The University of Arizona
RECORD

SUPPLEMENT
to the 1987–89 General Catalog
SUPPLEMENT

TO THE

1987–89 UNIVERSITY OF ARIZONA GENERAL CATALOG

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Director of Admissions
The University of Arizona
Tucson, Arizona 85721
(602) 621-3237

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CONTENTS

I. Administrative changes, new programs, new academic units, name changes, and program deletions and transfers

II. New courses, course deletions, course and catalog changes
This Supplement is the record of all curricular changes approved since the publication of the 1987-89 General Catalog. All information contained herein has previously appeared in the Curriculum Bulletin, Vol. 12, Nos. 1 - 8. Changes for the same course with the same effective date have been combined into one entry. In some cases, where two or more changes have occurred in a given course, only the final version will appear in this Supplement. If the sequence of one or more related changes is critical, as in the case of a deletion and subsequent course renumbering, each individual change will be listed.

Please report any errors noted in this publication to the Curriculum Office as soon as possible, as the Supplement will be a primary source for revising the 1989-91 catalog.

Pat Jones
Curriculum Office
1-3913
I. ADMINISTRATIVE CHANGES, NEW PROGRAMS, NEW ACADEMIC UNITS, NAME
CHANGES, AND PROGRAM DELETIONS AND TRANSFERS.

Final Action by the Board of Regents, April 24, 1987.

Approved the major in media arts for the Bachelor of Fine Arts
degree.

Approved deletion of the major in business education for the
Bachelor of Science in Education and for the Master of Education
degrees.

Final Action by the Board of Regents, May 29, 1987.

Approved the revision of admission practices for undergraduate non-
resident students. Under the provisions of Board policy 2-101A, the
Board gave authorization to the University to implement the
following:

"Non-resident applicants for admission as freshmen will be admitted
unconditionally, if they meet the competency requirements in Board
policy, 2-102A,2 and rank in the upper 25% of the high school
graduating class, have attained a cumulative high school grade point
average of at least 3.0 on a 4.0 scale or have met aptitude require-
ments of at least 23 on the American College Test or at least 1010 on
the Scholastic Aptitude Test.

"Non-resident applicants for admission as freshman who meet the
competency requirements in Board Policy 2-102A,2 and who rank in the
upper 50%, but not in the top 25%, of the high school graduating
class or have attained a cumulative high school grade point average
of 2.5-2.99 on a 4.0 scale will be reviewed by an admissions
committee which will make an admission determination based upon
likelihood of academic success. The decision of the committee may be
to admit unconditionally, to admit on condition that additional
requirements be completed, or to deny admission."


Approved the transfer of the counseling and guidance major for the
Master of Arts degree from the College of Education to the School of

Final Action by the Board of Regents, September 11, 1987.

Approved the name change of the Near Eastern Center to the Center
for Middle Eastern Studies.

Approved discontinuation of the Human Development Laboratory.

Approved discontinuation of the Laboratory of Native Development
Systems.

Approved establishment of the Karl Eller Graduate School of
Management.

Final Action by the Faculty Senate, October 5, 1987.

Approved the following amendment to Page 7 of the General Catalog:
CREDITS FROM COMMUNITY COLLEGES—A maximum of 72 units may be trans-
ferred from accredited community colleges, provided these units are in
courses acceptable for transfer credit. Courses in skill development,
personal assessment or enhancement, or vocational or technical train-
ing are not ordinarily transferable for University of Arizona credit.
Transferability of courses of independent study, internship, or practicum must be validated by the appropriate department or college at the University of Arizona and may be restricted both in number of units transferable and in degree applicability. Students who have taken community college courses in these categories which are rejected for transfer may petition the relevant college for an exception.

Final Action by the Board of Regents, December 3, 1987.

Approved the major in computer science for the Bachelor of Science degree.

Approved the deletion of the major in geosciences for the Bachelor of Arts degree.

Approved the deletion of the major in public recreation administration for the Bachelor of Science in Public Administration degree.

Approved the transfer of the major in operations management for the Bachelor of Science in Business Administration degree from the Department of Management and Policy to the Department of Management Information Systems.

Approved the establishment of the Center for Insect Science.


Approved the request of the College of Business and Public Administration to raise the minimum grade-point average for advanced standing to 2.6 for fall of 1989. Effective I 89-90.

Final Action by the Board of Regents, January 16, 1988.

Approved the establishment of the School of Public Administration and Policy within the College of Business and Public Administration.

Approved discontinuation of the Irrigation and Water Management Institute.

Approved discontinuation of the Seed Testing Laboratory.

Final Action by the Academic Affairs Council, March 10, 1988.

Approved the establishment of a critical languages program to be administered within the College of Arts and Sciences/Faculty of Humanities.

Final Action by the Board of Regents, March 12, 1988.

Approved the name changes of (1) the Division of Child Development and Family Relations to the Division of Family Studies, and (2) the major in child development and family relations for the Bachelor of Science in Family and Consumer Resources degree to family studies.
II. NEW COURSES, COURSE DELETIONS, COURSE AND CATALOG CHANGES.

ACCOUNTING (Acct.)

Page 98 of the General Catalog, under the paragraph entitled "Accounting":
Delete paragraph from second sentence beginning "All students planning
major..." and substitute "Accounting majors must complete Acct. 305
or M.I.S. 375 and Acct. 310. Acct. 471 or M.I.S. 471 is also
necessary to fulfill the policy requirement." Delete footnote listing
prerequisites and asterisk above. Effective II 87-88.

200. Add prerequisite: "P, sophomore standing required." Effective Summer

210. Add to prerequisite: "sophomore standing required." Effective Summer

305. Change course number from "405". Change prerequisite to "M.I.S. 275".
Effective II 87-88.

401. Delete "GC" from Section 3. Effective I 87-88.
Add "GC" to Section 3. Effective II 87-88.

405. Change course number to "305". Change prerequisite to "M.I.S. 275".
Effective II 87-88.

422. Delete "GC". Effective I 87-88.
Add "GC". Effective II 87-88.
Delete "GC". Effective II 87-88.

431. Change prerequisites to "300b, 305, or M.I.S. 375". Effective II 87-88.

461. Delete "GC". Effective I 87-88.
Add "GC". Effective I 88-89.

461. Change prerequisites to "310 or 551". Delete sentence: "Credit allowed
for this course or 471 but not both". Effective II 87-88.

471. Delete sentence: "Credit allowed for this course or 461 but not both".
Effective II 87-88.

472. Change prerequisites to "210 or 272". Effective II 87-88.

567. Change prerequisites to "Acct. 550, M.A.P. 552, and M.I.S. 501".
Effective II 87-88.

AEROSPACE & MECHANICAL ENGINEERING (A.M.E.)

240. Course number changed from "340a". New listing reads: "Thermodynamics
(3) I II Basic laws and examples of engineering applications of
macroscopic thermodynamics; equations of state; reversible and irre-

340. Course number changed from "340b". New listing reads: "Advanced
Thermodynamics (3) I II Power systems, nonreacting and reacting
mixtures; heat transfer, design exercises." Effective II 87-88.

340a. Change course number to "240". Course revised. [For new listing, see
"240".] Effective II 87-88.

340b. Change course number to "340". Course revised. [For new listing, see
"340".] Effective II 87-88.

427. NEW COURSE: "Intermediate Dynamics (3) GC I Dynamics of and systems of
particles; Newtonian and Lagrangian descriptions of motion; rigid body
and linkage dynamics; Hamilton's theorem. Applications to engineering
problems. P, 232."
524. NEW COURSE: "Advanced Dynamics (3) [Rpt.] I Review of Newton's laws of motion; Lagrange's equations; rigid body and multibody dynamics; Kane's equation and applications. P, 232, knowledge of differential equations."

546. Change semester offering to "I". Effective I 88-89.

AGRICULTURAL ECONOMICS (A.Ec.)

242. Add crosslisting: "(Identical with Econ. 242)". Effective II 87-88.

313. Add "I" to offering. Effective I 87-88.


539a. DELETE: "Analysis of Variance (1)"

539n. DELETE: "Nonparametric Analysis (1)"

539r. DELETE: "Regression Analysis (1)"

539s. DELETE: "Sample Surveys (1)"

549. Add: "Applied Econometric Analysis (3) II (Identical with Econ. 549)"

AGRICULTURAL EDUCATION (A.Ed.)

350. Course number changed from "397a". Course revised. New listing reads: "Applications in Agricultural Mechanics (3) I Application of agricultural mechanics concepts and principles to electrical systems and internal combustion engines as used in urban and commercial agriculture. Miller". Effective I 87-88.


397a. Change course number to "350". Course revised. Effective I 87-88. [For new listing, see "350".]

397b. Change course number to "351". Course revised. Effective II 87-88. [For new listing, see "351".]

397d. NEW COURSE: Workshop: "Writing for Applied Sciences (2) I II P, Engl. 101 or 103H and 102 or 104H. (Identical with F.C.R. 397d and R.N.R. 397d)"

422. Add "II" to semester offering. Effective II 88-89.

497i. Delete "GC". Change title to "Video Communications and Methods". Effective II 87-88.

597d. Change title to "Administration, Management, and Supervision of Cooperative Extension". Effective II 87-88.

597m. NEW COURSE: Workshop: "*Personal Effectiveness: The Human Factor (1-2) II (Identical with H.E.E. 597m)". [*Offered only through the Cooperative Extension Service Winter School.]

597n. NEW COURSE: Workshop: "*Public Policy Issues (1-2) II (Identical with H.E.E. 597n)". [*Offered only through the Cooperative Extension Service Winter School.]
NEW COURSE: Workshop: "Local Government and Extension: A Working Partnership (1-2) II (Identical with H.E.E. 597s)". [Offered only through the Cooperative Extension Service Winter School.]

AGRICULTURAL ENGINEERING (A.En.)

325. NEW COURSE: "Solar, Wind and Biomass Energy (2) II Principles of operation and evaluation of equipment to collect solar, wind and biomass energy and convert it to usable forms of energy. P, Math. 117e. Larson"


463. Change class structure to "3R". Effective II 87-88.

AGRICULTURE (Agri.)

422. Add "II" to semester offering. Effective II 88-89.

AMERICAN INDIAN STUDIES (A.In.S.)

631. Add: "Indian Law (3) I (Identical with Law 631)". Effective I 87-88.

ANTHROPOLOGY (Anth.)

100. Change course number to "101". Effective I 88-89.

101. Course number changed from "100". Effective I 88-89.

111. Change title to "Exploring Physical Anthropology". Effective I 88-89.

334. Add: "Art and Archaeology of Ancient Egypt (3) II 1987-88 (Identical with Clas. 334)". Effective II 87-88.

448. NEW COURSE: "Writing Culture (3) GC [Rpt.] I The development of anthropological writing as it has moved toward cultural critique: the use of knowledge of other cultures to examine the assumptions of our own. Comparison of ethnographic examples."

501a-501b. Course revised. New listing reads: Medical Anthropology (3-3) [Rpt./2] I II 501a: The anthropology of health, illness and sickness. Cultural perceptions of health, ethnophysiology, illness causality and classification. 501b: Each semester the course will concentrate on a different world region. Examine indigenous medical traditions, changing health profiles, the interface between modern and traditional medicine, and patterns of health care utilization." Effective II 86-87.

596r. Change title to "Hominoid and Hominid Evolution". Effective II 86-87.


696b. Add "[Rpt./3]". Effective I 88-89.

696c. Add "[Rpt./3]". Effective I 88-89.

696d. Add "[Rpt./3]". Effective I 88-89.

696e. Add "[Rpt./3]". Effective I 88-89.
ARCHITECTURE (Arch.)

401. Add "GC". Effective I 86-87.

402. Add "GC". Effective I 86-87.

452H. NEW COURSE: "Honors Senior Project (6) I II S Studio-based honors thesis project demonstrating a synthesis of knowledge or development of theoretical concepts. P, 451."

474. Change course number to "484". Retain crosslisting with Planning. Effective I 87-88.

484. Course number changed from "474". Retain crosslisting with Planning. Effective I 87-88.

ART (Art)


Page 190, lines 4-5, of the General Catalog. Change applicable to art education major. Delete: "9 units of upper-division studio art courses." Insert: "9 units of upper-division art courses selected from art education, studio, and art history." Effective I 87-88.

250. NEW COURSE: "Relief Printmaking I (3) I II Introductory course in the fundamental techniques and aesthetics of relief printmaking. 6S. P, 101, 102."

251. Course revised. "New listing reads: Intaglio I (3) I II Introductory course in the fundamental techniques and aesthetics of intaglio printmaking with emphasis on etching. 6S. P, 101, 102, or permission of department." Effective I 87-88.

253. NEW COURSE: "Alternative Methods in Printmaking I (3) I II Introductory course in the nontraditional approaches to printmaking. Monotype, industrial techniques, and handmade paper. 6S. P, 101, 102, or permission of department."

255. Course number changed from "352". Course revised. New listing reads: "Lithography I (3) I II Introductory course in the fundamental techniques and aesthetics of black and white, and color lithography. Stone and metal plate processes are covered. 6S. P, 101, 102, or permission of department." Effective I 87-88.

334. Add: "Art and Archaeology of Ancient Egypt (3) II 1987-88 (Identical with Clas.' 334)"

343. NEW COURSE: "Photographic Techniques (3) I II CRD The fundamentals of exposure and development control, print control, studio and portrait lighting, slide copying and view camera operation. 2R, 2S. P, 241."


351. NEW COURSE: "Intaglio II (3) I II Intermediate course in techniques and aesthetics of intaglio printmaking. Continuation of Art 251. 6S. P, 251."

352. Change course number to "255". Course revised. Effective I 87-88. [For new listing, see "255".]

NEW COURSE: "Lithography II (3) I II Intermediate course in stone and metal plate lithography. Continuation of Art 255. 6S. Open to majors only. P, 255."

NEW COURSE: "Typography (3) I II GRD The study of letterforms and their appropriate and effective use in visual communications, from an historic as well as from a contemporary perspective. 6S. P, 265."

Retain crosslisting with Art. [Classics is home department.] Effective I 87-88.

