

MINUTES OF MEETING OF THE FACULTY SENATE OF THE UNIVERSITY OF ARIZONA
Monday, May 5, 1958 Room 101, Law Building

The Faculty Senate convened in regular session at 3:40 P.M. on Monday, May 5, 1958, in Room 101 of the Law Building. Thirty-five members were present with President Harvill presiding. Dr. Hurlbutt was present also.

Present: Bateman, Brewer, Buchhauser, Carlson, Casaday, Crowell, Enke, Forrester, Gegenheimer, Hall, Harvill, Hudson, Humphrey, Irwin, Kemmerer, Leshner, Lynn, Lyons, Marcoux, Martin, Mead, Merritt, Murphy, Myers, Nugent, Park, Patrick, Paylore, Powell, Rhodes, Roy, Tucker, Vavich, Wallraff, Zapotocky.

Absent: Bogart, Conley, Garretson, Howard, Hull, Livermore, Picard, Pistor, Slonaker.

Approval of minutes: The minutes of the meeting of April 21, 1958 were approved as distributed to members.

Appreciation, expressions of: Dr. Gegenheimer, in connection with the approval of the minutes, referred to the service of Mr. Leshner as secretary of the Senate since its organization. He moved that the Senate vote its expression of appreciation to the secretary for his services.

President Harvill mentioned Mr. Leshner's service as secretary of the Advisory Council and of the General Faculty, as well as secretary of the Senate and of the Border Intercollegiate Athletic Conference. He expressed his admiration for the secretary and for his service to the University. The motion was seconded and passed unanimously.

Mr. Leshner expressed his appreciation for the action of the Senate and stated that his experience as a member of the staff beginning in 1922 as Assistant Registrar and since 1927 as Registrar had been a rich and rewarding one. He had many gratifying experiences, he said, in his associations with administrative officers and members of the faculty and particularly with members of the Senate. He felt that the Senate had proved itself a very valuable agency in the formulation and administration of University policy. The action of the Senate, he said, would be a pleasant memory in connection with the completion of his services as Registrar and Director of Admissions in June.

Professor Hall explained that it was also an appropriate time to recognize the many years of service given to the University by Dean John C. Park, who completes his term of appointment as Dean this year, but will continue as a member of the faculty in Civil Engineering. He moved that the Senate vote an expression of its appreciation for Dean Park's outstanding service. The motion was seconded by Dr. Patrick.

President Harvill explained that Dean Park had served the University for thirty-two years and that it would be difficult to express adequately the estimate of the service he has given, first as a member of the teaching faculty and, secondly, as an administrative officer. The unprecedented growth of the College of

Engineering and the organization of its academic programs reflect the success of Dean Park's period of administration. The Enthusiastic appreciation of the Senate for Dean Park's long years of service was voted unanimously.

Catalogue material, approval of: The Senate approved catalogue material received from various colleges of the University, with the changes as noted:(Changes designated as such, in parenthesis):

Summer Session: New Course -

Educ.228s Aviation Workshop for Teachers (3)
A survey of the air age and space age with special emphasis devoted to understanding the simple scientific principles and problems of aviation and their relationship to society.

Regular Session - New courses:

An.Sci. 106 - Meat Judging (2) I Roubicek
Consideration of factors involved in selection and grading of carcasses and wholesale cuts of beef, pork, and lamb. A meat judging team will be selected from students in this course. IR, 3LP, An.Ind. 1. Fee \$3.00.

An.Sci. 107 Meat Selection & Identification (2) II Roubicek
Identification, quality determination, and meat cutting demonstrations, with special reference to institutional requirements. IR, 3L. Fee, \$3.00.

Geology 205 Industrial Minerals (3) I Lacy & Pye
Mode of occurrence, specifications, uses and methods of evaluating industrial mineral deposits. 2R, 3L. P. 204.

Geology 307 Exploration Photogeology (2) I Mitchum
Application of photogeology techniques, determining structural situations and rock alteration, in delimiting ore targets. 6L, P.207, 228. Fee \$4.00.

