

The  
Graduate  
Catalog of

North  
Central  
College

2008-09



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# ACADEMIC CALENDARS

	2008-09	2009-10
<b>Fall Term</b>		
Classes Begin	Sept. 15	Sept. 14
Classes End	Nov. 26	Nov. 25
Thanksgiving Recess Begins	Nov. 26	Nov. 25

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<b>Interim</b>		
Interim Begins	Dec. 1	Nov. 30
Interim Ends	Dec. 19	Dec. 18

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<b>Winter Term</b>		
Classes Begin	Jan. 5	Jan. 4
Classes End	Mar. 18	Mar. 17
Spring Break Begins	Mar. 18	Mar. 17

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<b>Spring Term</b>		
Classes Begin	Mar. 30	Mar. 29
Easter Weekend Begins	April 10	April 2
Classes Resume	April 13	April 5
Memorial Day Holiday	May 25	May 31
Classes End	June 10	June 9
Commencement	June 13	June 12

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<b>Summer Term</b>		
Classes Begin	June 15	June 14
Independence Day Holiday	July 4	July 5
Classes End	Aug. 7	Aug. 6

# CONTACT DIRECTORY

North Central staff are happy to answer your questions. Inquiries by mail should be addressed to the specific offices listed below at North Central College, 30 N. Brainard St., Naperville, IL 60540-4690. The College office hours are 8 a.m.-5 p.m. Central Standard Time during the academic year and 8 a.m.-4 p.m. during the summer months. Direct dial telephone numbers for specific offices are listed below. The College's main number is 630.637.5100.

## **Academic Issues - 630.637.5362**

Academic programs, academic personnel, competence, and curriculum

Contact: Dean of Graduate and Continuing Education

## **Admission - 630.637.5840**

Information on graduate programs and admission to North Central

Contact: Director of Graduate Admission, Old Main

## **Alumni Affairs - 630.637.5200**

Information about alumni and alumni programs

Contact: Director of Alumni Relations, Old Main

## **Athletics - 630.637.5500**

Information about athletic events, programs, and use of facilities

Contact: Director of Athletics, Merner Fieldhouse

## **Career Development Center - 630.637.5141**

Career planning, summer jobs and internships, job search preparation and placement, and self-assessment programs

Contact: Director of Career Development, Old Main

## **Office of Community Development - 630.637.5560**

Educational programs for personal and professional growth, non-credit programs, conference planning and facilities utilization.

Contact: Office of Community Development; Cardinal Stadium

## **Continuing Education - 630.637.5555**

Adult and continuing education.

Contact: Office of Graduate and Continuing Education

## **Development - 630.637.5211**

Information on annuity investment opportunities, gifts, bequests, and the Annual Fund

Contact: Vice President for Institutional Advancement, Old Main

## **Financial Aid - 630.637.5600**

Financial aid forms and requirements; Stafford student loans

Contact: Director of Financial Aid, Old Main

## **Graduate Programs - 630.637.5555**

Advising and registration for graduate programs

Contact: Office of Graduate and Continuing Education

## **Marketing and Communications - 630.637.5300**

Information about the College, the calendar, and special events during the year

Contact: Director of Public Information, Old Main

## **Registrar - 630.637.5258**

Information on courses of study and grades, graduation requirements, registration, acceptance of transfer credit, and requests for transcripts

Contact: The Registrar, Old Main

## **Student Affairs - 630.637.5151**

Information about enrolled students, housing, counseling services, student activities, health services, and campus security

Contact: Dean of Students, Old Main

## **Student Accounts - 630.637.5682**

Payment of tuition and fees, room deposits, and questions about student accounts

Contact: Business Office, Old Main



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# THIS IS NORTH CENTRAL

**North Central College is a community of learners dedicated to preparing informed, involved, principled and productive citizens and leaders over a lifetime.**

## **History**

North Central College was founded in 1861 by the Evangelical Association a forerunner of the United Methodist Church. Until 1870 the College was located in Plainfield, Illinois, and was originally known as Plainfield College. The name of the College was changed to North-Western College in 1865 and to North Central College in 1926. The College's founders expressed the advanced thought for that day that "Christian commitment and intellectual attainments are compatible," and from the beginning the College was non-sectarian in its hiring and admission practices. This pioneering concept – along with the commitment to the inclusiveness and diversity of the United Methodist Church – is part of the heritage of North Central and continues to add depth and meaning to its programs.

## **Degrees awarded**

North Central College offers six graduate degrees which complement and enhance the College's distinctive educational mission and liberal arts heritage by providing opportunities for advanced scholarly work and professional development: Master of Science Degree in Computer Science, Master of Business Administration Degree, Master of Science Degree in Management Information Systems, Master of Arts Degree in Liberal Studies, Master of Arts Degree in Education (Leadership and Administration track and Curriculum and Instruction track), and Master of Leadership Studies Degree. Additionally, students may earn dual degrees with the Master of Business Administration and Master of Science in Management Information Systems Degrees, and the Master of Science in Computer Science and Master of Science in Management Information Systems Degrees. North Central also offers graduate certificates for individuals who have earned an undergraduate degree or graduate degree, and now seek short, more focused programs of study.

## **Accreditation and Affiliation**

North Central College is accredited by the Higher Learning Commission and is a member of the North Central Association of Colleges and Schools. The College is also accredited by the University Senate of the United Methodist Church. It maintains membership in the American Council on Education, the Council of Independent Colleges and Universities, the Council for the Advancement and Support of Education, the Federation of Independent Illinois Colleges and Universities, the Associated Colleges of Illinois, and the Associated New American Colleges (as a founding member). The North Central Association of Colleges and Schools can be reached at 30 N. LaSalle St., Chicago, IL 60602-2504, by calling 312.263.0456, or via the internet at <http://www.ncahigherlearningcommission.org>.

## **Compliance with Legal Requirements**

North Central College does not discriminate in its admission policy, programs, or activities on the basis of race, religion, gender, age, national origin, ancestry, marital status, sexual orientation, handicap, disability, veteran status, or unfavorable discharge from military service. Nor does the College discriminate on the basis of race, color, religion, gender, age, national origin, ancestry, marital status, sexual orientation, handicap, disability, veteran status, or unfavorable discharge from military service in its educational policies, scholarship and loan programs, athletic and other college-administered programs, or hiring practices and programs. In addition to meeting fully its obligations of non-discrimination under federal and state laws, North Central College is committed to maintaining a community in which a diverse population can live and work in an atmosphere of tolerance, civility, and mutual respect for the rights and sensibilities of each individual, regardless of difference in economic status, ethnic background, political views, or other personal characteristics and beliefs.

The College is also committed to providing all of its students, faculty, staff and visitors with access to its programs, events, and facilities. To this end, and in compliance with the Americans with Disabilities Act of 1990, the College has made and continues to make modifications to its facilities and programs so as to provide access for individuals with disabilities. Inquiries, requests for modifications beyond those already completed, appeals regarding assistance to accommodate individual needs, or complaints regarding compliance with these federal regulations should be directed to the vice president for business affairs or the vice president for enrollment management and student affairs.

Statistics related to the Student Right to Know and Campus Crime and Security Act are published annually in the Student Handbook and are available in the Office of Student Affairs.

## **Family Educational Rights and Privacy Act**

North Central College complies with all of the rules and regulations of the Family Educational Rights and Privacy Act of 1974, as amended. Copies of the policy are available in the Office of the Registrar, and the policy is also published in the Student Handbook.

The College designates the following categories of student information as public or “directory” information: name; address (local and home); telephone numbers; e-mail address; date and place of birth; class; major; participation in officially recognized activities and sports; physical factors (height and weight of athletes); photographs/video for College and other publications; the most previous educational institution attended; dates of enrollment; degrees and awards conferred, including dates; and current course load.

The above information may be disclosed by North Central College for any purpose at its discretion. Currently enrolled students can withhold disclosure of the information classified as “directory” information by notifying the Office of the Registrar in writing on or before August 15 each year. Requests for non-disclosure are in effect until the student notifies the Office of the Registrar in writing to remove the restriction.

Questions concerning the Family Educational Rights and Privacy Act should be directed to the Office of the Registrar.



# ADMISSION

To apply for admission to a graduate program at North Central College, please contact the Office of Graduate Admission for an application.

North Central College does not discriminate on the basis of race, color, national or ethnic origin, age, sex, or religion in its policies and programs of admission. The College believes that the master's programs should be accessible to as many students as possible. It also affirms that the programs should reflect the highest standards of quality.

A student may take selected courses for professional development only. A student who selects this option must have at least a four-year bachelor's degree and meet the specific course prerequisites, but may also have completed a master's or doctorate degree or courses beyond the bachelor's degree without having completed a graduate degree. Students may take no more than three classes while classified a student-at-large.

A student may be accepted into a graduate program, but still need to complete one of the Requirements for Admission. A student accepted in such a situation is PROVISIONALLY admitted. The remaining admission requirements must be met before a student is allowed to register for a second term of classes.

## ADMISSION REQUIREMENTS FOR DEGREE CANDIDACY AND CERTIFICATES

The following items are necessary for admission to the program as a degree candidate or as a certificate student. It is suggested that applicants submit all materials at least 45 days before the start of the term for which they apply. (Note: A student not having submitted one of the documentation items may be admitted as a provisional student for a maximum of one term of study.)

### Requirements for all Programs and Certificates

To be considered for admission to any of North Central College's master's programs, applicants must meet the following requirements:

1. Complete an application for admission, including the \$25 application fee.
2. Hold an earned four-year bachelor's degree from a regionally accredited college or university.
3. Provide official transcripts from all undergraduate and graduate-level work.
4. Complete an interview with the appropriate Faculty Coordinator or Advisor for the program application.

### International Applicants

An applicant whose primary language is not English and who graduated from a college or university in a country other than the United States must complete the following additional requirements in order to be considered for admission:

1. Apply at least 60 days before the term begins. Students who are currently not in the United States may need to allow additional time.
2. Show evidence of English competency in one or more of the following ways:
  - a. Provide official results of the TOEFL, with a score of at least 90 internet-based test/233 computer-based test/577 paper-based test. Individual programs may require higher TOEFL scores for admission.
  - b. Complete a minimum of two years, full-time university-level study in the United States, Canada, United Kingdom, Ireland, Australia, New Zealand (within the past five years).
  - c. Hold a recent degree from a college or university in the United States, Canada, United Kingdom, Ireland, Australia, New Zealand.

- d. Contact the Office of International Programs for alternative testing information.
- e. A native speaker of English who graduates from a college or university where instruction is conducted in a language other than English can submit a high school/secondary school transcript.
3. Provide the Office of Graduate Admission with a detailed evaluation of all foreign transcripts. All foreign transcripts require evaluation, at the applicant's expense, by an outside firm designated by the College.
4. Complete an interview with the College's International Student Advisor, in addition to the regular admission requirements.
5. For all non-immigrant applicants present in the United States, provide a copy of a valid passport, U.S. Visa page, current I-94, and Form I-20, if applicable. Permanent residents, provide a copy of Form I-551, Resident Alien or Permanent Resident card.
6. For applicants requiring a Form I-20, provide evidence of financial support. Submit a notarized Declaration of Finances and bank letter. On-campus housing may be available for graduate students on a limited basis.

### **International Student Contact Information**

TOEFL Services, Educational Testing Service, P.O. Box 6151, Princeton, NJ 08541-6151, USA Telephone 609.771.7100, E-mail: [toefl@ets.org](mailto:toefl@ets.org), <http://www.toefl.org>. Educational Credential Evaluators, Inc., P.O. Box 514070, Milwaukee, WI 53203-3470 Telephone 414.289.3400, E-mail: [eval@ece.org](mailto:eval@ece.org), <http://www.ece.org>

### **Program Specific Requirements**

**Master of Arts Degree in Education** Students applying for the Leadership and Administration program or the Curriculum and Instruction program must provide proof of full time work in a school (Type 73 certificate). For both programs, please submit a letter from your district's personnel office indicating the length of your teaching experience. School service personnel must submit a copy of their Type 73 certificate.

**Master of Arts Degree in Liberal Studies and Master of Leadership Studies** Students applying for these programs must submit a writing sample. Samples should reflect the ability to research and to write critically. Contact the faculty coordinator or an admission counselor for more details.

**Master of Science Degree in Computer Science** There are ten undergraduate prerequisite courses in computer science, math and statistics. (Note: Students may be admitted as degree seeking students in the graduate program while they complete needed prerequisite courses.)

**Master of Science Degree in Management Information Systems** There are three to four undergraduate prerequisite courses in computer science. (Note: Students may be admitted as degree seeking students in the graduate program while they complete needed prerequisite courses.)

**Master of Business Administration Degree** There are seven undergraduate prerequisite courses in business areas. (Note: Students may be admitted as degree seeking students in the graduate program while they complete needed prerequisite courses.)

## Graduate Entrance Exams

Graduate entrance exams, such as the Graduate Record Examination (GRE) are optional. Students who take the entrance exams and score above a certain level, as indicated in the formulas below, may take courses in the order they choose.

### Master of Arts Degree in Education Curriculum and Instruction

$\text{MAT} + (\text{GPA} \times 10) = 65$

### Master of Arts Degree in Education Leadership and Administration

$\text{MAT} + (\text{GPA} \times 10) = 65$

### Master of Arts Degree in Liberal Studies

$\text{Verbal GRE} + (\text{GPA} \times 100) = 762$

### Master of Business Administration

$\text{GMAT} + (\text{GPA} \times 200) = 1000$

### Master of Leadership Studies

$\text{Verbal GRE} + (\text{GPA} \times 100) = 762$

### Master of Science Degree in Computer Science no exam required

### Master of Science Degree in Management Information Systems

$\text{GMAT} + (\text{GPA} \times 200) = 1000$

Students who decide not to take entrance exams, or who score below the required level, must follow these program requirements specified below.

**Master of Arts Degree in Education Curriculum and Instruction**—First six classes must include 1) EDN 501, 2) EDN 505, 3) EDN 510, and 4) EDN 523.

**Master of Arts Degree in Education Leadership and Administration**—First six classes must include, 1) EDN 500, 2) EDN 515, and 3) EDN 534.

**Master of Arts Degree in Liberal Studies** Careful monitoring by Faculty Coordinator of first three classes.

**Master of Business Administration** First six MBA classes must include three quantitative courses as approved by the MBA Faculty Coordinator or Director of Graduate and Continuing Education.

**Master of Leadership Studies** Careful monitoring by Faculty Coordinator of first three classes.

**Master of Science Degree in Computer Science** All undergraduate prerequisite coursework must be completed before a student may register for their fourth graduate-level Computer Science class.

**Master of Science Degree in Management Information Systems** First six classes must include 1) a Computer Science class, 2) a quantitative course from Accounting, Economics, Finance, or Business, and 3) a qualitative course with a writing component.

## **Transfer Credit**

A maximum of two graduate courses from other schools may be transferred into the master's program. Such work must have course grades of B- or higher, be appropriate to the program and must have been completed within the five year period immediately preceding admission as a degree candidate. In addition, the work must have been completed for graduate credit or designated for possible graduate credit, and taken in excess of credit required for the student's undergraduate degree. Transfer credit is granted by the Dean of Graduate and Continuing Education, in consultation with the specific Program Coordinator and Director of Graduate and Continuing Education.

A North Central undergraduate student may take a graduate course if he or she has senior standing and/or receives special permission from the faculty member teaching the course, the Director of Graduate and Continuing Education or Program Coordinator, and the Dean of Graduate and Continuing Education. This does not include courses that are cross-listed at the undergraduate and graduate levels.

## **Dates of Entry and Matriculation**

A graduate student's matriculation date is the first day of the term in which he or she enrolls in a 500- or 600-level course at North Central. All course work and other requirements for each master's degree must be completed within five years after a student's date of matriculation. A student retains this date of entry, and follows the terms of the catalog then in effect, as long as he or she does not drop out for more than one term, not including summers, or receives approval for a Leave of Absence as described below. A student who is not in attendance for two or more consecutive terms, not including summer, and who does not obtain a Leave of Absence, (see page 19) must enroll under the terms of the catalog in effect on the first day of the term in which he or she is readmitted to the graduate program at North Central College.

## **State Regulations for Immunizations**

Illinois law requires all new, incoming students born after January 1, 1957, and taking more than three credit hours per term, to provide a documented, up-to-date immunization record. You may use a copy of your high school, college, or military service immunization record. A Certificate of Immunity form may be requested from the Director of Health Services if you do not have an immunization record. Please note that Illinois legislation requires the College to prohibit a student from registering for subsequent terms, if the information has not been submitted or is incomplete. Your medical record is confidential. Information is requested only to comply with State requirements.

# STUDENT EXPENSES

## 2008-2009 TUITION AND FEE SCHEDULE

<u>Hour/Course</u>	<u>Amount per credit</u>
Master of Business Administration . . . . .	\$677/\$2,031
Master of Science in Management Information Systems . . . . .	\$592/\$1,776
Master of Science in Computer Science . . . . .	\$592/\$1,776
Master of Arts in Liberal Studies . . . . .	\$548/\$1,644
Master of Leadership Studies . . . . .	\$548/\$1,644
Master of Arts in Education . . . . .	\$419/\$1,257

<u>Fees</u>	<u>Amount</u>
Technology Fee (per term) . . . . .	\$20

### **Credit hour**

Effective summer 1999, the unit of credit used at North Central College has been the Credit Hour. A 3 credit hour course is the equivalent of 3 semester hours or 4.5 quarter hours.

### **Part-time vs. full-time status**

Students enrolled for 6 or more credit hours in a term are classified as full-time students *for that term*. All other students are classified as part-time students. Student status is critical when determining financial aid eligibility.

### **Notice**

While the College has every intention of maintaining the stated tuition and fee charges for the entire academic year, North Central College reserves the right to change tuition and fees at any time without prior notice.

### **Refunds**

Because North Central College contracts with faculty and staff and incurs other expenses in advance of the academic year, a refund formula has been established to reflect the equitable sharing of the loss when a student withdraws from classes. Refunds due to official withdrawal, suspension, or dismissal will be made on the following basis:

Tuition—A student who officially withdraws from the College or a course(s) may receive a full or partial refund (credit) according to the following schedule computed from the first official day of the academic term as identified by the Registrar, excluding summer and interim (which, in general, is the first weekday of the term in which classes are held):

- During first 8 calendar days—100%
- 9th through 14th calendar day—90%
- 15th through 21st calendar day—50%
- After 21st calendar day—0%

A current schedule with specific effective dates is published in advance of each term. The date of withdrawal is established by the student's completion of all official steps for completing the process and will be based on the date that the Registrar's Office records the withdrawal. If a student withdraws from the College or any courses at any time without having completed the official process, no refund/credit will be made. Non-attendance in a class does not auto-

matically withdraw the student from the course. The appropriate paperwork must be turned in to the Office of Graduate and Continuing Education to be recorded. The College reserves the right to modify the refund schedule as circumstances may dictate.

