

CAESARRegistrationCTECStudentsFaculty and StaffCalendarsCatalogFormer StudentsStatisticsConsumer Info

## Office of the Registrar



Main titles for Supplement to the Undergraduate Catalog 2003-2005

The University

## Undergraduate Education

Undergraduate Schools and Courses
Judd A. and Marjorie Weinberg College of Arts and Sciences
School of Communication
School of Education and Social Policy
Robert R. McCormick School of Engineering and Applied Sciences
Medill School of Journalism
School of Music
Other Undergraduate Programs
Administration and Faculty

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog

Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118

## Office of the Registrar <br> Return to Supplement to the Undergraduate Catalog 2003-2005

The University: Supplement to the Undergraduate Catalog 2003-2005

## Student Services

Student Affairs

Page: 7

## Description of Change:

delete text: which are

## New text:

Students are encouraged to take advantage of these opportunities and services, designed to help them establish and meetpersonal, academic, and career goals; assist them in acquiring skills to confront problems and issues in their lives; and provide them with essential services as part of a residential community.

Student Affairs

## Health Service

Page: 7

## Description of Change:

Correction of text

## New text:

All students are re q u i red to have healthcare insurance coverage.

## Page: 9

## Description of Change:

Correction of one word

## New text:

Complete information about Northwestern's residences, including rental rates, is e-mailed to applicants
after they have been admitted to the University and paid the required tuition deposit.

## Student Affairs Office

Page: 9

## Description of Change:

Replace all the text.

## New text:

The Office of Student Affairs in Scott Hall is a source of information and assistance for students, parents, and faculty/staff. Staff in the office includes the following. The Dean of Students and Associate Vice President for Student Affairs serves students with personal and academic problems or concerns. In addition, the Associate Vice President counsels students who believe they have been victims of sexual harassment and discrimination by other students. The Judicial Affairs Officer oversees the University Hearing and Appeals System and the Sexual Assault Hearing and Appeals System. The Coordinator of Orientation and Student Transitions plans and implements orientation and other transition programs for students, organizes family weekend, and produces publications for parents of undergraduates. See www. northwestern.edu /student affairs for links to all Student Affairs departments.

## University Career Services

Page: 9

## Description of Change:

add text: walk-in services,

## New text:

Confidential career counseling, career assessments
(Myers-Briggs Type Indicator and Strong Interest
Inventory), walk-in services, and advising about the graduate and
professional school application process

## Page: 9

## Description of Change:

change text: Internship-finding assistance

## New text:

Internship services, including individual -
ized help, programs, and vacancy listings.

## Page: 9

## Description of Change:

delete text \& replace:
Access to Careertrak, an online searchable database
listing thousands of full-time, part-time, and internship
positions as well as other online resources

## New text:

CareerCat, a career management system, which offers on-campus interviews for students, easy on-line registration, and other enhanced features

## Page: 9

## Description of Change:

insert new text

## New text:

* Access to Monstertrak, an on-line searchable database listing thousands of full-time, parttime, and internship positions as well as other on-line resources


## Page: 9

## Description of Change:

delete text: Expo, Graduate and Professional school fair
replace text: Forum, Horizons program

## New text:

Special events include fall and winter Career job fairs, Virtual Career Fairs, Martin Luther King Jr. Public Interest Job Fair, Internship Initiative, and Career Conversations.

Services for Students with Disabilities

Page: 10

Replace words: impairments, problems

## New text:

Northwestern University's programs and activities
are accessible for full participation to all its students, including those with mobility impairments and with difficulties such as learning disabilities or auditory, visual, or other special conditions.

Page: 10

## Description of Change:

Replace sentence: The bro ch u re includes maps
of the Evanston and Chicago campuses indicating
building access and parking locations.

## New text:

Additional information is available on the SSD web site at www.northwestern.edu/disability.

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118
Phone: 847-491-5234 • Fax: 847-491-8458 • E-mail: nu-registrar@northwestern.edu
Last Revision J une 18, 2008
World Wide Web Disclaimer and University Policy Statements © 2005 Northwestern University

## Office of the Registrar

Return to Supplement to the Undergraduate Catalog 2003-2005

Undergraduate Education: Supplement to the Undergraduate Catalog 2003-2005

## Financial Aid

Page: 17

## Description of Change: <br> Update to text.

## New text:

During the 2003-04 academic year, undergraduate students at Northwestern received more than $\$ 64$ million in grant assistance: $\$ 52.5$ million from Northwestern, $\$ 7$ million from federal and state governments, and $\$ 4.5$ million from outside sources. The average Northwestern grant for the 3,250 students receiving aid was \$16,000.

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118
Phone: 847-491-5234 • Fax: 847-491-8458 • E-mail: nu-registrar@northwestern.edu Last Revision June 18, 2008

## Office of the Registrar

Return to Supplement to the Undergraduate Catalog 2003-2005

Undergraduate Schools and Courses: Supplement to the Undergraduate Catalog 2003-2005

There are no entries for the Supplement to the Undergraduate Catalog 2003-2005 under this title.

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118 Phone: 847-491-5234 • Fax: 847-491-8458•E-mail: nu-registrar@northwestern.edu Last Revision J une 18, 2008
World Wide Web Disclaimer and University Policy Statements © 2005 Northwestern University

## Office of the Registrar

Return to Supplement to the Undergraduate Catalog 2003-2005

Judd A. and Marjorie Weinberg College of Arts and Sciences: Supplement to the Undergraduate Catalog 2003-2005

## African American Studies

"Politics, Society, and Policy"

Page: 45

## New Course <br> AF_AM_ST * AF AM 365 Black Chicago

This course focuses on the presence of African-Americans in Chicago from the turn of the 20th Century to the turn of the 21st Century. Themes to be addressed include: the meanings of migration from the South to the North; the development of the black political submachine; black urban fiction in Chicago; black music, including gospel, jazz and blues; the formation and hardening of the "color line"; Chicago's relation to the Civil Rights Movement; and the development and meaning of class structures in Chicago. May also count toward Historical and Comparative Studies concentration.

## African Studies Program

Minor in African Studies

Minor course requirements (6 units)
Page: 47

Demonstrated competence in any African language or a European language other than English that is used in Africa (French or Portuguese) by completing the second year of language study or being certified by the appropriate language department. Professional school students whose curricula preclude meeting this requirement as well as students with proficiency in another Weinberg College language may petition the program to count additional courses with African content toward the minor in lieu of fulfilling the language requirement

## New text:

## Anthropology

Major in Anthropology

## Departmental courses

Page: 48

## Description of Change:

add under Human biology... after *398 (senior year)

## New text:

* 399 (senior year)


## Concentration in Human Biology

Page: 49

## Description of Change:

add above Relaged Courses

New text:

* 399 (senior year)


## Art Theory and Practice

Courses Primarily for Undergraduates

Page: 56

ART 270-0 I ntroduction to the Understanding of Art Description of Change:
Title Change

New text:
Contemporary Art Survey
Page: 56
ART 272-0 Introduction to Understanding of Contemporary Art Description of Change:
Title Change
New text:
Critical Methods for Contemporary Art

Biological Sciences Undergraduate Program

Courses Primarily for Undergraduates
Page: 60
New Course
BIOL_SCI 307 Learning and Teaching Biology

Page: 61
New Course
BIOL_SCI 348 Plant Population Genetics
Page: 60
New Course
BIOL_SCI 330 Plant Biology
Page: 61
New Course
BIOL_SCI 349 Plant Community Ecology
Page: 61
New Course
BIOL_SCI 350 Plant Systematics

## Classics

## Courses in Latin

## Page:

## New Course

## LATI N 115-1,2 Accelerated First-Year Latin

Beginning course designed to compress Latin 101 into two quarters of study for students with the need for a more intense introduction to Latin. Classical Latin vocabulary, grammar, and syntax, with graded readings for translation. Three class meetings a week. Prerequisite: department placement.

Courses with Readings in English

## Page:

## New Course CLASSICS 245-0 Classics and Cinema

Analysis of how literary and social/political assumptions intersect in the reception of two related dramatic forms originating in 5th- century Greece and 20th-century United States.

## Page:

## New Course CLASSICS 340-0 Homer and the Traidtions of Epic

Detailed study of the Iliad and Odyssey with selective attention to later works shaped by them, from the Homeric Hymns through the Argonautica and the Aeneid to European epics of the sixteenth and seventeenth centuries and "epic" novels, such as Tom Jones.

## Economics

Courses Primarily for Sophomores, Juniors, and Seniors
Page: 74

## New Course <br> ECON 316-0 Advanced Topics in Macroeconomics

Topics may include growth, business cycles, unemployment and search, monetary economics, macroeconomic policy, inter-temporal choice, general equilibrium.

## New Course ECON 359-0 Economics of Non-Profit Organizations

The economic rationale for the non-profit sector in a mixed economy. Topics include the objectives
and behavior of non-profit organizations, competition with commercial firms, volunteerism, and
charitable donation.

## English

Literature Courses Primarely for Juniors and Seniors

Page: 78
New Course
ENGLISH 355 Medieval Drama

## Environmental Sciences Program

Major in Environmental Sciences
Page: 79

## Description of Change:

Update of requirements for the major, as approved by WCAS. Plus description of new courses. New description of ISP double major provision.

## New text:

Foundations in Science: nine or ten courses, depending on freshman chemistry, including all of the following: Chemistry 101, 102, 103 (or 171,172); Mathematics 214-1,2.
five of the following: Math 214,3; Statistics 210; Physics 135-1,2 (Physics 130-1, 2 may be sutstituted with consent of the program advisor); Biology 210-1 or 164; Chemistry 210-1; Economics 201, 202.
Core courses: three courses, Env. Sci. 201, 202, 203. (One or more of Env. Sci. 235, Biol. 204, Chem. 204, Geol. Sci. 201, Geog. 211 may be substituted with consent of program advisor)
Advanced Studies: six courses, of which at least four must be at the 300 -level.
Science track: four courses from the Science list, two from the Environment \& Society list;
Policy track: Economics 281, 310-1, 370; plus three additional courses, two of which must be from the science list.
Senior year research: two courses, Env. Sci. 398-1,2 or Civ. Eng. 398-1,2.
Advanced studies:
Science list: Anthropology 312, 313, 315; Biol. Sci. 341, 343, 345, 346, 347, 359; Chemistry 329, 342-1, 343; Fiv. Eng. 348, 359, 360, 361, 363, 366, 367, 370; Env. Sci. 235; 301.

Environment \& Society list: Anthropology 306, 310; Economics 370; Env. Sci. 390; Geog. 328; History 215; Philosophy 268; Pol. Sci. 304, 349, 371; Sociology 312.

Environmental Sciences Second Major for ISP Students
Page: 80

## Description of Change:

DELETE SECTION OF TEXT WITH BULLETS UNDER THE 'ENVIRONMENTAL SCIENCES SECOND MAJ OR FOR ISP STUDENTS' AND SUBSTITUTE NEW TEXT FOLLOWING THE WORDS "and must take the following additional courses: "

## New text:

--Env. Sci. 201, 202, 203
--two courses listed under Environment \& Society above
--two courses, not in the same department, from those on the Science list, except Chem 3421;
--Students may take the 2 quarters of Env Sci 398 instead of ISP 398.

## Page: 80

## Description of Change:

new course descriptions, under the heading "Core Course"

## New text:

Envr. Sci. 201: Earth, An Habitable Planet.
Chemical and physical perspectives on the evolution of the planet; emergence of life and nature of biogeochemical cycles; the role of human activities that are now part of these cycles.

Envr.Sci. 202: The Health of the Biosphere.
Population processes in nature, role of human population growth, interactions between populations, major impacts of human populations on the environment.

Envr.Sci.203: Energy and the Environment--The Automobile.
Integrated study of fundamental chemistry, industrial production, energy use, and public policy using the automobile as an example.

