

April 4, 1994

Wording Changes for Curriculum Process Policies:

Policy 1

Change first sentence to "Courses which have not been taught for three years, or two consecutive offerings, whichever is longer.

Policy 3

At the end of sentence 3, Section A, add "before the forms or proposals are sent to the Department Head for review."

Section C sentence 1, should read "The Faculty Senate is ultimately responsible for the faculty-level University-wide ----

At the end of Section C, add "Degree granting program/unit creation, elimination, mergers, transfers, and changes in title still require Faculty Senate approval.

Faculty Senate
April 4, 1994

Curriculum Process Policies
Submitted to the Faculty Senate for
Discussion on March 21, 1994

Three recommendations, extracted from the report to the Senate. Additions indicated by boldface and underlining.

Policy 1: Sunset Review

The following sunset review policy for curricular offerings should replace current procedure:

Courses which have not been taught for three years should be automatically removed from the Catalog. There will be no automatic appeal process for such course deletions. If a unit wants to reinstate a course which has been removed, it will follow the normal procedure for the introduction of new courses.

Policy 2: Temporary Courses

The current category of 'experimental or temporary course' should be redefined as 'temporary course.' A temporary course is to be designed as a short term ad hoc offering. The introduction of a temporary course is not a method to introduce an addition to the curriculum or to speed courses through the review process. Any course that a department intends at the outset to teach more than twice is not an appropriate candidate for a temporary offering and, ordinarily, a third offering will not be allowed. This change will entail two other changes. First, the University curricular form titled 'Recommendation for Experimental or Temporary Course' should be changed to 'Recommendation for a Temporary Course.' Second, the recommendation form for a temporary offering should be modified to include essentially the same information required for a permanent course, in particular the information included in the section titled 'Course Justification and Analysis.'

Policy 3: Curricular Review

Curricular review includes the review of new and experimental course proposals, new programs, course and program deletions, and modifications in existing programs and courses.

a. All curricular units should have a curriculum committee (where a committee of the whole is one option). This committee will review all curricular changes originating within the curricular unit. The committee chair will sign off on course recommendation forms and program proposals to indicate the approval of the committee. The membership of the current curriculum committee for each unit should be selected by the faculty of the unit, should include a student member, and should be on file in the relevant dean's office.

b. All colleges should have an elected curriculum review committee, chaired by a faculty member, and which includes a student member, with the college dean or dean's designee as an ex-officio member. (The college may choose to separate graduate and undergraduate curriculum committees, but need not.) Course and program review should focus on quality, programmatic need, and cost. The dean's signature on the relevant form will indicate that all such issues within the college have been resolved.

c. The Faculty Senate is ultimately responsible for University-wide curricular review, but delegates this responsibility to the appropriate elected representative faculty council (undergraduate or graduate). The focus of this review level is curricular overlap and duplication, and to ensure that all processes have been carried out.

d. The University Curriculum Office offers a final technical review of course and program proposals, e.g. contact hours per unit of credit. Subject to the decision of the University faculty councils, this is the final stage in the review process. The University Curriculum Office will also provide staffing for the University councils.

e. The decision of each of the levels would be binding about the issues within their purview. Thus, if review within a college found objections from another unit in the college, the committee and dean would mediate these objections; if mediation did not resolve the dispute, the dean would make a decision with input from the college curriculum committee and the dispute would not be carried to the next stage. Similarly, if review at the University level involved an objection from a unit outside the originating college, the appropriate University faculty council would consider this objection; however, the decision of the council would be final.

f. The Faculty Senate will approve on a yearly basis the curricular and program review procedure, proposing modifications as necessary. The faculty councils will provide a yearly report to the Faculty Senate on their review activity. This report is intended to apprise the Faculty Senate of trends in new course and program proposals. The councils may also make recommendations as necessary about desirable changes in the review process.

g. The Curriculum Bulletin will provide the campus community with information on curricular changes both as they come to the University councils and after they have successfully negotiated the review process. The Curriculum Bulletin should be expanded to include as its first page a checklist of the curricular issues which are addressed at each of the four review levels.

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Criteria for Evaluating Course Proposals
Departmental Level

Add, to the 8 items listed, the following:

9. Has the cost of the course (in faculty time, materials, library resources) been carefully and realistically assessed and provision made for accommodation?

- - - - -
University Faculty Council Level

Add, to the 6 items listed, the following:

7. Has the cost of the course (in faculty time, materials, library resources) been carefully and realistically assessed and provision made for accommodation?

Proposed

Curriculum Process Policies

Submitted to Senate 3/21/94

Committee Members

J. D. Garcia, Chairman of the Faculty

Dr. Fredrick Hill, Professor

Assistant Professor Sheila Pitt

Dr. Susan Steele, Associate Dean

Professor Ed Williams

BACKGROUND

An effective and efficient delivery of the curriculum is fundamental to the mission of a university. This document offers a number of recommendations and proposals as to how the University of Arizona might better accomplish this mission. The recommendations and proposals address four different aspects of curricular delivery:

1. **The appropriate allocation of teaching resources.** It is important that every unit give appropriate consideration to the needs of all students within its range of service, when allocating the teaching resources of the unit. There is always a temptation to provide disproportionate service to higher level students with interests close to those of the faculty. Recommendation 1 suggests a measure for the appropriate allocation of teaching resources within a curricular unit.
2. **Sunset review.** New curricular offerings are created on a regular basis, but old offerings are removed at a much slower pace. For example, the ratio of new course proposals to course deletions for three Faculties within the College of Arts and Sciences (SBS, Humanities, and Science) was 4:1 in 1990-91, 5:1 in 1991-2, 1.25:1 in 1992-3 and 5:1 for the first eight months of 1993-4. Recommendation 2 describes a change in the sunset review policy for curricular offerings.
3. **Temporary courses.** Recommendations for the offering of experimental and temporary courses are very common. In 1991-92, for example, the number of recommendations for experimental and temporal courses in the same three Faculties within the College of Arts and Sciences was 158; in 1992-3, 142; and for the first eight months of 1993-4, 65. Because of their ephemeral character, experimental and temporary courses seldom have a well-defined place in the curriculum. Recommendation 3 is meant to reduce the numbers of these courses.
4. **Curricular Review.** Faculty review of course and program proposals is fundamental to the health of our curriculum. Yet, at present, the curricular review process is ill-defined. It is not clear that any consistency exists across colleges nor is there any clarity as to the criteria employed at any stage in the process. Recommendation 4 proposes a four-stage curricular review process with Faculty Senate oversight.

These four points form a coherent package, yet they do not share a single status. The recommendation for the appropriate allocation of teaching resources is to be taken as a model that curricular units could follow in assessing their resource allocation. Proposed policies 1, 2, and 3, on the other hand, form the heart of the proposal and describe a coherent curricular process for the entire campus.

A Recommendation for the Allocation of Teaching Resources

Numerical measures are helpful in monitoring the equity of resource allocation from semester to semester. Unique approaches to teaching in individual units (for example, distinct mechanisms for utilizing teaching assistants) will cause both the computation and interpretation of these measures to differ among departments and colleges. To the extent that these measures may be circulated within the University, justifications may be included to reflect the impact of these unique teaching approaches.

A set of meaningful measures may be obtained by partitioning a department's course offering into sets as follows.

1. (L) 100 and 200 level courses
2. (U) 300 and 400 level courses that are not jointly convened (i.e. scheduled with a corresponding 500 level course).
3. (J) jointly convened 400 and 500 level courses (counted as one course)
4. (G) separate 500 level and 600 level courses

The average number of students per section for set 1 is L. The average number of students per section for sets 2, 3, and 4 are U, J, and G respectively. Six separate ratios may be computed by dividing the "students per section" average for a lower level set by the average for a higher level set. The largest ratio will usually be L/G. Each college should work out an appropriate ratio for its units, but, as a rule of thumb, an L/G of 4.0 is probably not excessively high. All of the ratios are meaningful.

Proposed Policy 1: Sunset Review

The following sunset review policy for curricular offerings should replace current procedure:

Courses which have not been taught for three years should be automatically removed from the **Catalog**. There will be no automatic appeal process for such course deletions. If a unit wants to reinstate a course which has been removed, it will follow the normal procedure for the introduction of new courses.