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## FINANCIAL AID

### Federal Student Loans

For financial aid purposes graduate students fall into two classifications:

Full time: 6 or more credit hours per term

Half-time: 3 to 5 credit hours per term

**Robert T. Stafford Federal Student Loan Program (Subsidized Interest)**  
Federal Stafford loans are available through banks, savings and loan associations and credit unions. The student is required to complete the Free Application for Federal Student Aid and the North Central College Institutional Verification Form (IVF) to be considered for this loan program. Graduate students may borrow up to \$8,500 per academic year. Graduate students are allowed to borrow an aggregate subsidized cumulative maximum of \$65,500 (including undergraduate borrowing).

Loan amounts are recommended by North Central College and are based on financial need. Interest on the loan is paid by the Federal Government while a student is enrolled at least half-time. Repayment of the principal and interest begins six months after a student ceases to be enrolled at least half-time. The interest rate is variable by year and capped at 8.25%.

**Robert T. Stafford Federal Student Loan Program (Unsubsidized Interest)**  
The Unsubsidized Federal Stafford Loan is not based on need but the student is required to complete the Free Application for Federal Student Aid and the North Central College Institutional Verification Form (IVF). The maximum loan amount per academic year for this program and the Subsidized Stafford Loan Program combined (see previous section) is \$8,500 for Graduate students. Graduate students are allowed to borrow a combined subsidized and unsubsidized aggregate cumulative maximum of \$138,500 (including undergraduate borrowing).

Principal payments on the loan are not required while the student is enrolled at least half-time. Students have the option to pay the interest on the loan while they are in school or let it accrue and capitalize onto the principal balance. The interest rate and fees are the same as listed in the previous section for the Subsidized Federal Stafford Loan Program.

Graduate students enrolled at least half-time can borrow additional amounts under the Unsubsidized Stafford Loan Program of up to \$10,000 per academic year.

### Electronic Funds Transfer

North Central College participates in electronic funds transfer (EFT). Through EFT your student loan proceeds will credit directly to your account at North Central College. This eliminates the delay of paper checks arriving through the mail and students waiting to sign loan checks.

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## Loan Counseling

**Entrance:** All schools are required by Federal regulations to provide “entrance counseling” to first-time Federal Stafford Loan borrowers. The “**entrance counseling**” is designed to provide the student with information about the loan program and his/her rights and responsibilities as a borrower. This “entrance counseling” must be completed prior to the disbursement of any loan funds.

**Exit:** Students who receive Federal Stafford Loan (formerly known as a Guaranteed Student Loan), a Federal Unsubsidized Stafford Loan, a Supplemental Loan for Students (SLS), an Illinois Opportunity Loan or a combination of these are required to complete an “**exit counseling session**” to prepare and inform you about the repayment process. Completion of this exit interview is required by Federal law.

Both the “**entrance and exit counseling sessions**” are found on the internet at <http://mapping-your-future.org>. To begin the session, click on the graphic called ENTRANCE COUNSELING or EXIT COUNSELING.

## Payment of Tuition and Fees

All tuition and fees are due in full on or before the beginning of each term. Exceptions must be cleared through the Business Office. Billing statements are normally mailed three to four weeks in advance of the due date. A student must confirm his or her preregistration through REGISTRATION CONFIRMATION on the first day of classes to be sure the accounts are clear. The location and time schedules of registration confirmation are published prior to each term. A late payment fee will be charged for any unpaid balances.

The College reserves the right to withhold a student’s diploma, the degree, a transcript of credits, or course grades, as long as any bills owed the College remain unpaid. The College reserves the right to deny registration to any student with unpaid bills from a previous term.

Because the College contracts with faculty and staff, and incurs other expenses in advance of the academic year, a refund formula has been established to reflect an equitable sharing of the loss when a student withdraws, is suspended or is dismissed. A current schedule with specific effective dates is published by the Student Accounts Office in advance of each term. The refund schedule is subject to change. For details, contact the Office of Graduate and Continuing Education.

The date of withdrawal is established by a student’s completion of all official steps for withdrawal. If a student withdraws from the College at any time without completing the official steps, no refund will be made. Requests for exception to this policy must be made in writing through the College’s General Petition procedures. Exceptions may be granted for reasons such as an institutional error, documented medical condition, a call to military service, or other circumstances beyond the student’s control. Prior to petitioning for an exception, the student should pursue alternative means of completing the course, including an incomplete grade and/or extended study. Petitions which are granted may be assessed a \$50.00 processing fee. **Non-attendance of class does not constitute withdrawal.**

# STUDENT SERVICES

## Student Services

A variety of services and organizations are available for all North Central College students, both graduate and undergraduate alike. These include, but are not limited to Campus Ministry, Multicultural Affairs, and the Community Service Center. A complete listing may be found in the North Central College Student Handbook.

## Library Services

The mission of North Central College library services is to actively support the College's educational programs. The library staff offers orientations, workshops, and classes to teach patrons how to access the wealth of information available to them. In addition to books, periodicals, videos, cds, and electronic reference resources housed in Oesterle library, the library's webpage ([http://www.noctrl.edu/library\\_ncc](http://www.noctrl.edu/library_ncc)) offers access to online catalog, databases, and online reference sources. Members of the College community may also borrow materials from 56 other academic libraries in Illinois, either in person, online.

## Career Development Center

The staff in the Career Development Center (CDC) provides career counseling, computerized assessment, programming on relevant issues, developing job search strategies, plus resume, cover letter and interview preparation. The office houses a library with resource books, CD-ROMs, directories, and computers where students can research companies and prepare themselves for the job market. The services of the Career Development Center also include on-line job listings, job and internship fairs, resume referrals, credential files, resume critiques, and mock interviews. Lists of part-time and full-time job vacancies are also available. The CDC may be accessed online through the website [http://www.noctrl.edu/stud\\_current/career/index.shtml](http://www.noctrl.edu/stud_current/career/index.shtml).

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# POLICIES AND PROCEDURES

## General Degree Program Guidelines and Graduation Requirements

1. Satisfactory completion of a minimum of 27 credit hours at the graduate level (any course at the 500 or 600-level or any course allowed to count for graduate credit by the Dean of Graduate and Continuing Education) in the discipline offering the degree program. Each program has specific requirements for completing the individual degree.
2. A culminating experience is required for each student earning a graduate degree. The form of the experience (master's project, master's thesis, or other culminating experience) is determined by individual programs and must be approved by the Academic Programs and Policies Committee and the faculty. A student is only allowed to complete one such culminating experience per degree. A student earning a dual master's degree need only complete one such capstone experience, not one in each degree area, unless a specific program chooses to require otherwise.



3. At least one interdisciplinary support course (at the graduate level) outside the discipline must be included in each degree program. These courses focus on human, ethical, societal issues of concern to the discipline offering the degree program.

The Dean of Graduate and Continuing Education, with recommendations from the Committee on Graduate Academic Standing, will decide on cases of academic probation and dismissal, as well as on appeals. The Dean of Graduate and Continuing Education may waive specific requirements in exceptional cases.

### **Course Audits**

Students may choose to audit 500- and 600-level graduate courses. When courses are audited, grades are not determined and course credit is not granted. Audited courses will not be applied to any master's or certificate program. There is no limit on the number of courses a student may audit.

### **Certificate Program Guidelines and Requirements**

1. North Central College Graduate Certificates are predicated on the following:
  - a. Graduate certificate programs utilize graduate courses.
  - b. Students take courses for a grade.
  - c. Courses taken as part of a graduate certificate program can be counted toward a master's degree, provided a grade of B- or better is earned, the course is appropriate for the graduate degree applied to, and it is taken within three years of beginning the degree program.
  - d. Professors/Instructors maintain current pedagogy and content in courses designated for use in graduate certificate programs.
2. Graduate Certificate Specific Rules
  - a. Completion of at least nine credit hours are needed to earn a graduate certificate.
  - b. Courses used to complete specific graduate certificate requirements will be chosen from specific lists approved by the Faculty.
  - c. Students must have completed the same prerequisites or have the same equivalent work experience as graduate degree candidates to enroll in specific courses.
  - d. Each specific graduate certificate topic, proposed by graduate programs in conjunction with the appropriate department(s), will be brought through the governance process at the most local level appropriate, but also with approval of the Dean of Graduate and Continuing Education.
3. Graduate Certificate Course Requirements

Students are required to complete the same assignments as are required for graduate degree candidates. No differentiation in course requirements will exist between students enrolled in graduate certificate programs and those in graduate degree programs. However, a student may meet the requirements for a graduate certificate by receiving a grade of C- or better. Nevertheless, courses taken as part of a graduate certificate program can be counted toward a master's degree only if a grade of B- or better is earned, the course is appropriate for the degree applied to, and it is taken within three years of beginning work in a graduate degree program for which the previous certificate work can apply. However, no more than 18 credit hours (generally six courses) of graduate certificate work may be applied to any one graduate degree program. Once enrolled as a degree candidate, students may not use courses to count toward both their degree requirements and a Certificate Program.

## Certificate Program Candidates

Students enrolled in Certificate Programs must attain a grade of C- or better in order to qualify for a certificate. Any Certificate Program student receiving a grade below a C- in any course will be placed on probation, and will be required to retake the course and attain a grade of C- or better to meet the requirements of his/her chosen Certificate Program. A Certificate Program student receiving a second grade below a C- will be dismissed from the program.

## Academic Advising

Each student's file is transferred to the Office of Graduate and Continuing Education 14 days after the start of the student's first term. Students receive academic advising through the Office of Graduate and Continuing Education. With help from the Office of Graduate and Continuing Education and/or the specific program coordinator, the graduate student plans a course schedule usually a year in advance. Term by term adjustments can be made to the schedule as needed or desired by the student in order to facilitate steady progress toward completion of the master's degree.

## Registration and Changes in Registration

Registration for graduate courses is normally completed prior to the beginning of a term through the Office of Graduate and Continuing Education. After a term begins, all enrollments in courses and withdrawals from courses are governed by published deadline dates. Informal attendance in a class is not recognized as constituting registration in the course. Informal absence from class is not recognized as constituting withdrawal from the course. A student who wants to withdraw must contact the Office of Graduate and Continuing Education. This responsibility falls on the student and the student alone. See the sections below, "Dropping Courses" and "Withdrawal from North Central." Please complete all registrations in writing and forward via fax, e-mail, mail or submit directly to the Office of Graduate and Continuing Education. Some On-line registration capabilities are allowed through Merlin at <https://merlin.noc-trl.edu>.

## Adding Courses

After the first day of a term and up to the first class meeting, a student may enroll in new courses only through the Office of Graduate and Continuing Education. After the first class meeting, the consent of the instructor must also be obtained. The instructor's signature is required to add a class through the add/drop period.

## Dropping Courses

A student may drop courses as follows (excluding summer term):

1. Through the eighth calendar day of a term, a student may cancel enrollment in a course without a grade or notation on the record, by request to the Office of Graduate & Continuing Education.
2. From the ninth calendar day of a term through the end of the sixth week of class, a student may withdraw with the notation WD on the record by request to the Office of Graduate and Continuing Education.
3. After the sixth week of class, any student who withdraws from a course will receive an F in the class.
4. The official date of withdrawal is the date when the Office of Graduate and Continuing Education completes withdrawal procedures. The amount of refund is determined by the official date of withdrawal. Consult current tuition and fee information for details. **Absence from class does not constitute withdrawal from a course.**

Students should contact the Office of Graduate and Continuing Education for official drop dates for summer terms.

## Repeating Courses

A student who wishes to repeat any 500- or 600-level course where a grade of "C+" or lower was earned may do so. Both grades will appear on the student's transcript. However, only the most recent grade will be used in calculating the student's cumulative grade point average.

If a student repeats a course in which the original grade was a C+ or lower, and the subsequent grade is also a C+ or lower, the student is subject to academic dismissal. For advice on repeating coursework, a student should consult the Office of Graduate and Continuing Education.

## Leave of Absence

It may be necessary from time to time for a student to interrupt his or her studies for two or three terms in order to accommodate a heavy work schedule or other demands. Under such circumstances, a student may apply for a Leave of Absence. The main advantage of being granted a Leave of Absence is that the student retains the program requirements that were in effect at the date of entry. Without a Leave of Absence, a student who interrupts course work for two or more terms, excluding summers, must be readmitted under the requirements of the catalog in effect at the time of readmission. The maximum Leave of Absence time period is one calendar year. For a degree candidate, the Leave of Absence is counted as part of the five year program time limit. A student must apply for a Leave of Absence during the term prior to the beginning of the Leave of Absence. Application is made through the Office of Graduate and Continuing Education. A student on Leave of Absence must notify the Office of Graduate and Continuing Education if his/her intention is to resume graduate study.

## Undergraduate Students Enrolling in Graduate Coursework

A maximum of six credit hours of graduate coursework may be available to seniors with the approval of their faculty advisor and special permission from the Dean of Graduate and Continuing Education. An approval form, which must accompany the registration, is available in the Office of Graduate and Continuing Education.

If an undergraduate course is not available, a parallel graduate course may apply toward an undergraduate degree. A maximum of six graduate credit hours counts toward the 120 credit hours required for an undergraduate degree. Graduate courses taken for credit toward an undergraduate degree will not later be applied toward a graduate degree at North Central College.

Alternatively, graduate coursework taken as an undergraduate may apply toward a graduate degree at North Central. This coursework will not be applied toward the 120 hours required for an undergraduate degree or any other undergraduate requirement.

## Grades and Graduation Requirements

North Central College uses the familiar letter grades A, A-, B+, B, B-, C+, C, C-, D, and F. Courses in which a student receives grades of D or F cannot be used to meet the course requirements of the graduate program and must be repeated. D and F grades are used in calculation of grade point averages. For computation of grade point averages, an A grade counts as 4.0, A- as 3.7, B+ as 3.3, B as 3.0, B- as 2.7, C+ as 2.3, C as 2.0, C- as 1.7, D as 1.0, and F as 0.0.

A student must pass the Master's Project or Thesis with a grade of Pass or Pass with Distinction. If the Project or Thesis course cannot be completed by the end of the first term, the student will be assigned a grade of PR, indicating a course in progress. Students should consult their program coordinator or advisor regarding the maximum number of terms allowed for completion. Students are automatically registered for a second term (or more if program rules allow) unless a formal leave of absence is requested and approved. A student must

complete the Project/Thesis within the time length allowed, including summers, or receive a grade of No Pass. **Lack of contact with project/thesis advisor does not constitute a withdrawal or leave of absence from the project/thesis.**

An I, or Incomplete grade, may be given to a student who has carried a course at an A or B level until near the end of the term and then, because of circumstances beyond the student's control, has been unable to complete it. A grade of I on a student's record must be changed to a letter grade by the fifth week of the following term, or it will lapse into an F.

Excluding the Project or Thesis grade, averages are computed for each term and cumulatively. Graduate work taken elsewhere and accepted as transfer credit is included in the computation of cumulative grade averages. A cumulative grade average of B (3.00) or higher is required for graduation. No more than one course in which a C+, C, or C- was earned may be applied toward a graduate degree. No grade below C- may be applied to a degree program.

### **Student Classifications**

The following classifications apply to graduate students:

1. First year graduate student: earned fewer than 18 graduate credit hours.
2. Second year graduate student: earned 18 or more graduate credit hours.
3. Full-time graduate student: enrolled in six or more graduate credit hours per term.
4. Part-time graduate student: enrolled in less than six credit hours per term.

### **Writing and Speaking Proficiencies**

Good writing and speaking skills are emphasized throughout all graduate degree programs. Each Master's Project or Thesis must be presented in both written and oral form. A Project or Thesis will not be judged acceptable until both the written content and oral presentation are evaluated as satisfactory.

The College has developed a support program to identify and remedy deficiencies that a student might have regarding written and oral communication skills. Based on evaluations, either at the time of admission, or in early course work, the Dean of Graduate and Continuing Education or a Program Coordinator may require a student to improve communication skills through the Writing Center, tutoring, additional undergraduate course work, or other means.

### **Degrees and Commencement**

An application for graduation must be submitted to the Office of Graduate and Continuing Education prior to the term in which a student's degree program will be completed. Contact the Office of Graduate and Continuing Education for current submission deadlines.

A student completing all degree requirements in any term will receive a diploma on completion of that term and will be recorded as a member of the graduating class of that academic year. All work for the degree must be completed and documentation received by the Office of Graduate and Continuing Education by the last day of the examination period for that term. All graduates of the master's programs are encouraged to participate in the June Commencement ceremony. If a student has completed the Project or Thesis by the end of the spring term and has only one class remaining, he or she may participate in the Commencement ceremony.

### **Academic Probation and Dismissal**

A cumulative grade point average of 3.0 or higher is required for graduation. A graduate student shall be placed on probation after any term in which his or her cumulative grade point average is below 3.0, or any term in which he or she receives a graduate course grade of C+ or lower. Probation status warns the student that serious academic performance problems exist and that these problems must be diagnosed and corrected.

A student shall be dismissed when:

- the grade point average earned during a single term falls below 1.0, or
- the cumulative grade point average is below 3.0 for three consecutive terms of attendance, or
- a graduate course grade of C+ or lower is received and all previous graduate course grades of C+ or lower have not been replaced with grades of B- or higher

A dismissed student may apply for readmission after one year, upon demonstrating an improvement in motivation or preparation for graduate work. In the case of academic dismissal, an appeal may be made to the Dean of Graduate and Continuing Education.

### **Academic Dishonesty**

Any instructor who has assembled evidence of plagiarism will first offer the student a chance to provide an alternate explanation of the evidence or to admit fault. If the inference of plagiarism remains, the instructor may choose one of these options, listed in order of increased severity according to the extent and evident deliberateness of the deceit. The first two options suppose that the plagiarism is not extensive, that it would not have given the student substantial academic advantage such as full course credit or high course grade, or that the instructor has clear reasons to believe that the plagiarism can be accounted for by ignorance, which, though subject to discipline, is genuine.

1. Reprimanding the student and requiring either a revision of the work or an additional paper or exam
2. Lowering the grade for the paper or exam (even as far as F) without opportunity to regain the lost credit

The remaining three options come into play if the plagiarism is extensive, if it gave the student substantial academic advantage, or if the student had previously been warned against it.

3. Directed withdrawal of the student from the course
4. Failure of the student for the course
5. Referral of evidence to the dean of faculty for appropriate disciplinary action (which may go so far as suspension or dismissal)

Any sanction beyond 1) will be reported to the Dean of Faculty for notation in the student's file. The record of past plagiarism for a given student may affect the disposition of any new case. No notation will appear on the student's permanent transcript, nor will any notation be sent off campus with the student's records.