## European Studies Program

Major in European Studies

Page: 80
Description of Change:
move text "• HISTORY 201-1,2" to first entry under "Major course requirements"

## New text:

Major course requirements

- HISTORY 201-1,2
- EUR ST 301-1,2,3
- 6 additional courses dealing with Europe, at least 4 at the 300 level
- 2 300-level language/literature courses taught in a continental European language
- EUR ST 390-1,2,3

With the exception of the two 300 -level language courses, none of the above courses may be double-counted toward the European studies major and another major.

## French

Minor in French

Page: 81

## Description of Change:

Change to French minor course requirements

## New text:

Up to 4 200-level courses: 2 chosen from 201, 202, 203; 2 chosen from 210 or 211, 271 or 272

## Courses Primarily for Undergraduates

Page: 82

## FRENCH 111-1,2,3 First-Year French Description of Change:

Change to course structure

## New text:

Four class meetings a week.

Italian

Courses with Reading and Discussion in English
Page: 85

New Course
ITALI AN 305 Italian Cultural Traditions

## Geography Program

## Page: 86

## Description of Change:

Major in Geography
Program courses: GEOG 210, 211, or Envr Sci 235; Geog 341; and 4 additional geography courses, at least 3 of which must be at the 300 level, including 1 unit of research (399)
Related courses: Econ 201, 202; Math 214-1,2; Stat 210; or equivalent

## New text:

Major in Geography
Program courses: Geog 211 or Envr Sci 235; Geog 341; and 4 additional geography courses, at least 3 of which must be at the 300 level, including 1 unit of research (399)
Related courses: Econ 201, 202; Math 214-1,2; Stat 210 or equivalent
Page: 86

## Description of Change:

Delete course Geog 210 The Natural Environment

## New text:

## Geological Sciences

Courses Primarily for Freshmen and Sophomores
Page: 88

## New Course

## GEOL_SCI 109-0 We Choose to Go to the Moon

How and why did the US go to the Moon in 1969? What did we learn, and why should we go back? Topics include fundamentals of spaceflight, human exploration of space, and the geology of the Moon.

## GEOL_SCI 114-0 Uniformity, Catastrophe, and the Meaning of Evolution Description of Change:

Course name change to "Evolution and the Scientific Method"

## New text:

## German

## Major in German

Page: 90

## Description of Change:

Correction to text:
Students returning from a study abroad program in their junior year must enroll in one 300level quarter-course in the department.

## New text:

Students returning from a study abroad program in their junior year must enroll in two 300level quarter-courses in the department

## Page: 90

## Description of Change:

Correction:

- History (1 unit): Chosen from 233-1, HISTORY 344-2, HISTORY 349


## New text:

- History (1 unit): Chosen from 233-1,2, HISTORY 344-2, HISTORY 349

Page: 90

## Description of Change:

Correction to text:

- Comparative literature: 3 quarter-courses including COMP LIT 202 or 280; and 2 chosen from COMP LIT 302, 383, 397-1,2,3, and a graduate seminar


## New text:

- Comparative literature: 3 quarter-courses including COMP LIT 202 or 280; and 2 chosen from COMP LIT 302, 383, or a graduate seminar


## Description of Change:

Correction to text:

- Religion: 2 quarter-courses chosen from RELIGION 224, 306, 331, 335, 352


## New text:

- Religion: 2 quarter-courses chosen from RELIGION 230, 320, 332, 334, 339

Major in German

Departmental courses
Page: 90

## Description of Change:

Delete

## New text:

. Political science: appropriate courses to be determined in consultation with an adviser

Minors in German

Page: 90

## Description of Change:

Correction to text:

- History (1 unit): 233-1, HISTORY 344-2 OR 349


## New text:

- History (1 unit): 233-1,2, HISTORY 344-2 OR 349

Language Courses
Page: 91
New Course
GERMAN 111-1,2,3 Beginning Yiddish

## History

Major in History
Page: 92

# Description of Change: <br> Add concentration 

## New text:

Comparative History, with a topical focus

Unites States

Page: 95

# HI STORY 301-1,2 Survey of African American History Description of Change: 

Delete course

## New text:

Page: 95

## New Course

HI STORY 212-1,2 African American History

## Integrated Science Program

Page: 29

## Description of Change:

Correction to text. To simplify things, I have just revised text in the box below.

## New text:

The Integrated Science Program (ISP) is a highly selective curriculum of natural sciences and mathematics presented predominantly in small classes at an accelerated pace. ISP courses emphasize the common base and the interrelationships between the sciences, including the importance of mathematics and the development of first principles, leading to advanced topics at the forefront of modern science. The goal is to provide students who are interested in careers in science and mathematics with a broad, quantitative background that will give them superior preparation for further work in graduate or professional schools or for permanent employment. The curriculum is composed of 23 quarter-courses as well as a regular seminar series. Students are encouraged to take advantage of opportunities to pursue independent research with leading scientists at Northwestern. ISP may lead to a three-year bachelor of arts degree if, by the end of the third year, the student has completed 36 or more quarter-courses and satisfied all other college requirements.

Admission is by special application to the director of the ISP program. For more information on admission procedures, consult the description of ISP under Academic Options in the Undergraduate Education section of this catalog. Also see the Admission section for achievement tests required. The ISP curriculum consists of specially designed courses taught by faculty members of science and mathematics departments. Course descriptions are found
with the appropriate departments in this catalog. Though listed in a three-year format, the program is usually spread over four years, particularly if a student wishes to combine an ISP major with a second major in mathematics or another science. Specific second major requirements for ISP students can be found under individual departments in this catalog. For more information, see the ISP Web page at www.isp.northwestern.edu.

## Linguistics

Courses Primarily for Undergraduates
Page: 100

## New Course

## LI NG 223 Language Myths

Page: 100

## New Course

LI NG 224 Languages of Chicago

## Mathematics

Page: 103

## Description of Change:

substitution for first three paragraphs

## New text:

Mathematics, often celebrated as the "Queen of the Sciences," has long been a basic tool in the physical sciences, engineering and commerce. Today, it is also used in sophisticated ways in the social sciences and humanities. Students majoring in mathematics have the opportunity to learn about its diverse applications, as well as acquiring an understanding of both the foundations and the frontiers of the discipline.
The department offers a major and a minor in mathematics. The mathematics major is quite flexible; it can accommodate students interested in the foundations of the modern mathematical sciences, as well as those whose primary interest is the application of mathematics in the biological, social, and behavioral sciences, management, or engineering. Students with sufficiently strong preparation who are interested in a more rigorous approach to the subject are encouraged to enter the MENU program. The department encourages properly prepared students to enroll in its graduate courses.
All majors are encouraged to discuss their program of study with the director of undergraduate studies as well as their individual professors.

MENU Program

Page: 103

## Description of Change:

substitution for the text under MENU program

## New text:

## MENU Program

The Mathematical Experience for Northwestern Undergraduates Program (MENU) is designed for students with a love for mathematics and a solid background in calculus; it is ideal for mathematically talented students who are considering a major in mathematics, the physical sciences, or economics, although it is by no means restricted to them.
MENU is comprised of 290 and 340, two specially designed year-long courses normally taken in the freshman and sophomore years. Since admission to 290 is based on results of the CEEB Advanced Placement Examination (preferably the BC exam), it is strongly recommended that high school students with a keen interest in mathematics prepare for and take this exam. Students who have a solid grasp of calculus of one variable (including both differentiation and integration) who have not taken an AP examination are encouraged to speak to the MENU director to determine if enrolling in 290 (as against 214-3) is appropriate for them. The director of MENU is available as an adviser for all MENU students, regardless of their major, during their time at Northwestern.
Further information on MENU is available at the Mathematics Department home page.

## Placement in Calculus

Page: 103

## Description of Change:

Substitution for text

## New text:

Placement in Calculus
Students who have not yet taken any calculus should enroll in 214-1. Students who have taken calculus in high school should enroll in the most advanced course appropriate to their background

- those who have completed a semester of calculus with grades of "B" or higher should ordinarily register for 214-2
- those who have completed a year's course in calculus with grades of " $B$ " or higher should ordinarily register for 214-3
- those who have studied multivariable calculus and/or linear algebra before reaching Northwestern should consult the department's calculus coordinator
To help determine the appropriate placement, students may take the Self-Placement Examination available on the web. The calculus coordinator is also available to consult with students who are unsure about their correct placement


## General Course Recommendations

substitution for text

## New text:

General Course Recommendations for beginning students

- Students who have mastered the elements of single variable calculus and are looking for an early introduction to theoretical mathematics should consider enrolling in MENU (see above under MENU).
- Other students, including premedical students, who are interested in mathematics, the natural sciences, economics, and engineering, should begin in the standard calculus sequence 214-1,2,3
- those interested in economics may replace 214-2,3 with 214-4 (see course descriptions below)
- students who intend to major in the behavioral sciences and those from Medill often take 210-0 and 211-0 rather than 214-1,2,3, especially if they are concerned about the level of their math skills
- students seeking to fulfill the Area II distribution requirement with mathematics courses who do not intend to do more advanced work in mathematics may choose from a 100 -level course, 210-0 and 211-0

Material from the basic calculus courses (214-3, 215, 219, 221) is also covered in 291-1,2,3. Other sequences such as 290-1,2,3, 292-1,2,3, and ESAM 252-1,2,3 cover substantial parts of this material. Those uncertain about the exact equivalences should consult with the director of undergraduate studies. Students should not attempt to mix and match courses from different sequences without prior consultation with the director of undergraduate studies, since they will not be allowed credit for programs that result in excessive duplication of subject matter.

## Majors in Mathematics

Page: 103

## Description of Change: <br> substitution of text

## New text:

The Major in Mathematics
Basic courses: 214-1,2,3, 215, 219 or 290-1,2,3 or equivalent
Required major courses: a total of nine 300-level courses offered by the department; these must include 334 and at least one of the complete sequences $310-1,2,3,312-1,2,3,330-$ $1,2,3,337-1,2,3$, or $338-1,2,3$. With the prior approval of the department, as many as 3 of these 9 courses may be 300-level courses offered by other departments which focus on serious applications of mathematics or have substantial mathematical content. This option is especially recommended to those interested in the applications of mathematics to other areas of study.

## Major in Applied Mathematics

Page: 104

## Description of Change:

delete the entire "Major in Applied Mathematics"

Page: 104

## Description of Change:

substitution of text

## New text:

Some General Advice for Majors
A course in computer science is often valuable for students. Students interested in probability and statistics or in becoming an actuary should take 330-1,2,3 and one or more courses in statistics (e.g. Stat 350, 351, 352, or 355). They should complete their major requirements with courses from among real analysis ( 310 or 312 ), computer science, and areas where probability and statistics are used. Those interested in economics should take Math 310 and 330 and as well as Econ 380 and/or 381 . Double majors in mathematics and economics should consult the director of undergraduate studies in Economics for other possible changes to their requirements.

## Mathematics Second Major for ISP Students

Page: 104

## Description of Change:

## New text:

Insert the following:
312-1,2,3 and 338-1,2,3
in the part about full-year sequences

## Honors in Mathematics

Page: 104

## Description of Change:

Substitution for text

## New text:

Honors in Mathematics
Majors (in either mathematics or applied mathematics) with outstanding records may be nominated for graduation with departmental honors. Those graduating under the regular mathematics option must have completed both 310-1,2,3 or 312-1,2,3 and 337-1,2,3 or 338$1,2,3$. In exceptional cases, students who have not completed these courses may be considered for honors.
To be nominated for departmental honors a student must, in addition, complete with distinction two quarters of independent study or two quarters of a graduate course, as well as an acceptable project that culminates in an honors thesis. Finally, the student must have a grade point average of 3.5 or above in courses used to satisfy major requirements. (Basic
courses as defined above are not used in this computation.)
For more information on honors consult the director of undergraduate studies. See also Honors under Academic Policies earlier in this section of the catalog.