Proposed Policy 2: Temporary Courses

The current category of 'experimental or temporary course' should be redefined as 'temporary course'. A temporary course is to be designed as a short term ad hoc offering. The introduction of a temporary course is not a method to introduce an addition to the curriculum or to speed courses through the review process. Any course that a department intends at the outset to teach more than twice is not an appropriate candidate for a temporary offering and, ordinarily, a third offering will not be allowed. This change will entail two other changes. First, the University curricular form titled 'Recommendation for Experimental or Temporary Course' should be changed to 'Recommendation for a Temporary Course'. Second, the recommendation form for a temporary offering should be modified to include essentially the same information required for a permanent course, in particular the information included in the section titled 'Course Justification and Analysis'.

Proposed Policy 3: Curricular Review

Curricular review includes the review of new and experimental course proposals, new programs, course and program deletions, and modifications in existing programs and courses.

- a. All curricular units should have a curriculum committee (where a committee of the whole is one option). This committee will review all curricular changes originating within the curricular unit. The committee chair will sign off on course recommendation forms and program proposals to indicate the approval of the committee. The membership of the current curriculum committee for each unit should be selected by the faculty of the unit and should be on file in the relevant dean's office.
- b. All colleges should have an elected curriculum review committee, with the college dean or dean's designee as an ex-officio member. (The college may choose to separate graduate and undergraduate curriculum committees, but need not.) Course and program review should focus on quality, programmatic need, and cost. The dean's signature on the relevant form will indicate that all such issues within the college have been resolved.
- c. The Faculty Senate is ultimately responsible for University-wide curricular review, but delegates this responsibility to the appropriate elected representative faculty council (undergraduate or graduate). The focus of this review level is curricular overlap and duplication.
- d. The University Curriculum Office offers a final technical review of course and program proposals, as e.g. contact hours per unit of credit. Subject to the decision of the University faculty councils, this is the final stage in the review process. The University Curriculum Office will also staff the University councils.
- e. The decision of each of the levels would be binding about the issues within their purview. Thus, if review within a college found objections from another unit in the college, the committee and dean would mediate these objections; if mediation did not resolve the dispute, the dean would make a decision with input from the college curriculum committee and the dispute would not be carried to the next stage. Similarly, if review at the University level involved an objection from a unit outside the originating college, the appropriate University faculty council would consider this objection; however, the decision of the council would be final.
- f. The Faculty Senate will approve on a yearly basis the curricular and program review procedure, proposing modifications as necessary. The faculty councils will provide a yearly report to the Faculty Senate on their review activity. This report is intended to apprise the Faculty Senate of trends in new course and program proposals. The councils may also make recommendations as necessary about desirable changes in the review process.
- g. The Curriculum Bulletin will provide the campus community with information on curricular changes both as they come to the University councils and after they have successfully negotiated the review process. The Curriculum Bulletin should be expanded to include as its first page a checklist of the curricular issues which are addressed at each of the four review levels.

Criteria for Evaluating Course Proposals

Departmental Level

1. Does the course conform to the unit's approved Curriculum Plan?
2. Is the course proposal form complete, is it accompanied by a syllabus, and is it accompanied by the CV of the instructor if the instructor is not listed as faculty in the current catalog?
3. Is the course being proposed at an appropriate level, and for an appropriate number of units of credit?
4. Are prerequisites specified? Do prerequisites logically precede the proposed course?
5. Have the proposal and its syllabus been carefully worked out by the responsible faculty member?
6. Does the proposed course contribute to the overall mission and program of the department?
7. If the course is to be conjoined at the 400/500 levels, do the course description and syllabus make appropriate distinctions in description and requirements?
8. Does the syllabus indicate what is expected of students, how they will be evaluated, and other policies relevant to student behavior and performance?

College Curriculum Committee Level

1. Does the course conform to the unit's approved Curriculum Plan?
2. Is the course proposal form complete, is it accompanied by a syllabus, and is it accompanied by the CV of the instructor if the instructor is not listed as faculty in the current catalog?
3. Is the proposed course appropriate to the department or program proposing it?
4. Are prerequisites specified? If prerequisites are drawn from outside the unit proposing the course, have the relevant units been notified of the proposal and are they capable of supporting the demand it will create?
5. Is the proposed catalog description appropriate for the catalog listing, and is the description consistent with the accompanying syllabus?
6. Does the proposed course contribute to the overall mission of the College?
7. If the course is to be conjoined at the 400/500 levels, do the course description and syllabus make appropriate distinctions in description and requirements?
8. If the proposal is part of a larger change, as in the major curriculum, is there sufficient documentation provided so that the whole proposal can be understood and interpreted?
9. Do realistic expectations of enrollment meet or exceed minimum enrollment requirements?
10. Has the cost of the course (in faculty time, materials, library resources) been carefully and realistically assessed and provision made for accommodation?
11. Does the syllabus indicate what is expected of students, how they will be evaluated, and other policies relevant to student behavior and performance?

University Faculty Council Level

1. Is the course appropriate for university credit?
2. Is the proposed course appropriate to the department or program proposing it?
3. Has the proposal been reviewed and discussed with other departments/programs with which it may intersect, conflict, or be of interest, and have all appropriate cross-listings been secured?
4. Have other relevant courses in the catalog been reviewed and the new proposal shown to be non-duplicative and non-redundant?
5. If the course specifies prerequisites outside of the unit proposing it, have the relevant units been notified of the proposal and are they capable of supporting the demand it will create?
6. Has the cost of the course (in faculty time, materials, library resources) been carefully and realistically assessed and provision made for accommodation?

University Curriculum Office Level

1. Does the proposal conform to established specifications, including particularly
 - a. relevant sections of the University Handbook for Appointed Personnel, 1988, especially
 - (1) Section 7.02, Curriculum (pp. 60-61).
 - (2) Section 7.08, Grading, Examinations, and Scholarship Requirements (p. 65 ff.) but particularly 7.08.05 regarding final examinations (p. 66).
 - b. the current General Catalog of the University, particularly with reference to course numbers and course listings (pp. 89-91 of the 1991-93 catalog).
 - c. the "Curriculum Procedures Memoranda" prepared by the University Curriculum Office (revised June 1990).
 - d. Curriculum Bulletin.
2. Is the course number correct--the proper series, proper sequences, etc. (seminar number for seminars, etc.)?

March 22, 1994

Report, with Recommendations, from the Instruction and Curriculum Policy Committee Regarding the Tabled Proposal from the Media Arts Department to Raise the GPA from 2.25 to 2.5 for Students Majoring in Media Arts

Our charge: To discover an alternative measure for reducing enrollment in the Media Arts major that would be more acceptable than raising the GPA.

Procedure: The ICPC requested from Dr. Caren Deming, Head of the Media Arts Department, and received from Dr. Michael Gillette, in her absence, comprehensive information about the B.A. in Media Arts and the B.F.A. in Media Arts. Liz Armandroff, Special Assistant to the Provost, met with the Committee and explained the background of the proposal, earlier instances in which departments had raised the GPA, the Provost's concern about this proposal, and points made in discussions by the Deans' Council and the Provost's Staff regarding the proposal.

The ICPC spent the better part of three meetings discussing the problem with which Media Arts is faced (too many majors for the faculty and the resources) and the consequences of raising the GPA. In trying to think of alternatives, we considered a lottery to select majors from applicants, the first-come-first-served method, decreasing the number of units in the major by three, not admitting transfer students until they had completed 24 units at the U of A, paying students to go elsewhere (not really). We considered asking applicants for admission to the University to state a major, under the assumption that the University could use this information to control enrollment in the various majors. However, we concluded that that technique would not work for more than a year or two, because applicants would catch on: they would state majors in under-subscribed fields and change majors after being admitted. We considered whether there were not some departments with under-subscribed majors that would volunteer some lines for Media Arts, but doubted that there were.

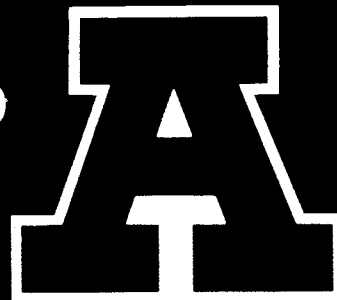
We asked by what principle the University can deny a unit in the College of Arts and Sciences the privilege of controlling enrollment by raising the GPA when it has granted that privilege to units in almost all other colleges in the University. We recognize that if this proposal is approved, other units that would attract students whose GPA was too low for Media Arts, such as Communication and Journalism, would be unhappy and would probably make good cases before the Undergraduate Council for raising their GPA requirements. Other units might follow. We can imagine a time when there might be a large body of students who had been admitted to the University but who could not gain admission to a suitable major program. That would be very regrettable, but by what principle can the University draw the line at the Media Arts Department in the College of Arts and Sciences? Such a general, long-range problem as serious discrepancies between the expectations of the University and expectations of the various units in the University needs a general, long-range solution.