NEW COURSE: "Video for Artists (3) GC I II Seniors and graduate students utilize small format video camera and editing to extend/amplify concepts that have developed in their artistic inquiry. 2R, 2S. P, admission by portfolio. Field trips."

NEW COURSE: "Relief Printmaking III (3) [Rpt./2] I I I Advanced course in the techniques and aesthetics of relief printmaking. 6S. Field trips. Open to majors only. P, 205, 350."

Course number changed from "454". Course revised. New listing reads: "Intaglio III (3) [Rpt./2] GC I I I Advanced course in technique and aesthetics of intaglio printmaking. Continuation of 351. 6S. P, 351." Effective I 87-88.

Change course number to "455". Course revised. Effective I 87-88. [For new listing, see "455"].


Change course number to "451". Course revised. Effective I 87-88. [For new listing, see "451"].

Course number changed from "452". Course revised. New listing reads: "Lithography III (3) [Rpt./2] GC I I I Advanced course in stone and metal plate lithography. Continuation of 355. 6S. P, 355." Effective I 87-88.

Add "[Rpt./3]". Effective I 87-88.

NEW COURSE: Proseminar: "Current Issues in Art Education Theory and Practice (3) [Rpt./12 units] I II P, upper-division standing."

NEW COURSE: "Graduate Relief Printmaking (3) [Rpt./4] I II Relief printmaking with emphasis on individual research, personal direction and professional standards. 6S."

NEW COURSE: "Graduate Intaglio (3) [Rpt./4] I II Intaglio printmaking with emphasis on individual research, personal direction and professional standards. 6S."

NEW COURSE: "Graduate Alternative Methods in Printmaking (3) [Rpt./4] I II Nontraditional approaches to printmaking with emphasis on individual research, personal direction and professional standards. 6S."

NEW COURSE: "Graduate Lithography (3) [Rpt./4] I II Lithography with emphasis on individual research, personal aesthetic and professional standards. 6S."
ASTRONOMY (Astr.)

100L. Change course number to "101L". Effective I 89-90.

101L. Course number changed from "100L". Effective I 89-90.


589. Add: "Topics in Theoretical Astrophysics (3) [Rpt.] I (Identical with Phys. 589)"

ATMOSPHERIC SCIENCES (Atmo.)

171L. NEW COURSE: "Introduction to Meteorology and Climatology Laboratory (1) I II Applications of the basic concepts of meteorology and climatology, with emphasis on the interpretation and detection of selected weather phenomena. P, Math. 117e, CR 171, Section 1. (Identical with Geog. 171L)"

427. DELETE: "Bioclimatology (3)"

555. DELETE: "Computational Methods for Radiative Transfer (3)"

560. Course number changed from "575". Course revised. New listing reads: "Aerosol Science (3) I 1987-88 Physics, chemistry, mechanics, and optics of individual and industrial aerosol particles. Topics include formation, dynamics, nucleation and growth, coagulation, scattering and absorption of radiation, deposition and aerosol technology. (Identical with Ch.E. 560 and E.C.E. 560)". Effective I 87-88.

561. DELETE: "Radar Meteorology (3)"

575. Change course number to "560". Course revised. Effective I 87-88. [For new listing, see "560".]

631. DELETE: "Numerical Methods in the Atmospheric Sciences (3)"

BIOCHEMISTRY (Bioc.)

568b. DELETE: "Nucleic Acids (3)"

CHEMICAL ENGINEERING (Ch.E.)

481. NEW COURSE: "Bioreactor Engineering (3) GC I Introduction to biotechnology; chemistry of microorganisms; design of bioreactors to include cellular and enzyme reactors of all types; transport phenomena and control of bioreactors; instrumentation and measurement in bioreactors. P, Math 254, Chem. 241a, Chem. 480a-480b."


CHEMISTRY (Chem.)

101a-101b. Change description to read: "101a: An introduction to general and organic chemistry with special topics related to many different major fields of study. 101b: A brief introduction to organic chemistry and a concentration on physiological chemistry. Intermediary metabolism is accompanied by a case study approach involving metabolic dysfunction. Both courses are for students in prenursing and allied health field programs as well as nonscience majors. Neither course is a prerequisite for higher level chemistry courses. P, algebra recommended, CR 102 encouraged." Effective I 87-88.
102a-102b. Change description to read: "The basic functions of a chemical laboratory, including how to safely perform chemical experiments, interpret the results, and an introduction to some basic chemical techniques, instruments, and calculations. 102a focuses on general chemistry, while 102b emphasizes organic and biochemistry. P, CR 101a-101b. Both 102a and 102b are offered each semester. Effective I 87-88.

103Ha-103Hb and 104Ha-104Hb. Change course numbers of Honors Sections only to "105a-105b". Retain 103a-103b and 104a-104b without Honors Sections. Course revised. Effective I 87-88. [For new listing, see "105a-105b".]

105a-105b. Course numbers changed from Honors Sections only of "103Ha-103Hb and 104Ha-104Hb". Retain 103a-103b and 104a-104b without Honors Sections. Course revised. New listing reads: "Honors Fundamentals of Chemistry (4 to 5 - 3 to 5) Fundamental concepts of chemistry, with emphasis on theoretical and physical principles; atomic and molecular structure and theory, properties of gases, liquids and solids, thermodynamics and equilibria, kinetics, descriptive inorganic chemistry. Lab stresses individual studies and library research. Extra unit credit available for students pursuing optional original lab research problem. 4R, 3 or 6L. Open to students who have had high school chemistry and physics and received acceptable scores on the ACT tests." Effective I 87-88.

241Ha-241Hb. Change course numbers of Honors Sections only to "242a-242b". Retain 241a-241b without Honors Sections. Course revised. Effective I 87-88. [For new listing, see "242a-242b".]


CIVIL ENGINEERING & ENGINEERING MECHANICS (C.E./E.M.)

Civil Engineering (C.E.)

196H. NEW COURSE: Proseminar: "Honors Proseminar (1) II"

202. NEW COURSE: "Personal Computers for Civil Engineers (1) I II Fundamentals for computer graphics, data preparation and analysis, and use of spreadsheets, word processors, and basic software for civil engineering applications. 1R, 1L. Open to majors only. P, S.I.E. 170."

214. Add at end of description but before "P": Honor section is available." Effective I 89-90.

217. Add at end of description but before "P": Honor section is available." Effective I 89-90.


400. Course number changed from "465". Course revised. Drop "GC". Change description to read: "Integration of accumulated background in civil engineering course work for application to specific design projects. Interaction with practicing engineers to develop design methodologies. P, 322, 337, 340, 360, 370." Effective II 87-88.

432a. Change course number to "436". Course revised. Effective I 88-89. [For new listing, see "436".]

432b. Change course number to "437". Course revised. Effective I 88-89. [For new listing, see "437".]
436. Course number changed from "432a". Course revised. New listing reads: "Advanced Structural Design in Steel (3) I CC Advanced problems in the analysis and design of steel structures: static and dynamic lateral and vertical loads; braced and moment-resistant frames; welded and bolted connections; computer methods. P, 336." Effective I 88-89.

437. Course number changed from "432b". Course revised. New listing reads: "Advanced Structural Design in Concrete (3) II GC Advanced problems in the analysis and design of concrete structures, design of slender columns and one- and two-way slabs; lateral and vertical load analysis of bridges and multistory buildings; introduction to design for torsion and seismic forces; use of structural computer programs. P, 337." Effective I 88-89.

465. Change course number to "400". Course revised. Effective II 87-88.

[For new listing, see "400".]

465. NEW COURSE: "Project Planning and Modeling (3) GC II Use of systems analysis in contemporary planning, including consideration of social, environmental and physical constraints; study of general and special purpose manual and computer-based simulation and gaming as an engineering and planning tool. P, senior standing in civil engineering or consult with department."

477. DELETE: "Environmental Impact of Energy-Related Systems (3)"

478. NEW COURSE: "Introduction to Hazardous Wastes (3) GC I II Management, planning, legal and engineering aspects of liquid and solid hazardous waste treatment and disposal. P, 370 or 471 or consult with department before enrolling."

574. Change title to "Hazardous Waste Management". Change description to read: "Engineering concerns in toxic and hazardous waste management focus on aspects of chemical transport between air, water and soil systems, and microbial degradation processes in the natural environment." Effective I 87-88.

574. Change title to "Chemical Transport in Environmental Processes". Effective II 87-88.

577. NEW COURSE: "The Physiological Bases of Microbial Treatment Processes (3) II Principles of bacterial physiology including morphology, metabolism and genetics. Applications of importance to waste treatment and environmental quality. P, 370 or consult with department."

633. NEW COURSE: "Reinforced Concrete Members (3) I Inelastic behavior of beams and columns, short- and long-term beam deflections; combined bending, shear, and torsion in beams; behavior under load reversals, analysis and design of beam to column connections and shear walls. P, 432b or departmental approval."

671. Change number of units to "(2)". Change class structure to "1R, 3L". Effective II 87-88.

674. NEW COURSE: "Toxic and Hazardous Waste Treatment (3) II The process engineering fundamentals from which treatment strategies and process treatment trains can be synthesized to control toxic and hazardous wastes. Both traditional and emerging technologies will be considered. Emphasis will be placed on integrated water, air and land interfacial environmental interactions. Field trips. P, 574 or consult with department."
Engineering Mechanics (E.M.)

508. NEW COURSE: "Fracture Mechanics (3) II 1988-89 Modes of fracture; crack propagation; griffith energy balance; crack tip plasticity; J-integral; fatigue cracks; analytical and numerical techniques; constitutive models for damaged materials. P, 505 or consult with department."

CLASSICS (Cls.)


326. NEW COURSE: "Greek Mythology II (2-4) [Rpt. /9 units] II S An intermediate examination of Greco-Roman mythology which focuses on source materials or the influence of classical myths. Field trip to Greece, Italy, or elsewhere. Fee varies."

330. NEW COURSE: "Women in Antiquity (3) II 1987-88 Women in literature, archaeology and history from the Bronze Age to the Roman Empire. (Identical with Hum. 330 and W.S. 330)"

334. NEW COURSE: "Art and Archaeology of Ancient Egypt (3) II 1987-88 Art and archaeology of the Egyptian civilization from the beginning of the Pharaonic Period to the Alexandrian Age. (Identical with Art 334)"


COMMUNICATION (Comm.)

696b. Add "[Rpt./3]". Effective I 87-88.

696d. Add "[Rpt./3]". Effective I 87-88.

696e. Add "[Rpt./3]". Effective I 87-88.

696h. Add "[Rpt./3]". Effective I 87-88.

696i. Add "[Rpt./3]". Effective I 87-88.

696j. Add "[Rpt./3]". Effective I 87-88.

696k. Add "[Rpt./3]". Effective I 87-88.

COMPUTER SCIENCE (C.Sc.)

115. Change prerequisite to "Math. 117a". Drop "CDT". Change units to "(4)". Effective II 87-88.


453. Change course number to "553". Effective II 87-88.

553. Course number changed from "453". Effective II 87-88.

553. Change course description to read: "Basic concepts of compilation of block-structured languages. Topics include lexical analysis, top-down and bottom-up parsing, semantic analysis, syntax-directed code generation, debugging." Change prerequisites to read: "P, 237, 430, 473." Effective I 88-89.

555. Change prerequisites to "553, 473". Effective II 87-88.
555. Change course description to read: "Detailed study of more advanced aspects of compilation. Topics include translator writing systems, attribute grammars, flow analysis and optimization, register allocation, code generation." Effective I 88-89.

560. NEW COURSE: "Database Systems (3) II Theoretical and logical aspects of databases: data models, database languages, deductive databases, database design, dependency theory, query optimization, concurrency control and recovery. P, 473 and 430."

571. Delete "II" offering. Effective I 87-88.

DANCE (Dnc.)

341a. Change units to "(1)". Effective Preession 1987.
Change units to "(2)". Effective S 1987.

439a-439b. NEW COURSE: "Advanced Pointe Technique (1-1) [Rpt./4 units] GC I II 439a: Barre work; continuing development of strength, speed, and stamina. Introduction of advanced barre combinations. Center work; allegro en pointe, solo adagio, and pirouettes and consecutive turns. 439b: Continuation of 439a with increasing difficulty and complexity in the enchainments. 2S. P, audition."

441a-441b. Change number of units to "(3-3)". Effective II 87-88.

450a-450b. NEW COURSE: "Ballet Repertoire (2-2) [Rpt./12 units] Repertoire from romantic, classical and contemporary ballets including works by Bouronville, Petipa, Ashton, Balanchine, Christensen and others. 1R, 3S. P, 340 or by audition."

541a. Change units to "(1)". Effective Preession 1987.
Change units to "(2)". Effective S 1987.

DRAMA (Dram.)

Page 78 of the General Catalog. Add general education requirements for drama-musical theatre majors (1) under "E. THE ARTS (3-6 units)"; "Drama-musical theatre majors are required to take Mus. 120a-120b." (2) under "Department of Drama Requirements"; "Drama-musical theatre majors are required to take Dnc. 259, Mus. 130a-130b." Effective II 87-88.

Page 225 of the General Catalog. Under paragraph beginning "Bachelor of Fine Arts (major in drama-musical theatre), delete Mus. 120a,120b, 130a, 130b and change Dnc. 141b to 241b. Effective II 87-88.

111. Change number of units to "(3)". Change description to "Basic principles of the scenic process: construction and use of materials, shop techniques and practices. 2R, 1L." Effective II 87-88.

112. DELETE: "Stagecraft Laboratory (1)". Effective II 87-88.

116. Change number of units to "(3)". Change description to read: "Trends of historic dress analyzed in relation to social and economic background; design and execution of costumes, and the organization and care of departmental wardrobes, costume construction techniques and shop practices. 2R, 1L." Effective II 87-88.

116. Change course number to "116a-116b". Course revised. Effective I 88-89. [For new listing, see "116a-116b."]

116a-116b. Course number changed from "116". Course revised. New listing reads: "Stage Costume History (3-3) I II Trends of historic dress analyzed in relation to social and economic background, design and execution of costumes; and the organization and care of departmental wardrobes. 116a is not prerequisite to 116b. 2R, 3L. Effective I 88-89.
117. DELETE: "Stage Costume Laboratory (1)". Effective II 87-88.

