

2001-2003 UNDERGRADUATE BULLETIN SUPPLEMENT FALL 2002

Psst! Can't find a course in the Bulletin? Look here!
This Supplement includes all changes and corrections to the Bulletin
AND descriptions of special topics courses!

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THIS SUPPLEMENT CONTAINS:

Changes to academic policies

New majors and minors

Changes to majors and minors
arranged alphabetically by name of program

New courses

Special topics descriptions
arranged alphabetically by course designator

and

Corrections to the *Undergraduate Bulletin*

Academic Policies and Regulations

Pass/No Credit Option

Please refer to page 61 of the 2001-2003 *Undergraduate Bulletin*.
Under Pass/No Credit Option, add:

Note: Most graduate and professional schools require that prerequisite courses be taken for a letter grade and many can interpret NC grades as being equivalent to a grade of F. Students should consult the appropriate pre-professional or departmental advisors regarding the implications of electing the P/NC option.

Academic Standing, Support, and Retention

Please refer to page 63 of the 2001-2003 *Undergraduate Bulletin*.
Add the following statement to the conclusion of the paragraph on **Probation**:

Students who are validly registered at Stony Brook and whose current academic standing remark is "academic probation" are considered to be in good standing for purposes of enrollment certification and participation in athletic and other co-curricular activities.

Retaking Courses

Please refer to page 75 of the 2001-2003 *Undergraduate Bulletin*.

Students may repeat any course not designated as repeatable only once; i.e. it may be taken at most twice. Students are considered to have taken a course if they remain in the course past the add/drop deadline, regardless of the grade assigned in the course (passing, failing or withdrawal). Credits for repeated courses will count once toward cumulative credits, but will count each time toward semester load. Each grade received in the course will be averaged into the cumulative grade point average. A student who wishes to take a course more than twice must submit a petition for approval by the academic standing committee of the student's college and for endorsement by the department offering the course. If a student has taken a course more than once prior to fall 2002, under the new policy the student has one more opportunity to take the course

Advanced Placement Credit

Please refer to page 71 of the 2001-2003 *Undergraduate Bulletin*:

Exam	Score	SB Equiv.	Credits	D.E.C.
Physics				
B	5	PHY 131, if AP Calculus BC exam score of 5	3	E
	3 or 4	none	3	E
C:Mech.	4 or 5	PHY 131	2	none
	3	none	2	none
C:Elec&Mag	4 or 5	PHY 132	2	none
	3	none	2	none
Both C Exams			4	E

Double Degrees

The following replaces the text under "Double Degrees" on page 72 of the 2001-2003 *Undergraduate Bulletin*.

Qualified students may be granted permission to earn double degrees at the undergraduate level only if one of the majors leads to a degree that is specified as professional or clinical (externally certified) and the total number of credits completed for the two degrees is at least 144.

Only the following currently offered undergraduate programs are considered to be professional or clinical degree programs:

- Bachelor of Engineering degrees in bioengineering, engineering science, electrical engineering, computer engineering and mechanical engineering;
- Bachelor of Science degree in nursing;
- Bachelor of Science degree in social welfare;
- Bachelor of Science degrees in clinical laboratory sciences, cytotechnology, occupational therapy, physician assistant, and respiratory care.

Students who are planning to complete the majors in biology and in either clinical laboratory sciences or cytotechnology should note that these programs will lead **only** to a double major, not a double degree.

Students who are planning to complete a bachelor of science degree in nursing or a bachelor of social work degree in social welfare and any other major should note that these programs will lead **only** to a double degree, not a double major.

Students must be formally admitted to each unit granting the degree and have written approval from the dean of each college. Approval is subject to review and final authorization by the Office of Undergraduate Academic Affairs.

Approved Majors, Minors, and Programs

The requirements for the majors, minors and programs listed below have been changed since the publication of the 2001-2003 *Undergraduate Bulletin*. When requirements change, students who have completed at least 45 credits may elect to satisfy either the

previous major requirements or the new major requirements. Students with fewer than 45 credits must satisfy the new requirements, unless the major department specifies otherwise. Please consult the section "When Major Requirements Change" in the Academic Policies and Regulations chapter of the *Bulletin*, page 71, for complete details.

Astronomy (AST) major, new minor

Please refer to page 107 of the 2001-2003 Undergraduate Bulletin.

Under A. Required Departmental Courses, replace requirement 2 with:

2. AST 341 Stars and Radiation
AST 346 Galaxies
AST 347 Cosmology

In requirement 3. change "(except AST 248)" to "(except AST 248, 301, and 304)".

Under B. Required Physics Courses, change requirement 4. to:

4. At least 12 credits from approved PHY courses numbered 300 or higher. At least 3 credits must be in the area of applied numerical analysis.

Requirements for the Minor in Astronomy (AST)

All courses offered for the minor must be passed with a letter grade of C or higher. Completion of the minor requires 23-24 credits.

1. AST 203 Astronomy
2. AST 205 Introduction to Planetary Sciences
3. Three additional AST courses at the 300 level or higher
4. PHY 125 Classical Physics A
or PHY 131 Classical Physics I
or PHY 141 Classical Physics I: Honors
5. MAT 125 Calculus A
or MAT 131 Calculus I
or MAT 141 Honors Calculus I
or AMS 151 Applied Calculus I

Bioengineering (BME) new major

The Department of Biomedical Engineering offers the major in bioengineering, leading to the Bachelor of Engineering (B.E.) degree. The program is designed to provide an engineering education along with the necessary background in the biological and physical sciences, and to enhance the development of skills of creativity and collaboration through study of a specialization within the field of bioengineering. Teamwork and communication skills are strongly emphasized. Students learn to understand the impact of engineering solutions in a global and societal context, especially where these solutions interface directly with the realm of the biological sciences. Graduates are prepared for entry into professions in biomedical engineering, biotechnology, pharmaceuticals, and medical technology, or for continued study in such graduate programs as business, engineering, law, and medicine.

To provide this intensive undergraduate experience, core courses have been developed by the biomedical engineering faculty to provide depth within the broad field of bioengineering. These

courses are integrated with, and rely upon, course offerings from both the College of Engineering and Applied Sciences and the College of Arts and Sciences. In order to achieve the breadth of engineering experience expected of bioengineering graduates from Stony Brook, additional elective courses from the College of Engineering and Applied Sciences are required of all bioengineering students.

Acceptance into the Major in Bioengineering

Freshman and transfer applicants who have specified their interest in the bioengineering major may be accepted directly into the major upon admission to the University. Applicants admitted to the University but not immediately accepted into an engineering major may apply for acceptance on an ongoing basis, based on a student visit or a request to the director of the undergraduate program. Students in good academic standing may apply in any semester, but priority for admission to an engineering major is given to those students who have 1. completed MAT 132 and PHY 132 or their equivalents, 2. earned a g. p. a. of 3.0 or higher in all mathematics and physics courses with no more than one grade in the C range, and 3. received completed course evaluations for all transferred courses that are to be used to meet requirements of the major.

Requirements for the Major in Bioengineering (BME)

The curriculum begins with a focus on basic mathematics and the natural sciences followed by courses that emphasize engineering science and bridging courses that combine engineering science and design. The sequence of courses culminates with a one-year design experience that integrates the science, engineering and communication knowledge acquired. The core sequence, technical electives, and additional courses are chosen in consultation with a faculty advisor, taking into consideration the particular interest of the student.

Completion of the major requires approximately 107 credits.

1. Mathematics

- a. AMS 151, 161 Calculus I, II
- b. AMS 261 or MAT 203 or MAT 205 Calculus III
- c. AMS 361 or MAT 303 or MAT 305 Calculus IV
- d. AMS/BME 394 Statistical Laboratory

Note: The following alternate calculus course sequences may be substituted for AMS 151, 161

- MAT 125, 126, 127
- MAT 131, 132
- MAT 141, 142

2. Natural Sciences

- a. BIO 150 The Living World
- b. BIO 203 Fundamentals of Biology: Cellular and Organ Physiology
- c. CHE 131, 132 General Chemistry I, II
- d. PHY 131, 132 Classical Physics I, II

Note: The following alternate science sequences may be substituted:

PHY 125, 126, 127, or PHY 141, 142 in lieu of PHY 131, 132

CHE 141, 142, in lieu of CHE 131, 132

3. Computer and Programming courses

- a. ESG 111 C Programming for Engineers
or MEC 112 Practical C/C++ for Scientists and Engineers
or ESE 124 Computer Techniques for Electronic Design
- b. MEC 203 Computer Aided Drafting

4. Required Engineering Courses

- a. ESG 100 Introduction to Engineering Science
or MEC 100 Introduction to Mechanical Engineering
- b. MEC 260 Engineering Statistics
- c. MEC 262 Engineering Dynamics
- d. ESE 271 Electrical Circuit Analysis I

5. Required Bioengineering Courses

- BME 201 Bioengineering and Society
- BME 212 Laboratory in Bioengineering
- BME 300 Writing in Biomedical Engineering
- BME 301 Bioelectricity
- BME 304 Genetic Engineering
- BME 305 Heat and Mass Transfer in Bioengineering
- BME 440 Design in Bioengineering
- BME 441 Senior Design in Bioengineering

6. Bioengineering Specialization and Technical Electives

Bioengineering students must complete an area of specialization, composed of at least 30 credits in one of the three areas of specialization, including at least two 3- to 4-credit design technical elective courses. The area of specialization must be declared in writing by the end of the junior year and is selected in consultation with the faculty advisor to ensure a cohesive curriculum with depth at the upper level.

7. Upper-Division Writing Requirement

All degree candidates must demonstrate skill in written English at a level acceptable for engineering majors. All BME students need to register for the writing course BME 300 concurrently with BME 305. The quality of writing in technical reports submitted for BME 305 is evaluated, and students whose writing does not meet the required standard are referred for remedial help. Satisfactory writing warrants an S grade for BME 300, thereby satisfying the requirement.

Grading

All courses taken to satisfy requirements 1-6 must be taken for a letter grade. A grade of C or higher is required for AMS 151, 152 (or equivalent), PHY 131, 132 or equivalent, BIO 150, 203, CHE 131, 132 (or equivalent). The average of the grades for all BME courses and the technical elective courses should be at least 2.0.

Areas of Specialization

Design technical elective courses are indicated with an asterisk (*) following the course. Other courses may be used towards this requirement with the permission of the undergraduate program director.

a. Biomechanics

Courses focusing on developing an understanding of mechanical structures and dynamics. This specialization is appropriate for students interested in the areas of biofluid mechanics, biomaterials, mechanical prosthetics, or mechanical instrumentation.

Recommended courses:

BME 303 Biomechanics
 BME 420 Computational Biomechanics*
 BME 430 Engineering Principles in Drug & Gene Delivery
 BIO 307 Comp. Modeling for Bio. Sys
 BIO 328 Mammalian Physiology
 CHE 312 Physical Chemistry
 ESE 218 Digital System Design*
 MEC 363 Mechanics of Solids
 MEC 412 Computer Aided Design*

Alternative courses:

AMS 331 Mathematical Modeling
 CSE 332 Introduction to Scientific Visualization
 ESE 315 Control System Design*
 ESE 346 Computer Communication
 ESG 332 Materials Science I
 ESM 353 Biomaterials
 MAR 410 Modeling Techniques for Marine Chemistry
 MEC 310 Introduction to Machine Design
 MEC 320 Engineering Design Methodology and Optimization
 MEC 402 Mechanical Vibrations
 MEC 411 System Dynamics & Control
 MEC 455 Applied Stress Analysis

b. Biomaterials

Courses focusing on developing an understanding of various material sciences issues pertinent to biomedical problems, specifically issues of biocompatibility of materials used in the design of biomedical devices and implants. The student study the basics of biology, organic chemistry, and material sciences, to understand how to apply skills acquired to the design of prosthetic devices and materials that will be in contact with living tissues and organs.

