Credit by examination (per credit)	125
Credit by examination – Nursing courses (per credit)	165
Prior Learning Assessment (per credit)	125
Prior Learning Assessment (Nursing-per credit)	165
Tuition per credit for additional credits – non-nursing (greater than 19 credits) ..	250
Tuition per credit for additional credits – nursing (greater than 19 credits)	325
Language Credit Abroad Programs (4-8 credits)	250
Language Credit Abroad Programs (12-16 credits)	500

Course fees (per course)28-55

These fees are required for classes with expendable material costs, as well as other costs unique to the course, and include, but are not limited to, lab courses.

A student spends an estimated \$1036 per year on books.

Applied Music Fees

The academic year charges for individual instruction in voice, piano, organ, strings, winds and percussion are:

One-half hour lesson per week.....\$400

One hour lesson per week800

No refunds of applied music fees will be made after the second week of classes.

ADDITIONAL EXPENSES – NURSING PROGRAM

Nursing is a practice discipline and students enrolled in the nursing program must plan for additional costs that are directly related to the program. These include uniforms, nursing textbooks, health requirements, CPR certification, liability insurance, and transportation costs associated with clinical experiences.

- Uniform cost will vary depending on vendor used. Uniform patch is available through the bookstore. Also required for clinical nursing courses: watch with a second hand, white nurses shoes (or all white athletic shoes), bandage scissors and stethoscope.
- Students are required to carry professional liability insurance when enrolled in any clinical course. Cost varies according to plan selected and agency used.
- Nursing pin. Cost varies depending on quality ordered.
- For graduating seniors desiring registration and licensure in Wisconsin:
 - Registration fee for NCLEX exam
 - Application for State Board
 - Work permit for graduates working in Wisconsin
 - State Board registration photograph
 - Class composite photograph (optional)

Payment of Student Accounts

Charges for tuition, fees, room and board are the obligation of the student upon registration and are to be paid no later than the first day of the semester. A student may attend classes, take examinations, and be entitled to the benefits of a fully registered student only when all charges have been paid or satisfactory financial arrangements have been approved by the Business Office.

An initial bill is sent to each student's permanent address prior to the beginning of each semester in the form of an estimated bill. Full payment of the balance must be made by the first day of the semester unless payment plan arrangements have been approved

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by the business office. If additional charges are incurred during a semester, a statement will be mailed to the student showing those supplemental charges. These charges are due upon receipt of the billing.

A late fee of \$50 will be assessed or, at the college's election, interest will be charged at a rate not to exceed 18% annual percentage rate (APR) to all accounts with balances on September 5 for the fall semester and January 21 for the spring semester. A student with an unpaid balance will not be allowed to register for the next semester or participate in study abroad programs until that balance is paid in full. In the event of default, the college may refer the account to a credit reporting agency, a collection agency, and/or initiate legal action to recover any outstanding debt. The student will be responsible for the costs of collection, including, without limitation, interest, penalties, collection agency fees, court costs and attorney fees. Additional information can be obtained in the business office.

Diplomas and transcripts of credits and credentials will be issued only to students who have settled all obligations to the college, including tuition, fees, fines and signatures on loan documents. Any student who is delinquent on a payment plan will have the above credentials held.

How payments are applied to student accounts

Credits to students' accounts are applied in the following manner:

Financial aid in the form of grants and scholarships is the first item credited to the student's account and will be applied in the following order:

Tuition, program fees, other fees, board charges, room charges

Cash payments (other than student loans) will be applied to fines and incidental charges.

The remaining cash and/or loan proceeds made to student accounts are applied against charges not covered by grants and scholarships in the following order:

Tuition, program fees, other fees, board charges, room charges

Information regarding payment plan options may be obtained from the business office of the college. Students are invited to contact the business office if they have any questions concerning payments due to the college.

Veterans' Benefits

Veterans' benefits should be applied for with the appropriate agency for necessary authorization well in advance of the registration date. The proper authorization should be presented to the veterans affairs officer at registration. Veterans enrolling under P.L. 550 or 358 or a veteran's child enrolling under P.L. 634 should be prepared to pay all expenses, since payments are made directly to the veteran by the Veterans Administration. Recipients of such payments are advised to anticipate a delay of about two months before receiving the first payment from the sponsoring agency.

Part-time (Less than 12 Credits)

Tuition

Undergraduate course per credit.....	\$250
Nursing course per credit	325
*Undergraduate OCICU course per credit	325
Auditing per credit	62
Auditing Nursing per credit	81
Credit by examination (per credit)	125
Credit by examination – Nursing courses (per credit).....	165

These charges do not apply to full-time students who drop a course after the first week of a semester.

*Please refer to www.cc.edu/academics/online for information pertaining to Carroll's online consortium (OCICU) courses.

Students contemplating dropping and substituting courses involving online programs may substitute another section of the same course as long as it is in the same term (“term” applies to the period during which the course is offered, beginning to ending date). Traditional courses and courses offered through the Online Consortium of Independent Colleges and Universities (OCICU) have different start and end dates and drop policies even though they may be equivalent courses. Students contemplating dropping or substituting an OCICU course with a traditional course or an OCICU course must contact the Registrar at 262-524-7211 or email ahandfor@cc.edu for policy and cost information.

A late fee of \$50 will be assessed or, at the college's election, interest will be charged at a rate not to exceed 18% annual percentage rate (APR) to all accounts not paid in full by October 5 for the fall and February 21 for the spring semester.

Part-time students with past due accounts on October 5 of the first semester and February 21 of the second semester will not be allowed to register for the next semester or leave on a study abroad program until the account balance is paid in full. Diplomas and transcripts of credits and credentials will be issued only to students who have settled all obligations to the college including tuition, fees, fines and signatures on loan documents. The student will be responsible for the costs of collection, including, without limitation, interest, penalties, collection agency fees, court costs and attorney fees. Additional information can be obtained in the business office.

Refer to the graduate catalog for information regarding the graduate programs.

Internships

The college offers three types of internships. It is the student's responsibility to register for the appropriate internship course.

1. Internship with approval and placement by the program instructor
 (Course 480)\$250 per credit
 \$325 per credit - Nursing

- 2. Credit for work experience approved by the program instructor
(Course 483)\$125 per credit
\$165 per credit - Nursing
- 3. Written project completed at work site and approved by the program
instructor (Course 482)\$125 per credit
\$165 per credit - Nursing

Refund Policies

Full-time status is determined at the end of the first week of classes on the date indicated in the calendar as the last date to add classes. A full-time student who drops below 12 credits after this date will continue to be billed at full-time rates unless the student withdraws from the college.

To begin the withdrawal process the student must fill out the withdrawal form. This form may be obtained from the registrar's office or from the business office. This form must be returned to the business office so that the college can calculate the refund, if any, of institutional charges and determine the amount of aid that may need to be refunded to the various sources.

Refunds may be available for students with Title IV federal aid who withdraw from the college.

Students with federal aid who withdraw from the college will have their charges recalculated in accordance with guidelines established by the U.S. Department of Education derived from the October 7, 1998, Reauthorization of the Higher Education Act. The "Federal Refund" calculation includes tuition, fees, room, board and other charges.

The federal formula provides a return of the Title IV aid if the student received federal financial assistance in the form of a Pell Grant, Supplemental Education Opportunity Grant, National SMART Grant, Academic Competitiveness Grant, Perkins Loan or Subsidized and Unsubsidized Stafford Loans or PLUS Loans and withdraws on or before completing 60% of the semester. The percentage of the refund is equal to the number of calendar days completed in the semester divided by the number of calendar days in the semester. Scheduled breaks of five or more days are excluded.

If any refund remains after the required return of Title IV aid, the refund will be used to repay Carroll funds, state funds, other private sources and the student in proportion to the amount paid by each non-federal source as long as there is no unpaid balance due at the time of withdrawal. If there was an unpaid balance, then all aid sources will be repaid before any refund is paid the student.

