

CURRICULUM

Vol. 13 No. 11 The University of Arizona August 27, 1990

USE OF THIS BULLETIN: Proposals presented in this bulletin are subject to University-wide review. If you are concerned with anything herein enclosed, please contact the University Curriculum Office, Admin. 412, Extension 1-3913, during the two-week waiting period. Concerns raised after two weeks will be referred to the Faculty Senate or appropriate Council. Forms for the submission of curricular materials are available from the above office. All formal submissions should be routed through the appropriate dean or director. Final day for voicing concerns on the following curricular matters is September 10, 1990.

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I. NOTICES (for approval)

- A. **Entrepreneurship (BSBA):** The Karl Eller Center and the College of Business and Public Administration propose a new major in entrepreneurship for the Bachelor of Science in Business Administration degree. Currently offered as a concentration within the general business administration major, the program represents innovative business education which helps students develop their entrepreneurial potential. The curriculum combines 24 units of core business courses with 15 units selected from economics, finance, management and marketing to prepare students to identify and plan new business ventures. No additional faculty or staff will be required by the proposed change and no effect on student enrollment in the program is anticipated. Graduates of the UA program have been successful both in establishing new businesses and in being hired by established businesses. The proposal was approved by the Undergraduate Council on May 8, 1990.
- B. **Epidemiology (MS,PhD):** The Department of Family and Community Medicine, with the approval of the College of Medicine, proposes a new major in epidemiology for the Master of Science and Doctor of Philosophy degrees. Epidemiology studies the causes and prevention of disease, focusing on health research problems in communities rather than in individuals. The proposed major and attendant minor will provide training for biomedical researchers and academic research physicians. The M.S. degree will require 33 units, including 18 in epidemiology, 6 in biostatistics, and 9 units of thesis. The Ph.D. will require 46 units in the major, including 6 core courses totalling 22 units, 9 units in a minor, and 18 units of dissertation. Sixteen faculty members from the College of Medicine will participate in offering the proposed programs. It is anticipated that the new major will have approximately 8-12 master's degree students and 8 doctoral students within three years. The proposal was approved by the Graduate Council on April 20, 1990.
- C. **Health and human services administration merger (BSFA):** The Department of Management and Policy, with the approval of the College of Business and Public Administration, proposes to merge the major in health services administration and the major in human services administration, both for the Bachelor of Science in Public Administration degree, into the health and human services administration major. The proposed combined major will increase the efficient use of college resources while maintaining the same career-preparation options as provided by the existing separate majors. Merging the majors will allow the department to better accommodate student demand for courses. Current majors will be provided the courses needed to complete their programs. The proposal was approved by the Undergraduate Council on April 24, 1990.
- D. **Home economics extension education (BSFCR):** The School of Family and Consumer Resources, with the approval of the College of Agriculture, requests the deletion of the home economics extension education major for the Bachelor of Science in Family and Consumer Resources degree. The undergraduate degree program no longer prepares students adequately for employment. Within the state, graduates with master's degrees are preferred for extension positions. Presently no students are enrolled in the program. The request for deletion was approved by the Undergraduate Council on May 8, 1990.
- E. **Merchandising and consumer studies merger (BSFCR):** The School of Family and Consumer Resources, with the approval of the College of

Agriculture, proposes to merge the major in consumer studies and family resource management and the major in merchandising and fashion promotion, both for the Bachelor of Science in Family and Consumer Resources degree, into the merchandising and consumer studies major. Student interest in consumer studies and family resource management has been limited, with only 13 students currently enrolled. Under the proposed merger, course work dealing with consumer studies will be transferred to the merged major entitled merchandising and consumer studies, and curriculum dealing with family resource management will become part of the family studies major. The proposed merger will provide a more competitive program for available employment opportunities. Current majors will be provided the courses needed to complete their programs. The proposed merger was approved by Undergraduate Council on May 8, 1990.

- F. **Specialist in Microbiology degree (SpM):** The Department of Microbiology and Immunology, with the approval of the College of Medicine, requests the deletion of the Specialist in Microbiology degree. The program, originally approved in 1978, was designed as a nonresearch option for persons seeking careers in microbiology and medical technology. Subsequent reorganization within the department resulted in the transfer of the related medical technology program to another unit and the development of an emphasis on research programs. Currently no students are enrolled in the program, and only one member of the faculty involved with this program remains. The proposed deletion was approved by the Graduate Council on May 4, 1990.

II. NOTICES (for information)

Final Action by the Board of Regents, April 6, 1990

- A. Approved the name change of the M.A., Ed.S., Ed.D., and Ph.D. degree majors in reading to language, reading and culture.
- B. Approved the merger of the M.A., Ed.D., and Ph.D. degree majors in special education and the M.S., Ed.D., and Ph.D. in rehabilitation into the M.A., Ed.D., and Ph.D. in special education and rehabilitation.
- C. Approved the merger of the M.A., Ed.D. and Ph.D. degree majors in elementary education and secondary education into the M.A., Ed.D. and Ph.D. majors in teaching and teacher education.
- D. Approved the name change of the M.A. degree major in bilingual/bicultural education to bilingual/multicultural education.
- E. Approved the name change of the Ed.S. degree major in special education to special education and rehabilitation.
- F. Approved the deletion of the following programs:
- educational administration for the M.A., M.Ed., and Ph.D.
 - educational psychology for the M.Ed. and Ed.D.
 - higher education for the M.Ed. and Ed.D.
 - foundations of education for the M.Ed. and Ed.D.
 - elementary education for the Ed.S.
 - secondary education for the Ed.S.

Final Action by the Board of Regents, June 1, 1990

A. Approved the addition of 103 courses totalling 314 units and the deletion of 55 courses totalling 137 units.

B. Approved the following continuations/discontinuations following a sunset review:

Continuations:

Social and Behavioral Sciences Research Institute (new review date: 1994-95)

Arizona Mining and Mineral Resources Research Institute (new review date: 1993-94)

Sleep Disorders Center (new review date: 1993-94)

Discontinuations:

Arizona Math Project

American Parkinson Disease Association Information and Referral Center

Exercise and Sport Sciences Laboratory

Quantum Electronics Laboratory

Final Action by the Board of Regents, July 20, 1990

A. Approved the deletion of the agricultural communications major for the Bachelor of Science in Agriculture degree.

B. Approved the deletion of the natural resource recreation major for the Bachelor of Science in Renewable Natural Resources degree.

C. Approved the deletion of the plant pathology major for the Bachelor of Science in Agriculture degree.

D. Approved the establishment of the cognitive science minor for the Doctor of Philosophy degree.

E. Approved planning authorization for the major in entrepreneurship for the Bachelor of Science in Business Administration.

F. Approved planning authorization for the major in geophysical engineering for the Master of Science and Doctor of Philosophy degrees.

G. Approved the termination of planning authorization for the major in bioengineering for the Master of Science and Doctor of Philosophy degrees.

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Planning Authorization Deadline for Fall Term:

October 1 is the deadline for all new requests for planning authorizations and for extensions of existing planning authorizations to be submitted to the Curriculum Office. Planning authorizations are considered twice a year by the Board of Regents, in January and July.
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III. CORRECTIONS (for information) See appropriate department, committee, faculty or college.

IV. NEW COURSES & COURSE DELETIONS

ANIMAL SCIENCES (ANS)

443. Add: "Research Animal Methods (3) I (Identical with V.Sc. 443) May be convened with 543." Eff. I 90-91.

543. Add: "Research Animal Methods (3) I (Identical with V.Sc. 543) May be convened with 443." Eff. I 90-91.

ANTHROPOLOGY (ANTH)

410. NEW COURSE: "Ceramic Ethnoarchaeology (3) II 1990-91 Using ethnoarchaeological and ethnographic case studies from diverse geographic areas, the course examines relationships between ceramics and a range of matters traditionally of interest to archaeologists. May be convened with 510." Eff. II 90-91.

488. Add: "Governing Science and Technology (3) II (Identical with Geog. 488)". Eff. II 90-91.

510. NEW COURSE: "Ceramic Ethnoarchaeology (3) II 1990-91 For a description of course topics, see 410. Graduate-level requirements include a research paper. May be convened with 410." Eff. II 90-91.

ART (ART)

306. NEW COURSE: "Images and Ideas in the Visual Arts (3) I II S Art heritage, aesthetics, art criticism, and knowledge of various art media. P, 130." Eff. I 90-91. [Note: This is an art education course.]

321. NEW COURSE: "Introduction to Contemporary Art (3) I II Survey of contemporary art in the United States and Europe since the 1960s. P, 118." Eff. I 90-91. [Note: This is an art history course.]

423a-423b. NEW COURSE: "The Art of Mexico (3-3) I II 423a: The art of Colonial Mexico, from the early 16th century to the late 18th century. The effects of the Spanish conquest on native traditions; public, private and sacred patronage; the effects of the Bourbon reforms. Painting, sculpture, architecture, graphic and minor arts. 423b: The art of Modern Mexico, from the late 18th century to the early 20th century. The Independence Period, the National Period, and the Revolutionary Period. Painting, sculpture, architecture, graphic and minor arts. 423a is not prerequisite to 423b. May be convened with 523a-523b." Eff. I 90-91. [Note: This is an art history course.]

430. DELETE: "Understanding the Visual Arts (3)". Eff. I 90-91.

446. NEW COURSE: "Experimental Color Photography (3) [Rpt./I] I Nontraditional approaches to color photography including the use of black-and-white and color negatives, manipulation of the negative, dyes and paints added to the print. Development of personal vision encouraged. 2R, 2S. P, 241; 341a, 341b or 341c; 346. May be convened with 546." Eff. I 90-91. [Note: This is a studio course.]

- 523a-523b. NEW COURSE: "The Art of Mexico (3-3) I II For a description of course topics, see 423a-423b. Graduate-level requirements include a critical bibliography as well as a research paper. 523a is not prerequisite to 523b. May be convened with 423a-423b." Eff. I 90-91. [Note: This is an art history course.]
546. NEW COURSE: "Experimental Color Photography (3) [Rpt./1] I For a description of course topics, see 446. Graduate-level requirements include more rigorous grading and expectation. 2R, 2S. May be convened with 446." Eff. I 90-91. [Note: This is a studio course.]

ASTRONOMY (ASTR)

404. DELETE: "Exploration of the Solar System (3)". Eff. I 90-91.
504. Delete listing.

ATMOSPHERIC SCIENCES (ATMO)

472. DELETE: "Weather Forecasting (3)". Eff. II 90-91.
572. Delete listing. Eff. II 90-91.

BIOCHEMISTRY (BIOC)

443. Add: "Research Animal Methods (3) I (Identical with V.Sc. 443) May be convened with 553." Eff. I 90-91.
543. Add: "Research Animal Methods (3) I (Identical with V.Sc. 543) May be convened with 443." Eff. I 90-91.

CANCER BIOLOGY (CBIO)

505. Correction to Curriculum Bulletin, Vol. 13, No. 9: Add crosslisting: "(Identical with M.C.B. 505)". Eff. I 90-91.

COMMUNICATION (COMM)

422. NEW COURSE: "Presidential Leadership and Communication (3) II Examination of presidential leadership and communication strategies of the modern presidents from Kennedy to the present. P, upper-division standing. May be convened with 522." Eff. II 90-91.
522. NEW COURSE: "Presidential Leadership and Communication (3) II For a description of course topics, see 422. Graduate-level requirements include an in-depth research paper or project. May be convened with 422." Eff. II 90-91.

COMPARATIVE LITERATURE & LITERARY THEORY (CPLT)

200. NEW COURSE: "Critical Concepts in Western Culture (3) [Rpt./9 units] I II S Analyzes concepts in art and literature which have shaped western ideology. Juxtaposes traditional and nontraditional, elite with popular, western and nonwestern. P, 6 units of Freshman Composition." Eff. I 91-92.

COMPUTER SCIENCE (CSC)

534. NEW COURSE: "Advanced Computer Graphics and User Interface (3) I Advanced aspects of computer graphics and interaction; hidden surface

elimination algorithms, lighting models, techniques for photo-realism, parametric surfaces, user interface design and evaluation, window systems, user interface management systems. P, 533." Eff. I 91-92.

EAST ASIAN STUDIES (EAS/CHN/JPN)

Chinese Studies (CHN)

461. NEW COURSE: "Women in China (3) I Analysis of the role of women in Chinese society with equal emphasis on traditional and modern periods. May be convened with 561." Eff. I 90-91.
561. NEW COURSE: "Women in China (3) I For a description of course topics, see 461. Graduate-level requirements include a 15-page term paper. May be convened with 461." Eff. I 90-91.

Japanese Studies (JPN)

515. Change number of units to "(3)". Eff. I 90-91.
516. Change number of units to "(3)". Eff. I 90-91.

ECOLOGY & EVOLUTIONARY BIOLOGY (ECOL)

420. NEW COURSE: "Evolutionary Quantitative Genetics (3) II 1990-91 Rigorous coverage of the inheritance and evolution of quantitative characters. Theory, estimation and design issues, and experimental results given equal coverage. P, Calculus. May be convened with 520." Eff. II 90-91.
510. NEW COURSE: "Research Design and Analysis (3) I Design and analysis for ecology, behavior, and morphology; inference and hypothesis tests; exploratory statistics. Requires a research project." Eff. I 91-92.
520. NEW COURSE: "Evolutionary Quantitative Genetics (3) II 1990-91 For a description of course topics, see 420. Graduate-level requirements include a research paper. P, Calculus. May be convened with 420." Eff. II 90-91.

EDUCATION (EDUC/EDA/EDP/HED/LRC/SER/TTE)

Education (EDUC)

605. NEW COURSE: "Evaluation of Educational Programs and Personnel (3) I II S Models, purposes served, contextual influences and procedures employed in evaluating educational programs and personnel. P, 500." Eff. I 90-91.

Special Education and Rehabilitation (SER)

415. NEW COURSE: "Managing Physical Handicaps (3) [Rpt./1] I Physical and multiple impairments, etiology, intervention practices, adaptations needed, transferring and handling skills, and integration into typical environments. Field trips. May be convened with 515." Eff. I 90-91.
478. NEW COURSE: "Prevention of Addictions (3) I Analysis of addictive behaviors (e.g., drug addictions, eating disorders, compulsive gambling) from a psychosocial and biological perspective and the implications of this analysis for primary, secondary, and tertiary prevention of addictions. May be convened with 578." Eff. I 90-91.

515. NEW COURSE: "Managing Physical Handicaps (3) [Rpt./1] I For a description of course topics, see 415. Graduate-level requirements include additional research. Field trips. May be convened with 415." Eff. I 90-91.
578. NEW COURSE: "Prevention of Addictions (3) I For a description of course topics, see 478. Graduate-level requirements include an in-depth research paper or other project. May be convened with 478." Eff. I 90-91.