Recommended courses:

BME 303 Biomechanics
 BME 430 Engineering Principles in Drug and Gene Delivery*
 ESG 302 Thermodynamics of Materials
 ESG 332 Materials Science I
 ESM 334 Materials Engineering
 ESM 335 Mechanical Properties of Materials

ESM 353 Biomaterials
 ESM 355 Materials and Processes in Manufacturing Design*
 ESM 369 Polymers

Alternative courses:

ESG 316 Engineering Science Design II*
 ESM 221 Intro. to Chemistry of Solids
 ESM 309 Thermodynamics of Solids
 ESG 333 Materials Sciences II
 ESG 339 Thin Film Processing of Adv. Materials
 ESM 338 Engineering Ceramics
 ESM 450 Phase Changes and Mechanical Properties of Materials
 MEC 320 Engineering Design Methodology and Optimization*
 MEC 455 Applied Stress Analysis

c. Bioelectricity

Courses focusing on the description of biological cells, tissues, and organisms as complex systems. This specialization is appropriate for students interested in the areas of bioinstrumentation, medical imaging, electrical prosthetics, electromagnetic compatibility, tissue engineering, or bioinformatics.

Recommended courses:

AMS 210 Applied Linear Algebra
 BME 410 Biophysical Mechanisms and Models*
 CHE 133 General Chemistry Lab I
 CHE 134 General Chemistry Lab II
 CHE 321 Organic Chemistry
 ESE 218 Digital System Design*
 ESE 305 Deterministic Signals and Systems
 ESE 306 Random Signals and Systems
 ESE 315 Control System Design*
 ESE 324 Electronics Laboratory
 ESE 372 Electronics

Alternative courses:

AMS 326 Numerical Analysis
 CSE 332 Introduction to Scientific Visualization
 CSE 326 Digital Image Processing
 CSE 327 Computer Vision
 CSE 346 Computer Communications
 ESE 304 Electronic Instrumentation and Operational Amplifiers
 ESE 307 Modern Filter Design
 ESE 311 Electrical Circuits Design I*
 ESE 316 Digital Devices and Circuits
 ESE 331 Introduction to Semiconductor Devices
 ESE 340 Basic Communication Theory
 ESE 347 Digital Signal Processing: Implementation
 ESG 333 Materials Science II: Electronic EST 307
 Computer Modeling of Biological Systems
 ESM 336 Electronic Materials
 EST 392 Engineering and Managerial Economics
 Properties

Bioengineering Minor (BNG)

Please refer to page 120 of the 2001-2003 *Undergraduate Bulletin*. Under A. Required Courses, change requirement 3 to read: Two 200- or 300-level BME courses (excluding BME 300). Note: All BNG courses have changed to BME.

Business Management (BUS)

Please refer to page 123 of the 2001-2003 *Undergraduate Bulletin*. Under Requirements for the Major in Business Management, requirement C. Economics Courses:

Delete ECO 107, ECO 109, and ECO 303.

Add ECO 108 Introduction to Economics

Under Requirement E. Electives:

Add ECO 303 Intermediate Microeconomic Theory

Child and Family Studies, Child Life Pre-Professional Option (CFS)

The Child and Family Studies minor supports the option of preparation for certification as a Child Life specialist.

Requirements for eligibility for the Child Life Certification Examination offered through the Child Life Council include:

1. Bachelor's degree
2. Minimum of 10 courses in child life, child development, or child and family studies or closely related courses
3. 480 hours of child life clinical experience

Field-based experience with healthy children prior to the child life internship is recommended.

Students may select course that will allow them to complete the Child and Family Studies minor within the pre-professional Child Life option.

Recommended Curriculum for the Pre-Professional Child Life Option

Required Courses in Child and Family Studies

1. SSI 210 Human Development: The Family Context or PSY 220 Developmental Psychology
2. SSI 283 Practicum in Child Development and SSI 381 Seminar in Child Development
3. SSI 339 Children's Play

Elective Courses in Child and Family Studies

1. SSI 340 Children in Hospitals and Medical Settings
2. Five additional courses chosen from the following:
 SSI 308 Abuse of Women and Children
 SSI 320 The Special Child
 SSI 321 Early Childhood Environments
 SSI 322 The Infant and Young Child
 SSI 327 Middle Childhood and Adolescent Development
 SSI 345 Parental Roles in a Pluralistic Society
 SSI 405 Children, Law, and Social Policy
 PSY 325 Children's Cognitive Development
 PSY 338 Behavior Deviation in Children
 PSY 347/WST 377 Psychology of Women
 SOC 304 Sociology of the Family
 SOC 348 Sociology of the Life Course

3. SSI 489 Child Life Internship—completion of 12 credits for a total of 480 hours of child life clinical experience.

Students are required to complete and pass the Child Life Certification Examination to receive certification.

Computer Engineering (ECE)

Please refer to pages 140 of the 2001-2003 *Undergraduate Bulletin*.

- In requirement 4. Engineering Topics:
 - under a. Engineering Science, change ESE 318 Digital Systems Design to ESE 218.
 - under b. Engineering Design, delete ESE 324 Electronics Laboratory C and add ESE 382 Digital Design with Programmable Logic.
- In requirement 6. Computer Science,
 - delete CSE 306 Operating Systems (ESE 333 Real-Time Operating Systems is now required).
 - delete CSE 308 Software Engineering.
 - add CSE 219 Computer Science III.
- In requirement 7. Engineering Technical Electives,
 - delete ESE 316 Digital Devices and Circuits.
 - delete ESE 382 Digital Design with Programmable Logic.
 - add ESE 330 Integrated Electronics.
 - add ESE 476 Undergraduate Instructional Laboratory Development Practicum.

In the sample course sequence:

In Sophomore Fall, replace ESE 318 with ESE 218

In Junior Fall, replace D.E.C. with CSE 214

In Junior Spring,

- replace ESE 324 with ESE 382
- replace ESE technical elective with CSE 219
- replace CSE 214 with D.E.C.

In Senior Fall,

- change credits on ESE technical elective to 3
- replace CSE 308 with ESE 333

In Senior Spring,

- replace CSE 306/ESE 333 with ESE technical elective
- replace ESG 302 etc. with ESE technical elective.

Note: Beginning Spring 2002, ESE 318 became ESE 218.

Computer Science (CSE)

CSE 127 has been deleted from the curriculum.

Economics (ECO)

Beginning with the Spring 2002 semester, the offerings of ECO 107 and ECO 109 were suspended and the new ECO 108 Introduction to Economics is being offered. ECO 108 will satisfy the Economics major requirement in place of ECO 107 and 109. ECO 108 will also satisfy prerequisites to courses in place of ECO 107 and 109. Students who have previously taken ECO 107

or 109 need not take any additional 100-level Economics class toward the major.

Electrical Engineering (ESE)

Please refer to pages 158-160 of the 2001-2003 *Undergraduate Bulletin*.

Requirements for the Major in Electrical Engineering (ESE)

The areas of specialization (page 160) have been eliminated and replaced with three tracks, General Electrical Engineering, Microelectronics, and Telecommunications. Students must select one of the three tracks by the end of the sophomore year.

In requirement 1. Mathematics, add AMS 210 or MAT 211

In requirement 2. Natural Sciences, PHY 251 or ESG 281 has been removed and added to the department's list of technical electives.

Requirements in 4, 5 and 6 have been replaced with the following:

4. Core Courses

- ESE 211 Electronics Lab A
- ESE 218 Digital Systems Design
- ESE 271 Electrical Circuit Analysis
- ESE 305 Deterministic Signals and Systems
- ESE 306 Random Signals and Systems
- ESE 314 Electronics Laboratory B
- ESE 319 Introduction to Electromagnetic Fields and Waves
- ESE 324 Electronics Laboratory C
- ESE 331 Introduction to Semiconductor Devices
- ESE 337 Digital Signal Processing Theory
- ESE 372 Electronics
- ESE 380 Embedded Microprocessor Systems Design I

5. Tracks One of the following:

a. General

6 ESE technical electives and 2 non-ESE technical electives

b. Microelectronics

ESE 304 Applications of Operational Amplifiers
 ESE 311 Analog Integrated Circuits
 ESE 330 Integrated Electronics
 ESE 355 VLSI System Design
 ESE 373 RF Electronics for Wireless Communications
 2 ESE technical electives
 1 non-ESE technical elective

c. Telecommunications

ESE 340 Basic Communication Theory
 ESE 342 Digital Communications Systems
 ESE 346 Computer Communications
 ESE 347 Digital Signal Processing: Implementation
 ESE 363 Fiber Optic Communications
 2 ESE technical electives
 1 non-ESE technical elective

6. Design

ESE 440 and 441, Engineering Design I and II
 Students who select Microelectronics or Telecommunications must complete a senior design project designated for the respective area.

ESE students should visit the Department of Electrical and Computer Engineering, Light Engineering Building 267, for a copy of the sample course sequence for each track.

English (EGL)

Please refer to pages 170-172 of the 2001-2003 *Undergraduate Bulletin*.

Requirements for the Major in English

Under Study within the Area of the Major:

4. Six 300-level courses from among courses numbered EGL 300-379 and 390-399; EGL 490 and 496 may also be used.
5. One elective course from among courses numbered EGL 200-399. EGL 490 and 496 may also be used if not used to satisfy Requirement 4.

Under Notes on Section A:

2. This note is deleted.
3. Add EGL 399 to courses listed under American Literature. Add EGL 321 and 322 to courses listed under Modern and Contemporary Literature. Add EGL 390-399 to courses listed under Issues and Topics in the Study of Literature

The Minor in English

Under Point B, section 3, add EGL 321 and 322 to the list of courses.

Environmental Studies (ENS)

Please refer to pages 172-174 of the 2001-2003 *Undergraduate Bulletin*.

Under A. Foundation Courses, replace GEO 101, 111 with:

One of the following:

- GEO 101 Environmental Geology
- MAR 104 Oceanography
- ATM/EST 102 Weather and Climate
- ENS 101 Global Climate Change: Prospects for Planet Earth

Replace B. Core Courses, with the following:

B. Core Courses (20 credits)

1. BIO 113 General Ecology.
2. One of the following statistics courses:
 AMS 102, AMS 110, AMS 310, ECO 320, POL 201, PSY 201, or SOC 202.
3. MAR 340 Environmental Problems and Solutions
4. ENS 301 Contemporary Environmental Policies and Practices
5. ENS 311 The Global Environment
 or BIO 386 Ecosystem Ecology in a Changing World.
6. ENS 312 Population, Technology and the Environment

ENS 443 Environmental Problem Solving
 ENS 487 Independent Research (or equivalent, see Note 3)
 ENS 488 Internship (or equivalent, see Note 4).