### **Withdrawal from North Central**

A student considering withdrawal from North Central must contact the Office of Graduate and Continuing Education. The amount of refund due upon complete withdrawal is determined by the date that permission to withdraw is received from the Office of Graduate and Continuing Education.

### **Learning Outcomes Assessment**

In order to provide for continual improvement in the quality of a North Central education, the College has developed an Outcomes Assessment Program, not just to find out how much and how well students learn, but also how and where they learn. What is discovered through the assessment program is used to make decisions about everything the College does, from curriculum planning to student activities to support services.

While not all students participate in every aspect of the assessment program, each student at North Central is expected to participate as needed in this important effort. Student contributions provide a clearer picture of what it means to be a North Central College graduate. Consequently, the College can communicate to employers and others the qualities which they can expect in a North Central graduate.



# Master of Arts Degree in Liberal Studies

**Mission Statement:** The Master of Arts in Liberal Studies provides students with a broad, integrative, and interdisciplinary vision of the most important issues of modern culture. Students will be able to communicate with more precision, grace, and power, and to think and lead more creatively and critically at work and in their communities.

## Master of Arts Degree in Liberal Studies Program Structure

The Master of Arts Degree in Liberal Studies brings North Central College's commitment to interdisciplinary study up to the depth, intensity, and maturity associated with graduate study. The College's MALS program is one of the most prominent programs of its kind in the nation, and its core values can be most succinctly captured by its four capstone courses: that is, a concern for justice, care and community; for leadership and social change; for the future; and for public discourse on the most crucial issues of the day (see MLS 680, 683, 685, and 690 below.) The ability to think critically, creatively and ethically, to make significant connections between disciplines, to communicate with power and grace, and to connect learning and the liberal arts with practical ways to contribute to family, work, community and beyond are also significant goals of this program. MALS students typically bring to their studies a wealth of experience and a deep desire to contribute to society.

Students must take ten courses (30 credit hours) and complete a masters thesis or project (3 credit hours). They must take at least two courses in any two of the three themes detailed below, and at least one course in the other theme. Electives may be chosen from either theme courses or a special list of elective courses. They must also take at least two of the four capstone courses.

## THEME AREAS

**Theme One: Interpreting the World** This theme explores various frameworks and points of view through which we interpret the world and establish a sense of meaningful action in it. Courses will study how science, religion, philosophy, history, economics, language, and the arts interact to create such frameworks in specific situations.

**Theme Two: Community and Identity** This theme examines how involvement in a community shapes the individual, and how individual initiative can shape a community. Courses will explore such topics as urban development, justice and moral community, art and communal identity, and the impact of factors such as work, race, or gender on conceptions of community.

**Theme Three: The Ethical Life** This theme focuses on how ethical perspectives shape ways of addressing and resolving major problems. Courses take up such topics as the relationship between art and moral perception, culture and environmental concerns, technology, biomedical dilemmas, and economics and ethics.

## ELECTIVES

Elective courses in critical thinking, creative writing, decision making, and independent study are designed to enable students to more effectively pursue and articulate concerns addressed in all three Theme Areas.

## **CAPSTONE COURSES**

Capstone courses integrate ideas from the theme and elective courses and should be taken after a student has completed at least one course in all of the theme and elective areas. These courses include Justice, Care and Community, Leadership for Social Change and Renewal, Studying the Future, and Public Discourse.

## **THE MASTER'S PROJECT/THESIS**

Under the supervision of a faculty advisor, students are required to focus and integrate in greater depth an aspect of their studies which, through the course of the program, has emerged as one of their central concerns.

## **COURSE DESCRIPTIONS**

All of the following courses are worth three credit hours unless otherwise noted.

### **THEME ONE: INTERPRETING THE WORLD**

#### **MLS 510 Changing Models of the Universe: Plato to Kepler**

An examination of the interdependence of religion, philosophy, and scientific theories. Focus is on the cosmologies and physical theories of Plato, Ptolemy, Copernicus, and Kepler, and how these led to radical changes in our concept of the structure, size, and meaning of the universe. First of a three-course sequence on the nature and history of science (see MLS 610 and 612). Prerequisite: None.

#### **MLS 512 Religion, Ritual and Symbol**

A cross-cultural examination of how religious beliefs and institutions, concepts of the magical, and myths and rituals shape our view of reality. The course will survey some of the major ways our understanding of these things has evolved, focusing particularly on structural analysis of symbol systems. Prerequisite: None.

#### **MLS 514 The Uses and Abuses of Science**

A study of the nature of science, its philosophical underpinnings, its limits, and its effects on society, with particular attention to the ways science has been misused to justify social theories (as with Leysenko's biological theories on behalf of Marxism). Students will examine what society can reasonably expect from science, and how society influences scientific investigation. Prerequisite: None.

#### **MLS 518 Gender and Art**

The study and critique of feminist strategies for analyzing art and culture. The course explores how women have portrayed their experience in literature and the visual arts in comparison to how men have traditionally depicted their experience. Prerequisite: None.

#### **MLS 526 Hispanic Culture and the Border**

A study of works by Hispanic writers and artists from the United States, Latin America and Spain. The course will focus on issues relating to multicultural identity, gender and assimilation as reflected in literature and art. The framework for study and conversation will come from concepts drawn from gender, multicultural, and border studies. In particular the latter provides a way for understanding the important nature of borders, literal and metaphorical, as both constrictive and creative places, and the many ways Hispanic culture is redefining our sense of boundaries. Prerequisite: None.



**MLS 610 From Certainty to Chaos**

This course begins with Isaac Newton, whose brilliant ideas led scientists and philosophers to envision a time when all facts about the universe would be known and precisely based on mathematical knowledge. It then investigates how continuing work in theoretical mathematics, logic, computability, and the new theory of chaos has seriously questioned this vision and placed severe limits on how broad and precise human knowledge can get. Prerequisite: MLS 510 recommended.

**MLS 612 Changing Concepts of the Earth and Its Life**

An investigation of the history of geology and evolutionary biology. The course begins with Darwin's theory of adaptive evolution under uniform and regular geological conditions and ends with Gould's theory of punctuated equilibrium acting under cyclically catastrophic geological conditions. The effects of an increasingly contingent view of our origin as a species will also be investigated. Prerequisites: MLS 510 and 610 recommended.

**THEME TWO: COMMUNITY AND IDENTITY****MLS 530 The City**

A comparative study of urban development and the nature and growth of urban populations in various parts of the world. The course also explores various images, theories, and attitudes toward the city, and how these are related to ways we perceive the social problems arising with urban growth and propose solutions to them. Prerequisite: None.

**MLS 532 Work and Community**

How work and the professions shape group and individual identity. Through readings of a broad range of texts dealing with a wide variety of work, students will gain an understanding of how particular work situations implicate persons into particular values and expectations, and how working with or against these values continually shapes the identity of the individual worker, the particular work culture, and the view of work possessed by society as a whole. Prerequisite: None.

**MLS 534 Gender in Public Life and the Professions: Literature, Theory, and Practice**

Through a consideration of literature, theory, and practice, this course will examine constructions of gender as they impact such issues as community, problem solving, leadership, and organizational structure within a national and global setting. Literary texts will be read in conjunction with interdisciplinary readings drawn from such fields as the arts, business, education, law, medicine, communication, technology, and social sciences. Prerequisite: None.

**MLS 538 Sport in a Multicultural World**

This course explores the function of sport in American society as utilized by various constituencies. It assumes an interdisciplinary format that draws from historical, sociological, anthropological, and literary texts, as well as film analysis. Reading and class discussions will analyze the role of sport in the construction of culture, the nature of cultural change over time and the various meanings of sport among sub-cultures. Ethical questions, such as the role of sport in establishing, reinforcing, or resisting dominant social values will be considered. This course aims to improve critical thinking and analytical skills by learning and applying theoretical frameworks. Students should develop a historical perspective on the construction of culture, and particularly, on the uses of sport in that process. Students should also gain an appreciation and respect for alternative cultures. Prerequisite: None.

**MLS 632 Race, Ethnicity, and the American Experience**

An analysis of how race, ethnicity, and concepts about these have shaped the American experience. Focusing on selected groups from both minority populations and the “white” majority population, students will study how these groups have sought to define themselves against the larger backdrop of American culture and society. Social, historical, and economic perspectives will be considered and supplemented by literature and analytical methods drawn from contemporary critical theory. Prerequisite: None.

**MLS 634 The “Third World”**

A study of literature, culture, politics, and psychology aimed at understanding both the so-called “Third World’s” struggle for identity, as well as ways the West has imposed its political and cultural constructs upon this world. Prerequisite: None.

**THEME THREE: THE ETHICAL LIFE****MLS 506 Social and Ethical Responsibilities of Management**

A critical examination of social and ethical issues and problems facing business and managers. Students are asked to assess the extent and relative influence of government, competitors, labor unions, consumers, society’s expectations, and the personal values of managers as factors in business decisions. Prerequisite: None.

**MLS 550 Ethics and Imagination**

A thematic introduction to roles played by the imagination in developing, sustaining, and transforming morality. The course will approach critical thinking about the moral life from the dual perspectives of ethics and of arts such as literature, painting, and film. Prerequisite: None.

**MLS 552 Ethics, Public Policy, and Biomedicine**

A study of the ethical dilemmas caused by rapidly changing medical technology. Possible issues to be explored include in-vitro fertilization, fetal tissue experimentation, genetic screening and manipulation, abortion, human subjects experimentation, behavior control, organ transplants, and euthanasia and suicide. Public policy issues related to the use of biomedical resources will also be discussed. Prerequisite: None.

**MLS 554 Culture, Ethics, and the Environment**

Different cultures relate to their environment in highly divergent ways. This course is a cross-cultural examination of such relationships, focusing on how cultural values, norms, and institutions often ignored in a scientific analysis of environmental problems profoundly shape culturally specific perceptions, policies, and ethical constructs concerning the environment. Students will learn how important an awareness of such cultural factors is for finding resolutions to the environmental challenges which threaten human survival. Prerequisite: None.

**MLS 555 Technology, Society and Ethics**

Focusing primarily on the 20th century, the course examines the impact of technological change on the cultural, social, economic, and ethical aspects of society. In addition, the public policy issues related to the allocation of scarce technological resources are also explored. Prerequisite: None.

**MLS 558 Conflict Resolution**

This course studies the prevailing theories and methods of conflict resolution from a variety of perspectives and in a number of settings—including interpersonal, business, cross-cultural, and international. Special attention will be given to developing facilitative communication and negotiation skills. Prerequisite: None.

**MLS 652 Ethics and Economics**

A study of efficiency and equity criteria used in economic analysis, and the relationship of these criteria to traditional Western ethical values. The study includes a critique of capitalism and socialism and a consideration of past and potential contributions of economic analysis to ethical reasoning. The application of individual rights, economic efficiency, and justice to selected contemporary issues will be examined. Prerequisite: None.

**ELECTIVES****ARL 520 Communication Ethics**

An examination of the major ethical issues and questions which arise when humans make choices about symbolic behavior and the relationships entailed when they communicate. Readings and discussions are focused on helping students apply a variety of theoretical positions to case studies and their own experiences in dealing with communication problems. Prerequisite: None.

**EDN 521 Schools and Their Institutional/Political Environment**

Examination of the political, social, and business context in which school administrators make decisions. Includes the historical foundation and evolution of schools as a social institution. Includes a study of intergovernmental relationships in education. Studies school systems as politically influenced entities. Includes strategies for dealing with the issues of school governance, including lobbying, negotiating use of power, influence and authority, and district relationships with local businesses. Prerequisite: Consent of instructor.

**EDN 524 Professional Ethics for Teachers**

An introduction to professional ethics focused on models of professional-client obligation and dilemmas specific to the practice of education. Prerequisite: None.

**EDN 536 The School/Home/Community Partnership**

Examination of the theories and techniques of marketing communications applicable to developing a set of school/community activities to serve important school objectives, including student achievement and program evaluation. Examines techniques for establishing effective school/community communication and involvement. Students will examine different types of passive and active parental involvement and their relationship to achieving school objectives. Prerequisite: None.

**EDN 650 Educational Leadership Roles and Responsibilities**

Examination of the specific evolving roles of school leadership personnel including principalships, central office administrators, and superintendents and the current and future issues confronting school administrators. Prerequisite: EDN 530 or consent of the instructor.

**MGT 621 Organizational Behavior**

An examination of the development of organization theory, as well as individual and group motivation and behavioral factors within organizations. Topics include organizational change, conflict, structure, development, communication, decision making, and leadership. Prerequisite: None.

**MGT 645 Organizational Leadership Theory and Group Performance**

An analysis of the development of various leadership theories and the practice of leadership. Profit and not-for-profit sectors are examined. The intellectual, psychological, political, and social sources of leadership are studied for their theoretical foundation and for practical application. The concept of transformational leadership, contrasted with transactional leadership, is stressed. Students are encouraged to practice leadership roles in class and to apply their knowledge in a course project. Prerequisite: None.

**MGT 683 Innovation and Organizational Change**

An analysis of the management of innovation and change in organizations; the technical, economic, and social dynamics associated with the change process; and the role of the leader as a change agent. Case studies of organizations undergoing change and biographies of leaders and change agents are examined. Several models of change are studied, including the matrix of possible change strategies and actors in the organization. Students are encouraged to undertake a project of consequential change in an organization of their choice. Prerequisite: MGT 645, MGT 675, or consent of MBA coordinator.

**MLS 570 Critical Thinking**

A study of various perspectives concerning critical thinking. In particular, the course will explore various relationships between creative and critical thinking with specific attention to what such relationships mean for the pursuit of truth, the development of writers, and the methods teachers and others who lead can use to enhance critical and creative thinking in others. Prerequisite: None.

**MLS 572 Creative Writing and Public Discourse**

A workshop in the writing and analysis of poetry and prose fiction as a means of helping students use creative writing techniques to broaden the nature of public discussion, and of encouraging them to articulate attitudes toward social and ethical issues creatively. Prerequisite: None.

**MLS 576 Creative Thought**

This course studies how we can nurture creative thought in ourselves and others. It explores the nature of creativity and the obstacles to it, and helps students apply creativity to many aspects of life—whether at work, home or in the community; as creative problem solvers; or as artists, scientists, or whatever sphere of life is important to them. Prerequisite: None.

**MLS 599 Independent Study**

Designed for students who want to do an introductory study of a topic not covered in a regular course. Prerequisite: Consent of instructor.

**MLS 692 Special Topics**

Topics will vary depending on faculty and student interests. Topics and prerequisites will be announced in advance. May be taken more than once with different content. Prerequisite: Consent of Instructor.

**MLS 693 Independent Study**

Designed for students who want to do advance study of a topic previously covered in a regular course but not offered in another course. Prerequisite: Consent of instructor.

## **CAPSTONE COURSES**

### **MLS 680 Justice, Care and Community**

A critical investigation of contemporary debates over the moral basis of justice between advocates of liberalism, communitarianism, and feminist ethics. The course focuses on ways in which these different perspectives produce alternative responses to topics in distributive and retributive justice, as well as the notion of justice-based community itself. Prerequisite: Student must have completed at least one course in all three theme areas and one elective.

### **MLD 683 Leadership for Social Change and Renewal**

A study of contemporary leaders who have developed organizations and programs addressing critical environmental and social issues. Their strategies for building consensus and constituencies will be considered in light of social and ethical theory. Prerequisite: Student must have completed at least one course in all three theme areas and one elective.

### **MLS 685 Studying the Future**

This course will help students begin to integrate concepts from theme and elective courses by exploring their implications for the future. It examines how thinking about the future shapes our interpretations of the past and affects our actions in the present, and shows how various theories and methods of thinking about the future can be used creatively to arrive at desirable futures. Prerequisite: Student must have completed at least one course in all three theme areas and one elective.

### **MLS 690 Public Discourse**

A study of the many levels of public discourse, as well as a broad range of examples of public discussion past and present. The course seeks to foster a sense of public responsibility, and to enable students to understand ways their own interests and academic concerns may be brought effectively into the arena of public awareness, debate, and action. Prerequisite: Student must have completed at least one course in all three theme areas and one elective.

## **MASTER'S PROJECT/THESIS**

Under supervision of a faculty advisor, students are required to focus and integrate at greater depth an aspect of their studies which has, through the course of the program, emerged as one of their central concerns. The results of the project must be presented before the MALS and college community. The project (695) is meant for work which will be more performance oriented (for example, focusing less on final paper and more on a project in art, theater, music, creative writing and other such endeavors, or projects with direct application to work, community, schools or other such situations), while the thesis (696) is meant for work which results in and focuses on the production of a more traditional thesis paper. In "gray area" situations, designation may be decided by the student's advisor or the MALS program coordinator.

### **MLS 695 Master's Project**

Prerequisite: Students typically must have completed at least one course in each theme area, one elective, and one capstone course. Before registering, students must also complete a proposal essay and obtain signatures from their faculty director and second reader attesting approval of the proposal.

### **MLS 696 Master's Thesis**

Prerequisite: Students must have completed at least one course in each theme area, one elective, and one capstone course. Before registering, students must also complete a proposal essay and obtain signatures from their faculty director and second reader attesting approval of the proposal.



# Master of Leadership Studies Degree

**Mission Statement:** The Master of Leadership Studies Degree program enables students to develop a broadened perspective in ethics, social sciences and humanities to advance into leadership positions within a community or organization. Students learn that leadership is first the work of exerting influence and second a matter of achieving position. In their studies, students will identify and assess the common challenges of leadership that cut across business, social and cultural contexts.

## Master of Leadership Studies Degree Program Structure

The Master of Leadership Studies Degree program (MLD) enables students to develop a broadened perspective about themselves and others so as to better inform and practice leadership within their communities and work places. Students learn that leadership is first and foremost the work of exerting influence and secondary a matter of achieving position. The courses track both the behavioral and humanistic strains of research in the study of leadership, identifying the common challenges of leadership that cut across business, community and cultural contexts. Students engage in reading and discussion with peers about the big issues of leadership that lead to the development of the whole person, beginning with questions of values and integrity.

Students must complete a total of 42 credit hours to receive the Master of Leadership Studies Degree (MLD): 18 to 21 from the MALS program; 18 to 21 from the MBA and MA-Ed. programs, depending upon the student's particular focus; and a Master's Project addressing leadership concerns. Students must take at least five 600-level courses to complete degree requirements. Courses shall be distributed as follows:

## REQUIRED CORE COURSES: PERSPECTIVES ON LEADERSHIP

(8 courses, 24 hours)

MGT 621 Organizational Behavior  
 MGT 645 Organizational Leadership & Group Behavior  
 MLD 545 Ethical Challenges of Leadership  
 MLD 595 Assessment & Research in Leadership  
 MLD 683 Leadership for Social Change & Renewal  
 MLS 558 Conflict Resolution  
 MLS 690 Public Discourse  
 MLD 695 Project or MLD 696 Thesis

## ELECTIVES:

Students must choose a minimum of 1 course (3 hours) and no more than 4 courses (12 hours) from each area of perspective.