220. Change number of units to "(3)". Change description to "Studies in stage lighting equipment, procedures, design techniques, and shop practices. 2R, 1L." Effective II 87-88.

221. DELETE: "Stage Lighting Laboratory (1)". Effective II 87-88.

223. Change number of units to "(3)". Change description to "Basic principles of scenic design, painting techniques and shop practices. 2R, 1L." Effective II 87-88.

224. DELETE: "Scene Design Laboratory (1)". Effective II 87-88.

267. Course number changed from "467". Delete crosslisting with M.Ar. Effective I 88-89.

320. NEW COURSE: "Advanced Make-up (2) [Rpt./2] History and practical application of theatrical make-up. Design and construct such items as masks, prosthetic pieces, wigs, and beards. P, 115.".

415. Change title to "Theatre Graphics II: Drafting". Change number of units to "(3)". Effective I 88-89.


421. Change title to "Advanced Lighting Design I". Effective I 88-89.

422. NEW COURSE: "Theatrical Properties (3) [Rpt./2] GC 1989-90 Construction and collection of stage properties. Experimentation with the use of materials and techniques."

424. Change title to "Advanced Scenic Design I". Effective I 88-89.

425. Change title to "Advanced Stagecraft I". Effective I 88-89.

427. Change title to "Advanced Stage Costume Construction I". Effective I 88-89.

429. Change title to "Advanced Stage Costume Design I". Effective I 88-89.

460a-460b. Change number of units to "(3-3)". Effective I 88-89.

467. Change course number to "267". Delete crosslisting with M.Ar. Effective I 88-89.

474. Correction to Curriculum Bulletin, Vol. 11, No. 7. Change course number to "474a-474b". Course revised. Effective I 86-87. [For listing, see "474a-474b".]
497e. Change title to "Scenic Production". Effective I 88-89.


516. NEW COURSE: "Scenography (3) I The integration of scenery, costume, make-up, light and sound into a total production design."

520. NEW COURSE: "Advanced Stage Lighting II (3) I 1988-89 An advanced study of lighting design for opera and dance; theoretical (light plots) and practical (light lab) projects. P, 420."

521. NEW COURSE: "Advanced Stage Lighting III (3) I 1989-90 An advanced study of lighting design for musical theatre; theoretical (light plots) and practical (light lab) projects. P, 420."


525. NEW COURSE: "Advanced Stagecraft II (3) I 1989-90 Advanced techniques in construction and problem solving in technical theatre production; microcomputers, hydraulics, rigging, welding, plastic and advanced problems. P, 425."

527. NEW COURSE: "Advanced Stage Costume Construction II (3) I 1989-90 Advanced techniques in draping, period styles, tailoring, dyeing, painting fabrics and a study of a variety of fabrics and their uses. P, 427."

529. NEW COURSE: "Advanced Stage Costume Design II (3) II 1989-90 Advanced costume design; emphasis on research, line and color analysis, and realized projects. P, 429."

531. NEW COURSE: "Artist Collaboration (2) [Rpt./2] II 1988-89 The development and communication of a visual idea for performance art; exploring all mediums of visual and aural communication."

597a. NEW COURSE: Workshop: "Technical Direction (1-2) [Rpt./10 units] I II"

597b. NEW COURSE: Workshop: "Costume Design (1-2) [Rpt./10 units] I II"

597c. NEW COURSE: Workshop: "Light/Sound Design (1-2) [Rpt./10 units] I II"

597d. NEW COURSE: Workshop: "Property Design (1-2) [Rpt./10 units] I II"

597e. NEW COURSE: Workshop: "Scenic Design (1-2) [Rpt./10 units] I II"

600. Change number of units to "(3)". Effective I 88-89.

696a. NEW COURSE: Seminar: "Special Topics in Playwriting (3) P, permission of instructor."


NEW COURSE: Seminar: "Special Topics in Costume Design (2-3) [Rpt./6 units] P, 429."


NEW COURSE: Seminar: "Special Topics in Lighting Design (2-3) [Rpt.] P, 420."

NEW COURSE: Seminar: "Special Topics in Costume Design (2-3) [Rpt./6 units] P, 429."

ECOLOGY AND EVOLUTIONARY BIOLOGY (Ecol.)

105. Change course number to "105R". Course revised. [For new listing, see "105R".] Effective II 88-89.

105R. Course number changed from "105". Course revised. New listing reads: "Introductory Botany (3) II Structure, function, development and economic importance of flowering plants; brief overview of plant diversity. 3R. 105R must be taken concurrently with 105L to satisfy general education science requirements." Effective II 88-89.

106. Change course number to "206". [For new description, see "206".] Effective I 88-89.

107. NEW COURSE: "Concepts in Biology (4) I II S Levels of biological organization from biosphere to atoms provide a framework around which are developed concepts of diversity and unity of life forms, genetic continuity and evolutionary change, and the interdependent nature of ecosystem components. Nonscience majors orientation. 3R, 3L. Field trips."

159a-159b. Course numbers changed from "159aR-159bR". Delete "phrm." from description. Effective II 87-88.

159aR-159bR. Change course numbers to "159a-159b". Effective II 87-88.

159aL-159bL. Change course numbers to "160a-160b". Change prerequisite to "159a-159b". Effective II 87-88.

160a-160b. Course numbers changed from "159aL-159bL". Change prerequisite to "159a-159b". Effective II 87-88.


403L. Add: "Parasitology Laboratory (1) GC I (Identical with V.Sc. 403L)"

434. Add "[Rpt.]". Effective I 87-88.

440R. Change semester offering to "I". Add alternate year, "1988-89". Effective I 88-89.

440L. Change semester offering to "I". Add alternate year, "1988-89". Effective I 88-89.

445. Delete course.

463a-463b. Course numbers changed from "464aL-464bL". Effective I 87-88.

464a-464b. Course numbers changed from "464aR-464bR". Change title to "Lectures in Human Physiology". Effective I 87-88.

464aR-464bR. Change course numbers to "464a-464b". Change title to "Lectures in Human Physiology". Effective I 87-88.

464aL-464bL. Change course numbers to "463a-463b". Effective I 87-88.
482. Add alternate year, "1989-90". Effective I 89-90.

519. NEW COURSE: "Molecular Evolution and Genome Organization (3) II 1988-89"
A rigorous and comprehensive survey of both the molecular and
evolutionary details of genome organization. P, 320, year of calculus."

596c. NEW COURSE: Seminar: "Macroevolution (2) [Rpt./6 units] I"

610a-610b. Add "[Rpt.]". Effective I 86-87.

620. Change title to "Human Genetics". Effective I 88-89.

ECONOMICS (Econ.)

200. NEW COURSE: "Basic Economic Issues (3) I II S CDT National and
international economic issues. An introduction to economic analysis.
Credit is allowed for this course or 201a-201b or 210."

242. Add: "World Food Economy (3) II (Identical with A.Ec. 242)." Effective
II 87-88.

305. NEW COURSE: "Soviet Economic System (3) I Marxist-Leninist foundations
of Soviet economic policy; economic management and planning mechanisms;
problems of international trade and integration; economic reform and
prospects. P, 201a."

313. Add "I" to offering. Effective I 87-88.

480. Add: "New Venture Market and Industry Analysis (3) I (Identical with
Mktg. 480)"

500. Change prerequisite to "M.I.S. 400 or Math. 119 or 123". Effective I
87-88.

549. NEW COURSE: "Applied Econometric Analysis (3) II Econometric model-
building, estimation, forecasting and simulation for problems in agri-
cultural and resource economics. Applications with actual data and
models emphasized. P, 422 or A.Ec. 539. (Identical with A.Ec. 549)"

568. Transfer course from Economics to Marketing. Retain crosslistings
with Econ. 568 and M.A.P. 568. Effective I 87-88.

EDUCATIONAL FOUNDATIONS AND ADMINISTRATION (Ed.A./Ed.P./H.Ed.)

Educational Administration (Ed.A.)

411. Correction to Curriculum Bulletin Vol. 11, No. 18. As Ed.F.A. was a
crosslisting department, "DELETE" should have been "Delete course".

487. Delete "GC". Effective II 87-88.

488. Delete "GC". Effective II 87-88.

604. DELETE: "Educational Administration in Anthropological Perspective (3)"

Educational Psychology (Ed.P.)

430. Correction to Curriculum Bulletin Vol. 11, No. 19. Delete erroneous
crosslisting with Art 430.

431. Correction to Curriculum Bulletin Vol. 11, No. 19. Delete erroneous
crosslisting with Art 431.

445. Correction to Curriculum Bulletin Vol. 11, No. 19. Change was
erroneous for Ed.P. Heading should have read "ELECTRICAL & COMPUTER
ENGINEERING" above this change.
Correction to Curriculum Bulletin Vol. 11, No. 19. Change was erroneous for Ed.P. Heading should have read "ELECTRICAL & COMPUTER ENGINEERING" above this change.

Change course number to "615a-615b". Change units to "(3-3)". Change semester offerings to "I II". Effective II 87-88.

615a-615b. Course number change from "615". Change units to "(3-3)". Change semester offerings to "I II". Effective II 87-88.

**ELECTRICAL & COMPUTER ENGINEERING (E.C.E.)**

NEW COURSE: "Circuit Theory (3) I II S CDT Electric circuits in the frequency domain, using sinusoidal steady-state, Laplace and Fourier methods, and including single-phase and three-phase power; time domain methods and convolution; transformed networks; natural frequencies; poles and zeros; two-port network parameters; and Fourier series analysis. P, 220b."

NEW COURSE: "Engineering Systems Analysis (3) I II S CDT Basic concepts in the modeling and analysis of engineering systems and fundamental topics in communications, controls, and signal processing. Includes classification of systems; signal characterization in frequency domain, Fourier and Laplace transforms; representation of continuous-time systems by I/O models; system diagrams; state variable models; stability analysis and Bode plots; feedback system characteristics; discrete-time systems; and digital signal processing. P, 320."

NEW COURSE: "Circuits and Device Electronics (3-3) I II S CDT An introduction to advanced topics in electronic circuits and to data acquisition concepts, device physics in relation to terminal behavior, and important classes of semiconductor devices. 352a: Transistor amplifiers, bipolar and MOS, and operational amplifier circuits; frequency response of amplifiers; feedback; tuned and broad-band amplifiers; filters and oscillators; logic circuit families. 352b: Data acquisition circuits; electronic properties of semiconductors; carrier transport phenomena; P-N junctions; bipolar, unipolar, microwave and photonics devices. P, 220b."


Course number changed from "552". Add "GC". Add prerequisite: "352b". Effective I 87-88.

Delete "I" semester offering. Effective I 87-88.


Delete listing.


NEW COURSE: "Microwave Engineering (3) II Waveguides; cavities; S-parameter representation of microwave components and networks; transistor and MESFET amplifiers; IMPATT diode and Gunn oscillators; microwave integrated circuits. P, 482."

DELETE: Workshop: "Energy Conversion Devices (3)"

552. Change course number to "453". Add "GC". Add prerequisite: "352b". Effective I 87-88.

553. Change prerequisite to "453". Effective I 87-88.


563. DELETE: "Electric Power Systems II (3)"

566. DELETE: "Power System Transients I (3)"

576. NEW COURSE: "Knowledge-Based System Design (3) II Provides a conceptual framework for constructing computer-aided environments to support engineering design. The framework will employ methods of artificial intelligence, theory of modelling, and simulation techniques. Term project involves team work on a selected design problem. P, course in artificial intelligence recommended."

578. Change semester offering to "I". Effective I 88-89.

666. DELETE: "Power System Transients II (3)"

696a. NEW COURSE: "Knowledge-Based Systems and Simulation Models (3) [Rpt./6 units] I P, 574 or 576 or 579."

ENGLISH (Engl.)

251a-251b-251c. NEW COURSE: "Western Civilization, Literary Perspectives (3-3-3) I II S 251a: Ancient Visions. A study of man and woman and their struggle in literature to find patterns and methods for self-completion. 251b: Middle Ages through Enlightenment. Continued study of western man and woman in literature. 251c: 19th and 20th Centuries. Continued study of western man and woman in modern literature. Courses need not be taken in sequence. P, Freshman Composition."

270a-270b-270c-270d. NEW COURSE: "Approaches to Literature (3-3-3-3) I II S 270a: Major Authors. An assessment of the works of one, two, or three major authors, emphasizing the common themes they treat and their different modes of treatment. 270b: Major Works. A study of one or more demonstrably major works in the western tradition which have had a pervasive influence on western thought. 270c. Literary Mode or Genre. A study of how individual literary forms work and how they arise out of specific cultural circumstances. 270d. Major Themes. An introduction to important themes in literature which incorporate, use, and transform ideas in the literary tradition. Courses need not be taken in sequence. P, Freshman Composition."

295a. NEW COURSE: Colloquium: "British Life and Culture (3) I II"


408. Delete "GC". Effective I 87-88. Add "GC". Effective II 87-88.
Add "[Rpt.]". Change description to read: "Explores prosody through discussing and writing of forms and types, research paper. P, 309." Effective II 86-87.

NEW COURSE: "Literature of the Early Republic (3) I Satire, drama, essays, novels, and poetry of the Revolutionary and post-Revolutionary periods; Franklin, Frenneu, Crevecoeur, the Connecticut Wits, C.B. Brown, Irving, Cooper. P, upper-division standing."

Add crosslisting: "(Identical with Ital. 496e)". Effective I 88-89.

Correction to Curriculum Bulletin Vol. 11, No. 17. Delete course.

Change title to "Second Language Acquisition Research". Change semester offering to "II" only. Effective I 88-89.


ENTOMOLOGY (Ento.)

Change title to "Bee Biology and Pollination". Change description to "Natural history of bees stressing their mutualistic relationships with plants. The biology of honey bees, their management for pollination, and as producers of honey and other commodities. 2R. Field trips. P, one course in biology or permission of department. Erickson" Effective II 87-88.

Delete listing. Effective II 87-88.