The Teaching of Mathematics

Page: 105

## Description of Change:

substitute one word

## New text:

Substitute "desire" for "wish"

Courses Primarily for Undergraduates

Page: 105

## New Course <br> MATH 104-0 I ntroduction to Game Theory

Introduction to the mathematical theory of strategic competition; optimal strategies, and equilibria; the Prisoner's Dilemma; bargaining and negotiation; strategic voting; applications to economics and political science. For non-science students seeking a gentle introduction to the subject, without the technical details or prerequisites of a more advanced course.
Familiarity with high-school mathematics is assumed.

Page: 105

MATH 104-0 Games and Fallacies
Description of Change:
delete course

## New text:

Page: 105

## New Course <br> MATH 110-0 I ntroduction to Mathematics I

This course explores the beauty and mystery of mathematics through a study of the patterns and properties of the natural numbers $1,2,3 \ldots$. Topics include counting, probability, prime numbers, Euclidean algorithm, and unique factorization. Recommended for students with little mathematical background.

## New text:

Page: 105

## New Course <br> MATH 111-0 Introduction to Mathematics II

Similar in spirit to 110, with topics chosen from number theory, topology, probability, geometry, cryptology and algebra. Recommended for students with little mathematical background. 110 is not a prerequisite for 111.

Page: 105

## MATH 111-0 Survey of Modern Mathematics II Description of Change:

Delete this course

New text:

Page: 105

## New Course <br> MATH 219-0 Linear Algebra

Basic concepts of linear algebra. Solutions of systems of linear equations; vectors and matrices; subspaces, linear independence, and bases; determinants; eigenvalues and eigenvectors; other topics and applications as time permits. Prerequisite: 214-3 or 214-4. Students may not receive credit for 219 and any of 217, 290-1, 291-3, or 292-1.

Page: 105

## MATH 219-0 Linear Algebra with Economics Applications Description of Change:

Delete course

New text:

Page: 105

New Course
MATH 290-1,2,3 Linear Algebra and Multivariable Calculus

Page: 105
MATH 290-1,2,3 MENU: First Year
Description of Change:

## New text:

Page: 105

# MATH 301-1,2 Mathematical Models in Finance Description of Change: <br> Substitution of course in prerequisites 

## New text:

Substitute 219 instead of 221
Page: 106

## New Course <br> MATH 310-1,2,3 Real Analysis

Rigorous analysis in Euclidean space, beginning with one and proceeding to several variables. Properties of the real numbers, limits and continuity, differentiation and integration, sequences and series, the inverse and implicit function theorems. Applications to Fourier series. Primarily for undergraduates; open to graduate students only with departmental permission. Students may not receive credit for both of 310-1 and 312-1 or for both of 310-2 and 312-2. Prerequisite: 215, 219, 308.

Page: 106

## MATH 310-1,2,3 Introduction to Real Analysis Description of Change: <br> Delete this course

## New text:

Page: 106

## New Course

MATH 312-1,2,3 MENU: Real Analysis
Rigorous analysis in Euclidean space and on metric spaces. Metric space topology, properties of Euclidean spaces, limits and continuity, differentiation and integration, sequences and series, the inverse and implicit function theorems. Lebesgue integration with applications. 312-1,2 differ from 310-1,2 in two respects: they cover more topics in more depth, and aim at intensive development of students' ability to analyze and create mathematical proofs. Faster than 310, and at a higher level of abstraction. Students may not receive credit for both of 310-1 and 312-1 or for both of 310-2 and 312-2. Prerequisite: permission of department.

## New Course <br> MATH 318-0 I ntroduction to Optimization

Mathematical methods and concepts on which
continuous nonlinear optimization theory (determining the maxima and minima of a function on an allowable set of points) rests. Examples drawn from economics, business, and engineering. Prerequisite: 310-1 or 312-1.

Page: 106

## New Course <br> MATH 330-1,2,3 Probability and Stochastic Processes

1. Discrete probability spaces, random variables, expected value, combinatorial problems. Special distributions, independence and conditional probability. Weak law and central limit theorem (CLT). 2. Integrating density functions, convolutions, multidimensional joint distributions and densities, proof of the the weak law and CLT. Markov chains with discrete parameter, recurrence and transience, stationary distributions. 3. Integrating density functions, convolutions, multidimensional joint distributions and densities, proof of the weak law and CLT. Markov chains with discrete parameter, recurrence and transience, stationary distributions. Students may not receive credit for both 330-1 and 392-1. Prerequisites: 215, 219.

Page: 106

## MATH 330-1,2,3 Probability and Statistics Description of Change:

Delete this course

New text:

Page: 106

## New Course <br> MATH 334-0 Linear Algebra: second course

Abstract theory of vector spaces and linear transformations. Complex vector spaces, unitary and Hermitian matrices. Jordan canonical form. Selected applications from networks and incidence matrices, least squares approximation, systems of differential equations, fast Fourier transform, finite element method, linear programming. Prerequisite: 219. Students who took 337-1 prior to 2004-2005 may not also take 334 for credit towards the major without departmental consent. Math 335-1,2 Introduction to the Theory of Numbers 1. Divisibility and primes, congruences, quadratic reciprocity, diophantine problems. 2. Additional topics in analytic and algebraic number theory. Prerequisite: 214-3.

Page: 106
MATH 334-0 Linear Algebra for Applications Description of Change:
Delete this course

## New text:

Page: 106

## New Course <br> MATH 337-1,2,3 Abstract Algebra

1. Groups and their structure; elementary ring theory; polynomial rings. 2. Continuation of ring theory; basic field theory. 3. Galois theory; modules over Euclidean domains; application to canonical form theorems of linear algebra. Prerequisite: 308 or instructor's permission. Students may not receive credit for correponding quarters of both 337 and 338.

Page: 106

MATH 337-1,2,3 I ntroduction to Modern Algebra Description of Change:
Delete this course

New text:

Page: 106

## New Course

MATH 338-1,2,3 MENU: Abstract Algebra

1. Groups and their structure, including the Sylow theorems; elementary ring theory; polynomial rings. 2. Continuation of ring theory; basic field theory; Galois theory. 3. Module theory, including application to canonical form theorems of linear algebra. 338 differs from 337 in two respects: it covers more topics in more depth, and aims at intensive development of students' ability to analyze and create mathematical proofs. Prerequisite: permission of department. Students may not receive credit for corresponding quarters of both 337 and 338.

Page: 106

MATH 338-1,2,3 MENU:Algebra Description of Change:
Delete this course

## New text:

Page: 106

## New Course <br> MATH 340-1,2,3 MENU: Applied Analysis

Same description as before

Page: 106

## MATH 340-1,2,3 MENU:Second Year Description of Change:

Delete this course

## New text:

## Philosophy

Major in Philosophy

## Page: 107

## Description of Change:

Delete text "313"

## New text:

add text "one of Phil 310, 311, 312, or 313;"

Honors in Philosophy

## Page:

## Description of Change:

add to text

## New text:

(Philosophy 398 cannot be used to fulfill the Department's requirement that majors take at least 4 courses in Philosophy at the 300-level.)

Page: 107

## Description of Change:

add to text

## New text:

(Philosophy 398 cannot be used to fulfill the Department's requirement that majors take at least 4 courses in Philosophy at the 300 -level.)

Courses Primarily for Freshmen and Sophomores
Page: 108

## Description of Change:

for 210-1,2,3, delete title "Introduction to Existentialism"

## New text:

for 210-1,2,3, correct title to "The History of Philosophy"
Page: 108

## Description of Change:

for 219-0 delete title "History of Philosophy"
New text:
correct 219-0 title to "Introduction to Existentialism"

## Political Science

Page: 113

## Description of Change:

Correction to page.

## New text:

Political Science: Undergraduate Catalog 2003-2005
A knowledge of political science is central for understanding human behavior, policy making, and the relationships between people and governments.
A background in political science is therefore critical for people in public service, politics, the business sector, and the media. Such professionals are in constant need of information on and understanding of the political, legal, and public implications of their fields.
The Department of Political Science is internationally recognized for excellence at both the undergraduate and graduate levels. The department is especially strong in American politics and government; the politics of foreign countries, especially in Europe, Latin America, Asia, and Africa; law and politics; political economy; international studies; and political theory. Political Science faculty at Northwestern are associated closely with the activities of the Program of African Studies, the Center for International and Comparative Studies, and the Institute for Policy Research, all of which are outstanding in their respective specialties.

## Political Science

Major in Political Science
Page: 113

## Description of Change:

Correction to whole text

The major in political science allows students to develop an understanding of various political phenomena and processes. Students can begin pursuing the major with 200 level courses, which provide a general introduction to subfields of political science as well as background for 300 level courses. Majors can choose courses from the following subfields of political science: American Politics, Comparative Politics, International Relations, Political Theory, and Research Methodology.
When students declare a major in political science they meet with an advisor in the department to discuss their program of study.
Students planning to major in political science are advised to complete the 200 -level prerequisites and at least one 300 -level course in political science by the end of their sophomore year.
Students who intend to study abroad should discuss their options with an advisor in the department early in their sophomore year.

Major in Political Science

## Departmental courses

## Page:

## Description of Change: <br> Correction to page.

## New text:

Requirements for the major in Political Science:
Undergraduate Catalog 2003-2005
Basic courses: 3 courses chosen from 201, 204, 220, 221, 230, 240, 250
Major courses: 7 300-level courses in political science, 1 of which must be 310, 311, or 312 and another of which must be 395 .

Related courses: 5 quarter-courses in anthropology, economics, history, philosophy, psychology, or sociology, of which at least 2 must be at the 300 level; no more than 1 may be at the 100 level.

Students should take at least one of the following courses before taking 395: 310, 311, 312. Students normally take the required 395 in the junior year.
All majors also are urged to acquire mastery of a foreign language.

## Minor in Political Science

## Page:

## Description of Change:

Correction to page

## New text: <br> Minor in Political Science: Undergraduate Catalog 2003-2005

The minor in political science offers students the opportunity to acquire a foundation in the discipline as well as significant exposure to advanced courses. Students can choose courses that focus on American Politics, International Relations, Political Theory, and Research

Methodology. Students should begin pursuing the minor with the introductory 200 level courses. The minor in Political Science also allows students to pursue specialized interests. For example, students who aspire to a legal career, an appropriate minor might concentrate on
law and politics courses and could include 230, 330, 331, 332, or 333. Minors may follow similar pathways for concentrations in political theory, international relations, comparative politics, and American political processes, or they may choose an array of courses that cut across subfields rather than concentrate on one or
two areas. To develop an individual program of study for a minor in political science, students should consult with a member of the departmental advising team.

## Comparative Politics

## Page:

## Description of Change:

## New text:

POLI_SCI 355-0: Chinese Politics

## Page:

## New Course <br> POLI_SCI 355 Chinese Politics

Fundamental conflicts in Chinese politics; party-mass relations; class; the urban-rural split; and debates over ideology, democracy, and development strategy.

## Political Theory

## Public Policy and Political Economy

## Page:

## New Course <br> POLI_SCI 376 Comparative Capitalism in Advanced Industrialized Countries

Different patterns of industrialization produce differences in the political organization of capitalism, i.e., in the position and role of labor and in relations between business and the state. Historical roots of those differences and their implications for contemporary politics and policy.

## Page:

## New Course <br> POLI_SCI 373 Political Economy of Developing Countries

Major analytical perspectives of modern political economy through the examination of concrete problems in the developing world.

## Seminars, Independent Study, and Special Opportunities

## Page:

## Description of Change:

Correction to page

## New text:

Seminars, Independent Study, and Special Opportunities: Undergraduate Catalog 2003-2005 Political Research Seminar (395) is required of all political science majors. The 395 Research Seminar is ordinarily taken during junior year (or fall quarter of senior year).
With consent of the department, students may receive credit for more than one 395 seminar provided that, if 398 and 399 are also taken, 395 with 398 and 399 do not exceed a total of four course credits.