Federated Learning Community Minor in Globalization (GLS)

The Federated Learning Community is a one to two year program that focuses on an issue of major importance and leads to an academic minor. The program design enables students to register for a cluster of courses arranged around that issue. The program seminars focus and integrate the material of the "federated" courses in a small community setting. The topic for 2001-2002 and 2002-2003 is Globalization. The program responds to the growing globalization of the economy, the interdependence of nations and peoples, and the growth of international political institutions. It provides an interdisciplinary approach that includes the study of Western and non-Western cultures, requires an understanding of comparative socio-cultural analysis, is concerned with global links, interactions, and synergies, and thematizes how global changes can be assessed and changed to improve the quality of life of current and future generations and provide resources for a sustainable future.

All students may enroll in FLC courses but to receive the minor in Globalization, students must complete 24 credits of federated courses, including the program seminars, FLC 301 in the fall and FLC 302 in the spring of either 2001-2002 or 2002-2003, and six of the following courses, distributed in any manner over the four semesters:

Refer to the Supplement in the Spring 2002 Class Schedule, page 28, for a list of courses offered toward the minor in Fall 2001 and Spring 2002. The following will be offered in 2002-2003.

Fall 2002

AFS/ANT 351-F Comparative Religion
 EST/POL 412 Intelligence Organizations, Technology, and Democracy
 HIS/POL 214-J Modern Latin America
 PHI 372-G Ethical Inquiry
 POL 404 Immigration & Reform Movements
 FLC 301/SOC 393 Program Seminar: Human Rights, Terrorism, and Transnational Movements—*required if not taken previously*

Spring 2003

ECO 317-F Marxist Political Economy
 HIS 365-F Environmental History of North America
 POL 305-I Government and Politics in the UK
 POL 309-I Politics of European Union
 FLC 302/SOC 393 Program Seminar: Global Economics, Development, & Political Governance—*required if not taken previously*

All courses offered for the minor must be completed with a letter grade of C or higher.

For more information about the Federated Learning Community minor in Global Studies, contact Prof. Hermann Kurthen at *Hermann.Kurthen@notes.cc.sunysb.edu* or call or stop by the Learning Communities Program office, Library N-3007 or call 632-4378.

Information Systems (ISE)

Please refer to page 195 of the 2001-2003 *Undergraduate Bulletin*. Under Requirements for the Major in Information Systems, requirement C. Economics and Business Courses:
 Delete ECO 109 Introduction to Analytical Economics
 Add ECO 108 Introduction to Economic Analysis

International Studies (KIS)

Please refer to page 198 of the 2001-2003 *Undergraduate Bulletin*.

The interdisciplinary minor in international studies provides an integrated view of global processes through a critical examination of the world's institutions, ideas, cultures, and historical traditions. Students should develop a strong grasp of current social, political, and economic developments in the world, and be able to apply this knowledge to analyze both the opportunities and problems created by global processes, and the possibilities for social activism and change. The minor is open to all undergraduates regardless of academic major or place of residence. In addition, the minor is a living learning center program affiliated with Stimson International College and residents of Stimson have preference in enrollment. Students are encouraged to live in Stimson and actively participate in the college, although this is not required. As part of the minor requirements, students select a world region to study from among the following: Western Europe (and the developed world), Eastern Europe (including the former Soviet Union), the Middle East, Asia, Africa, or Latin America/Caribbean. Students are also encouraged to spend a semester abroad, with these credits counting toward fulfillment of the minor.

Requirements for the Minor in International Studies

Completion of the minor requires 20 credits. All courses offered for the minor must be passed with a letter grade of C or higher.

1. LIS 201 Democracy and Capitalism
2. Two courses chosen from the following:
 AMR 101 Local and Global: National Boundaries and World-Systems
 ANT 102 Introduction to Cultural Anthropology
 ANT 230 Peoples of the World
 LIN 101 Introduction to Linguistics
 PHI 105 Politics and Society
 POL 101 World Politics
 POL 103 Introduction to Comparative Politics
 SOC 105 Introduction to Sociology
3. Three courses (9 credits) from any department focussing on the student's regional area of study. Two of these courses must be numbered 300 or higher.

4. LIS 401 Global Social Problems

Note: With the approval of the director, study abroad may substitute for requirement 3 above.

Italian Studies (ITL)

Please refer to page 200 of the 2001-2003 *Undergraduate Bulletin*. Under A.1. Concentration in Language and Literature Required courses:

Add ITL 312 Conversation and Composition II

Under A.2. Elective courses, change a. and b. as follows:

- a. Six courses in ITL or HUI. At least three courses must be ITL courses numbered 300 or higher.
- b. One ITL or HUI course numbered 200 or higher.

Under B.1. Concentration in Italian and a Second Discipline, Required courses:

Add ITL 312 Conversation and Composition II

Under B.2. Elective courses, requirement b., change "Six additional ITL or HUI courses..." to "Five additional ITL or HUI courses...."

Jazz Music (JAZ) new minor

Requirements for the Minor in Jazz

All courses offered for the minor in jazz music must be passed with a letter grade of C or higher. At least 3 credits from requirement 2 in either track must be at the upper division level. Completion of the General Track requires 23 credits. Completion of the Theory track requires 24 credits.

General Track

1. Theory
MUS 119 Elements of Music or MUS 130 Sound Structures
MUS 315 Structural Principles of Music I
MUS 389 Jazz Improvisation
Note: Students well versed in music notation and basic theory (demonstrated by the MUS 119 challenge examination) should take MUS 130.
2. History
MUS 101 Introduction to Music
MUS 308 History of Jazz
One of the following:
MUS 304 Contemporary Traditions in American Music
MUS 310 Music and Culture in the 1960s
MUS 355 Special Topics when topic is appropriate
3. Performance
Two semesters of the following:
MUS 264 Big Band Jazz Ensemble
MUS 267 Jazz Combo

Theory Track

1. Theory
MUS 121 Musicianship I
MUS 220 Musicianship II
MUS 221 Musicianship III
MUS 130 Sound Structures
MUS 321 Tonal Harmony I

2. History
MUS 308 History of Jazz
3. Performance
MUS 267 Jazz Combo
Two semesters of the following:
MUS 187 Lessons
MUS 264 Big Band Jazz Ensemble

Latin American and Caribbean Studies

Please refer to page 207 of the *Undergraduate Bulletin*. Add note 3: LAC 487 may be substituted for LAC 488 with permission of the director.

Mathematics

Please refer to page 216-217 of the *Undergraduate Bulletin*. Under Requirements for the Major in Mathematics, change

6. Students must satisfy either a or b:
 - a. Two courses in analysis:
MAT 319 or 320 and
MAT 322 or 324 or 341 or 342
 - b. For students graduating with the secondary teacher preparation option: MAT 319 or 320

Honors Program in Mathematics

Change paragraph two and requirement 1 as follows:

The program consists of a set of seven MAT courses, at least three of which are not used to fulfill the MAT major requirements. These courses must include: MAT 260; MAT 322 or 324; MAT 401 or 402; a course in algebra other than MAT 310 or 318; and MAT 495....

1. Completion of the set of seven courses with a grade point average of at least 3.50.

Requirements for the Minor in Mathematics

Change requirement 4 as follows:

4. MAT 319 or 320 or 341 or 342

Theatre Arts (THR)

The major has been revised.

Requirements for the Major in Theatre Arts (THR)

The major in theatre arts leads to the Bachelor of Arts degree. All courses offered for the major must be passed with a letter grade of C or higher.

Completion of the major requires 55 credits.

A. Core Courses

1. THR 100 Performing and Performance
or THR 105 Acting I
2. THR 115 Stagecraft I
3. THR 116 Stagecraft II
4. THR 120 Analysis/Performance/Media
5. THR 216 Introduction to Visual Interpretation
6. THR 205 Acting II

- or THR 336 Stage Management
7. Two semesters each of:
THR 200 Theatre Practicum I
THR 300 Theatre Practicum II
 8. THR 310 Historical Contexts
 9. One of the following:
THR 312 American Theatre and Drama
THR 315 European Theatre and Drama: The Classical Era
THR 316 European Theatre and Drama: The Modern Era
 10. THR 313 Asian Theatre and Drama
 11. THR 380 Company I
 12. THR 381 Company II
 13. THR 401 Senior Seminar
 14. THR 402 Senior Projects

B. Electives

Twelve additional credits in one of the following areas: performance; playwriting; design; technical theatre; dance; media; technology; or history, theatre, and criticism.

C. Upper Division Writing Requirement

This requirement remains unchanged.

Requirements for the Minor in Theatre Arts (THR)

Please refer to page 275 of the 2001-2003 *Undergraduate Bulletin*. Change requirement 1. to THR 100 Performing and Performance or THR 105 Acting I
Change requirement 3. to THR 380 Company I.

Course Descriptions

The courses below are special topics courses for Fall 2002 or have been added to the curriculum or have been changed in some way since the publication of the 2001-2003 *Undergraduate Bulletin*. If a course has been "revised," only the revisions to the course information in the *Bulletin* are included here. Special topics course descriptions only include prerequisites additional to those enumerated in the *Bulletin*.

AFH 368 Caribbean and America Connections in Literature *revised course*

Not for credit in addition to the discontinued AFH 213.
Crosslisted with EGL 368.
Prerequisite: U3 or U4 standing

AFH 385 French Caribbean Literature *revised course*

Not for credit in addition to the discontinued AFH 212.
Crosslisted with HUF 385.
Prerequisite: U3 or U4 standing

AIM 104 Literary Analysis and Critical Reasoning

Delete corequisite of WRT 102.

AMS 310 Survey of Probability and Statistics *revised prerequisite*

Prerequisite: AMS 201 or 210 or MAT 211

AMS 394 Statistical Laboratory *new crosslisting*

Crosslisted with BME 394.

AMS 410 Actuarial Mathematics *revised description and prerequisites*

Integrates calculus and probability with risk assessment and insurance in a quantitative manner to prepare students for the first actuarial examination.

Prerequisites: AMS 261 or MAT 203 or 205; AMS 310; AMS 311 or 315

ANP 300 Human Anatomy *revised prerequisite*

Prerequisite: ANP 120 or BIO 201 or BIO 202.

ANP 350 Methods in Studying Primates *new course*

Introduction to the concepts and practical skills needed to conduct scientific work, particularly in the study of primates, including how to collect and analyze data focusing on habitat description, primate densities, use of space, and social interactions. Topics include design and presentation of research; ecological field methods; behavioral observations; and other techniques. Students are required to plan a small research study and to present their proposal in class. Some computer work outside class required.

Prerequisite: ANP 120 or BIO 201
3 credits

ANT 295-H Sex and Human Nature *new course*

The study of how our evolutionary history sets the stage for humans to evolve into social creatures. Emphasis on the biological underpinnings that shape human sex roles and the evolution of human nature. Topics include human mate choice, family formation strategies, evolution of the life span, and the capacity for cooperation and aggression.

3 credits

ANT 392-F New Americans: The Heroic Immigration of 1880-1926 *special topic fall 2002*

Examination of the forging of a new generation of American during the period known as the "Heroic Immigration", between approximately 1880 and 1926, when millions of poor and illiterate immigrants entered the United States, mainly from southern and eastern Europe. Using both scholarly and fictional materials, the course examines how immigrants adapted to their new homeland and how they both acculturated to American culture and at the same time maintained vestiges of their Old World ethnic traditions. May be repeated as the topic changes.