We had to keep reminding ourselves during our discussion of a fact that the Senate should keep in mind: the question is not whether Media Arts should decrease the enrollment in its two majors--the department was told to decrease its enrollment after an Academic Program Review. The question is whether there is a better alternative method of doing it right now than raising the GPA.

We have concluded that there is no better alternative.

Recommendations:

1. That the Faculty Senate approve the proposal from the Department of Media Arts stated in the Curriculum Bulletin, January 24, 1994 (Notice I.B.).
2. That the Senate advise the Admissions Office to list for accepted applicants in the notification of admission the GPA required for admission to advanced standing in the various units that specify a GPA requirement.



CURRICULUM

Vol. 15 No. 10 The University of Arizona January 24, 1994

USE OF THIS BULLETIN: This material is presented to the Faculty Senate for information or approval as designated. Prior to approval, the material is subject to university-wide review. Questions or objections may be referred to the Curriculum Office, 621-3913, prior to the date below. Items for which objections are raised and which are not resolved will be withdrawn from consideration prior to faculty senate approval. Questions or objections raised after the deadline will be referred to the Faculty Senate or appropriate Council. Deadline for objections on material in this bulletin is February 7, 1994.

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(for approval)
- IV. COURSE & CATALOG CHANGES
(for information)

I. NOTICES (for approval)

- A. *Deletion of the major in pharmacy for the M.S. and Ph.D.:* The College of Pharmacy requests approval of a proposal to delete the major in pharmacy for the M.S. and Ph.D. degrees. The deletion of the program will reduce administrative costs associated with the degree. Students currently enrolled in M.S. or Ph.D. programs in pharmacy will, instead, enroll in the continuing M.S. or Ph.D. programs in pharmaceutical sciences. The deletion of the program is in keeping with the complete implementation of the Doctor of Pharmacy degree, which has replaced, in part, the need for the M.S./Ph.D. in pharmacy. The proposed deletion was recommended by a faculty committee conducting an overall review of graduate programs in the College of Pharmacy and is supported by the faculty responsible for teaching the program. The Graduate Council approved the proposal on October 15, 1993.
- B. *Revision of qualifications for declaration as a media arts major:* The Department of Media Arts, with the approval of the Faculty of Fine Arts, requests approval of its proposal to raise the GPA requirement in all courses for advanced standing in media arts from 2.25 to 2.5, effective fall 1995 for all students regardless of catalog. The proposal is in response to a need to reduce the number of undergraduate majors from the current 620 to a total of approximately 450. The department does not have the funds necessary to provide equipment and/or faculty for 620 students. The department is eliminating the current requirements of an acceptable portfolio and a 2.5 GPA in media arts courses because of time demands required to administer these requirements. By raising the GPA requirement for all courses to 2.5, the department expects to reduce the number of students to 450 within three years. The Undergraduate Council approved the proposal on November 2, 1993.

- C. *Proposed major in environmental engineering for the M.S. and Ph.D. degrees and proposal to change the name of the Department of Chemical Engineering to the Department of Chemical and Environmental Engineering:* The Department of Chemical Engineering, with the approval of the College of Engineering and Mines, requests approval of its proposal to change the name of the department to Chemical and Environmental Engineering and to establish a new major in environmental engineering for the M.S. and Ph.D. degrees. On July 1, 1993, the faculty and graduate students with an environmental engineering focus, formerly within the Department of Civil Engineering and Engineering Mechanics, merged with the Department of Chemical Engineering. As a result of the merger, faculty from Civil Engineering with research expertise in water treatment, industrial wastewater treatment, environmental microbiology and chemistry, hazardous and toxic wastes and water reuse have been brought together with faculty members in Chemical Engineering with research expertise in various aspects of air pollution. The proposed academic degree programs cover critical areas of environmental engineering by combining emphases in air and water pollution, hazardous materials and methods of pollution prevention. The M.S. will require 30 units of credit, including 21 units of required courses and 3 units of thesis or master's report. The Ph.D. will require 78 units, including 18 units of dissertation. A special strength of the Ph.D. will be its breadth of available research areas including physical, chemical and biological methods for waste water treatment, colloidal and bacterial transport in aquifers and soils, combustion-generated pollutants, air pollutant transport and advanced separation technologies. No additional courses or faculty are required. The Graduate Council approved the proposal on November 19, 1993.

D. *Proposal to establish a new major in gerontology:* The Graduate Interdisciplinary Program in Gerontology, with the approval of the Office of Graduate Interdisciplinary Programs, requests approval of its proposal to establish a new major in gerontology for the M.S. degree. The proposed Master of Science with the major in gerontology is designed to provide a core of courses, interdisciplinary in nature, in the field of gerontology accompanied by concentrations that provide the opportunity to integrate gerontological content with other disciplines (e.g., administration, employment, counseling, nursing, social work, etc.) The proposed major requires 48 units of credit--30 units of core courses, 9 to 15 units in a concentration and 3 to 9 hours of elective. It includes an internship and a thesis/project. Seventy-five percent of a faculty line will be needed during the first five years of the program. A rapidly expanding older population, significant expression of interest by students in gerontological study, and increasing employment opportunities in the public and private sectors demonstrate the need for the proposed major. The Graduate Council approved the proposal on November 19, 1993.

E. *Proposal to establish a new major and minor in insect science for the Ph.D. degree:* The proposed doctoral program will offer interdisciplinary graduate training in the study of insects, the dominant class of animals on this planet. It is designed to complement the widely recognized interdisciplinary program carried on through the Center for Insect Science. The program will require 36 units in the major, 9 units in the minor and 18 units of dissertation credit. It will combine a broad knowledge of insects as organisms with training in one or more specialized disciplines such as ecology, epidemiology, neurobiology, biochemistry, molecular biology. At least 25 relevant courses exist; one new course will be proposed in biochemistry. No additional faculty are required. There is a considerable demand by industry, universities, governmental and international agencies for scientists with a broad interdisciplinary training in insect science. The Graduate Council approved the proposal on October 15, 1993.

II. NOTICES (for information)

Planning Authorization Deadline for Fall Term:

March 1 is the deadline for submission to the Curriculum Office of all new requests for planning authorization and for extension of existing planning authorizations which are to be considered by the Board of Regents in July 1994. Planning authorizations are considered twice a year by the Board of Regents, in January and in July. Planning authorization must be granted by the Board of Regents prior to the development of the formal new study program request. Planning authorization request forms are available at the University Curriculum Office, Nugent 209, or by calling 621-3913.

Catalog and Course Review

A printout of your department's current catalog files (General and Graduate catalogs), including all changes made since the 1993-95 catalogs were printed, may be obtained at any time by calling the Curriculum Office at 621-3913.

III. NEW COURSES AND COURSE DELETIONS

Agricultural and Resource Economics (AREC)

- 676.+ NEW COURSE: "Economic Dynamics and Natural Resource Use (3) I 1995-96 Course covers three topic areas: the mathematical structure of dynamic optimization problems; the economics of exhaustible resource use; and the economics of renewable resource use. The methods part of the course treats both discrete and continuous time as well as deterministic and uncertain environments. Relationships between the methods of Lagrange, dynamic programming, optimal control, the calculus of variations, and the 1to calculus are developed. The sections on natural resource use apply these tools to the classical economic problems of natural resource allocation and exploitation. P, graduate student standing with one year of graduate microeconomic theory. (Identical with ECON 676)." Eff. I 95-96
- 696g.- Add: Seminar: "Interstate Conflict Resolution (3) [Rpt.] II 1993-94 (Identical with HWR 696g, which is home)." Eff. II 93-94.

Arts and Sciences (A&S)

- 195a. NEW COURSE: Colloquium: "You & the U (1)." Eff. I 94-95.

Chemistry (CHEM)

433. NEW COURSE: "Chemistry Demonstrations (3) II S Preparation and presentation of demonstrations of chemical phenomena in the classroom. Designed for undergraduate teaching majors in chemistry, for graduate students interested in teaching chemistry at the secondary or college level, and for chemistry teachers already employed in secondary schools. 1R, 6L. P, 241b; 243b or 245b; or permission of instructor. May be convened with 533." Eff. Summer 1994
533. Add: "Chemistry Demonstrations (3) II S For description of course topics, see 433. Graduate-level requirements include additional demonstrations and more thorough analyses for each demonstration. In addition, secondary school chemistry teachers will be expected to offer insights and counsel to students who have never taught in a real classroom. May be convened with 433." Eff. Summer 1994.