## Psychology

## Major in Psychology

Seminars, Independent Study, and Special Opportunities

## Related courses

## Page: 118

## Description of Change:

correction to text: correct abbreviation for Communication Sciences; delete CSD 203, which is no longer offered

## New text:

2 200-level mathematics courses plus 3 additional courses chosen from the following: any 200-level mathematics course; any 300-level statistics course; any biological sciences, chemistry, computer science, or physics course at any level; ANTHRO 213; COGSCI 207; CSD 202, 301, or 302. With department permission, PSYCH 351 may also be counted toward this requirement.

Courses Primarily for Juniors and Seniors

Page: 119

New text:
Change course title to "Physiological Psychology"

## Page: 119

## PSYCH 326-0 Social and Personality Development Description of Change:

Description change; current version lists both old and new prerequisites

## New text:

Research methods, theories, and facts relating to the development and modification of attitudes and behavior. Prerequisites: 205; 204, 215, or 218.

Page: 119

## PSYCH 360-0 Human Memory and Cognition Description of Change:

Description change: add "s" to prerequisites, to clarify that there is more than one

## New text:

In-depth survey of recent work in human memory and cognition. Prerequisites: 205 and 228 or consent of instructor.

Page: 119

## PSYCH 384-0 Interpersonal Relations Description of Change:

Course renamed PLUS Description changed

## New text:

384-0: Close Relationships
Social psychological analysis of close relationships; emphasis on romantic relationships. Interpersonal processes associated with relationship formation, development, and dissolution. Prerequisite: 204.

## Religion

Page: 120

## Description of Change:

New courses

## New text:

The department of Religion has extensively revised its course offerings, adding, deleting, and renaming nearly all the courses in the curriculum. Until the 2005-7 catalog is available, please see the department for details.

## Spanish

## Portuguese Language Courses

Page: 132

## New Course <br> PORT 202 Reading \& Writing Portuguese

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118 Phone: 847-491-5234 • Fax: 847-491-8458 • E-mail: nu-registrar@northwestern.edu

World Wide Web Disclaimer and University Policy Statements © 2005 Northwestern University

## Office of the Registrar

Return to Supplement to the Undergraduate Catalog 2003-2005

School of Communication: Supplement to the Undergraduate Catalog 2003-2005

## Academic Policies

Requirements for the Degree of Bachelor of Arts in Communication

## General Requirements

Page: 136

## Description of Change:

delete "Thirty-five of the required 45 units must be completed
with grades of $\mathrm{A}, \mathrm{B}$, or C (grades of C -minus
do not satisfy this requirement)."

## New text:

Add "No more than 10 of the 45 required units can be completed with grades of C- or D"

Page: 136

## Description of Change:

Delete "No more than 18 of the 45 courses offered
for the degree may be taken in the major department."

New text:

## Academic Options

Interdepartmental Studies

## Requirements for a Major in Interdepartmental Studies

Page: 137

## Description of Change:

delete: "associate dean for undergraduate affairs"

## New text:

replace with "undergraduate dean"

Interschool Certificates and Adjunct Major

## Adjunct Majors

Page: 137

## Description of Change:

Delete "International studies, gender studies, and legal studies" dashes

## New text:

Make remaining text a sentence.

## Communication Sciences and Disorders

Requirements for a Major in Communication Sciences and Disorders

Page: 139

## Description of Change:

delete: " Courses taken in the department: No more than 18 can
be counted toward the BSCmn degree

New text:

## CSD 202 Neurobiology of Communication

Human anatomy, physiology, and neurology in relation to communicative behavior. Sensory, perceptual, cognitive, and motor processes.

## Communication Studies

Course Specializations for Departmental Majors

Communication Industries and Technologies

Page: 142

## Description of Change:

## New text:

add to the list of courses in numerical order:
374, 384
"Rhetoric, Media, and Public Culture"

Page: 142

## Description of Change:

Delete: "and
one other 200-level course from the following: 225, 271 ,
and 275."

New text:

Page: 142

Description of Change:
Change "minimum of three" to "minimum of four"

New text:

Page: 142

Description of Change:

New text:
add to list of courses under "mimimun of four" in numerical order

$$
225,271,275,326,374
$$

## Media and Politics

## Page: 143

## Description of Change:

## New text:

add in numerical order "384"

## Argumentation and Advocacy

Page: 143

## Description of Change:

Add "Gen Cmn 104" to this list "two practice-oriented courses from 214, 215, and 221"

## New text:

## Page: 143

## Description of Change:

## New text:

add in numerical order to the list of theory oriented courses "326"

General Requirements for a Major in Communication Studies

Page: 143

## Description of Change:

delete: "A maximum
of 18 courses in the Department of Communication
Studies may be counted toward the bachelor's degree."

New text:
"Courses Primarily for Juniors, Seniors, and Graduates"
Page: 146
New Course
COMM_ST Comm St 397 Senior Honor's Thesis

Students work on a yearlong project with the guidance of a faculty advisor, cumlinating in a senior thesis. Those who complete the program successfully will be eligible to graduate with departmental honors. Open via application to the program director only.

## Radio/Television/Film

Requirements for a Major in Radio/Television/Film

Page: 148

Description of Change:
delete "and writing"

New text:

## Theatre

## Requirements for a Major in Theatre

"History, Literature, and Criticism"

## Page: 151

## Description of Change:

delete "note the School of Communication 18-unit
requirement (see General Requirements)"

## New text:

Sentence should read "Electives in Communication and other areas."

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students
Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

## Office of the Registrar <br> Return to Supplement to the Undergraduate Catalog 2003-2005

School of Education and Social Policy: Supplement to the Undergraduate Catalog 2003-2005

## Academic Policies

## Honors

Page: 156

## Description of Change:

Replace the following text:
"During the spring quarter students must successfully complete SESP 391 Advanced Research Methods."

## New text:

During the spring quarter students must successfully complete SESP 391 Advanced Research Methods and be recommended for admittance to the honors program.

## Page: 156

## Description of Change:

Replace the following text:
"Students who successfully complete 391 may formally enter the three-quarter honors program by registering for SESP 398 Honors Thesis in the fall quarter of their senior year."

## New text:

Students who successfully complete 391 and are reccommended for the honors program may formally enter the three-quarter honors program by registering for SESP 398 Honors Thesis in the fall quarter of their senior year.

## Academic Programs

## Human Development and Psychological Services, Learning and Organizational Change, Secondary Teaching, and Social Policy Programs

## SESP Core (8 units)

Page: 158

## Description of Change:

New requirements. Change the following text:
"One course chosen from the following is also required:
SESP 201 Human Development: Childhood and Adolescence
SESP 202 Introduction to Community Development
SESP 203 Human Development: Adulthood and Aging
LOC 212 Learning and Understanding
SESP 316 Moral Values in Human Development: An Introduction
SESP 317 Gender and the Life Course
SESP 318 Adult Development and Work Careers"

## New text:

One course chosen from the following is also required:
SESP 201 Human Development: Childhood and Adolescence
SESP 203 Human Development: Adulthood and Aging
LOC 212 Learning and Understanding
SESP 316 Moral Values in Human Development: An Introduction
SESP 317 Gender and the Life Course
SESP 318 Adult Development and Work Careers
Page: 158

## Description of Change:

Add new text after the following:
"The practicum involves a one-quarter unpaid internship in an off-campus setting related to the student's program."

## New text:

The students conduct social science research while at the site.

## Description of Change:

Add new text after the following:
"Concurrent with the internship, students attend a weekly seminar taught by a Northwestern faculty member that integrates their experiential knowledge with the theoretical training in their course work. "

## New text:

The site research will serve as the basis for a final research paper.

## Human Development and Psychological Services

Page: 159

## Description of Change:

New requirements. Replace the following text:
"Major program - 16 courses "

## New text:

Major program - 18 courses

Page: 159

## Description of Change:

New requirements. Replace the following text:
"- Required major courses -11 courses, at least 4 at the 300 level, selected from an approved list in human development and psychological services and other areas such as anthropology, communication studies, linguistics, psychology, and sociology."

## New text:

- Required major courses - 13 courses, at least 5 at the 300 level, selected from an approved list in human development and psychological services and other areas such as anthropology, communication studies, linguistics, psychology, and sociology.

Page: 159

## Description of Change:

New requirements. Replace the following text:
"Electives - 11 courses"

## New text:

Electives - 9 courses

## Description of Change:

New requirements. Replace the following text:
"Major program - 16 courses "

## New text:

Major program - 18 courses

## Page: 159

## Description of Change:

New requirements. Replace the following text:
"- Required major courses - 9 courses, at least 3 at the 300 level, selected from an approved list in learning and organizational change and other areas such as cognitive science, computer science, economics, psychology, and sociology."

## New text:

- Required major courses - 9 courses, at least 4 at the 300 level, selected from an approved list in learning and organizational change and other areas such as cognitive science, computer science, economics, psychology, and sociology.

Page: 159

## Description of Change:

New requirements. Replace the following text:
"Electives - 11 courses"

## New text:

Electives - 9 courses

Learning and Organizational Change

## Social Policy

Page: 159

## Description of Change:

New requirements. Replace the following text:
"Major program - 16 courses "

## New text:

Major program - 18 courses

## Description of Change:

New requirements. Replace the following text:
"• Basic courses - 6 courses
SOC POL 201 Introduction to Social Policy
SOC POL 304 Social Policy and the Human Services
SOC POL 307 Educational Policy
SOC POL 330 Economics of Social Policy
ECON 201 Introduction to Macroeconomics
ECON 202 Introduction to Microeconomics"

## New text:

- Basic courses - 8 courses

SESP 202 Intorduction to Community Development
SOC POL 201 Introduction to Social Policy
SOC POL 304 Social Policy and the Human Services
SOC POL 307 Educational Policy
SOC POL 330 Economics of Social Policy
ECON 201 Introduction to Macroeconomics
ECON 202 Introduction to Microeconomics
POL SCI 220 American Government and Politics

## Page: 159

## Description of Change:

New requirements. Replace the following text:
"• Required major courses - 11 courses, at least 5 at the 300 level, selected from an approved list in human development and psychological services and other areas such as anthropology, communication studies, linguistics, psychology, and sociology."

## New text:

- Required major courses - 10 courses, at least 6 at the 300 level, selected from an approved list in human development and psychological services and other areas such as anthropology, communication studies, linguistics, psychology, and sociology.

Page: 159

## Description of Change:

New requirements. Replace the following text:
"Electives - 11 courses"

## New text:

Electives - 9 courses

Secondary Teaching Program
Page: 160

## Description of Change:

Replacing the following text:
"Students enrolled in the School of Education and Social Policy or elsewhere in the University who wish to pursue the secondary teaching major and recommendation for secondary teaching certification must apply for formal admission to the Secondary Teaching Program."

## New text:

Students enrolled in the School of Education and Social Policy or elsewhere in the University who wish to pursue the secondary teaching major and recommendation for secondary teaching certification must apply for formal admission to the Secondary Teaching Program during the term in which they are enrolled in Teach Ed 304 or no later than the first week of October of their junior year.

Secondary Teaching Program

## Preparation for Professional Work in Middle and Secondary Schools

Page: 160

## Description of Change:

Replacing the following text:
"Students in the Secondary Teaching Program take extensive course work in the liberal arts and complete a major in the academic subject they expect to teach."

## New text:

Students in the Secondary Teaching Program take extensive course work in the liberal arts and complete a major, or the equivalent of a major, in the academic subject they expect to teach.

## Teaching Major Requirements

## English (15 units)

Page: 161

## Description of Change:

New requirements.