Geology 334 Theories of Ore Deposition (3) II Lacy
Theories pertaining to origin, concentration, transport and deposition of elements constituting ore deposits. 2R, 3L.

Met. 235 Introduction to Powder Metallurgy (2) I Anthony
Basic principles of the production and mixing of powdered metals, and the forming, sintering and uses of powdered metal parts.

Pl.Breed.235 Sample Survey Methods (3) II Tucker
Study of practical problems arising in planning, execution, and analysis of a survey, methods of sampling, estimation of population values, estimation of sampling error and efficiency of methods.

Pl.Breed 339 Design of Experiments in Agriculture (3) I Tucker
Increasing precision and accuracy of experiments, complete and incomplete block designs, factorial experiments and confounding, response surface designs.

Poult.Sci.312

Biochem.& Nutr.312 Chemistry of Enzymes (2) II 1958-59 Kurnick
Biochemical and physical principles as applied to
the study of properties, functions, mode of action, isolation, purification
and identification of enzyme compounds.

Adjustments:

Geol. 312 - Sedimentary Petrography (3) II - change from II to I semester.

Geol. 314 - Sedimentation - change from I to II semester.

Page 86, Paragraph 3. Withdrawal Grades. Add a final sentence:

The right of graduate students to withdraw with the grade
of W is limited to the first six weeks of classes; thereafter the grade
will be awarded only for cause approved by the Committee on Graduate
Study.

Pl.Breed.237a, b - Page 415 Change title to Statistical Methods in
Agriculture.

COLLEGE OF BUSINESS & PUBLIC ADMINISTRATION

Public Administration - proposed description in Graduate College Announcement

Master of Public Administration

The degree of Master of Public Administration will be conferred upon
completion of programs designed to give advanced training in general
governmental administration at the national, state, and local levels; in
criminology and correctional administration; in probation-parole adminis-
tration; and in the fiscal or business administration of public school
systems. In the latter field, the degree of Master of Education may,
alternatively, be conferred.

Admission, residence, candidacy, and final examination requirements
are the same as those required of candidates for the Master of Arts and
Master of Science degrees, with the following exceptions. Undergraduate
work should preferably include background courses in public administration
and related subject matter.

Course requirements - Course work (excluding credit given for thesis
preparation or internship) must include a minimum of 30 hours; the number
of hours required in a specialized field will be prescribed for each student,
at the time he submits a program of study, by the appropriate major professor.

Thesis-Internship - Either a written thesis, or an approved internship
in a governmental or private agency in Arizona or elsewhere, will be re-
quired. Appropriate course credit will be given in either case.

Final Examination - The required final examination may be related
either to the thesis, or to the internship.

College of Business & Public Administration (cont'd)

Proposed wholly new section in COURSES OF INSTRUCTION in Biennial Catalogue, approximately on page 418.

PUBLIC ADMINISTRATION

Committee: (Graduate)

Professors: (Seven members, including Dean of College of Business and Public Administration as Chairman)

Graduate work leading to the degree of Master of Public Administration is offered, with major fields of specialization in governmental administration, criminology and correctional administration, and probation-parole administration. Public Administration on the graduate level is an interdepartmental responsibility. Representatives of the Departments of History and Political Science, Sociology, Economics, Psychology, and Business Administration, and of the Bureau of Business and Public Research, comprise the Graduate Committee on Public Administration.

Courses of study undertaken by candidates for the Master's degree will be prescribed individually by an appropriate adviser. The prerequisite is a bachelor's degree from an approved institution, preferably with undergraduate concentration in political science and history, sociology, or public administration. Candidates lacking such background may be admitted by permission, but they will find additional time and course work necessary to fulfill prerequisites before being advanced to candidacy for the degree.

Undergraduate students in the University may prepare for careers in public administration, or for graduate work, either in the College of Business and Public Administration or in the College of Liberal Arts. In the latter case, they will normally choose, as major and minor fields in the upper division, from among the fields of economics, political science, history, psychology, and sociology.