ELECTRICAL & COMPUTER ENGINEERING (ECE)

671. NEW COURSE: "Parallel Processing: Architectures and Algorithms (3) [Rpt./1] I S Parallel computer architectures; architectural classification schemes, techniques for parallel processing, pipeline computers, vector processing, multiprocessor structures and applications (SIMD and MiMD machines), study of parallel algorithms, parallel processing applications, neural networks, and data flow computing. 3R, 3-6L. P, knowledge of computer architecture and digital systems." Eff. II 90-91.
685. Delete listing. Eff. I 90-91.
687. Delete listing. Eff. I 90-91.

ENGLISH (ENGL)

- 195a. NEW COURSE: Colloquium: "Critical Reading and Writing (3) S Open to Bio-Prep program students only." Eff. Summer 1990.
620. NEW COURSE: "Cultural Dimensions: Second Language Acquisition (3) II Relationships between language and culture." Eff. II 90-91.

ENTOMOLOGY (ENTO)

202. NEW COURSE: "Applied Entomology (3) [Rpt./1] I Survey of insect pests of crops and domestic animals, in the forest and urban environments, and as vectors of plant and animal diseases. Control of insects using pesticides and biological methods and the public debate over insect control will be discussed. 2R, 3L. Field trips. Terry". Eff. I 91-92.
412. DELETE: "Cultural Control and Host Plant Resistance (1)". Eff. II 90-91.
418. DELETE: "Insect Vectors of Plant Pathogens (1)". Eff. II 90-91.

FAMILY & CONSUMER RESOURCES (FCR/CT/CS/COUN/FS/HEE/ID)

Clothing & Textiles (CT)

234. DELETE: "Apparel Design (3)". Eff. II 90-91.
- 394a. DELETE: Practicum: "Advanced Apparel Design (3)". Eff. II 90-91.
464. DELETE: "Aspects of Clothing Design (3)". Eff. II 90-91.

Consumer Studies (CS)

316. DELETE: "Applications of Family Management Principles (3)". Eff. II 90-91.
506. DELETE: "Economic Problems of the Family (3)". Eff. II 90-91.

Counseling & Guidance (COUN)

521. DELETE: "Techniques of Interviewing (3)". Eff. I 90-91.
549. DELETE: "Counseling and Guidance Laboratory (1-3)". Eff. I 90-91.
581. DELETE: "Human Relations Training (3)". Eff. I 90-91.
693. DELETE: "Internship
a. Counseling (1-9)". Eff. I 90-91.
694. DELETE: "Practicum P, . . . (etc.)
d. Agency Counseling (1-9)
e. Family Counseling (1-9)
f. Group Counseling (1-9)
g. Marriage Counseling (1-9)" Eff. I 90-91.
795. DELETE: "Colloquium
a. Professional Practice (1-3)
b. Counselor Education and Supervision (1-3)
c. Counseling Theory (1-3)
d. Career Development (1-3)". Eff. I 90-91.

Family Studies (FS)

327. DELETE: "Parent Education and Guidance (3)". Eff. II 90-91.
357. NEW COURSE: "Parent-Child Relationships (3) II Theoretical perspectives of current literature relevant to the study of parent-child relationships from the transition to parenthood through adulthood. P, 117, 223." Eff. II 90-91.
417. DELETE: "Advanced Human Development and Relations (3)". Eff. II 90-91.
476. NEW COURSE: "Family Financial Counseling (3) I 1992-93 Counseling techniques used when assisting families with financial management and over-indebtedness are addressed. Open to majors only. P, 416a, Coun. 401." Eff. I 90-91.
477. NEW COURSE: "Genetic Basis of Normal and Deviant Traits (3) II Explores methods of studying genetic influences on human traits and summarizes research findings on normal traits, such as sociability and IQ, and on deviant traits such as criminality. Implications for the fields of family studies, sociology, and psychology are considered. May be convened with 577." Eff. II 90-91.
- 495a. NEW COURSE: Colloquium: "Senior Report (1) I II P, Engl. 308, F.S. 416b. Writing-Emphasis Course. [Writing-Emphasis Course. P, satisfaction of the upper-division writing-proficiency requirement (see "Writing-Emphasis Courses" in the Academic Guidelines section of the catalog).] Eff. I 90-91.
577. NEW COURSE: "Genetic Basis of Normal and Deviant Traits (3) II For a description of course topics, see 477. Graduate-level requirements include a research proposal or paper. May be convened with 477." Eff. II 90-91.

646. NEW COURSE: "Theories of Family Economic Behavior (3) I Analysis of theories relevant to family economic behavior including theories on poverty, economic well-being, family systems, and decision making. Emphasis on social psychological concepts." Eff. I 90-91.

Interior Design (ID)

385. NEW COURSE: "Computer Aided Drafting (3) I Introduction to the basic concepts of computer graphics and the basic set-up and operation of a computer graphics system. Assignments, design problems, and final interior design project included. 1R, 4S. For majors only. P, 265, M.I.S. 111." Eff. I 90-91.
493. DELETE: "Internship
i. Interior Design (1-12)". Eff. II 90-91.

GEOGRAPHY & REGIONAL DEVELOPMENT (GEOG)

488. NEW COURSE: "Governing Science and Technology (3) II Historical, cross-cultural, and geographical assessment of strategies societies have deployed to govern science and technology; effects of particular strategies in terms of impacts (both positive and negative) of science and technology on people, their lives, and the environment. (Identical with Anth. 488 and Pol. 488)". Eff. II 90-91.

GEOSCIENCES (GEOS)

401. DELETE: "Environmental Education (3)". Eff. I 90-91.
404. NEW COURSE: "Petrographic Techniques (3) I Introduction to application of modern petrographic techniques. Use of optical theory, optical petrography, electron microprobe and image processing to examine and describe minerals and other materials. 2R, 3L. May be convened with 504. Anovitz". Eff. I 90-91.
405. DELETE: "Optical Mineralogy and Petrography (3)". Eff. I 90-91.
451. NEW COURSE: "Sedimentary Petrology (4) II Hand specimen, detrital grain, and thin section study of terrigenous clastic rocks, including mudrocks; carbonate rocks and associated evaporites; cherts, iron-rich rocks, and phosphorites. 2R, 3L. Field trips. P, 302, 315a-315b. May be convened with 551. Sreiber". Eff. II 90-91.
501. Delete listing. Eff. I 90-91.
504. (1) DELETE: "Geology of Arizona (3-4)". Eff. I 90-91.
(2) NEW COURSE: "Petrographic Techniques (3) I For a description of course topics, see 404. Graduate-level requirements include a paper and class presentation. May be convened with 404. Anovitz". Eff. I 90-91.
512. DELETE: "Petrology of Sandstones (3)". Eff. I 90-91.
515. NEW COURSE: "Advanced Sedimentary Petrology (3) I Advanced study of sedimentary rocks with an emphasis on the recognition of diagenetic features and the application of appropriate techniques to problem solving. Requires a research project in publication format. 1R, 6L. Field trips. P, 451/551. Sreiber". Eff. I 90-91.
521. DELETE: "Analysis of Regional Geologic Structure (3)". Eff. I 90-91.

551. NEW COURSE: "Sedimentary Petrology (4) II For a description of course topics, see 451. Graduate-level requirements include a research paper in publication format on a topic selected by the student and instructor. 2R, 3L. Field trips. P, 302, 315a-315b. May be convened with 451. Sreiber". Eff. II 90-91.

585. DELETE: "Petrology of Carbonate Rocks (3)". Eff. I 90-91.

HEALTH-RELATED PROFESSIONS ((HLTH/OSH/EXSS/MEDT))

Health Education (HLTH)

278. NEW COURSE: "Health Science Promotion (4) II Basic concepts of health science, optimal health, lifestyle factors and health risks associated with the college-age population; emphasis on health promotion and intervention techniques; practical experience with individual and group health behavior change projects. 3R, 3L. Credit is allowed for this course or 178, but not for both." Eff. II 90-91.

Exercise & Sport Sciences (EXSS)

161. DELETE: "Scuba Diving (2) I II S
a. Beginning Scuba Diving (2)
d. Advanced Scuba Diving (2)". Eff. I 90-91.
210. DELETE: "Personal Defense (1)". Eff. I 90-91.
231. NEW COURSE: "Track and Field (2) I^{*}". Eff. I 90-91. [This course belongs under "Professional Activity Courses". The * note is in place on page 167 of the General Catalog.]
276. DELETE: "Designed Exercise Programs (2)". Eff. I 90-91.
350. NEW COURSE: "Movement Experiences for Elementary School Children (2) I Development of knowledges and skill competencies necessary for teaching fundamental movements, rhythms and dance, gymnastics, games and sports to children. 4S. Open to majors only." Eff. I 90-91. [This course belongs under "Professional Preparation Courses".]
352. DELETE: "Movement Experiences for Elementary School Children (3)". Eff. I 90-91.
358. DELETE: "Dance for Children (2)". Eff. I 90-91.
383. DELETE: "Governance and Fiscal Aspects of Amateur Athletics (3)". Eff. I 90-91.
388. DELETE: "Administration of Physical Education Programs (3)". Eff. I 90-91.
393. DELETE: "Internship
b. Fitness Program (2-3)". Eff. I 90-91.
422. DELETE: "Curriculum Development in Physical Education (2)". Eff. I 90-91.
452. NEW COURSE: "Teaching Physical Education in the Elementary School (3) II Theory and methods of providing movement experiences for young children; emphasis placed upon curriculum development, methods of teaching, class organization, and management. Practical experiences at the

elementary level. 6S. Open to majors only. P, 221, 231, 285, 350." Eff. II 90-91. [Note: This course belongs under "Professional Preparation Courses".]

515. DELETE: "Philosophy of Physical Education and Sport (3)". Eff. I 90-91.
522. Delete listing. Eff. I 90-91.
540. DELETE: "Exercise EKG Interpretation and Cardiac Medications (1)". Eff. I 90-91.
551. DELETE: "Exercise Testing and Prescription (2)". Eff. I 90-91.
- 695b. DELETE: Colloquium: "Exercise Endocrinology (2)". Eff. I 90-91.

HISTORY (HIST)

- 495d. Add: Colloquium: "Latin American Studies Special Topics (3) [Rpt./1] (Identical with L.A.S. 495d, which is home) May be convened with 595d." Eff. II 90-91.
- 595d. Add: Colloquium: "Latin American Studies Special Topics (3) [Rpt./1] (Identical with L.A.S. 595d, which is home) May be convened with 495d." Eff. II 90-91.

HUMANITIES (HUM)

452. NEW COURSE: "Ancient Egypt: Culture/Language (3) II Examination of the culture of ancient Egypt through an introduction to hieroglyphs and study of selected inscriptions and texts. Topics include Egyptian kingship, art, literature and religion." Eff. II 90-91.

HYDROLOGY & WATER RESOURCES (HYDR/WRA)

Hydrology (HYDR)

505. NEW COURSE: "Vadose Zone Hydrology (3) II 1991-92 Fundamental concepts of multiphase flow and transport in the vadose zone. Methods for characterization of hydraulic properties and analytical and numerical solutions for particular cases. P, 407/507 or SW 470/570." Eff. II 90-91.
570. NEW COURSE: "Computer Simulation of Hydrochemical Processes (3) I Introduction to the fundamentals of solving complex water chemistry problems using computer codes as tools. Equilibrium, mass transfer, or 1-D transport models with multielement chemistry will be used; thermodynamic concepts, use of equations in models to place natural chemical processes into an interpretable framework. 2R, 3L. P, CR, 506, 517, knowledge of FORTRAN." Eff. I 90-91.

JOURNALISM (JOUR)

406. NEW COURSE: "Magazine Color Photography (3) S Techniques for taking and editing color photographs to illustrate magazine articles. Preparation of resumes and photo portfolios. Graduate-level requirements include additional readings and two additional photo assignments. Field trips. May be convened with 506." Eff. Summer 1991.
- 496m. NEW COURSE: Seminar: "Directions in News Technology (3) [Rpt./1] S May be convened with 596m." Eff. Summer 1990.
506. NEW COURSE: "Magazine Color Photography (3) S For a description of course topics, see 406. Graduate-level requirements include additional

readings and two additional photo assignments. Field trips. May be convened with 406." Summer 1991.

- 596m. NEW COURSE: Seminar: "Directions in News Technology (3) [Rpt./1] S May be convened with 496m." Eff. Summer 1990.

LATIN AMERICAN STUDIES (LAS)

- 495d. NEW COURSE: Colloquium: "Latin American Studies Special Topics (3) [Rpt./1] (Identical with Hist. 495d) May be convened with 595d." Eff. II 90-91.
- 595d. NEW COURSE: Colloquium: "Latin American Studies Special Topics (3) [Rpt./1] (Identical with Hist. 595d) May be convened with 494d." Eff. II 90-91.

LAW (LAW)

663. NEW COURSE: "Individual Income Tax (3) I". Eff. I 90-91.
668. NEW COURSE: "Pretrial Litigation (3) I II P, 608." Eff. I 90-91.
686. NEW COURSE: "International Law Journal (1-3) [Rpt./5 units] I II 3-9L. P, selection to the Arizona Journal of International and Comparative Law Board". Eff. Summer 1990.

LIBRARY SCIENCE (LIS)

693. DELETE: "Internship
- a. Academic Library (2-4)
 - b. Special Library (2-4)
 - c. Public Library (2-4)
 - d. School Library (2-4)
 - e. Community College Library (2-4)". Eff. I 90-91.

LINGUISTICS (LING)

530. NEW COURSE: "Morphology (3) I Morphology is the internal structure of words and the relationship between words and the syntactic, phonological, and semantic properties of the units that include them. Course work includes the development of morphological theory." Eff. I 90-91.

MANAGEMENT & POLICY (MAP)

532. NEW COURSE: "Conflict and Cooperation in the Dyad (3) I Critical exposition of the essential ideas of two-person game theory and the findings of experimental research on strategic interactions in the dyad. (Identical with Psyc. 532)". Eff. I 90-91.
540. NEW COURSE: "Theories of Crime and Public Policy (3) II Theories of crime applied to public policy issues. The relationship between scientific analysis of crime and formation of public policy. (Identical with Soc. 540)". Eff. II 90-91.

545. NEW COURSE: "Interactive Behavior in Small Groups (3) II Critical survey of the essential ideas of n-person game theory (n>2) and the findings of experimental research on social dilemmas bargaining and coalition formation. (Identical with Psyc. 545)". Eff. II 90-91.
586. NEW COURSE: "Behavioral Research in Judgment and Decision Making (3) I Theory and research on the strategies and abilities of human judges and decision makers. Focus is upon behavioral, as contrasted with normative, investigation, and upon methods of improving judgment and decision performance. P, statistics. (Identical with Psyc. 586)". Eff. I 90-91.
- 696d. NEW COURSE: Seminar: "Judgment and Decision Making (3) [Rpt./2] II P, 586. (Identical with Psyc. 696d)". Eff. II 90-91.

MEDIA ARTS (MAR)

250. DELETE: "Media Performance (3)". Eff. I 90-91.
413. DELETE: "Advanced Audio Production (3)". Eff. I 90-91.
450. NEW COURSE: "Conducting Media Campaigns (3) II Analysis of the development and distribution of information through the media. Press releases, fact sheets, public service announcements, interviews, press conferences, and public hearings are studied. P, 350 or 376". Eff. II 90-91.
- 497b. DELETE: "Video for Law Enforcement (1)". Eff. I 90-91.