ANT 394-F Geological Anthropology *special topic fall 2002*

An examination of the use of geological concepts and methods to study archaeology and human evolution. Topics include sedimentology, stratigraphy, paleoenvironmental reconstruction, geochronology, and provenance. Emphasis is placed on application of geological methods to study key events in human evolution. May be repeated as the topic changes.

ANT 401 Culinary Anthropology *special topic fall 2002*
The cultural and cross-cultural significance of food and drink. Topics considered in relation to food include religion, stratification, and gender. May be repeated as the topic changes.

ARH 111-G Representing Sexuality: An Introduction to Queer Studies *new course*
A survey of historical representations of queer difference from the late 19th century to the present. Works of visual art, literary representations and poetry are examined as evidence of the shifting understanding of lesbian/gay/bisexual/transgendered/queer identity. Crosslisted with WST 111.
3 credits

ARH 306-I The Early Renaissance in Italy *new crosslisting*
Crosslisted with HUI 306.

ARH 396-K Sex and Gender in American Art *new course special topic fall 2002*
This course surveys the representation of sexual and gender difference in American art from the late 19th century to the present, focusing on the work of artists already celebrated as mainstream or canonical. Based in the newest scholarship, it also constitutes an introduction to both queer and feminist theory in the visual arts. May be repeated as the topic changes.
Prerequisites: U3 or U4 standing; one ARH course
3 credits

ARS 201-D Photography for Non-Majors *new course*
An introductory non-darkroom course on the fundamentals of camera techniques, photographic history, and terminology as well as the visual language of still and moving imagery. Students must own a 35mm camera with manual capability. Books, photographic materials, and field trip expenses are estimated to cost \$200.
Advisory Prerequisite: ARS 154
3 credits

ARS 491 Senior Seminar *special topic fall 2002*
Advanced studio and critique for senior or upper division studio majors in all media, who intend to pursue professional careers or further studies in art.

AST 100 Astronomy Today *new course*
Seminar designed to introduce students to the excitement of modern astronomy, focusing on the most recent discoveries, as reported in the media. The course provides sufficient scientific background to enable students to understand the impact of these discoveries.
1 credit

AST 101 Introduction to Astronomy *revised description*
Add to course description: "Two hours of lecture and one hour of recitation per week. Not for major credit."

AST 105 Introduction to the Solar System *revised description*
Add to course description: "Not for major credit."

AST 112 Astronomy Laboratory *revised description*
Add to course description: "Not for major credit."

AST 205 Introduction to Planetary Sciences *new course*
An introduction to the solar system for the student with a background in mathematics or physical sciences. A survey of the planets, comets, asteroids, and interplanetary medium, based upon the latest scientific discoveries. Not for credit in addition to AST 105.
Prerequisite: PHY 125 or 131 or 141
3 credits

AST 301 Collisions in the Solar System *revised prerequisite*
Prerequisites: One lower division AST course; MAT 125 or 131 or 141 or AMS 151; PHY 121/123 or 125 or 131 or 141

AST 341 Stars and Radiation *revised prerequisites*
Prerequisites: AST 203; PHY 251/252; MAT 203 or 205 or 211 or AMS 261

AST 346 Galaxies *new course, first offering Spring 2003*
An introduction to the properties of galaxies, including the Milky Way and others. Examination of the physical processes that govern the stars, dust, and gas in galaxies. Stellar constituents of galaxies, equilibria of collisionless systems, gas dynamics, and radiative processes. Not for credit in addition to the discontinued AST 342 or 343.
Prerequisites: AST 203; PHY 251/252; MAT 203 or 205 or 211 or AMS 261
Corequisite: PHY 306
3 credits

AST 347 Cosmology *new course, first offering Spring 2004*
An introduction to physical cosmology. Examination of the physical properties that govern the galaxies and intergalactic matter in the universe. Expansion of the universe and the Friedmann equations, microwave background variation, thermal history of the universe, and nucleosynthesis. Not for credit in addition to the discontinued AST 344.
Prerequisites: AST 203; PHY 251/252; MAT 203 or 205 or 211 or AMS 261
Corequisite: PHY 306
3 credits

AST 443 Observational Techniques in Optical Astronomy *revised prerequisite*
Prerequisite: AST 203

ATM 437 Forecasting Practicum *new course*
The course provides students with additional forecasting experience. Students make at least three forecasts per week for either Long Island or a city designated by the National Forecast Contest. Students write a weather discussion for each forecast and verify their forecasts to show their progress during the semester.
Pre- or Corequisite: ATM 347
1 credit

BIO 343 Invertebrate Zoology *revised description*

Delete "Not for credit in after BIO 340 or 344 or 346 if passed with a C or higher."

BNG courses:

All BNG courses have been changed to BME.

BME 212 Laboratory Methods in Bioengineering
(formerly BME 309) *only the course number has been changed*
Not for credit in addition to the discontinued BME 309.

BME 303 Biomechanics *revised course and prerequisites*

A rigorous introduction to the interactions between mechanics and biology. Basic concepts of mechanics are covered and the mathematical tools necessary to explain the concepts, with a strong emphasis on the relevant biology. Topics include force vectors, moments and torque, analyses of systems in equilibrium, skeletal joints and muscles, stress and strain in living systems, material properties of biological tissues, multiaxial deformations and stress analyses, and mechanical modeling of biological tissues.
Prerequisites: BIO 201 or 202 or 203; MEC 260

3 credits

BME 305 Heat and Mass Transfer in Bioengineering *new course*

The fundamentals of heat transfer, mass transfer, and fluid mechanics in the context of physiological systems. Techniques for formulating and solving biofluid and mass transfer problems with emphasis on the special features and the different scales encountered in physiological systems, from the organ and the tissue level down to the molecular transport level.

Prerequisites: AMS 361; MEC 262

3 credits

BME 394 Statistical Laboratory *new course*

Statistics and their applications. Basic statistical techniques including sampling, design, regression, and analysis of variance are introduced. Includes the use of statistical packages such as SSPS and SAS. Students translate realistic research problems into a statistical context and perform the analysis. Crosslisted with AMS 394.

Prerequisite: One AMS course (AMS 102 or 110 or 310 or 315 recommended)

3 credits

BME 420 Computational Biomechanics *new course*

Introduces the concepts of skeletal biology, mechanics of bone, ligament, and tendon; and linear and nonlinear properties of biological tissues. Principles of finite differences method (FDM) and finite elements method (FEM) to solve biological problems. Both FDM and FEM are applied to solve equations and problems in solid and porous media. Requires knowledge of Fortran or C programming.

Prerequisite: BME 303 or MEC 363

3 credits

BME 430 Engineering Approaches to Drug and Gene Delivery *new course*

Introduction to the application of engineering principles and biological considerations in designing drug delivery systems for

medical uses. The concept of biocompatibility and its implications in formulating controlled release devices are illustrated. Emphasis on the use of biodegradable materials to design drug delivery systems for site-specific applications.

Prerequisites: AMS 161 or MAT 132 or 142; BIO 203; BME 304

BUS 390 Emerging Markets *special topic fall 2002*

Focuses on the forces that shape emerging markets. For various emerging markets, students analyze the political and economic environments, behavior of investors and borrowers, capital structures, sovereign defaults, and the debt negotiation process of the debt crises at the end of the 20th century. Examines the causes of financial crises and how emerging markets countries can minimize the impact.

Prerequisites: BUS major; BUS 110 and 355; ECO 107 or 108
3 credits

BUS 440 International Management *revised prerequisites*

Prerequisites: BUS 110; BUS 249 or ECO 348; BUS 355 or ECO 389; BUS 347 or SOC 381; BUS major or minor or ECO major; U4 standing

BUS 441 Business Strategy *revised prerequisites*

Prerequisites: BUS 110, 210, 340, 347, and 351; BUS major or minor or ECO major; U4 standing

CAR 110 Career Development and Decision Making *new course*

Introduces students to theories of career decision-making, and the relationship between major choice, academic planning, and career options. Examines two steps in the career decisions process: self-assessment (skills, interests, values, and personality traits) and career exploration.

Prerequisite: Completion of D.E.C. category A, first course
2 credits

CAR 210 Career Planning *new course*

Focuses on a systematic approach to the career planning process, including goal setting, professional communication, job market trends, and career research strategies. Analyzes the value of extracurricular service, and leadership experiences, and how to convey this value through written and oral presentation. Examines components of successful transition to the workplace.

Prerequisite: Completion of D.E.C. category A
1 credits

CCS 201 Writing about Culture *revised components*

Fall 2002: Two hours of lecture and two hours of laboratory per week.

CHE 123-E Introductory Chemistry I *new course*

This course develops skills in information processing, critical thinking, and problem solving. Content is taken from the first half of CHE 131: stoichiometry, chemical structure and reactions, solutions, acids and bases. Not for credit in addition to CHE 131 or 141 or the discontinued CHE 121.

Prerequisites: Level 2 on the mathematics placement examination and high school chemistry or Level 3 on the mathematics placement examination

Corequisite: MAP 103 or appropriate MAT course
 Advisory Corequisite: CHE 133
 3 credits

CHE 124-E Introductory Chemistry II *new course*

This course continues to develop reasoning skills. It covers material from the second half of CHE 131, including introduction to organic and biological molecules and reactions. Not for credit in addition to CHE 131 or 141.

Prerequisites: C or higher in CHE 123; MAP 103

Corequisite: MAT 123

Advisory Corequisite: CHE 134

3 credits

CHE 130 Problem Solving in General Chemistry *new course*

This course provides a structured environment for completing CHE 131 homework assignments and helping students develop the quantitative reasoning and problem solving skills needed in General Chemistry. Satisfactory/Unsatisfactory grading only. Grading is based on attendance and participation. Required for students taking CHE 131 along with MAT 123.

Corequisites: CHE 131; MAT 123

0 credit, S/U grading

CHE 131-E General Chemistry *revised prerequisites*

Prerequisite: High school chemistry

Pre- or Corequisite: Level 3 on the mathematics placement examination and enrollment in CHE 130 and MAT 123; or level 4 on the mathematics placement examination and enrollment in MAT 125

CHI 210 Elementary Chinese for Chinese Speakers *new course*

An elementary level Chinese language course for students who have had some exposure to the Chinese cultural norms and conventions and who already can communicate in Chinese orally on topics of daily routines, although with grammatical mistakes and non-standard pronunciation, but cannot read or write. The course focuses on reading and writing skills and expands the depth and scope of exposure to the Chinese culture.

4 credits

CHI 395-J, 396-J Modern Chinese Literature I, II *new courses*

A detailed study of selected masterpieces written during the first half of the 20th century (1911-1949). Students are expected to improve their skills in literature appreciation and to model their own writings after works read in class. Designed for students who are already proficient in Chinese.

Prerequisite: CHI 312

3 credits per course

CLT 333-G Prehistory of the Novel *special topic fall 2002*

Study of the predecessors of the novel in the ancient and medieval world and in the renaissance. Works considered include *Daphnis and Chloe*, a Greek romance, and with the Latin novel, *The Golden Ass*, by Apuleius, medieval predecessors of the novel such as *The*

Decameron and *Lazarillo De Tormes* as well as chapters from Book I of *Don Quijote*. May be repeated as the topic changes.