Undergraduate preparation for the examinations governing entrance into careers in the State Department (foreign and domestic service) may be secured either in the College of Liberal Arts or in the College of Business and Public Administration.

The following courses include those which will be normally included in various programs of study for the degree of Master of Public Administration. Prerequisites indicated may be satisfied by previous undergraduate course work, or by inclusion in the first year programs of students admitted to the graduate program prior to their advancement to candidacy.

243. WELFARE LEGISLATION (3) II Yoshino
A survey and analysis of the provisions and administration of the major federal legislation in the area of social welfare.
245. COUNSELING IN SOCIAL ADMINISTRATION (3) II Mulligan
The basic concepts and principles of counseling, casework, and interviewing in professional and administrative settings. P, 6 units of sociology and Senior standing.

College of Business and Public Administration - Cont'd

263. THE ADMINISTRATIVE PROCESS (3) II Burke
(To be listed also as Political Science 263).
A detailed study of the processes of policy making and execution within the executive branch of the government with special emphasis on the influence of parties, pressure groups, public opinion, Congressional leaders and committees, and the "in-administration" interests. P, Pol.Sci. 51a.
266. POLICE ORGANIZATION AND ADMINISTRATION (3) II Staff
A thorough analysis of theory and practice of police organization and administration at the national, state, and local levels. P, Soc. 2 and 87.
267. PUBLIC PERSONNEL ADMINISTRATION (3) I Kelso (To be listed also as P.Sci. 267)
Development of public service and its role in the contemporary state. Basic ideas, problems, and processes in public personnel administration. Development of a career service. Prerequisite: Pol.Sci.51a, b, upper division standing.
- 337a-337b. FISCAL AND BUDGETARY ADMINISTRATION OF PUBLIC AGENCIES (2-2) Yr.Staff
Analysis of the internal fiscal operation, and the budgetary cycle, of public and non-profit agencies. Individual reports will be assigned. P, Bus.Adm. 237.
- 346a-346b. THE DYNAMICS OF PROBATION AND PAROLE (2-2) Yr. Mulligan
A critical discussion of the techniques of social investigation, diagnosis, supervision, and treatment of the offender. P, Pub.Adm.235 or equivalent.
366. REHABILITATIVE SERVICES IN CORRECTIONAL INSTITUTIONS (2) I Vedder
Analysis of the rehabilitative process in the modern correctional institution. Problems associated with admission and reception, discipline, special services, classification, education, vocational training, and preparation for parole. P, Soc. 2, 87.
- 405c. INTERNSHIP IN CORRECTIONAL ADMINISTRATION (2-6) I, II Vedder
The advanced student and candidate for the Master's Degree in Correctional Administration is required to spend time working in a penal institution under the guidance and supervision of responsible officials. Emphasis is placed on the practical aspects of the correctional field. P, Soc. 87, 166a, b, 287.
- 405p. INTERNSHIP IN PROBATION AND PAROLE (2-6) I, II Mulligan
Student serves an internship of from 8 to 10 weeks on a full-time basis in a community correctional agency under professional and University supervision. Open only to graduate students in the Probation and Parole program. P, 346a, b.

(Catalog 1957-59, p. 163)

(The present "Bachelor of Science in Public Administration with a Major in Social Work" will be deleted in the 1959-60 catalogue.) Insert the following:

College of Business and Public Administration - cont'd

BACHELOR OF SCIENCE IN PUBLIC ADMINISTRATION

WITH A MAJOR IN SOCIAL ADMINISTRATION

This major is designed for students who wish to prepare for administration or research positions in governmental or private agencies in the general fields of public health, social welfare, and labor. In addition to equipping the student with both the basic knowledge and skills for these areas, a sound preparation will be afforded students who may subsequently desire to do graduate work in these fields.