If a student who receives Title IV HEA program assistance other than Federal Work Study is owed a refund, the college will allocate that refund in the following order:

- 1. Federal Unsubsidized Stafford Loan Program
- 2. Federal Subsidized Stafford Loan Program

3. Federal Perkins Loan Program
4. Federal PLUS Loan Program
5. Federal Pell Grant Program
6. Federal Academic Competitiveness Grant
7. Federal National SMART Grant
8. Federal SEOG Program
9. Any other assistance awarded to the student under programs authorized by Title IV HEA
10. Other federal, state, private or institutional financial assistance programs
11. The student

For purposes of repayment, if funds are released to a student because of a credit balance on the student's account, then the student may be required to repay some of the federal grants released to the student. Until the repayment is resolved, the student is ineligible for further Title IV assistance and the repayment must be reported on any financial aid transcript completed. These refund policies are based upon the rules and regulations of the U.S. Department of Education and are subject to change.

Worksheets used to determine the amount of refund or return of Title IV aid are available upon request at the Carroll College Business Office.

Example: A student withdraws on the tenth day of classes. The semester is 100 days. The percentage of earned Title IV funds would be 10%, 10 days/100 days. The unearned aid would be 90%. The semester charges include \$10,200 for tuition and \$250 for fees. The total \$10,450 is paid as follows:

- * \$1,200 Stafford Loan
- * \$1,100 Federal Pell Grant
- * \$2,000 Carroll College Grant
- * \$1,000 Carroll College Scholarship
- * \$5,150 Student Payment

Under the Federal "Return of Title IV Aid" policy, \$1,200 would be returned to the lending institution to repay the Stafford Loan and \$870 would be returned to the Federal Pell Grant. In addition to this, under Carroll College refund policy for students receiving Title IV aid, the Carroll Grant would be reduced by \$1,800 and the Carroll Scholarship would be reduced by \$900. According to the refund policy, the charges for the semester will be reduced by \$9,405.00. An administrative fee of 5% (not to exceed \$100) will be charged to the student's account. The student in this example would receive a refund of \$4,535.00 minus any incidental charges that may be on the student's account.

Financial aid for part-time students will be adjusted to reflect the final number of credits for which the student is enrolled on Wednesday, September 12, 2007, for the fall semester or on Monday, January 28, 2008, for the spring semester. If enrollment on either one of these dates is for fewer than six credits, no financial aid will be available for the term.

Tuition refunds:

- Full or part-time students without federal aid who withdraw from the college may be eligible for a tuition refund.

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- Part-time students who drop courses may be eligible for a tuition refund.

Fall 2007

<u>Drop on or before</u>	<u>Refund</u>
Tuesday, September 4	100%
Monday, September 10	80%
Monday, September 17	60%
Monday, September 24	40%
Monday, October 1	20%

Spring 2008

<u>Drop on or before</u>	<u>Refund</u>
Friday, January 18	100%
Monday, January 28	80%
Monday, February 4	60%
Monday, February 11	40%
Monday, February 18	20%

Refunds of board fees are available if a resident student officially withdraws from the college. The amount is determined by the refund calculations listed above. Room fees are not refundable after the semester begins.

Specially timed courses have the following refund schedule:

Refund	Withdrawal Date
100%	Before the first day of classes
75%	Before the second day of classes
25%	Before the third day of classes
0%	Before the fourth day of classes

All refunds will be reduced by a 5% administrative fee (not to exceed \$100).

All scholarships, grants, and loans must be credited to a student account before a refund check will be issued.

No refund of tuition, fees, room or board will be made to students dismissed or suspended from the college for disciplinary or academic reasons. Refunds of study abroad program registration fees are subject to regulations available in the IOP office.

Refund policy for military reservists called to active duty:

The college recognizes the sacrifices that those in the armed services make while serving our country. We are proud to have these individuals as a part of our campus community and therefore maintain the following policy:

- The student must provide the registrar's office copies of official military orders. The student will then be automatically withdrawn from all of his/her courses for the given semester. The academic record will reflect the non-punitive "W."
- The student will be eligible for a full refund for tuition and course fees for that semester.
- Any room and board charges will be prorated based on the period in the semester when the student is required to leave and the remaining amount will be refunded.

All students adding or dropping a course must do so in writing through the registrar's office. Refunds are based on the date of the postmark of withdrawals sent by mail or on date of delivery of those brought in personally to the registrar's office. If a student drops from a credit class to an audit, the refund will be based on the credit course fee according to the refund policy. If a class is cancelled due to lack of enrollment, students registered for that class will be given a full refund.

FINANCIAL AID

The U.S. Department of Education has stated that Carroll College may participate in those student financial assistance programs authorized by Title IV of the Higher Education Act of 1965, as amended. You may contact the Director of Financial Aid at the telephone number or address listed below, if you would like to review a copy of the most current Program Participation Agreement.

Financial aid is available to students who are enrolled at least on a half-time basis per semester (some students may qualify for a Pell Grant if enrolled less than half-time), are degree seeking, and meet all other guidelines established by the college and the U.S. Department of Education. For financial aid purposes, half-time status (6-8 credits) is a minimum of six credit hours per semester, three-quarter-time is 9-11 credits and full-time status is a minimum of 12 credit hours per semester. The college participates in four types of financial aid programs: scholarships, grants, loans, and employment. The following pages provide more information about the various financial aid programs and how to apply. More detailed information is available on our web site at www.cc.edu and upon request by contacting the office of financial aid at 262-524-7296 locally, or at 1-800-Carroll. You may also write to us at the following address: Carroll College Office of Financial Aid, 100 N. East Ave., Waukesha, WI 53186.

Note: Students may be eligible for student financial assistance program funds for attending a study abroad program that is approved for credit by the Carroll College Registrar. For more information contact the Office of Financial Aid as described above.

Application for Aid

The college uses the results of the Free Application for Federal Student Aid (FAFSA) as the basis for determining a student's eligibility for Federal, State, and institutional funds. The FAFSA must be entirely completed and sent to the federal processor. Carroll College's address and Title IV code (003838) must be listed on the FAFSA in order for the college to receive a copy of the results from the federal processor. Students are encouraged to complete the FAFSA by April 1 for September enrollment, and by November 1 for January enrollment.

In order to receive financial aid, students must have their financial aid paperwork (including the FAFSA and any additional information required by the Financial Aid Office) completed by the following dates for the applicable term:

Summer	June 15
Fall	November 15
Spring	April 15

The information reported on the FAFSA is used to determine a student's expected family contribution (EFC), an amount the student and parent(s) or spouse are expected to contribute towards their education. The EFC is subtracted from a student's cost of

FINANCIAL AID

attendance to determine his/her financial need. A financial aid counselor will attempt to put together a financial aid package that comes as close as possible to meeting a student's demonstrated financial need. However, due to limited funds, the amount awarded to a student may fall short of the amount for which she/he needs. The college attempts to distribute financial aid to students in a fair and equitable manner among the various student populations.

About 30% of the students who complete the FAFSA will be randomly selected for a process known as verification. When selected for verification, the student and parent(s) or spouse must complete a federal verification document and submit signed federal income tax information to the Carroll College Office of Financial Aid. The college is required by the U.S. Department of Education to review the documents to ensure the information reported on the FAFSA is correct.

Scholarships

Carroll College recognizes outstanding student accomplishments by awarding a number of scholarships. There are two categories of scholarships: academic and additional. For additional scholarship information, please see our web site at www.cc.edu/prospective/scholarships.asp.

Grants

Grants are awarded based upon a student's demonstrated financial need as determined by the Free Application for Federal Student Aid (FAFSA). A student can receive a grant from the Federal Government, the State of Wisconsin (if a Wisconsin resident), and Carroll College. Like scholarships, grants are considered gift aid that does not need to be repaid. For additional grant information, please see our web site at www.cc.edu/prospective/finaid_grants.asp.

Loans

Students who obtain a loan must adhere to the terms of the loan. The terms include repayment, entrance and exit counseling, and conditions under which students may obtain deferral or partial loan repayment for volunteer service. For additional loan information, please see our web site at www.cc.edu/prospective/finaid_loans.asp.

Student Employment

College employment opportunities allow students to earn an hourly wage and receive a monthly paycheck while attending Carroll. Students may work from five to 14 hours each week. The number of hours a student may work depends upon the student's financial aid award. Students eligible for federal work-study are given first preference for employment positions. Students eligible for federal work study are encouraged to participate in off-campus community service positions. For additional student employment information, please see our web site at www.cc.edu/prospective/finaid_employment.asp.