CSE 110 Introduction to Computer Science *revised course*

An introduction to the fundamentals of computer science. Topics covered include: algorithmic design; problem-solving techniques for computer programming; fundamentals of digital logic and computer organization; the role of the operating system; introductory programming methodology including variables, assignment statements, control statements and subroutines (methods); programming paradigms; the compilation process; theoretical limits of computation; and social and ethical issues. Intended for students who have not taken any college-level computer science course with programming assignments in a high level programming language.

Prerequisite: Level 3 or higher on the mathematics placement examination

3 credits

CSE 114 Computer Science I *revised prerequisite, effective Spring 2003*

Prerequisite: CSE 110 or, for engineering majors, ESG 111 or MEC 111 or 112, or ESE 124

CSE 230 Introduction to Programming in C and C++ *revised course*

An intermediate introduction to the C and C++ programming languages. Topics include basic control structures and data types, functions and program structures, pointers and arrays, input and output system calls, classes and types, inheritance and object-oriented programming, exceptions and templates.

Recommended for students who have already completed an introductory programming course and plan to take advanced courses that required familiarity with C or C++.

Prerequisites: CSE 110 or 114 or MEC 112 or ESG 111

CSE 346 Computer Communications *revised course*

Basic principles of computer communications. Introduction to performance evaluation of protocols. Protocols covered include those for local, metropolitan, and wide area networks.

Introduction to routing, high speed packet switching, circuit switching, and optical data transport. Other topics include TCP/IP, Internet, web server design, network security, and grid computing. Not for credit in addition to CSE 310. Crosslisted with ESE 346.

Pre- or corequisite for ESE and ECE majors: ESE 306

Pre- or corequisite for CSE majors: AMS 310 or 311

Prerequisite for CSE majors: CSE 220

CSE 375 Concurrency *new course*

The concurrent execution of asynchronous processes in the abstract using state diagrams and a related language. The concurrent aspects of Java are discussed as a practical implementation of these issues and program logic is introduced to describe them formally. Examples are drawn from operating systems, database systems, and communication systems.

Prerequisite: CSE 305 or 306 or ESE 333

3 credits

CSE 376 Advanced Systems Programming in UNIX/C *new course*

Focuses on several aspects of producing commercial-grade system software: reliability, portability, security, and survivability. Uses UNIX and C which are heavily used in industry when developing systems and embedded systems codes. Emphasis on the techniques and tools to produce reliable, secure, and highly portable code. Requires substantial programming as well as a course project.

Prerequisites: CSE 219 and 220

Advisory prerequisite: CSE 306

3 credits

CSE 390 Introduction to Visual Computing *special topic fall 2002*

A unified introduction to computer graphics and computer vision for students interested in imaging or digital visual arts. Includes image synthesis and image analysis techniques.

Requires excellent programming skills and a strong background in mathematics.

Prerequisites: CSE or ISE major; U3 or U4 standing; CSE 214; AMS 210

CSE 392 Game Programming *special topic fall 2002*

Fundamental concepts of computer game programming and writing 2D computer games for PCs. Designing and programming computer games on Windows-based PC systems. Includes a project to write an interactive 2D computer game in the C programming language using Windows and DirectX. Familiarity with C is assumed but programming in Windows and use of the DirectX components DirectDraw, DirectInput, and DirectSound are covered.

Prerequisites: CSE or ISE major; U3 or U4 standing; CSE 127 and 214

ECO 108-F Introduction to Economics *new course*

An introduction to economic analysis. Microeconomics (the study of individual, firm, industry, and market behavior) and macroeconomics (the study of the determination of national income, employment, and inflation). Not for credit in addition to the discontinued ECO 107 or ECO 109.

Prerequisites: WRT 101; C or higher in MAT 122 or MAT 123 or AMS 151 or level 4 on the mathematics placement examination

4 credits

ECO 303-F Intermediate Microeconomic Theory *revised prerequisites; D.E.C. category*

The course satisfies D.E.C. category F

Prerequisites: ECO 107 or 108 or 109; C or higher in MAT 122 or MAT 123 or AMS 151 or placement level 4 on the mathematics placement examination

ECO 305-F Intermediate Macroeconomic Theory *revised prerequisites; D.E.C. category*

The course satisfies D.E.C. category F

Prerequisites: ECO 107 or 108 or 109; C or higher in MAT 122 or MAT 123 or AMS 151 or placement level 4 on the mathematics placement examination

ECO 320 Mathematical Statistics *revised prerequisites*

Prerequisites: ECO 107 or 108 or 109; C or higher in MAT 122 or MAT 123 or AMS 151 or placement level 4 on the mathematics placement examination

ECO 325 International Economics *new course*

Economic theory of international trade, protection, commercial policy, customs unions, capital movements, and international finance.

Prerequisite: ECO 303

3 credits

ECO 317, 318, 339, 340, 341, 360 *revised prerequisites*

Prerequisites: ECO 107 or 108 or 109

ECO 351 eCommerce *special topic fall 2002*

Study of the possible evolutions of e-commerce. Emphasis is on the infrastructure of the Internet, pricing and advertising strategies, diversification and shopping behavior compared to traditional retailing. May be repeated as the topic changes.

Prerequisite: ECO 303

ECO 356 Health Economics *special topic fall 2002*

An application of microeconomics to the health sector of the economy. Topics include the demand for health care; the roles of hospitals, physicians, and HMO's in the supply of health care; the role of the government in the provision of health care; and the determinants of health care costs. May be repeated as the topic changes.

Prerequisite: ECO 107 or 108 or 109

EGL 349 Victorian Major Authors: Mind-Altered Victorians *special topic fall 2002*

This course examines writings about altered states of consciousness, mainly caused by drink and drugs. Works include Charlotte Brontë, *Villette*, Charles Dickens, *The Mystery of Edwin Drood*, poems of Elizabeth Barrett Browning, Alfred, Lord Tennyson, Dante Gabriel Rossetti, and A. C. Swinburne, Walter Pater, Preface to *The Renaissance*, Oscar Wilde, *The Picture of Dorian Gray*, and a Sherlock Holmes mystery by Sir Arthur Conan Doyle. May be repeated as the topic changes.

EGL 361 Poetry: Lyric Poetry in English *special topic fall 2002*

A study of the lyric in English from the early Renaissance to the present, considering both formal and thematic matters. Issues of prosody, lineation, stanzaic identity, diction and syntax; matters of place and time, self-description, self-revision. Representations of the poetic vocation and career. Poetry as both embodiment of and agent of history and culture. Readings in poets from Thomas Wyatt to John Ashbery. May be repeated as the topic changes.

EGL 440 Performance and Technology in Teaching Literature and Composition *formerly EGL 393 revised course*
Not for credit in addition to the discontinued EGL 393.

EGL 441 Methods of Instruction in Literature and Composition *revised course formerly EGL 398 revised course*
Not for credit in addition to the discontinued EGL 398.

ENS 119 Physics for Environmental Studies *change in prerequisite*
The prerequisite has changed to a corequisite.
Corequisite: MAT 125 or 131 or 141 or AMS 151

ESE 218 Digital Systems Design *revised course number*
Formerly ESE 318.

ESE 231 Introduction to Semiconductor Devices *new course*
The principles of semiconductor devices. Energy bands, transport properties and generation recombination phenomena in bulk semiconductors are covered first, followed by junctions between semiconductors and metal-semiconductor. The principles of operation of diodes, transistors, light detectors, and light emitting devices based on an understanding of the character of physical phenomena in semiconductors. Provides background for subsequent courses in electronics.
Prerequisites: MAT 132 and PHY 132
3 credits

ESE 300 Writing in Electrical/Computer Engineering *revised corequisite*
Corequisite: ESE 324 for ESE majors; ESE 382 for ECE majors

ESE 304 Applications of Operational Amplifiers *revised title*
Only the title has changed.

ESE 311 Analog Integrated Circuits *revised title*
Only the title has changed.

ESE 324 Electronics Laboratory C *revised corequisite*
Corequisite: For ESE majors, ESE 300

ESE 331 Introduction to Semiconductor Devices *revised prerequisite*
Prerequisite: ESE 311

ESE 344 Software Techniques for Engineers *revised course*
Trains students to use computer systems to solve engineering problems. Includes C/C++ programming languages, UNIX programming environment, basic data structures and algorithms, and object oriented programming.
Prerequisites: ESE 124; ESE 218 or the discontinued ESE 318

ESE 346 Computer Communications *revised course*
Basic principles of computer communications. Introduction to performance evaluation of protocols. Protocols covered include those for local, metropolitan, and wide area networks. Introduction to routing, high speed packet switching, circuit switching, and optical data transport. Other topics include

TCP/IP, Internet, web server design, network security, and grid computing. Not for credit in addition to CSE 310. Crosslisted with CSE 346.

Pre- or corequisite for ESE and ECE majors: ESE 306
Pre- or corequisite for CSE majors: AMS 310 or 311
Prerequisite for CSE majors: CSE 220

ESE 355 VLSI System Design *new course*
Introduction to mask level integrated circuit design. Techniques of VLSI CMOS system design in the MOS technology are presented. Includes CMOS processing technology, mask layout methods and design rules, MOS digital circuit analysis and design, various SMOS circuit design techniques, arithmetic building blocks, and design for testability. Correct engineering design methodology is emphasized. A project-oriented course in which students design a simple 16-bit, 2-stage pipelined RISC microprocessor. Extensive use of commercial CAD tools. Eligible projects are fabricated through the MOSIS system.
Prerequisites: ESE 218 or the discontinued ESE 318
4 credits

ESE 372 Electronics *revised corequisite*
Corequisite for ESE and ECE majors: ESE 211

ESE 373 RF Electronics for Wireless Communications *new course*
Introduces basic concepts and key circuits of radio-frequency systems. Taught within the design and construction of a transceiver for wireless communications, the course covers fundamental principles which apply to all radio devices. Essential theoretical background, with additional emphasis on practical implementation using commercially-available integrated circuits for double-balanced mixers, oscillators, and audio power amplifiers. Basic components and circuits; key elements of radio electronics, including filters, matching networks, amplifiers, oscillators, mixers, modulators, detectors, and antennae. Computer simulation via Pspice and Puff is emphasized as an integral part of the design process.
Prerequisite: ESE 372
3 credits

ESE 382 Digital Design Using VHDL and PLDs *revised corequisite*
Corequisite: For ECE majors, ESE 300

ESE 476 Instructional Laboratory Development Practicum *new course*
Students work closely with a faculty advisor and staff in developing new laboratory experiments for scheduled laboratory courses in electrical and computer engineering. A comprehensive technical report and the instructional materials developed must be submitted at the end of the course. May be used as a technical elective for electrical and computer engineering majors. May be repeated as an open elective.
Prerequisites: U4 standing; minimum cumulative g.p.a. of 3.0 and minimum grade of A- in the course for which the students will develop material; permission of department and instructor
3 credits

ESG 217 Engineering Science Design I *revised prerequisite*
The prerequisite has been deleted.