Economics (ECON)

449. NEW COURSE: "International Business Environments (3) I Study of the widely-varying social, political, cultural and economic factors which make up different countries' unique business environments. Open to international business majors only. P, 300 or 361; 330 or 332." Eff. I 1994-95.
- 676.- Add: "Economic Dynamics and Natural Resource Use (3) I 1995-96 P, graduate student standing with one year of graduate microeconomic theory. (Identical with AREC 676)." Eff. I 95-96

Genetics (GENE)

581. NEW COURSE: "Genetic Counseling (1) [Rpt./6] I II Principles of genetic counseling, general topics related to issues raised during genetic counseling (such as coping with chronic illnesses), and specific genetic counseling issues related to unique disorders encountered in the genetics clinic and other genetic counseling settings. Such disorders will include prenatal, pediatric, and adult genetic conditions. Limited to students in the genetic counseling training program except by permission of instructor." Eff. II 93-94.
- 596j. NEW COURSE: Seminar: "Medical Counseling (1) [Rpt./6] I II Limited to students in the genetic counseling training program except by permission of instructor." Eff. II 93-94.

Hydrology and Water Resources (HWR)

- 696g.+ NEW COURSE: Seminar: "Interstate Conflict Resolution (3) [Rpt.] II 1993-94 (Identical with AREC 696g and HWR 696g). P, consent of instructor." Eff. II 93-94.

Language, Reading and Culture (LRC)

139. NEW COURSE: "Literacy Tutoring (3) Introduction to literacy and study strategies theory and practices; observation of literacy learning; supervised literacy tutoring." Eff. Summer 1994.

Law (LAW)

- 695l. NEW COURSE: "Civil Rights Law (2) I II." Eff. II 93-94.

Mathematics (MATH)

101. COURSE DELETION: "Survey of Mathematical Thought (3)." Eff. II 93-94.

Medicine (MED/ANES/FC M/MEDI/NEUR/OBG/OPH/PATH/ PED/PSYI/RADI/RONC/SURG)

Interdepartmental Medicine (MED)

- 896w. NEW COURSE: Seminar: "Biomedical Ethics (1) P, 3rd and 4th year medical students." Eff. Summer 1994.

Anesthesiology (ANES)

- 810b. NEW COURSE: Clerkship: "Pain Management (4) I P, fourth year medical students or permission of instructor." Eff. I 94-95.

Family and Community Medicine (F CM)

- 596q. COURSE DELETION: "Introduction to Public Health (3)." Eff. I 94-95.
- 815l. NEW COURSE: Subspecialty: "Nutrition in Disease (3) P, BIOC 801, SBS-COPC." Eff. II 93-94.
- 815o.+ NEW COURSE: Subspecialty: "Care of HIV-Infected Patients (4) P, required clerkships. (Identical with MEDI 815o)." Eff. II 93-94.
- 896j. COURSE DELETION: "Crises and Conflict Health Services in Latin America, Brazil (2)." Eff. II 93-94.
- 896k. COURSE DELETION: "Nutrition in Disease (2)." Eff. II 93-94.
- 896m. COURSE DELETION: "Practice of Community-Oriented Medicine in Rural Areas (2)." Eff. II 93-94.
- 896o. NEW COURSE: Seminar: "Public Health Nutrition (1) II P, medical school year I, II." Eff. II 93-94.
- 896q. COURSE DELETION: "Introduction to Public Health (3)." Eff. I 94-95.

Medicine (MEDI)

- 815o.- Add: Subspecialty: "Care of HIV-Infected Patients (4) (Identical with F CM 815o, which is home)" Eff. II 93-94.
- 891f. NEW COURSE: Preceptorship: "Medical Toxicology/Clinical Pharmacology (4) P, completion of required clerkships." Eff. I 94-95.

Neurology (NEUR)

815d. NEW COURSE: "Subspecialty: "Epilepsy Elective (4-6)." Eff. Summer 1994.

Pediatrics (PED)

810c. NEW COURSE: Clerkship: "Clinical Research Elective (6) [Rpt]." Eff. II 93-94.

815i. NEW COURSE: Subspecialty: "Developmental and Behavioral Pediatrics (4-6) P, pediatric clerkship." Eff. II 93-94.

815o. NEW COURSE: "Subspecialty: "Pediatric Gastroenterology (4) P, 803 or equivalent." Eff. Summer 1994.

Radiology (RADI)

815c. NEW COURSE: Subspecialty: "Neuroradiology (3) P, fourth year medical students, 815a." Eff. II 93-94.

Optical Sciences (OPTI)

342. NEW COURSE: "Optical Systems Analysis (3) II Mathematical background; special functions; systems and operators; convolution; Fourier series; the Fourier transform; linear filtering; sampling; two-dimensional operations; applications in diffraction and image formation. P, MATH 223, PHYS 116 or 121." Eff. II 93-94.

Psychology (PSYC)

461.- Add: "Neurobiology (4) I (Identical with MCB 461)." Eff. I 93-94.

Special Education and Rehabilitation (SER)

597g. NEW COURSE: Workshop: "Best Practices for Educating Students with Severe Disabilities (2) [Rpt./2]S Intervention strategies dealing with assessment, teaming, teaching techniques and adaptations that support students with severe disabilities in typical settings." Eff. Summer 1994.

Speech and Hearing Sciences (SP H)

371. NEW COURSE: "Pediatric Communication Disorders (3) II The study of child disordered communicative processes. Consideration is given to signs and symptoms, etiology, clinical course, and developmental-academic-social impact. Principles of assessment and intervention are highlighted. Open to majors only. P, 260, 280." Eff. I 94-95.

IV. COURSE AND CATALOG CHANGES

Aerospace and Mechanical Engineering (A ME)

352. Change class structure to "1.5ES, 1.5ED." Eff. II 93-94.

440.- Add: "Energy Utilization and Management (3) I (Identical with NEE 440). May be convened with 540." Eff. I 94-95.

432. Change class structure to "1ED, 2ES." Eff. II 93-94.

448. Change semester offering from "I" to "II." Eff. II 94-95.

455. Change class structure to "1.5ES, 1.5ED." Eff. II 93-94.

456. Add class structures 1.5ES, 1.5ED.

466. Add class structure "3ES." Eff. II 93-94.

540.- Add: "Energy Utilization and Management (3) I (Identical with NEE 540). May be convened with 440." Eff. I 94-95.

541.- Add: "Industrial Energy and Power Management (3) II (Identical with NEE 541)." Eff. II 93-94.

556. Add class structure 1.5ES, 1.5ED.

566. Add class structure "3ES." Eff. II 93-94.

Anatomy (ANAT)

583.- Change alternate year from "1993-94" to "1994-95." Eff. II 94-95.

Biochemistry (BIOC)

501. Change number of units from "(5)" to "(6)." Eff. II 93-94.

Family and Consumer Resources (FCR/MCS/FS/HE E/ID/COUN)

Merchandising and Consumer Studies (MCS)

Revision to 1993-95 General Catalog headnotes, page 204, column 2, fourth paragraph. First sentence following "The major in merchandising and consumer studies" is revised as follows: "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 100 and 102 or 112, ENGL 307, MATH 117R/S; ABE 220." Eff. I 94-95.

Revision to 1993-95 General Catalog headnotes, page 204, column 2, fourth paragraph. The second sentence after "The major in merchandising and consumer studies" is revised as follows: "Major requirements include: MCS 114, 115, 284, 304, 310 or 346, 384, 315 or 455; 335 or 354; 376 or 440; 358, 434; 9 units from MCS 214, 310, 315, 335, 346, 354, 376, 388, 440, 455, 456, 493 (3 units maximum); ACCT 200; MKTG 361, 456, MAP 305; and 12 units from ACCT, FIN, MAP (330 recommended), MKTG, MIS, MCS 493b (6 units maximum)." Eff. I 95-96.

114. Change course title and description. New course listing reads: "Introduction to Retailing (3) I II Introduction to processes used for distributing consumer goods from manufacturers through wholesale and retail channels." Eff. I 94-95.
115. Change course description to: "Theory and exploration of design elements and principles; contemporary trends. Open to FCR majors only or consult department before enrolling." Eff. I 94-95.
214. Delete prerequisites. Eff. I 94-95.
284. Change number of units, semester offering, description and prerequisites. New listing reads: "Textile Science (3) I II Survey of the chemical and physical properties used in manufacturing soft goods. Emphasis on end use applications and product specifications. P, 114, CHEM 101a, 102a or PHYS 102a, 180a." Eff. I 94-95.
304. Change semester offering, course description and prerequisites. New listing reads: "Merchandising Analysis (3) I Study of retail planning and control procedures with emphasis on retail mathematics and computer applications. P, 114, MATH 117, ACCT 200, ABE 220." Eff. I 94-95.