## Ethical Perspective:

EDN 524 Professional Ethics for Teachers  
 MLS 506 Social & Ethical Responsibilities of Management  
 MLS 550 Ethics & Imagination  
 MLS 552 Ethics, Public Policy & Biomedicine  
 MLS 555 Technology, Society & Ethics

**Organizational/Management Perspective:**

MGT 591 Quality Management

MGT 623 Human Resource Management

MGT 683 Innovation &amp; Organizational Change

MGT 692 Special Topic: Negotiation, Mediation &amp; Arbitration for Business Dispute Resolution

**Community/Multicultural Perspective:**

MLS 530 The City

MLS 532 Work &amp; Community

MLS 534 Gender in Public Life and the Professions: Literature, Theory and Practice

MLS 538 Sport in a Multicultural Society

MLS 632 Race, Ethnicity &amp; the American Experience

MLS 634 Third World

MLS 680 Justice, Care and Community

**Recommended Support Courses**

Students choose remaining hours from among the courses listed under each of the perspectives.

**THE MASTER'S PROJECT**

MLD 695 Master's Project or MLD 696 Thesis (listed under descriptions)

Upon evaluation of a student's transcript and life experiences, the Graduate Committee on Leadership Studies may waive requirements in certain areas, thereby allowing a student more flexibility in choosing his or her remaining courses.

**COURSE DESCRIPTIONS** All of the following courses are worth three credit hours unless otherwise noted.

**PERSPECTIVES ON LEADERSHIP****MLD 545 Ethical Challenges of Leadership**

An examination of the ways in which ethics provides the grounding for the practice of leadership. Attention given to how leadership involves use of a set of values and an ethical stance to engage followers. Leadership is defined as more than occupying an organizational position or wielding power. Topics covered include ethical systems, the nature of values, the reciprocal relationship between leaders and followers, the exercise of power and decision-making. Prerequisite: None.

**MLD 595 Assessment and Research in Leadership**

An overview of traditions in leadership and organizational studies. Leadership and organizational assessment will be looked at through the lenses of social science, cultural studies, rhetorical studies and ethnography. Attention will be paid to the use of assessment tools in leadership and organizations, with a focus on self-assessment. Prerequisite: None.

**MLD 683 Leadership for Social Change and Renewal**

A study of contemporary leaders who have developed organizations and programs addressing critical environmental and social issues. Their strategies for building consensus and constituencies will be considered in light of social and ethical theory. Prerequisite: Student must have completed at least one course in all three theme areas and one elective.



**MLS 558 Conflict Resolution**

This course studies the prevailing theories and methods of conflict resolution from a variety of perspectives and in a number of settings—including interpersonal, business, cross-cultural, and international. Special attention will be given to developing facilitative communication and negotiation skills. Prerequisite: None.

**MLS 690 Public Discourse**

A study of the many levels of public discourse, as well as a broad range of examples of public discussion past and present. The course seeks to foster a sense of public responsibility, and to enable students to understand ways their own interests and academic concerns may be brought effectively into the arena of public awareness, debate, and action. Prerequisite: Student must have completed at least one course in all three theme areas and one elective.

**MGT 621 Organizational Behavior**

An examination of the development of organizational theory, as well as individual and group motivation and behavioral factors within organizations of different kinds and sizes. Topics include organizational change, conflict, structure, development, communication, decision making, and leadership. Prerequisite: None.

**MGT 645 Organizational Leadership and Group Performance**

An analysis of organizational leadership and the practice of leading and managing corporations and small businesses and not-for-profit associations or governmental agencies. The intellectual, psychological, political, and social sources of leadership are studied for their theoretical foundation and practical application. The concepts of transformational and transactional leadership are continually examined and students are encouraged to develop their leadership skills through case analysis, role development, and research projects. Prerequisite: None.

**ELECTIVES**

Students must choose at least one course, but no more than three, from each category.

**Ethical Perspective****MLS 506 Social and Ethical Responsibilities of Management**

A critical examination of social and ethical issues and problems facing business and managers. Students are asked to assess the extent and relative influence of government, competitors, labor unions, consumers, society's expectations, and the personal values of managers as factors in business decisions. Prerequisite: None.

**MLS 550 Ethics and Imagination**

A thematic introduction to roles played by the imagination in developing, sustaining, and transforming morality. The course will approach critical thinking about the moral life from the dual perspectives of ethics and of arts such as literature, painting, and film. Prerequisite: None.

**MLS 552 Ethics, Public Policy, and Biomedicine**

A study of the ethical dilemmas caused by rapidly changing medical technology. Possible issues to be explored include in-vitro fertilization, fetal tissue experimentation, genetic screening and manipulation, abortion, human subjects experimentation, behavior control, organ transplants, and euthanasia and suicide. Public policy issues related to the use of biomedical resources will also be discussed. Prerequisite: None.

**MLS 555 Technology, Society, and Ethics**

Focusing primarily on the 20th century, the course examines the impact of technological change on the cultural, social, economic, and ethical aspects of society. In addition, the public policy issues related to the allocation of scarce technological resources are also explored. Prerequisite: None.

**EDN 524 Professional Ethics for Teachers**

An introduction to professional ethics focused on models of professional-client obligation and dilemmas specific to the practice of education. Prerequisite: None.

**Organizational/Management Perspective****MGT 591 Quality Management**

An elective course for graduate business students, at any stage of their degree program, which is designed to provide an overview of the importance of quality in a rapidly changing competitive environment. The course explores the applicability of total quality management concepts to all types of organizations. Prerequisite: None.

**MGT 623 Human Resource Management**

Examines factors, both inside and outside the organization, which influence the personnel planning function. Topics include employee selection, development, motivation, evaluation and remuneration, and labor relations. Instructional methods include cases, laboratory exercises and small group discussions. Prerequisite: None.

**MGT 683 Innovation and Organizational Change**

An analysis of the management of innovation and change in organizations; the technical, economic, and social dynamics associated with the change process; and the role of the leader as a change agent. Case studies of organizations undergoing change, and biographies of leaders and change agents, are examined. Several models of change are studied, including the matrix of possible change strategies and actors in the organization. Students are encouraged to undertake a project of consequential change in an organization of their choice. Prerequisites: MGT 645, MGT 675.

**MGT 692 Special Topics**

Topics will vary depending on faculty and student interests. Topics and prerequisites will be announced in advance. This course may be taken more than once with different content. Prerequisite: None

**Community/Multicultural Perspective****MLS 530 The City**

A comparative study of urban development and the nature and growth of urban populations in various parts of the world. The course also explores various images, theories, and attitudes toward the city, and how these are related to ways we perceive the social problems arising with urban growth and propose solutions to them. Prerequisite: None.

**MLS 532 Work and Community**

How work and the professions shape group and individual identity. Through readings of a broad range of texts dealing with a wide variety of work, students will gain an understanding of how particular work situations implicate persons into particular values and expectations, and how working with or against these values continually shapes the identity of the individual worker, the particular work culture, and the view of work possessed by society as a whole. Prerequisite: None.

**MLS 534 Gender in Public Life and the Professions: Literature, Theory and Practice**

Through a consideration of literature, theory, and practice, this course will examine constructions of gender as they impact such issues as community, problem solving, leadership, and organizational structure within a national and global setting. Literary texts will be read in conjunction with interdisciplinary readings drawn from such fields as the arts, business, education, law, medicine, communication, technology, and the social sciences. Prerequisite: None.

**MLS 538 Sport in a Multicultural Society**

An exploration of the role of sport in the construction of culture, the nature of cultural change over time, and the many meanings of sport among various sub-cultures. Ethical questions such as the role of sport in establishing, reinforcing, or resisting dominant social values will also be considered. Through a study of historical, sociological, anthropological, and literary texts, including film, students will develop an historical perspective on the construction of culture, and particularly on the role of sport in that process, as well as an appreciation and respect for alternative cultures. Prerequisite: None.

**MLS 632 Race, Ethnicity, and the American Experience**

An analysis of how race, ethnicity, and concepts about these have shaped the American experience. Focusing on selected groups from both minority populations and the “white” majority population, students will study how these groups have sought to define themselves against the larger backdrop of American culture and society. Social, historical, and economic perspectives will be considered and supplemented by literature and analytical methods drawn from contemporary critical theory. Prerequisite: None.

**MLS 634 The “Third World”**

A study of literature, culture, economics, politics and psychology aimed at understanding the so-called “Third World’s” struggle for identity, as well as ways the West has imposed its political and cultural constructs upon this world. Prerequisite: None.

**MLS 680 Justice, Care, and Community**

A critical investigation of contemporary debates over the moral basis of justice between advocates of liberalism, communitarianism, and feminist ethics. The course focuses on ways in which these different perspectives produce alternative responses to topics in distributive and retributive justice, as well as the notion of justice-based community itself. Prerequisite: Student must have completed at least one course in all three theme areas and one elective.

**MASTER’S PROJECT****MLD 695 Master’s Project**

Prerequisite: Approval of MLD Coordinator or Director of Graduate and Continuing Education.

# Master of Business Administration Degree

**Mission Statement:** The purpose of the Master of Business Administration program at North Central College is to expand a student's analytical ability in problem recognition and resolution by educating the student as to the broad scope of business, economic, technological, social and ethical, and management issues in the present day. The goal of the MBA program is to prepare students for career advancement. In providing students the opportunity for intellectual growth through small and interactive classes, balancing theoretical and practical perspectives, we assist our students in reshaping their potential and their capabilities.

**Master of Business Administration Degree Program Structure** The curriculum consists of 10 to 16 courses (30 to 48 credit hours), that balance management theory with applications in a broad spectrum of organizational settings. The program contains four coordinated and cohesive components: (1) a set of six prerequisite courses that may be fulfilled partially or completely, with a student's previous course work at the undergraduate or graduate level; (2) a common core of six courses at North Central College including a capstone experience; (3) a set of three courses in an "Area of Focus"; and (4) a single elective course taken from any graduate program. Entry into the program requires the student to have earned a bachelors degree from an accredited college or university, or to have been accepted into one of the College's five-year integrated undergraduate/graduate programs. In addition, a grade of "B-" or better must have been earned to meet a prerequisite. Students needing to take one or more prerequisites may not count these courses towards the minimum 10-course degree requirement. Students must take at least five 600-level courses to complete degree requirements. Although each student's timetable and abilities are different, it is possible to complete the program in less than two years.

## PREREQUISITE COURSES (with North Central College courses)

Course	Undergraduate Course	Graduate Course
Financial Accounting	ACC 201	ACC 501
Managerial Accounting	ACC 202	ACC 502
Business Law	BUS 105	BUS 505
Statistics	BUS 241	BUS 541
Economics	ECN 250 & ECN 252	ECN 500
Financial Management	FIN 350	FIN 550

## **CORE COURSES (6 COURSES, 18 CREDIT HOURS)**

BUS 546 - Operations Research **or** BUS 641 - Econometrics

MGT 645 - Organizational Leadership

MGT 675 - Strategic Management

MKT 570 - Marketing Management

One of :

MLD 545 - Ethical Challenges of Leadership

MLS 506 - Social and Ethical Responsibilities of Management

MLS 555 - Technology, Society, and Ethics

MLS 652 - Ethics and Economics

ACC/BUS/FIN 695 or BUS/FIN 696 Applications Capstone or Thesis\*

\*Students may choose to complete a Thesis instead of the "Capstone: Applications" course. For details on the differences between these two options, consult the MBA program Coordinator or the Director of Graduate and Continuing Education.

## **AREA OF FOCUS (3 COURSES, 9 CREDIT HOURS)**

A set of three courses with a common disciplinary theme. The specific courses used to complete the Area of Focus require the approval of the MBA coordinator or Director of Graduate and Continuing Education. This "set" may be a traditional area of study, including:

- Change Management
- Human Resource Management
- Marketing
- Finance
- Management

or it could be a unique combination of courses taken from several disciplines, including graduate courses from non-business areas, such as:

- Computer Science (MS-CS)
- Leadership Studies (MLD)
- Management Information Systems (MS-MIS)
- Education (MA-Ed)
- Liberal Studies (MALS)

Students work closely with their graduate advisor to define an Area of Focus suited to their individual needs and educational aspirations.

## **ELECTIVE (1 COURSE, 3 CREDIT HOURS)**

Students round out their program with one elective course (three credit hours). These electives offer students the opportunity to extend their educational experience into new topics or to pursue additional coursework in their Area of Focus. Generally, students may choose elective courses from any of the College's six graduate programs, provided they are approved by the MBA Coordinator. Prerequisite courses may not be used in this area.

## **ONE YEAR PROFESSIONAL MANAGEMENT MBA**

In contrast to the "flexible" MBA described above, with its choice of multiple areas of focus, plus choice in speed of program completion, the Professional Management MBA is designed as a cohort program to be completed in a one-year period of time. It contains a similar core and a focus on management. The curriculum consists of a coordinated and cohesive set of 10 courses (30 credit hours), and balances management theory with applications in a broad spectrum of organizational settings. Courses are offered in a cohort format and meet twice a week from 6:00-10:00 p.m. There are five 8-week sessions, with two courses taken during each 8-week period. The first session begins in late August and the final session ends in early August of the following year. Total time to completion: 51 weeks.

## APPLICATION PREREQUISITES

All students entering the one-year program must have earned a bachelor's degree from an accredited college or university within the past five years. In addition, the same prerequisite courses listed on page 36 must be completed prior to enrollment in the program. For a prerequisite to be met the student must have completed the course with a grade of B- or better. All prerequisites must be met to be accepted into the program.

## REQUIRED COURSES (10 COURSES, 30 CREDIT HOURS)

Students take two courses per session over five, 8-week sessions.

- MKT 570 - Marketing Management
- FIN 635 - Advanced Financial Management
- MIS 510 - Management Information Systems
- ACC 601 - Financial Analysis and Control
- BUS 546 - Operations Research
- MGT 645 - Organizational Leadership
- MGT 621 - Organizational Behavior
- MGT 623 - Human Resource Management
- MGT 682 - International Management
- MGT 675 - Strategic Management

## MBA TO MS-MIS DUAL DEGREE

Students who earn the MBA degree through North Central College may, with careful planning, earn the MS-MIS degree with a minimum of 18 additional graduate credit hours. Students who are interested in pursuing this option should work closely with the Faculty Coordinator from the MS-MIS program, as well as with the Director of Graduate and Continuing Education.

Students must complete the required undergraduate level prerequisite courses (or their equivalent as determined by the Faculty Coordinator) for the MS-MIS program:

- CSC 160 Computer Science I
- CSC 161 Computer Science II
- CSC 306 Software Development in C++

At a minimum, students must complete the following graduate requirements:

- CSC 553 Systems Analysis
- CSC 560 Database Management Systems

Four additional graduate level courses, of which nine credit hours must be in computer science

## Residency Requirement

All MBA students must complete a residency requirement of 24 credit hours. Prerequisite courses taken at North Central College do not count toward the residency requirement. Students may transfer up to six credit hours of graduate coursework from other accredited institutions. The "Capstone: Applications" course or Thesis must be completed in residence at North Central College. Three of the four "Area of Focus" courses must be completed in residence at North Central College.

**COURSE DESCRIPTIONS** All of the following courses are worth three credit hours unless otherwise noted. All courses offered annually unless otherwise noted.

**ACC 501 Financial Accounting**

Measurement and reporting of financial information, including revenue recognition, inventory valuation, depreciation theory, liability recognition, and corporate equity measurement. Prerequisite: None.

**ACC 502 Managerial Accounting**

Development, analysis, and interpretation of accounting data for management decision-making. Topics include allocation of manufacturing overhead, budgeting, break-even and variance analysis, and methods of reporting costs that are essential to managerial decisions. Prerequisite: Knowledge of external and internal accounting reports is recommended.

**ACC 531 Taxes II (Same as: ACC 431)**

Basic concepts of federal income tax laws and their application primarily to business entities. Topics include corporations, corporate distributions, partnerships, securities and retirement plans, administrative procedures, and S corporations. Prerequisite: ACC 430.

**ACC 540 Advanced Accounting (Same as: ACC 440)**

A study of accounting principles concentrating on the preparation of consolidated financial statements and related topics. Prerequisites: ACC 318, IFS 104.

**ACC 560 Accounting for Not-For-Profits (Same as: ACC 460)**

A study of fund accounting as used by not-for-profit organizations such as government agencies, colleges, hospitals, and charitable organizations. Prerequisites: ACC 318, IFS 104.

**ACC 570 Auditing (Same as: ACC 470)**

A study of Generally Accepted Auditing Standards, procedures used to examine clients' financial statements and the auditors' decision-making process. Additional topics include internal control environment, evidence-gathering procedures, sampling, and the preparation of the auditors' report. Prerequisites: ACC 310, ACC 318, ECB 241.

**ACC 590 Seminar: Financial Accounting (Same as: ACC 490)**

Topics in financial accounting with an emphasis on emerging issues and the nature of financial accounting standard setting. Repeatable with different topic. Prerequisite: ACC 318.

**ACC 599 Independent Study**

Designed for students who intend to conduct an introductory study of a topic not covered in regular coursework.

**ACC 601 Financial Analysis and Control**

Building upon financial and managerial accounting principles, we will study and perform financial statement analysis. Recent requirements to strengthen reporting controls will be explored. Other relevant topics will be discussed.

**ACC 692 Special Topics**

Topics will vary depending on faculty and student interests. Topics and prerequisites will be announced in advance. May be taken more than once with different content. Prerequisite: Consent of instructor.

**ACC 693 Independent Study**

Designed for students who intend to conduct an advanced study of a topic introduced previously in a graduate course.

**ACC 695 Capstone: Applications in Accounting**

This culminating and capstone course gives the students the opportunity to apply what they have learned throughout the MBA program. Specifically, students will complete individual projects related to their areas of focus and interest. Normally the course is taken towards the end of the student's program. Prerequisite: Approval of MBA coordinator or Director of Graduate and Continuing Education. Instructor consent required.

**BUS 505 Legal Environment of Business**

An introduction to the influence of public policy, as implemented through the legal system and governmental regulatory bodies, on the formation and operation of businesses in a competitive environment. Topics include issues such as environmental, safety, labor, and antitrust legislation; affirmative action; product liability; interstate commerce regulation; and consumerism. Prerequisite: None.

**BUS 541 Business Statistics**

Statistical theory and methodology, with applications of principles of probability, sampling and estimation, hypothesis testing, regression, and correlation in a wide range of business decisions under conditions of risk and uncertainty. Same as: EDN 541. Prerequisite: College algebra.