Add: "Parasitology Laboratory (1) CC I (Identical with V.Sc. 403L)"

Change prerequisite to "444 or a course in population ecology". Effective I 87-88.

DELETE: "Urban Entomology (3)"

DELETE: "Insect Population Sampling (1)"

DELETE: "Biorational Strategies for Insect Control (1)"

DELETE: "Chemical Control (1)"

Change prerequisites to "412, 422, and 430". Effective I 87-88.

DELETE: "Principals of Insect Pest Management (1)"

Change end of description to read: "between populations and abiotic factors". Add "2R, 3L". Add "Field trips". Change prerequisite to "one course in entomology or Ecol. 182". Add instructor’s name: "Moran". Effective I 87-88.

DELETE: "Ecology and Evolution of Insect/Host Plant Associations (1)"

DELETE: "Crop Insect Biology (1)"

NEW COURSE: "Agricultural Entomology (3) GC I Principles underlying the management of arthropods in agricultural systems; Identification, sampling of animals, damage. 2R, 3L. Field trips. P, one course in entomology, Byrne/Terry"

EXERCISE & SPORT SCIENCES (Ex.S.S.) See HEALTH-RELATED PROFESSIONS.
The "General Requirements for the Bachelor of Science in Family and Consumer Resources" are revised as follows:

**GROUP I.**

**BASIC SKILLS AND PROFICIENCIES**
- Freshman Composition: 6
- Communications: 6
- Mathematics: 3
- Computer Skills: 3
- Upper-Division Writing Proficiency Exam**: 6

**GROUP II.**

**STUDY AREAS (Complete five study areas.)**
- A. Western Civilization: 6-9
- B. Biological and Life Sciences (one course to include lab work): 8
- C. Physical and Environmental Sciences: 8
- D. Individuals, Societies and Institutions: 6-9
- E. Non-Western Civilization: 3
- F. Arts, Literature and Language: 6

**GROUP III.**

**FOUNDATION, MAJOR AND MINOR**
- Total Units Required for Graduation: 130

**GROUP IV.**

**ELECTIVES**
- 0-30

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*Groups I and II comprise the General Education Requirement for the College of Agriculture. Students must complete a minimum of 18 units in Group I and 32 units in Group II from a college-approved list.

**Students awarded an unsatisfactory mark must complete an additional writing course from a college-approved list."
597m. Add: Workshop: "*Personal Effectiveness: The Human Factor (1-2) II (Identical with A.Ed. 597m, which is home)" [*Offered only through the Cooperative Extension Service Winter School.]

597n. Add: Workshop: "*Public Policy Issues (1-2) II (Identical with A.Ed. 597n, which is home)" [*Offered only through the Cooperative Extension Service Winter School.]

597s. Add: Workshop: "*Local Government and Extension: A Working Partnership (1-2) II (Identical with A.Ed. 597s, which is home)" [*Offered only through the Cooperative Extension Service Winter School.]

Interior Design (I.D.)

375. Change semester offering to "II". Effective II 87-88.

FINANCE & REAL ESTATE (Fin.)

313. Add "I" to offering. Effective I 87-88.

431. Delete "GC". Effective I 87-88.
   Add "GC". Effective Summer 88.


484. Add: "Development of New Venture Plans (3) II (Identical with M.A.P. 484)"

511. Course revised. New listing reads: "Managerial Finance (3) I II Integration of the basic principles and underlying theory of finance, with emphasis on analytical financial management of business firms and other organizations. Students with credit in Fin. 412 should take Fin. 512. Open only to students admitted to a BPA graduate program. P, Acct. 550." Effective II 87-88.


PREFIX CHANGE: Change departmental prefixes to "Fre." and "Ita.". Effective I 89-90.

The Department of French and Italian has changed the requirements for
1. The French literature major and the French teaching major, Page 274 of the General Catalog: "Literature major: 36 units past the 201a level, including 350, 375a-375b, three 400-level survey courses, and two additional electives from the 400 level, one of which must be a literature course. No fewer than 24 units must be upper-division course work. . . . Teaching major: 36 units past the 201a level, including 350, 375a-375b, 414, three 400-level survey courses, and 6 additional units in the 400 series." Effective I 88-89.

2. The Italian teaching minor, Page 276 of the General Catalog: "Students with teaching minors are required to complete a course in the methodology of foreign-language teaching used in high school and/or junior college." Effective I 88-89.

French (Fren.)

Pages 273-274 of General Catalog. Changes to revised headnotes include: (1) the substitution of "business French" for "commercial and technical French"; (2) under Writing-Emphasis Courses, add: "French 282-283 and Italian 282-283, taught in English, may be offered as Writing-Emphasis courses but do not count toward the major or minor."; (3) substitute for commercial and technical concentration, the following: "Business Emphasis Option: 36 units past the 201 level, including 370a-370b, 375a-375b, 401, 416, 430b. No fewer than 24 units must be from upper-division course work. Among recommended courses for the remaining units are 372, 430a, 470. The minor subject will be chosen in consultation with the major advisor." Effective I 88-89.

101. Course number changed from "101a". Course revised. New listing reads "Elementary French I (4) I II S CDT Listening, speaking, reading, writing; an introduction to the basic structures and vocabulary of French. (Does not count toward the French major or minor.) Also see 302a-302b." Effective I 88-89.

101a. Change course number to "101". Course revised. Effective I 88-89.

101b. Change course number to "102". Course revised. Effective I 88-89. [For new listing, see "102".]

101y. Change course number to "102y". In description, change word "upon" to "on". Effective I 88-89.

102. Course number changed from "101b". Course revised. New listing reads: "Elementary French II (4) I II S CDT Listening, speaking, reading, writing; an introduction to the basic structures and vocabulary of French, continuation. P, 101 or placement. (Does not count toward the French major or minor.) Also see 302a-302b." Effective I 88-89.

102y. Course number changed from "101y". In description, change word "upon" to "on". Effective I 88-89.

201. Course number changed from "201a". Course revised. New listing reads: "Intermediate French I (4) I II S CDT Continued skill development; reinforcement of basic language skills. P, 102 or placement. (Does not count toward the French major.)" Effective I 88-89.

201a. Change course number to "201". Course revised. Effective I 88-89. [For new listing, see "201".]

201b. Change course number to "202". Course revised. Effective I 88-89. [For new listing, see "202".]
201y. Change course number to "202y". In description, change word "upon" to "on". Effective I 88-89.

202. Course number changed from "201b". Course revised. New listing reads: "Intermediate French II (4) I II S CDT Continued skill development; reinforcement of basic language skills. P, 201 or placement." Effective I 88-89.

202y. Course number changed from "201y". In description, change word "upon" to "on". Effective I 88-89.

282. Course number changed from "282a". Course revised. New listing reads: "The French Novel and Society (3) I Counts toward general education requirement in Arts and Literature. Does not count toward fulfillment of language requirement, or the major or minor in French." Effective I 88-89.

282a. Change course number to "282". Effective I 88-89. Course revised. [For new listing, see "282".]

282b. Change course number to "283". Effective I 88-89. Course revised. [For new listing, see "283".]

282c. Course number changed from "282b". Course revised. New listing reads: "Existentialism and the Absurd: The French Foundations (3) II Counts toward general education requirement in Arts and Literature. Does not count toward fulfillment of language requirement, or the major or minor in French." Effective I 88-89.

300a. Change course number to "403". Course revised. Effective I 88-89. [For new listing, see "403".]

300b. Change course number to "402". Course revised. Effective I 88-89. [For new listing, see "402".]

300c. Change course number to "401". Course revised. Effective I 88-89. [For new listing, see "401".]

302a-302b. Change last line in description to read: "302a is the equivalent of 101-102; 302b is the equivalent of 201-202." Effective I 88-89.

305a-305b. In description, change word "upon" to "on". Effective I 88-89.

305a-305b. Change prerequisite to "202". Effective I 88-89.


355. NEW COURSE: "Intensive Composition and Conversation (3) S For students at advanced and high intermediate levels. Materials for discussion and writing exercises are derived from current activities in Paris (films, plays, and other cultural events). Offered in Paris program only. P, 201b or two years' college French." [Note: Prerequisite will change to 202, effective I 88-89.]  

370a-370b. Change title to "Business French". Change prerequisite to "202 or consult department before enrolling". Effective I 88-89.


396H. Add crosslisting "(Identical with W.S. 396H)". Effective I 87-88.
Course number changed from "300c". Course revised. New listing reads:
"French Literature of the 19th and 20th Centuries (3) Survey of French
literature of the period with focus on main literary genres and

DELETE: "Introduction to Medieval French Literature (3)"

Course number changed from "300b". Course revised. New listing reads:
"French Literature of the 17th and 18th Centuries (3) Survey of French
literature of the period with selected readings of major authors,
textual analysis and discussion of historical, social and cultural

Course number changed from "300a". Course revised. New listing reads:
"French Literature of the Middle Ages and 16th Century (3) Survey of
French literature from its beginnings to the Renaissance. Definition
of literary genres with readings of major texts (in modern French). P,
350." Effective I 88-89.

Course numbers changed from "516a-516b". Course revised. New
listing reads: "Literature of the 19th Century (3-3) 1990 -91 516a:
Poetry and theatre. 516b: Novel and short story; intellectual current.
516a is not prerequisite to 516b." Effective I 88-89.

Course numbers changed from "517a-517b". Course revised. New
listing reads: "Literature of the 18th Century (3-3) 1989-90 Study of
ideas in the French Enlightenment. 517a: Rationalist currents. 517b:
Sensibility. 517a is not prerequisite to 517b." Effective I 88-89.
518a-518b. Course numbers changed from "404a-404b". Course revised. New listing reads: "Literature of the 17th Century (3-3) 1990-91 518a: Literature and culture in the first half of the 17th century. 518b: The Classical ideal. 518a is not prerequisite to 518b." Effective I 88-89.

519a-519b. Course numbers changed from "403a-403b". Course revised. New listing reads: "Literature of the 16th Century (3-3) 1989-90 519a: Early Renaissance, Reformation, Rabelais, the Pleiade. 519b: The Humanists, Montaigne, D'Aubigne, the drama. 519a is not prerequisite to 519b." Effective I 88-89.

696i. NEW COURSE: Seminar: "Foreign Language Pedagogy (3) [Rpt.] I II 2R, 1L. P, 579." Effective II 87-88.

Italian (Ital.)

Page 276 of the General Catalog. In headnote for Italian, under the major and the minor, substitute "101-102" for "101a-101b". Effective I 88-89.

101. Course number changed from "101a". Course revised. New listing reads: "Elementary Italian I (4) I II CDT Listening, speaking, reading, writing; an introduction to the basic structures and vocabulary of Italian. (Does not count toward the Italian major or minor.) Also see 102z." Effective I 88-89.

101a. Course number changed to "101". Course revised. Effective I 88-89. [For new listing, see "101"].

101b. Course number changed to "102". Course revised. Effective I 88-89. [For new listing, see "102"].

101z. Change course number to "102z". Change prerequisite to "P, language major or demonstrated language proficiency. Corresponds to 101 and 102." Effective I 88-89.

102. Course number changed from "101b". Course revised. New listing reads: "Elementary Italian II (4) I II S CDT Listening, speaking, reading, writing; an introduction to the basic structures and vocabulary of Italian, continuation. P, 101 or placement. (Does not count toward the Italian major or minor.) Offered each semester. Also see 102z." Effective I 88-89.

102z. Course number changed from "101z". Change prerequisite to "P, language major or demonstrated language proficiency. Corresponds to 101 and 102." Effective I 88-89.

201. Course number changed from "201a". Course revised. New listing reads: "Intermediate Italian I (4) I II CDT Continued skill development; reinforcement of basic language skills. P, 102 or placement. Also see 202z." Effective I 88-88.

201a. Change course number to "201". Course revised. Effective I 88-89. [For new listing, see "201"].

201b. Change course number to "202". Course revised. Effective I 88-89. [For new listing, see "202"].

201z. Change course number to "202z". Change prerequisite to "P, language major or demonstrated language proficiency. Corresponds to 201 and 202." Effective I 88-89.

202. Course number changed from "201b". Course revised. New listing reads: "Intermediate Italian II (4) I II CDT Continued skill development; reinforcement of basic language skills. P, 201 or placement. Also see 202z." Effective I 88-89.
202z. Course number changed from "201z". Change prerequisite to "P, language major or demonstrated language proficiency. Corresponds to 201 and 202." Effective I 88-89.

282. Course number changed from "282a". Course revised. New listing reads: "The Middle Ages: Italian Literature in Translation (3) Detailed study of representative masterpieces of Italian literature of the Middle Ages. Counts toward General Education requirement in Arts or Literature. Does not count toward fulfillment of the language requirement for the major or the minor in Italian." Effective I 88-89.

282a. Change course number to "282". Course revised. Effective I 88-89. [For new listing, see "282a"].

282b. Change course number to "283". Course revised. Effective I 88-89. [For new listing, see "283a".]

282c. DELETE: "Italian Literature in Translation: The Theater (3)"

282d. Change description to: "The Novel. Does not count toward fulfillment of the language requirement for the major or the minor in Italian." Effective I 88-89.

283. Course number changed from "283b". Course revised. New listing reads: "The Renaissance: Italian Literature in Translation (3) Detailed study of representative masterpieces of Italian literature of the Renaissance. Counts toward General Education requirement in Arts or Literature. Does not count toward fulfillment of the language requirement for the major or the minor in Italian." Effective I 88-89.

305a-305b. Change description to: "Emphasis on improving listening, comprehension, speaking and writing." Change prerequisite to "P, 202 or consult department before enrolling." Effective I 88-89.

400a-400b. Change prerequisite to "202 or consult department before enrolling". Effective I 88-89.

402a-402b. Change prerequisite to "202". Effective I 88-89.

404a-404b. Change prerequisite to "202". Effective I 88-89.

406a-406b. Change prerequisite to "202". Effective I 88-89.


420. Change prerequisite to "202". Effective I 88-89.

420b. DELETE: "Italian Civilization (3)". [Note: "420a" became "420" in Curriculum Bulletin Vol. 11, No. 19.]