PART-TIME STUDIES

Carroll College is committed to helping adults gain and utilize knowledge which will enrich their personal and professional lives. The College offers the opportunity for students to earn a bachelor's degree or certification through part-time study. Day, evening, and web-based classes are offered, allowing students the flexibility to combine work and family responsibilities with continuing study. The curriculum is designed to provide part-time students with educational opportunities that are comparable in quality and purpose to those offered to traditional, full-time undergraduates.

Part-time students considering enrollment at Carroll will work closely with an adviser to design their academic programs. Evening and Saturday appointments are available through the office of admission. The B.A. or B.S. degree is awarded upon completion of 128 credits with the last 32 credits and one-fourth of the major(s) and minor(s) completed at Carroll. The credits can be comprised of transfer credit, Carroll credit, and, in many instances, CLEP and/or Prior Learning credit. A maximum of 64 credits may be transferred from an accredited two-year institution. A minimum grade point average of 2.00 is required for graduation (this includes the overall GPA as well as the Carroll GPA).

All majors are available to part-time students with the ability to take day classes. Part-time students can also complete the degree requirements for nine majors by attending exclusively in the evening or by combining online courses with evening and/or Saturday attendance. A majority of the certificate programs are offered in the evenings with some course work offered on Saturday as well.

Evening/Saturday Degree Options

Accounting
Business Administration (Management emphasis only)
Commercial Art
Communication
Computer Science
Education*
Graphic Communication
Organizational Leadership
Psychology

*It is recommended that Part-Time Studies students coordinate with the Education office for advising as soon as possible for current DPI requirements.

General Education Requirements

Part-time students complete the following general education courses:

- English 170, Writing Seminar
- Math 106 or higher is required for all students pursuing a Bachelor of Arts degree or a Bachelor of Science in Nursing degree. Students pursuing a Bachelor

PART-TIME STUDIES

of Science degree are required to complete either Math 112, or Math 140 or higher.

- The Liberal Studies Program (LSP) requirements are part of a part-time student's course of study regardless of his or her major and are intended to impart the breadth of learning that is the hallmark of a liberal education. All degree candidates must complete one course from each of the seven areas listed on pages 11-14.
- Capstone Experience: Each discipline offers its own Senior Capstone to serve as a bridge to graduate study and/or career. This gateway experience represents the culmination of each student's major course of study by providing opportunities to bring together the learning that has occurred during their years of study at Carroll. In addition, the Capstone helps students prepare for their transition to graduate study and/or a career. Students must complete the Senior Capstone in each of their majors.

Degree-Specific Requirements

The required courses for each major are identified in the appropriate section of this catalog.

Special Policy for Part-time students enrolled in student teaching:

Carroll students who have been part-time (11 credits or less) for at least three consecutive semesters (fall and spring only, excluding winter and summer sessions) immediately preceding the student teaching semester, will be charged the part-time tuition rate for the 12 credit semester. All other students will be charged the regular full-time rate for the student teaching semester.

Special Academic Sessions

Summer Sessions

Carroll College offers three summer sessions that provide students with additional flexibility in scheduling their academic programs. The summer sessions make it possible for part-time students to study year round. Summer I begins after commencement in the second week of May and lasts for three weeks. Students can take a maximum of four credits during Summer I. Summer II & III are each six weeks long and run from early June until mid July and from mid July to the end of August, respectively. Students can take a maximum of eight credits in each of the six week sessions. Visitors from other institutions are welcome to enroll in summer courses.

Winter Session

Winter Session is a three-week term in early January. It is a good time to explore new subject matter, fulfill a requirement, or speed up your progress toward graduation. Winter Session includes General Education and Liberal Studies Program courses as well as courses from a variety of majors. Students can take a maximum of four credits during Winter Session.

Web-based Classes

Carroll College web-based courses are designed to provide students with the highest quality learning experience. Web-based courses include a variety of fully online and mostly online courses. Many of the fully online courses are accelerated eight-week courses offered through the Online Consortium of Independent Colleges and Universities (OCICU). The College's membership in OCICU offers students a wider variety of online courses in collaboration with other private colleges and universities. OCICU courses have different add/drop policies, pricing, refund policies, and start and end dates. OCICU courses meet during six eight-week terms throughout the year. Information on web-based courses is available at www.cc.edu/academics/online.

Certificate Programs

Because many adults have learning needs best served by short course sequences, Carroll College offers a number of certificate programs. Certificates are awarded upon completion of a cluster of courses in a relevant field. Students must notify the Office of Part-time Studies when they have completed the required courses. After a review of academic credentials, certificates are issued to students that have met all certificate requirements. Official transcripts detailing the completed coursework must be requested in writing from the Registrar's Office.

Certificates currently available include:

- E-Commerce
- Nonprofit Management
- Programmer Analyst
- World Wide Web

The Office of Part-time Studies is a division of the Admission Office and is located in Voorhees Hall 105. Part-time Studies can be reached by calling 262-524-7220.

STUDENT LIFE

Spiritual Life Program

The office of the chaplain coordinates the religious program at Carroll. Student, faculty and staff committees and organizations share in the initiation and development of programs. The chaplain, representatives of student organizations, clergy from area churches, and occasional special guest speakers contribute to the chapel services. Pastoral care/spiritual growth is provided by the chaplain by appointment. Individual and small group spiritual and educational options are offered for the Carroll community.

Cultural Diversity

Cultural diversity encompasses differences in gender, physical and mental disability, race, sexual orientation, economic status, religious denomination, ethnicity, political affiliation, geographical background, etc. It is associated with the acceptance and awareness in the differences of other people.

Carroll College is committed to diversity by providing comprehensive, holistic student support services and programs that orient students with the culture of the Carroll institution and assist students with the adjustment of their education goals. These programs directly benefit the Carroll student body, faculty, and staff as well as the Waukesha community. In turn, they provide the whole community with opportunities to gain a greater appreciation for the diversity represented on campus.

Student Activities

Student organizations play an active role in the life of the campus. Carroll currently has social fraternities and sororities, a student senate, activities board, cultural diversity organizations, a Habitat for Humanity chapter, an environmental action coalition and many other groups. Student publications include a newspaper and literary magazine. WCCX is the campus radio station. A wide range of arts organizations is open to students, including some by audition.

Student Handbook

The specific rules and regulations of Carroll College, published in the current Carroll student handbook and available to all students on the college's web site, inform students of their responsibilities as well as their rights. The additional expectations associated with enrollment in specific academic programs are published separately.

Intercollegiate Athletics and Carroll College Recreation

Carroll College is a member of the Midwest Conference and Division III of the National Collegiate Athletic Association. The institution offers intercollegiate sports in men's baseball and football, men's and women's basketball, cross country, golf, indoor and outdoor track and field, soccer, swimming, and tennis, and women's softball and volleyball. Student-athletes are required to maintain good academic and social standing as defined in the student handbook in order to participate in the intercollegiate athletic program.

The Carroll College Recreation Program includes an intramural sports program, open recreation program, the Ganfield Gymnasium Fitness Center, and Dance and Cheerleading.

Residence Life

Living on-campus is an important part of the college experience. All full time freshmen and sophomores who are not living at home with parents or immediate relatives must reside in college housing. The residence halls are staffed with live-in professionals and student resident assistants specifically trained to build community and respond to student needs.

Housing

Requests for housing are handled through the college's housing office. Returning students have the option of being assigned to spaces in the spring semester. New students are assigned spaces based on the date their housing contract is returned. Part-time students may petition to live on campus contingent on available space. Residence options include:

Bergstrom Complex: North and South Bergstrom are both coeducational halls.

Kilgour Hall: Kilgour is an all-female hall. It also houses the offices of Student Life.

Steele/Swarthout Complex: Steele and Swarthout halls are joined by a common lobby area. Both halls are coeducational with men and women living on alternate floors.

New Hall: New Hall is a coeducational residence facility housing students in suite-style rooms. Each suite houses four students with a private bathroom.

Charles House: Charles House is a coeducational residence facility and is available to sophomores, juniors and seniors with no behavioral conduct history.

Wright House: Wright House is a coeducational residence facility available to upperclassmen with no behavioral conduct history and a 3.0 or higher GPA requirement.

Carroll, College, and Hartwell Apartments: College-owned apartments available to upperclassmen with no behavioral conduct history. Double and triple units are selected through the housing assignment process.