MEDICINE (MED/ANES/FCM/IMED/ NEUR/OBG/OPH/PATH/PED/PSYI/RADI/RONC/SURG)

Interdepartmental (MED)

805. NEW COURSE: "Social and Behavioral Science (6) I II". Eff. I 90-91.

MICROBIOLOGY & IMMUNOLOGY (MICR)

443. Add: "Research Animal Methods (3) I (Identical with V.Sc. 443) May be convened with 543." Eff. I 90-91.
543. Add: "Research Animal Methods (3) I (Identical with V.Sc. 543) May be convened with 443." Eff. I 90-91.
681. DELETE: "Biostatistical Methods in Microbiology (2)". Eff. I 90-91.

NUCLEAR & ENERGY ENGINEERING (NEE)

685. DELETE: "Inertial Confinement Controlled Fusion (3)". Eff. I 90-91.
687. DELETE: "Magnetic Confinement Controlled Fusion (3)". Eff. I 90-91.

PLANETARY SCIENCES (PTYS)

404. DELETE: "Exploration of the Solar System (3)". Eff. I 90-91.
504. Delete listing. I 90-91.

POLITICAL SCIENCE (POL)

488. Add: Governing Science and Technology (3) II (Identical with Geog. 488)". Eff. II 90-91.
489. DELETE: "The Politics of National Policymaking (3)". Eff. I 90-91.

589. Delete listing. Eff. I 90-91.

PSYCHOLOGY (PSYC)

102. NEW COURSE: "Topics in Psychology (1) I II S Optional discussion course designed to complement the lectures and readings in 101. Laboratory demonstrations. Library research leading to modest writing assignment. Strongly recommended for prospective majors and students in the Honors Program. CR, 101." Eff. I 91-92.
419. NEW COURSE: "Field-Based Human Learning (3) I II Learning principles in terms of behavioral ecology. Naturalistic study with video and computer methods of human services and academic settings. P, 101, 370. May be convened with 519. Writing-Emphasis Course. [Writing-Emphasis Course. P, satisfaction of the upper-division writing-proficiency requirement (see "Writing-Emphasis Courses" in the Academic Guidelines section of the catalog).]" Eff. I 90-91.
- 430b. DELETE: "Psychology, Law and Social Policy (3)". Eff. I 91-92.
431. NEW COURSE: "Ethical Issues in Psychology (3) I II A consideration of issues in the derivation of ethical criteria, selection of the appropriate subset of criteria to guide ethical decision-making, and utilization of the criteria when making a decision. P, upper-division standing or honors student. May be convened with 531." Eff. I 90-91.
437. NEW COURSE: "Gerontology: A Multidisciplinary Perspective (3) I II Biological, psychological, and social issues in aging, including brain changes with age, cognitive change with age, and the social impact of increasingly older population demographics." Eff. I 90-91.
465. NEW COURSE: "Neural Encoding, Memory and Computation in the Mammalian Brain (3) I II Theoretical principles and biological mechanisms by which information is represented, categorized, stored, and recalled in specific central nervous system (CNS) circuits in the course of adaptive behavior. P, one advanced course in neurobiology, biological or cognitive psychology, one advanced course in math or computer science." Eff. I 90-91.
467. NEW COURSE: "Principles of Mammalian Systems Neurophysiology (2) I II Topics in the neurophysiology of sensation, perception, cognition, and action in mammals illustrating the application of modern research methods to the understanding of higher brain function. Enrollment is restricted to those concurrently enrolled in the lab. P, Npsc. 588; CR, Psyc. 403." Eff. I 90-91.
519. NEW COURSE: "Field-Based Human Learning (3) I II For a description of course topics, see 419. Graduate-level requirements include advanced research applications in psychology or related areas." Eff. I 90-91.
531. NEW COURSE: "Ethical Issues in Psychology (3) I II For a description of course topics, see 431. Graduate-level requirements include an in-depth research paper on a single aspect of the course topic. May be convened with 431." Eff. I 90-91.
532. Add: "Conflict and Cooperation in the Dyad (3) I (Identical with M.A.P. 532)". Eff. I 90-91.
545. Add: "Interactive Behavior in Small Groups (3) II (Identical with M.A.P. 545)". Eff. II 90-91.

586. Add: "Behavioral Research in Judgment and Decision Making (3) I (Identical with M.A.P. 586)". Eff. I 90-91.
- 696d. Add: Seminar: "Judgment and Decision Making (3) [Rpt./2] II (Identical with M.A.P. 696d, which is home)". Eff. II 90-91.

RELIGIOUS STUDIES (RELI)

302. NEW COURSE: "Protestant Thought in the 20th Century (3) Survey of the various strands of Protestant theology since the turn of the century, with special reference to authors such as Rauschenbusch, Barth, Brunner, Tillich, Bultman and Bonhoeffer." Eff. II 90-91.

RENEWABLE NATURAL RESOURCES (RNR/LAR/RAM/WSM/WFSC/NRR)

Renewable Natural Resources (RNR)

- 694a. NEW COURSE: Practicum: "Teaching in Renewable Natural Resource Studies (1-3) [Rpt./4 units] I II". Eff. I 90-91.
- 694b. NEW COURSE: Practicum: "Teaching in Range Management (1-3) [Rpt./4 units] I II". Eff. I 90-91.
- 694c. NEW COURSE: Practicum: "Teaching in Watershed Management (1-3) [Rpt./4 units] I II". Eff. I 90-91.
- 694d. NEW COURSE: Practicum: "Teaching in Wildlife and Fisheries Science (1-3) [Rpt./4 units] I II". Eff. I 90-91.

Landscape Architecture (LAR)

- 595a. DELETE: Colloquium: "Systems Ecology for Planners and Designers (3)". Eff. I 90-91.

Wildlife & Fisheries Science (WFSC)

126. NEW COURSE: "Wildlife Conservation Laboratory (1) I Laboratory exercises and field trips covering conservation techniques; animal census, habitat analysis, population dynamics, and management techniques. 3L. Field trips. P, CR, 125." Eff. I 90-91.
581. NEW COURSE: "Conservation, Biology, and Management of Large Mammals (3) I 1992-93 An in-depth examination of the ecology and management of big game in North America and an introduction to large mammals and megaherbivores in Asia, Europe, and Africa. Field trip. P, 444/544." Eff. I 90-91.
- 595a. DELETE: Colloquium: "Big Game Management (2)". Eff. I 90-91.

RUSSIAN & SLAVIC LANGUAGES (RUSS)

- 596c. NEW COURSE: Seminar: "Language Program in USSR III (3) S Training in Russian conversation, grammar and phonetics conducted in Moscow by specialists trained in the teaching of Russian to foreigners. Field trips. P, 407b." Eff. Summer 1990.

SOCIOLOGY (SOC)

540. Add: "Theories of Crime and Public Policy (3) II (Identical with M.A.P. 540)". Eff. II 90-91.

557. NEW COURSE: "Gender and Labor (3) Sources and consequences of gender differentiation and inequality, with attention to occupations, earnings, labor markets, household work, and the family. P, 3 graduate credits in women's studies, sociology, or economics; or undergraduate major in one of these three fields." Eff. I 90-91.

SOIL & WATER SCIENCE (SW)

105. NEW COURSE: "Introduction to Environmental Science: Land, Water and Air (3) I Introduction to contemporary environmental issues and their relationship to physical, chemical, and biological principles. Discussion and evaluation of risks and tradeoffs in addressing solutions to environmental pollution. Optional field trip. P, high school chemistry recommended; CR, 106 encouraged. Eff. I 90-91.
106. NEW COURSE: "Environmental Science Laboratory: Land, Water and Air (1) I Laboratory exercises and field trip experiences to study environmental problems related to land, water, and air resources. Basic physical, chemical and biological principles that relate to understanding environmental problems will be stressed. Field trips. P, algebra and high school chemistry recommended." Eff. I 90-91.

SPANISH & PORTUGUESE (SPAN/PORT)

Spanish (SPAN)

578. NEW COURSE: "Multimedia Approaches to Second Language Acquisition and Learning (3) II S Study of the theory and applications of media to the development of second language skills." Eff. II 90-91.
- 696f. NEW COURSE: "Second Language Curriculum and Materials Design (3) I II Applications of theories of second language acquisition and learning to the development of curriculum goals and materials." Eff. II 90-91.

SPEECH & HEARING SCIENCES (SPH)

- 496a. NEW COURSE: Seminar: "Clinical Observation and Analysis (1) I II P, 370a-370b. Writing-Emphasis Course. * [* Writing-Emphasis Course. P, satisfaction of the upper-division writing-proficiency requirement (see "Writing-Emphasis Courses" in the Academic Guidelines section of the catalog).]" Eff. II 90-91.
501. NEW COURSE: "Professional Issues in Speech-Language Pathology and Audiology (1) I Professional practice issues including certification, licensure, supervision, quality control, ethics, federal and state legislation." Eff. II 90-91.
556. NEW COURSE: "Adult Language Disorders (3) I Description and explanation of communication disorders associated with stroke and aphasia, traumatic brain-injury, and age-related diseases. Principles of assessment and treatment. P, 567." Eff. I 90-91.
563. NEW COURSE: "Microcomputer Applications (2) II Designed for biological sciences majors with no computer background. Emphasis is on microcomputers. Knowledge of computer architecture, operating system, and programming language." Eff. II 90-91.
578. NEW COURSE: "Voice and Resonance (2) II Nature, evaluation, and management of voice disorders, alaryngeal voice, and professional voice. P, 260." Eff. II 90-91.

600. NEW COURSE: "Research Methods in Communication Sciences and Disorders (3) II Design and execution of descriptive and experimental research in communication sciences and disorders." Eff. II 90-91.
696. NEW COURSE: "Seminar
 a. Experimental Phonetics (1-3) [Rpt./9 units] I II
 b. Clinical Audiology (1-3) [Rpt./9 units] I II
 c. Hearing-Physiology and Psychophysics (1-3) [Rpt./9 units] I II
 d. Language and Language Disorders (1-3) [Rpt./9 units] I II
 e. Speech Pathology (1-3) [Rpt./9 units] I II". Eff. I 90-91.

VETERINARY SCIENCE (VSC)

443. NEW COURSE: "Research Animal Methods (3) I Regulations, care, diseases and techniques involving common laboratory animals used in research and teaching programs. (Identical with An.S. 443, Bioc. 443, Micr. 443) May be convened with 543." Eff. I 90-91.
543. NEW COURSE: "Research Animal Methods (3) I For a description of course topics, see 443. Graduate-level requirements include an in-depth research paper on one of the lecture topics presented in the course. (Identical with An.S. 443, Bioc. 443, Micr. 443) May be convened with 443." Eff. I 90-91.
681. Delete listing. Eff. I 90-91.

V. COURSE & CATALOG CHANGES (for information)

AEROSPACE & MECHANICAL ENGINEERING (AME)

310. Change number of units to "(3)". Change prerequisites to "P, 232, C.E. 217, Math. 254, Engr. 101." Eff. II 90-91.

ANATOMY (ANAT)

471. Change number of units to "(4)". Eff. II 90-91.
 571. Change number of units to "(4)". Eff. II 90-91.

ANIMAL SCIENCES (ANS)

601. Transfer course from Nutrition and Food Science (N.F.S.) to Animal Sciences (An.S.). Retain crosslisting with N.F.S. Eff. II 90-91.
 665. Transfer course from Nutrition and Food Science (N.F.S.) to Animal Sciences (An.S.). Add crosslisting with Nutrition and Food Science (N.F.S.) and retain crosslisting with Biochemistry (Bioc.): "(Identical with Bioc. 665 and N.F.S. 665)". Eff. II 90-91.

ANTHROPOLOGY (ANTH)

200. Add "Open to majors only." Eff. I 90-91.
 265. Add prerequisites, "P, 101 or 111." Eff. I 90-91.
 419. Add prerequisites, "P, 102, 200 or other cultural anthropology course." Eff. I 90-91.
 431. Add prerequisite, "P, 3 units of anthropology." Eff. I 90-91.
 479. Add crosslisting: "(Identical with Engr. 479)". Eff. I 90-91.

ARCHITECTURE (ARCH)

212. Change number of units to "(3)". Eff. II 90-91.
 222. Change number of units to "(3)". Eff. I 90-91.

ART (ART)

Page 40 of the Graduate Catalog: Line 8, the sentence beginning "The unit requirement for this program" should be changed to read: "The unit requirement for this program is sixty units, of which twelve must be in art history, art criticism or related areas (as approved by the major advisor), and 48 in studio art courses. A student who enters the M.F.A. program in art with fewer than 12 credits in art history shall be admitted with deficiencies in undergraduate art history and shall be required to make up these deficiencies in addition to the normal requirements." Eff. I 90-91.

Page 110 of the General Catalog: Column 2, under "Illustration emphasis": Change sentence to read: "24 units of upper-division courses including 363, 364, 365, 366, 367, 466, 467, and 469." Eff. II 90-91.

341. Course expansion to "341a-341b-341c". Change number of units to "(3-3-3)". Delete "[Rpt./2]". After "Principles and processes of photography.", insert the following: "341a: Introduction for artists to the principles and nature of

- black-and-white documentary photography. 341b. Creating untrue narratives, students are challenged to deconstruct the familiar photo essay and create new ways of telling stories. 341c: Introduction to principles of synchronized color slide - audio tape production for artists. 341a is not prerequisite to 341b; 341a and 341b are not prerequisite to 341c." Add "2R, 2S." Change prerequisite to "P, 241." Eff. II 90-91.
343. Course expansion to "343a-343b". Change number of units to "(3-3)". Delete "GRD". New description reads: "343a: Fundamentals of exposure and development control, print control, studio and portrait lighting, slide copying and view camera operation. 343b: Manipulation and extension of boundaries of traditional photography using polarization, appropriation, montage, toning and bleaching. 343a is not prerequisite to 343b. 2R, 2S. P, 241." Eff. II 90-91.
363. Course number changed from "366" to "363". [Title = "Typography"] Eff. II 90-91.
366. (1) Change course number from "366" to "363". [Title = "Typography"] Eff. II 90-91.
(2) Course number changed from "368" to "366". [Title = "Rendering Techniques"] Eff. II 90-91.
367. Course number changed from "369" to "367". [Title = "Advertising Illustration"] Eff. II 90-91.
368. Change course number from "368" to "366". [Title = "Rendering Techniques"] Eff. II 90-91.
369. Change course number from "369" to "367". [Title = "Advertising Illustration"] Eff. II 90-91.
- 397a. Change title to "Writing and the Arts". Eff. II 90-91.
- 422a-422b. Add crosslisting: "(Identical with L.A.S. 422a-422b)". Eff. I 90-91.
465. (1) Change course number from "465" to "469". [Title = "Portfolio Preparation"] Eff. II 90-91.
(2) Course number changed from "468" to "465". [Title = "Graphic Design Studio"] Eff. II 90-91.
467. Course number changed from "469" to "467". [Title = "Experimental Illustration"] Eff. II 90-91.
468. Change course number from "468" to "465". [Title = "Graphic Design Studio"] Eff. II 90-91.
469. (1) Change course number from "469" to "467". [Title = "Experimental Illustration"] Eff. II 90-91.
(2) Course number changed from "465" to "469". [Title = "Portfolio Preparation"] Eff. II 90-91.
- 522a-522b. Add crosslisting: "(Identical with L.A.S. 522a-522b)". Eff. I 90-91.
565. (1) Change course number from "565" to "569". [Title = "Portfolio Preparation"] Eff. II 90-91.
(2) Course number changed from "568" to "565". [Title = "Graduate Graphic Design Problems"] Eff. II 90-91.
567. Course number changed from "569" to "567". [Title = "Graduate Illustration"] Eff. II 90-91.