ESG 302 Thermodynamics of Materials *revised pre- and corequisites*

Prerequisite: CHE 198

Pre- or corequisite: AMS 361 or MAT 303

ESG 316 Engineering Science Design II: Methods *revised prerequisites*

Prerequisite: ESG major; U2 standing; ESG 217; AMS 161 or MAT 127 or 132 or 142

FLC 301 Human Rights, Terrorism, and Transnational Movements *special topic fall 2002*

Comparative approach to understanding the technological, sociological, and political ramifications of fundamental and contradictory challenges for life on planet earth in the 21st century. Topics include citizenship, human and minority rights and its ethical and political dilemmas, transnational migration and the rise of diasporas, ethnic and religious conflict, and the "asymmetric" warfare of global terrorism. May be repeated as the topic changes. Crosslisted with SOC 393 for fall 2002.

GEO 109-E Life through Time *new course*

An examination of biodiversity as preserved in the fossil record and how it contributes to the understanding of evolution. Species examined include invertebrates, plants, dinosaurs, and mammals and the ultimate origin and evolution of humans. Principles of evolution, paleontology, phylogeny reconstruction, and conservation are discussed.

3 credits

GER 343 Introduction to Literary Genres *change in title*

GER 344 Survey of German Literature *change in prerequisite*

Prerequisite: GER 212

HIS 350-J Modern North Africa and the Middle East

special topic fall 2002

The history of Algeria, Morocco, and Palestine-Israel as three case studies in the modern history of North Africa and the Middle East. Political and cultural history are addressed, with particular attention to contact with European and American cultures and states. May be repeated as the topic changes.

HIS 380 Women and Testimony in Latin America *special topic fall 2002*

The course explores the lives of colonial and modern Latin American women as wives, mothers, workers and activists through their own testimonies with special attention to women's roles in the workplace, in politics, and in the community. May be repeated as the topic changes.

HIS 390 Religion in the Ancient World *special topic fall 2002*

The religious dimension of several ancient civilizations, particularly Egypt, Greece and Rome, and the ancient context of two surviving religious traditions, Judaism and Christianity. Consideration of what was "religious" about the phenomena

under study and how they connected with other dimensions of ancient society, culture and politics. May be repeated as the topic changes.

HIS 391 The Crusades and Medieval Society *special topic fall 2002*

Examination of the various medieval military conflicts known collectively (and according to at least one historian, inaccurately) as The Crusades. Investigation of specific episodes such as the Latin conquest of Jerusalem, the Children's Crusade, the Shepherds' Crusade, and the anti-heretical Albigensian Crusade, and exploration of such issues as the origins of the idea of crusade, the social developments underlying the crusades, crusading culture and propaganda, the European encounter with the Muslim world, and the long term effects of the crusades. May be repeated as the topic changes.

HIS 392 Society and Culture in Early Modern Europe *special topic fall 2002*

Examination of select themes related to magic, science and religion during the Renaissance and Reformation. May be repeated as the topic changes.

HIS 393 Society and Culture in Nazi Germany *special topic fall 2002*

An overview of the major issues in the social history of Nazi Germany focussing on such issues as gender, class, and race; daily life among non-Jewish, "ordinary" Germans with a particular emphasis on leisure, tourism, and fashion; family, sexuality and youth; and memory and history in post-Nazi Germany. Primary and secondary printed sources and films are used to gain insights into Nazi culture and society. May be repeated as the topic changes.

HIS 394 AIDS and the Social History of Medicine *special topic fall 2002*

The course focuses on AIDS and its relation to the social history of medicine, including such topics as how a society's concept of disease reflects its ideology and prejudices; the mystique of blood and semen; race and power identity, medical politics; and promiscuity and sexually transmitted disease in history. The course emphasizes the use of the past in interpreting the present. May be repeated as the topic changes.

HIS 396 The Gangs Of New York: Dead Rabbits to the Latin Kings *special topic fall 2002*

Consideration of the modern street gang, born in Jacksonian New York in the era of the Bowery Boys, and how and why, in every subsequent generation, the 'ownership' of the street has been a principal power-resource of new immigrant groups, including ethnic politics and popular culture as well as organized crime. May be repeated as the topic changes.

HIS 398 Science, Power and the Economy *special topic fall 2002*

Exploration of the social, economic, and political contexts that have shaped the institutions, findings and personnel of the

research communities across the sciences in the United States from the early 19th century to the advent of biotechnology and the Internet. Topics include who did the science, how and where; science in times of war; science in the economy; the Cold War and science; and the new realities for scientists in the 1980's and 1990's. May be repeated as the topic changes.

HIS 399 Disease in America *special topic fall 2002*

An examination of the importance of disease patterns in shaping modern American society. Particular emphasis is given to the transition from the "age of epidemics" to the "diseases of affluence" including heart disease and cancer. Readings include selections from books such as Howard Markel, *Quarantine!*, Harvey Levenstein, *Paradox of Plenty: A Social History of Eating*, and Cassandra Tate, *Cigarette Wars*. May be repeated as the topic changes.

HIS 401 London, Paris and Berlin *special topic fall 2002*

An interdisciplinary seminar using the "city" as a conceptual framework for investigating a number of interrelated themes, such as modernist culture; the gender of urban experience; sexual politics and social reform; the development of modernist architecture and urban planning; the struggles to redefine public space in Nazi Germany, cold war Europe, and post-unification Germany. May be repeated as the topic changes.

HIS 402 Modern European Cultural History *special topic fall 2002*

Consideration of new cultural history and the approaches historians have taken in turning to the writings of anthropologists, sociologists, philosophers, art historians and literary critics for ideas. Readings include examples of the new cultural history such as the essays in Lynn Hunt's *The New Cultural History* as well as such theoretical writings useful to historians as those of Walter Benjamin, Clifford Geertz, Roland Barthes, Pierre Bourdieu, and Frederic Jameson. May be repeated as the topic changes.

HIS 404 Sex, Evolution and Racism *special topic fall 2002*

Examination of who Darwin was, what he actually wrote, who his contacts were in the United States and how they introduced his theory to the American public; and the ways in which Darwin has been used for ideological, as well as scientific purposes over the last 140 years. Readings include some of Darwin's writings on evolution, the responses of his supporters and critics in the United States and the issues at stake as Americans came to their own interpretations and uses of his ideas. May be repeated as the topic changes.

HIS 411 History of New York City *special topic fall 2002*

The social, political, cultural and economic development of New York City from New Amsterdam to the Big Apple. Exploration of the development of the city's image, how various groups lived, how public institutions like the police took shape, as well as urban growth and diversification over 300 years. May be repeated as the topic changes.

HIS 412 The African American Intellectual Tradition

special topic fall 2002

The course considers works by and about African American intellectuals, including various forms of writing, music, and art, from the years of slavery to the present, in which an intellectual is defined as a person who contributes new ideas, insights and forms of knowledge. May be repeated as the topic changes.

HIS 414 20th Century Popular Culture *special topic fall 2002*

This course examines various trends in popular culture during the 20th century. May be repeated as the topic changes.

HIS 441 Two Global Histories: Earth and Human *special topic fall 2002*

This seminar studies the potential intersection of two kinds of global history at work in the world today, one authored by nature and the other by humans, considering whether we are observing two separate histories or whether human global history is beginning to interfere with natural global history. May be repeated as the topic changes.

HIS 461 Historical Perspectives On Women's Health Care Issues *special topic fall 2002*

Selected women's health issues, among them childbirth, women and hysteria, women and sports, and women healers, considering both the historical antecedents of problems raised by these topics, as well as proposed solutions that are under discussion today. Students work during class time as tutors to New York City high school students, who visit the course regularly throughout the term. Both class members and high school students participate in a conference at the end of the semester, showcasing their work and initiating dialogue with the East Harlem community on problems relating to women's health. Sponsored by the Department of History and the Program in Women's Studies at Stony Brook and supported by a "Partners in Health and Higher Education" grant, awarded by the Association of American Colleges and Universities and funded by the Centers for Disease Control. **The course meetings and the conference will be held at Stony Brook Manhattan, 401 Park Avenue at 28th Street in New York City.**

HUE 487 Independent Research *new course*

Intensive study of a special topic undertaken with close faculty supervision. Request for project approval of undergraduate studies director must be submitted no later than the last week of classes of the prior semester. May be repeated.

Prerequisites: U3 or U4 standing; permission of instructor and department

0-6 credits

HUF 385 French Caribbean Literature *revised course*

Not for credit in addition to the discontinued AFH 212.

Crosslisted with AFH 385.

Prerequisite: U3 or U4 standing

HUI 306-I The Early Renaissance in Italy *new crosslisting*

Crosslisted with ARH 306.

HUI 338-G Images of Italian Americans in Films *change in D.E.C. category*

Beginning Fall 2002, course now satisfies category G

HUR 341-G The Allegory of Love

The rise of human love, passion, sensuality, and worship in Western culture, and how these attitudes are reflected in Medieval and Renaissance European literature.

ITL Courses *Changes in prerequisites*

ITL 410, 411, 412, 424, 425, 426, 440, and 441

Prerequisites: ITL 311 and 312

ITL 430-ITL 435

Prerequisites: ITL 311, 312, 395, and 396

LAC 487 Independent Research in Latin American and Caribbean Studies *new course*

Supervised research with faculty in the Latin American and Caribbean Studies program. Students develop their own research projects under the supervision of a faculty member or assist with a faculty member's own research.

Prerequisites: 15 credits toward the Latin American and Caribbean studies minor; permission of instructor
0-6 credits

LAC 488 Internship in Latin American and Caribbean Studies *revised description*

Volunteer work in community, research organizations, or cultural centers relating to Latin American or Latino affairs, arranged in consultation with the LACC director. Current list of intern opportunities available at the LACC, Social and Behavioral Sciences building, N-333.

LAN 447 Directed Readings *new course*

May be repeated.

Prerequisite: Permission of instructor

1-6 credits

LHD 301 Men in American Society

special topic fall 2002

Touching on male experiences of childhood, adolescence and adult life, this course examines the nature of masculinity and male role conflict, review developmental theories describing these struggles and consider elements to foster male development.

LHD 401 Development of the Feminine Role *special topic fall 2002*

How the feminine role is acquired and how it impacts women's lives over the life cycle. Special attention is given to how institutions like religion, family, marriage, and standards of beauty develop and reinforce gender proscriptions for women.

LIN 250-F Languages and Cultures of Asian Americans

change in D.E.C. category

Beginning Fall 2002, course now satisfies D.E.C. category F.

LIN 344 Literacy Development *new course*

An introduction to the theories of literacy and language development of native English speakers and students who are English language learners in pre-school through grade 12. Students acquire knowledge in the development of literacy skills among children of different developmental and ability levels and develop learning experiences that integrate literacy skills and assessment across all disciplines. Attention is given to children with special needs and the integration of technology in the development of literacy skills.

Prerequisite: Enrollment in a teacher preparation program
3 credits

LIN 355-J Language and Life in the Middle East *special topic fall 2002*

An examination of the languages of the area in relation to their historical, social, cultural, political, and literary contexts. Topics include the main features of the phonology, morphology, and syntax of Arabic, Hebrew, Persian, and Turkish; use of languages in conversation, religion, literature, business, media, education; bilingualism and linguistic borrowing; cultural norms in language, such as kinship terms, speech acts, naming practices, politeness, greetings; minority languages: their use, preservation, and decline; gender issues in language use; the alphabets; language policy under colonial rule and after independence. May be repeated as the topic changes.