Safety

Carroll is dedicated to maintaining a safe environment and therefore employs its own security personnel, consisting of campus safety officers and off-duty Waukesha County sheriff's deputies. The campus has 24-hour-a-day coverage. Regular programs and publications inform the campus community about safety issues and measures.

A copy of Carroll College's annual security report is available online. This report includes statistics for the previous three years concerning reported crimes that occurred on campus; in certain off campus buildings or property owned or controlled by Carroll College; and on public property within or immediately adjacent to and

STUDENT LIFE

accessible from, the campus. The report also includes institutional policies concerning campus security, such as policies concerning alcohol and other drug use, crime prevention, the reporting of crimes, sexual assault, and other matters.

The report is available in an electronic version by accessing the following web site: [http://www2.cc.edu/prospective/crime statistics.html](http://www2.cc.edu/prospective/crime%20statistics.html)

A paper copy of this report is available from the Campus Safety Office located in the Campus Center at 262-524-7300.

Career Services

Carroll College provides a wide range of career education programs and services, offering assistance with choosing a major and career, preparing for a job search or graduate school application. A career laboratory and library, vocational testing, career counseling, informational interviewing and educational/placement programs and services are offered. Career Services maintains a web site with current technology to match student résumés with employers who are recruiting recent graduates:

<http://depts.cc.edu/studentlife/careerservices.asp>.

Counseling Services

Personal counseling is available to all full-time students at the Walter Young Center on the Carroll campus. Experienced, masters level therapists assist students with concerns regarding family, relationships, self-esteem, academic difficulties and other issues.

Students needing longer-term treatment are referred to a community resource.

Health Center

The Health Center at Carroll is staffed by nurse practitioners who treat students for a variety of minor illnesses and injuries. There are modest charges to see the nurse practitioners, receive medications, have lab tests, etc. Students needing further treatment are referred to community medical services and are responsible for any costs for those services.

Insurance

Health Insurance - Carroll College is concerned about the health and welfare of all its students. Carroll requires all students to have health insurance for necessary protection in case of unexpected health needs. Students may enroll in the student health plan offered by the college, or they must demonstrate that they have coverage through another plan. Many HMOs do not provide coverage outside of a particular area, so students and their parents should review their coverage before declining the student health plan.

Student-Athletes - the college carries an insurance policy that covers athletes who are injured during practice for, or while participating in, an intercollegiate athletic event. The student athlete is responsible for any deductible. This coverage does not extend to students who participate in intramural sports except in the case of catastrophic injury.

Vehicles - the college carries insurance on all of its vehicles. Any student receiving permission to drive a college vehicle must be approved by the college's insurance company before he or she drives any of its vehicles.

Property - Carroll College's property insurance policy covers damage to, or theft of, college-owned property only. It does not cover any personal property belonging to students.

Liability - Certain students are required to carry professional liability insurance when enrolled in any clinical course. These students include, but are not limited to, professional phase physical therapy and nursing students. Cost varies according to plan selected.

Disability Policy for Students

The Carroll College Policy on Individuals with Disabilities

Carroll College is committed to making otherwise qualified students with disabilities full participants in its programs, courses, services and activities. We are guided by the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. Individuals will receive reasonable accommodations according to their needs and the documentation of their disability.

Carroll Admissions Policy

College applicants with disabilities bear no obligation to disclose their disabilities during the application process. However, an applicant may choose to disclose his/her disability to the Office of Admission if the student believes that he/she does not meet the college's regular admission requirements. The disability may be taken into consideration in relationship to the student's overall achievement, the effect of the disability on his/her academic achievement, and the likelihood of the student's success in the college's programs, courses and activities.

Accommodation Request Process

Accommodation requests should be made through the Walter Young Center. In order to be eligible for reasonable accommodation(s) from the college, the student must provide recent, relevant and comprehensive documentation of the disability, and the disability's impact on the student's participation in a course, program or activity. Should documentation from the student be inadequate or incomplete, the college reserves the right to require additional documentation. The cost of providing additional documentation will be borne by the student. However, if documentation is complete, but the college seeks a second professional opinion, the college will pay for the cost of that second opinion. The college also reserves the right to deny accommodation until necessary documentation is received. Requested accommodations will be approved or disapproved by the Disabilities Services Office at the Walter Young Center following a Reasonable Accommodation Conference. Any accommodation decision may be appealed in writing to the Dean of Students within ten (10) days of the decision. Any request for additional or modified accommodations must be made in writing to the Disabilities Services Office.

TODD WEHR MEMORIAL LIBRARY

Linda Hartig	Reference Librarian
Susan Heffron	Instructional Services Librarian
Lelan McLemore	Director of Library Services and Professor of Politics
Amelia Osterud	Access Services Librarian
Allison Reeves	Associate Director of Library Services and Director of the Learning Commons
Susan Riehl	Public Service/Technical Services Librarian
Catherine Sanders	Serials/Electronic Resources Librarian and Archivist
Karla Strand	Diversity Librarian

Mission

The mission of the Library is to serve students by providing access to information, by maintaining an environment that promotes a culture of academic excellence, and by offering instruction that fosters scholarship, integrity, independent intellectual growth, and the sophisticated information skills necessary for lifelong learning.

Carroll's Library and Special Collections

Ten library faculty and staff and more than 40 students work to purchase, organize and make available a rich blend of materials and access points. The collection contains over 140,000 books and bound periodicals and over 8,000 nonbook items (videos, sound recordings, software, microform, etc.). The Library receives nearly 400 print periodicals, as well as over 18,000 electronic periodicals in full text. The Library's collections provide the basic informational resources required for programs offered by the college.

In addition to the Carroll collections, the Library also provides access to materials held across the state, the nation and the world through its home pages, online catalog, a variety of online services and the Internet, nearly all of which are available from off campus. Strong consortial relationships ensure the availability of supplemental materials that enrich study and research.

The Library offers an instruction program which teaches students methods of research and how to evaluate information applicable to all of the programs offered by the college. Library instruction begins in the First Year Seminar (FYS) program and continues as students work on assignments which require them to deal with a world of rapidly proliferating information and delivery systems. Librarians work with course assignments in classes and provide research assistance at the reference desk. Library instruc-

tion provides students with a foundation for learning at Carroll College and throughout their lives.

The Library provides a safe, clean and comfortable environment with state of the art technology and study spaces to accommodate a variety of study styles: quiet spaces, individual carrels, large tables, group rooms, hard chairs, soft chairs. The library is open 101 hours per week when class is in session during the academic year September through May. Hours are reduced during the summer or when classes are not in session.

Curriculum Materials Center (CMC)

The CMC, located on the main level of the Library, is dedicated to the needs of Education students on campus. The CMC collection is comprised of children's literature and curriculum materials appropriate for education levels K-12.

Special Collections

The Library's holdings include rare and historic books located in Special Collections. Bibles, literature, history and science titles from as far back as 1604 are part of Special Collections. All materials are accessible to interested students and faculty and may be used in the Library. Please ask for assistance at the Reference Desk.

College Archives

The College Archives contains official records and publications, private papers, photographs, books, periodicals, audio and video recordings and museum artifacts that record and illustrate the history and life of the college. These materials provide historical information about the Board of Trustees, the faculty, the student body, alumni, academic programs, the curriculum, administrative offices, campus services, college organizations and campus activities.

Learning Commons

The Learning Commons, located on the lower level of the library, is the center for several academic support activities including the Writing Center, course related tutoring, and the college's Supplementary Instruction Program.

Please see the Library's home page <http://divisions.cc.edu/library> for more information regarding the Library's services and policies.

CARROLL COLLEGE IN PROFILE

Carroll College was founded in 1846 and is Wisconsin's oldest institution of higher learning. The college is affiliated with the Presbyterian Church (U.S.A.), but is non-sectarian in its practices. Carroll confers the bachelor of arts, bachelor of science, bachelor of science in nursing, bachelor of music education, master of education, master of software engineering and doctor of physical therapy degrees. The 50-acre Carroll campus is located in the heart of Waukesha, Wisconsin, a city with a population of 65,000 residents within easy driving distance of Milwaukee, Chicago and Madison.

Today, Carroll enrolls a total of 3,300 full- and part-time students in its undergraduate and graduate programs. Though many of the college's students come from Wisconsin, 23 states and 32 foreign countries are represented on campus. Carroll's 116 full-time faculty are regarded as experts in their fields. The vast majority hold terminal degrees appropriate to their disciplines. The institution also draws upon the services of a wide range of distinguished adjunct faculty to deliver the personalized liberal arts education that is the hallmark of the Carroll experience.