568. Change course number from "568" to "565". [Title = "Graduate Design Problems"] Eff. II 90-91.
569. (1) Change course number from "569" to "567". [Title = "Graduate Illustration"] Eff. II 90-91.
(2) Course number changed from "565" to "569". [Title = "Portfolio Preparation"] Eff. II 90-91.

ASTRONOMY (ASTR)

523. Change title to "Statistical Mechanical Problems in the Space Sciences". Eff. II 90-91.

ATMOSPHERIC SCIENCES (ATMO)

450. Course expansion to "450/550". In description, add "and chemistry" after the word "dispersion". Change prerequisites to "P, 300, Phys. 121, Math. 254, Chem. 103, or consult with department before enrolling." Graduate-level requirements include more difficult homework and project assignments that require a deeper understanding of the material and more comprehensive examinations." Eff. II 90-91.
471. Course revised. New listing reads: "Synoptic Analysis and Weather Forecasting (4) I 1990-91 Principles of meteorological analysis and forecasting. Analysis of surface and upper-level charts, cross-sections and thermodynamic diagrams. Techniques for weather forecasting and actual forecasting experience including use of computer driven graphical displays. 2R, 6L. P, knowledge of Fortran or a similar programming language; P, CR, 441a, or 300. May be convened with 571." Eff. I 90-91.
550. See "450" above. Include same prerequisites as "450".
571. Change title and number of units to "Synoptic Analysis and Weather Forecasting (3)". Eff. I 90-91.

BIOCHEMISTRY (BIOC)

665. Change crosslisting to read: "(Identical with An.S. 665)". Eff. II 90-91.

BLACK STUDIES (BLS)

351. Add: Race and Class in Latin America (3) II (Identical with Hist. 351)". Eff. II 90-91.

BUSINESS & PUBLIC ADMINISTRATION

Page 42 of Graduate Catalog: Column 2 under "Master of Public Administration", change the paragraph beginning "The third segment" to read: "The third segment is a 12-unit specialization in a substantive area of study. Specializations include health care, long-term care, criminal justice, financial management, social policy, and natural resource policy. Students with excellent first year records may design individual specializations if warranted." Eff. I 90-91.

CHEMISTRY (CHEM)

- 491a. See "691a" below.
- 491b. See "691b" below.

- 491c. See "691c" below.
- 591a. See "691a" below.
- 591b. See "691b" below.
- 591c. See "691c" below.
- 691a. Course number change and expansion to "491a/591a". Graduate-level requirements include an additional reserach paper. Eff. I 90-91.
- 691b. Course number change and expansion to "491b/591b". Graduate-level requirements include an additional research paper. Eff. I 90-91.
- 691c. Course number change and expansion to "491c/591c". Graduate-level requirements include an additional research paper. Eff. I 90-91.

CIVIL ENGINEERING & ENGINEERING MECHANICS (CE/EM)

Civil Engineering (CE)

560. Change course number to "561". Eff. I 91-92.
561. Course number changed from "560". Eff. I 91-92.

COMMUNICATION (COMM)

409. Transfer course from Political Science (Pol.) to Communication (Comm.). Change course number to "410". Add crosslisting: "(Identical with Pol. 410)". Change last line to read: "May be convened with 510." Eff. I 91-92.
421. Change title to "Political Campaign Communication". Eff. I 91-92.
509. Transfer course from Political Science (Pol.) to Communication (Comm.). Change course number to "510". Add crosslisting: "(Identical with Pol. 510)". Change last line to read: "May be convened with 410." Eff. I 91-92.
521. Change title to "Political Campaign Communication". Eff. I 91-92.

COMPUTER SCIENCE (CSC)

344. Change semester offering to "I II". Eff. I 90-91.
373. Change prerequisites to "P, 227, 344." Eff. II 90-91.
422. Delete listing. Eff. I 90-91.
433. See "533" below.
470. See "570" below.
533. Course expansion to "433/533". Graduate-level requirements include more extensive and challenging programming assignments. Eff. II 90-91.
570. Course expansion to "470/570". Graduate-level requirements include more extensive problem sets and different examinations. Eff. II 90-91.
576. Change prerequisites to "P, 237 or E.C.E. 271b; 342." Eff. I 91-92.

DANCE (DNC)

Page 128 of the General Catalog: Column 3, under the paragraph beginning "The major", change line 9 to read: "394a-394b, 445, 496d; Mus. 107 and 108, or

130a or 130b and one unit of applied music; Phil 111, or Dnc. 397a; any one of T.Ar. 111, 116, or 220. . . ." Eff. I 90-91.

201. Course number changed from "297a". Eff. II 90-91.
- 239a-239b. Add prerequisite: "P, by audition only. CR, 112c or higher level ballet technique."
- 297a. Change course number to "201". Eff. II 90-91.
- 397a. Change title to "Writing and the Arts". Eff. II 90-91.
- 495a. See "595a" below.
- 595a. Course expansion to "495a/595a". Graduate-level requirements include teaching and a teaching outline for 8 weeks (2 classes per week) for nonmajor dance class. Eff. I 90-91.

DRAMA See THEATRE ARTS.

ECOLOGY & EVOLUTIONARY BIOLOGY (ECOL)

123. Change description to "Study of the directional and random forces that lead to adaptation within populations, speciation between populations, and quantum differences between major groups. The origin of life and the products of the evolutionary ages are not covered. P, cursory knowledge of Mendelian genetics recommended." Eff. II 90-91.
410. See "510" below.
411. See "512" below.
- 496d. Add "Writing-Emphasis Course" only if taken for 3-4 units." Eff. I 90-91.
510. Course expansion to "410/510". Graduate-level requirements include a research project. Eff. I 90-91.
511. See "512" below.
512. Course number change and expansion to "411/511". Eff. II 91-92.
586. Change title to "Biological Scaling". Eff. II 90-91.

EDUCATION (EDUC/EDA/EDP/HED/LRC/SER/TTE)

Educational Administration (EDA)

665. Change title to "Supervision of the Instructional Program". Eff. II 90-91.

Special Education and Rehabilitation (SER)

301. Course expansion to "301a-301b." Change number of units to "(2-2)". Semester offerings "I II" are understood. Retain "GRD". Course description reads: "Introduction to the integration of special students into the regular elementary (301a) and secondary (301b) classrooms. 301a is open to elementary education majors currently enrolled in student teaching. 301b is open to secondary education majors currently enrolled in student teaching. P, T.T.E. 322, 323, 324, 326, 327. (Identical with T.T.E. 301a-301b)". Eff. II 90-91.
- 301a-301b. Course number changed from "301". [For other changes, see "301".] Eff. II 90-91.

Teaching and Teacher Education (TTE)

301. Course expansion to "301a-301b." Change number of units to "(2-2)". Semester offerings "I II" are understood. Retain "GRD". Change crosslisting to read: "(Identical with S.E.R. 301a-301b)." Eff. II 90-91.
- 301a-301b. Course number changed from "301". [For other changes, see "301".] Eff. II 90-91.
- 493a. (1) Change number of units to "(3-15)". Eff. II 90-91.
(2) Change number of units to "(3-12)". Eff. Summer 1991.
- 493b. (1) Change number of units to "(6-15)". Eff. II 90-91.
(2) Change number of units to "(6-12)". Eff. Summer 1991.

ELECTRICAL & COMPUTER ENGINEERING (ECE)

527. Add: "Holography(3) II 1990-91 (Identical with Opti. 527)". Eff. I 90-91.

ENGINEERING (ENGR)

120. Add: "Technology and Society: An Historical Perspective (3) I (Identical with N.E.E. 120)". Eff. I 90-91.
255. Add: "Materials Science in Modern Society (3) I (Identical with M.S.E. 255)". Eff. I 90-91.
256. Add: "Laboratory for Materials Science (1) I (Identical with M.S.E. 256)". Eff. I 90-91.
257. Add: "Materials Science of Art and Archaeological Objects (3) II (Identical with M.S.E. 257)". Eff. I 90-91.
258. Add: "Materials Science of Art and Archaeological Objects Laboratory (1) II (Identical with M.S.E. 258)". Eff. I 90-91.
265. Add: "Engineering Economic Analysis (3) I II S (Identical with S.I.E. 265)". Eff. I 90-91.
435. Add: "Corrosion (3) II (Identical with M.S.E. 435)". Eff. I 90-91.
479. Add: "Culture and Materials Technology (3) I (Identical with Anth. 479)". Eff. I 90-91.
485. Add: "Technological Forecasting (3) I (Identical with M.S.E. 485)". Eff. I 90-91.
486. Add: "Technology and Society (3) I (Identical with M.S.E. 486)". Eff. I 90-91.
488. Add: "Scanning Electron Microscopy (3) I (Identical with M.S.E. 488)". Eff. I 90-91.

ENGLISH (ENGL)

533. Add "[Rpt./1]". Eff. I 87-88.
541. Add "[Rpt./1]". Eff. I 87-88.
- 555a-555b. Add "[Rpt./1]". Eff. I 87-88.
- 557a-557b. Add "[Rpt./1]". Eff. I 87-88.

- 565a-565b. Add "[Rpt./1]". Eff. I 87-88.
- 566a-566b. Add "[Rpt./1]". Eff. I 87-88.
- 596a. Add "[Rpt./2]". Eff. I 87-88.
- 596b. Add "[Rpt./2]". Eff. I 87-88.
- 596c. Add "[Rpt./2]". Eff. I 87-88.
- 596d. Add "[Rpt./2]". Eff. I 87-88.
- 596e. Add "[Rpt./2]". Eff. I 87-88.
- 596f. Add "[Rpt./2]". Eff. I 87-88.
- 596g. Add "[Rpt./2]". Eff. I 87-88.
- 596h. Add "[Rpt./2]". Eff. I 87-88.
- 596j. Add "[Rpt./2]". Eff. I 87-88.
- 596k. Add "[Rpt./2]". Eff. I 87-88.
- 596l. Add "[Rpt./2]". Eff. I 87-88.
- 596p. Change course number to "696d". Course revised. Eff. II 90-91. [For new listing, see "696d".]
- 596w. Add "[Rpt./2]". Eff. I 87-88.
- 696d. Course number changed from "596p". Course revised. New listing reads: "History of Rhetoric (3) [Rpt./6] I II". Eff. II 90-91.

ENTOMOLOGY (ENTO)

- Page 150 of the General Catalog: Add the following paragraph to the headnotes, after the first paragraph: "The Minor: The department offers students the opportunity to complete an undergraduate minor in entomology. The minor requires at least 20 units of credit to be selected from course offerings in Entomology. Specific course requirements include 201; three courses chosen from 404, 411, 416, 444; and six or more credits selected from the upper-division courses offered by the department. Students will be expected to have prerequisites and/or supporting courses that may be required by the courses in the minor. For further details, students should consult with a faculty advisor in the department." Eff. I 90-91.
151. Change title to "Insects and Society". Eff. II 90-91.
- 201R. Add prerequisites: "P, M.C.B. 181 and Ecol. 182." Eff. II 90-91.
214. Course number change and expansion to "414/514". Course revised. Eff. II 90-91. [For new listings, see "414" and "514".]
404. Change prerequisites to "P, 201R or invertebrate zoology." Eff. I 90-91.
- 407R. Course number changed from "507" and expanded to "407R/507R" and "407L/507L". Courses revised. New listing for "407R" reads: "Insect Physiology (3) II 1990-91 Introduction to the diverse and unique ways insects solve physiological problems. A whole-animal approach will be used centered around various aspects of an insect's life (i.e., growing, flying, reproducing). P, 201; CR, 407L; biochemistry recommended. May be convened with 507R. Hagedorn/Chapman". Eff. II 90-91.

- 407L. Course number changed from "507" and expanded to "407R/507R" and "407L/507L". Courses revised. New listing for "407L" reads: "Insect Physiology Laboratory (1) II 1990-91 Modern methods of physiological experimentation. P, 201; CR, 407R; biochemistry recommended. May be convened with 507L. Hagedorn/Chapman". Eff. II 90-91.
408. See "508" below.
411. See "512" below.
414. Course number changed from "214". Course revised. New listing for "414" reads: "Bee Biology and Pollination (2) II 1990-91 Fundamentals of pollination ecology with emphasis on bees as pollinators. A comprehensive review of the biology of all life stages of honey bees and honey bee colony management strategies. Field trips. P, one course in biology. May be convened with 514. Erickson". Eff. II 90-91.
416. See "516" below.
443. Change semester offering to "I". Change prerequisites to "P, M.C.B. 181, Ecol. 182." Eff. I 90-91.
444. Change prerequisite to "P, 201R." Eff. I 90-91.
468. Course revised. New listing reads: "Insect Pest Management (3) I Principles underlying the management of arthropods in agricultural systems. P, 201R. May be convened with 568. Terry". Eff. I 91-92
504. Change prerequisites to "P, 201R or invertebrate zoology." Eff. I 90-91.
507. Change course number to "507R" and "507L". Course expansion to "407R/507R" and "407L/507L". Courses revised. Eff. II 90-91. [For new listings, see "407R", "407L", "507R", and "507L".]
- 507R. Course number changed from "507" and expanded to "407R/507R" and "407L/507L". Courses revised. New listing for "507R" reads: "Insect Physiology (3) II 1990-91 For a description of course topics, see 407R. Graduate-level requirements include a written literature review and oral presentation of a selected topic. P, 201; biochemistry recommended. 507L is not required for 507R. May be convened with 407R. Hagedorn/Chapman". Eff. II 90-91.
- 507L. Course number changed from "507" and expanded to "407R/507R" and "407L/507L". Course revised. New listing for "507L" reads: "Insect Physiology Laboratory (1) II 1990-91 For a description of course topics, see 407L. For graduate-level requirements, see 507R. P, 201; biochemistry recommended. 507L is not required for 507R. May be convened with 407L. Hagedorn/Chapman". Eff. II 90-91.
508. Course expansion to "408/508". Graduate-level requirements include a written literature review and oral presentation of a selected topic. Eff. II 91-92.
511. See "512" below.
512. Course number change and expansion to "411/511". Graduate-level requirements include a written literature review and oral presentation of a selected topic. Eff. II 91-92.
514. Course number changed from "214". Course revised. New listing for "514" reads: "Bee Biology and Pollination (2) II 1990-91 For a description of course topics, see 414. Graduate-level requirements include a research paper on some topic of bee biology or pollination, terminating with an oral

- presentation. Field trips. P, one course in biology. May be convened with 414. Erickson". Eff. II 90-91.
516. Course expansion to "416/516". Graduate-level requirements include a written literature review and oral presentation of a selected topic. Eff. I 91-92.
543. Change semester offering to "I". Change prerequisites to "P, M.C.B. 181, Ecol. 182." Eff. I 90-91.
544. Change prerequisite to "P, 201R." Eff. I 90-91.
568. Course revised. New listing reads: "Insect Pest Management (3) I For a description of course topics, see 468. Graduate-level requirements include an additional report. P, 201R. May be convened with 468. Terry". Eff. I 91-92.