**BUS 546 Operations Research**

Applications of mathematical models in managerial decision making. Statistical decision theory and optimization techniques including matrices, linear programming, decision theory, simulations, game theory, Markov processes, queuing theory, and network analysis. Prerequisite: BUS 541.

**BUS 599 Independent Study**

Designed for students who intend to conduct an introductory study of a topic not covered in regular course. Prerequisite: Consent of instructor.

**BUS 641 Econometric Applications for Business**

Applications of multivariate-analysis methods in a business setting. Students will be expected to define business-related problems; develop research proposals; collect, analyze, and interpret data; and prepare oral and written reports. Assignments include case studies and student/instructor defined projects. Prerequisite: BUS 541 or equivalent.

**BUS 692 Special Topics**

Topics will vary depending on faculty and student interests. Topics and prerequisites will be announced in advance. May be taken more than once with different content. Prerequisite: Consent of instructor.

**BUS 693 Independent Study**

Designed for students who intend to conduct advanced study of a topic introduced previously in a graduate course. Prerequisite: Consent of instructor.

**BUS 695 Capstone: Applications in Business**

This culminating and capstone course gives the students the opportunity to apply what they have learned throughout the MBA program. Specifically, students will complete individual projects related to their areas of focus and interest. Normally the course is taken towards the end of the student's program. Prerequisite: Approval of MBA coordinator or Director of Graduate and Continuing Education. Instructor consent required.



**ECN 500 Principles of Economics**

Concepts relevant to the analysis of the economic environment of the business firm, including factors of supply and demand, elasticity, competition, unemployment, inflation, national income analysis, and resource allocation decisions by government, businesses, and households. Prerequisite: None.

**FIN 550 Financial Management**

A survey of the tools, concepts, and models used in financial analysis. Specific topics include discounted cash flow analysis, capital budgeting, risk and return, valuation models, financial markets, statement analysis, mergers and acquisitions, and multinational finance. Prerequisite: ACC 501 or ACC 502, ECN 500. BUS 541 recommended.

**FIN 599 Independent Study**

Designed for students who intend to conduct an introductory study of a topic not covered previously in a regular course. Prerequisite: Consent of instructor.

**FIN 600 Investments, Portfolio Analysis, and Financial Planning**

A broad survey of investments, portfolio analysis, and financial planning. Topics include stock and bond market analysis and valuation; portfolio analysis and management; efficient markets; modern portfolio theory; and personal investment planning. Prerequisite: FIN 550, BUS 541.

**FIN 610 Personal Financial Planning**

A broad-based course covering topics in personal financial planning and personal finance. Topics include the financial planning process, creating and evaluating personal financial statements, tax planning, insurance planning, investment planning, evaluation of credit sources and financial services, retirement planning, estate planning, and investment advising. The course is intended for a wide audience including students interested in taking a first step toward careers in personal financial consulting, advising, and financial services (financial planning, investment advising, personal banking), who already work in financial services fields and seek a greater understanding of personal financial topics to better serve clients, or who seek to better manage their own financial affairs. Prerequisite: FIN 550.

**FIN 635 Advanced Financial Management**

The analysis of long term strategic financial decisions. Topics include the cost of capital, capital budgeting, cash flow estimation, capital structure theory and policy, leasing, multinational finance, bankruptcy and reorganization, mergers, and acquisitions. Prerequisite: FIN 550, BUS 541.

**FIN 685 International Finance**

Theory and application in the realm of financial decision making in the international sphere. Topics may include the global financial environment, foreign exchange risk management, financing international transactions and asset management including short-term and long-term multinational corporate finance decisions. Prerequisite: FIN 550.

**FIN 692 Special Topics**

Topics will vary depending on faculty and student interests. Topics and prerequisites will be announced in advance. May be taken more than once with different content. Prerequisite: Consent of instructor.

**FIN 693 Independent Study**

Designed for students who intend to conduct advanced study of a topic introduced previously in a graduate course. Prerequisite: Consent of instructor.

**FIN 695 Capstone: Applications in Finance**

This culminating and capstone course gives the students the opportunity to apply what they have learned throughout the MBA program. Specifically, students will complete individual projects related to their areas of focus and interest. Normally the course is taken towards the end of the student's program. Prerequisite: Approval of MBA coordinator or Director of Graduate and Continuing Education. Instructor consent required.

**FIN 696 Thesis**

Prerequisite: Approval of MBA Coordinator and faculty supervisor.

**MGT 591 Quality Management**

An elective course for graduate business students, at any stage of their degree program, which is designed to provide an overview of the importance of quality in a rapidly changing competitive environment. The course explores the applicability of total quality management concepts of all types of organizations. Prerequisite: None.

**MGT 599 Independent Study**

This course is designed for students who want to do introductory study of a topic not covered in a regular course. Prerequisite: Consent of instructor.

**MGT 620 Operations Management**

A systems approach applied to operational tasks such as the production and control functions. Topics covered include production and operations scheduling, activity based costing, total quality control, productivity, inventory planning models, CAD/CAM, flexible manufacturing systems, computer integrated manufacturing, and the interaction between production and other functional areas. Prerequisite: BUS 546.

**MGT 621 Organizational Behavior**

An examination of the development of organizational theory, as well as individual and group motivation and behavioral factors within organizations. Topics include organizational change, conflict, structure, development, communication, decision making, and leadership. Prerequisite: None.

**MGT 623 Human Resource Management**

Examines factors, both inside and outside the organization, which influence the personnel planning function. Topics include employee selection, development, motivation, evaluation and remuneration, and labor relations. Instructional methods include the case approach, laboratory exercises, and small group discussions. Prerequisite: None.

**MGT 645 Organizational Leadership and Group Performance**

An analysis of organizational leadership and the practice of leading and managing corporations and small businesses and not-for-profit associations or governmental agencies. The intellectual, psychological, political, and social sources of leadership are studied for their theoretical foundation and practical application. The concepts of transformational and transactional leadership are continually examined and students are encouraged to develop their leadership skills through case analysis, role development, and research projects. Prerequisite: None.

**MGT 675 Strategic Management**

A case-oriented course in the formulation and implementation of organizational strategy, policy, structure, and programs of action. Taught from a top management perspective, the course involves the student in strategy making and draws on prior course work in accounting, finance, marketing, management, and personnel studies. Comprehensive cases cover behavioral, financial, marketing, legal, and general management factors. Prerequisite: FIN 550 and 2nd year graduate student status.

**MGT 682 International Management**

The course will expose the student to the environment of international management, planning in the global arena, organizing global operations, international negotiations, strategy formulation, leadership and cross-cultural management, and finally, controlling international operations. Prerequisite: ACC 501, ECN 500 or equivalent study in accounting and economics.

**MGT 683 Innovation and Organizational Change**

An analysis of the management of innovation and change in organizations; the technical, economic, and social dynamics associated with the change process; and the role of the leader as a change agent. Case studies of organizations undergoing change, and biographies of leaders and change agents, are examined. Several models of change are studied, including the matrix of possible change strategies and actors in the organization. Students are encouraged to undertake a project of consequential change in an organization of their choice. Prerequisite: MGT 645, MGT 675.

**MGT 685 Human Resource Planning**

The development of a comprehensive plan for meeting the future personnel needs of an organization. Emphasis on the principles and practices required to forecast and acquire the human resources necessary to implement operational and strategic plans in organizations. Both for-profit and not-for-profit sectors are examined in regard to recruitment, selection, training, and appraisal of organizational members. Prerequisite: MGT 623, MGT 675.

**MGT 692 Special Topics**

Topics will vary depending on faculty and student interests. Topics and prerequisites will be announced in advance. This course may be taken more than once with different content. Prerequisite: Consent of instructor.

**MGT 693 Independent Study**

This course is designed for students who want to do advanced study of a topic previously covered in a regular course, but not offered in another course. Prerequisite: Consent of instructor.

**MIS 510 Information Management**

An analysis of computer system capabilities, limitations and systems with an emphasis on business applications. Topics include the economics of information, the information services function and information system elements, design, control and application. Prerequisite: None.

**MKT 570 Marketing Management**

The analysis, planning, implementation, and coordination of marketing activities for the purpose of achieving organizational objectives. Topics include determination of target market segments, needs and opportunities, developing marketing strategies, and manipulation of elements in the marketing mix. Prerequisite: None.

**MKT 575 Marketing Research Analysis and Management**

The quality of marketing decisions depends to a great extent on the information available to the marketing decision-maker. It is the function of marketing research to provide information for this decision making. The format of this course is to concentrate not only on how to do marketing research but why to do it that way. In this investigation such topics as research design, sources of marketing research data and techniques used to gather and interpret data, to mention a few, are discussed. Prerequisite: MKT 570.

**MKT 599 Independent Study**

This course is designed for students who want to do introductory study of a topic not covered in a regular course. Prerequisite: Consent of instructor.

**MKT 685 Promotional Management**

A study of the theories and techniques applicable to the development of the promotional mix. Topics include the analysis and development of promotional objectives, budgets, message and media design, and measuring the effectiveness of advertising, sales promotion, and public relations efforts. Prerequisite: MKT 570.

**MKT 688 International Marketing**

An exploration of the differences between markets and distribution systems among various countries, with an emphasis on the social, economic and cultural factors causing these differences. Topics include the organization of trade channels in various cultures; typical government policies toward international trade as countries reach different stages of development, international marketing research, advertising, and exporting. Prerequisite: MKT 570.

**MKT 692 Special Topics**

Topics will vary depending on faculty and student interests. Topics and prerequisites will be announced in advance. This course may be taken more than once with different content. Prerequisite: None.

**MKT 693 Independent Study**

This course is designed for students who want to do advanced study of a topic previously covered in a regular course, but not offered in another course. Prerequisite: Consent of instructor.

**MLD 545 Ethical Challenges of Leadership**

An examination of the ways in which ethics provides the grounding for the practice of leadership. Attention given to how leadership involves use of a set of values and an ethical stance to engage followers. Leadership is defined as more than occupying an organizational position or wielding power. Topics covered include ethical systems, the nature of values, the reciprocal relationship between leaders and followers, the exercise of power and decision-making. Prerequisite: None.

**MLS 506 Social and Ethical Responsibilities of Management**

A critical examination of social and ethical issues and problems facing business and managers. Students are asked to assess the extent and relative influence of government, competitors, labor unions, consumers, society's expectations, and managers' personal values as factors in business decisions. Prerequisite: None.

**MLS 555 Technology, Society, and Ethics**

Focusing primarily on the 20th century, the course examines the impact of technological change on the cultural, social, economic, and ethical aspects of society. In addition, the public policy issues related to the allocation of scarce technological resources are also explored. Prerequisite: None.

**MLS 652 Ethics and Economics**

A study of efficiency and equity criteria used in economic analysis, and the relationship of these criteria to traditional Western ethical values. The study includes a critique of capitalism and socialism and a consideration of past and potential contributions of economic analysis to ethical reasoning. The application of individual rights, economic efficiency, and justice to selected contemporary issues will be examined. Prerequisite: None. Offered: Occasionally.

# Master of Science Degree in Management Information Systems

**Mission Statement:** The Master of Science in Management Information Systems at North Central College provides graduates with the technical and management skills necessary to advance their organization's goals.

## Master of Science Degree in Management Information Systems Program Structure

The Master of Science Degree in Management Information Systems is designed to build a bridge between technology and management. It does this by offering courses that will increase technical competence and promote effective management. Strengthening the students' analytical and critical thinking skills while sharpening their communications skills, the program focuses on the development and implementation of effective information systems.

A student without the prerequisite technical base must successfully complete the required North Central College courses or their equivalent in their first six classes. In addition, a total of 39 graduate credit hours must be completed by the student. These credits are structured to provide a balance between the technical side and the managerial functions that comprise the management information systems area.

## REQUIRED TECHNICAL BASE

CSC 160 Computer Science I (JAVA)

CSC 161 Computer Science II (JAVA)

And depending on prerequisites for chosen program track, either CSC 210 Data Structure and Algorithms and CSC 306 Software Development in C++ (advanced object oriented programming)

or CSC 220 Computer Systems Concepts

## REQUIRED CORE COURSES (five courses, 15 credit hours)

BUS 541 Business Statistics

BUS 641 Econometric Applications for Business

CSC 553 Systems Analysis

or CSC 554 Object Oriented Analysis and Design

CSC 560 Database Management Systems

MIS 695 or BUS 695 Master's Project\*

\*Students may choose to complete a Thesis (MIS 696 or BUS 696) instead of a Master's Project. For details on the distinctions between the two options, consult the MS-MIS Program Coordinator or Director of Graduate and Continuing Education.

## ELECTIVE COURSES

### Analytical Business Courses - Choose three (nine credit hours):

ACC 501 Financial Accounting

ACC 502 Managerial Accounting

ACC 692 Special Topics

BUS 546 Operations Research

ECN 500 Principles of Economics

FIN 550 Financial Management

MGT 620 Operations Management

**Management Perspective Courses - Choose one (three credit hours):**

MIS 510 Information Management  
 MGT 591 Quality Management  
 MGT 621 Organizational Behavior  
 MGT 623 Human Resource Management  
 MGT 645 Organizational Leadership and Group Performance  
 MGT 675 Strategic Management  
 MGT 682 International Management  
 MGT 683 Innovation and Organizational Change

**Computer Science Courses - Choose three (nine credit hours):**

CSC 550 Advanced Java Programming  
 CSC 554 Object Oriented Analysis & Design  
 CSC 555 Project Management  
 CSC 557 Software Quality and Reliability  
 CSC 569 Data Communication and Networking  
 CSC 570 Local Area Networks  
 CSC 590 Special Topics  
 CSC 660 DBMS II  
 CSC 662 Database Programming  
 CSC 670 Advanced Networking

**Ethical Issues - Choose one (three credit hours):**

See the Liberal Studies electives chart located on page 73.

**MS-MIS TO MBA DUAL DEGREE**

Students who earn the MS-MIS degree through North Central College may, with careful planning, earn the MBA degree with a minimum of 18 additional graduate credit hours. Students who are interested in pursuing this option should work closely with the Faculty Coordinators from both the MS-MIS and MBA programs, as well as with the Director of Graduate Programs.

Students must complete the MBA Core Curriculum and an Area of Focus. At a minimum the following requirements would need to be completed:

BUS 505 Legal Environment of Business  
 MKT 570 Marketing Management  
 Area of Focus courses as agreed upon by the MBA Faculty Coordinator  
 An elective approved by the Faculty Coordinator

**MS-MIS TO MS-CS DUAL DEGREE**

Students who earn the MS-MIS degree through North Central College may, with careful planning, earn the MS-CS degree with a minimum of 18 additional graduate credit hours. Students who are interested in pursuing this option should work closely with the Faculty Coordinators from both the MS-MIS and MS-CS programs, as well as with the Director of Graduate Programs.

Students must complete the required undergraduate level prerequisite courses (or their equivalent as determined by the Faculty Coordinator) for the MS-CS program:

CSC 210 Data Structures and Algorithms  
 CSC 220 Computer System Concepts  
 CSC 230 Discrete Structures I  
 CSC 306 Software Development in C++  
 MTH 152 Calculus II

A course in technical writing

Students must also complete 6-7 graduate CSC courses (18-21 cr. hrs.) not used toward the MIS degree. These additional courses must include:

CSC 520 Operating Systems I  
 CSC 540 Algorithms

4 electives (at least 2 at the 600-level) if CSC 695 Master's Project is included in the student's MIS or Computer Science program or  
 5 electives (at least 3 at the 600-level) if CSC 695 is not included.

**COURSE DESCRIPTIONS** All of the following courses are worth three credit hours unless otherwise noted.

**ACC 501 Financial Accounting**

Measurement and reporting of financial information, including revenue recognition, inventory valuation, depreciation theory, liability recognition, and corporate equity measurement. Prerequisite: None.

**ACC 502 Managerial Accounting**

Development, analysis, and interpretation of accounting data for managerial decision-making. Traditional and contemporary issues will be discussed, including the Theory of Constraints. Prerequisite: None, but knowledge of external and internal accounting reports is recommended.

**ACC 692 Special Topics**

Topics will vary depending on faculty and student interests. Topics and prerequisites will be announced in advance. May be taken more than once with different content.

**BUS 541 Business Statistics**

Statistical theory and methodology, with applications of principles of probability, sampling and estimation, hypothesis testing, regression, and correlation in a wide range of business decisions under conditions of risk and uncertainty. Same as: EDN 541. Prerequisite: None.

**BUS 546 Operations Research**

Applications of mathematical models in managerial decision-making. Statistical decision theory and optimization techniques including matrices, linear programming, decision theory, simulations, game theory, Markov processes, queuing theory, and network analysis. Prerequisite: BUS 541.

**BUS 641 Econometric Applications for Business**

Applications of multivariate analysis methods in a business setting. Students will be expected to define business-related problems; develop research proposals; collect, analyze, and interpret data; and prepare oral and written reports. Assignments include case studies and student/instructor defined projects. Prerequisite: BUS 541 or equivalent.

**BUS 695 Applications in Business**

Prerequisite: Approval of MS-MIS Coordinator or Director of Graduate and Continuing Education.

**CSC 550 Advanced Java Programming**

Advanced topics in Java programming. Includes reflection, multi-threaded applications, interfacing to native methods, Internet and servlet programming, JavaBeans, JDBC, remote objects, and remote method invocation. Extensive programming required. Repeats CSC 590 Special Topics: Java. Same as: CSC 450. Prerequisite: CSC 306 and knowledge of Java.

**CSC 553 Systems Analysis**

Methods, techniques and tools to model and analyze systems. Topics include problem definition, the project life cycle, organizational change, data acquisition, data flow and entity-relationship modeling, use cases, domain engineering, and costs and benefits of CASE tools. Major project required. Same as: CSC 453. Prerequisite: CSC 161.

**CSC 554 Object-Oriented Analysis and Design**

Concepts and formal methods of the object-oriented software analysis and design paradigm. Includes CRC and other methodologies, overview of UML, and comparison of the object paradigm with other software development paradigms. Programming may be required. Same as: CSC 454. Prerequisite: CSC 306.

**CSC 555 Project Management**

Skills needed to effectively manage projects. Topics include methods of planning, estimating, scheduling, tracking, and controlling development projects. Addresses group process issues. Same as: CSC 455. Prerequisite: CSC 306 or CSC 453. Recommended: Basic knowledge of statistics.

**CSC 557 Software Quality and Reliability**

Exploration of software quality and reliability issues including design, verification, complexity measurement, quality metrics, test plan development, testing techniques, and fault tolerance. Same as CSC 457. Prerequisites: CSC 306 and a course in statistics. Repeats CSC 655 Software Quality and Reliability.