History (HIST)

413. Change course title and description to: "War, Peace and Social Change in Europe, 1870 to the Present (3) II History of twentieth century Europe, examining global processes including imperialism and the two world wars interacting with ongoing changes in domestic politics, society and culture. May be convened with 513." Eff. I 94-95.
513. Change course title to: "War, Peace and Social Change in Europe, 1870 to the Present." Eff. I 94-95.

Language, Reading and Culture (LRC)

430. Change course description to "Introduction to computer applications for language arts and other educators; examination of current and proposed hardware and software; survey of technological developments and trends impacting education; examination of social, psychological and educational consequences of technology in education." Eff. I 93-94.

Linguistics (LING)

- 496f.- Add: "Cognitive Psychology (3) [Rpt./1] I II (Identical with PSYC 496f)." Eff. II 93-94.

Microbiology and Immunology (MBIM)

- 529.+ Add crosslisting with MCB and VSC. Eff. II 93-94.

Mining and Geological Engineering (G EN/MNEC/MNE)

Geological Engineering (G EN)

503. Course number changed from "603" to "503." Title: "Rock Mass Joint Geometry Modeling." Eff. II 93-94
603. Change course number from "603" to "503." Eff. II 93-94.

Molecular and Cellular Biology (MCB)

- 461.+ Add crosslisting with PSYC. Eff. I 93-94.
511. Delete from course description: "and to perform at a level 10% above undergraduate students."
- 529.- Add: "General Virology (3) II (Identical with MBIM 529)." Eff. II 93-94.
- 583.+ Change alternate year from "1993-94" to "1994-95." Change course description to: "Reading and discussion of primary literature on molecular, cellular, biochemical, physiological, and structural changes that occur on the adult nervous system." Eff. II 94-95.

Music (MUS/MUSI)

Music (MUS)

201. Add: "Coached Ensembles (1) Offering chamber music experience; designed to develop musical independence." Eff. I 94-95.
- 201a. Delete: "Accompanying (1)." Eff. I 94-95.
- 201b. Delete: "Brass Ensemble (1)." Eff. I 94-95.
- 201c. Delete: "Percussion Ensemble (1)." Eff. I 94-95.
- 201d. Delete: "Guitar Ensemble (1)." Eff. I 94-95.
- 201e. Delete: "Jazz Combo (1)." Eff. I 94-95.
- 201f. Delete: "Saxophone Ensemble (1)." Eff. I 94-95.
- 201g. Delete: "String Ensemble (1)." Eff. I 94-95.
- 201h. Delete "Woodwind Ensemble (1)." Eff. I 94-95.
- 201i. Delete: "Steel Band (1)." Eff. I 94-95.
- 201j. Delete: "Mariachi Arizona (1)." Eff. I 94-95.
- 201k. Delete: "Electronic Music Ensemble (1)." Eff. I 94-95.
- 201l. Delete: "Harp Ensemble (1)." Eff. I 94-95.
202. Add: "Small Conducted Ensembles (1)." Eff. I 94-95.
- 202a. Delete: "Brass Choir (1)." Eff. I 94-95.
- 202b. Delete: "Contemporary Ensemble (1)." Eff. I 94-95.
- 202c. Delete: "Clarinet Choir (1)." Eff. I 94-95.
- 202d. Delete: "Musical Theatre (1)." Eff. I 94-95.
- 202e. Delete: "Pep Band (1)." Eff. I 94-95.

202f. Delete: "Flute Choir (1)." Eff. I 94-95.
 202g. Delete: "Recital Choir (1)." Eff. I 94-95.
 202j. Delete: "Trombone Choir (1)." Eff. I 94-95.
 401. Add: "Coached Ensembles (1) Offering chamber music experience; designed to develop musical independence." Eff. I 94-95.
 401a. Delete: "Accompanying (1)." Eff. I 94-95.
 401b. Delete: "Brass Ensemble (1)." Eff. I 94-95.
 401c. Delete: "Percussion Ensemble (1)." Eff. I 94-95.
 401d. Delete: "Guitar Ensemble (1)." Eff. I 94-95.
 401e. Delete: "Jazz Combo (1)." Eff. I 94-95.
 401f. Delete: "Saxophone Ensemble (1)." Eff. I 94-95.
 401g. Delete: "String Ensemble (1)." Eff. I 94-95.
 401h. Delete: "Woodwind Ensemble (1)." Eff. I 94-95.
 401i. Delete: "Steel Band (1)." Eff. I 94-95.
 401j. Delete: "Mariachi Arizona (1)." Eff. I 94-95.
 401k. Delete: "Electronic Music Ensemble (1)." Eff. I 94-95.
 401l. Delete: "Harp Ensemble (1)." Eff. I 94-95.
 402. Add: "Small Conducted Ensembles (1)." Eff. I 94-95.
 402a. Delete: "Brass Choir (1)." Eff. I 94-95.
 402b. Delete: "Contemporary Ensemble (1)." Eff. I 94-95.
 402c. Delete: "Clarinet Choir (1)." Eff. I 94-95.
 402d. Delete: "Musical Theatre (1)." Eff. I 94-95.
 402e. Delete: "Pep Band (1)." Eff. I 94-95.
 402f. Delete: "Flute Choir (1)." Eff. I 94-95.
 402g. Delete: "Recital Choir (1)." Eff. I 94-95.
 402j. Delete: "Trombone Choir (1)." Eff. I 94-95.
 501. Add: "Coached Ensembles (1) Offering chamber music experience; designed to develop musical independence." Eff. I 94-95.
 501a. Delete: "Accompanying (1)." Eff. I 94-95.
 501b. Delete: "Brass Ensemble (1)." Eff. I 94-95.
 501c. Delete: "Percussion Ensemble (1)." Eff. I 94-95.
 501d. Delete: "Guitar Ensemble (1)." Eff. I 94-95.
 501e. Delete: "Jazz Combo (1)." Eff. I 94-95.
 501f. Delete: "Saxophone Ensemble (1)." Eff. I 94-95.
 501g. Delete: "String Ensemble (1)." Eff. I 94-95.
 501h. Delete: "Woodwind Ensemble (1)." Eff. I 94-95.
 501i. Delete: "Steel Band (1)." Eff. I 94-95.
 501j. Delete: "Mariachi Arizona (1)." Eff. I 94-95.

501k. Delete: "Electronic Music Ensemble (1)." Eff. I 94-95.
 501l. Delete: "Harp Ensemble (1)." Eff. I 94-95.
 502. Add: "Small Conducted Ensembles (1)." Eff. I 94-95.
 502a. Delete: "Brass Choir (1)." Eff. I 94-95.
 502b. Delete: "Contemporary Ensemble (1)." Eff. I 94-95.
 502c. Delete: "Clarinet Choir (1)." Eff. I 94-95.
 502d. Delete: "Musical Theatre (1)." Eff. I 94-95.
 502e. Delete: "Pep Band (1)." Eff. I 94-95.
 502f. Delete: "Flute Choir (1)." Eff. I 94-95.
 502g. Delete: "Recital Choir (1)." Eff. I 94-95.
 502j. Delete: "Trombone Choir (1)." Eff. I 94-95.
 605. Add repeatability "[Rpt./12 units]" Eff. I 94-95.
 695c. Change repeatability to "[Rpt./5]." Eff. I 94-95.

Performance Studies (MUSI)

180E. Change course title to "Euphonium." Eff. I 94-95.
 181E. Change course title to "Euphonium." Eff. I 94-95.
 182E. Change course title to "Euphonium." Eff. I 94-95.
 185E. Change course title to "Euphonium." Eff. I 94-95.
 285E. Change course title to "Euphonium." Eff. I 94-95.
 385E. Change course title to "Euphonium." Eff. I 94-95.
 485E. Change course title to "Euphonium." Eff. I 94-95.
 580E. Change course title to "Euphonium." Eff. I 94-95.
 585E. Change course title to "Euphonium." Eff. I 94-95.
 685E. Change course title to "Euphonium." Eff. I 94-95.
 785Y. Add "Tuba (1-4)." Eff. I 94-95.

Neuroscience (NRSC)

583.- Change alternate year from "1993-94" to "1994-95." Eff. II 94-95.

Nuclear and Energy Engineering (N EE)

440.+ Add crosslisting with A ME. Eff. I 94-95.
 496s. Change course title to "Advanced Nuclear Power Activities." Add "May be convened with 596s." Eff. II 93-94.
 540.+ Add crosslisting with A ME. Eff. I 94-95.
 541.+ Add crosslisting with A ME. Eff. II 93-94.
 596s. Add "May be convened with 496s." Eff. II 93-94.