FAMILY & CONSUMER RESOURCES (FCR/CT/CS/COUN/FS/HEE/ID)

Family & Consumer Resources (FCR)

129. Change number of units to "(2)". Eff. I 91-92.

Clothing & Textiles (C.T.)

- 393b. Change title to "Merchandising and Consumer Studies". Eff. II 90-91.
445. Add prerequisites: "P, 9 units of Individuals, Societies and Institutions courses." Eff. II 90-91.
- 493b. Change title to "Merchandising and Consumer Studies". Eff. II 90-91.
545. Add prerequisites: "P, 9 units of Individuals, Societies and Institutions courses." Eff. II 90-91.

Consumer Studies (CS)

116. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Change title to "Family Resource Management". Change course description to read: "Principles of management as applied to families and individuals with special emphasis on management of money and time." Eff. II 90-91.
356. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Change alternate year to "1991-92". Change course description to read: "Interaction of social and economic factors relating to the selection of family housing." Eff. II 90-91.
416. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.
436. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.
466. Transfer course from Consumer Studies (C.S.) from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.
536. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.
566. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.

Counseling & Guidance (COUN)

Page 152 of the General Catalog, under Counseling and Guidance: Change the first paragraph to read: "The program area of counseling and guidance offers professional preparation in community and mental health counseling." Eff. I 90-91.

- 401. Change semester offering to "S". Add prerequisite: "P, 6 units of social science." Eff. I 90-91.
- 403. Change semester offering to "I S". Add prerequisite: "P, 6 units of social science." Eff. I 90-91.
- 421. Change semester offering to "S". Add prerequisite: "P, 6 units of social science." Eff. I 90-91.
- 503. Change semester offering to "I S". Add prerequisite: "P, 6 units of social science." Eff. I 90-91.
- 521. Change semester offering to "S". Add prerequisite: "P, 6 units of social science." Eff. I 90-91.
- 550. Add prerequisite: "P, 6 units of counseling or related area." Eff. I 90-91.
- 570. Add prerequisite: "P, 6 units of counseling or related area." Eff. I 90-91.
- 571. Add prerequisite: "P, 6 units of counseling or related area." Eff. I 90-91.
- 597c. Add prerequisite: "P, 6 units of counseling or related area." Eff. I 90-91.
- 597j. Add prerequisite: "P, 6 units of counseling or related area." Eff. I 90-91.
- 597k. Add prerequisite: "P, 6 units of counseling or related area." Eff. I 90-91.
- 601. Change semester offering to "I". Eff. I 90-91.
- 622. Change semester offering to "I". Eff. I 90-91.
- 623. Change semester offering to "II". Eff. I 90-91.
- 631. Change semester offering to "I". Eff. I 90-91.
- 644. Change semester offering to "II". Eff. I 90-91.
- 647. Change semester offering to "I". Eff. I 90-91.
- 648. Change semester offering to "II". Eff. I 90-91.
- 649. Change semester offering to "S". Eff. I 90-91.
- 672. Change semester offering to "II". Eff. I 90-91.
- 683. Change course description to read: "Theory and process in group counseling; applications in community and mental health settings; lab. experience." [Note: Prerequisite remains the same.] Eff. I 90-91.
- 696e. Change semester offering to "I". Eff. I 90-91.
- 696r. Change semester offering to "I". Eff. I 90-91.

Family Studies (F.S.)

Page 153 of the General Catalog under Family Studies:

First paragraph, last three lines, after the word "areas", substitute the following: "human development, interpersonal relations, and family financial counseling."

Second paragraph, substitute the following: "The major in family studies: Majors must complete five general education study areas as described in the College of Agriculture section of this catalog (see school advising sheets for specific requirements for study areas); as well as completing Engl. 101 or 103H, 102 or 104H; Engl. 308; Comm. 100 and 102 or 104; Math. 117R/S; M.I.S. 111. All majors must satisfy a common set of core courses: F.S. 116, 117, 137, 337; 357 or 407 or 413; Psyc. 245 and 255; in addition to the required core, the student must complete specific courses required of each concentration: Human Development Concentration: F.S. 223, 247, 407, 447, 457; N.F.S. 101, Psyc. 214, 216, 265, 415. Interpersonal Relations Concentration: F.S. 416a, 427, 457, 487; F.S. 416b or 436 or 466; Comm. 104 and 417, Soc. 321; Psyc. 300; Anth. 200 or 308 or 312 or 402 or 403 or 419. Family Financial Counseling Concentration: F.S. 356, 416a-416b, 436, 466, 476, 495a, Fin. 221 and 251, M.A.P. 348, Coun. 401. A minimum of 12 units should be chosen from the following areas: anthropology, education, family studies, counseling and guidance, family and consumer resources, psychology, management and policy, sociology, and finance."

Third paragraph: Delete paragraph beginning "The major in early childhood education".

Eff. I 90-91.

- 116. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Change title to "Family Resource Management". Change course description to read: "Principles of management as applied to families and individuals with special emphasis on management of money and time." Eff. II 90-91.
- 117. Change course description to read: "Behavioral science approach to human development through the life span." Eff. II 90-91.
- 137. Course revised. New listing reads: "Interpersonal Relations in Marriage and the Family (3) I II Behavioral science approach to family development through the life span." Eff. II 90-91.
- 247. Change semester offering to "I". Change prerequisites to "P, 117, Psyc. 101." Eff. II 90-91.
- 337. Change course description to read: "The modern family and its relationships with emphasis on marriage and interpersonal relationships. P, 137." Eff. I 90-91.
- 347. Change prerequisites to "P, CR, 223." Eff. II 90-91.
- 356. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Change alternate year to "1991-92". Change course description to read: "Interaction of social and economic factors relating to the selection of family housing." Eff. II 90-91.
- 407. Add prerequisite: "P, 223." Eff. II 90-91.
- 413. Course expansion to "413/513". Add alternate year "1992-93". Delete crosslisting with Gerontology on the 400-level only: "(Identical with Gero. 413)". Change course description for "413" to read: "Introduction to

- gerontology, with emphasis upon contemporary issues. May be convened with 513." Eff. II 90-91.
416. (1) Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.
(2) Course expansion to "416a-416b". Course revised. New listing reads: "Management of Family Finances (3-3) 416a: Techniques and tools useful in the management of family finances to achieve economic well-being. 416b: Application of financial management during various life transitions. P, 116." Eff. I 91-92.
427. Add prerequisite: "P, 137." Eff. II 90-91.
436. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.
457. Change course description to read: "Bio-social factors, including genetic influences, related to human development, socialization, and cross-cultural patterns of behavior." [Note: Keep rest of entry.] Eff. II 90-91.
466. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.
487. Course expansion to "487/587". Course revised. New listing for "487" reads: "Advanced Family Relations (3) II Critical analysis of selected studies and current research in family relations. P, 337 or Soc. 321. May be convened with 587." Eff. II 90-91.
- 507a-507b. Course revised. New listing reads: "Research Methods in Family Studies (3-3) 507a: I Design issues of general relevance to behavioral research. 507b: I Design issues of particular relevance to family and developmental research." [Note: Both offered "I" semester only.] Eff. II 90-91.
513. Course expansion to "413/513". Add alternate year "1992-93". Add crosslisting with Gerontology on 500-level only: "(Identical with Gero. 513)". Course description for "513" should read: "For a description of course topics, see 413. Graduate-level requirements include additional readings and a written research proposal. (Identical with Gero. 513) May be convened with 413." Eff. II 90-91.
536. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.
566. Transfer course from Consumer Studies (C.S.) to Family Studies (F.S.). Eff. II 90-91.
573. Change prerequisite to "P, 9 units of family studies, psychology or sociology." Eff. I 91-92.
587. Course expansion to "487/587". Course revised. Listing for "587" reads: "Advanced Family Relations (3) II For a description of course topics, see 487. Graduate-level requirements include extra required readings and an in-depth term paper. P, 337 or Soc. 321. May be convened with 487." Eff. II 90-91.
637. Delete semester offering "I". Eff. I 91-92.

Home Economics Education (HEE)

Page 154 of General Catalog under Home Economics Education:

Delete "E. Sproles, Program Leader".

First Paragraph, lines 5-6: Delete "home economics and journalism".

Second Paragraph, line 6: After the word "education", insert the following: ", family life education track".

Second Paragraph, line 10: After the word "degree", insert a period and replace the remainder of the paragraph with the following sentence: "All majors must pass the writing proficiency exam or complete remedial work prior to enrolling in 300- and 400-level Home Economics Education and College of Education courses."

Third Paragraph, lines 9-15: Replace list of required courses following "Major requirements include:" with "F.C.R. 129; Ed.P. 310; Educ. 350; L.R.C. 435; H.E.E. 288, 338g, 408, 409, 489; F.S. 116, 223, 337, 347, 356, 357, 416; F.S. 247 or Ed.P. 302 or 402; C.T. 114, 284; I.D. 115 or 388, 365; S.E.R. elective, and N.F.S. 101."

Fifth Paragraph, lines 9-14: Replace "Ed.A. 487." with "computer skills course from approved course list." Replace list of required courses following "Major requirements include:" with "F.C.R. 129; F.S. 116, 117, 137, 223, 243, 337, 357, 416a, 436; F.S. 247 or Ed.P. 302 or 402; H.E.E. 288, 338g, 408, 493; Hith. 330; Phil. 113; M.A.P. 110 or 348; two courses from Anth. 308, 310, or 420; and an upper-division course from outside the major."

Eff. I 90-91.

288. Change title to "Observation/Participation in Home Economics and Family Life Education". Change alternate year to "1992-93". Eff. II 90-91.
408. Change title to "Curriculum Decisions in Home Economics and Family Life Education". Add alternate year, "1991-92". Change course description to read: "Bases for and processes in developing home economics programs for schools and communities." [Note: Keep prerequisites.] Eff. II 90-91.
409. Change prerequisites to "P, CR, T.T.E. 338g."
489. Change prerequisites to read: "P, T.T.E. 338g; P, CR, H.E.E. 408." Eff. I 90-91.
509. Change prerequisites to "P, CR, T.T.E. 338g."
609. Change semester offering to "II". Change alternate year to "1992-93". Eff. I 90-91.
628. Change semester offering to "II". Change alternate year to "1991-92". Eff. I 90-91.

Interior Design (ID)

Page 155 of the General Catalog, under Interior Design:

Third Paragraph: Replace this paragraph with the following paragraph: "The major in interior design: Majors must complete five general education study areas, as described in the College of Agriculture section of

this catalog (see school advising sheets for specific requirements for study areas); as well as completing Engl. 101 or 103H; 102 or 104H; Comm. 112; Engl. 307; Math. 117R/S; M.I.S. 111 or approved course. Major requirements include: I.D. 115, 155, 202, 265, 275, 335, 355, 375, 475, 485, 488, 493; C.T. 284R; Arch. 101; 3 units selected from I.D. 285 or 345 or 455; Mktg. 361; Ex.S.S. (2 units); F.C.R. upper-division course from outside the major.

Fourth paragraph: Delete entire paragraph.

Eff. II 90-91.

115. Delete "GRD". Change course description and restriction to read: "Theory and exploration of design elements and principles; historical aspects and contemporary trends. Open to F.C.R. and L.Ar. majors only or consult department before enrolling." Eff. II 90-91.
265. Course number changed from "265a". Course revised. New listing reads: "Presentation Graphics (4) I Drafting mechanics, interrelationships of 2-d or 3-d composition; introduction to orthographic projections, axonometric drawings, and lettering. Application to professional phase. P, 155." Eff. II 90-91.
- 265a. Change course number to "265". Course revised. Eff. II 90-91. [For new listing, see "265".]
- 265b. Course number change to "275". Course revised. Eff. II 90-91. [For new listing, see "275".]
275. Course number changed from "265b". Course revised. New listing reads: "Applied Design Studio (4) II Design development; creative problem solving for applied design issues; design programming and process; interior and furniture working drawing techniques. P, 265." Eff. II 90-91.
335. Change prerequisites to "P, 275, Art 101." Eff. II 90-91.
345. Change prerequisites to "P, 265." Eff. II 90-91.
355. Change course description to read: "Period styles in interiors and furniture, ancient to the 20th century." [Keep remainder of course entry.] Eff. II 90-91.
365. Change course description to read: "Human needs in housing; housing structure; and construction practices." [Keep: "Field trips."] Add "P, junior standing." Eff. II 90-91.
375. Course revised. New listing reads: "Private Space Design (4) II Design of residential environments for individual or family use applying knowledge of interior materials, furnishings, and human factors. P, 335, 355." Eff. II 90-91.
405. Add prerequisite: "P, 9 units of Individuals, Societies and Institutions courses." Eff. II 90-91.
475. Course revised. New listing reads: "Public Space Design (4) I Studio projects with specific focus on interior environments designated for public usage. Includes programming, design development, project documentation and organization, working drawings and presentation techniques. P, 375, 385." Eff. I 91-92.
485. Change course description and prerequisite to read: "Readings in the interior fields, with emphasis on ethics, business organization, communication and professional development. Includes study of billing and

fee structures; writing proposals, contracts, specifications; and highlights various career tracks associated with the design profession. P, 475."

488. Course revised. New listing reads: "Advanced Public Space Design (4) II Studio projects with special focus on large-scale multifunction public space environments; design development by teams. P, 475." Eff. II 90-91.

FINE ARTS (FA)

207. Delete crosslisting: "(Identical with M.Ar. 207)". Eff. II 90-91.
307. Delete crosslisting: "(Identical with M.Ar. 307)". Eff. I 90-91.
317. Delete crosslisting: "(Identical with M.Ar. 317)". Eff. II 90-91.
- 397a. Change title to "Writing and the Arts". Eff. II 90-91.