COLLEGE CORPORATION

2007-2008

CARROLL COLLEGE

The corporate name of the college is Carroll College, Inc.

Officers

Chair	William G. Laatsch
Chair Emeritus	Pershing E. MacAllister
Vice Chair	Charmaine L. Ponkratz
Treasurer	James M. Schneider
Secretary	Jeffery T. Cummisford
President of the College	Douglas N. Hastad

Trustees

Gary S. Bosak '69, *Vice President Strategic Operations (retired), Sears Roebuck & Co., Sun City West, Az.*

Steven A. Burd '71, *Chairman, President and CEO, Safeway Inc., Pleasanton, Calif.*

Jeffrey T. Cummisford '73, *VP, Mortgage and Field Manager, Johnson Bank, Waukesha, Wis.*

James W. Ehrenstrom '58, *Executive Consultant, Leehecht-Harrison, Ltd, Mequon, Wis.*

Martin H. Frank '63, *Vice President, Waukesha State Bank, Waukesha, Wis.*

Rev. L. John Gable, *Senior Pastor, Crossroads Presbyterian Church, Mequon, Wis.*

Douglas N. Hastad, *President, Carroll College, Waukesha, Wis.*

William G. Laatsch '60, *Professor of Geography, University of Wisconsin-Green Bay Green Bay, Wis.*

Pershing E. MacAllister '40, *Chairman of the Board, MacAllister Machinery Company Indianapolis, Ind.*

Steven C. Miller '76, *President, BeneCo of Wisconsin, Inc., Brookfield, Wis.*

Alice Crofts Morava '52, *Vice President and CEO, Stuart W. Johnson & Co., Inc., Lake Geneva, Wis.*

Bruce M. Otto '58, *Vice President (retired) for Planning and Administration, Amoco Technology Company, East Troy, Wis.*

Donald E. Peters '71, *Executive Vice President; Director of Systems & Operations (retired), Associated Banc-Corp Services, Inc., Stevens Point, Wis.*

Charmaine L. Ponkratz '77, *Vice President Marketing (retired), Marshall & Ilsley Corp., Punta Gorda, Fl.*

Dennis G. PUNCHES '58, *President, Payback, L.P., Waukesha, Wis.*

Thomas A. Quadracci, *Chairman and CEO, Quad/Graphics, Sussex, Wis.*

E. John Raasch '67, *Attorney, Tikalsky, Raasch & Tikalsky, Waukesha, Wis.*

James M. Schneider '74, *Chairman of the Board Frontier Bancshares, Inc., Austin, Texas*

Marna M. Tess-Mattner '75, *Attorney (Labor Law), VP, Milwaukee, Wis.*

David J. Vetta '76, *President & CEO First Business Bank-Milwaukee, Brookfield, Wis.*
Jerome E. Vielehr, *Laureate Investments, Mequon, Wis.*
Jeffrey M. Waller '73, *Vice President-Human Resources, Asia-Pacific, S.C. Johnson & Son, Inc., Racine, Wis.*

Alumni Representative

Blane D. Dexheimer '86, *Director-Corporate Bonds, Northwestern Mutual Insurance, Milwaukee, Wis.*

Honorary Life Trustees

Charles W. Anderson, *Brookfield, Wis.*
Robert V. Cramer, *Louisville, Ky.*
Joan Hardy, *Waukesha, Wis.*
L.B. Hardy, *Waukesha, Wis.*
Lee Melville '50, *Waukesha, Wis.*
Richard H. Miller, *Milwaukee, Wis.*

CARROLL FACULTY

2007-2008

Douglas N. Hastad, 2006

President

B.A., Concordia College, Moorhead, Mn.

M.S., Washington State University

Ed.D., Arizona State University

Julie A. Averbeck, 2004

Assistant Professor of Nursing

*B.S.N., University of Wisconsin-
Eau Claire*

M.S.N., Arizona State University

Jason Badura, 2005

Visiting Assistant Professor of Politics

B.A., Gustavus Adolphus College

M.A., University of Wisconsin-Milwaukee

Monika Baldrige, 2005

Assistant Professor of Biology

B.S., Marquette University

Ph.D., University of Wisconsin-Milwaukee

William F. Bauer, 2004

Assistant Professor of Business

B.A., Kent State University

M.A., Trinity International University

Daniel Becker, 2006

*Assistant Professor of Graphic
Communication*

B.A., University of Wisconsin-Eau Claire

M.A., DePaul University

John S. Bennett, 2002

Assistant Professor of Biology

*B.S., University of Wisconsin-Stevens
Point*

Ph.D., Loyola University Chicago

Lynne L. Bernier, 1987

Associate Professor of Politics

B.A., Carroll College

M.A., Fletcher School, Tufts University

Ph.D., University of Wisconsin-Milwaukee

B.J. Best, 2006

Instructor in English

B.S., Drake University

M.F.A.W., Washington University

Robert G. Black, 1994

Professor of Spanish

*A.B., M.A., Ph.D., University of
California-Berkeley*

David A. Block, 1988

Associate Professor of Geography

B.S., Carroll College

*M.S., Ph.D., University of Wisconsin-
Milwaukee*

Kim Boykin, 2007

Assistant Professor of Religion

B.A., Vassar College

*M.T.S., Candler School of Theology,
Emory University*

Scott M. Boyle, 2000

Assistant Professor of Theatre Arts

B.F.A., University of Wisconsin-Superior

M.F.A., University of Missouri-Kansas City

Angela Brindowski, 2006

Assistant Professor of Nursing

*B.S.N., University of Wisconsin-
Milwaukee*

M.S.N., University of Phoenix Online

Genee A. Brukwitzki, 2005

Assistant Professor of Nursing

*B.S.N., University of Wisconsin-
Milwaukee*

M.S.N., Marquette University

Ph.D., University of Wisconsin-Milwaukee

Thomas Bruno, 2002

Assistant Professor of Theatre Arts

*B.F.A., State University of New York at
Purchase*

M.F.A., Penn State University

CARROLL FACULTY

Charles A. Byler, 1990
Professor of History
B.A., Whitman College
M.A., University of Washington
Ph.D., Yale University

Peter Byrne, 2006
Assistant Professor of English
B.A., University of California-Los Angeles
M.A., Ph.D., University of California-Irvine

Timothy J. Cloeter, 2004
Assistant Professor of Music
B.S., Concordia Teachers College
M.M., Westminster Choir College

Richard H. Coon, 1983
Associate Professor of Sociology
B.A., University of Wisconsin-La Crosse
M.A., University of Wyoming
Ph.D., Iowa State University

Amy A. Cropper, 1995
Associate Professor of Art
B.A., Whitman College
M.A., M.F.A., University of Iowa

Joseph M. Dailey, 1972
Associate Professor of Communication
B.A., St. Norbert College
M.A., Marquette University
Ph.D., University of Illinois

Mary Lee Danielson, 2007
Assistant Professor of Education
B.S., University of Wisconsin-Stout
Ed.D., University of North Carolina-Chapel Hill

Stephen J. Dannhoff, 2006
Assistant Professor of Physical Education
B.S., M.S., University of Wisconsin-La Crosse

Elena M. De Costa, 1995
Associate Professor of Spanish
B.A., Boston State College
M.A., Ph.D., University of Wisconsin-Madison

Dennis M. Debrecht, 1984
Associate Professor of Economics
B.A., Benedictine College
Ph.D., Iowa State University

Sara Deprey, 2000
Assistant Professor of Physical Therapy
B.S.P.T., M.S.P.T., Finch University of Health Sciences/The Chicago Medical School

Rose Ann Donovan, 2002
Assistant Professor of Education
B.S., University of Wisconsin-Madison
M.A., Silver Lake College

Brian P. Edlbeck, 2004
Assistant Professor of Exercise Science
B.S., University of Wisconsin-Stevens Point
M.S., University of Wisconsin-Milwaukee

Mark R. Erickson, 2003
Assistant Professor of Physical Therapy
B.S., University of Wisconsin-LaCrosse
M.A., University of Minnesota