496e. Add: Seminar: "Comparative Literature (3) [Rpt./9 units] I II S (Identical with Engl. 496e, which is home)". Effective I 88-89.

GENETICS (Gene.)

539. Add: "Statistical Methods (4) I II (Identical with A.Ec. 539)". Effective I 87-88.

539a. Delete course.

539n. Delete course.
539r. Delete course.
539s. Delete course.
568b. Delete course.
620. Change title to "Human Genetics". Effective I 88-89.
638. Add: "Genetics of Plant Cell Cultures (2) I 1988-89 (Identical with Pl.S. 638)"

GEOGRAPHY & REGIONAL DEVELOPMENT (Geog.)

171L. Add: "Introduction to Meteorology and Climatology Laboratory (1) I II (Identical with Atmo. 171L)"

497a. NEW COURSE: Workshop: "Geography for Teachers (3) GC S Acquaints teachers with major themes and ideas of geography. Emphasis on location on the earth's surface; attributes of place; human-environment relations; spatial interaction; the region."

GEOSCIENCES (Geos.)

530. NEW COURSE: "Chemical Evolution of the Earth (3) I Chemical differentiation and evolution of earth's mantle and crust according to major-element, trace-element and isotropic characteristics of neodymium, hafnium, strontium, lead and other isotopes. (Identical with Pty.S. 530)"

596a through 596z. Add "[Rpt./6 units]". Effective I 87-88.

596r. Change title to "Hominoid and Hominid Evolution". Effective II 86-87.
Change title to "Quaternary Geochronology". Effective I 87-88.

GERMAN (Ger.)

320. NEW COURSE: "History of German Cinema (3) I The important films in the development of German cinema of the pre-1945 period and the cinema of the Federal Republic of Germany after 1945 to the present."

GERONTOLOGY (Gero.)


447. Delete "Open to nonmajors". Effective II 87-88.

HEALTH-RELATED PROFESSIONS (H.R.P./Ex.S.S./Hlth./Med.T./O.S.H.)

Exercise & Sport Sciences (Ex.S.S.)

220. NEW COURSE: "Personal Defense (1) I"

269. NEW COURSE: Peak Performance (2) I II Examines approaches to psychological training which lead to peak performance in sport and other endeavors. Develops individualized training procedures for maintaining optimal arousal, motivation, concentration and confidence.

591a. NEW COURSE: Preceptorship: "Cardiac Rehabilitation (1) I II S 1R, 3L. P, 530, 594b, CPR certification."

591b. NEW COURSE: Preceptorship: "Adult Fitness (1) I II S 1R, 3L. P, 530, 594b."

Health Education (Hlth.)

178. Change title to "Introduction to Health Science". Effective II 87-88.

180. DELETE: "Secondary School Health Education (3)"

181. Change course number to "381". Course revised. [For new listing, see "381".] Effective I 88-89.

381. Course number changed from "181". Course revised. New listing reads: "School Health Education (3) I II Emphasis on health science information applicable to health education classes; for students preparing to teach in the public schools." Effective I 88-89.

HISTORY (Hist.)

170. Course number changed from "170b". Course revised. New listing reads: "Indian Civilization (3) (Identical with Or.S. 170)". Effective I 87-88.

170a. Delete course.

170b. Change course number to "170". Course revised. Effective I 87-88. [For new listing, see "170".]


270. Add: "Modern East Asia: A History (3) II (Identical with Or.S. 270)"

272. Add: "Japanese Civilization (3) II (Identical with Or.S. 272)"

351. NEW COURSE: "Race and Class in Latin America (3) II The impact of commercial expansion, urbanization, industrialization, and ideological change on race and class relations in Latin America from the 16th to early 20th century."


421a-421b. Transfer course from Oriental Studies to History. Change course number to "481a-481b". Change title to "History of East Asian Buddhism". Retain crosslisting with Religion. Effective I 87-88.

428. NEW COURSE: "Antisemitism: Successes and Failures of Social Theory (3) GC II 1987-88 Within the focus of a perennially perplexing historical problem, a broad range of social, cultural, political, economic and religious issues will be explored. Specific emphasis on questions of ethnicity and race as they appeared in German Central Europe and in an often multinational context in the period 1860 to 1920. (Identical with Relit. 428)"

457. NEW COURSE: "The Mexican Revolution (3) GC II S A detailed examination of Mexico's social upheaval of 1910, and its implications for contemporary Mexican society. Offered in Guadalajara only."


481a-481b. Course transferred from Oriental Studies to History. Course number changed from "421a-421b". Title changed to "History of East Asian Buddhism". Retain crosslisting with Religion. Effective I 87-88.

481a-481b. Change course number to "491a-491b". Add crosslistings: "(Identical with Or.S. 491a-491b and Reli. 491a-491b)". Effective I 88-89.


491a-491b. Course number changed from "481a-481b". Add crosslistings: "(Identical with Or.S. 491a-491b and Reli. 491a-491b)". Effective I 88-89.

595a. Add "[Rpt.]". Effective 82-83.
595b. Add "[Rpt.]". Effective 82-83.
595c. Add "[Rpt.]". Effective 82-83.
595d. Add "[Rpt.]". Effective 82-83.
595e. Add "[Rpt.]". Effective 82-83.
595f. Add "[Rpt.]". Effective 82-83.
596a. Add "[Rpt.]". Effective 82-83.
596b. Add "[Rpt.]". Effective 82-83.
596c. Add "[Rpt.]". Effective 82-83.
596d. Add "[Rpt.]". Effective 82-83.
596e. Add "[Rpt.]". Effective 82-83.
596f. Add "[Rpt.]". Effective 82-83.
596g. Add "[Rpt.]". Effective 82-83.
596h. Add "[Rpt.]". Effective 82-83.
596i. Add "[Rpt.]". Effective 82-83.
596j. Add "[Rpt.]". Effective 82-83.
596k. Add "[Rpt.]". Effective 82-83.
596l. Add "[Rpt.]". Effective 82-83.
NEW COURSE: "Fundamentals of Water Quality (3) GC I Introduction to chemical processes affecting the behavior of major and minor chemical species in the aquatic environment. Physical, equilibrium, organic, and analytical principles as applied to natural waters. 2R, 3L. Open to majors only. P, Chem. 103b, Phys. 103b and Math 125b."

Change course number to "517". Effective I 87-88.

Change course number to "518". Effective I 87-88.


Change course number to "519". Effective II 87-88.

NEW COURSE: "Vadose Zone Monitoring (2) GC II Laboratory and field methods for characterizing water flow and contaminant transport through unsaturated geologic media. 6L. P, 405."

Change title to "Hydrogeochemistry". Effective II 88-89.

NEW COURSE: "Hydrologic Transport Processes (3) II Development and application of equations describing mass and energy transport in surface and subsurface hydrology. P, 535 or 503, S.I.E. 170."

Course number changed from "402". Effective I 87-88.

Course number changed from "403". Effective I 87-88.

Course number changed from "404". Effective II 87-88.

NEW COURSE: Seminar: "Advanced Hydrologic Modeling (1-3) II P, 642 or consult department prior to enrolling."

Change course number to "520". Effective II 87-88.

Change course number from "408". Effective II 87-88.
NEW COURSE: "Ethics and the Mass Media (3) GC I II Ethical theory of news, journalists' rights and responsibilities, case studies involving the First Amendment and ethics, accuracy, bias, privacy and national security. (Identical with Phil. 439)"

Change title to "Ethics and the News Media". Effective I 87-88.

LANGUAGE, READING & CULTURE (L.R.C.)

Delete "GC" from Section 2. Effective I 87-88.
Add "GC" to Section 2. Effective II 87-88.

NEW COURSE: "Bilingual Reading and Writing (3) I Analysis of reading situations encountered by bilingual students; phonological, semantic and syntactic aspects of instruction; methods and materials. P, 505 or CR." Effective II 86-87.

NEW COURSE: "Multiethnic Literature and Literacy (3) I GRD Analyzes the use of multiethnic literature that fosters self-concept, acceptance, and a sense of identity to develop literacy. Includes readings from the major categories of multiethnic literature about Black, Native, Hispanic, and Asian Americans."

Delete "GRD". Effective I 87-88.

Correction to General Catalog, page 313. Change course number to "597o". Effective I 87-88.
Correction to General Catalog, page 313. Course number changed from "597c". Effective I 87-88.


LATIN AMERICAN STUDIES (La.S.)

Page 314 of the General Catalog, 1987-89: In the paragraph beginning "The student must demonstrate. . .", change Span. "301a" to "301b". Effective I 87-88.

Add "[Rpt.]". Effective I 87-88.

Add "[Rpt.]". Effective I 87-88.

LAW (Law)

Add "I" for offering. Change units to "(3)". Effective II 86-87.

DELETE: "Decedents' Estates (2)"

DELETE: "Trusts and Fiduciary Administration (4)"

Change units to "(3)". Effective II 86-87.

Change units to "(3)". Effective II 86-87.

Course number changed from "696f". Change title to "Constitutional Law II". Change units to "(4)". Change semester offering to "II". Effective II 86-87.

Add "II" for offering. Change title to "Corporations". Effective II 86-87.

Change units to "(3)". Effective II 86-87.
630. Change title to "Law and Humanities". Effective II 86-87.
631. Change units to "(3)". Add crosslisting "(Identical with A.In.S. 631)". Effective I 87-88.
636. Change offering to "I". Effective II 86-87.
637. Change course number to "696k". Add to prerequisite: "or 633b". Effective II 86-87.
655. Add alternate year "1987-88". Effective I 87-88.
659. Add alternate year "1987-88". Effective I 87-88.
664. NEW COURSE: "Law and Social Science (2) II"
665. Add "I" to offering. Effective II 86-87.
667. NEW COURSE: "International Law (3) I II"
696a. Change units to "(2)". Delete "610, 611" from prerequisites. Effective II 86-87.
696b. NEW COURSE: Seminar: "Dispute Resolution (3) II"
696c. Change units to "(2-3)". Effective II 86-87.
696d. DELETE: Seminar: "Juvenile Delinquency (2)"
696e. Change course number to "615". Change title to "Constitutional Law II". Change units to "(4)". Change semester offering to "II". Effective II 86-87.
696g. DELETE: Seminar: "Mass Communication (3)"
696h. Change title to "Labor and Employment Problems". Change units to "(3)". Delete alternate year. Effective I 86-87.
696i. DELETE: Seminar: "Child, Family, and State (3)"
696j. NEW COURSE: Seminar: "Debtor-Creditor Game (1) II"
696k. Course number changed from "637". Add to prerequisite: "or 633b". Effective II 86-87.
6961. NEW COURSE: Seminar: "Problems under the First Amendment (3) II"

696m. DELETE: Seminar: "Landlord and Tenant (2)"

696m. NEW COURSE: Seminar: "World Peace through Law (2)"

696n. NEW COURSE: Seminar: "Advanced Writing (3) II"

696o. Change title to "Mental Health Law". Change units to "(2)". Change offering to "II". Add alternate year "1987-88". Effective II 86-87.

696q. NEW COURSE: Seminar: "Tax Policy (3)"

696r. NEW COURSE: Seminar: "Public Interest Law (3)"

696w. NEW COURSE: Seminar: "Warren Court (3)"

696pp. Change course number to "671". Course revised. Effective I 87-88. [For new listing, see "671".]

LIBRARY SCIENCE (Li.S.)

480. Change course number to "580". Course revised. Effective I 87-88. [For new listing, see "580".]

503. Change number of units to "(3)". Effective Summer I 88.

504. Change number of units to "(3)". Effective Summer II 88.

506. Change number of units to "(3)". Effective Summer II 88.

563. DELETE: "Communication in Libraries: Public Service (1)"

580. Course number changed from "480". Course revised. New listing reads: "Children's Literature for Librarians (3) I II Literature to promote literary appreciation and to meet the needs of children through preadolescence." Effective I 87-88.

696a. NEW COURSE: Seminar: "Current Research Trends (1-4) [Rpt.] I II P, permission of school."

697a. NEW COURSE: Workshop: "Issues in Library and Information Science (1-4) [Rpt.] I II"

LINGUISTICS (Ling.)

101. Change title to "Introduction to Language". Effective I 88-89.

400. NEW COURSE: "Foundations of Syntactic Theory I (3) GC I An introduction to fundamental issues in the theory of syntax, including phrase structure, the opacity conditions, government, control, binding, thematic relations, and theory of logical form. Intended to familiarize the student with the essentials of the Extended Standard Theory and related developments."

451. Change title to "Language Acquisition". Effective II 88-89.

472. NEW COURSE: "Computational Linguistics (3) GC I Fundamentals of formal language theory; syntactic and semantic processing; the place of world knowledge in natural language processing. P, a course in one of the following: formal languages, syntax, data structures, or compilers."

564. Add: "Formal Semantics (3) I (Identical with Phil. 564)"

696g. NEW COURSE: Seminar: "Topics in Experimental Phonology (3) [Rpt./2]"
400. Replace "Open only to M.B.A. and M.P.A. degree candidates." with "Open only to graduate students. This course cannot be credited toward the completion of a bachelor's degree." Effective I 88-89.

411. Correction to Curriculum Bulletin Vol. 11, No. 18. Course was erroneously deleted in M.A.P., the home department. Retain course. [Only crosslisting with Ed.F.A. should have been deleted.]

481. Add: "Finance and New Venture Development (3) I (Identical with Fin. 481)"

483. NEW COURSE: "Marketing Planning and Operational Decision-Making (3) II New product development; marketing programming and strategy; bargaining technique; individual and group decision-making processes. Open only to entrepreneurship program students. P, Econ. 330, Fin. 311, Mktg. 361. (Identical with Mktg. 483)" [Note: This is a General Management and Policy course.]

484. NEW COURSE: "Development of New Venture Plans (3) II Preparation and presentation of a comprehensive business plan. Integration of financial, operational, and marketing elements. Open only to entrepreneurship program students. P, Econ. 330, Fin. 311, Mktg. 361. (Identical with Fin. 484)" [Note: This is a General Management and Policy course.]