LIN 375 TESOL Pedagogy: Theory and Practice *revised course*

Introduction to language and literacy instruction, instructional approaches, and assessment models for the teaching of speaking, listening, reading, and writing. Students design standard-based lessons and evaluate resources and technologies.

Prerequisites: One 200 level linguistics course and two years of a language other than English.

Corequisite: LIN 449.

3 credits.

LIN 449 Field Experience in Grades N-12 *new course*

Observation, inquiry, and practice in language and literacy development across disciplines for learners from linguistically and culturally diverse backgrounds. Students are placed in variety of educational settings in elementary and secondary schools for 50 hours of fieldwork. May be repeated. Satisfactory/Unsatisfactory grading only.

Corequisite: LIN 375 or LIN 378

1 credit, S/U grading

LIN 451, 452 Supervised Teaching—English as a Second Language: Primary Grades N-6, Secondary Grades 7-12 *revised prerequisites*

Prerequisites: Linguistics major; 3.00 g.p.a. in major 2.75 g.p.a. overall; permission of department; New York teacher certification examinations LAST and ELPA

LIN 454 Managing Instruction, Assessment, and Resources *revised course*

Examination of effective practices, assessments, and technologies for developing language and literacy across content areas in multi-level classrooms. Collaboration with colleagues, parents, and communities is explored.

Prerequisites: LIN 378; permission of instructor; New York teacher certification examinations LAST and ELPA

Corequisites: LIN 451 and 452

LIS 201 Democracy and Capitalism *revised course*

Introduction to the two major ideologies and structures shaping the world today: democracy and the interstate political system, and capitalism and the world-economy. How they came into being, how they have been transformed over time, and how and whether they continue to be transformed. The course seeks to understand global connections between democracy and capitalism, and how the workings of the interstate system and the world-economy combine to impact power, culture, and social change at both the global and local level.

2 credits

MAT 200 Logic, Language and Proof *revised prerequisites*

Prerequisites: C or higher in MAT 203 or 205 or AMS 261 and in MAT 211 or AMS 210; or A- or higher in MAT 125 or 131 or 141 or AMS 151; or B- or higher average in MAT 125/126/127 or MAT 131/132 or MAT 141/142 or AMS 151/161; or permission of instructor

MAT 203 Calculus III with Applications *revised prerequisites*

Prerequisite: C or higher in MAT 127 or 132 or 142 or AMS 161 or level 9 on the mathematics placement examination

MAT 205 Calculus III *revised prerequisites*

Prerequisite: C or higher in MAT 127 or 132 or 142 or AMS 161 or level 9 on the mathematics placement examination

MAT 211 Introduction to Linear Algebra *change in description*

Add to description: May not be taken for credit in addition to AMS 210.

MAT 303 Calculus IV with Applications *revised prerequisites*

Prerequisite: C or higher in MAT 127 or 132 or 142 or AMS 161 or level 9 on the math placement exam

Advisory Prerequisite: MAT 203 or 205 or AMS 261

MAT 305 Calculus IV *revised prerequisites*

Prerequisite: C or higher in MAT 127 or 132 or 142 or AMS 161 or level 9 on the math placement exam

Advisory Prerequisite: MAT 203 or 205 or AMS 261

MAT 319 Foundations of Analysis *new course*

A careful study of the theory underlying topics in one-variable calculus, with an emphasis on those topics arising in high school calculus. The real number system. Limits of functions and sequences. Differentiations, integration, and the fundamental theorem. Infinite series.

Prerequisites: C or higher in MAT 200 or permission of instructor; one of the following: MAT 203, 205, 211, or AMS 261 or A- of higher in MAT 127, 132, 142 or AMS 161

4 credits

MAT 320 Introduction to Analysis *revised course*

A careful study of the theory underlying one-variable-calculus. The real number system. Limits of functions and of sequences. Differentiation, integration, and the fundamental theorem. Infinite series. Uniform convergence.

Prerequisites: C or higher in MAT 200 or permission of instructor; one of the following: MAT 203, 205, 211, or AMS 261 or A- of higher in MAT 127, 132, 142 or AMS 161

4 credits

MAT 324 Real Analysis *new course*

Metric spaces, including compactness, connectedness, completeness, and continuity. Introduction to Lebesgue integration. Aspects of Fourier series, function spaces, Hilbert spaces, Banach spaces.

Prerequisites: MAT 203 or 205 or AMS 261; B or higher in MAT 320

3 credits

MAT 401 Elementary Fluid Mechanics *special topic fall 2002*

The basic notion of flows and material and spacial coordinate systems. Topics include steady state flows and their relation to conformal maps; compressible flows and sound speed; sound in a moving fluid; vorticity and its conservation; boundary conditions in viscid and inviscid flows; ill-posed problems: e.g., Rayleigh-Taylor and Kelvin-Helmholtz; and flows with a free boundary. May be repeated as the topic changes.

Prerequisites: B or higher in MAT 320; MAT 303 or 305 or AMS 361

MUS 300-H Music, Technology, and Digital Culture *new course*

Study of the interactions between music, technology, and culture in popular and concert music since World War I. Issues of production, distribution, and reception, involving such topics as the impact of radio on composition in the 1920s and 1930s, early synthesizers, and the rise of electronic music, digital sampling and DJs, the MP3 phenomenon, cross-cultural borrowings, gender and technology, the internet, interactivity, and new models of consumption. Not for major credit.

Prerequisite: One of the following: MUS 101, 105, 106, 119, or 130

3 credits

MUS 355-G Popular Music Since 1945 *special topic fall 2002*

Consideration of the interaction of popular music with society where, since the end of World War II, it has played an important part in the youth culture experience in the United States and increasingly in the rest of the world. Examination of popular music from different scholarly perspectives, including how gender, race, place, technology, and identity affect the creation, performance, and reception of popular music. Musical styles

include Blues, Rock, Punk, Funk, Pop, Industrial, Techno, Rap, and Heavy Metal. May be repeated as the topic changes.

MUS 450 The Music of J.S. Bach *special topic fall 2002*

The diverse perspectives of Johann Sebastian Bach's achievement, including his reputation in 18th-century Saxony as a virtuoso keyboard player, respected teacher and *Kapellmeister*, and in later generations as an imaginative composer who brought German baroque music to culmination, guide an inquiry into the music he wrote, its changing historical contexts and interpretations, and its aesthetic and technical dimensions. Works considered include the "Well-tempered Clavier," the "Brandenburg" Concerti, and "The Musical Offering", selected cantatas, the "Mass in b minor" and the "St. Matthew Passion". May be repeated as the topic changes.

PEC 300 Kinesiology *new course*

The mechanical aspects of human motion and the structure and function of these motions in physically active individuals with or without pathological involvement.

Corequisite: ANP 300

4 credits

PEC 305 Prevention and Care of Athletic Injuries *new course*

A course addressing the areas of knowledge, skills, and values needed to identify injury and illness risk factors encountered by athletes and others involved in physical activity and to plan and implement a risk management and prevention program.

Prerequisite: PEC 210

3 credits

PEC 335 Athletic Training Practicum II Seminar *new course*

Assignments in clinical settings related to the students' area of study in evaluation of athletic injuries. Students are given the opportunity to observe and integrate skills under the supervision of a certified athletic trainer. Students also participate in a laboratory setting that re-evaluates students' skills through psychomotor and scenario simulations. Provides grand rounds forum.

Prerequisite: PEC 320

3 credits

PEC 345 Therapeutic Modalities *new course*

Knowledge, skills, and values needed to plan, implement, document, and evaluate the efficacy of therapeutic modalities in the treatment of injuries to and illnesses of athletes and others involved in physical activity.

Prerequisite: PEC 320

3 credits

PEC 355 General Medical Conditions and Disabilities in the Physically Active *new course*

The pathophysiology and management of common diseases and other medical disorders or disabilities as they relate to athletes and the physically active.

Prerequisite: Permission of instructor

3 credits

PHI 312 Phenomenology *special topic fall 2002*

This course explores questions concerning the lived body, intersubjectivity, and emotion in the phenomenological movement, and in the works of recent feminist theorists. Readings include selections from such philosophers as Husserl, Merleau-Ponty, Sartre, Irigaray and I. M. Young. May be repeated as the topic changes.

PHI 380 Schopenhauer: Aesthetics *special topic fall 2002*

A survey of Schopenhauer's theory of aesthetics—of the qualitative expression of the artistic, poetic, and musical genius, and of the forms of the fine arts—set in the framework of *The World as Will and Representation*, volume one. The course will trace the evidence of Schopenhauer's influence on subsequent philosophical figures, especially on Emerson and Nietzsche, and on a musical and literary figures such as Richard Wagner, Tolstoy, Turgenev, Proust, Hardy, and Conrad. May be repeated as the topic changes.

PHI 400 Kant's System of Ethics *special topic fall 2002*

This advanced seminar treats the foundations of Kant's ethical theory as well as the main features of Kant's theory of moral virtue. Special attention is paid to the historical background of Kant's ethical thought. Readings are taken from three of Kant's major works: *Groundwork of the Metaphysics of Morals*, *Critique of Practical Reason*, and *Metaphysics of Morals*.

PHI 420 Thinking in Indian Philosophy *special topic fall 2002*

The course examines the distinctive features of Indian theories and praxis of thinking. The philosophical treatment focuses on the classical patterns of logical analysis, argumentation, reasoning, debate, jurisprudential interpretation, and syllogism, in the quest for valid knowledge, across the systems of Indian philosophy and also considers certain critical departures from the standard analytical modes of thinking toward the more subjective, hermeneutical, transcendental and spiritual quests in the wider tradition, especially in the light of Buddhist, Yoga, and Jaina critiques and the alternative pathways shown. May be repeated as the topic changes. Crosslisted with SAS 401 for fall 2002.

PHI 435 Senior Seminar: What Philosophy Is *special topic fall 2002*

Investigation of questions such as "What is philosophy?", "How is it done?", and "How can you tell it from other things like science or political activity?" through reading philosophy and interviewing philosophers.

PHY 119 Physics for Environmental Studies *change in prerequisite*

The prerequisite has changed to a corequisite.
Corequisite: MAT 125 or 131 or 141 or AMS 151

PHY 121, 122 Physics for the Life Sciences I, II *revised courses*

Primarily for students majoring in biological sciences or in pre-clinical programs. A general introduction to physics, with applications to biological systems. Topics include mechanics, fluid mechanics, electromagnetism, optics, acoustics, and radiation phenomena. Three lecture hours, one recitation hour and two laboratory hours per week. PHY 121 may not be taken for credit in addition to PHY 125, 131 or 141. PHY 122 may not be taken for credit in addition to PHY 126, 127, 132, or 142. *Prerequisites* to PHY 121: MAT 125 or 131 or 141 or AMS 151; CHE 132 or 142
Prerequisite to PHY 122: PHY 121
4 credits

PHY 125 Classical Physics A *new prerequisite*

Prerequisite: Level 4 on the mathematics placement examination
Corequisite: MAT 125 or 131 or 141 or AMS 151

PHY 126 Classical Physics B *revised corequisite*

Prerequisite: PHY 125 or 131 or 141
Corequisite: MAT 126 or 132 or 142 or AMS 161

PHY 131 Classical Physics I *new prerequisite*

Prerequisite: MAT 125 or level 5 on the mathematics placement examination
Corequisite: MAT 131 or 141 or 126 or AMS 151

PHY 141 Classical Physics I: Honors *revised prerequisites*

Prerequisites: Level 6 on the Math Placement Exam, or B or higher in MAT 131 or 141 or AMS 151, or B+ or higher in MAT 125, or permission of instructor (priority to students in honors progs or WISE)
Corequisite: MAT 131 or 141 or 126 or AMS 151

PHY 251 Modern Physics *revised prerequisite*

Prerequisite: PHY 126 or 127 or 132 or 142 or 122/124

PHY 313-H Mystery of Matter *revised description*

The evolving understanding of matter, and the social contexts that drive, retard, or otherwise influence this evolution. Topics may include Galileo's clash with the Church over the nature of stary matter; physics and chemistry of vapors and the social upheavals which ended the careers of Priestley and Lavoisier; "cold fusion," the pressures of funding, publicity, and the path from folly to fraud; radiation and fear, whether real, perceived, or only politically useful, and the closing of the Brookhaven Research Reactor.