## New text:

- 3 introductory courses: ENGLISH 298 and 210-1,2 or 270-1,2
- 2 composition courses, one of which must be Teach ed 325
- 8 literature courses: 2 American literature courses, 2 English literature courses, and 4 additional literature courses, one of which must be non-Western literature
- 1 linguistics course chosen from LING 220, 221, 250, 260, 270, 311, 312, 321, 322, 323, 341,342 , or one poetry course
- 1 reading and language acquisition course: TEACH ED 324

French (12 units)

## Page: 161

## Description of Change:

New requirements.

## New text:

- 6 language courses: FRENCH 202, 203, 301, 302, 303, 305
- 3 literature courses: FRENCH 210 and 2 additional 300-level literature courses taught in French
- 3 culture and civilization courses, at least 2 of which must be 300 -level, chosen from FRENCH 201, 211, 380, 390, 391-1,2, 396


## Spanish (12 units)

## Page: 161

## Description of Change:

New requirements.

## New text:

- 3 language and composition courses: SPANISH 201-1 or 201-2, or appropriate substitute for heritage speakers; 202-1 or 207, 202-2
- Spanish 220
- 3 literature courses chosen from SPANISH 250, 251, 260, 261
- 5 additional 300-level courses taught in Spanish, with at least 1 course from a period earlier than 1800
- 1 culture course chosen from SPANISH 360, 361 or 380


## Mathematics (12 units)

Page: 161

## Description of Change:

Replace the following requirement

## New text:

- 1 probability and statistics course chosen from MATH 330-1; STAT 202, 302 or SESP 210


## History (12 units)

Page: 161

## Description of Change:

New requirements.

## New text:

- History 201-1, 2
- History 210-1, 2
- 2 ancient/classic civilization courses
- 6 additional history courses
- 3 related courses chosen from ECON 201, SOC 201, ANTHRO 214, POL SCI 220, SOC 226 or SESP 210 or STATS 210, PSYCH 110, GEOG 341


## Clinical Experiences

Page: 162

## Description of Change:

Correction to the first three paragraphs

## New text:

Secondary teaching students complete three clinical experiences: a 40-hour non-school practicum, a 100-hour practicum and a secondary student teaching internship. However, students must have applied to the program no later than the first week of October of their junior year to be eligible for the 100-hour practicum and student taching. Eligibility for Admission is based on a passing grade on the Illinois Basic Skills Test; a GPA of at least 2.5; a minimum 2.5 avergae in the subject area and professional education courses.

Students typically complete the first practicum during winter of sophmore or junior year and the 100 -hour practicum is typically spring quarter of their junior year. The practicum includes a minimum of 10 hours per week in a classroom for the length of the quarter as well as a practicum seminar (TEACH ED 378 or 379 ). Students are also enrolled in a methods course (TEACH ED 354-59) and a third education course (TEACH ED 341). Students usually enroll in a fourth class, frequently in their concentration area. They must complete a preliminary contract for their practicum during the first two weeks of the quarter.

Students then typically complete the student teaching internship during fall or winter quarter of their senior year. To apply for student teaching, they must have satisfactorily completed their practicum and related requirements (see above) and passed the Illinois subject area exam for teachers. They also must have a GPA of 2.5 and a grade point average of 2.5 or above in their major and professional core courses. (Note: While a grade point average of

## Additional Requirements for Certification

Page: 162

## Description of Change:

New requirements.

## New text:

-Completion of a Digital Portfolio

- Illinois State Teacher Certification Examination (Basic Skills, Content Area, and Assessment of Professional Teaching exams). Information about the required Illinois State Teacher Certification Examination is available in the Office of Student Affairs. Some school districts require a police background check before student teachers may begin their internships and become eligible for certification.
- United States citizenship or evidence of permanent resident status


## Recommendation for Certification

Page: 162

## Description of Change:

Replace the following text:
"Students successfully completing approved teacher training programs at Northwestern qualify to receive Illinois certification. Although legal requirements for certification vary from state to state, each teacher training program offered at Northwestern is sufficiently flexible to permit a student who plans carefully to complete provisional requirements of most states. A teacher certification reciprocity agreement exists between Illinois and 40 other states. Information is available in the SESP Office of Student Affairs. Northwestern will recommend a student for a teaching certificate only when the student has successfully completed an approved Northwestern University teacher preparation program. Students should apply through the SESP Office of Student Affairs no later than the quarter preceding the final quarter of study at Northwestern."

## New text:

Students successfully completing approved teacher training programs at Northwestern qualify to receive Illinois certification. Although legal requirements for certification vary from state to state, each teacher training program offered at Northwestern is sufficiently flexible to permit a student who plans carefully to complete provisional requirements of most states. A teacher certification reciprocity agreement exists between Illinois and 40 other states. Information is available in the SESP Office of Student Affairs. Northwestern will recommend a student for a teaching certificate only when the student has successfully completed an approved Northwestern University teacher preparation program.

## Partnership through the Arts Program

## Description of Change:

Delete all text.

## New text:

## Service Learning Certificate Program

Page: 163

## Description of Change:

Add text.

## New text:

Completion of the program requires bi-weekly discussions, three courses (including SESP 202: Introduction to Community Development) and 50 hours of community service every year, as well as a two quarter Capstone Project.

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118 Phone: 847-491-5234 • Fax: 847-491-8458 • E-mail: nu-registrar@northwestern.edu

Last Revision J une 18, 2008
World Wide Web Disclaimer and University Policy Statements © 2005 Northwestern University

## Office of the Registrar <br> Return to Supplement to the Undergraduate Catalog 2003-2005

Robert R. McCormick School of Engineering and Applied Sciences: Supplement to the Undergraduate Catalog 2003-2005

Page: 167

## Description of Change:

New title of the BS degree, Manufacturing Engineering.

## New text:

The new title is Manufacturing and Design Engineering. Its ABET accreditation status remains unchanged.

## Academic Policies

Requirements for the Degree of Bachelor of Science
Page: 168

## Description of Change:

Students must have received a grade of C, or higher, in any course taken elsewhere and then used to fulfill a McCormick degree requirement.

## New text:

A grade point average of not less than C is required for all courses presented for the degree. Students must have received a grade of C, or higher, in any course taken elsewhere and then used to fulfill a McCormick degree requirement. The grade point average of the 16 major program courses ...

## Pass/No Credit Option

## Description of Change:

The requirement of a speaking course may not be fulfilled by a course taken $\mathrm{P} / \mathrm{N}$.

## New text:

... only four 100- or 200-level courses may be taken under the P/N option and used to satisfy the seven-course requirement in the social sciences. humanities area.
... in mathematics, engineering analysis and computer proficiency, basic sciences, design and communications, and ...

## Page: 168

## Description of Change:

The requirement of a speaking course may not be fulfilled by a course taken $\mathrm{P} / \mathrm{N}$.

## New text:

... only four 100- or 200-level courses may be taken under the P/N option and used to satisfy the seven-course requirement in the social sciences/humanities area.
... in mathematics, engineering analysis and computer proficiency, basic sciences, design and communications, and ...

## Academic Options

Honors Program in Engineering and Education
Page: 172

## Description of Change:

This program has been discontinued.

## New text:

## Undergraduate Programs of Study

McCormick Curriculum Requirements

## Page: 173

## Description of Change:

The former degree program, Manufacturing Engineering, is now called, Manufacturing and Design Engineering.

## New text:

MFG ENG (manufacturing and design engineering)

## Page: 173

## Description of Change:

The former degree program, Manufacturing Engineering, is now called Manufacturing and Design Engineering.

## New text:

MFG ENG (manufacturing and design engineering)

McCormick Curriculum Requirements

Design and Communications (3 courses)

Page: 174

## Description of Change:

GEN ENG 106-1,2 "Engineering Design and Communications" will be relisted as IDEA 106-1,2.

New text:
Writing and Design.
IDEA 106-1,2

## Basic Engineering (5 courses)

Page: 174

## Description of Change:

Erroneous bullet points in front of CHEM ENG 211, MAT SCI 314, MECH ENG 220, and MECH
ENG 370 in the section, Thermodynamics.

New text:
Thermodynamics:
BME 250 ...
CHEM 342-1 ...
CHEM ENG 211 ...
MAT SCI $314 \ldots$
MAT SCI $315 \ldots$
MECH ENG 220 ...
MECH ENG 370 ...

Page: 174

## Description of Change:

Erroneous bullet points in front of "or MAT SCI 203" and "or MAT SCI 301" in the section, Materials science.

## New text:

Materials science:
MAT SCI 201...
or MAT SCI 203 ...
or MAT SCl 301 ...

## Page: 174

## Description of Change:

ECE 230 has been renamed, Programming for Engineers.

## New text:

ECE 230 Programming for Engineers

## Page: 174

## Description of Change:

Add the course, CIV ENG 304-0 "Civil \& Environmental Engineering Systems Analysis" to the list of Basic Engineering Courses in the category of Systems Engineering and Analysis.

## New text:

Systems Engineering and Analysis:
CHEM ENG 210
IEMS 310
ES APPM 346
CIV ENG 304

## Page: 174

## Description of Change:

Add the new course ECE 231-0 "Advanced Programming for Computer Engineers" to the category of Computer Programming as an either/or with ECE 230 "Programming for Engineers."

## New text:

Computer Programming:
COMP SCI 211
COMP SCI 317
ECE 230 or ECE 231

Department Curricula

## Applied Mathematics Curriculum

Page: 175

## Description of Change:

In the Basic Engineering requirement, replace the two categories, Computer Science and Computer Engineering, with the new categories, Computer Architecture, and Numerical Methods and Computer Programming.

## New text:

Basic Engineering - 5 courses.

## Civil Engineering Curriculum

Page: 176

## Description of Change:

Make statement under Basic Engineering read, "MAT_SCI 203 or 1 other course from Systems engineering and analysis, Computer programming, Computer architecture and numerical methods, or Materials science."

## New text:

Basic Engineering:
CIV ENG 216
MECH ENG 241
Thermodynamics 1 course
Electrical science 1 course
MAT_SCI 203 or 1 other course from Systems Engineering and Analysis, Computer Programming, Computer Architecture and Numerical Methods, or Materials Science

## Computer Engineering Curriculum

Page: 177

## Description of Change:

Change, "Computer Engineering: ECE 203 (grade of C- or better required for graduation) and ECE 230"
to, "Computer Architecture and Numerical Methods: ECE 203 (grade of C- or better required for graduation). Computer Programming: ECE 231."

## New text:

Basic Engineering - 5 courses.
Probability, Statistics, ...: ECE 302
Electrical Science: ECE 202
Computer Architecture and Numerical Methods: ECE 203 (grade of C- or better required for graduation).
Computer Programming: ECE 231
1 course from thermo....

## Computer Science Curriculum

## Page: 178

## Description of Change:

In the departmental requirements under the heading "Project work", replace the statement, "The courses above must be chosen to include 2 quarters of project work..." with, "The courses must be chosen to include a 2 -quarter project..."

The courses must be chosen to include a 2-quarter project, resulting in the construction ...

## Page: 178

## Description of Change:

Limit to 3 the number of times a student can repeat COMP SCI 338-0 and use them toward their Computer Science degree.

## New text:

No more then 4 credits of COMP_SCI 338-0, "Practicum in Intelligent Information Systems", can be toward the satisfaction of their engineering degree requirements.

## Electrical Engineering Curriculum

## Page: 178

## Description of Change:

Change, "Computer Engineering: ECE 203 (grade of C- or better required for graduation) and ECE 230"
to, "Computer Architecture and Numerical Methods: ECE 203 (grade of C- or better required for graduation). Computer Programming: ECE 230 or ECE 231."

## New text:

Basic Engineering - 5 courses.
Electrical Science: ECE 202 (grade of C- or better required for graduation).
Computer Architecture and Numerical Methods: ECE 203 (grade of C- or better required for graduation)
Computer Programming: ECE 230 or ECE 231
Probability, Statistics, ...: ECE 302
1 course from the basic engineering list...