FRENCH & ITALIAN (FRE/ITA)

453. Add crosslisting: "(Identical with Reli. 453)". Eff. I 90-91.

GEOGRAPHY & REGIONAL DEVELOPMENT (GEOG)

301. Delete crosslisting: "(Identical with Plng. 301)". Eff. I 90-91.
402. Change course number to "409". Change crosslisting to read: "(Identical with H.W.R. 409)". Eff. I 91-92.
409. Course number changed from "402". Eff. I 91-92.
411. Add crosslisting: "(Identical with L.A.S. 411)". Eff. I 90-91.
412. Add crosslisting: "(Identical with L.A.S. 412)". Eff. I 90-91.
461. Add crosslisting: "(Identical with L.A.S. 461)". Eff. I 90-91.
502. Change course number to "509". Change crosslisting to read: "(Identical with H.W.R. 509)". Eff. I 91-92.
509. Course number changed from "502". Eff. I 91-92.
511. Add crosslisting: "(Identical with L.A.S. 511)". Eff. I 90-91.
512. Add crosslisting: "(Identical with L.A.S. 512)". Eff. I 90-91.

GEOSCIENCES (GEOS)

- 396H. Change title to "Natural Resources and Society". Eff. I 91-92.
421. Course number changed from "511" to "421/521". Title changed to "Tectonometamorphism". Change instructor's name to "Anovitz". Eff. II 91-92.
511. Course number change and expansion to "421/521". Title changed to "Tectonometamorphism". [See "521" for graduate-level requirements.] Eff. II 90-91.
521. Course number changed from "511" to "421/521". Title changed to "Tectonometamorphism". Graduate-level requirements include a project. Change instructor's name to "Anovitz". Eff. II 91-92.

655. Change last sentence in course description to read: "Emphasis on sampling strategies, analytical approaches, and applications to problems in climatology." Eff. I 90-91.

GERONTOLOGY (GERO)

413. Delete listing. Eff. II 90-91.
 436. Change crosslisting to read: "(Identical with F.S. 436)". Eff. II 90-91.
 513. Add: "Issues in Aging (3) II 1992-93 (Identical with F.S. 513)". Eff. II 90-91.
 536. Change crosslisting to read: "(Identical with F.S. 536)". Eff. II 90-91.

HEALTH-RELATED PROFESSIONS (HRP)

Health Education (HLTH)

178. Add after course description: "Credit for this course or 278, but not for both." Eff. II 90-91.

Exercise & Sport Sciences (EXSS)

370. Course number change and expansion to "462/562". Graduate-level requirements include a research paper. For both 462 and 562, change prerequisites to "P, Ecol. 159a-159b, Math. 118." Eff. I 90-91.
 375. Course number change and expansion to "420/520". Graduate-level requirements include a research-review paper on an approved topic. Same prerequisites. Add instructor's name: "Fregosi". Eff. II 90-91.
 376. Course number change and expansion to "421/521". Graduate-level requirements include additional laboratory reports. See "421" and "521" for prerequisites. Eff. II 90-91.
 420. See "375" above.
 421. See "376" above. Change prerequisite to "P, CR, 420." Eff. II 90-91.
 462. See "370" above.
 520. See "375" above.
 521. See "376" above. Prerequisite should read: "P, CR 520."
 562. See "370" above.

HISTORY (HIST)

351. Add crosslisting: "(Identical with Bl.S. 351)". Eff. II 90-91.
 411. (1) Course expansion to "411/511". Graduate-level requirements include more advanced readings and an in-depth research paper. Eff. I 90-91.
 (2) Change title to "European Social and Intellectual History". Eff. II 90-91.
 511. (1) See "411" above. Eff. I 90-91.
 (2) Change title to "European Social and Intellectual History". Eff. II 90-91.

HYDROLOGY & WATER RESOURCES (HYDR/WRA)

Change prefixes of all courses listed under Hydrology (Hydr.) and Water Resources Administration (W.R.A.) to a new prefix, "H.W.R.", signifying Hydrology & Water Resources. Eff. I 91-92. [Several of the course number changes listed immediately below are relevant to this change.]

Hydrology (HYDR)

440. Course expansion from "540" to "440/540". Course revised. New listing for 440 reads: "Advanced Surface Water Hydrology (3) I Theory and selected design problems from fluvial dynamics, flood hydrology, flood routing, and water supply hydrology. P, 250 or 423 or 523 or 519. May be convened with 540." Eff. I 90-91.
 480. Course number and prefix change to "H.W.R. 482". Eff. I 91-92.
 481. Course number and prefix change to "H.W.R. 483". Eff. I 91-92.
 540. Course expansion to "440/540". Course revised. New listing for 540 reads: "Advanced Surface Water Hydrology (3) I For a description of course topics, see 440. Graduate-level requirements include an in-depth paper or project. P, 250 or 423 or 523 or 519." Eff. I 90-91.
 580. Course number and prefix change to "H.W.R. 582". Eff. I 91-92.
 581. Course number and prefix change to "H.W.R. 583". Eff. I 91-92.

Water Resources Administration (WRA)

402. Course number and prefix change to "H.W.R. 409". Eff. I 91-92.
 502. Course number and prefix change to "H.W.R. 509". Eff. I 91-92.
 560. Course number and prefix change to "H.W.R. 561". Eff. I 91-92.

LATIN AMERICAN STUDIES (LAS)

411. Add: "Middle America (3) II (Identical with Geog. 411) May be convened with 511." Eff. I 90-91.
 412. Add: "South America (3) I (Identical with Geog. 412) May be convened with 512." Eff. I 90-91.
 422a-422b. Add: Pre-Columbian Art (3-3) (Identical with Art 422a-422b) May be convened with 522a-522b." Eff. I 90-91.
 461. Add: "Population and Resources (3) II (Identical with Geog. 461)". Eff. I 90-91.
 511. Add: "Middle America (3) II (Identical with Geog. 511) May be convened with 411." Eff. I 90-91.
 512. Add: "South America (3) I (Identical with Geog. 512) May be convened with 412." Eff. I 90-91.
 522a-522b. Add: Pre-Columbian Art (3-3) (Identical with Art 522a-522b) May be convened with 422a-422b." Eff. I 90-91.

LAW (LAW)

648. Change number of units to "(3)". Eff. I 90-91.

667. Change number of units to "(3)". Eff. I 90-91.
 696c. Change number of units to "(3-4)". Eff. Summer 1990.

LINGUISTICS (LING)

430. Course expansion to "430/530". Graduate-level requirements include mastery of the formalisms, solving data-set problems, and a higher level of performance. Eff. I 92-93.
 530. See "430" above.
 540. Course revised. New listing reads: "Linguistic Change and Diachronic Theory (3) II Current theories in historical linguistics, including the study of the mechanisms and consequences of language change and the methods of linguistic reconstruction. Particular languages and areas of linguistics vary with the instructor." Eff. II 90-91.

MANAGEMENT & POLICY (MAP)

480. Course revised. New listing reads: "Men, Women and Work (3) I II Survey of research on topics that have to do with gender and organizations. Topics include social determinants of career choice, perceptions and performance of men and women as managers, occupational sex segregation, work and family issues, implications of technological change for women's employment, affirmative action and comparable worth. P, 305. (Identical with W.S. 480)". Eff. II 90-91.

MANAGEMENT INFORMATION SYSTEMS (MIS)

422. Change semester offering to "I". Delete crosslisting: "(Identical with C.Sc. 422)". Add "May be convened with 522." Eff. I 90-91.
 453. Change semester offering to "I II". Eff. I 90-91.
 522. Change semester offering to "I". Change course description to read: "For a description of course topics, see 422. Graduate-level requirements include include an additional term paper or program. May be convened with 422." Eff. I 90-91.
 553. Change semester offering to "I II". Eff. I 90-91.
 680. Delete prerequisite. Eff. I 90-91.

MATERIALS SCIENCE & ENGINEERING (MSE)

255. Add crosslisting: "(Identical with Engr. 255)". Eff. I 90-91.
 256. Add crosslisting: "(Identical with Engr. 256)". Eff. I 90-91.
 257. Add crosslisting: "(Identical with Engr. 257)". Eff. I 90-91.
 258. Add crosslisting: "(Identical with Engr. 258)". Eff. I 90-91.
 435. Add crosslisting: "(Identical with Engr. 435)". Eff. I 90-91.
 471. See "571" below.
 485. Add crosslisting: "(Identical with Engr. 485)". Eff. I 90-91.
 486. Add crosslisting: "(Identical with Engr. 486)". Eff. I 90-91.
 488. Add crosslisting: "(Identical with Engr. 488)". Eff. I 90-91.

571. Course expansion to "471/571". Delete "[Rpt.]". Change semester offering to "I". Graduate-level requirements include a research paper or project. Change prerequisite, for both levels, to "P, 260." Eff. I 90-91.

MATHEMATICS (MATH)

- Page 188 of the General Catalog: Change double-daggered note that appears after Math. 125a to read: "Credit will not be given for this course if the student has credit in a higher level math course; these students will be dropped by the Registrar's Office. Students with unusual circumstances can petition the department for exemption from this rule. This policy does not infringe on the student's rights granted by the university policy on repeating a course." Eff. I 90-91.
 116R. Note revised. See changes for Page 188 above. [This note should be included in every Schedule of Classes.]
 116S. Note revised. See changes for Page 188 above. [This note should be included in every Schedule of Classes.]
 117R. Note revised. See changes for Page 188 above. [This note should be included in every Schedule of Classes.]
 117S. Note revised. See changes for Page 188 above. [This note should be included in every Schedule of Classes.]
 118. Note revised. See changes for Page 188 above. [This note should be included in every Schedule of Classes.]
 120. Note revised. See changes for Page 188 above. [This note should be included in every Schedule of Classes.]
 123. Note revised. See changes for Page 188 above. [This note should be included in every Schedule of Classes.]
 124. Note revised. See changes for Page 188 above. [This note should be included in every Schedule of Classes.]
 125a. Note revised. See changes for Page 188 above. [This note should be included in every Schedule of Classes.]
 344. Change semester offering to "I II". Eff. I 90-91.

MEDIA ARTS (MAR)

207. Delete listing. Eff. II 90-91.
 307. Delete listing. Eff. I 90-91.
 317. Delete listing. Eff. II 90-91.
 325. Course revised. New listing reads: "Survey of Broadcasting History (3) I Survey of American broadcasting; emphasis on economic history, technical innovation, networks and ratings." Eff. II 90-91.
 397a. Change title to "Writing and the Arts". Eff. II 90-91.

MEDICINE (MED/ANES/FCM/IMED/NEUR

OBG/OPH/PATH/PED/PSYI/RADI/RONC/SURG)

Family & Community Medicine (FCM)

- 596w. Change title to "Diet and Disease Prevention". Eff. II 90-91.
896w. Change title to "Diet and Disease Prevention". Eff. II 90-91.

MILITARY SCIENCE, NAVAL SCIENCE & MILITARY AEROSPACE STUDIES

(MLS/NS/MLA)

Naval Science (NS)

101. Change number of units to "(3)". Change last line of course description to read: "customs, military justice; shipboard damage control and safety." Eff. I 90-91.
400a-400b. Add "[Rpt./1]". Eff. I 90-91.

MOLECULAR & CELLULAR BIOLOGY (MCB)

465. Change course description to read: "Selected topics in studies of the neural basis for natural behavior." [Keep prerequisites.] Eff. I 90-91.
505. Correction to Curriculum Bulletin, Vol. 13, No. 9: Add: "Eukaryotic DNA Replication (3) [Rpt./1] I 1990-91 (Identical with C.Bio. 505)". Eff. I 90-91.

MUSIC (MUS)

- 397a. Change title to "Writing and the Arts". Eff. II 90-91.

NEAR EASTERN STUDIES (NES)

- 496b. Course expansion to "496b/596b". Eff. I 90-91.
596b. See "496b".

NUCLEAR & ENERGY ENGINEERING (NEE)

120. Add crosslisting: "(Identical with Engr. 120)". Eff. I 90-91.
425. Course number change to "494a". Course revised. Eff. II 90-91. [For new listing, see "494a".]
494a. Course number changed from "425". Course revised. New listing reads "494. Practicum
a. Operation of the University of Arizona TRIGA Reactor (2) II P, 540 or 343." Eff. II 90-91.

NURSING (NURS)

Page 28 of the General Catalog, 1987-89: Under the Bachelor of Science in Nursing, change the number of units required to "130". Eff. I 87-88.

Page 141 of the General Catalog, 1987-89: Following "Total Minimum Units Required for Graduation--", change number of units to "130-133". Eff. I 87-88.

421. Course expansion to "421/521". Graduate-level requirements include a paper and/or presentation. Both levels have same prerequisites. Eff. Summer 1991.
422. Course expansion to "422/522". Graduate-level requirements include identifying a select population; conducting a needs assessment; planning, implementing, and evaluating a specific health program.
521. See "421" above.
522. See "422" above.

NUTRITION & FOOD SCIENCE (NFS)

566. Correction to General Catalog: Change number of units to "(1)". Eff. I 87-88.
601. Transfer course from Nutrition and Food Science (N.F.S.) to Animal Sciences (An.S.). Retain crosslisting with N.F.S. Eff. II 90-91.
665. Transfer course from Nutrition and Food Science (N.F.S.) to Animal Sciences (An.S.). Retain crosslisting with Biochemistry (Bioc.). Add crosslisting with Nutrition and Food Science. (N.F.S.). Eff. II 90-91.

OPTICAL SCIENCES (OPTI)

527. Add crosslisting: "(Identical with E.C.E. 527)". Eff. I 90-91.

ORIENTAL STUDIES (ORS) See EAST ASIAN STUDIES (EAS/CHN/JPN), JUDAIC STUDIES (JS), or NEAR EASTERN STUDIES (NES).

PHARMACEUTICAL SCIENCES (PHSC)

302. Course number changed from "302a". Course revised. New listing reads: "Physical Pharmacy (5) I Discussion of the physical and chemical factors that relate to the development of pharmaceutical products and drug delivery systems. Emphasis is placed on newly emerging technologies and an industrial perspective. 3R, 3L. P, Phys. 102b, 180b, Chem. 103b, 104b." Eff. II 90-91.
302a. Change course number to "302". Course revised. Eff. II 90-91. [For new listing, see "302".]
302b. Change course number to "307". Course revised. Eff. II 90-91. [For new listing, see "307".]
307. Course number changed from "302b". Course revised. New listing reads: "Dosage Form Design (3) II Application of physical-chemical principles to pharmaceutical dosage forms, including a discussion of the biopharmaceutical considerations which influence the efficacy of pharmaceutical formulations. 2R, 3L. P, 302." Eff. II 90-91.

PHARMACOLOGY AND TOXICOLOGY (PCOL/TOX)

Toxicology (TOX)

408. See "508" below.
508. Course expansion to "408/508". Eff. II 91-92.

PLANETARY SCIENCES (PTYS)

523. Change title to "Statistical Mechanical Problems in the Space Sciences". Eff. II 90-91.

PLANNING (PLNG)

300. Correction to General Catalog: Title should read "Introduction to Planning" as does the course entry in the home department of M.A.P.
301. Delete listing. Eff. I 90-91.

POLITICAL SCIENCE (POL)

Page 228 of the General Catalog under Political Science:

Third paragraph, line three: Insert "100" before "120, 140, 160."