Heather Harken Evans, 2006
Instructor in Mathematics
B.S., University of Wisconsin-Whitewater
M.Ed., Cardinal Stritch University

Peggy Thurston Farrell, 1991
Assistant Professor of Art
B.A., Carroll College
M.A., M.F.A., University of Wisconsin-Milwaukee

David Feil, 2001
Associate Professor of Mathematics
B.A., Coe College
Ph.D., University of Iowa

Timothy J. Fiedler, 1976
Associate Professor of Sociology
B.A., St. Cloud State University
M.A., Ph.D., Southern Illinois University

CARROLL FACULTY

Mary Fossier, 2005
Instructor in Modern Languages
B.A., M.A., University of Wisconsin-
Milwaukee
*Etudes Supérieures Université de Paris-
Censier*

Jason Freund, 2006
*Assistant Professor of Environmental
Science*
B.S., University of Wisconsin-Platteville
M.S., Ph.D., West Virginia University

Robert J. Friebus, 1975
Associate Professor of Sociology
B.A., Concordia Teachers College
M.A., Southern Illinois University
Ph.D., University of Illinois at Chicago
Circle

Catherine M. Goodale, 2006
Assistant Professor of Nursing
B.S.N., Marquette University

Lilly Goren, 2005
Associate Professor of Politics
A.B., Kenyon College
M.A., Ph.D., Boston College

Karen L. Gorton, 2003
Assistant Professor of Nursing
B.S., Wheaton College
B.S.N., Carroll College and Columbia
College of Nursing
M.S., Indiana University

Lisa Green, 2006
Assistant Professor of Nursing
B.S.N., Viterbo University
M.S.N., Cardinal Stritch University

James P. Grimshaw, 2004
Assistant Professor of Religion
B.S., Rose-Hulman Institute of Technology
M.Div., Christian Theological Seminary
Ph.D., Vanderbilt University

Denise D. Guastello, 1989
Associate Professor of Psychology
B.A., Northwestern University
M.S., Illinois Institute of Technology
Ph.D., Loyola University of Chicago

Kevin S. Guilfooy, 2004
*Assistant Professor of Religion and
Philosophy*
B.A., University of Vermont
M.A., Ph.D., University of Washington

Larry D. Harper, 1986
Professor of Music
B.A., California State University-
Northridge
M.S., University of Illinois
D.M.A., Michigan State University

Hugo J. Hartig, 1976
Professor of Music
B.M., B.M.E., University of Wisconsin-
Oshkosh
M.M., University of Oregon
Ph.D., Michigan State University

Linda Hartig, 1997
*Reference Librarian with the rank of
Librarian III*
B.Mus., M.A.T., University of Oregon-
Eugene
Ph.D., Michigan State University
M.L.S., University of Wisconsin-Milwaukee

Susan K. Heffron, 2005
Instructional Services Librarian
B.A., Clarke College
M.L.I.S., University of Wisconsin-
Milwaukee

Joseph J. Hemmer Jr., 1970
Professor of Communication
B.S., Wisconsin State University-Oshkosh
M.A., Bradley University
Ph.D., University of Wisconsin-Madison

Scott Hendrix, 2007
Assistant Professor of History
B.A., Athens State University
M.A., University of Tennessee

Kimberly K. Hofkamp, 2005
Assistant Professor of Education
B.S., University of Wisconsin-Madison
M.A.E., Silver Lake College

CARROLL FACULTY

Jane F. Hopp, 1994
Dean of Natural and Health Sciences
Associate Professor of Physical Therapy
B.S.P.T., University of Wisconsin-Madison
M.S., Medical College of Wisconsin
Ph.D., University of Illinois at Chicago

Cynthia J. Horst, 1994
Associate Professor of Biology
B.A., Goshen College
Ph.D., Emory University

Chenglie Hu, 2001
Professor of Computer Science
B.S., M.S., East China Normal University
Ph.D., Wichita State University

Carolyn Cristel Hurst, 2006
Instructor in Biology
B.A., Lewis & Clark College
Ph.D., Arizona State University

Rebecca Imes, 2005
Assistant Professor of Communication
B.A., Nebraska Wesleyan University
M.A., Emerson College/Tufts University
School of Medicine
Ph.D., University of Iowa

Gerald L. Isaacs, 1978
Professor of Computer Science
B.S., University of Minnesota
M.S., Ph.D., University of Iowa

William Jablonsky, 2006
Instructor in English
B.A., M.A., Northern Illinois University
M.F.A., Bowling Green State University

Darrel A. Johnson, 2007
Visiting Instructor in Mathematics
B.S., M.S., University of Wisconsin-
Milwaukee

Catherine E. Jorgens, 2006
Risk Manager
Lecturer in Business
B.A., University of Wisconsin-Madison
J.D., University of Wisconsin School of
Law

Lara P. Karpenko, 2006
Assistant Professor of English
B.A., University of California-Santa
Barbara
M.Ed., University of California-Los
Angeles
Ph.D., University of Notre Dame

Margaret D. Kasimatis, 1998
Assistant Professor of Psychology
B.A., St. Mary's College, Notre Dame
M.A., Ph.D., Loyola University of Chicago

Deirdre M. Keenan, 1991
Associate Professor of English
B.A., M.A., Ph.D., University of
Wisconsin-Milwaukee

Lori Duin Kelly, 1986
*The Mary Robertson Williams Chair in
English*
Professor of English
B.A., St. Xavier College
M.A., University of Chicago
Ph.D., University of North Carolina-
Chapel Hill
(on sabbatical leave, fall 2007)

Barbara L. King, 1995
Associate Professor of Communication
B.A., Carroll College
M.A., Purdue University
Ph.D., Wayne State University

Karie M. Ruekert Kobiske, 2004
Assistant Professor of Nursing
B.S.N., Carroll College
M.S.N., Marquette University

Michael G. Konemann, 1984
Associate Professor of Computer Science
B.S., Carroll College
M.S., Marquette University

Kathrine Kramer, 2000
Assistant Professor of Education
B.S., M.S., University of Wisconsin-
Whitewater

CARROLL FACULTY

Philip L. Krejcarek, 1977
Professor of Art
B.S., *University of Wisconsin-Oshkosh*
M.F.A., *University of Wisconsin-Milwaukee*
(on sabbatical leave, fall 2007)

Gregory A. Kuhlemeyer, 2000
Dean of Professional and Graduate Studies
Associate Professor of Business
B.S., *Western Illinois University*
M.B.A., Ph.D., *University of Tennessee-Knoxville*

Michael S. Kula, 2004
Assistant Professor of English
Writer-in-Residence
B.A., *Vanderbilt University*
M.F.A., *Emerson College*

Laurie A. Kunkel-Jordan, 2006
Assistant Professor of Nursing
B.S.N., *Alverno College*
M.S.N., *Marquette University*

Jeffrey T. Kunz, 1981
Assistant Professor of Accounting
B.S., *St. Norbert College*
M.S., *University of Wisconsin-Whitewater*

Christopher Kuster, 2007
Assistant Professor of Mathematics
B.A., *Knox College*
M.S., Ph.D., *North Carolina State University*

Kristen A. Lampe, 2000
Associate Professor of Mathematics
B.A., *University of Dayton*
M.A., Ph.D., *Washington University in St. Louis*

Michael G. Levas, 1985
Assistant Professor of Business
B.S., M.B.A., *Northern Illinois University*

Susan E. Lewis, 1994
Professor of Biology
B.A., *Earlham College*
M.A., Ph.D., *University of Minnesota*

David B. MacIntyre, 1996
Assistant Professor of Exercise Science
B.S., *Hope College*
M.S., *Pennsylvania State University*

Edward J. Maher, 2004
Assistant Professor of Physical Therapy
B.S.P.T., *University of Wisconsin-Madison*
M.P.T., D.Sc.P.T., *Andrews University*

Akhtar Mahmood, 2007
Assistant Professor of Physics
B.S., *Edinboro University*
M.S., Ph.D., *State University of New York at Albany*

Gergory T. Marks, 2006
Assistant Professor of Chemistry
B.S., *Marquette University*
Ph.D., *Medical College of Wisconsin*

Abigail M. Markwyn, 2006
Assistant Professor of History
B.A., *Carleton College*
M.A., Ph. D., *University of Wisconsin-Madison*

Christopher May, 2007
Assistant Professor of Psychology
B.S., *Tulane University*
M.A., *University of California, Davis*