## Industrial Engineering Curriculum

Page: 179

## Description of Change:

Change the requirement, IEMS 390-1,2 or IEMS 391-1,2, to IEMS 391-2 "Industrial Engineering Design Project II" and one course from IEMS 390-1, IEMS 390-2, or IEMS 3911.

## New text:

Senior Design Project - 2 courses.
IEMS 391-2 and one course from IEMS 390-1, IEMS 390-2, or IEMS 391-1.

Page: 179

## Description of Change:

Add the new IEMS 383-0 to the departmental program selection category, Production and Logistics.

## New text:

Production and Logistics - 1 course.
IEMS 381, 382, or 383.

Manufacturing Engineering Curriculum

Page: 179

## Description of Change:

New Title for this degree program.

## New text:

Manufacturing and Design Engineering

Page: 180

## Description of Change:

MFG ENG 398 is renumbered as IDEA 398

## New text:

Senior Design Project - 2 courses
IDEA 398 "Manufacturing Engineering Design Project".

Page: 180

## Description of Change:

Change the core course requirements of the Manufacturing and Design Engineering degree:
Replace "COMP_SCI 110 or ECE 230" and "IEMS 244 or COMP_SCI 317" with IDEA 344
"Manufacturing Engineering Design" and IDEA 308 "Human Centered Product Design"

## New text:

Core - 10 Courses
IDEA 344 Manufacturing Engineering Design
IDEA 308 Human Centered Product Design
IEMS 201
IEMS 305 or IEMS 307
etc.

General Engineering Courses

Page: 181

GEN_ENG 106-1,2 Engineering Design and Communication Description of Change:
GEN ENG 106-1,2 "Engineering Design and Communication" is now to be listed under the department, Institute for Design Engineering and Applications, as IDEA 106-1,2.

## New Course

## GEN_ENG 215-1,2,3,4 Engineering Advanced Conceptual Workshop

Exercises related to the segment of Engineering Analysis in which the student is currently enrolled. Prerequisites: Co-registration in the counterpart GEN_ENG 205-1,2,3,4.

Page: 181

GEN_ENG 206-1,2,3 Honors Engineering Analysis
Description of Change:
ES APPM 253 is now GEN ENG 206-4

## New text:

(Omit the last, parenthetical sentence.)

Page: 181

## GEN_ENG 206-1,2,3,4 Honors Engineering Analysis Description of Change: <br> ES APPM 253 is now the fourth segment in this series course.

## New text:

Covers the topics addressed 205-1,2,3,4 at a deeper level. Intended for students with demonstrated strength in mathematics, computer programming, and/or physics.
Prerequisite: Consent of the instructor.

## Biomedical Engineering

Courses Primarily for Undergraduates

Page: 183

BMD_ENG 322-0 Mathematical Modeling of Physiological Systems Description of Change:
Course has been dropped.

New text:

Page: 184

BMD_ENG 373-0 Cardiac Mechanics
Description of Change:
Course has been dropped.

## New text:

## Civil Engineering

Courses Primarily for Undergraduates
Page: 188

## CIV_ENG 219-0 Continuum Mechanics I <br> Description of Change: <br> Course has been dropped.

New text:

Page: 189

## CI V_ENG 340-0 Fluid Mechanics II

 Description of Change:The prerequisite of CIV ENG 321 should be CHEM ENG 321.

## New text:

Prerequisite: CHEM ENG 321, MECH ENG 241 or consent of the instructor.
Page: 188

## New Course

CIV_ENG 206-0 Environmental Literacy

New title to replace "Analyzing Environmental Issues"
Page: 188

## New Course <br> CI V_ENG 304-0 Civil and Environmental Engineering Systems Analysis

This course presents quantitative techniques to develop descriptive and prescriptive models that can be used to support efficient planning and management of civil and environmental engineering systems. Prerequisites: MATH 214-2 or Equivalent.

CI V_ENG 314-0 Mechanics of Crustal Processes
Description of Change:
Course has been dropped.
New text:

Page: 190
CIV_ENG 368-0 Industrial Hygiene and Environmental Control Description of Change:
Course has been dropped.
New text:

Page: 190
CI V_ENG 372-0 Transportation System Design and Analysis Description of Change:
Course has been dropped.
New text:

Page: 190

## New Course

CI V_ENG 382-0 Infrastructure Facilities and Systems

Theory, function, planning, design, ownership, finance and operation of contemporary infrastructure systems presented in lecture-discussion format, along with weekly field trips to example systems.

Electrical and Computer Engineering

Courses Primarily for Undergraduates

Page: 193
ECE 115-0 The Electron in the 21st Century Description of Change:
Course has been dropped.

New text:

Page: 196

## New Course

## ECE 394-0 ASIC and FPGA Design

Overview of Computer Aided Design tool flow for ASIC and FPGA Design. Synthesis from hardware description languages and creation of finite state machines. Differences between FPGA and ASIC design flows. Exploration of concepts in several projects. Prerequisites: ECE 303.

Page: 195

## ECE 365-0 Communication Filters

Description of Change:
Course has been dropped.

## New text:

Page: 194

## New Course

## ECE 231-0 Advanced Programming for Computer Engineers

Object-oriented programming, classes and data hiding, dynamic object construction and destruction, derived classes and inheritance, virtual functions; file processing; introduction to UNIX; testing and test generation. Prerequisite: COMP_SCI 110 or knowledge of any programming language.

Page: 194

## New Course <br> ECE 230-0 Programming for Engineers

Revision of previous 230-0, "Programming for Computer Engineers"
New Prerequisite: GEN_ENG 205-1,2

Engineering Sciences and Applied Mathematics

Courses Primarily for Undergraduates
Page: 196

## ES_APPM 253-0 Honors Engineering Analysis IV Description of Change:

This course has been converted into GEN ENG 206-4.

## Industrial Engineering and Management Sciences

Courses Primarily for Undergraduates

## General Business Management

Page: 198

## New Course <br> I EMS 345-0 Negotiations and Conflict Resolution for Engineers

This course is a highly interactive case-study based exploration of the field of negotiations and dispute resolution. Students interact in simulated negotiations and disputes that range in complexity from single party/single issue to multi party/multi issue cases that illustrate integrative negotiations techniques. In addition, this course explores dispute resolution as well as alternate dispute resolution techniques as well in the context of typical industrial situations. Prerequisites: IEMS 303 and IEMS 342 are recommended

Page: 198

## New Course <br> I EMS 343-0 Project Management for Engineers

This course is a case study based exploration of the project management body of knowledge.
Key topics include: project scheduling, risk management, project leadership, small group dynamics, project methodologies, lifecycle concepts and project controls. A Socratic approach is taken to explore various case studies in the context of established and leading edge project management concepts. Prerequisites: IEMS 303 and IEMS 342 are recommended

## Economics and Financial Decisions

Page: 198

## New Course

I EMS 373-0 I ntroduction to Financial Engineering
(replaces previous Financial Engineering I course.)

Production and Logistics

Page: 199

New Course
I EMS 383-0 Service Operations Management

Explores service industries. Introduces cost reduction and service enhancement models.
Topics include location planning, workforce scheduling, yield management, queuing analysis, and call center management. Prerequisites: IEMS 313 and IEMS 315

Manufacturing Engineering

## Page: 199

## Description of Change:

Replace the category, Manufacturing Engineering, with Manufacturing and Design Engineering.

## New text:

Manufacturing and Design Engineering

## Page: 199

## Description of Change:

Courses previously designated as MFG_ENG will not be designated as IDEA courses.

## New text:

Page: 199

## Description of Change:

Courses previously designated as MFG_ENG will now be designated as IDEA courses.

New text:

## Manufacturing Engineering

Courses Primarily for Undergraduates

## Page:

## MFG_ENG 106-1,2 Engineering Design and Communication Description of Change:

GEN ENG 106-1,2 will now be listed as IDEA 106-1,2.

## New text:

(see previous description for GEN ENG 106-1,2)

## New Course <br> MFG_ENG 298-0 I nterdisciplinary Design Projects I

Product or system design projects carried out by small student groups. Conceptual and detailed design, implementation and evaluation, reporting and archiving. At least one team member must be registered for IDEA 398. Prerequisite: IDEA 106-1,2.

Page: 199

## MFG_ENG 395-0 Special Topics in Manufacturing Engineering Description of Change:

This course will now be IDEA 395-0

## New text:

IDEA 395-0 "Special Topics in Manufacturing Engineering"
Page: 199

## MFG_ENG 398-0 Manufacturing Engineering Design Project Description of Change:

This course will now be IDEA 389-0

## New text:

IDEA 398-0 "Manufacturing Engineering Design Projects"

Page: 199

MFG_ENG 399-0 I ndependent Study Description of Change:
This course will now be IDEA 399-0

## New text:

IDEA 399-0 "Independent Study"
Page: 199

## New Course

MFG_ENG 308-0 Human-Centered Product Design

This project-based course focuses on user needs. The course introduces observational methods, brainstorming, prototyping, business models, and the social and engineering concerns for product design. Prerequisite: Sophomore standing or IDEA 106-1,2 (EDC)

Page: 199

New Course
MFG_ENG 297-0 Intermediate Topics in Engineering Design (0.5 units)

## New Course <br> MFG_ENG 306-0 Technology Assessment and Innovation

Application of real-world methodologies to innovative engineering design. Critical evaluation of candidate technologies; consideration of stakeholder needs and constraints; design review; design proposal.
Prerequisite: Sophomore standing or IDEA 106-1,2 (EDC)

## Page:

## New Course <br> MFG_ENG 344-0 Manufacturing Engineering Design

This course focuses on production system design with emphasis on manual assembly, machining processes, material handling, material storage, and product design for manufacture and assembly.
Prerequisite: MECH_ENG 340-1 or Consent of the Instructor

Page: 199
New Course
MFG_ENG 370-0 Advanced Topics in Engineering Design (0.5 units)

Topics suggested by students and faculty with approval of the Institute.
Page: 199

## New Course <br> MFG_ENG 370-0 Engineering Portfolio Development (0.5 units)

Students create a portfolio that showcases engineering work and furthers their personal career goals, such as obtaining a position in industry or acceptance into a program of graduate study. The portfolio is a design project, aimed at presenting a story about its creator in a physical presentation that embodies its goals. The course also provides students with an integrated capstone experience in design and communication. The course provides instruction on giving effective presentations and requires multiple presentation activities. NOTE: This course can be combined with any other IDEA half- unit course to produce a wholeunit credit.

## Mechanical Engineering

## New Course <br> MECH_ENG 382-0 Experiments in Micro/ Nano Science and Engineering

This course covers wide and diverse interdisciplinary topics spanning physical, biological sciences and engineering. It consists of seven integrated labs by which students acquire hands-on experience in various aspects of nano and micro science and engineering. The labs cover clean room microfabrication, flow visualization in microchannels, nanomechanics, AFM and dip pen nanolithography, multi-physics computational tools, and experimental techniques to evaluate micro/nano devices. Prerequisites: ME381 or permission of instructor.

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118
Phone: 847-491-5234 • Fax: 847-491-8458 • E-mail: nu-registrar@northwestern.edu
Last Revision June 18, 2008
World Wide Web Disclaimer and University Policy Statements © 2005 Northwestern University

## Registrar

## Office of the Registrar

Return to Supplement to the Undergraduate Catalog 2003-2005

Medill School of Journalism: Supplement to the Undergraduate Catalog 2003-2005

There are no entries for the Supplement to the Undergraduate Catalog 2003-2005 under this title.

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118 Phone: 847-491-5234 • Fax: 847-491-8458•E-mail: nu-registrar@northwestern.edu Last Revision J une 18, 2008
World Wide Web Disclaimer and University Policy Statements © 2005 Northwestern University

## Office of the Registrar <br> Return to Supplement to the Undergraduate Catalog 2003-2005

School of Music: Supplement to the Undergraduate Catalog 2003-2005

## Academic Policies

Programs of Study

## Bachelor of Music

Page: 213

## Description of Change:

omit first sentence and replace with text below

## New text:

Courses of study leading to the bachelor of music degree include music cognition, music composition, music education, musicology (historical or ethnomusicology tracks), music theory, general academic studies, and performance in jazz studies, piano, string instruments, voice, winds and percussion instruments.