552. Change prerequisite to "M.I.S. 400 or Math. 119 and 123". Effective I 87-88.

567. Change prerequisites to: "M.A.P. 552, M.I.S. 501, and Acct. 550".

568. Change crosslisting to "(Identical with Mktg. 568)". Effective I 87-88.

595a. Change title to "Local Government Administration". Effective I 87-88.


696pp. Change course number to "671". Course revised. Effective I 87-88. [For new listing, see "671"].

MANAGEMENT INFORMATION SYSTEMS (M.I.S.)

275. Transfer course to Department of Statistics. Effective II 87-88.


400. Replace "Open only to M.B.A. and M.P.A. degree candidates." with "Open only to graduate students. This course cannot be credited toward the completion of a bachelor's degree." Effective I 88-89.

422. Add "GC". Effective II 86-87.

461. Delete "GC". Effective I 87-88.
Add "GC". Effective I 88-89.

461. Change prerequisites to "310 or 551". Effective II 87-88.

580. NEW COURSE: "Introduction to Expert Systems (3) I II An in-depth technical background of the concepts and skills essential to analysis, design and development of business expert systems. Open only to BPA graduate students."

622. NEW COURSE: "Mathematical Programming and Applications (3) I II Overview of mathematical programming techniques and business applications. Emphasis on model building and problem description. Open only to BPA graduate students."

671. NEW COURSE: "Domestic and International Issues (3) I Information technologies and their applications in national and international economic, political and social settings. Open only to BPA graduate students. P, 511 or consult with department before enrolling."

MARKETING (Mktg.)

451. Change course number to "551". Course revised. Effective II 87-88. [For new listing, see "551".]

480. NEW COURSE: "New Venture Market and Industry Analysis (3) I Assessment of market opportunity; competitive strategy development, market structure analysis, forecasting techniques. Open only to entrepreneurship program students. P, 361, Econ. 330, Fin. 311. (Identical with Econ. 480)"

483. Add: "Marketing Planning and Operational Decision-Making (3) II (Identical with M.A.P. 483)"


557. NEW COURSE: "Industrial Marketing (3) II Problems and methods of marketing decision making in industrial, government and high-tech markets. P, 500."

568. Course transferred from Economics to Marketing. Course revised. New listing reads: "An MBA integrative course. How information from the economy can be used to develop a firm's competitive strategy. Multi-disciplinary, using concepts from economics, marketing and management. Open only to BPA graduate students. P, 500, Econ. 500, Fin. 511. (Identical with Econ. 568 and M.A.P. 568)." Effective I 87-88.

572. Change course number to "672". Course revised. Effective I 87-88. [For new listing, see "672".]
696c. Change course number to "696b". Change semester offering to "II". Change prerequisite to "696a". Effective I 87-88.

696c. NEW COURSE: Seminar: "Marketing Management and Strategy (3) I 1988-89 P, admission to marketing graduate program or approval of department."

696d. NEW COURSE: Seminar: "Consumer Behavior (3) I 1987-88 P, admission to marketing graduate program or approval of department."

696e. NEW COURSE: Seminar: "Marketing Organization and Systems (3) II 1988-89 P, 696a or approval of department."


MATERIALS SCIENCE & ENGINEERING (M.S.E.)

430a-430b. Course number changed from "430aR-430bR". Effective I 87-88.

430aR-430bR. Change course number to "430a-430b". Effective I 87-88.

433. NEW COURSE: "Science and Technology of Magnetic Recording Materials (3) GC I Magnetic properties of materials, materials for magnetic recording, technology of magnetic recording. P, a basic course in chemistry or materials science."


460. Change course number to "560". Effective II 87-88. [Note: Final]

471. NEW COURSE: "The Formation and Structure of Glass (3) [Rpt./2] GC II The glass transition, Kauzmann's paradox, kinetic theory of glass formation, physics and chemistry of glassmaking, glass structure, thermal properties. P, 470 recommended but not required."

471. Change course number to "571". Description changed. Effective II 87-88. [For new description, see "571".]


472. Change course number to "572". Course revised. [For new listing, see "572".] Effective I 88-89.


560. Change course number to "460". Course revised. [For new listing, see "460".] Effective II 87-88.

560. Course number changed from "460". Effective II 87-88. [Note: Final]


MATHEMATICS (Math.)

120. NEW COURSE: "Calculus Prep (3) I II S Reviews manipulative algebra and trigonometry; covers uses of functional notation, partial fraction decomposition and analytic geometry. For students who have credit in college algebra and trigonometry but have not attained a sufficient score on the Math Readiness Test to enter calculus. P, high school or university credit in college algebra and trigonometry, math readiness score of 13 or higher."

396b. NEW COURSE: Proseminar: "Investigations in Mathematics Education (1) [Rpt./3 units] I II S P, 305."

485. NEW COURSE: "Mathematical Modelling (3) GC II Development, analysis, and evaluation of mathematical models for physical, biological, social, and technical problems; both analytical and numerical solution techniques are required. P, 421, CR 475b, S.I.E. 320a. Writing Emphasis Course. P, satisfaction of the upper-division writing-proficiency requirement (see "Writing-Emphasis Courses" in the Academic Guidelines section of this catalog)."

534a-534b. Delete alternate year. Add semester offerings "I" and "II". Effective I 87-88.

MEDIA ARTS (M.Ar.)


208. Change title to "Law of the Press". Effective I 87-88. [Note: Title change was made to Jour. 208, the home department's course, in Curriculum Bulletin Vol. 12, No. 2.]

214. Change number of units to "(4)". Change class structure to "3R, 3L". Effective I 87-88.


MEDICINE (Med./Anes./F.C.M./I.Med./Neur./Ob.G./Oph./Path./Ped./Psy.i./Ronc./Radi.)

Interdepartmental (Med.)


811b. NEW COURSE: Subinternship: "Intensive Care (4) P, successful completion of third year medical school."

896d. DELETE: Seminar: "Pathogenesis and Approach to Immunological Diseases (2)"

41
Family & Community Medicine (F.C.M.)

596e/896e. DELETE: Seminar: "Occupational and Environmental Health (1-3)"

596v/896v. NEW COURSE: Seminar: "Interpersonal Violence (2) II Field trips. P, permission of department."

596v/896v. DELETE: Seminar: "Interpersonal Violence (2)"

815d. Change title to: "Problems in Community Oriented Primary Care". Effective II 87-88.

Internal Medicine (I.Med.)

810a. NEW COURSE: Clerkship: "Ambulatory Care (4-6) [Rpt./12 units] I II S P, completion of third year of medical school."


Neurology (Neur.)

500. DELETE: "Research (2-16)"

815n. Delete course.

891b. DELETE: Preceptorship: "Personal Preceptorship in Neurology (3)"

891b. NEW COURSE: Preceptorship: "Neurology Practice (3) P, 803."

815r. Correction to Curriculum Bulletin Vol 11, No. 18. As Neurology was a crosslisting department, "DELETE" should have been "Delete course".

Pediatrics (Ped.)

815k. DELETE: Subspecialty: "Pediatric Clinical Pharmacology (1-12)"

MEXICAN AMERICAN STUDIES (M.A.S.)


MICROBIOLOGY AND IMMUNOLOGY (Micr.)

403L. Add: "Parasitology Laboratory (1) GC I (Identical with V.Sc. 403L)"

MINING & GEOLOGICAL ENGINEERING (G.En./Mn.E./Mn.Ec.)

Geological Engineering (G.En.)

120. Change course number to "124". Effective I 87-88.

124. Course number changed from "120". Effective I 87-88.

311. DELETE: "Engineering Ethics (1)"

325. Correction to Curriculum Bulletin Vol. 11, No. 17: Only crosslisting with M.S.E. 325 should have been deleted. Retain Mn.E. 325 (home) and crosslisting with G.En. 325. Home listing reads: "Principles of Health and Safety in the Mineral Industry (2) I Fundamental concepts of loss control in the mineral industry; includes a review of state and federal regulations and standards and instruction in program management, industrial hygiene, safety, toxicology, fire protection, workers' compensation and mine rescue. (Identical with G.En. 325)". Effective I 87-88.
Correction to Curriculum Bulletin Vol. 11, No. 16. Effective date for course number change, etc., should have been "II 86-87".

DELETE: "Mining Geology (2)"

Correction to General Catalog. Mining Engineering is home. Retain crosslisting with Geological Engineering. Effective I 87-88.

Correction to General Catalog. Mining Engineering is home. Retain crosslisting with Geological Engineering. Effective I 87-88.

Correction to Curriculum Bulletin Vol. 11, No. 16. Effective date for course number change, etc., should have been "II 86-87".

DELETE: "Subsurface Exploration Methods (3)"

DELETE: "Simulation Gaming in Exploration (3)"

Mining Engineering (Mn.E.)

Change course number to "406". Add "GC". Effective II 87-88.

Change course number to "410". Add "GC". Effective II 87-88.

Delete course.

DELETE: "Rock Fragmentation (2)"

Change course number to "333". Effective I 87-88.

Course number changed from "330". Effective I 87-88.

Course number changed to "433". Course revised. Effective I 89-90. [For new listing, see "433".]

Change course number to "497a". Add "GC". Effective II 87-88.

Course number changed from "304". Add "GC". Effective II 87-88.

Course number changed from "310". Add "GC". Effective II 87-88.

Change course number to "435". Effective I 87-88.

Course number changed from "333". Course revised. New listing reads: "Elements of Coal Mining (3) GC 1989-90 Coal geology, properties and use. Surface and underground methods and equipment strip mining; continuous, conventional, longwall mining; ground control; ventilation; haulage; electrical power; drainage. Preparation and reclamation. P, 220, 304, E.C.E. 207. Daemen" Effective I 89-90.

Course number changed from "420". Effective I 87-88.

Correction to General Catalog. Mining Engineering is home. Retain crosslisting with Geological Engineering. Effective I 87-88.

Correction to General Catalog. Mining Engineering is home. Retain crosslisting with Geological Engineering. Effective I 87-88.

Course number changed from "397a". Add "GC". Add "I" to semester offering. Effective II 87-88.

DELETE: "Advanced Design of Mining Systems (3)"
461. Course number changed from "463". Effective I 87-88.


463. Change course number to "461". Effective I 87-88.

463a-463b. Course numbers changed from "464aL-464bL". Effective I 87-88.

464a-464b. Course numbers changed from "464aR-464bR". Change title to "Lectures in Human Physiology". Effective I 87-88.

464aR-464bR. Change course numbers to "464a-464b". Change title to "Lectures in Human Physiology". Effective I 87-88.

464aL-464bL. Change course numbers to "463a-463b". Effective I 87-88.

568b. Delete course.

MUSIC (Mus./Musi.)

Page 86 of the Graduate Catalog in the paragraph beginning "SPECIFIC REQUIREMENTS FOR THE MAJOR IN PERFORMANCE", delete the sentence in parentheses: "(this recital must include a major work assigned by the instructor of applied music and prepared independently by the student within a period of 30 days)". Effective II 87-88.

Pages 367-369 of the General Catalog and Pages 242-243 of the Graduate Catalog, under "Performance Studies: Individual and Group Instruction", change first sentence under heading in both catalogs to read: "All courses listed below are offered both first and second semesters and may be repeated." Effective II 87-88.

Music (Mus.)

101a-101b. Course revised. New listing reads: "Exploring Music through Piano for General Students (3-3) 101a: Introduces and develops basic concepts of music as a creative process in studying piano. Includes music fundamentals, beginning improvisation, playing by ear, chording to melodies, music reading, and repertory. 101b: A continuation of 101a. More advanced levels of the skills and concepts in 101a, including ensemble playing and piano concert field trips. P, 101a or by audition/interview." Effective I 87-88.

525. NEW COURSE: "History and Literature of the Wind Band (3) A research-oriented study of wind band history and literature from the Renaissance to the present."

551. NEW COURSE: "Behavioral Research in Music (3) I S 1988-89 Research methodologies as they apply to musical behavior; emphasis on applying the results of existing studies to practice and on conducting original research. [Note: This is a music education course.]"

Music Performance Studies (Musi.)

585a. NEW COURSE: "Performance Studies: Individual and Group Instruction / Oboe (1-4) [Rpt./4] I II S"

585b. NEW COURSE: "Performance Studies: Individual and Group Instruction / Bassoon (1-4) [Rpt./4] I II S"

585c. NEW COURSE: "Performance Studies: Individual and Group Instruction / Clarinet (1-4) [Rpt./4] I II S"

585d. NEW COURSE: "Performance Studies: Individual and Group Instruction / Horn (1-4) [Rpt./4] I II S"
NEW COURSE: "Performance Studies: Individual and Group Instruction / Baritone (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Flute (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Guitar (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Harp (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Harpsichord (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Violin (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Viola (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Cello (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / String bass (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Organ (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Piano (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Conducting (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Trombone (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Saxophone (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Trumpet (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Voice (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Tuba (1-4) [Rpt./4] I II S"

NEW COURSE: "Performance Studies: Individual and Group Instruction / Percussion (1-4) [Rpt./4] I II S"

NEW COURSE: "Master's Recitals (Credit varies) For master's students in music performance." [Note: This is a house-numbered, individual studies course. Grades available: S/F, E, K, W.]

Change title of this house-numbered course to "Doctoral Recitals". Change description to read: "For doctoral students in music performance." Effective II 87-88.

NUCLEAR & ENERGY ENGINEERING (N.E.E.)

DELETE: "Energy Engineering Principles (3)". Effective II 88-89.

Change class structure to "3R". Effective II 87-88.
NEW COURSE: "Energy Engineering Management (3) GC II Methods for evaluating the technical and economic aspects of energy conversion and usage directed toward the effective utilization of resources, including economics, HVAC systems, electric power, lighting and industrial processes. P, A.M.E. 240."

Delete listing.

NURSING (Nurs.)

Course number changed from "359". Course revised. New listing reads: "Perspectives of Nursing and Health Care (3) I II Orientation to nursing as a profession including an overview of the health care delivery system within the context of societal needs and social structures. Required of nursing majors. Open to nonmajors; consult with department before enrolling." Effective I 89-90.