**CSC 560 Database Management Systems**

Data modeling, database design and implementation, comparison of different DBMS models with emphasis on the relational model. Includes integrity, security, recovery and concurrency issues, and business applications of database systems. SQL programming required. Same as: CSC 460. Prerequisite: CSC 161.

**CSC 569 Data Communications and Networking**

Introduction to basic communication theory, data transmission, and data communication protocols. Exploration of network architectures with emphasis on the Internet related protocol model. Introduction to local area networks. Includes hands-on lab activities. Same as: CSC 469. Prerequisite: CSC 220.

**CSC 570 Local Area Networks**

Exploration of Local Area Network technology including design, protocols, standards, and performance analysis. Covers wired and wireless LANs, LAN operating systems, LAN security, and network management. Includes hands-on lab activities. Same as: CSC 470. Prerequisites: CSC 569. Repeats CSC 669 Local Area Networks.

**CSC 590 Special Topics**

One or more seminars are normally offered each year on topics of current interest. Recent offerings have included human-computer interaction, computer security, and eBusiness. Same as: CSC 490. Prerequisite: Varies with topic.

**CSC 660 Database Management Systems II**

This course focuses on advanced topics in both centralized and distributed database systems, using both relational and object data modeling. Emphasis is on systems rather than applications. Includes topics of importance to database administrators and analysts, such as database security and advanced transaction processing. Prerequisite: CSC 560.

**CSC 662 Database Programming**

This course covers the fundamentals of database application development using various programming languages, such as PL/SQL, JDBC, ProC++, and SQLJ. Includes physical data organization, Web interfaces, and various systems topics, such as transaction monitors, multi-database systems, and integration of database systems. Prerequisite: CSC 161, CSC 560.



**CSC 670 Advanced Networking**

Advanced topics in computer and data networking focusing on network architectures, with particular emphasis on wireless and broadband. Covers high level (transport and application layer) protocols and their support for Web services; network security; quality of service; and creation and analysis of network models. Includes hands-on lab activities. Prerequisite: CSC 569.

**CSC 692 Special Topics**

Topics will vary depending on faculty and student interests. May be taken more than once with different content. Prerequisite: Varies with topic.

**ECN 500 Principles of Economics**

Concepts relevant to the analysis of the economic environment of the business firm, including factors of supply and demand, elasticity, competition, unemployment, inflation, national income analysis, and resource allocation decisions by government, businesses, and households. Prerequisite: None.

**FIN 550 Financial Management**

A survey of the tools, concepts, and models used in financial analysis. Specific topics include discounted cash flow analysis, capital budgeting, risk and return, valuation models, financial markets, statement analysis, mergers and acquisitions, and multinational finance. Prerequisite: ACC 501 or ACC 502, ECN 500. BUS 541 recommended.

**MGT 591 Quality Management**

An elective course for graduate business students, at any stage of their degree program, which is designed to provide an overview of the importance of quality in a rapidly changing competitive environment. The course explores the applicability of total quality management concepts to all types of organizations. Prerequisite: None.

**MGT 620 Operations Management**

A systems approach applied to operational tasks such as the production and control functions. Topics covered include production and operations scheduling, activity based costing, total quality control, productivity, inventory planning models, CAD/CAM, flexible manufacturing systems, computer integrated manufacturing, and the interaction between production and other functional areas. Prerequisite: BUS 546.

**MGT 621 Organizational Behavior**

An examination of the development of organization theory, as well as individual and group motivation and behavioral factors within organizations. Topics include organizational change, conflict, structure, development, communication, decision-making, and leadership. Prerequisite: None.

**MGT 623 Human Resource Management**

Examines factors, both inside and outside the organization, which influence the personnel planning function. Topics include employee selection, development, motivation, evaluation and remuneration, and labor relations. Instructional methods include the case approach, laboratory exercises, and small group discussions. Prerequisite: None.

**MGT 645 Organizational Leadership and Group Performance**

An analysis of organizational leadership and the practice of leading and managing corporations and small businesses and not-for-profit associations or governmental agencies. The intellectual, psychological, political, and social sources of leadership are studied for their theoretical foundation and practical application. The concepts of transformational and transactional leadership are continually examined and students are encouraged to develop their leadership skills through case analysis, role development, and research projects. Prerequisite: None.

**MGT 675 Strategic Management**

A case-oriented course in the formulation and implementation of organizational strategy, policy, structure, and programs of action. Taught from a top management perspective, the course involves the student in strategy making and draws on prior course work in accounting, finance, marketing, management and personnel studies. Comprehensive cases cover behavioral, financial, marketing, legal, and general management factors. Prerequisite: FIN 550, 2nd year graduate student, or consent of MBA Coordinator.

**MGT 682 International Management**

The course will expose the student to the environment of international management, planning in the global arena, organizing global operations, international negotiations, strategy formulation, leadership and cross-cultural management, and finally, controlling international operations. Prerequisite: ACC 501, ECN 500 or equivalent study in accounting and economics.

**MGT 683 Innovation and Organizational Change**

An analysis of the management of innovation and change in organizations; the technical, economic, and social dynamics associated with the change process; and the role of the leader as a change agent. Case studies of organizations undergoing change, and biographies of leaders and change agents, are examined. Several models of change are studied, including the matrix of possible change strategies and actors in the organization. Students are encouraged to undertake a project of consequential change in an organization of their choice. Prerequisite: MGT 645, MGT 675, or consent of MBA Coordinator.

**MIS 510 Information Management**

An analysis of computer system capabilities, limitations and systems with an emphasis on business applications. Topics include the economics of information, the information services function and information system elements, design, control and application. Prerequisite: None.

**MIS 695 Master's Project**

Prerequisite: Approval of MIS Coordinator or Director of Graduate and Continuing Education.

**MIS 696 Thesis**

Prerequisite: Approval of faculty supervisor.

**INTERDISCIPLINARY SUPPORT COURSES**

Reference the Liberal Studies electives chart located on page 73.

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# Master of Science Degree in Computer Science

**Mission Statement:** The mission of the North Central College Computer Science graduate program is to provide professional study at the graduate level for computer scientists working in industry, and for individuals desiring to embark on, or make a career change into, the field of Computer Science.

## Master of Science Degree in Computer Science Program Structure

The M.S. in Computer Science program prepares students for successful careers as computer scientists. About half the students in the program already have a computer science background and wish to build on it to increase their employment potential. The other half includes students making a career change into the field. A set of undergraduate prerequisite courses prepares these students for graduate level study in computer science.

## ADMISSION REQUIREMENTS

In addition to the admissions requirements specified in the Admission section of this catalog, a degree-seeking applicant must also have successfully completed the following North Central College undergraduate courses or their equivalent. (See the “Selected Prerequisite Course Descriptions”.)

CSC 160 Computer Science I  
CSC 161 Computer Science II  
CSC 210 Data Structures and Algorithms  
CSC 220 Computer System Concepts  
CSC 230 Discrete Structures I  
CSC 306 Software Development in C++  
MTH 151 Calculus I  
MTH 152 Calculus II  
A statistics course  
A course in technical writing

A student who has not met the above requirements may be admitted provisionally while he/she completes the coursework and demonstrates academic performance appropriate for graduate-level study. A student admitted under these circumstances is expected to earn a grade of B- or better in all Computer Science prerequisites and a grade of C- or better in all Math and Statistics prerequisites.

## DEGREE REQUIREMENTS

Students may elect either the project or the non-project option of the Master of Science degree in Computer Science. Students who elect the project option complete 9 courses and a Master’s Project for a total of 10 graduate-level courses. Students who elect the non-project option complete 11 courses.

The following three courses constitute the core of the degree and must be included in each student’s program:

CSC 520 Operating Systems I  
CSC 540 Algorithms  
An interdisciplinary support course (see page 73)

The remaining 7 or 8 courses are selected by the student in consultation with the MS-CS Program Coordinator and the Director of Graduate and Continuing

Education. Students who elect the project option select an additional 6 courses (at least two of which must be at the 600 level) and complete CSC 695 Masters Project. Students who elect the non-project option complete 8 additional courses, at least three of which must be at the 600 level.

## **MS-CS / MS-MIS DUAL DEGREE**

Students who earn the MS-CS degree through North Central College may, with careful planning, earn the MS-MIS degree with a minimum of 18 additional graduate credit hours. Students who are interested in pursuing this option should work closely with the Faculty Coordinators from both the MS-MIS and MS-CS programs, as well as with the Director of Graduate and Continuing Education.

At a minimum, students must complete the following requirements:

BUS 541 Statistics\*

BUS 641 Econometric Applications for Business

CSC 553 or CSC 554, and CSC 560 if not already taken as part of the MS-CS degree

Any three of the following:

ACC 501 Financial Accounting

ACC 502 Managerial Accounting

ACC 692 Special Topics

BUS 546 Operations Research

ECN 500 Economics

FIN 550 Financial Management

MGT 620 Operations Management

Any one of the following:

MIS 510 Information Management

MGT 591 Quality Management

MGT 621 Organizational Behavior

MGT 623 Human Resource Management

MGT 645 Organizational Leadership and Group Performance

MGT 675 Strategic Management

MGT 682 International Management

MGT 683 Innovation and Organizational Change

\*Students who received a grade of “B” or better in the undergraduate statistics course used for the MS-CS prerequisite will have BUS 541 replaced with an additional graduate level course from the Economics and Business Division.

**COURSE DESCRIPTIONS** All of the following courses are worth three credit hours unless otherwise noted.

### **CSC 520 Operating Systems I**

An examination of approaches to computer system resource management. Topics include scheduling, memory management, file systems, I/O management, multiprocessing, security, and protection. Programming may be required. Same as: CSC 420. Prerequisites: CSC 161, CSC 220. Recommended: CSC 210.

### **CSC 525 Computer Graphics**

2D and 3D graphical applications implemented in OpenGL, graphics algorithms, display technologies, and human factors. Extensive programming required. Same as: CSC 425. Prerequisite: CSC 306.

**CSC 527 Linux Programming**

Fundamental concepts, operating system kernel, library facilities, and programming techniques that provide the foundation for application programming on Linux systems. Course topics include process management, input/output, signals, sockets, interfacing to the Internet, Shell programming, and software project development tools. The course does not cover system administration or operating system internals. Major project required. Same as CSC 427. Prerequisite: CSC 306. Recommended: CSC 520. Repeats CSC 490/590 Special Topics: Linux.

**CSC 531 Advanced Windows and .NET Programming**

System and application programming on the Windows and .NET platforms using C# and C++. Topics include development of Windows and Web applications, the .NET framework class libraries, ADO.NET, ASP.NET, interprocess communication, multi-threaded applications, network programming, and security. Extensive programming required. Same as: CSC 431. Prerequisites: CSC 306.

**CSC 535 Windows Game Programming**

Design and development of Windows game software. Topics include computer graphics, networking, event-driven programming, the Windows API, GDI and Win32 libraries, DirectX, DirectInput, DirectSound, DirectPlay, modeling tools, and graphics engines for games. Extensive programming in C++ required. Same as: CSC 435. Prerequisite: CSC 525. Repeats CSC 490/590 Special Topics: Game Software.

**CSC 536 Human Computer Interaction**

Fundamental principles in the design, implementation, and evaluation of human-machine interfaces with emphasis on human computer interaction. Topics include user psychology, theories of human learning and perception, audio and visual physiology, graphical user interfaces, task analysis, and usability heuristics. Same as: CSC 436. Prerequisite: CSC 160. Repeats CSC 590 Special Topics HCI.

**CSC 540 Algorithms**

Design and analysis of algorithms. Classification of algorithms by time and space complexity. Algorithm design techniques such as divide and conquer, the greedy method, and dynamic programming. NP-complete problems and approximation algorithms. Introduction to parallel algorithms. Programming may be required. Same as: CSC 440. Prerequisite: CSC 210, CSC 230.

**CSC 550 Advanced Java Programming**

Advanced topics in Java programming. Includes reflection, multi-threaded applications, interfacing to native methods, Internet and servlet programming, JavaBeans, JDBC, remote objects, and remote method invocation. Extensive programming required. Same as: CSC 450. Prerequisite: CSC 306 and knowledge of Java. Repeats CSC 590 Special Topics: Java.

**CSC 553 Systems Analysis**

Methods, techniques and tools to model and analyze systems. Topics include problem definition, the project life cycle, organizational change, data acquisition, data flow and entity-relationship modeling, use cases, and domain engineering. Major project required. Same as: CSC 453. Prerequisite: CSC 161.

**CSC 554 Object-Oriented Analysis and Design**

Concepts and methods of the object-oriented software analysis and design paradigm. Includes CRC and other methodologies, use cases, overview of UML, and comparison of the object paradigm with other software development paradigms. Programming may be required. Same as: CSC 454. Prerequisite: CSC 161.

**CSC 555 Project Management**

Skills needed to effectively manage projects. Topics include methods of planning, estimating, scheduling, tracking, and controlling development projects. Addresses group process issues. Same as: CSC 455. Prerequisite: CSC 306 or CSC 553; Recommended: basic knowledge of statistics.

**CSC 557 Software Quality and Reliability**

Exploration of software quality and reliability issues including design, verification, complexity measurement, quality metrics, test plan development, testing techniques, and fault tolerance. Same as CSC 457. Prerequisites: CSC 306 and a course in statistics. Repeats CSC 655 Software Quality and Reliability.

**CSC 560 Database Management Systems**

A study of data modeling, database design, and database implementation with emphasis on the relational model. Introduces integrity, security, recovery, concurrency issues, and business applications of database systems. SQL programming required. Same as: CSC 460. Prerequisite: CSC 161.

**CSC 564 Data Mining**

This course introduces data mining in the context of KDD (Knowledge Discovery and Data Mining) and covers the three main phases of the KDD process: preprocessing, data extraction, and data analysis. Includes data cleaning and preparation techniques; extraction methods such as deviation detection, classification, dependency modeling, and clustering; statistical analysis methods; and visualization techniques. Same as: CSC 464. Prerequisite: CSC 560, CSC 585. Repeats CSC 692 Special Topics: Data Mining. Repeats CSC 664 Data Mining.

**CSC 565 Principles of Programming Languages**

A comparative study of programming languages. Includes formal languages and automata, run-time behavior, internal organization, and compilation and interpretation. Programming required. Same as: CSC 465. Prerequisite: CSC 220, CSC 230, CSC 306.

**CSC 569 Data Communications and Networking**

Introduction to basic communication theory, data transmission, and data communication protocols. Exploration of network architectures with emphasis on the Internet related protocol model. Introduction to local area networks. Includes hands-on lab activities. Same as: CSC 469. Prerequisite: CSC 220.

**CSC 570 Local Area Networks**

Exploration of Local Area Network technology including design, protocols, standards, and performance analysis. Covers wired and wireless LANs, LAN operating systems, LAN security, and network management. Includes hands-on lab activities. Same as: CSC 470. Prerequisite: CSC 569. Repeats CSC 669 Local Area Networks.

**CSC 580 Digital Logic and Computer Design**

Computer organization from basic digital logic to complete systems. Analysis and design of combinational and sequential networks, organization of memory, registers, ALU, and control units. Laboratory. Same as: CSC 480. Prerequisite: CSC 220, CSC 230.

**CSC 585 Fundamentals of Artificial Intelligence**

An introduction to artificial intelligence topics including search algorithms, knowledge representation, and uncertainty. Covers machine learning and reasoning applications. Extensive programming in Prolog or Lisp is required. Same as: CSC 485. Prerequisite: CSC 210, CSC 230.

**CSC 587 Parallel Processing and Concurrent Programming**

A course in hardware, software, and language aspects of parallel computing, focusing on the development of effective parallel algorithms and their implementation on a variety of parallel architectures and interconnection networks. Same as: CSC 487. Prerequisite: CSC 520. Repeats CSC 635 Parallel Processing.

**CSC 590 Special Topics**

One or more special topics courses are normally offered each year on topics of current interest. Recent offerings have included advanced Java, computer security, and eBusiness. Same as: CSC 490. Prerequisite: Varies with topic.

**CSC 599 Independent Study (1.0 - 4.0 credit hours)**

Designed for students who want to study a topic not covered in a regular course. Prerequisite: Consent of instructor.

**CSC 620 Operating Systems II**

A study of the organization and design of computer operating systems. Includes alternate approaches to common problems and trade-offs inherent in different OS design strategies. Topics include the Linux kernel, multi-threading, interprocess communication facilities, support for distributed computing, and security. Programming required. Prerequisite: CSC 520.

**CSC 660 Database Management Systems II**

This course focuses on advanced topics in both centralized and distributed database systems, using both relational and object data modeling. Emphasis is on systems rather than applications. Includes topics of importance to database administrators and analysts, such as database security and advanced transaction processing. Prerequisite: CSC 560.

**CSC 662 Database Programming**

This course covers the fundamentals of database application development using various programming languages, such as PL/SQL, JDBC, ProC++, and SQLJ. Includes physical data organization, Web interfaces, and various systems topics, such as transaction monitors, multi-database systems, and integration of database systems. Prerequisite: CSC 161, CSC 560.

**CSC 670 Advanced Networking**

Advanced topics in computer and data networking focusing on network architectures, with particular emphasis on wireless and broadband. Covers high level (transport and application layer) protocols and their support for Web services; network security; quality of service; and creation and analysis of network models. Includes hands-on lab activities. Prerequisite: CSC 569.

**CSC 686 Advanced Artificial Intelligence**

Advanced principles of artificial intelligence including search techniques, knowledge engineering, game playing, planning, and machine learning. Programming in Prolog or Lisp required. Prerequisite: CSC 540, CSC 585, a graduate-level writing course.

**CSC 692 Special Topics**

Topics will vary depending on faculty and student interests. May be taken more than once with different content. Prerequisite: Instructor consent required.

**CSC 693 Independent Study (1.0 - 3.0 credit hours)**

Designed for students who want to do more advanced independent study of a topic previously covered in a regular graduate course. Prerequisite: Instructor consent required.

**CSC 695 Master's Project**

Special one to two term project carried out under the guidance of a faculty advisor and a second reader. The results of the project must be reported in a specified written form and presented orally. Detailed project guidelines are available from the Office of Graduate and Continuing Education. Prerequisite: second year graduate student status, approval of the project advisor.

**INTERDISCIPLINARY SUPPORT COURSES**

Reference the Liberal Studies electives chart located on page 73.

**SELECTED PREREQUISITE COURSE DESCRIPTIONS**

The following list of undergraduate and graduate courses may be used by students to plan their prerequisite requirements. All are offered annually.

**BUS 541 Business Statistics**

Statistical theory and methodology, with applications of principles of probability, sampling and estimation, hypothesis testing, regression, and correlation in a wide range of business decisions under conditions of risk and uncertainty. Prerequisite: None.