Psychology (PSYC)

496f. + Add crosslisting with LING. Eff. II 93-94.

Speech and Hearing Sciences (SPH)

- 370a-370b. Change course number from "370a-370b" to "370." Eff. I 94-95.
370. Course number changed from 370a-370b" to "370." New title and course description. New listing reads: "Adult Communication Disorders (3) I The study of adult disordered communicative processes. Consideration is given to signs and symptoms, etiology, clinical course, and vocational-social impact of these disorders. Principles of assessment and intervention are highlighted. Open to majors only. P, 260, 280." Eff. I 94-95
458. Change course title and description as follows: "Clinical Studies: Speech-Language Pathology (1-3) [Rpt./9 units] I II S Under supervision, students carry out prescribed intervention programs and conduct evaluation of children and adults. Students participate in weekly staffings and clinical problem solving. Open to majors only. P, 451, 471 or CR. Open to majors only. May be convened with 558." Eff. I 94-95.
459. Change course description and title. New listing reads: "Clinical Studies: Audiology (1-3) [Rpt./9 units] I II S Under supervision, students assess hearing impairments, formulate objectives, and carry out remedial programs with emphasis on the application of research data and current technology to clinical treatment. Open to majors only. P, 483 or CR. May be convened with 559." Eff. I 94-95.
558. Course number changed from "558a-558b" to "558." Change title and course description. New listing reads as follows: "Clinical Studies: Speech-Language Pathology (1-3) [Rpt./9 units] I II S For a description of course topics, see 458. Graduate-level requirements include independent planning of treatment programs, completion of clinical progress reports, and formulation of evaluation reports as needed. Clinical research designs are also considered. Open to majors only. P, 451 or 571. May be convened with 458." Eff. I 94-95.
- 558a-558b. Change course number from "558a-558b" to "558." Eff. I 94-95.
559. Course number changed from "559a-559b" to "559." Title and description changed to: "Clinical Studies: Audiology (1-3) [Rpt./9 units] I II S for a description of course topics, see 459. Graduate-level requirements include clinical progress or evaluation reports. Open to majors only. P, 589 or CR. May be convened with 459." Eff. I 94-95.
- 559a-559b. Change course number from "559a-559b" to "559." Eff. I 94-95.

Systems and Industrial Engineering (SIE)

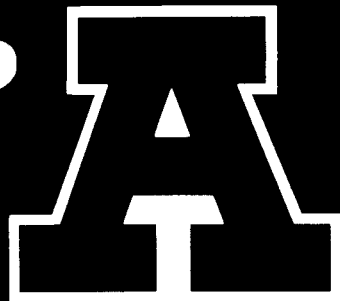
696g.- Add: Seminar: "Interstate Conflict Resolution (3) [Rpt.] II 1993-94 (Identical with HWR 696g, which is home)." Eff. II 93-94.

Teaching and Teaching Education (TTE)

521. Change course title to "Elementary and Middle School Mathematics Curriculum." Change first sentence of course description to: "Elementary and middle school mathematics curricula in terms of their aims content/processes, instructional methods and assessment." Eff. I 94-95.

Veterinary Science (V SC)

- 429.- Change semester offering to "II." Eff. II 93-94.
- 529.- Add: "General Virology (3) II (Identical with MBIM 529)." Eff. II 93-94.



CURRICULUM

Vol. 15 No. 12 The University of Arizona March 21, 1994

USE OF THIS BULLETIN: This material is presented to the Faculty Senate for information or approval as designated. Prior to approval, the material is subject to university-wide review. Questions or objections may be referred to the Curriculum Office, 621-3913, prior to the date below. Items for which objections are raised and which are not resolved will be withdrawn from consideration prior to faculty senate approval. Questions or objections raised after the deadline will be referred to the Faculty Senate or appropriate Council. Deadline for objections on material in this bulletin is April 4, 1994.

CONTENTS

- I. NEW COURSES & COURSE DELETIONS
(for approval)
- II. COURSE & CATALOG CHANGES
(for information)

I. NEW COURSES AND COURSE DELETIONS (for approval)

Agricultural Technology Management (AGTM)

195a. NEW COURSE: Colloquium: "Agricultural Technology and Public Policy (1) I II." Eff. I 94-95.

Art (ART/ARE/ARH)

Art (ART)

289. NEW COURSE: "Beginning Modeling Emphasizing the Figure (3) I II Beginning modeling techniques in clay emphasizing the figure. Scale, composition, gesture, surface and anatomical structure will be studied to develop creative solutions. P, 104." Eff. I 94-95.

389. NEW COURSE: "Intermediate-Modeling Emphasizing the Figure (3) I II Intermediate modeling techniques in clay emphasizing the figure. Scale, composition, gesture, surface and anatomical structure will be studied to develop creative solutions. P, 104." Eff. I 94-95.

Art History (ARH)

431. NEW COURSE: "Studio Introduction to Contemporary Art (3) I Introduction to contemporary art, theory, criticism, and cultural politics circa 1945 to the present. Emphasis on movements and themes. Lecture with discussion. May be convened with 531." Eff. I 94-95.

531. Add: "Studio Introduction to Contemporary Art (3) I For description of course topics, see 431. Graduate students will lead discussions, write two artists' statements, have a critique with the professor, as well as midterm, final and an extended paper. May be convened with 431." Eff. I 94-95.

East Asian Studies (EAS/CHN/JPN)

East Asian Studies (EAS)

498. NEW COURSE: "Senior Capstone Experience (1) [Rpt.] I II The course focuses on a senior project and preparation of a portfolio reflecting the student's work in EAS. Discussion format. Required of senior majors. P, senior status in EAS." Eff. II 94-95.

Japanese Studies (JPN)

595a. NEW COURSE: Colloquium: "Masters Colloquium (1) I." Eff. I 94-95.

English (ENGL)

443. NEW COURSE: "Mexican-American Literature in Translation (3) [Rpt./1] I II Study of the literature, in English or English translation, by Mexican-American authors, or important to the development of Mexican-American literature. P, upper-division standing. May be convened with 543." Eff. I 94-95.

543. Add: "Mexican-American Literature in Translation (3) [Rpt./1] I II For a description of course topics, see 443. Graduate-level requirements include an extra paper and leading a class discussion. May be convened with 443." Eff. I 94-95.

Hydrology and Water Resources (HWR)

696g. Correction to Curriculum Bulletin Volume 15, #10, crosslistings should have been listed as "(Identical with AREC 696g and SIE 696g)."

Mathematics (MATH)

122. NEW COURSE: "Mathematics in Modern Society (3) The course will examine topics such as voting schemes, apportionment problems, network problems, critical paths, Fibonacci numbers, population models, symmetry, fractals, data analysis, probability and statistics. P, two years of high school algebra and a satisfactory score on the Mathematics Readiness Assessment test." Eff. I 94-95.

Medicine (MED/ANES/F

CM/MEDI/NEUR/OBG/OPH/PATH/PED/PSYI/RADI/R ONC/SURG)

Family and Community Medicine (F CM)

891i. NEW COURSE: Preceptorship: "Caduceus Project: Healing Arts (3) P, completion of 2nd year of medical school." Eff. I 94-95.

Neurology (NEUR)

815a. COURSE DELETION: "Neuro-oncology (3-4)." Eff. II 94-95.

Pediatrics (PED)

815h. NEW COURSE: Subspecialty: "Pediatric Orthopaedics (3-6) P, completion of basic sciences." Eff. II 94-95.

Mexican American Studies (MAS)

695r. COURSE DELETION: "Bilingualism in the United States (3)." Eff. I 94-95.

Molecular and Cellular Biology (MCB)

360.- Add: "Principles of Plant Physiology (4) [Rpt.] I (Identical with PL S 360)." Eff. II 94-95.

564.- Delete: "Plant Growth and Development (3)." Eff. II 95-96.

Neuroscience (NRSC)

495a. COURSE DELETION: "Antennal Lobe (1)." Eff. I 94-95.

495c. COURSE DELETION: "Neurophysiology (1)." Eff. I 94-95.

- 495e. COURSE DELETION: "Neurobiology (1)." Eff. I 94-95.
 595a. Delete: "Antennal Lobe (1)." Eff. I 94-95.
 595c. Delete: "Neurophysiology (1)." Eff. I 94-95.
 595e. Delete: "Neurobiology (1)." Eff. I 94-95.