Course number changed from "353". Course revised. New listing reads: "Nursing Process and Health Assessment (4) I II Application of scientific knowledge for assessment of basic and developmental needs; use of nursing process to promote health, prevent illness and provide continuing care. Open to majors only. P, 251, CR 279." Effective II 89-90.

Course number changed from "379". Course revised. New listing reads: "Nurse as a Consumer and Use of Research (3) I II Development of analytical skills related to use of research findings; introduction to research process. Open to majors only. P, 251, CR 263." Effective II 89-90.

NEW COURSE: "Pathophysiology (3) I II Provides a conceptual integrative approach to selected pathophysiological phenomena and human responses to illness. Nonmajors who wish to enroll should consult the department. P, Chem 101a-101b, 102a-102b, Ecol. 159a-159b, 160a-160b, and 181." Effective II 89-90.

Course number changed from "354". Course revised. New listing reads: "Nursing Skills for Care Provider (6) I II Provide students with basic nursing skills for the care provider. Includes selected psychosocial and psychomotor skills used in assisting individuals, families and groups in meeting their health care needs. Open to majors only. P, 263, 279, CR 350, 372." Effective I 90-91.

Change course number to "263". Course revised. Effective II 89-90. [For new listing, see "253"].

Change course number to "352". Course revised. Effective I 90-91. [For new listing, see "352"].

Change course number to "251". Course revised. Effective I 89-90. [For new listing, see "251"].

Change course number to "384". Course revised. Effective II 90-91. [For new listing, see "384"].

Course number changed from "373a". Course revised. New listing reads: "Nurse as Care Provider for Developing Families (5) I II Concepts, principles and techniques for care with developing families; clinical practice focuses upon providing care to newborns and their families. Open to majors only. P, 263, 279, CR 350, 352." Effective I 90-91.

Change course number to "372". Course revised. Effective I 90-91. [For new listing, see "372"].

Change course number to "472". Course revised. Effective I 91-91. [For new listing, see "472"].
375. Change course number to "475". Course revised. Effective I 91-92. [For new listing, see "475".]

379. Change course number to "279". Course revised. Effective II 89-90. [For new listing, see "279".]

381. Change course number to "481". Course revised. Effective I 91-92. [For new listing, see "481".]

382. Change course number to "383". Course revised. Effective II 90-91. [For new listing, see "383".]


387a. Change course number to "485". Course revised. Effective II 91-92. [For new listing, see "485".]

387b. Change course number to "486". Course revised. Effective II 91-92. [For new listing, see "486".]

388. Change course number to "488". Course revised. Effective II 91-92. [For new listing, see "488".]

389. DELETE: "Research Methods in Nursing (2)". Effective II 91-92.


Course number change from "388". Course revised. New listing reads: "Contemporary Professional Issues (2) I II Nursing health care and societal issues which influence nursing roles and the practice of professional nursing. Open to majors only. P, 472, 475, 481, CR 485, 486. Writing-Emphasis Course. P, satisfaction of the upper-division writing-proficiency requirement (see "Writing-Emphasis Courses" in the Academic Guidelines section of this catalog)." Effective II 91-92.

NUTRITION & FOOD SCIENCE (N.F.S.)


568b. Delete course.

ORIENTAL STUDIES (Or.S.)

140. Course number changed from "140a". Course revised. New listing reads: "South Asian and Middle Eastern Humanities (3) Major trends and traditions in the arts, literatures and languages, religions and philosophies of the Middle East, India and Pakistan. (Identical with Reli. 140)". Effective II 87-88.

140a. Change course number to "140". Course revised. Effective II 87-88. [For new listing, see "140a".]

140b. Change course number to "142". Course revised. Effective II 87-88. [For new listing, see "142".]


170. Course number changed from "170b". Course revised. New listing reads: "Indian Civilization (3) Survey of the traditional and contemporary social, political and thought patterns of India. (Identical with Hist. 170)". Effective I 87-88.

170a. DELETE: "Introduction to Asian Civilizations (3)"

170b. Change course number to "170". Course revised. Effective I 87-88. [For new listing, see "170".]

174. NEW COURSE: "Chinese Civilization (3) I Survey of the key elements of traditional and modern Chinese civilization. Changes in the modern period and contrasts with the West are examined."


270. NEW COURSE: "Modern East Asia: A History (3) II Historical survey of China and Japan during the 19th and 20th centuries, along with the factors that have influenced these East Asian countries. (Identical with Hist. 270)"

272. NEW COURSE: "Japanese Civilization (3) II A multidisciplinary introduction to the social and political values and institutions, aesthetic traditions and history of Japan from early times to the present day. (Identical with Hist. 272)"

312. NEW COURSE: "Self in Society: Japan and India (3) I A survey of the contemporary societies of India, China and Japan, with emphasis on the transformation of traditional ways of life."


421a-421b. Transfer course from Oriental Studies to History. Change course number to "481a-481b". Change title to "History of East Asian Buddhism". Retain crosslisting with Religion. Effective I 87-88.


481a-481b. Course transferred from Oriental Studies to History. Course number changed from "421a-421b". Title changed to "History of East Asian Buddhism". Retain crosslisting with Religion. Effective I 87-88.


487. NEW COURSE: "Women in South Asia (3) GC II 1987-88 The history of women in South Asian societies, with emphasis on changes in traditional roles during the colonial and post-colonial periods. (Identical with W.S. 487)"

491a-491b. Add: "History of East Asian Buddhism (3-3) GC (Identical with Hist. 491a-491b)". Effective I 88-89.


496n. Change number of units to "(3)". Effective II 87-88.


PHARMACEUTICAL SCIENCES (Ph.Sc.)

302a-302b. Change units to "(5-3)". Effective I 88-89.

407. Change number of units to "(4)". Add crosslisting: "(Identical with Ph.Pr. 407)". Effective I 88-89.
408a-408b. NEW COURSE: "Pharmacokinetics Discussion (1-1) GC I II Discussion related to the application of pharmacokinetic principles with case-study examples. CR, 407 for 408a, 885 for 408b. (Identical with Ph.Pr. 408a-408b)."

475a-475b-475c. Delete listing. Effective II 88-89.


596d. NEW COURSE: Seminar: "Pharmaceutics (1) [Rpt./5 units] I II"

8151. Add: "Pharmacy Subspecialty: Research (3-10) I II S 15-30L. P, 10 units of 810 or CR. (Identical with Ph.Pr. 8151, which is home)". Effective I 88-89.

885. Add: "Advanced Clinical Pharmacokinetics (3) II (Identical with Ph.Pr. 885)". Effective I 88-89.

PHARMACOLOGY (Phcl.)

495a. Add: "Introduction to the Neurosciences I (2) GC 1989-90 (Identical with Med. 495a, which is home)." Effective S 1987.

495b. Add: "Introduction to the Neurosciences II (2) GC 1989-90 (Identical with Med. 495b, which is home)." Effective S 1987.

PHARMACOLOGY & TOXICOLOGY (Pcol./Tox.)

Pharmacology (Pcol.)

475a-475b-475c. Delete listing. Effective II 88-89.

8151. Add: "Pharmacy Subspecialty: Research (3-10) I II S 15-30L. P, 10 units of 810 or CR. (Identical with Ph.Pr. 8151, which is home)" Effective I 88-89.

Toxicology (Tox.)

463a-463b. Course numbers changed from "464aL-464bL". Effective I 87-88.

464a-464b. Course numbers changed from "464aR-464bR". Change title to "Lectures in Human Physiology". Effective I 87-88.

464aR-464bR. Change course numbers to "464a-464b". Change title to "Lectures in Human Physiology". Effective I 87-88.

464aL-464bL. Change course numbers to "463a-463b". Effective I 87-88.

581. NEW COURSE: "Industrial Ventilation (3) II 1987-88 Design and evaluation of industrial ventilation systems. Emphasis is on level exhaust systems used to control industrial contaminants. Five laboratory exercises and course design project. 3R, 1L."

PHARMACY PRACTICE (Ph.Pr.)

303. Course number changed from "303a". Course revised. New listing reads: "Introduction to Pharmacy Practice (1) I". Effective I 88-89.

303a. Change course number to "303". Course revised. Effective I 88-89. [For new listing, see "303".]

303b. DELETE: Clinical Clerkship: "Long Term Care (1)"

303c. Change course number to "305". Change semester offering to "II". Delete "Field trips". Effective I 88-89.
303d. Change course number to "304". Change semester offering to "I". Delete "Field trips". Effective I 88-89.

303e. Change course number to "414". Change semester offering to "II". Delete "Field trips". Effective I 89-90.

304. Course number changed from "303d". Change semester offering to "I". Delete "Field trips". Effective I 88-89.

305. Course number changed from "303c". Change semester offering to "II". Delete "Field trips". Effective I 88-89.


408a-408b. Add: "Pharmacokinetics Discussion (1-1) GC I II (Identical with Ph.Sc. 408a-408b)"

410. Change course number to "413". Change semester offering to "II". Effective I 89-90.

412. Change semester offering to "I". Change prerequisite to "305". Effective I 88-89.

413. Course number changed from "410". Change semester offering to "II". Effective I 89-90.

414. Course number changed from "303e". Change semester offering to "II". Delete "Field trips". Effective I 89-90.

447. Delete "Open to nonmajors". Effective II 87-88.

475a-475b-475c. Change number of units to "(6-6-8)". Change semester offerings to "II" for 475a, "I" for 475b, and "I" for 475c. Delete crosslistings with Pcol. 475a-475b-475c and Ph.Sc. 475a-475b-475c. Effective II 88-89.


803e. NEW COURSE: Clinical Clerkship: "Adult Acute Care Pharmacy Practice (5) [Rpt./10 units] I II P, 861, 875."

8151. Add crosslistings: "(Identical with Ph.Sc. 8151 and Pcol. 8151)". Effective I 88-89.

885. Add crosslisting: "(Identical with Ph.Sc. 885)". Effective I 88-89.

896a. Change semester offering to "II". Effective I 89-90.

896b. DELETE: Seminar: "Pharmacy Practice Research (1)"

896c. DELETE: Seminar: "Infectious Disease (2)"
NEW COURSE: "Philosophical Foundations of Western Civilization: Justice and Virtue (3) I II S Classical, medieval, and modern moral and political thought: theories of human good, natural rights, political obligation, relation of individual and state, class conflict."

NEW COURSE: "Philosophical Foundations of Western Civilization: Mind, Matter, and God (3) I II S Classical, medieval, and modern metaphysical questions: What am I—mind, body, or both? Is the nature of the world ultimately physical? What is God? How may we know?"

NEW COURSE: "Philosophical Foundations of Western Civilization: Science and Inquiry (3) I II S Classical, medieval and modern approaches to science, mathematics and knowledge; philosophical problems raised by discovery and change."


NEW COURSE: "Minds, Brains and Computers (3) [Rpt.] I An introduction to cognitive science; current issues relating to minds as computers, neuroscience, vision and language. (Identical with Psyc. 350)"

Add: "Ethics and the Mass Media (3) GC I II (Identical with Jour. 439)"

Change title to "Ethics and the News Media". Effective I 87-88.

Add: Proseminar: "Special Topics in Cognitive Science (3) GC II (Identical with Psyc. 496a, which is home)"

NEW COURSE: "Formal Semantics (3) I Introduction to model-theoretic investigations of natural language interpretation, including coordination, quantification, referential relations, tense, aspect, and modality. (Identical with Ling. 564)"

NEW COURSE: "Introduction to Computational Physics (3) II An introduction to numerical techniques physicists actually employ to solve real physics problems. Its focus is on problems whose solution can best be obtained numerically and on the use of the standard mathematics and graphics packages. Sample physics topics include chaos and nonlinear mechanics, quantum perturbation theory and eigenvalues, particle trajectories, and stellar structure. P, Phys. 110, 116, 121."

NEW COURSE: "Topics in Theoretical Astrophysics (3) [Rpt.] I Current topics in theoretical astrophysics in depth, with emphases on the methodology and techniques of the theorist and the cross-disciplinary nature of astrophysical theory. Example subjects are nuclear astrophysics, hydrodynamics, transient phenomena, planetary interiors and atmospheres, neutron stars, jets, and the evolution of star clusters. (Identical with Astr. 589 and Pty.S. 589)"

NEW COURSE: Colloquium: "Graduate Physics Laboratory (3) [Rpt./2] II Introduction to modern research methods and experiments. Problems in low-temperature physics, solid-state, atomic, and nuclear spectroscopy; computer-based data acquisition and analysis; solar-energy physics; and others."
PHYSIOLOGY (Psio.)

503. Course revised. New listing reads: "Cellular Physiology (4) I Fundamental responses of living organisms to environmental changes, by examining mechanisms which operate at the cellular level. Topics include organelle structure and function, transmembrane homeostasis and transport phenomena, excitability, intercellular and intracellular communication, cellular motility, and nerve-muscle-synapse function. P, Chem. 103b, 104b, 241b, 243b; Phys. 102b; Math. 125a-125b; Bioc. 460." Effective I 87-88.

595a-595i/895a-895i. NEW COURSES: Colloquia:
   b. Muscle Physiology (2) [Rpt./6] I II P, 503.
   c. Endocrinology (2) [Rpt./6] I II
   d. Renal Physiology (2) [Rpt./6] I II P, 601/801, 602.
   e. Molecular and Cellular Excitability (2) [Rpt./6] I II
   g. Membranes and Transport (2) [Rpt./6] I II
   h. Systems Neurophysiology (2) [Rpt./6] I II
   i. Introduction to Personal Computers in Physiology (2) [Rpt./6] I II

600. DELETE: "Mathematical Techniques in Physiology (3)"

601. Course revised. New listing reads: "Systems Physiology (8) II Comprehensive coverage of systemic physiology with emphasis on the underlying principles of function. Provides an overview of systems level neuroscience and, in conjunction with 602 and 801, concludes with an integrative section. P, Chem. 103b, 104b, 241b, 243b; Phys. 102b. May enroll for credit in 601 or 602, but not both. Consult department before enrolling." Effective II 87-88.