**CSC 160 Computer Science I (3.5 credit hours)**

An introduction to computer science and object-oriented programming emphasizing development of algorithms and their implementation in Java. Topics include objects, classes, inheritance, data types such as arrays and strings, control mechanisms for selection and iteration, graphical user interfaces, and event-driven programming. Extensive programming required. Laboratory. May not be taken after a higher level programming class. Prerequisite: MTH 121 or higher or appropriate placement.

**CSC 161 Computer Science II (3.5 credit hours)**

A second course in programming, emphasizing design and implementation of well-constructed programs using Java. Topics include graphical user interfaces, polymorphism, exception handling, stream and file I/O, algorithms for searching and sorting, recursion, linked lists, stacks, and queues. Extensive programming required. Laboratory. Prerequisite: CSC 160 or one year of high school programming in Java; MTH 121 or higher or appropriate placement.

**CSC 210 Data Structures and Algorithms**

Structures, techniques, and algorithms for managing data. Topics include variations of linked lists; binary trees, B-trees and other types of search trees; advanced searching and sorting algorithms; graphs and graph algorithms; and analysis of algorithms. Programming required. Prerequisite: CSC 161 and knowledge of Java.



**CSC 220 Computer System Concepts**

Basic computer architecture including combinational circuits, instruction sets, microprogramming and assembly language, I/O (devices, busses, and interrupts), and memory systems and organization. Programming required. Prerequisite: CSC 161; CSC 230 recommended.

**CSC 230 Discrete Structures I**

Fundamental topics in mathematics and computer science including formal logic, proof techniques, sets, relations and functions, combinatorics, graphs, logic circuits, and finite state machines. Same as: MTH 230. Prerequisite: CSC 160, MTH 121 or higher or appropriate placement.

**CSC 306 Software Development in C++**

Object-oriented design and implementation of large scale software using C++. Topics include development of event-driven software with graphical user interfaces. Prior knowledge of C++ is not required. Extensive programming required. Prerequisite: CSC 161 and knowledge of C++ or Java. Recommended: CSC 210.

**BUS 241 Statistics**

This course is designed to provide students with the ability to apply and interpret descriptive and inferential procedures, probability distributions, statistical sampling and design, hypothesis testing, and regression. Primary objectives are to improve the statistical capabilities of students as well as their abilities to apply statistical concepts in a business setting. Prerequisites: MTH 121 or higher, IFS 104 or IFS 106.

**MTH 151 Calculus I**

Fundamental concepts of calculus including limits, continuity and differentiation with applications. Prerequisite: MTH 121 and MTH 122; or four years high school math including algebra, geometry, and trigonometry.

**MTH 152 Calculus II**

Continuation of Calculus I with emphasis on integration and its applications. Prerequisite: MTH 141 or MTH 151.

**PSY 250 Statistics**

A course stressing the methods, concepts and logic underlying the statistical evaluation of research data. The course stresses descriptive and inferential statistics, estimation and hypothesis testing and “why” as well as “when” to use various statistical methods. A working knowledge of basic algebraic techniques is necessary. Prerequisite: MTH 121 or higher; one of IFS 104, IFS 106, or spreadsheet experience



# Master of Arts Degree in Education

**Mission Statement:** The Department of Education teaches, inspires, and guides aspiring leaders to be effective facilitators of learning and leadership.

## Master of Arts Degree in Education Program Structure

### EDUCATIONAL LEADERSHIP AND ADMINISTRATION

The purpose of the Educational Leadership and Administration specialization (program for Type 75 eligibility in the area of General Administrative) in the Master of Arts Degree in Education (MA-Ed) is to develop educational leaders and administrators who have vision and possess a wide set of leadership and management perspectives and skills. The program provides students with an understanding of the school environment and how a principal, through his/her abilities with the technical, managerial, and institutional levels, creates and fosters a professional learning environment. Students are provided with breadth of theory in leadership and practical experiences that provides them with a foundation of knowledge and performances necessary to understand the enterprise of educational leadership and educational management to facilitating the learning of teachers and students in their care.

The graduate program in Educational Leadership and Administration enables students to view leadership and administrative decision making from multiple perspectives.

#### Certificate Only Option

The Educational Leadership and Administration program allows students to take all courses necessary to be eligible for the General Administrative Endorsement of the Type 75 Certificate issued by the State of Illinois with or without taking the additional courses required to complete the MA-Ed. Note, however, that to be eligible for the Type 75 Certificate, students must have earned a master's degree. Therefore, students who have not yet done so should enroll in the education program to complete both the master's degree and the courses required for the Type 75 Certificate.

### THE EDUCATIONAL LEADERSHIP AND ADMINISTRATION CURRICULUM

The degree in Education with a specialization in Educational Leadership and Administration requires a student to complete 36 credit hours.

Students who complete the M.A. degree in Education with a specialization in Educational Leadership and Administration can earn the course credits necessary to sit for the Illinois Type 75 Certification Exam. Note: Other significant requirements for the Type 75 Certificate, including work experience and prior certification requirements, also must be met; contact the M.A. in Education Program Coordinator, the Office of Graduate and Continuing Education, or your county Superintendent of Education, for details and complete requirements.

The M.A. degree in Education Program Coordinator or Office of Graduate and Continuing Education will assist each student in selecting appropriate courses depending on the student's intent to a) earn the full M.A. in Education or b) complete only those courses required to sit for the Type 75 Certification Exam.

To earn the M.A. degree in Education, students must complete the following courses:

EDN 500 The Principalship: An Overview of School Leadership  
(recommended as entry course to the program)

EDN 508 Leadership for Innovation and Change

EDN 515 The Institutional and Political Environment of Schools

EDN 522 Issues in School Law

EDN 534 Leadership for Curriculum and Instruction

EDN 536 School, Home, and Community

EDN 610 School Operations and Management

EDN 620 Program Assessment (Prerequisite: EDN 500)

EDN 630 Schools as Learning Communities

EDN 690 Field Experiences (Prerequisite: 21 credit hours)

MLS Class\*

EDN 695 Master's Project\*- Prerequisite: Consent of MA-Ed Coordinator or Director of Graduate and Continuing Education

or

EDN 696\* The Educational Leader (Prerequisite: 30 credit hours)

\*Students choosing the Certificate Only Option—meaning they are seeking only Type 75 Certification and not the M.A. degree in Education—are not required to complete these courses.

## **CURRICULUM AND INSTRUCTION: TEACHER AS LEADER MASTER'S DEGREE**

The Curriculum & Instruction Master's program has been modified to provide teacher leaders with a contemporary focus on learning, leadership, and opportunities for in-depth professional development to improve learning for teachers and students. Master's candidates in the program will complete six required core courses in curriculum and instruction, with an emphasis on teacher leadership in the school environment. Students will choose 12 hours from one of the elective strands: curriculum and instruction, leadership and administration, or mathematics (reading strand pending). Candidates in the program may also choose a generalist approach and select 12 hours from any of the elective strands.

These strands are intended to maximize the candidate's potential to continue studies for endorsements and certification beyond completion of the Master's program. Thus, the teacher leader strand could provide a gateway to Teacher Leader Endorsement or a Type 75 certification while the reading strand could lead to a reading endorsement or reading certification beyond the Master's requirements.

The program is based on the standards for National Board Certification for Teachers and requires that each candidate in the program develop a standards based portfolio that reflects the growth and development of teacher leadership in curriculum and instruction. Teacher Leader I is designed as the entry point for the program and Teacher Leader II as the capstone course.

All students are required to complete a total of 33 credit hours: 18 credit hours of core courses and 12 credit hours of elective courses (which will meet specific needs in their discipline) and one Liberal Studies elective. (The required core and elective courses are divided into three strands.) Students must complete the 18 core hours as well as 12 elective credit hours from one or more strands and one (3 hour) Liberal Studies elective. All courses are worth three credit hours.

## CORE COURSES

All students must complete the following six courses, for which 18 credit hours are awarded:

- EDN 503 Teacher Leader I: Professional Learning Communities
- EDN 501 Assessment in the Learning Environment
- EDN 510 The Classroom as a Learning Community
- EDN 600 Teaching Diverse Learners
- EDN 615 Educational Research in the Learning Environment
- EDN 697 Teacher Leader II: The Capstone Experience

## Elective Strands

### Curriculum and Instruction Elective Strand

- EDN 502 Curriculum & Instruction: Integration, Issues & Design
- EDN 504 Cooperative Learning
- EDN 505 Learning Styles
- EDN 506 Using Technology to Improve Instruction
- EDN 507 Content Reading
- EDN 511 Problem Based Learning
- EDN 692 Special Topics

### Leadership and Administrative Elective Strand

- EDN 508 Leadership for Innovation and Change
- EDN 534 Leadership for Curriculum & Instruction
- EDN 536 Home, School, Community
- EDN 630 Schools as Learning Communities
- \*Possible Type 75 State Leadership Certification or Teacher as Leader Endorsement

### Math Elective Strand

- EDN 513 Methods in Mathematics
- MTH 504 Topics in Discrete Mathematics
- MTH 506 History of Mathematics
- MTH 604 Geometry and Algebra for High School Teachers

### Liberal Studies Electives

All students must choose one MLS elective.

- MLS 506 Social and Ethical Responsibilities of Management
- MLS 555 Technology, Society and Ethics
- MLS 514 The Uses and Abuses of Science
- MLS 518 Gender and Art
- MLS 526 Hispanic Culture and the Border
- MLS 530 The City in the 20th Century
- MLS 532 Work and Community
- MLS 534 Gender in Public Life and the Professions: Literature, Theory and Practice
- MLS 538 Sport in a Multicultural Society
- MLS 550 Ethics and Imagination
- MLS 552 Ethics, Political Policy, and BioMedicine
- MLS 558 Conflict Resolution
- MLS 570 Critical Thinking
- MLS 572 Creative Writing and Public Discourse
- MLS 574 Judgment, Decision and Choice
- MLS 576 Creative Thought
- MLS 610 From Certainty to Chaos

MLS 612 Changing Concepts of the Earth and Its Life  
MLS 632 Race, Ethnicity and the American Experience  
MLS 634 The Third World  
MLS 652 Ethics and Economics

See pages 23-29 for Liberal Studies (MLS prefix) course descriptions.

**COURSE DESCRIPTIONS** All of the following courses are worth three credit hours. All of the following courses are offered annually unless otherwise noted. No prerequisites are required unless otherwise noted.

**EDN 500 Introduction to The Principalship.**

This course emphasizes an introduction of school culture, standards, and building a learning community for the principal. It is designed to foster development in future principals about the decisions they will make about their practice and how those decisions will affect students and teachers. Emphasis is given to community building, school effectiveness, building leadership capacity, and the process of change. Program requirements regarding the standards matrix, field requirements, and portfolio developed will be introduced in this course.

**EDN 501 Assessment Strategies for the Classroom**

This course is designed to foster the essential link between learning and assessment. Emerging theory on performance-based assessment, brain research, and curriculum-aligned assessment will be explored to better understand the fundamental nature of assessment. Students will be engaged in a systematic study of different methods of performance-based assessment. Teachers as leaders will examine ways to implement effective assessment practices throughout the school community. This is a required course in the C&I Program.

**EDN 502 Curriculum and Instruction: Integration, Issues, and Design**

This course will familiarize participants with the rationale for integrating curriculum and provide methods for differentiating instruction. In order to provide theory to practice, students will engage in a curricular inquiry project which examines curriculum integration and design in an authentic learning environment. This course is offered in the C & I elective strand.

**EDN 503 Teacher as Leader I: Professional Learning Communities**

This course is an introduction to the complex issues and challenges of school as a professional community. Each teacher leader will identify the potential for building individual and/or organizational leadership capacity in order to maximize learning and continuous school improvement. The challenge of current education, issues, school ethics, and the ability to implement change to meet the needs of a diverse community of learners will be addressed in this course. Teacher leaders will reflect on their own knowledge and skills to learn, lead, and contribute to the learning culture of the school community. *Teacher as Leader* is recommended as the entry course into the C&I program. It is a required core course in the C&I Program.

**EDN 504 Applying Cooperative Learning Techniques Across the Curriculum**

This course will help students understand the basic elements of cooperative learning and how to apply them to teaching a content area. Students will learn the five elements that must be present in cooperative learning and the specific group processing skills. They will also learn the differences between the Johnson and Slavin models and become familiar with the Slavin structures. In addition, students will learn how to integrate the use of this instructional technology in the teaching of humanities as well as science courses.

**EDN 505 Using Student Learning Styles to Improve Instruction**

This course will introduce students to the major learning style theories and help students integrate the use of learning style theory into their instructional plans. This course is offered in the C&I elective strand.

**EDN 506 Using Technology to Improve Instruction**

This class focuses on understanding the use of instructional technology as thoughtful integration of technology into the teaching and learning environment. No extensive prior knowledge of technology is necessary.

**EDN 507 Content Reading**

This course examines the current research, curricular goals, and methods of teaching and integrating reading and language arts throughout content areas. Students will apply strategies for teaching reading within their specific disciplines. Content literacy in a standards-based curriculum and research-based best practices for teaching all readers-struggling, gifted, English-language learning, and challenged-will be studied. Specific emphasis will be placed on the strategic use of literature in various content classes. The course is designed to provide teaching professionals strategies and practical knowledge to enhance student learning and competencies. This course is offered in the C&I elective strand.

**EDN 508 Leadership for Innovation and Change**

This course is designed as an overview of the field of school administration and leadership. Students will examine theories of leadership, the dynamics of change, site-based management and collaborative decision-making, school culture and interaction of internal and external forces affecting school leaders. Students will analyze current issues facing public schools as well as research findings. Emphasis will be placed on leadership theories, characteristics, behaviors, and styles.

**EDN 509 Using Multimedia in the Classroom**

This course focuses on the integration of multimedia technology with elementary and secondary curricula. Students will examine multimedia as an effective pedagogical tool, then plan and design individual instructional multimedia projects for use in their own classrooms. Prerequisite: EDN 506.

**EDN 510 The Classroom as a Learning Environment**

This course will address all aspects of the classroom learning environment, including the physical, behavioral, social, and psychological influences, as well as the instructional implications for fostering a community of learners and improved student learning. Principles of effective management, classroom organization, planning, and instructional grouping strategies will be emphasized. Students will examine effective communication techniques for fostering positive relationships with and among students, parents, and other school personnel. Students will plan for ways to enhance their own approach in the classroom, as well as strategies for assisting colleagues. This course is a core requirement in the C&I program.

**EDN 511 Problem Based Learning**

An introduction to problem based learning as a method in designing curricular and institutional activities.

**EDN 515 The Institutional and Political Environment of Schools**

The governance of schools today is characterized by a fundamental shift in structure, organization, and administration. This course will examine these changes and the political, social, and business context in which school administrators make decisions. The course will include the historical foundations and evolution of schools as a social institution, as well as the issues that shape policy-making at the local school level.

**EDN 522 Issues in School Law**

This course focuses on an analysis of selected general legal principles, case and statute law, and lawmaking agencies that impact schools and educational leaders. Federal and state constitutions and statutes, and case law will be related to the responsibilities of teachers, principals, supervisors, central office administrators, superintendents, and school board members. This course provides a broad overview of the essential elements of state and national legal frameworks as outlined by the Illinois Standards for Principals and the Interstate School Leaders Licensure Consortium (ISLLC). Students will become informed about professional codes of ethics, the process and management of litigation, policy development at the district level, and constitutional, statutory, and regulatory provisions that bear on the operation of a school district.

**EDN 534 Leadership for Curriculum and Instruction**

This course is designed to examine the educational leader's role as a facilitator of learning. The primary objective of the course is to explore the broad area of school reform through the lenses of curriculum, pedagogy, assessment, standards, and dilemmas that reform in these areas can create. Throughout there will be an emphasis on the concepts and skills of leadership that are required to enhance and extend student learning.

**EDN 536 The School/Home/Community Partnership**

An interactive, participatory graduate course designed to explore the administrator's role in the school, home, and community relationship. Through discussion, interactive exploration, group analysis, and networking, the student will experience ways to be an educational leader in this triad. Focus will be on parent and community involvement, communication with stakeholders, school-business partnerships, school board relations, and additional areas of interest that involve the community as a key component.

**EDN 590 Special Topics**

Topics and credit hours (1-3) will vary. Topics and prerequisites will be announced in advance. May be taken more than once with different content.

**EDN 599 Independent Study**

Designed for students who want to do introductory study of a topic not covered in a regular course.

**EDN 600 Teaching Diverse Students**

The aim of this course is to examine what it means to teach in an educational organization within a multicultural society. Specific focus will be on cultural, racial, and ethnic backgrounds, teacher awareness of and expanded meaning of culturally responsive pedagogy, and examination of the school/classroom environment that leads to increased learning of all students. This course is a core requirement in the C&I program.



**EDN 606 Using Advanced Technology to Improve Instruction**

An exploration of the research and use of advanced technologies to aid learning. Students will explore promising advanced technologies and applications to determine how they can be used to effectively improve instruction. Prerequisite: EDN 506 or consent of instructor. Prerequisite: EDN 506.

**EDN 610 School Operations and Management**

This graduate course is designed to focus on the use of leadership skills in the management function of the school principal. Students will learn about the day-to-day responsibilities as well as the general, longer-term responsibilities of the school principal. Care and maintenance of the school plant, operating the food service program, and the principal's role in transporting students will be studied. Students will study the principal's role in developing and managing a school budget. A focus will also be given to writing building level operation and management oriented policies and procedures.

**EDN 615 (previously EDN 523) Educational Research in the Learning Environment**

The course is a forum for analysis and exploration of current topics and research in the field of education in order to gain an informed, multifaceted perspective on the practice of education. The course will include the principles of action research. Students will explore action research methodology through applications to self-identified professional challenges and questions. Students will learn to gather and analyze data, draw conclusions, and disseminate their findings to the educational community. This course is a core requirement in the C&I program.

**EDN 620 Program Assessment**

This graduate course is designed to increase the students' understanding of program assessment and the use of technology as a tool in pursuit of data driven decision-making. The course will focus on how to conduct program assessment. Students will gain an understanding of data collection and analysis and how to use that information in the decision-making process. Using data collected through program assessment, students will learn how to use data to formulate a school improvement plan for the improvement of instruction and learning. Students will also learn how technology can be used to support the management function of the principal. Prerequisite: EDN 500.

**EDN 630 Schools as Learning Communities**

This course is a study of the myriad and complex interactions that take place within a school community. The emphasis is on the school as a learning organization. It examines basis theories, attributes, and functions of human organizations, issues related to motivation, the management of group dynamics and human relations, organizational change, and the nature of leadership within the school environment. The course considers the application of organizational theories, notably systems thinking, to central issues in K-12 education.