POL 402 Congress by Comparison *special topic fall 2002*

Study of the uniqueness of the American Congress through comparison to legislatures and political institutions in other modern democracies, especially Canada and the United Kingdom, including consideration of why Congress is so inefficient and why parties are so weak in the United States. Electoral systems and their consequences are also considered.

POL 403 Political Leadership Rhetoric *special topic fall 2002*

After consideration of the concept of political leadership and the ways in which it has been studied, the course focuses on the analysis of political rhetoric. Topics include campaign rhetoric, apologies, women politicians, policy change, and social movement leadership.

POL 404 Politics of Immigration and Refugees *special topic fall 2002*

A comparative study of the politics of international migration—the movement of people across international borders.

PSY 358 Neuroethology *special topic fall 2002*

How the brain is organized to allow animals to see, to flee from predators, and to remember experiences. The course considers the neuronal organization of behavior by examining neural solutions that have evolved in animals to solve problems encountered in their particular environmental niches, including echolocation in bats, vision in barn owls, flight in locust, learning in honeybees and much, much more. The course does not presume a strong biological background, but may be best suited for students who have had some prior iintroduction to the study of the brain. May be repeated as the topic changes.

PSY 359 Forensic Psychology *new course special topic fall 2002*

Exploration of many aspects within the realm of forensic psychology, defined as any application of psychological knowledge or methods to a task faced by the legal system. Topics include child custody, sexual abuse, discrimination, jury selection and criminal profiling. The course is designed to enlighten students about the relationship between psychology and law by displaying how psychological research and theory plays a critical role in the legal process. May be repeated as the topic changes.

PSY 369 Sleep *special topic fall 2002*

Survey of various aspects of sleep in humans and animals. Students are introduced to standard methods of sleep research, basic physiological mechanisms underlying sleep regulation, normal and disordered sleep patterns, and ways to manage their own sleep. Topics include polysomnography, sleep deprivation, sleep disorders, circadian rhythms, dreaming, daytime consequences of disturbed sleep and personal sleep management. May be repeated as the topic changes.

RLS 408 Islamic Mystical Theology *special topic fall 2002*

An investigation of basic concepts of Islamic theology as interpreted by the school of Ibn Arabi (d. 1240), who was for six hundred years the most influential Muslim theologian and one of the most revered mystical teachers. Topics include the names of God, the nature of the universe, the levels of cosmic and psychological becoming, and the path leading to spiritual perfection.

SAS 401 Thinking in Indian Philosophy *special topic fall 2002*

Crosslisted with PHI 420 for fall 2002. See PHI description.

SOC 338 Sociology of Crime *revised prerequisite*
Prerequisite: SOC 105; two other courses in the social sciences

SOC 391 Sociology of Identity *special topic fall 2002*
A sociological analysis of the identities that people feel themselves to be, the identities that they claim to be, and the identities that others attribute to them. Topics include: the negotiation of identities in interactional settings; factors affecting the formation, maintenance and change of identities; and identity and the life course.

SOC 393 Human Rights, Terrorism, and Transnational Movements *special topic fall 2002*
Crosslisted with FLC 301 for fall 2002. See FLC description.

SPN415 Latin American Woman Writers and Latina Women Writers *special topic fall 2002*
An introduction to contemporary women writing in Latin America and to the recent writing of Latinas in the United States with a special focus on their complex representation on sexuality and the maternal body. May be repeated as the topic changes.

SPN420 Mexican Cinema *special topic fall 2002*
A critical survey of the history of Mexican cinema, from the development of sound film in the 1930's through the Golden Age of the '40s and '50s up to the present. Particular attention is paid to the role of film in the post-revolutionary project of nation building as well as the questioning of such unified projections of national identity and purpose in recent cinema. May be repeated as the topic changes.

SPN 435 The "Fictions" of Jorge Luis Borges *special topic fall 2002*
Examination of the works of Borges, who was arguably the most famous and influential Latin American writer of the last century, and who was the object of both fulsome praise and bitter criticism. The course considers how to explain such diametrically opposed reactions in addition to what his strange tales are about. Particular attention is paid to *Ficciones* and *El Aleph*. May be repeated as the topic changes.

SPN 465 The Syntax of the Dialects of Spanish *special topic fall 2002*
The differences between varieties of Spanish spoken in Spain and the Americas, focusing on such factors as word order, pronouns and other constructions. Comparison with English and other Romance languages such as French, Catalan, Italian, Portuguese are used in discussion. May be repeated as the topic changes.

SSI 210-F Introduction to Human Growth and Development in the Family Context *new title*

SSI 327 Human Growth and Development in the Educational Context *change in title and description*
The biological and psychological development of childhood and adolescence that affects teaching and curriculum development for diverse learners. Additional topics include childhood and

adolescent psychiatric disorders, special education programs, drug and alcohol use and abuse, and societal issues.

SSI 340 Children in Hospitals and Health Care Settings *new course*
An examination of the social and emotional needs of children, adolescents, and their families when confronted with illness, medical crisis, and hospitalization. The course focuses on the creation of developmentally appropriate, culturally sensitive, and family-centered health care environments. Topics include preparation for hospitalization and medical intervention, the dynamics of family stress, multicultural perspectives on illness and health care, and children's reactions to parental and sibling illness.
Prerequisites: SSI 210 or PSY 220
Advisory Prerequisite: One of the following: SSI 320, 321, 322, or 327
3 credits

SSI 449 Field Experience in Grades 7-12
Observation, inquiry and practice in social studies education on the secondary education. Field experience will include 50 hours of documented visitation and observation at appropriate sites. Field observation logs will be the basis for group discussions.
Corequisite: SSI 397 or 398
1 credit; S/U grading

THR 100-D Performing and Performance *new course*
Study and practice in performance and communications: interpersonal communication, public presentations, and theatrical performance.
3 credits

THR 216-D Introduction to Visual Interpretation *revised course*
A design and analysis course emphasizing the construction of space in the two dimensions of the computer screen and the three dimensions of everyday reality. The course examines the way space is constructed and meanings are assigned to it and considers the effects of race, gender, ethnicity, and class on those interpretations. Projects involve use of digital programs for video manipulation and editing.

THR 353 Indian Classical Dance *special topic fall 2002*
Consideration of the mudras—gestures—plus storytelling, footwork and multiple rhythms and poses.

USB 300 Global Issues *new topics course*
Global issues involving international politics, sociology, and economics. The course addresses topics and regions that are currently of global importance, each class session focussing on a particular issues presented by an expert and coordinated by the instructor. Meeting times may be variable. May be repeated as the topic changes.
1 credit; S/U grading

WST 111-G Representing Sexuality: An Introduction to Queer Studies *new course*
Crosslisted with ARH 111. See ARH description.

WST 112-F Introduction to Queer Studies in the Social and Behavioral Sciences *new course*

An introduction to the field of queer studies from the perspectives of the social and behavioral sciences. Themes include the construction of sexual and political difference, heterosexism and the nature of oppression, race/class/gender and sexuality, psychological theories of sexuality, and their historical roots. *3 credits*

WST 390:01-G Alice Walker and Literature and Philosophical Contexts *special topic fall 2002*

Explication of the cultural productions of Alice Walker, for her conception of human being (consciousness), social totality, history, and power and examination of the influences of certain social theorists of the Western tradition, such as Friedrich Nietzsche, Karl Marx, Simone De Beauvoir, Jean-Paul Sartre, and Albert Camus, on Walker's early ideas and writing. May be repeated as the topic changes.

WST 390:02-G Women's Autobiographical Narrative *special topic fall 2002*

A study of personal narratives, both fictional and non-fictional, to gain insights into the lives of women from a range of cultural contexts and historical moments and exploring questions entailed in the autobiographical genre as well as gain understanding of the. May be repeated as the topic changes.

WST 391:01-G Contemporary Memoir: The Making and Unmaking of the Self *special topic fall 2002*

Examination of the increasing popularity of the memoir in late 20th Century Western culture, considering both the production and reception of the memoir in order to understand memoir not only as a narrative phenomenon but also as a cultural phenomenon. May be repeated as the topic changes.

WST 391:02-G Music and Sexuality: Listening to the Queer Past

The course examines the ways in which lesbians, gay men, bisexuals, transgender, and other queer folk have been engaged in music as composers, performers, audiences, and critics, considering such questions as how and for what purposes music has been used in various communities in difference historical periods; how music is a context for queer sexualities, and how queer identity shapes musical performance, composition, listening, and writing about music. May be repeated as the topic changes.

WST 394-H Women, Science and Reproduction *special topic fall 2002*

Consideration of the New Reproductive Technologies, including in vitro fertilization, sex selection, and intra-uterine imaging; the position of women in the scientific study and development of NRTs; and the impact such NRTs have on the lives and bodies of women in contemporary U.S. society. The course includes readings and films that represent such NRTs and demonstrate their possible ramifications. May be repeated as the topic changes.

WST 396-K Sex and Gender in American Art *new course special topic fall 2002*

Crosslisted with ARH 396. See ARH description.

WST 408 Senior Research Seminar for Women's Studies Majors *revised prerequisite*

Prerequisites: WST 305; 15 additional credits in the major; U4 standing; WST major

WST 476 Undergraduate Teaching Practicum in Women's Studies II *new course*

Work with a faculty member as an assistant in one of the faculty member's regularly scheduled classes. Students assume greater responsibility in such areas as leading discussions and analyzing results of tests that have already been graded. Students may not serve as teaching assistants in the same course twice.

Prerequisite: Permission of department
3 credits, S/U grading

**CORRECTIONS TO
2001-2003 UNDERGRADUATE
BULLETIN**

**Corrections to Approved Majors,
Minors, and Programs**

Physics (PHY)

Requirements for the Major in Physics (PHY)

Courses in Physics

PHY 251 /252 Modern Physics

**Requirements for the Minor in Physics for students
with a Major in the College of Arts and Sciences (PHY)**

PHY 251 /252 Modern Physics

Corrections to Course Descriptions

**LAN 447 Directed Readings in Uncommonly Taught
Languages**

May be repeated.

Prerequisite: Permission of instructor

1-6 credits

**LHD 301 Human Sexual and Gender Development
Issues**

May be repeated as the topic changes.

PHY 301 Electromagnetic Theory I

MAT 341 is not a corequisite.

RUS 447 Directed Readings

May be repeated.