Plant Pathology (PL P)

- 496b. NEW COURSE: Seminar: "Research Discussions (1-3) [Rpt.3]." Eff. I 94-95.
 596b. Add: Seminar: "Research Discussions (1-3) [Rpt./3]." Eff. I 94-95.

Plant Sciences (PL S)

250. NEW COURSE: "Intermediate Plant Sciences (3) II Principles of plant classification, reproduction, ecology and evolution. Intended for majors in all fields of biology. Field trips. 2R, 3L. P, 100 or 100H and MCB 181R, 181L." Eff. II 94-95.
 306. NEW COURSE: "Crop Science and Production (3) II 1995-96 An examination of the fundamental aspects of plant science as applied to crop production. Laboratory exercises require the small scale production of vegetable crops. 2R, 2L. P, PL S 100 or PL S 100H, PL S 250, S W 200." Eff. II 95-96.
 360.+ NEW COURSE: "Principles of Plant Physiology (4) [Rpt.] I Survey of water relations, mineral nutrition, photosynthesis, respiration, growth and development of plants. P, 100 or MCB 181R, 181L, CHEM 103a, 103b. CHEM 241a and 241b recommended. (Identical with MCB 360)." Eff. II 94-95.
 564.+ COURSE DELETION: "Plant Growth and Development (3)." Eff. II 95-96.
 620. NEW COURSE: "Plant Biochemistry (3) I 1995-96 Current topics in bioengineering; photosynthesis; carbohydrate; nitrogen and lipid metabolism. This course deals with biochemical processes specific to plants and allow students to gain an understanding and appreciation of how chemical components are synthesized and utilized by the plant during growth and development. P, BIOC 462a and 462b, PL S 560." Eff. I 95-96.
 629. NEW COURSE: "Plant Cell Biology (3) I 1996-97 In-depth analysis of the empirical evidence, experimental methods, and theoretical background that underlies our understanding of modern plant cell biology. P, MCB 410 or equivalent." Eff. I 96-97.
 684. NEW COURSE: "Plant Development (3) II 1995-96 Plant growth and reproduction presented at the cellular and molecular level to explain our current understanding of the processes that determine plant form and function. P, PL S 550, 560, MCB 411 or PL S 510." Eff. II 95-96.

Psychology (PSYC)

102. COURSE DELETION: "Topics in Psychology (1)." Eff. I 94-95.

Soil and Water Science (S W)

444. NEW COURSE: "Applied Environmental Law (3) II A guided journey through real world environmental law: U.S. legal system, major environmental laws--criminal and civil; common marketplace problems and solutions; high profile cases; essential professional skills. May be convened with 544." Eff. II 94-95.
 544. Add: "Applied Environmental Law (3) II For a description of course topics, see 444. Graduate-level requirements include extra term papers and case studies. May be convened with 444." Eff. II 94-95.

Spanish and Portuguese (SPAN/PORT)

Spanish (SPAN)

448. NEW COURSE: "Topics in Hispanic, Mexican and Mexican American Literature (3) [Rpt.] Monographic, generic, work or author courses in any area of Spanish-American/Mexican/Mexican-American literature. Course may be repeated only with differing topics. P, 401, 402 or 403." Eff. Summer 1994.

Veterinary Science (V SC)

- 696a. NEW COURSE: Seminar: "Research Seminar (1) [Rpt./3] I II." Eff. II 93-94.

II. COURSE AND CATALOG CHANGES (for information)

Agricultural and Biosystems Engineering (ABE)

- 220.+ Change crosslisting from AGRI to AGTM 220. Eff. I 94-95.
 220.+ Add crosslisting with FCR 220. Eff. I 94-95.

Agricultural Education (A ED)

100. Change course prefix from "A ED" to "AGTM." Eff. I 94-95.
 350. Change course prefix from "A ED" to "AGTM." Eff. I 94-95.
 351. Change course prefix from "A ED" to "AGTM." Eff. II 94-95.
 402.+ Change course prefix from "A ED" to "AGTM." Eff. I 94-95.
 422.+ Change crosslisting from AGRI to AGTM 422. Eff. I 94-95.
 502.+ Change course prefix from "A ED" to "AGTM." Eff. I 94-95.

Agricultural Technology Management (AGTM)

100. Course prefix changed from "A ED" to "AGTM." Title "Principles and Practices of Agricultural Mechanization." Eff. I 94-95.

- 220.- Course prefix changed from "AGRI" to "AGTM." Eff. I 94-95.
- 350. Course prefix changed from "A ED" to "AGTM." Title: "Applications in Agricultural Mechanics." Eff. I 94-95.
- 351. Course prefix changed from "A ED" to "AGTM." Title: "Operations in Agricultural Mechanics." Eff. II 94-95.
- 402.- Course prefix changed from "A ED" to "AGTM." Title: "Agriculture Environment: Focus on Pesticides." Eff. I 94-95.
- 422.- Course prefix changed from "AGRI" to "AGTM." Eff. I 94-95.
- 502.- Course prefix changed from "A ED" to "AGTM." Eff. I 94-95.

Agriculture (AGRI)

- 220.- Change course prefix from "AGRI" to "AGTM." Eff. I 94-95.
- 422.- Change course prefix from "AGRI" to "AGTM." Eff. I 94-95.

Anatomy (ANAT)

- 596c. Change semester offering to "II." Eff. I 94-95.

Anthropology (ANTH)

- 195a. Change course title to "Archaeology." Eff. I 94-95.
- 195c. Change course title to "Linguistic Anthropology." Eff. I 94-95.
- 595d.- Add: "Latin American Studies Special Topics (3) [Rpt./1] (Identical with LAS 595d, which is home)." Eff. I 94-95.

Astronomy (ASTR)

- 105.- Change course number from "105" to "105a." Eff. I 94-95.
- 105a.- Course number changed from "105" to "105a." Eff. I 94-95.

Biochemistry (BIOC)

- 105a.- Add: "The Universe and Humanity: Origin and Destiny (3) I II (Identical with PTYS 105a)." Eff. I 94-95.

Ecology and Evolutionary Biology (ECOL)

- 480. Add alternate year "1995-96." Eff. I 95-96.
- 500b. Change number of units from "(4)" to "(3)." Eff. II 94-95.
- 580. Add alternate year "1995-96." Eff. I 95-96.

Entomology (ENTO)

- 402.- Change crosslisting to: "(Identical with AGTM 502)." Eff. I 94-95.
- 502.- Change crosslisting to: "(Identical with AGTM 502)." Eff. I 94-95.

Family and Consumer Resources (FCR/MCS/FS/HEE/ID/COUN)

Family and Consumer Resources (FCR)

- 220.- Add: "Microcomputing Applications (3) I II (Identical with ABE 220)." Eff. I 94-95.

Interior Design (ID)

- 335. Change course prefix from "ID" to "MCS." Eff. I 95-96.

Merchandising and Consumer Studies (MCR)

- 315. Change course title to: "Retail Advertising and Promotion." Change prerequisites to: "115 or CR." Eff. I 94-95.
- 335. Course prefix changed from "ID" to "MCS." Change course title to "Hard Goods Production." Change semester offering to "II." Change prerequisite to "P, 115." In course description, delete the words "and the market." Eff. I 95-96.
- 346. Change course title, description and prerequisites as follows: "International Consumption and Retailing (3) II Analysis of international consumption patterns and retailing system in the global market; cultural analysis of global consumer market; importing and exporting systems and procedure of retailing consumer goods. P, 358 or CR." Eff. I 94-95.
- 354. Change title to: "Soft Goods Evaluation." Delete semester offering "II." Change course description to: "Understanding price, quality, design and other attributes of soft goods and their relationship to product development, specification and buying practices used by retail firms." Eff. I 94-95.
- 384. Change course description and prerequisites to: "Preparation for internship programs and careers; topics include development of roles, responsibilities; and standards for business and industry personnel; job search methods and skills. P, or CR ENGL 307." Eff. I 94-95.
- 388. In course description, delete the words: "designed for nonmajors." Eff. I 94-95.
- 434. Change course title, description and prerequisites to: "Strategic Retail Management (3) II Application of retail planning and control procedures with emphasis on development and evaluation of retail practices and strategies using the case method. P, MKTG 361, MKTG 358 or CR. May be convened with 534." Eff. I 94-95.
- 440. Change course description and prerequisites to: "Decision-making processes as related to business environment. P, or CR 358, MKTG 361, a statistics course, and senior standing." Eff. I 95-96.
- 534. Change course title to: "Strategic Retail Management." Eff. I 94-95.
- 455. In course description delete the words "scheduling and promotion." Eff. I 94-95.
- 456. Change course description to: "Study of the retail environment, the physical and psychological effects that initiate and motivate consumer activity." Delete "3L." Eff. I 94-95.