**EDN 690 Field Experiences**

This course is designed to help students apply the field/clinical experiences of previous courses in the Leadership Program to future challenges in educational administration, particularly at the building level. Students will focus on the Illinois Standards for Principals in seminar discussions, hands on school-based assignments, and the refinement of their individual leadership portfolio, a selective collection of artifacts that are aligned with the Illinois Standards for Principals. Type 75 candidates must complete and show evidence of a standards-based portfolio prior to receiving a grade in this course. Prerequisite: 21 credit hours.

**EDN 692 Special Topics**

Topics will vary depending on faculty and student interests. Topics and prerequisites will be announced in advance. May be taken more than once with different content. Prerequisite: None.

**EDN 693 Independent Study**

Designed for students who want to do advanced study of a topic previously covered in a regular course but not offered in another course.

**EDN 696 The Educational Leader**

This course serves as the capstone course in the Master's Program of the Educational Leadership Program. It will require the analysis, synthesis, and application of all learning and coursework in the program, as well as the graduate's own experiential knowledge to frame the educational issues and provide varied approaches to address those encountered by school administrators. The student will provide as a culminating requirement a standards-based portfolio as evidence of leadership knowledge, dispositions, and performance. Note: Must be last course of the program. Prerequisite: 30 credit hours.

**EDN 697 Teacher as Leader II: The Capstone Experience**

This course will serve as the capstone course in the Master's Program in Curriculum and Instruction requiring the analysis and synthesis of all learning and coursework in the program. Collaborative field applications will occur to deepen the understanding of professional development as a critical component of effective learning communities. Teacher leaders will present a culminating and comprehensive professional portfolio of learning and leadership evidence reflective of the standards and field applications. This course, previously the Reflective Teacher, is a required core course and is recommended as the final course in C&I program. Prerequisite: Instructor permission for less than 27 hours.

**Math Strand Elective Course Descriptions****EDN 513 Methods in Mathematics**

This course will cover the following topics: calculator/graphing and computer algebra approach to problem solving; logarithmic and exponential functions and their application to real life situations (like finance, population planning, investments); trigonometric functions and their applications to real life situations; introduction to fractal geometry, and iteration of functions; and pedagogical methods including group work, peer instruction, and interactive learning environment. Required project: Create a 3 week unit utilizing the techniques learned in this course and implement it in your classroom.

**MTH 504 Topics in Discrete Mathematics**

This course includes selected topics from discrete mathematics with an emphasis on topics suitable for high school teachers. Topics to include: construction of the real number field, recursion and the solution of recursion relations, graph theory, Boolean Algebras, Turing machines and the Turing Incompleteness theorem.

**MTH 506 History of Mathematics**

This is an advanced course in the history of mathematics. Students will explore the origins of the calculus and of the notion of rigorous proof. Each student will create a three-week unit based on the history of a specific portion of the high school mathematics curriculum.

**MTH 604 Geometry and Algebra for High School Teachers**

An investigation into connections between geometry, algebra, and number theory; topics to include some or all of the following: geometric constructions and constructible numbers, isometries and transformations, projective geometry, and elliptic curves.

**LIBERAL STUDIES**

See page 73 for Liberal Studies electives.

See pages 23-29 for Liberal Studies (MLS prefix) course descriptions.

# Graduate Certificate Programs

Graduate certificates are currently offered in the following areas:  
(All courses are worth three credit hours unless otherwise noted.)

## **BUSINESS FOUNDATIONS**

Nine credit hours chosen from the following courses:

- ACC 501 or 502 Financial or Managerial Accounting
- BUS 541 Business Statistics
- BUS 546 Operations Research
- BUS 505 Legal Environment of Business
- ECN 500 Economics
- FIN 550 Financial Management
- MKT 570 Marketing Management

Prerequisites: Students may need to take basic algebra or finite mathematics courses at the undergraduate level to enroll in this certificate.

## **CHANGE MANAGEMENT**

Please note that this certificate is designed for people who already have a significant amount of graduate level coursework. Nine credit hours chosen from the following courses, to include at least one 600-level course:

- CSC 555 Project Management
- MGT 621 Organizational Behavior
- MGT 675 Strategic Management
- MGT 683 Innovation and Organizational Change
- MGT 692 Special Topics in Management (variable credit)
- MLD 683 Leadership for Social Change and Renewal
- MLS 555 Technology, Society, and Ethics
- MLS 685 Studying the Future

Prerequisites: Students may need basic statistics or quantitative methods for specific courses listed above. Students who have not taken those prerequisites at the undergraduate or graduate level will need to do so.

## **DATABASE AND DATA MINING**

Provides a basic understanding of databases and retrieval of information by using data mining techniques. Certificate requires prerequisites of CSC 161, Computer Science II, CSC 210, Data Structures and Algorithms, and CSC 230, Discrete Structures I (or equivalent).

Select one of the following two courses:

- CSC 560 Database Management System (for students without previous DBMS)
  - CSC 585 Artificial Intelligence (for students with previous DBMS)
- and
- CSC 564 Data Mining
  - CSC 662 Database Programming

## **DISPUTE RESOLUTION**

Students must complete nine credit hours.

The following course is required:

MLS 558: Conflict Resolution

Students will complete their program by taking two of the following courses:

BUS 505: The Legal Environment of Business

or EDN 522: Issues in School Law

MGT 683: Innovation and Organizational Change

or EDN 508: Leadership for Innovation and Change

MGT 623: Human Resource Management

MGT 692: Topics: Negotiation, Mediation and Arbitration: Principles of Business Dispute Resolution

MLD 683: Leadership for Social Change and Renewal

MLS 506: Social and Ethical Responsibilities of Management

Program Prerequisites: None

## **EDUCATIONAL TECHNOLOGY**

Nine credit hours chosen from the following courses:

Required:

EDN 506 Using Technology to Improve Instruction

Students will select two courses from the following list:

EDN 509 Using Multimedia in the Instructional Program

EDN 590 Special Topic: Facilitation of Online Learning

EDN 606 Using Advanced Technology to Improve Instruction

## **FINANCE**

Nine credit hours chosen from the following courses:

ACC 501 Financial Accounting

FIN 550 Financial Management

FIN 600 Investments, Portfolio Analysis, and Financial Planning

FIN 610 Personal Financial Planning

FIN 635 Advanced Financial Management

FIN 685 International Finance

FIN 692 Special Topics (variable credit)

Prerequisites: Students must have taken either Micro or Macro Economic Principles and/or basic statistics at the undergraduate level. Students who have not taken these courses may need to complete ECN 500 and/or BUS 541 prior to beginning their graduate certificate program. Students needing these prerequisites may want to enroll in the Business Foundations Graduate Certificate program first.

## **GENDER STUDIES**

Nine credit hours chosen from the following courses:

MLS 518 Gender and Art

MLS 526 Hispanic Culture and the Border

MLS 534 Gender in Public Life and the Professions: Literature, Theory, and Practice

MLS 570 Critical Thinking

MLS 680 Justice, Care, and Community (This is a capstone course in the MALS program. Instructor consent required. Students entering capstone courses will have normally completed three courses in the MALS program, one in each theme area.)

Prerequisites: Students are required to submit a writing sample as part of the application process for this certificate.

## **HISTORY AND NATURE OF SCIENCE**

Nine credit hours chosen from the following courses:

- MLS 510 Changing Models of the Universe: Plato to Kepler
- MLS 514 The Uses and Abuses of Science
- MLS 555 Technology, Society, and Ethics
- MLS 610 From Certainty to Chaos
- MLS 612 Changing Concepts of the Earth and Its Life

Prerequisites: Students are required to submit a writing sample as part of the application process for this certificate.

## **HUMAN RESOURCE MANAGEMENT**

Qualifications: Students may need to take Statistics, BUS 541, at the graduate level to enroll into this certificate.

Nine credit hours chosen from the following courses:

Required Courses:

- MGT 623 Human Resource Management (3 credit hours)
- MGT 685 Human Resource Planning (3 credit hours)

Choose one of the following courses:

- MLS 558 Conflict Resolution (3 credit hours)
- MGT 621 Organizational Behavior (3 credit hours)
- MGT 645 Organizational Leadership and Group Performance (3 credit hours)
- MGT 692 Special Topics: Compensation (3 credit hours)
- MGT 692 Special Topics: Negotiation, Mediation, and Arbitration (3 credit hours)

## **INVESTMENTS & FINANCIAL PLANNING**

To optimize completion time for this program, it is recommended students start in the summer term. Students must complete nine credit hours. The following two courses are required:

- FIN 600 Investments, Portfolio Analysis, and Financial Planning
- FIN 610 Personal Financial Planning

In addition, students will complete their program by taking one of the following two courses:

- FIN 692 Special Topics (must be for 3 credit hours and be in the area of investments or financial planning to qualify),
- or
- FIN 693 Independent Study (must be for 3 credit hours and be in the area of investments or financial planning to qualify).

Courses in Applied Portfolio Management and Applied Personal Investment Advising are routinely available to graduate degree candidates. Depending on student interest, either could be used to complete the certificate.

Prerequisites: Students must have taken a basic course in finance at the undergraduate or graduate level, equivalent to FIN 350 or FIN 550 at NCC.

## LEADERSHIP

Nine credit hours chosen from the following courses:

Required Course:

MLD 545 The Ethical Challenge of Leadership

Students will select two courses from the following list.

MGT 645 Organizational Leadership and Group Performance

MGT 683 Innovation and Organizational Change

MLD 595 Assessment and Research in Leadership Development

MLD 683 Leadership for Social Change and Renewal

MLD 692 Special Topics

MLS 558 Conflict Resolution

## MANAGEMENT

Nine credit hours chosen from the following courses, to include at least one 600-level course:

CSC 555 Project Management

MKT 570 Marketing Management

MGT 591 Quality Management

MGT 620 Operations Management

MGT 621 Organizational Behavior

MGT 623 Human Resource Management

MGT 645 Organizational Leadership and Group Performance

MGT 675 Strategic Management

MGT 692 Special Topics in Management (variable credit)

Prerequisites: Students may need basic statistics or quantitative methods courses for specific courses listed above. Students who have not taken those prerequisites at the undergraduate or graduate level will need to do so.

## MARKETING

Students seeking the Graduate Certificate in Marketing must complete nine credit hours based on the following:

Students are required to take:

MKT 570 Marketing Management (3.00) Prerequisite: None.

Students may choose six credit hours from the following courses:

MKT 575 Marketing Research & Analysis Management (3.00) Prerequisite: MKT 570.

MKT 685 Promotional Management (3.00) Prerequisite: MKT 570

MKT 688 International Marketing (3.00) Prerequisite: MKT 570

MKT 692 Special Topics in Marketing (3.00) Prerequisite: Instructor's Consent

## MULTICULTURAL STUDIES

Nine credit hours chosen from the following list of courses:

MLS 512 Religion, Ritual, and Symbol

MLS 526 Hispanic Culture and the Border

MLS 538 Sport in a Multicultural World

MLS 632 Race, Ethnicity, and the American Experience

MLS 634 The "Third World"

Prerequisites: Students are required to submit a writing sample as part of the application process for this certificate.

## **ORGANIZATIONAL ETHICS**

Three courses required, nine credit hours.

At least one required from:

- MLS 506 Social & Ethical Responsibilities of Management
- MLD 545 Ethical Challenges of Leadership

Students elect up to two additional courses from the following:

- EDN 524 Professional Ethics for Teachers
- MLS 550 Ethics and Imagination
- MLS 555 Technology, Society and Ethics
- MLS 552 Ethics, Public Policy and Biomedicine
- MLS 652 Ethics and Economics
- MLS 680 Justice, Care and Community

## **TEACHER LEADERSHIP**

Nine credit hours required:

- EDN 500 The Principalship: An Overview of School Leadership
- EDN 508 Leadership for Innovation and Change
- EDN 536 School, Home, and Community



# Support Courses

## INTERDISCIPLINARY SUPPORT COURSES

Liberal Studies Electives	Page	Rotation	MA-Ed	MALS	MLD	MS-CS	MS-MIS	MBA
EDN 524 Professional Ethics for Teachers	64	Every 3rd term			•			
MGT 645 Organizational Leadership and Group Performance	42	Annually						•
MLD 545 Ethical Challenges of Leadership	32	Annually						•
MLS 506 Social and Ethical Responsibilities of Management	26	Annually	•	•	•	•	•	•
MLS 510 Changing Models of the Universe: Plato to Kepler	24	3 course seq		•				
MLS 512 Religion, Ritual and Symbol	24	ODD, sp		•				
MLS 514 The Uses and Abuses of Science	24	Every 3rd yr	•	•		•	•	
MLS 518 Gender and Art	24	ODD, fall	•	•				
MLS 526 Hispanic Culture and the Border	24	ODD, sp	•	•				
MLS 530 The City	25	EVEN, sp	•	•	•			
MLS 532 Work and Community	25	EVEN, sp	•	•	•	•	•	
MLS 534 Gender in Public Life and the Professions: Literature, Theory, and Practice	25	EVEN, fall	•	•	•			
MLS 538 Sport in a Multicultural Society	25	EVEN, fall	•	•	•			
MLS 550 Ethics and Imagination	26	EVEN, wtr	•	•	•			
MLS 552 Ethics, Public Policy and Biomedicine	26	EVEN, wtr	•	•	•			
MLS 555 Technology, Society and Ethics	26	Annually	•	•	•	•	•	•
MLS 558 Conflict Resolution	26	ODD, sp	•	•		•	•	
MLS 570 Critical Thinking	28	EVEN, fall	•	•		•	•	
MLS 572 Creative Writing and Public Discourse	28	hiatus	•	•		•	•	
MLS 576 Creative Thought	28	ODD, fall	•	•		•	•	
MLS 610 From Certainty to Chaos	24	3 course seq	•	•		•	•	
MLS 612 Changing Concepts of the Earth and Its Life	25	3 course seq	•	•				
MLS 632 Race, Ethnicity and the American Experience	25	EVEN, e	•	•	•	•	•	
MLS 634 The "Third World"	26	ODD, su	•	•	•			
MLS 652 Ethics and Economics	26	ODD	•	•			•	•
MLS 680 Justice, Care, and Community	28	ODD, wtr			•			

## Our Graduate Faculty

Our graduate program faculty includes department heads, writers, successful businessmen and women, industry professionals and award-winning teachers who have years of professional experience that supplement their, on average, 10 years of higher education experience. Their solid academic and professional experience gives them the unique ability to synthesize tested classroom principles and theories with real world applications. North Central College professors are also committed to a variety of professional, community and educational associations. As active leaders and learners, our faculty see the value in building external relationships. Outside activities keep them abreast of the changing needs in these environments and enable them to prepare students for the current issues and demands faced in education, business and public sectors.

In addition to their unique and impressive qualifications, the professors at North Central College take a personal approach to higher education. They value each student's professional knowledge, expertise and contributions and encourage an exchange of ideas within the classroom. Our professors provide personal attention and guidance while challenging students to work beyond expectations.

### College Administrators

**Harold R. Wilde**, President of the College and Professor of Political Science. 1991. A.B., Amherst College, 1967; M.A., Ph.D., 1973, Harvard University.

**R. Devadoss Pandian**, Vice President for Academic Affairs and Dean of Faculty; Professor of Mathematics. 1985. B.S., 1963, M.S., 1966, Madras University, India; M.Phil., Madurai University, India, 1971; Ph.D., George Washington University, 1983.

**Paul H. Loscheider**, Vice President for Business Affairs. 1978. B.A., Lewis University, 1976; C.P.A., 1977.

**Laurie Hamen**, Vice President for Enrollment Management and Student Affairs. 1996, 2002. B.A., College of Saint Catherine, 1982, M.S. Winona State University, 1992.

**Rick Spencer**, Vice President for Institutional Advancement, 1981, 1992, B.A., Augustana College 1974; M.S., Western Illinois University, 1980.

**Peter Barger**, Dean of Graduate and Continuing Education. 1989, 2006. B.A., 1979, Washington State University; M.S., 1981 and Ph.D., 1989, University of Illinois-Urbana.

**Frank Johnson**, Director of Graduate and Continuing Education. 1998. B.A., 1982, St. Ambrose University; M.S., 1988, Aurora University.

**Kara Northcutt**, Graduate and Continuing Education Admission Counselor, 2006. B.A. Indiana University, 2003; M.A. Chicago School of Professional Psychology, 2006.

**Megan Otermat**, International Admission Counselor. 2006. B.A., 1996, Mount Holyoke College.

**Jonathan M. Pickering**, Registrar and Director of Institutional Research. 1997, 2005. B.A., 1992, M.B.A., 1997, Olivet Nazarene University.

**Marty Rossman**, Director of Financial Aid. 2005. B.S., Eureka College, 1998.

## Graduate Program Coordinators

**Thomas D. Cavenagh**, Coordinator, Master of Leadership Studies Degree. 2006. Professor of Business Law and Conflict Resolution and Director of Leadership, Ethics and Values. 1990. B.A., Trinity College, 1984; J.D., DePaul University, 1987.

**Jean Clifton**, Coordinator, Master of Business Administration Degree, 2007. Associate Professor Management. 2000. B.A., 1981, M.A., 1988, University of Minnesota; Ph.D., Cornell University, 1999.

**Thomas J. Clifton**, Coordinator, Master of Science Degree in Management Information Systems. 2000. B.S., 1982, University of Minnesota; Ph.D., 1990, University of Minnesota.

**Richard R. Guzman**, Coordinator, Master of Arts Degree in Liberal Studies. 1977. B.A., 1971, University of California at Berkeley; M.A., 1973, California State University at Hayward; Ph.D., 1977, University of Virginia.

**Godfrey C. Muganda**, Coordinator, Master of Science Degree in Computer Science. 2005. B.S., 1979, Eastern Mennonite College; M.S., 1980, College of William and Mary; Ph.D., 1984, Lehigh University.

**Kristine Servais**, Coordinator, Master of Arts Degree in Education, 2007. 2005. B. S., 1978, M.S., 1983, University of Wisconsin at Whitewater; Ed. D., 2001, Northern Illinois University.

## Accounting

**David Gray**, Assistant Professor of Accounting. 2007. Millikin University, B.S., 1986. Northern Illinois University, M.A.S., 1992. CPA, CMA.

**Gerald D. Hamsmith**, Professor of Accounting. 1988. B.A., 1971, Aurora University; M.S., 1973, Northern Illinois University; C.P.A.

**Joan M. Vargocik Der**, Professor of Accounting Emerita. 1984-2008. B.S., 1974, Illinois State University; M.S., 1980, DePaul University; C.P.A., C.M.A.

**Sarah McKinney**, Assistant Professor of Accounting. 2008. B.S., Marist College, 2005; M.A.S., Northern Illinois University, 2006, CPA.

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## Computer Science

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