Page: 213

## Description of Change:

second paragraph, last sentence, omit the word "ethnomusicology" from the list of recent ad hoc specializations.

## New text:

## Bachelor of Arts in Music

Page: 213

## New text:

The Bachelor of Arts in Music offers a broad liberal arts education with a major in music. The requirements of this degree are essentially identical to those for the B.A. in the Weinberg College of Arts and Sciences. Within the degree's focus on music, there exists a wide range of possibilities for study spanning from cultural musicology to cognitive studies of music and from music composition to advanced technology for music. The Bachelor of Arts curriculum offers considerable latitude in designing a sequence of courses to suit the student's interests and goals. A key feature for the student is the planning and execution of a senior project. This degree is an excellent stepping stone to further education in music or to any career in which the person is deepened and enriched by knowledge of music.

## Degree Requirements

Page: 216

## Description of Change:

omit the whole second paragraph:
All freshmen in the School of Music must participate in band, choir, or orchestra, as appropriate to their principal auditioned instrument. It is recommended that freshmen not participate in more than two ensembles per quarter.

## New text:

Page: 216

## Description of Change:

add to the fourth paragraph the text below.

## New text:

Music majors must earn a grade of $C$ or above in all courses required in the major, including all core courses and all specialization courses, in order to count those courses toward graduation requirements. Grades of $D$ and above must be earned in all distribution courses and in all free electives in order to fulfill those requirements."

Music Performance Study

Page: 216

## Description of Change:

omit this entire text and replace with the text below.

## New text:

The School of Music offers major instruction in piano, string instruments, winds, percussion, and voice. Students should consult their adviser or program coordinator for the assignment of an instructor. Consent of the instructor and department chair as well as concurrent registration in ensemble (except in piano) are required. Elective performance study assignments are made by the appropriate department chair as space is available.

## Academic Options

## Double Major

Page: 217

## Description of Change:

omit the word "only" from the second sentence.

## New text:

Interdisciplinary Certificates
Page: 217

## Description of Change:

new heading
all new text below for this section

## New text:

Minor Programs
School of Music students may elect to complete one of the minor programs developed
by the School of Music faculty and representing disciplines often used in the music profession. Some minors cross the normally established disciplines to enable students to combine the study of music with another area in an interdisciplinary fashion. Each includes a minimum of six and a maximum of nine courses. Students applying for School of Music minors must present records showing a minimum of five courses not double counted in their major.
Students who complete all required courses and
notify the Office of Student Affairs that they have done so will receive a notation on their Northwestern transcripts. Applications to receive the minor should be completed along with the Application for a Bachelor's Degree.

## Page: 218

## Description of Change:

add new entry

## New text:

Music Composition
The Minor in Music Composition requires 9 courses:
3 units of Composition 111
3 units of Composition 311
1 unit Instrumentation or Orchestration (MUS COMP 314)

1 unit 300-level Composition
1 unit Music Technology
6 quarters Composition Colloquium

Interdisciplinary Certificates

## Commercial Music

Page: 217

## Description of Change:

change the word "Certificate" to "Minor" in the first line

## New text:

Jazz Studies

Page: 217
Description of Change:
change the word "Certificate" to "Minor" in the first line

New text:

Music Business

Page: 218

Description of Change:
change the word "Certificate" to "Minor" in the first line

New text:

Music Cognition

Page: 218

Description of Change:
change the word "Certificate" to "Minor" in the first line
New text:

Music Criticism

Page: 218

## New text:

## Music Technology

Page: 218

Description of Change:
change the word "Certificate" to "Minor" in the first line

New text:

Interschool Programs

Partnership through the Arts Program

Page: 218
Description of Change:
omit this entry entirely.
New text:

## Resources

Facilities

Page: 220

## Description of Change:

this paragraph should be replaced with the paragraph below.

## New text:

The School of Music occupies several buildings. The Music Administration Building houses administrative offices, classrooms, studios, and practice rooms. The faculties of the Department of Music Studies, Voice and Opera Program, and Piano Program have offices in this building. Regenstein Hall houses rehearsal facilities, practice rooms, a 200-seat lecture/ recital room, and the library and offices for the University bands. The Department of Music Performance Studies office and studios for faculty of the Conducting and Ensembles, String Instruments, and Wind and Percussion Instruments Programs also are located in Regenstein Hall. Practice Hall contains 35 practice rooms. Lutkin Hall, seating 400, is used for student and faculty recitals and lecture classes. Pick-Staiger Concert Hall provides a 1,000- seat concert hall, rehearsal facilities, and offices and library for the University Symphony Orchestra. The School of Music also maintains a computer lab and an
electronic music studio.

## Music Studies for Nonmajors

## Page: 221

## Description of Change:

omit the last sentence "For additional information about instruction, inquire in person at the School of Music's Office of Student Affairs" and replace with the sentence below.

## New text:

For additional information about instruction, call the program coordinator at 491-4782.

## Music Studies for Nonmajors

Private Lessons for Credit

Page: 221

## Description of Change:

change complete above text to what is given below. (all fees went up $\$ 10$ )

## New text:

Nonmusic majors may take half-hour private music lessons for .5 course credit in GEN MUS 115 Applied Piano/Organ, 120 Applied Strings, and 125 Applied Winds/Percussion. A registration fee of $\$ 210$ (for 2004-05) is billed to the student's tuition and fees account. Nonmusic majors may
take voice classes or private voice lessons, for up to . 5 course credit (subject to instructor consent), in GEN MUS 131, 133, 134, 160, 231, 260, and 360. A registration fee of $\$ 185$ for voice classes, $\$ 220$ for beginning private voice
lessons, or $\$ 270$ for intermediate or advanced private voice lessons (for 2004-05) is billed to the student's tuition and fees account. Students are accepted for private instrumental lessons and for vocal lessons and classes based on an audition and the availability of an instructor.

## Courses Open to Undergraduates

Page: 221

New Course
GEN_MUS 121-0 Beginning Nonmajor Class Guitar(.5)

## Courses Open to Undergraduates

## Page: 222

## New Course

MUSIC 399-0 Independent Study

## Music Studies

## Page: 222

## Description of Change:

add parenthesis below after the word "musicology" in the sixth line

## New text:

(historical or ethnomusicology track)

## Music Composition

Music Studies

## Major Studies Requirement

Page: 222

## Description of Change:

old text
322-1,2 Materials of Modern Music (1 unit)

## New text:

300-level Composition electives (2 units)

Page: 222

## Description of Change:

old text
Music theory courses in analysis (2 units) (1 unit must be in 20th-century analysis)

## New text:

20th-century analysis (1 unit)

## New Course

MUS_COMP 111-1,2,3 Class Composition

Class instruction in techniques of composition. Open to nonmusic majors. Prerequisite: preceding quarters of 111 or consent of instructor.

## Music Education

## Page:

## Description of Change:

old text for the "choral track" section should be replaced with the text below.

## New text:

Choral Track ( 6.5 units)

- 231-1 Guitar Class I (. 5 unit)
- 232 Voice Class (. 5 unit)
- CONDUCT 340-2 Advanced Conducting

361 Teaching General Music I

- 362 Teaching General Music II
- 366 Teaching Choral Music I
- 367 Teaching Choral Music II
- Instrumental class elective (. 5 unit)


## Music Education

Student Teaching Courses

## Page:

## Description of Change:

looks like there was a religion class sumbitted to this on-line editor that shouldn't be here! :)

## New text:

## Page:

# MUSI C_ED 396-0 Student Teaching Colloquium 

## Musicology

Page: 224

## Description of Change:

omit entire text and replace with below.

## New text:

An undergraduate major in musicology (either historical or in ethnomusicology) is available within the bachelor of music degree or as a concentration within the bachelor of arts. The courses required for this specialization are selected from musicology, analysis, and the departmental core. As some of the courses are offered on a two-year alternating schedule, certain courses may not be available during a given academic year.

## Major Studies Requirement

For a major in musicology (historical track), 16 course units are required:

- 350-355 History of Music (6 units)
- Musicology electives or cognates (6 units)
- applied lessons/ensemble/performance (3 units)
- Senior project or thesis (1 unit)

For a major in musicology (ethnomusicology track), 16 course units are required:

- Ethnomusicology Core (3 units)
- Area and Topics courses (9 units)
- applied lessons/ensemble/performance (3 units)
- Senior project or thesis (1 unit)


## Musicology

Courses Open to Undergraduates

Page: 225

New Course
MUSI COL 395-0 Musicology Colloquium

## Music Technology

## Page: 226

## Description of Change:

omit entire text and replace with below.

## New text:

The major in music technology offers a unique professional preparation for a career in the technological sectors of the musical world - from games and Web-based multimedia to programming and composing for electronic media. Music technology students are engaged in creating music content for media as well as building technological tools for musical tasks.

Major Studies Requirement
For a major in music technology, 16 course units are required:

- 12 courses in Music Technology (to be determined in consultation with the Music Technology program advisor)
- 385 Senior Project (1 unit)
- Applied lessons/ensemble/performance experience (3 units)


## Music Technology

Courses Open to Undergraduates

## Page:

## New Course

MUS_TECH 393-0 Music Technology Colloquium

Page: 227
New Course
MUS_TECH 393-0 Music Technology Colloquium

Music Theory and Cognition Program

## Page: 227

## Description of Change:

replace entire text with below.

## New text:

Undergraduates majoring in theory receive training in a variety of advanced analytical methods. Undergraduates majoring in music cognition receive a broad education in music and the cognitive sciences. The emphasis is on "cognitive musicology," whereby music is studied as an important aspect of human ability and society, using the tools and insights of cognitive science and musicological research.

Major Studies Requirement (Music Theory)
For a major in music theory, 16 course units are required:

- 300- and 400-level courses in music theory and cognition (6 units)
- Applied lessons/ensemble/performance experience (3 units)
- Music Technology (1 unit)

Musicology (2 units)

- Cognates (3 units)
- Senior project (1 unit)
- 390 Theory Colloquium (0 units)

Major Studies Requirement (Music Cognition)
For a major in music cognition, 16 course units are required:

- 351 Music Cognition (1 unit)

335 Music Cognition (2 units)

- Major Electives (4 units)
- PSYCH 201 Statistical Methods (1 unit)
- PSYCH 205 Research Methods (1 unit)
- Cognate areas (3 units)
- Applied lessons/ensemble/performance experience (3 units)
- Senior project (1 unit)

Page: 227
New Course
MUS_THRY 394-0 Music Cognition Colloquium

## Music Performance Studies

Page: 228

## Description of Change:

omit and replace with below.

## New text:

This department consists of the Conducting and
Ensembles; Jazz Studies and Pedagogy; Piano; String Instruments; Voice and Opera; and Wind and Percussion Instruments Programs.

## Conducting and Ensembles

Page: 228

## Description of Change:

omit entire second sentence:
While an ad hoc major in conducting
(for which courses are selected in consultation with the department chair) is available to undergraduates, students are u rged to consider majoring in conducting at the graduate level.

New text:

## Conducting and Ensembles

Courses Open to Undergraduates
Page: 228
New Course

A comprehensive examination of choral music literature from the Renaissance to 1800.

## Page: 228

## New Course

## CONDUCT 342-0 Choral Literature II

A comprehensive examination of choral music literature from 1800 to the present.