Fourth paragraph, replace with: "The teaching minor: Twenty units of course work in political science must be taken. Of the total twenty units, twelve must be taken in one of the six subfields. In addition, one of the lower-division courses -- 100, 102, 120, 130, or 160 -- must be within the appropriate subfield."

Eff. I 90-91.

333. Add prerequisite, "P, 102." Eff. I 90-91.
407. Add prerequisite, "P, 102." Eff. I 90-91.
409. Add prerequisite, "P, 102." Eff. I 90-91.
409. Transfer course from Political Science (Pol.) to Communication (Comm.). Change course number to "410". Add crosslisting: "(Identical with Pol. 410)". Eff. I 91-92.
410. See "409" above. Add: "Struggle for the Presidency (3) I (Identical with Comm. 410) May be convened with 510." Eff. I 91-92.
412. Add prerequisite, "P, 102." Eff. I 90-91.
421. Add prerequisite, "P, 102." Eff. I 90-91.
422. Add prerequisite, "P, 102." Eff. I 90-91.
423. Add prerequisite, "P, 102." Eff. I 90-91.
426. Add prerequisite, "P, 102." Eff. I 90-91.
431. Add prerequisite, "P, 102." Eff. I 90-91.
432. Add prerequisite, "P, 102." Eff. I 90-91.
434. Add prerequisite, "P, 102." Eff. I 90-91.

435. Add prerequisite, "P, 102, 231." Eff. I 90-91.
436. Add prerequisite, "P, 102, plus an introductory level course in psychology, sociology, or anthropology." Eff. I 90-91.
437. Add prerequisite, "P, 102." Eff. I 90-91.
440. Add prerequisite, "P, 102." Eff. I 90-91.
441. Add prerequisite, "P, 102." Eff. I 90-91.
443. Add prerequisite, "P, 102." Eff. I 90-91.
444. Add prerequisite, "P, 102." Eff. I 90-91.
445. Add prerequisite, "P, 102." Eff. I 90-91.
446. Add prerequisite, "P, 102." Eff. I 90-91.
447. Add prerequisite, "P, 102." Eff. I 90-91.
448. Add prerequisite, "P, 102." Eff. I 90-91.
449. Add prerequisite, "P, 102." Eff. I 90-91.
450. Add prerequisite, "P, 102." Eff. I 90-91.
451. Add prerequisite, "P, 102." Eff. I 90-91.
452. Add prerequisite, "P, 102." Eff. I 90-91.
454. Add prerequisite, "P, 102, 120 or 250, 247." Eff. I 90-91.
455. Add prerequisite, "P, 102." Eff. I 90-91.
456. Add prerequisite, "P, 102, 120 or 250." Eff. I 90-91.
457. Add prerequisite, "P, 102." Eff. I 90-91.
459. Add prerequisite, "P, 102, 120 or 250." Eff. I 90-91.
460. Add prerequisite, "P, 102." Eff. I 90-91.
464. Add prerequisite, "P, 102." Eff. I 90-91.
468. Add prerequisite, "P, 102." Eff. I 90-91.
470. Add prerequisite, "P, 102." Eff. I 90-91.
471. Add prerequisite, "P, 102." Eff. I 90-91.
474. Add prerequisite, "P, 102." Eff. I 90-91.
475. Add prerequisite, "P, 102." Eff. I 90-91.
476. Add prerequisite, "P, 102." Eff. I 90-91.
480. Add prerequisite, "P, 102." Eff. I 90-91.
481. Add prerequisite, "P, 102." Eff. I 90-91.
483. Add prerequisite, "P, 102." Eff. I 90-91.
484a-484b. Add prerequisite, "P, 102." Eff. I 90-91.
485. Add prerequisite, "P, 102." Eff. I 90-91.
487. Add prerequisite, "P, 102." Eff. I 90-91.

509. Transfer course from Political Science (Pol.) to Communication (Comm.). Change course number to "510". Change graduate-level requirements to include an "in-depth research project". Add crosslisting: "(Identical with Pol. 510)". Eff. I 91-92.
510. See "509" above. Add: "Struggle for the Presidency (3) I (Identical with Comm. 510) May be convened with 410." Eff. I 91-92.

PSYCHOLOGY (PSYC)

101. Change number of units to "(3)". Change course description and add concurrent registration requirement, as follows: "Survey of psychology including history, systems, and methods; structure and functions of the nervous and endocrine systems; learning; motivation and emotion; sensation and perception; memory; thought and language; personality; development; social interaction; psychopathology and psychotherapy. Required for admission to all other Psychology courses. CR, 102 recommended." Eff. I 91-92.
210. Change course description to read: "Current concepts, research strategies and findings in the brain sciences, emphasizing their application to behavior and social sciences. Open to freshmen and sophomores. Credit is allowed for this course or 302, but not both. P, 101." Eff. I 91-92.
212. Before prerequisite, add: "Open to freshmen and sophomores. Credit is allowed for this course or 313, but not for both." Eff. I 91-92.
230. Course number change from "245". Eff. I 91-92.
245. Change course number to "230". Eff. I 91-92.
255. Change course number to "290". Change prerequisites to "P, 101, 230." Eff. I 91-92.
290. Course number changed from "255". Eff. I 91-92.
300. Change prerequisites to "P, 101." Eff. I 91-92.
302. Before prerequisite, add: "Credit is allowed for this course or 210, but not for both." Change prerequisites to "P, 101 or 8 units of biological lab science." Eff. I 91-92.
313. Change prerequisites to "P, 101." Eff. I 91-92.
316. Change prerequisites to "P, 101." Eff. I 91-92.
329. Change course number to "340". Change title to "Sensation and Perception". Change prerequisites to "P, 101; 230 and 290, or 250." Eff. I 91-92.
370. Change prerequisites to "P, 101; 230 and 290, or 250." Eff. I 91-92.
371. Change prerequisites to "P, 290." Eff. I 91-92.
375. Change prerequisites to "P, 290." Eff. I 91-92.
385. Change prerequisites to "P, 290." Eff. I 91-92.
401. Change title to "Biological Bases of Motivation". Change prerequisites to "P, 101, 230 and 290, or 250; 302 or 8 units of biological lab science." Eff. I 91-92.
403. Course revised. New listing reads: "Laboratory in Mammalian Systems Neurophysiology (3) I II Neurophysiology laboratory including stereotaxic

- surgery, microelectrode recording of neural signals, electrical and chemical stimulation, and principles of analog and digital signal processing. P, 101, 255, 302. May be convened with 503. Writing-Emphasis Course " Eff. I 90-91.
403. Change prerequisites to "P, 290, 302." Eff. I 91-92.
405. Change prerequisites to "P, 290." Eff. I 91-92.
410. Change prerequisites to "P, 290." Eff. I 91-92.
411. Change prerequisites to "P, 290." Eff. I 91-92.
412. Change prerequisites to "P, 290." Eff. I 91-92.
414. Change prerequisites to "P, 290, 212 or 313." Eff. I 91-92.
415. Change prerequisites to "P, 290, 212 or 313." Eff. I 91-92.
416. Change prerequisites to "P, 290." Eff. I 91-92.
418. Change prerequisites to "P, 290." Eff. I 91-92.
421. Change prerequisites to "P, 290, or graduate standing." Eff. I 91-92.
- 430a. Change course number to "430". Change prerequisites to "P, 101; 230 and 290, or 250; 300; 6 units of a social science; or graduate standing." Eff. I 91-92. [Note: 430b is deleted elsewhere in this bulletin.]
435. Change prerequisites to "P, 290." Eff. I 91-92.
449. Change prerequisites to "P, 255, 300, 316 or 355.
450. Change prerequisites to "P, 290." Eff. I 91-92.
452. Change prerequisites to "P, 290 or consult department before enrolling." Eff. I 91-92.
454. Change prerequisites to "P, 290, 418." Eff. I 91-92.
458. Change prerequisites to "P, 290." Eff. I 91-92.
472. Change prerequisites to "P, 290, 370; or graduate standing." Eff. I 91-92.
475. Change prerequisites to "P, 290 and 6 upper-division units in psychology." Eff. I 91-92.
479. Change prerequisites to "P, 290 and 6 upper-division units in psychology." Eff. I 91-92.
480. Change prerequisites to "P, 290, 302." Eff. I 91-92.
481. Change prerequisites to "P, 290 and 6 upper-division units in psychology; or graduate standing." Eff. I 91-92.
483. Change prerequisites to "P, 290 and 6 upper-division units in psychology; or graduate standing." Eff. I 91-92.
485. Change prerequisites to "P, 290 and 6 upper-division units in psychology; or graduate standing." Eff. I 91-92.
487. Change prerequisites to "P, 290 and 6 upper-division units in psychology; or graduate standing." Eff. I 91-92.
503. Change title to "Laboratory in Mammalian Systems Neurophysiology". Eff. I 90-91.

RELIGIOUS STUDIES (RELI)

436. Correction to General Catalog: Course number changed from "437".
437. Correction to General Catalog: Change course number to "436". Change crosslisting to read: "(Identical with Jpn. 436)".
453. Add: "Culture and Civilization of North Africa (3) I 1992-93 (Identical with Fren. 453)". Eff. I 90-91.
545. Correction to Supplement: Erroneous listing. Delete.
- 595i. Correction to Supplement: Erroneous listing. Delete.
- 595j. Correction to Supplement: Erroneous listing. Delete.

RENEWABLE NATURAL RESOURCES (RNR/LAR/RAM/WSM/WFSS/NRR)

Page 238 of General Catalog:

First Column: Change heading "Wildlife, Fisheries and Recreation Resources" to "Wildlife and Fisheries Resources".

Third Column: Delete heading "Natural Resource Recreation (NRR)" and the three paragraphs which follow heading. Eff. I 91-92.

Renewable Natural Resources (RNR)

438. Delete alternate year. Eff. II 90-91.
538. Delete alternate year. Eff. II 90-91.

Landscape Architecture (LAR)

201. Change course number to "212". Change semester offering to "II". Change prerequisite to "P, 211." Eff. I 90-91.
202. Change course number to "211". Change semester offering to "I". Change prerequisite to "P, Art 101." Eff. I 90-91.
211. Course number changed from "202". Eff. I 90-91.
212. Course number changed from "201". Eff. I 90-91.

Natural Resource Recreation (NRR) [Note: The prefix "NRR" will no longer be used. Eff. I 91-92.]

- 489a-489b. Transfer from Natural Resource Recreation (N.R.R.) to Renewable Natural Resources (R.N.R.). Eff. I 91-92.
- 589a-589b. Transfer from Natural Resource Recreation (N.R.R.) to Renewable Natural Resources (R.N.R.). Eff. I 91-92.

SOCIOLOGY (SOC)

558. Course revised. New listing reads: "Gender Identities and Interactions (3) Examination of the interface of gender, race, class, and ethnicity in the context of social structures and institutions. Focuses upon identities and social interaction as keys to understanding how gender inequality is created, perpetuated, or altered in families, schools, peer groups, work settings, and cultural symbols. P, 3 graduate credits in sociology, social psychology or women's studies." Eff. I 90-91.

SPEECH & HEARING SCIENCES (SPH)

250. Change course number to "350". Eff. I 91-92.
350. Course number change from "250". Eff. I 91-92.
- 461R. Course number change and expansion to "460R/560R". Graduate-level requirements include a project on a selected topic. Eff. I 90-91.
- 461L. Course number change and expansion to "460L/560L". Eff. I 90-91.
500. Course revised. New listing reads: "Introduction to Quantitative Methods and Research in Speech and Hearing Sciences (2) I Study of measurement and research design and their application in research and professional practice." Eff. I 91-92.
510. Change semester offering to "I". Eff. I 91-92.
562. Delete class structure. Eff. II 90-91.
- 565R. Change course number to "665R". Change prerequisites to "P, 260, 460, 567." Eff. I 91-92.
- 565L. Change course number to "665L". Change prerequisite to "P,CR, 665R." Eff. I 91-92.
573. Change semester offering to "II". Eff. II 91-92.
574. Change semester offering to "II". Eff. II 91-92.
575. Change prerequisite to "P, 567." Eff. II 91-92.
588. Delete class structure. Eff. II 91-92.
- 665R. Course number changed from "565R". Change prerequisites to "P, 260, 460, 567." Eff. I 91-92.
- 665L. Course number changed from "565L". Change prerequisite to "P, CR, 665R." Eff. I 91-92.
- 560R. See "461R" above.
- 560L. See "461L" above.

SYSTEMS & INDUSTRIAL ENGINEERING (SIE)

265. Add crosslisting: "(Identical with Engr. 265)". Eff. I 90-91.

THEATRE ARTS (TAR)

Page 129 of the General Catalog:

Third Column, Fourth Paragraph, beginning "Drama core curriculum": Delete "140a-140b" and add, in numerical sequence, "246".

Third Column, Eighth Paragraph, beginning "Design/technical production option": Delete "440a-440b" and add, in numerical sequence, "340a-340b," and "440".

Eff. I 90-91.

First Column, Third Paragraph, beginning "Bachelor of Fine Arts (major in drama-musical theatre)": Under lower-division drama courses, delete "140a-140b". Under upper-division course work (third line from last), delete "440a-440b" and add, in numerical sequence, "340a-340b".

First Column, Fourth Paragraph, beginning "Bachelor of Fine Arts (major in drama education)": Delete "a" in "440a", leaving "440".

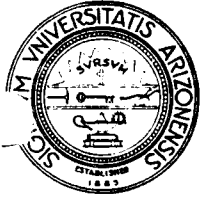
First Column, Fifth Paragraph, beginning "Bachelor of Arts in Drama (major in dramatic theory)": Change to "Bachelor of Arts in Theatre Arts (major in dramatic theory)". Change "Bachelor of Arts in Drama" to "Bachelor of Arts in Theatre Arts". Delete "140a-140b" and add, in numerical sequence "246," and "340a-340b".

Second Column, Second Paragraph, beginning "Drama minor/teaching minor (20 units)": Delete "140a, 140b, 440a, 440b," and add, in numerical sequence, "246, 340a-340b." Eff. I 90-91.

- 220. Add prerequisite, "P, 120". Eff. I 90-91.
- 397a. Change title to "Writing and the Arts". Eff. II 90-91.
- 423. Add alternate year "1992-93". Eff. I 90-91.
- 442. See "542" below.
- 523. Add alternate year "1992-93". Eff. I 90-91.
- 524. Change semester offering to "II". Eff. I 90-91.
- 542. Course expansion to "442/542". Graduate-level requirements include an additional creative and/or research project. Eff. I 90-91.
- 543. Delete semester offering and alternate year. Eff. I 90-91.

WOMEN'S STUDIES (WS)

- 480. Change title to "Men, Women and Work". Eff. II 90-91.
- 558. Change title to "Gender Identities and Interactions". Eff. I 90-91.