Janet H. McClintock, 1996
Assistant Professor of Nursing
B.S.N., *Niagara University*
M.S., *Southern Connecticut State University*
M.S.N., *Yale University*

Lelan E. McLemore, 1972
Dean of Humanities and Social Sciences
Director of the Library
Professor of Politics
B.A., *Baylor University*
M.A., *State University of New York at Buffalo*
Ph.D., *University of Oklahoma*

Kevin McMahan, 2000
Associate Professor of Chemistry
B.Sc., *University of Edinburgh*
M.Sc., Ph.D., *Dalhousie University*

CARROLL FACULTY

Susan Nusser, 2005
Assistant Professor of English
B.A., Boston University
M.F.A., Emerson College

Gary L. Olsen, 1975
Associate Professor of Accounting
B.S., Northern Michigan University
M.B.A., University of Illinois
Ph.D., Marquette University

Amelia Osterud, 2006
Access Services Librarian
B.F.A., M.A., M.L.I.S., University of
Wisconsin-Milwaukee

Tammy L. Ostroski, 2004
Assistant Professor of Nursing
B.S., Carroll College
M.S.N., University of Wisconsin-
Milwaukee

Thomas Pahnke, 2006
*Assistant Professor of Athletic Training
and Physical Therapy*
B.S.P.T., University of Wisconsin-Madison
M.S., Purdue University

Richard J. Penlesky, 2002
Professor of Business
B.S., M.B.A., Marquette University
D.B.A., Indiana University

Linda M. Phillips, 2005
Assistant Professor of Nursing
B.S.N., University of Wisconsin-
Milwaukee
M.S.N., Concordia University Wisconsin

Joseph J. Piatt, 1998
*Associate Professor of Chemistry and
Environmental Science*
B.S., Marquette University
M.S.C.E., University of Minnesota
Ph.D., University of Arizona

Pamela Pinahs-Schultz, 1980
Professor of Physical Education
B.Ed., University of Wisconsin-Oshkosh
M.S.Ed., Chicago State University
Ph.D., University of Wisconsin-Milwaukee

Julie A. Rapps, 1999
Assistant Professor of Biology
B.S., Southwest Missouri State University
Ph.D., University of Missouri

Kimberly Redding, 2001
Associate Professor of History
Social Sciences Area Chair
B.A., Goucher College
M.A., Ph.D., University of North
Carolina-Chapel Hill

Allison M. Reeves, 2002
Associate Director of Library Services
Access Librarian-rank of Librarian II
B.A., University of Alabama
M.A.Ed., University of Alabama at
Birmingham
M.L.I.S., University of Wisconsin-
Milwaukee

Susan I. Riehl, 2005
*Public Service/Technical Services
Librarian*
B.A., M.A., M.L.I.S., University of
Wisconsin-Milwaukee

Elise Riepenhoff, 2007
Assistant Professor of Education
B.S., M.S., University of Wisconsin-
Milwaukee

Nicholas Roberts, 2007
Visiting Assistant Professor of History
B.A., Carleton College
M.A., University of Chicago

Wilma Robinson, 2001
Assistant Professor of Education
B.A., Howard University
M.P.A., University of Wisconsin-Oshkosh
Ph.D., University of Wisconsin-Madison

Pacia Sallomi, 1997
Associate Professor of Art
B.S., University of California, Davis
M.A., University of New Mexico
M.F.A., Texas Tech University

CARROLL FACULTY

Catherine M. Sanders, 2005
Serials and Electronic Resources Librarian
B.A., *St. Norbert College*
M.A., *Marquette University*
M.L.I.S., *University of Wisconsin-Milwaukee*

Susan Vig Saucier, 2005
Assistant Professor of Nursing
B.S., *University of Wisconsin-Madison*
M.S., *University of Wisconsin-Milwaukee*

Matthew Scheel, 2007
Assistant Professor of Psychology
B.A., *Winona State University*
M.A., *Mankato State University*
Ph.D., *University of Nevada*

Tara Schmidt, 2007
Assistant Professor of Psychology
B.S., *Carroll College*
M.S., *University of Wisconsin-Milwaukee*

Michael D. Schuder, 1994
*The Edna M. and Edgar A. Thronson
Chair in Chemistry*
Associate Professor of Chemistry
B.S., *North Dakota State University*
Ph.D., *University of Colorado*

Debra R. Schultz, 2006
Visiting Assistant Professor of Business
B.S., *Carroll College*
M.S., *Cardinal Stritch University*

Gregory J. Schultz, 2002
Assistant Professor of Business
B.S., *Carroll College*
M.S., *Cardinal Stritch University*

Sally J. Schumacher, 2001
Assistant Professor of Education
B.S., *University of Wisconsin-Eau Claire*
M.A., *Western Michigan University*

Thomas F. Selle, 1983
Associate Professor of Art
B.F.A., M.S., M.F.A., *University of
Wisconsin-Milwaukee*

Kathleen A. Shields, 2005
Assistant Professor of Physical Therapy
B.S.P.T., M.S., *University of Wisconsin-Madison*

David D. Simpson, 1977
Professor of Psychology
A.B., *Oberlin College*
M.A., Ph.D., *Ohio State University*

Diane S. Sokolowski, 2005
Assistant Professor of Nursing
B.S.N., *Carroll College*
M.S.N., *University of Phoenix*

Karla J. Strand, 2006
Learning Commons Librarian
B.A., *Carroll College*
M.L.I.S., *University of Wisconsin-Milwaukee*

Bruce L. Strom, 1990
Associate Professor of Education
B.A., *Grinnell College*
M.A., Ph.D., *Cornell University*

John C. Symms, 1995
Associate Professor of Mathematics
B.S., *University of Arizona*
M.S., Ph.D., *Colorado State University*

Eric Thobaben, 2005
Assistant Professor of Biology
B.S., *Miami University*
Ph.D., *Michigan State University*

Elizabeth R. Towell, 1999
*Vice Provost for Institutional Research,
Planning and Student Success*
*Associate Professor of Business and
Computer Science*
B.S., *University of Southern Colorado*
M.B.A., *Roosevelt University*
Ph.D., *University of Wisconsin-Milwaukee*

John F. Towell III, 1999
Associate Professor of Computer Science
B.A., *University of Colorado*
Ph.D., *Colorado State University*

CARROLL FACULTY

Melvin G. Vance, 2003
Instructor in Religious Studies
B.A., Westmar College
M.Div., S.T.M., Union Theological
Seminary
Ph.D., Marquette University

Janice Weigman, 2006
Assistant Professor of Education
B.S., University of Wisconsin-Oshkosh
M.S., University of Wisconsin-Milwaukee

Kimberly White, 2005
Assistant Professor of Exercise Physiology
B.S., Beloit College
M.S., University of Notre Dame
Ph.D., Purdue University

Mary Ann Wisniewski, 2001
Associate Professor of Education
B.A., Alverno College
M.S., University of Wisconsin-Milwaukee
Ph.D., University of Wisconsin-Madison

Emeriti

Mark C. Aamot, 1974
Professor Emeritus of Music

Judith C. Anderson, 1997
*Associate Professor Emeritus of Physical
Therapy*

Harry A. Auchter, 1953
Associate Professor Emeritus of Physics

Royanna Benjamin, 1946
Registrar Emeritus

John C. Clausz, 1979
Professor Emeritus of Biology

O. Lamar Cope, 1969
*Professor Emeritus of Religion and
Philosophy*

Robert V. Cramer, 1971
President Emeritus

Jack R. Dukes, 1970
Professor Emeritus of History

Russel C. Evans, 1969
Librarian Emeritus

Frank S. Falcone, 1993
President Emeritus

Gordon R. Folsom, 1953
Professor Emeritus of English

Quinten C. Grosskopf, 1966
*Associate Professor Emeritus of
Mathematics*

C. Willis Guthrie, 1946
Professor Emeritus of Art

Eugene S. Haugse, 1966
Professor Emeritus of Political Science

Shirley E. Hilger, 1951
Director of Admission Emeritus

Earl N. Hudson III, 1970
Professor Emeritus of Chemistry

Uldis E. Inveiss, 1963
*Professor Emeritus of Economics and
Business Administration*