Page: 228

## CONDUCT 377-0 J azz Ensembles Description of Change: <br> omit CONDUCT 377-0

New text:

Page: 228

New Course
CONDUCT 395-0 Early Music Ensemble

Page: 228

## CONDUCT 377-0 J azz Ensembles

Description of Change:
omit this entry

New text:

Jazz Studies and Pedagogy

Page: 228

## Description of Change:

last two lines old text was:
CONDUCT 377 Jazz Ensembles (3-3.5 units)
WIND PER 391 Chamber Music (3-3.5 units)
should change to:

## New text:

JAZZ ST 377 Jazz Ensembles (3-3.5 units)
JAZZ ST 391 Jazz Combo (3-3.5 units)

Page: 229

## New Course

## J AZZ_ST 340-0 Concepts in J azz Pedagogy

Page: 229

## New Course

JAZZ_ST 377-0 J azz Ensemble

Page: 229

New Course
J AZZ_ST 391-0 J azz Combo

"Piano, Organ, and Church Music "

Page: 229

## Description of Change:

"Piano, Organ, and Church Music" heading should be changed to JUST "Piano"

## New text:

Page: 229

## Description of Change:

omit entire text and change to below.

## New text:

The Piano Program offers the major in piano performance. This major combines a strong musical
basis for a professional career with the broad humanistic interests embodied in a liberal arts education. The course of instruction focuses on the studio and includes private lessons, studio classes, a thorough course in piano repertoire,
piano pedagogy, and accompanying classes. Electives are available in chamber music and other areas, allowing students to tailor a program to their individual needs. Frequent performances as a soloist and as an assisting musician develop skills in public presentation. Solo recitals, required in both the junior and senior years, are considered an integral part of the programs.

Major Studies Requirement in Piano Performance
For a major in piano performance, 20 course units are
required:

- PIANO 161 Piano Performance (3 units)
- PIANO 261 Piano Performance (3 units)
- PIANO 361 Piano Performance ( 6 units)
- PIANO 313-1,2,3 Piano Repertoire (3 units)
- PIANO 315-1,2,3 Piano Pedagogy (3 units)
- PIANO 391 Chamber Music or 392 Chamber Music:

Trios (. 5 unit)

- PIANO 328 Beginning Collaborative Piano (1.5 units)
- Junior Recital (0 units)
- PIANO 380 Senior Recital (0 units)

Students enrolled in a five-year double-degree program may substitute three 300 -level musicology and/or music theory electives for the pedagogy requirement.
"Piano, Organ, and Church Music "

Organ Courses Open to Undergraduates

## Page: 229

## ORGAN 163-0,263-0,363-0 Organ Performance Description of Change: <br> omit this entry entirely

## New text:

Page: 229

ORGAN 163-0,263-0,363-0 Organ Performance Description of Change:
omit this entry entirely (ORGAN 163-0, 263-0, 363-0)

## New text:

## New text:

Harpsichord lessons; students accepted with permission of instructor

Page: 230

## ORGAN 380-0 Senior Recital <br> Description of Change: <br> omit this entry entirely (ORGAN 380-0)

## New text:

String Instruments

Courses Open to Undergraduates
Page: 231
New Course
STRI NGS 353-0 Introduction to the Harp

## Voice and Opera

Courses Open to Undergraduates
Page: 231

## VOICE 351-1,2,3 Opera Workshop for J uniors

Description of Change:
course description change

## New text:

Professional portfolio preparation; advanced techniques for the performance of arias;
methods of text and character analysis; audition techniques; study of opera scenes. Must be taken sequentially.

Page: 231
VOI CE 352-1,2,3 Opera Workshop for Seniors Description of Change:

## New text:

Track 1, section 20: Specialty seminars (stage make-up, combat, etc.); opera scene work and performance. Prerequisite: 351-1,2,3. Must be taken sequentially.
Track 2, section 21: Opera scene work and outreach performances; professional portfolio preparation; advanced techniques for the performance of arias; audition techniques/ Prerequisite: THEATRE 243. Must be taken sequentially.

## Wind and Percussion Instruments

## Courses Open to Undergraduates

Page: 232

## WI ND_PER 353-0 Introduction to the Harp Description of Change:

omit WIND PER 353 Intro to Harp entirely.

## New text:

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118
Phone: 847-491-5234 • Fax: 847-491-8458 • E-mail: nu-registrar@northwestern.edu
Last Revision June 18, 2008
World Wide Web Disclaimer and University Policy Statements © 2005 Northwestern University

## Office of the Registrar

Return to Supplement to the Undergraduate Catalog 2003-2005

Other Undergraduate Programs: Supplement to the Undergraduate Catalog 2003-2005

## Music Theatre Program

Partnership through the Arts Program

Page: 236

## Description of Change:

Omit the Partnership through the Arts program entirely. It no longer exists.

New text:
(none)

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118 Phone: 847-491-5234 • Fax: 847-491-8458•E-mail: nu-registrar@northwestern.edu

Last Revision June 18, 2008
World Wide Web Disclaimer and University Policy Statements © 2005 Northwestern University

## Office of the Registrar

Return to Supplement to the Undergraduate Catalog 2003-2005

Administration and Faculty: Supplement to the Undergraduate Catalog 2003-2005

## University Administration

Office of the Associate Provost of University Enrollment

## Undergraduate Admission Office

Page: 240

## Description of Change:

Add text

## New text:

Landis G. Fryer, BA, Assistant Director
Kenneth Hutchinson, BS, Assistant Director
Aaron Zdawczyk, MA, Assistant Director
Onis Cheathams, MA, Associate Director

Undergraduate Schools

Judd A. and Marjorie Weinberg College of Arts and Sciences

## Philosophy

Page: 251

New text:
add Tad Brennan, (PhD Princeton)
Associate Professor

## Page: 2

## Description of Change:

## New text:

Page: 251
Description of Change:
J onathan Garthoff, (PhD UCLA), Assistant Professor

New text:

Page: 251

## Description of Change:

New text:
add J onathan Garthoff, (PhD UCLA), Assistant Professor

School of Music

## Administration

Page: 270

## Description of Change:

correction: was
Toni-Marie Montgomery, PhD

## New text:

Toni-Marie Montgomery, DMA

## Page:

## Description of Change:

correction to old text:
Peter R. Webster, PhD
Associate Dean for Academic Affairs, John W. Beattie Professor of Music Education and Technology, Interim Chair of Music Studies, and Interim Coordinator of Music Composition

Peter R. Webster, PhD
Associate Dean for Academic Affairs and Research, John W. Beattie Professor of Music Education and Technology, Codirector of Graduate Studies

## Page: 270

## Description of Change:

omit Heather A. Landes, MM

## New text:

TBD

## Page: 270

## Description of Change:

## old text

Linda A. Garton, MM

## New text:

Linda A. Garton, PhD

Page: 270

## Description of Change:

old text
Margaret Gholson, BA

## New text:

TBD

Page: 270

## Description of Change:

omit Peter R. Webster entry entirely, and replace with new text below

New text:
Jason Eckardt (DM Columbia)
Lecturer

## Page:

## Description of Change:

New text:

Music Studies

Music Composition

Page: 270

## Description of Change:

omit Peter R. Webster entry entirely, and replace with new text below

## New text:

J ason Eckardt (DM Columbia)

## Lecturer

## Page:

## Description of Change:

addition to title

## New text:

Jay Alan Yim (PhD Harvard)
Associate Professor and Coordinator of Music Composition

## Music Education

## Page: 270

## Description of Change:

title change

## New text:

Maud Hickey (PhD Northwestern)
Associate Professor and Coordinator of Music Education

## Page: 270

## Description of Change:

add new prof

## New text:

Carlos Abril (PhD Ohio State)
Assistant Professor

Page: 270

## Description of Change:

omit last part of Peter Webster's title: "I nterim Chair of Music Studies, and Interim
Coordinator of Music Composition"

## New text:

Musicology

## Page: 270

## Description of Change:

change in coordinator-- it's not Thomas Bauman anymore.

## New text:

Linda P. Austern (PhD Chicago)
Associate Professor and Coordinator of Musicology Program
Thomas Bauman (PhD California Berkeley)
Professor

Page: 271

## Description of Change:

omit three faculty members entirely:
Virginia Gorlinski
Stephen Hill
Judith Schwartz

## New text:

## Music Technology

Page: 271

## Description of Change:

omit two entries entirely:
Maud Hickey
Peter R. Webster
and add one new entry (below)

## New text:

Scott Lipscomb (PhD UCLA)
Associate Professor

Music Theory and Cognition

## Page: 271

## Description of Change:

omit John Buccheri entry entirely
omit second part of Richard Ashley's title: "Coordinator of Music Cognition Program, and Codirector of Graduate Studies" should all go.
Description of Change:
addition to title
New text:Robert O. Gjerdingen (PhD Pennsylvania)Associate Professor, Coordinator of Music Theory and Cognition Program
Page: 271
Description of Change:omit entry entirely for:
Scott LipscombPeter R. Webster
New text:
Page: 271
Description of Change:
add two new entries
New text:
Stefan Eckert (PhD SUNY Stony Brook)
Lecturer
Elizabeth Margulis (PhD University of Arkansas)
Assistant Professor
Music Performance Studies
Conducting and Ensembles
Page: 271
Description of Change:
add entry
New text:Robert Hasty (DM Northwestern)
Senior Lecturer
Jazz Studies and Pedagogy
Page: 271

## Description of Change:

omit Michael Kocour entry entirely, and replace with below

## New text: <br> J oan Hickey <br> Lecturer <br> Jazz Studies and Pedagogy

Piano, Organ, and Church Music Program

Page: 272

## Description of Change:

change to program title -- used to be "Piano, Organ and Church Music" (now is just "Piano")

## New text:

Piano

## Page: 272

## Description of Change:

omit entries entirely for:
Steven Alltop
Douglas R. Cleveland
Margaret Kemper
Christine Kraemer
Richard Webster
and add one entry below

## New text:

Julian Dawson (MM Trinity Dublin)
Senior Lecturer

Page: 272

## Description of Change:

title change

## New text:

Alan Chow (MM Juilliard)
Professor of Piano

String Instruments

Page: 272

## Description of Change: <br> add two entries

## New text:

Charles Pickler
Lecturer
Gregory Sarchet (MM J uilliard)
Lecturer

## Voice and Opera

Page: 272

## Description of Change:

omit two entries:
Rhoda Levine
William Woodruff
and add the five new ones below

## New text:

Alan Darling (Certificate, Royal Academy of Music)
Senior Lecturer in Voice
Melissa Foster
Senior Lecturer in Voice
Pamela Hinchman (MM Curtis Institute of Music)
Associate Professor of Voice
Kenneth Smith
Lecturer in Voice
Rachael Gates (DMA Ohio State)
Lecturer in Voice

Wind and Percussion Instruments

Page: 273

## Description of Change:

add five new entries

## New text:

Randy Hawes (MM Carnegie Mellon)
Lecturer in Trombone
Michael Henoch
Lecturer in Oboe
Scott Hostetler

## Grover Schiltz

Lecturer in Oboe
J oel Spencer (BS University of Illinois)
Lecturer

Page: 273

## Description of Change:

two title changes

## New text:

Michael Burritt (MM Eastman)
Professor of Percussion and Coordinator of Wind and Percussion Instruments Program
Frederick L. Hemke (AMD Wisconsin)
Louis and Elsie Snydacker Eckstein Professor of Music, Professor of Saxophone, Charles Deering McCormick Professor of Teaching Excellence

CAESAR | Registration and Courses | Course and Teacher Evaluation Council (CTEC) | Information for Students Information for Faculty and Staff | Calendars | The Undergraduate Catalog Information for Former Students | Statistics | Consumer Information Office of the Registrar | Northwestern Home

Office of the Registrar • 633 Clark Street • Evanston, Illinois 60208-1118
Phone: 847-491-5234 • Fax: 847-491-8458 • E-mail: nu-registrar@northwestern.edu
Last Revision June 18, 2008
World Wide Web Disclaimer and University Policy Statements © 2005 Northwestern University