THE UNIVERSITY OF ARIZONA
TUCSON, ARIZONA 85721

CHAIR OF THE FACULTY

September 24, 1990

FACULTY CENTER
1528 ADMINISTRATION ANNEX
(602) 621-1342

SEP 25 1990

PROVOST 2950
ACADEMIC AFFAIRS

Dr. Jack R. Cole, Senior Vice President for Academic Affairs and
Provost
University of Arizona
Administration 512
Campus

Dear Jack:

As you requested last spring, the Faculty Governance Committee has addressed what it perceives to be current problems dealing with faculty governance and its involvement in university matters. The attached recommendations are the result of our deliberations from late spring through the summer and into the first part of the current semester.

It was felt by the committee that if the recommendations indicated can be implemented, it will be a considerable improvement in faculty morale and in the perception that faculty are more deeply involved in the directions that their departments, college and The University will be following in the future.

If you need further clarification on these recommendations, do not hesitate to contact me.

Cordially,

Thomas R. Rehm
Chairman of the Faculty
and
Chair, Faculty Governance Committee
on behalf of its members:

Sarah M. Dinham, CRUA
Joel Feinberg, Philosophy
Juan Garcia, History
John Hildebrand, Neurobiology
Josef Knott, Music

Mary Koss, Psychiatry
Jeanne Pemberton, Chemistry
Lewis Shenker, Ob/Gyn
Renate Schulz, German
Rob Williams, Law

FACULTY GOVERNANCE COMMITTEE

24 SEPTEMBER 1990

Based on its deliberations and presentations made by outside groups, the Committee offers the following recommendations for enhancing the role of faculty governance in University affairs.

The Faculty Governance Committee recommends that the following steps be taken by the indicated parties:

1. That deans, department heads, faculty status committees, and particularly faculty peers be made fully aware of the importance of faculty governance service in the evaluation of a faculty member's contributions and responsibilities to the teaching, research and SERVICE mission of The University. The service contribution of faculty in faculty governance must be a recognized and rewarded component in a department's bylaws as well as in its annual evaluation and promotion and tenure criteria. A few critical committees may require release time for their members and certainly for their chairpersons.
2. That the Faculty Senate be reconstituted such that EACH academic unit of The University of Arizona have a Senator to represent the unit. Each of these individual Senators would be elected by the members of their respective academic unit. Each Senator would have the responsibility of keeping their unit apprised of Senate actions and of bringing their unit's concerns to the Senate. A limited number of administrators and students would also be members of the Senate. Service as the unit's Senator would release that individual from other departmental service obligations when approved by the unit's membership. An 'academic unit' is a unit where appointed personnel have 'home' appointments, eg., the History and Anatomy Departments, being 'homes' would be academic units, but the Biomedical Engineering Program and none of the 'Studies' programs would be home units and therefore would not have a Senator.
3. That the Chair of the Faculty automatically be the presiding officer of the Faculty Senate.
4. That the Chair of the Faculty be a regular member of the President's Council, and the Secretary of the Faculty be a member of the Dean's Council.
5. That the Faculty Senate establish a standing faculty Committee on Facilities Planning to work with campus and building planners to see that faculty concerns are included in such planning. Effective planning done by faculty is needed to respond to educational needs, not those needs perceived by architects or those needs that appear to be dictated by public relations pressure.

6. That the existing Senate standing Committee on Budget and Strategic Planning Policy be given a strong and responsible role in evaluating and formulating the direction, goals and scope of where The University is heading for the future. In addition, this Committee should become heavily involved in decisions leading to the allocation of University resources, particularly those associated with new and continuing projects supported by local funds. Also department and college Bylaws should include a budget and planning function with very significant faculty involvement.
7. That each academic unit prepare through their faculty their own set of operational Bylaws. These Bylaws are to include items such as: procedures for handling annual evaluations, promotion and tenure, planning for resource allocation, mission and goals, departmental emphasis, and unit membership. A copy of the unit's Bylaws is to be provided to each member of the unit, as well as to the Faculty Center, the College, and the Provost's Office.
8. That all existing and future procedures detailed in Departmental and College Bylaws, the Constitution and Bylaws of The University of Arizona Faculty, the University Handbook for Appointed Personnel, The Code of Conduct, the Regent's Conditions of Faculty Service, etc., be thoroughly implemented and followed with due accountability being made for the actions of all parties, particularly stressing the importance and responsibilities of department heads and deans to their faculty. Although these procedures have been in existence for some time, much stronger monitoring by the Provost's office is called for to see that they are properly implemented and followed.
9. That the administration increase its reliance on the Faculty Governance structure, and the Committee on Committees in particular, in asking for names of individuals to serve on all higher administrator search and selection committees and on all ad hoc committees which impact on faculty and students.

THE UNIVERSITY OF
ARIZONA
TUCSON ARIZONA

Administrative Offices
Tucson, Arizona 85724
602-921-7111
FAX 602-921-7113

January 23, 1991

Professor Ford N. Burkhart
Acting Chair of Faculty
Faculty Center
1528, Administration Annex
Campus

Dear Professor Burkhart:

I want to respond to the recommendations made by the Faculty Governance committee that was chaired by Professor Thomas Rehm. Let me first comment on the recommendations point by point, in the same order that they appeared in the committee's report, and then turn to the practical matter of how I intend to proceed.

1. Service in Faculty Governance I agree with the committee that a faculty member's contributions to governance must be accorded due weight in our personnel decisions. This is true when those contributions go beyond minor efforts and include chairing major groups or service on unusually demanding committees. While I can see that, on occasion, released time to chair such committees might be necessary, frankly, our financial situation over the next several years will limit our ability to implement this recommendation to any significant further extent.

2. Restructuring the Faculty Senate This is a matter for the General Faculty to address, of course. I understand that the committee's proposal will be distributed to the General Faculty, as will a competing proposal for restructuring that originated with the Faculty Senate's Academic Personnel Policy Committee. The fact that these two proposals will be considered at different times is unfortunate in my view, since it would make better sense for the General Faculty to consider them simultaneously. However, that is a decision controlled by you and by the Faculty Senate Executive Committee.

3. Presiding Officer of the Faculty Senate The suggestion that this office be filled by the Chair of the Faculty is, again, a matter for the General Faculty to decide.

4. President's Council and Deans' Council I am not prepared to accept the committee's proposal that the Chair of the Faculty serve ex officio on the President's Council and, similarly, that the Secretary of the Faculty serve on the Deans' Council. Let me explain my reasons.

First, these groups are not governance or constitutional bodies that operate on a representative basis. They constitute no more than one president's preference for ensuring communication among administrators bearing similar levels of responsibility, and for arranging that he receives their advice. Second, it would not be fair to place the Chairperson and the Secretary in positions where their choice would appear to lie between co-optation or failing to earn acceptance as full members of the groups. Third, it would not be helpful for me to commit my successor to any particular arrangement when her or his preference may be very different from mine. I shall, of course, see that my successor is made aware of the committee's proposal.

5. Proposed Standing Committee on Facilities Planning This is an interesting proposal but, again, it is a matter for the General Faculty to decide.

6. Budget and Strategic Planning The committee's recommendation concerning this Faculty Senate committee seems entirely in harmony with the way matters have developed in recent years. It is an idea that I can endorse. You will appreciate that my recent invitation to the Budget Committee to share with me its thoughts on a likely budget recession this year and on budget reallocations next year are steps in the direction recommended, as was my appointment of the Ad hoc Budget Advisory Task Force. Similarly, I agree that there should be faculty input in the budgeting and planning activities of each college and department, and that provision for this should appear in college and department Bylaws.

7. Bylaws for Academic Units I agree that each academic unit should have its own Bylaws to clarify the arrangements and procedures by which the unit operates. At the same time I suggest that it is essential for the President or a designee (most likely the Provost) to scrutinize each set of proposed Bylaws most carefully before approving them. Otherwise there is a real danger

of adopting Bylaws that run counter to policies and procedures adopted by the Arizona Board of Regents or by the University itself.

8. Implementing Policies and Procedures I agree that our policies and procedures need to be observed at every level of administration. Indeed, this is the only way to avoid anarchy and chaos. I think, however, that the committee overestimates the ability of the Provost's Office to closely monitor the situation throughout the campus. It is more realistic to assume that it is incumbent on all levels of responsibility--- departmental, collegiate and central administrative--- to ensure that our rules and regulations are observed.

9. Faculty Representation on Committees I agree that the Committee on Committees should be asked, as a regular matter, to suggest the names of faculty members to serve on major search advisory committees and on other important committees. Let me add, however, given that the Committee on Committees is not familiar with the entire university and given that an appointing administrator commonly needs to balance a committee among various sections of the University community, that it is important for other sources to provide names also.

Having outlined my position on those six recommendations that call for a decision on my part, let me indicate what actions I propose to take on the five items that I am prepared to accept.

#1. By a copy of this letter I am asking Provost Jack R. Cole to ensure that appropriate instructions are included in the personnel action guidelines issued by his office.

#6. By copies of this letter I am asking Provost Cole and Vice President Joel Valdez to continue and intensify recent efforts to involve the Faculty Senate Committee on Budget and Strategic Planning Policy and the Ad hoc Budget Priority Advisory Task Force in the discussions that determine the future course of the University, in particular in preparing for a budget recision this year and budget reallocations next year.

#7. I shall consult with my vice presidents and Provost Cole will consult with the Deans' Council to determine how best we can move to develop collegiate and departmental Bylaws that meet the objectives that the committee has proposed while being compatible with Regents and University policies and procedures. These Bylaws should include attention to the need for faculty

input concerning budgetary and planning matters as suggested in Recommendation #6.

#8. By copies of this memorandum I shall remind all vice presidents, deans, directors and department heads concerning the necessity for carefully observing our established policies and procedures, both as a matter of efficiency and as a matter of fairness.

#9. By copies of this letter I shall remind my vice presidents of the need to involve the Committee on Committees in collecting suggestions of faculty members to serve on search advisory and other important committees.

I am most grateful to Professor Rehm and the members of his committee for their useful work in considering how best to enhance faculty participation in the affairs of the University. Clearly this is a topic of concern both to administrators and to the faculty at large, since neither group is satisfied with our present arrangements. I shall observe with interest how the Faculty Senate and the General Faculty react to the three recommendations addressed to them.

Cordially,



Henry Koffler
President

HK:nv

cc: Vice Presidents
Deans, Directors and Department Heads
Members, Faculty Governance Committee

UNIVERSITY OF ARIZONA
FACULTY SENATE

Budget and Strategic Planning Policy Committee, 1989-90 Annual Report

Members

Carrie Jo Braden, Nursing	Elizabeth Roemer, Astronomy and Lunar & Planetary Laboratory (Chair)
Michael D. Bradley, Hydrology and Water Resources	Robert Tindall, Management & Policy
Douglas Jones, Science Library	Beth Uhl, ASUA Office
Samuel Paplanus, Pathology	Thad Avery, ASUA Office (Summer 1990)
Hermann Rebel, History (resigned 7/90)	

Charge

The Budget Policy Committee deals with the long-range planning and budget implications of such matters as Program Change Requests (Legislative Request Budget), fiscal and budgetary considerations pertaining to long-range academic plans and goals, allocation of University resources, resource acquisition for salaries and benefits, new programs, reduction or elimination of existing programs, summer session, and Continuing Education.

Committee Activities

The committee met fifteen times in the period October 1989 through August 1990. Provost Jack Cole met with the committee on two of these occasions and interacted with the committee on an ongoing basis, responding to concerns of the committee and requesting the committee's views on a number of matters. Main thrusts of the committee's activities included the following:

1. Mission Statement and Five-Year Strategic Plan/Directions. The current committee followed through on the resolution proposed by the outgoing Budget Policy Committee and adopted by the Senate in September 1989 by continuing to press vigorously for a progressive but realistic mission statement and strategic plan that incorporated a balance among the teaching, research and service functions of the University. The format of the recent revision, matched to specifications determined by the Regents, still gives us pause. The latest version, as introduced by President Koffler's state-ment to the Regents in July 1990, represents a substantial improvement over earlier versions. We note, however, that the Mission Statement and Five-Year Strategic Plan as presented to the Regents have not been widely circulated on the campus and do not have formal faculty endorsement. We commend the work of the committee appointed by the Provost and chaired by Michael Gottfredson for the quality of the alternate mission statement presented for comment to the Senate at its meeting in May 1990 by the Provost. We hope that this statement will have a significant impact on at least local planning, and recommend that it, as well as the policy statements approved by the Regents, be published in Lo Que Pasa for comment or information, as appropriate.
2. Market Salary Adjustments. The Provost responded to questions from the committee about policy and procedures relating to market salary adjustments for individuals. A copy of a summary memorandum is available for examination at the Faculty Center.

The committee also offered assistance in support of the general market salary adjustment package before the Legislature but was not called upon. Funds sufficient to permit a start toward remedying salary deficiencies were

appropriated, however, and the committee is participating in review of the allocation plan.

3. Personnel Administration and Planning and Budgeting at the Level of Middle Management: Memoranda have been exchanged between the committee and the Provost concerning deficiencies that exist, their consequences, and possible ways of making improvements in personnel administration and in planning and budgeting skills at the unit and college levels. Further consultations are expected.
4. Program Change Priorities: 1991-92 Legislative Request Budget: The committee received documentation concerning all proposed program changes, made an initial evaluation, and communicated its provisional assessment of priorities to the Provost, along with a list of the considerations on which the priorities were based. A second iteration responded to priorities proposed by the Provost's staff. The committee recommended that highest priority continue to be given to relief of problems related to uncompetitive and inequitable faculty and staff salaries.
5. Request Budgets and Annual Financial Reports: Representatives of the committee met with Ed Frisch, Director, Resource Planning and Management, Office of Academic Affairs; Bert Landau, Associate Vice President for Finance and Controller; and Ron Kovar, Associate Controller, to obtain information about the contents of annual financial reports, their availability, and the relation of past expenditures to development of future budgets. The committee has received copies of the 1989-90 Local Funds Budget Request, the 1990-91 Operating Budget Request, and recent audited financial reports. In addition, copies of the audited annual financial reports covering the past fifteen years have been deposited at the Faculty Center and are available for examination. The committee has also received a copy of the June 1990 Report of the Self-Study of the Capital Development Plan from the Office of the Vice President for Business Affairs. Studies in the area of planning and budgeting, the ways in which priorities for the allocation of resources have been determined, and how they might better be determined in the future, are expected to continue.
6. Fee Waivers: With the existing policy with respect to fee waivers under threat early in the Legislative session, the committee sponsored a resolution, adopted by the Faculty Senate on February 5, 1990, in support of continuation of fee waivers for faculty, professionals, staff, their spouses, and dependent children. Similar resolutions were adopted by the faculty senates at ASU and NAU. Whether due in some degree to these resolutions or not, the existing policy survived intact.
7. Change in Name of the Committee: The Budget Policy Committee in its 1987-88 annual report recommended a change in name to better reflect the committee functions with respect to strategic planning. The proposal was set aside until a time at which other matters in the Constitution and By-laws were under review. Accordingly the change to Budget and Strategic Planning Policy Committee was approved by the Faculty Senate in May 1990. Final approval awaits a vote of the General Faculty.

The committee expresses its deep appreciation to all those individuals who have so generously assisted the committee in its work during the report year.

Elizabeth Roemer, Chair 1989-90