534. Change graduate-level requirements to "an in-depth research paper or project." Eff. I 94-95.
540. Change graduate level requirements to "an in-depth research paper or project.": Eff. I 94-95.
555. Change graduate-level requirements to "an in-depth research paper or project." Eff. I 94-95.
556. Change graduate-level requirements to "an in-depth research paper or project." Eff. I 94-95.
606. Change course title to: "Advanced International Consumption and Retailing." Eff. I 94-95.

Geography and Regional Development (GEOG)

- 450.- Add: "Geomorphology (4) I (Identical with GEOS 450)." Eff. I 94-95.

Geosciences (GEOS)

- 409a. Change course description to: "An integrated quantitative approach to process oriented problems in igneous and metamorphic petrology, especially in dynamic environments, through the applications of physico-chemical principles and experimental data to geological observations. P, 315 or equivalent, calculus. May be convened with 509a." Eff. I 1994-95.
450. + Add crosslisting with GEOG 450. Eff. I 94-95
- 509a-509b. Change course description to: "509a: II For description of course topics, see 409a. Graduate-level requirements include an independent research report. P, 315 or equivalent, calculus. May be convened with 409a. 509b: I An advanced treatment of the topic based primarily on the principles of classical thermodynamics, reaction-order-disorder, and diffusion-kinetics, and heat transfer. P, 509a or 583." Eff. I 1994-95.

Latin American Studies (LA S)

- 595d. + Add crosslisting with ANTH 595d. Eff. I 94-95.

Management and Policy (MAP)

560. Change course title and description to: "Management of Technology (3) I Issues in formulating and implementing technology strategy as organizations and industries grow, mature and stagnate. Topics include patterns of diffusion, role of licensing and joint ventures, and the divergence between leading edge and profitable science. P, 305 or 502." Eff. II 94-95.

Mathematics (MATH)

- 117R. Change last sentence of course description to: "Students with credit in 120 will obtain only two units of graduation credit for 117R. P, 116R or 116S or an acceptable score on the math readiness test." Eff. I 94-95.

- 117S. Change last sentence of course description to: "Students with credit in 120 will obtain only two units of graduation credit for 117S. P, 116R or 116S or an acceptable score on the math readiness test." Eff. I 94-95.

- 576a. Add semester offering and alternate year "I 1995-96." Eff. I 95-96.
- 576b. Add semester offering and alternate year "II 1995-96." Eff. II 95-96.

Media Arts (M AR)

304. Change number of units from "(4)" to "(3)." Change course description and prerequisites to "Introduction to the technical elements of video production, including equipment, professional practices, and production techniques. Laboratory experience with video equipment and production of technical exercises. 2R, 3L. P, 200 and M AR advanced standing." Eff. I 95-96.
305. Change number of units from "(4)" to "(3)." Change course description and prerequisites to "Basic principles of 16mm film production; camera, editing, sound, production techniques and practices; laboratory experience with film production equipment and production of technical exercise films. 2R, 3L. P, M AR advanced standing." Eff. I 95-96.
315. Change course description and prerequisites to "Production of video programs, including techniques and production procedures. Students will produce a short video work. 2R, 3L. Open to Media Arts BFA majors only. P, 304, M AR advanced standing." Eff. I 95-96.

Medicine (MED/ANES/F CM/MEDI/NEUR/OBG/OPH/PATH/ PED/PSYI/RONC/RADI/SURG)

Family and Community Medicine (F CM)

- 195a. Change number of units from "(1)" to "(2)." Eff. I 94-95.
401. Change course title to "Cognitive-Behavioral Medicine." Eff. I 94-95.
501. Change course title to "Cognitive-Behavioral Medicine." Eff. I 94-95.
- 596g. Change number of units from "(1)" to "(1-2)." Eff. Summer 1994.
- 596h. Add repeatability "[Rpt./4 units]." Eff. I 93-94.

Medicine (MEDI)

- 811i. Change course title to: "Medical Intensive Care Unit/Coronary Care Unit." Eff. I 94-95. [Abbrev: "Med ICU/CCU"]
- 815d. Change number of units from "(4-6)" to "(3-6)." Eff. I 94-95.
- 815e. Change number of units from "(3-6)" to "(3-8)." Eff. I 94-95.
- 891b. Change number of units from "(6)" to "(4-6)." Eff. I 94-95.

Pathology (PATH)

- 891c. Change course title to: "Barrow Neurological Institute--Neuropathology." Eff. I 94-95.

Mexican American Studies (MAS)

- 330.- Delete: "Minority Groups and American Policies (3)." Eff. II 94-95.
- 337.- Delete: "Survey of Mexican Folk Music (3)." Eff. II 94-95.

Microbiology and Immunology (MBIM)

- 570. Change semester offering to "II." Change course description to: "Molecular genetics and biology of the bacterial viruses; molecular mechanisms of gene regulation, DNA replication, DNA repair, mutation and genetic recombination; current research in bacterial genetics (lysogeny, transduction, conjugation, use of transposons and gene fusions in genetic analysis and transformation); recent advances in molecular evolution with emphasis on evolution of DNA polymerases." Eff. II 95-96.

Molecular and Cellular Biology (MCB)

- 105a.- Add: "The Universe and Humanity: Origin and Destiny (3) I II (Identical with PTYS 105a)." Eff. I 94-95.
- 410.+ Add crosslisting with PL S 410. Change prerequisites to: "P, 181R, 181L, 182, 462a, recommend 320 and CR 411." Eff. II 94-95.
- 411. Change prerequisites to: "P, 181R, 181L, BIOC 462a, recommend 320." Eff. II 94-95.
- 461. Change prerequisite to "P, 181R, 181L, 182, 410 or equivalents." Eff. I 94-95.

Music (MUS)

- 153. Add to course description: "For music education majors only." Eff. II 94-95.
- 337.+ Delete crosslisting with MAS. Eff. II 94-95.

Plant Pathology (PL P)

- 402.- Change crosslisting to: "(Identical with AGTM 502)." Eff. I 94-95.
- 502.- Change crosslisting to: "(Identical with AGTM 502)." Eff. I 94-95.

Plant Sciences (PL S)

- 410.- Add: "Cell Biology (3) II (Identical with MCB 410)." Eff. II 94-95.

Planetary Sciences (PTYS)

- 105.+ Change course number from "105" to "105a." See "105a" for additional changes. Eff. I 94-95.
- 105a.+ Course number changed from "105" to "105a." Add crosslistings with MCB and BIOC. Eff. I 94-95.

Political Science (POL)

- 330.+ Delete crosslisting with MAS. Eff. II 94-95.

Psychology (PSYC)

- 101. Change prerequisite to "CR, library research leading to modest writing assignment." Eff. I 94-95.

Spanish and Portuguese (SPAN/PORT)

Spanish (SPAN)

- 252. Course number changed from "302" to "252." Eff. Summer I 1994.
- 302. Change course number from "302" to "252." Eff. Summer I 1994.

Speech and Hearing Sciences (SP H)

Revision of 1993-95 General Catalog headnotes, page 342, column one as follows:

Fourth paragraph, beginning "The major," is revised to: "The major requires 30 units, including 260, 280, 350, 367, 370, 371, 451, 483 and 496a." Eff. I 93-94.

Fifth paragraph, second sentence is added as follows: "Coursework in human anatomy and physiology with a laboratory are required. Required courses include EXSS 201 and 202, or their equivalent." Eff. I 93-94.

Women's Studies (W S)

Revision of 1993-95 General Catalog headnotes, page 356, column 1, second paragraph of headnotes (below faculty listing), second sentence is changed to "The student is required to take 30 credit hours; three required courses 100, 200 and 305; one 200-level course chosen from 205, 216, 225, 253, 253b...." Eff. I 94-95.

RESPONSIBILITIES OF FACULTY GOVERNANCE REPRESENTATIVES

In accepting a position as a faculty governance representative, to a University committee, task force, team, etc., a faculty member also accepts certain responsibilities and expectations. Among those are:

- * Acting in the best interests of the university, with departmental, college, or self-interest set aside.
- * Being responsive to the needs of the faculty, including those articulated by the elected representatives.
- * Reporting back on a regular basis to the parent or appointing governance unit, and soliciting from that unit points of view to take to the task. The report should take the form of a memo, no more than one page dealing with (a) the issues addressed; (b) decisions made, policies, actions agreed upon.

Faculty governance representatives are accountable, for effective performance purposes, to the parent or appointing governance unit.

Faculty governance reserves the right to change its representatives.