Sidney C. Jones, 1961
Professor Emeritus of English

Robert W. Kearns, 1972
Professor Emeritus of Accounting

Gay G. Knutson, 1982
Professor Emeritus of Education

Patricia J. Lamont, 1968
Professor Emeritus of Education

Emily S. Long, 1991
Associate Professor Emeritus of Education

Bruce A. MacIntyre, 1968
Professor Emeritus of Biology

R. Merle Masonholder, 1980
*Associate Professor Emeritus of Physical
Education*

CARROLL FACULTY

Ted C. Michaud, 1959
Professor Emeritus of Biology

David M. Molthen, 1970
Professor Emeritus of Theatre Arts

Merlene A. Moody, 1983
*Associate Professor Emeritus of Business
Administration*

Richard J. O'Farrell, 1973
Professor Emeritus of Mathematics

Ralph F. Parsons, 1974
Professor Emeritus of Psychology

Virginia M. Parsons, 1976
Professor Emeritus of Psychology

Marceil V. Pultorak, 1970
Professor Emeritus of Art

Paul L. Rempe, 1969
Associate Professor Emeritus of History

Paul A. Roys, 1961
Professor Emeritus of Physics

Peter L. Settle, 1974
Professor Emeritus of Communication

Lawrence A. Sinclair, 1958
Professor Emeritus of Religious Studies

Claude H. Slusher, 1958
*Professor Emeritus of Business
Administration*

Morris N. Spencer, 1957
Vice President and Provost Emeritus

Paul D. Starr, 1965
Director Emeritus of Library Services

Daniel T. Steffen, 1974
*Assistant Professor Emeritus of Physical
Education*

Rebecca A. Steffes, 1975
Librarian Emeritus

Gary W. Stevens, 1970
Associate Professor Emeritus of English

Phyllis J. Stringham, 1959
Professor Emeritus of Music

Linda G. Thompson, 1981
Professor Emeritus of Mathematics

James E. Van Ess, 1969
Librarian Emeritus

Glenn A. Van Haitzma, 1958
Professor Emeritus of English

James B. Vopat, 1972
Professor Emeritus of English

Richard J. Watkins, 1976
Professor Emeritus of Chemistry

William D. Welch Jr., 1987
Professor Emeritus of Physics

Mark W. Williams, 1978
*Associate Professor Emeritus of Business
Administration*

Thomas R. Williams, 1966
Professor Emeritus of Philosophy

Manfred G. Wuerslin, 1958
Associate Professor Emeritus of English

CALENDAR

Fall Semester 2007

Sept. 2	Sunday	8 a.m.	Residence halls open to students
Sept. 3	Monday		Labor Day - NO CLASSES
Sept. 4	Tuesday	9 a.m.	Orientation for new part-time and full-time transfer students
		2 p.m.	New student convocation
		3 p.m.	Opening convocation
		5 p.m.	Orientation for new part-time and full-time transfer students
Sept. 5	Wednesday	8 a.m.	Classes begin
Sept. 12	Wednesday		Last day to add classes. Last day to admit new students. Last day to change from PT to FT status OR from FT to PT status.
Sept. 19	Wednesday		First half-semester classes: last day to select S/U grading or to change from S/U to letter grading
Oct. 1	Monday		Last day for part-time students not receiving Title IV aid to drop a class and receive a partial refund
Oct. 3	Wednesday		Last day to select S/U grading or to change from S/U to letter grading
			First half semester classes: last day to drop or change to audit
Oct. 6	Saturday		Homecoming
Oct. 10	Wednesday	9 a.m.	Mid-semester grades due
Oct. 15	Monday	8 a.m.	Mid-semester academic break
Oct. 16	Tuesday	4 p.m.	Classes resume
Oct. 17	Wednesday		Registration begins for winter session 2008
Oct. 29	Monday		Registration packets available for full-time students for spring 2008
Oct. 30	Tuesday		Advising begins for full-time students for spring semester 2008
Nov. 1	Thursday		Last day to drop classes or change to audit
			Deadline for submitting work to instructors for incompletes received the previous spring and summer
Nov. 6	Tuesday		Second half-semester classes: last day to select S/U grading or change S/U to letter grading
Nov. 8	Thursday		Incomplete grades lapse in "F" if no grade submitted from spring and summer 2007
Nov. 12	Monday		Registration begins for currently enrolled students for spring semester 2008
Nov. 20	Tuesday		Second half-semester classes: last day to drop or change to audit
			Registration begins for new students for spring semester 2008

CALENDAR

Nov. 21	Wednesday	4 p.m.	Thanksgiving recess begins. (Residence halls close at 5 p.m.)
Nov. 25	Sunday	Noon	Residence halls open to students
Nov. 26	Monday	8 a.m.	Classes resume
Dec. 11	Tuesday		Last day of classes
Dec. 12	Wednesday		Reading Day; no daytime classes; final examinations for Wednesday evening classes
Dec. 13-15	Thurs-Sat		Final examinations
Dec. 17-18	Mon-Tues		Final examinations

Winter Session 2008

Jan. 2	Wednesday	8 a.m.	Classes begin
Jan. 3	Thursday		Last day to add course
Jan. 4	Friday		Last day to drop course
Jan. 18	Friday		Classes end

Spring Semester 2008

Jan. 19	Saturday		Orientation for new students
Jan. 20	Sunday	Noon	Residence halls open
Jan. 21	Monday	8 a.m.	Classes begin
Jan. 28	Monday		Last day to add classes. Last day to admit new students. Last day to change from PT to FT status OR from FT to PT status.
Feb. 4	Monday		First half-semester classes: last day to select S/U grading or to change from S/U to letter grading
Feb. 6	Wednesday	11 a.m.	Founders' Day Convocation
Feb. 18	Monday		Last day to select S/U grading or to change from S/U to letter grading. First half semester classes: last day to drop or change to audit. Last day for part-time students not receiving Title IV aid to drop a class and receive a partial refund
March 4	Tuesday		Registration begins for summer sessions 2008
March 7	Friday	9 a.m.	Mid-semester grades due
March 13	Thursday		Last day to drop classes or to change to audit
March 14	Friday	5 p.m.	Residence halls close
March 15	Saturday	5 p.m.	Spring recess begins
March 23	Sunday	5 p.m.	Residence halls open
March 24	Monday	4 p.m.	Classes resume
April 2	Wednesday		Registration packets available for full-time students for fall 2008 Second half-semester classes: last day to select S/U grading or change from S/U to letter grading
April 3	Thursday		Advising begins for full-time students for fall semester 2008 Deadline for submitting work to instructors for incompletes received the previous fall and winter

CALENDAR

April 14	Monday	Registration begins for current students for fall semester 2008
April 16	Wednesday	Second half-semester classes: last day to drop or change to audit
April 18	Friday	“Celebrate Carroll”
April 21	Monday	Incomplete grades lapse into “F” if no grade submitted from fall and winter
April 22	Tuesday	Registration begins for new students for fall semester 2008
April 29	Tuesday	Last day of classes
April 30	Wednesday	Reading Day - no daytime classes; final examinations for Wednesday evening classes
May 1-3	Thurs – Sat	Final examinations
May 5-6	Mon – Tues	Final examinations
May 11	Sunday	Baccalaureate and Commencement

Summer Sessions 2008

Session I

May 12	Monday	Classes begin
May 14	Wednesday	Last day to add or register for Summer I
May 15	Thursday	Last day to select S/U grading or to change from S/U to letter grading
May 16	Friday	Last day to drop Summer I class or change to audit
May 26	Monday	Memorial Day – no classes
June 2	Monday	Classes end

Session II

June 3	Tuesday	Classes begin
June 10	Tuesday	Last day to add or register for Summer II
June 17	Tuesday	Last day to select S/U grading or to change from S/U to letter grading
June 24	Tuesday	Last day to drop Summer II classes or to change to audit
July 4	Friday	Holiday - no classes
July 15	Tuesday	Classes end

Session III

July 16	Wednesday	Classes begin
July 23	Wednesday	Last day to add or register for Summer III
July 30	Wednesday	Last day to select S/U grading or change from S/U to letter grading
Aug. 6	Wednesday	Last day to drop Summer III classes or to change to audit
Aug. 27	Wednesday	Classes end

The college offers other courses during the summer on a specially timed basis. The last day to drop classes or change to audit is no later than two-thirds through the course.

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