602. Course revised. New listing reads: "Systems Physiology for Neuroscience Students (7) II Comprehensive coverage of systemic physiology with emphasis on the underlying principles of function. Includes overviews of cardiovascular, renal, respiratory, gastrointestinal, and endocrine physiology and concludes with an integrative section. Offered in conjunction with 601 and 801. P, Chem. 103b, 104b, 241b, 243b; Phys. 102b. May enroll for credit in 601 or 602, but not both. Consult department before enrolling." Effective II 87-88.

606. DELETE: "Readings in Neuroscience (4)"

610. Course revised. New listing reads: "Research Methods in Physiology (1-3) [Rpt./10 units] I II Lab courses providing students with an understanding of the types of research available in the department. (Maximum length is 8 weeks.) Consult with department before enrolling." Effective I 87-88.

696a. Course revised. New listing reads: "Physiology Seminar Series (1) [Rpt./3] I II Open to majors only." Effective I 87-88.

696b. Course revised. New listing reads: "Physiology Seminar: Preparation and Presentation (1) [Rpt.] I II Open to majors only. Consult department before enrolling." Effective I 87-88.

697a. NEW COURSE: Workshop: "Physiology Tutorial (3) [Rpt./4] I II P, 503, 601 or 602. Consult department before enrolling."

895a-895i. NEW COURSES: For listings, see 595a-595i above.
PLANETARY SCIENCES (Pty.S.)

530. Add: "Chemical Evolution of the Earth (3) I (Identical with Geos. 530)


589. Add: "Topics in Theoretical Astrophysics (3) [Rpt.] I (Identical with Phys. 589)"

PLANNING (Plng.)

474. Change course number to "484". Retain crosslisting with Architecture. Effective I 87-88.

484. Course number changed from "474". Retain crosslisting with Architecture. Effective I 87-88.

PLANT PATHOLOGY (Pl.P.)


PLANT SCIENCES (Pl.S.)

101. NEW COURSE: "Plant Sciences Laboratory (1) I II Laboratory exercises in plant sciences. P, 100 or CR. Dobrenz"

110. DELETE: "Agronomic and Horticultural Crop Science (3)"


638. NEW COURSE: "Genetics of Plant Cell Cultures (2) I 1988-89 Comprehensive study of the genetic changes that occur during growth of plant cells, and genetic manipulations in vitro including mutant selection, genomic rearrangements, somatic hybridization and transformation. P, 312 or Ecol. 320, Ecol. 260 or M.C.B. 460. (Identical with Gene. 638)"

POLITICAL SCIENCE (Pol.)

450. NEW COURSE: "Religion and Politics (3) GC II A comparative examination of the relationship between religion and politics in the contemporary world. (Identical with Reli. 450)"

526. Add: "Cross-National Research Methods (3) II (Identical with Soc. 526)"

PSYCHOLOGY (Psyc.)

101. Change number of units to "(4)". Effective I 88-89.


311. Course number changed from "411". Delete "Writing Emphasis Course". Effective I 88-89.

350. Add: "Minds, Brains and Computers (3) [Rpt.] I (Identical with Phil. 350)"

NEW COURSE: "Psychology of Sexuality (3) S An overview of psychological aspects of sexuality with emphasis on the application of the different fields of psychology on various topics of sexuality. P, one psychology course or permission of the department."

Delete "GC". Effective S II 1987.
Add "GC". Effective I 87-88.

Change course number to "311". Delete "Writing-Emphasis Course". Effective I 88-89.

DELETE: "Comparative Psychology (3)"

NEW COURSE: Proseminar: "Special Topics in Cognitive Science (3) GC II (Identical with Phil. 496a)"

DELETE: "Theory and Research in Environmental Psychology (3)"

Correction to Curriculum Bulletin Vol. 11, No. 19. Add: "[Rpt.]".

NEW COURSE: "Clinical Principles of Behavior Modification (3) I Systematic review of the major theories of behavior modification, with emphasis on application to clinical problems. Open to graduate psychology majors only."

Correction to Curriculum Bulletin Vol. 11, No. 19. Add: "[Rpt./2]".

READING (Rdng.) (Note: Name change to Language, Reading & Culture was effective I 87-88. These changes occurred prior to the effective date.)

Delete "GC". Effective II 86-87.
Add "GC". Effective S 1987.

Delete "GC". Effective S I 1987.
Add "GC". Effective S II 1987.

REHABILITATION (Rhab.) (Note: Name change to Special Education and Rehabilitation was effective I 87-88. These changes occurred prior to the effective date.)

Delete "GC". Effective S I 1987.
Add "GC". Effective S II 1987.

RELIGIOUS STUDIES (Reli.)

Change title to "Greek Mythology I". Effective I 87-88.

Course number changed from "140a". Course revised. New listing reads: "South Asian and Middle Eastern Humanities (3) (Identical with Or.S. 140)". Effective II 87-88.

Change course number to "140". Course revised. Effective II 87-88.
[For new listing, see "140".]

Change course number to "142". Course revised. Effective II 87-88.
[For new listing, see "142".]

Course number changed from "140b". Course revised. New listing reads: "Chinese Humanities (3) (Identical with Or.S. 142)". Effective II 87-88.

Change course number to "483a". Change title to "History of Confucianism: The Classical Period". Effective I 87-88.

Change number to "483b". Change title to "History of Confucianism: The Neo-Confucian Tradition". Effective I 87-88.
421a-421b. Change course number to "481a-481b". Change title to "History of East Asian Buddhism". Effective I 87-88.

425. Add: "Women and Religion (3) GC I (Identical with W.S. 425)"

428. Add: "Antisemitism: Successes and Failures of Social Theory (3) GC II 1987-88 (Identical with Hist. 428)"

450. Add: "Religion and Politics (3) GC II (Identical with Pol. 450)"

481a-481b. Course number changed from "421a-421b." Change title to "History of East Asian Buddhism". Effective I 87-88.

481a-481b. Delete listing. Effective I 88-89.

483a. Course number changed from "418". Change title to "History of Confucianism: The Classical Period". Effective I 87-88.

483b. Course number changed from "419". Change title to "History of Confucianism: The Neo-Confucian Tradition". Effective I 87-88.

491a-491b. Add: "History of East Asian Buddhism (3-3) GC (Identical with Hist. 491a-491b)". Effective I 88-89.

RENEWABLE NATURAL RESOURCES (R.N.R./L.Ar./Re.M./Ws.M./W.F.Sc./N.R.R.)

Renewable Natural Resources (R.N.R.)

397d. Add: Workshop: "Writing for Applied Sciences (2) I II (Identical with A.Ed. 397d)"

497a. NEW COURSE: Workshop: "Desert Ecosystems (1) [Rpt./3] GC I II S The nature of southwest desert environments, interrelationships of people with native flora and fauna, including field investigations. Field activities in vicinity of workshop site."

595e. NEW COURSE: Colloquium: "Heritage Resources Planning and Management (2) II 1987-88"

Watershed Management (Ws.M.)

427. Delete course.

Wildlife & Fisheries Science (W.F.Sc.)

444. Add "Writing-Emphasis Course. P, Satisfaction of the upper-division writing proficiency requirement (see "Writing-Emphasis Courses" in the Academic Guidelines section of this catalog.) Effective II 87-88.

482. Add alternate year "1989-90". Effective I 89-90.

RUSSIAN & SLAVIC LANGUAGES (Russ.)


215. NEW COURSE: "Phonetics (1) [Rpt./3 units] I General improvement of the student's language skills through aural/oral training in Russian phonetics. P, 101b."

217. NEW COURSE: "Intonation (1) [Rpt./3 units] II General improvement of the student's language skills through aural/oral training in Russian intonation. P, 101b."
296a. NEW COURSE: Proseminar: "Language Proseminar in U.S.S.R. I (3) S Training in Russian conversation, grammar and phonetics conducted in Moscow by specialists from the Pushkin Institute. Field trips."

320. NEW COURSE: "Soviet Union Today (3) I II Introduction to contemporary Soviet society with the emphasis on the daily life of Soviet citizens."

496c. NEW COURSE: Proseminar: "Language Proseminar in U.S.S.R. II (3) S Advanced training in Russian conversation, grammar and phonetics conducted in Moscow by specialists from the Pushkin Institute. Field trips. P, 210b."

SOCIOLOGY (Soc.)

324. Add to description: "Credit allowed for this course or Hlth. 330 but not for both." Effective II 87-88.

515. NEW COURSE: "Social Movements and Collective Action (3) I II A sociological examination of the emergence and development of social movements/collective action at both the societal and individual levels. Major theoretical perspectives on social movements/collective action will be reviewed as well recent and classical empirical works in the area. P, admission to graduate program or departmental approval."

526. NEW COURSE: "Cross-National Research Methods (3) II Introduction to the logic and methods of cross-national social research. (Identical with Pol. 526)"

596d. NEW COURSE: Seminar: "The Microfoundations of Macrosociology (3) [Rpt./7] I II P, 500a."

SOIL & WATER SCIENCE (S.W.)

314. DELETE: "Soil Management (3)"

316. Change number of units to "(3)". Effective II 88-89.

SPANISH & PORTUGUESE (Span./Port.)

Spanish (Span.)


442. Correction to Curriculum Bulletin Vol. 11, No. 17. Course number "448" should have read "442".

445. Add description: "How the revolution of 1910 has been portrayed by Mexico's leading writers." Effective I 87-88.

448. Correction to Curriculum Bulletin Vol. 11, No. 17. Course number should have read "442".

Portuguese (Port.)

SPECIAL EDUCATION AND REHABILITATION (S.E.R.)

270. Change title to "History of Deafness". Effective I 88-89.

301. NEW COURSE: "Mainstreaming (1) I II GRD An introduction to the integration of special students into the regular elementary classroom. Open to elementary education majors currently enrolled in student teaching. Open to majors only. P, T.T.E. 322, 323, 324, 326, 327. (Identical with T.T.E. 301)"

404. NEW COURSE: "Bilingual Exceptional Learner (3) [Rpt.] I GRD To provide a theoretical base and practical approach to the study of special needs of the bilingual child. The basic premises of bilingual-special education and the interface of the two fields will be examined." Effective I 88-89.

410. Course revised. New listing reads: "Introduction to Severe Disabilities (3) GC I II An overview of issues affecting students with moderate to profound retardation and concomitant physical, sensory and behavioral disorders. Topics include history of services, characteristics of the population, etiology identification, types of service delivery, educational, social and psychological problems. P, 500." Effective I 88-89.

480. Course number changed from "500". Add "GC". Effective I 87-88.

494b. Course number changed from "594a". Course revised. New listing reads: "Sign Language Laboratory (1-3) [Rpt./4] I II". Effective I 87-88.

500. Change course number to "480". Add "GC". Effective I 87-88.

501. Change course number to "501a-501b". Course revised. [For new listing, see "501a-501b." Effective II 87-88.


502. Change title to "Teaching Learning Disabled Elementary Students". Change prerequisites to "P, 400 and permission of division; CR 501a, 593 or 594." Effective I 88-89.

511. Course revised. New listing reads: "Education Students with Severe Disabilities (3) II Methods of developing age-appropriate and functional programming, integration, community-based instruction, and integrative source delivery for students who have moderate to profound retardation and other physical, sensory and behavior disorders. P, 410." Effective II 87-88.

593. Change number of units to "(1-12)". Effective I 88-89.

594a. Change course number to "494b". Course revised. Effective I 87-88. [For new listing, see "494b".]


595c. Change title to "Severe Disabilities". Effective II 87-88.
SPEECH & HEARING SCIENCES (Sp.H.)

350. Course number changed from "450". Delete "GC". Course revised. New listing reads: "The Structure and Function of Language (3) I The form, meaning, use, and biological base of language are described and related to monolingual and bilingual language development and impairment." Effective 88-89.

450. Change course number to "350". Delete "GC". Course revised. Effective I 88-89. [For new listing, see "350".]


553R. Course description should read: "Syndromes of childhood language impairment are described in relation to etiology, diagnosis and therapy. Emphasis is given to language learning patterns across and within syndromes." Effective II 88-89.

559. Change prerequisite to "P, 589 or CR." Effective I 88-89.

575. Change title to "Neuromotor Speech Disorders". Effective II 87-88.


595a. NEW COURSE: Colloquium: "Current Problems in Speech and Hearing Sciences (1) [Rpt./5] I II"

595. Change prerequisite to "P, 589 or CR." Effective I 88-89.

STATISTICS (Stat.)

275. Transfer course from Department of Management Information Systems. Effective II 87-88.

SYSTEMS & INDUSTRIAL ENGINEERING (S.I.E.)

Pages 128 and 133 of the General Catalog. For the Bachelor of Science in Industrial Engineering and the Bachelor of Science in Systems Engineering, the following changes in the required curriculum have been made: Freshman Year, Second Semester, substitute Phys. 110 (4 units) for Phys. 103a and Phys. 180a and substitute Hum. & Soc. Sci. Elective for Science Elective; Sophomore Year, First Semester, substitute Phys. 116 (4 units) for Phys. 103b and Phys. 180b; Sophomore Year, Second Semester, substitute Phys. 121 for the Hum. & Soc. Sci. Elective; Senior Year, First Semester, change the number of units for the Tech. Elective to 3 and add Hum. & Soc. Sci Elective (3 units). Effective I 87-88.

172. Course number changed from "172R". Course revised. New listing reads: "Problem Solving Using Computers (PASCAL) (3) I II S Problem analysis, structured programming techniques, design of algorithms for solving elementary engineering problems and Pascal programming; machine and systems organization, data representation, program testing, verification and modularization. CR, Math 125a." Effective II 87-88.

172L. DELETE: "Problem Solving Using Computers Laboratory (PASCAL) (1)"
172R. Change course number to "172". Course revised. Effective II 87-88. [For new listing, see "172"].

TEACHING & TEACHER EDUCATION (T.T.E.)

301. Add: "Mainstreaming (1) I II GRD (Identical with S.E.R. 301)"

338m. Change semester offering to "II". Effective I 88-89.


514. NEW COURSE: "Supervision of Student Teachers (3) I II S Research-based strategies to supervise and critique teaching events, and to determine positive ways of thinking and acting in classrooms. For cooperating teachers. P, limited to persons who have served or are presently serving as cooperating teachers."

WOMEN'S STUDIES (W.S.)

60