FRESHMAN YEAR

First Semester		Second Semester	
<u>Subject</u>	<u>Units</u>	<u>Subject</u>	<u>Units</u>
English 1a (Composition).....	3	English 1b (Composition).....	3
Science or Mathematics *.....	4-5	Science or Mathematics *.....	4-5
Speech 2 (Principles)	3	Speech 10 (Public Speaking)..	3
Soc. 1 (Intro.) or Soc. 2 (Social Problems)...	3	Soc. 2 (Social Problems) or Soc. 1 (Intro.)	3
Soc. 40 (Intro.to Soc.Adm.)..	2	Sec.St.77 (Add-Calcul.Mach.)...	2
Mil.Sci. 1a (Men).....	1	Mil.Sci. 1b (Men).....	1
Phys.Educ. (Women and Men)...	1	Phys.Educ. (Women and Men)...	1
	<u>16-18</u>		<u>16-18</u>

SOPHOMORE YEAR

First Semester		Second Semester	
<u>Subject</u>	<u>Units</u>	<u>Subject</u>	<u>Units</u>
Humanities.....	4	Humanities	4
Pol.Sci. 51a (Am.Govt.).....	3	Pol.Sci.51b (Am.Govt.).....	3
Economics 1a (Intro.).....	3	Economics 1b (Intro.).....	3
Psych. 1a (Elementary).....	3	Psych. 1b (Elementary).....	3
Phys.Educ. (Women).....	1	Phys.Educ. (Women).....	1
Mil.Sci. 2a (Men).....	1	Mil. Sci. 2b (Men).....	1
Elective.....	2-3	Elective.....	2-3
	<u>16-17</u>		<u>16-17</u>

*Either a full year in a single laboratory science, or 8 hours of approved mathematics courses, must be taken to fulfill this requirement. Students planning to enter the field of public health administration should elect Zoology 1a, 1b.

JUNIOR AND SENIOR YEARS

Forty-five units from the following list are required to fulfill the major requirements, including all the starred courses:

College of Business and Public Administration - cont'd

<u>Subject</u>	<u>Units</u>
* Bus. Adm. 32 (Introduction to Accounting) I, II	3
Bus. Adm. 201 (Personnel Management) I	3
Bus. Adm. 203 (Wage and Salary Administration) I	3
Bus. Adm. 204 (Collective Bargaining) II	3
Bus. Adm. 237 (Governmental and Institutional Accounting) II	3
Econ. 205 (Labor Problems and Trade Unionism) I, II	3
Econ. 206 (Industrial Relations) II	3
* Econ. 245 (Public Finance) I	3
Econ. 351 (Theory of Social Insurance) I 1958-59	2
Pol.Sci. 252 (Probs. of Municipal Mgmt.) I, 1957-58	3
Pol.Sci. 258 (Political Aspects of Law Enf. & Crime Control) II ...	3
* Pol.Sci. 271a, 271b (Public Adm.) Yr. <u>OR</u>	
*Bus. Adm. 272 (Prin.of Management) and another approved course..	6
Psych. 15 (Introd. to Soc. Psych.) II	3
Psych. 23 (Bus. & Industrial Psychology) II	3
Psych. 210 (The Individual in the Group) I, II	3
Psych. 216 (Personality) II	3
* Pub.Adm. 243 (Welfare Legislation) II	3
Soc. 87 (Criminology) I, II	3
* Soc. 138 (Fields of Social Work) I	3
* Soc. 143 (Intro. to Public Welfare) I	3
* Soc. 145 (Intro. to Case Work) II	3
Soc. 212 (Sociology of Collective Behavior) I	3
Soc. 222 (Sociology of Minority Relations) II	3
Soc. 240 (Child Welfare Problems) I	2
Soc. 241 (Juvenile Delinquency) II	3
Soc. 253 (Group Dynamics) II	3
* Soc. 260a, 260b (Methods of Social Research) Yr.	4
* Soc. 261 (Introductory Social Statistics) I, II	3
Soc. 285 (Sociology of the Family) II	3
Soc. 286 (Sociology of Industry) I	3
* Soc. 289 (Population Problems) I	3
Soc. 290 (Problems of an Aging Population) II	3

Department of Sociology (1957-59 Catalogue, p. 425 ff.)

(1) Delete the following courses:

- Soc. 25a-25b Cultural Anthropology (3-3) Getty
- Soc. 168 Police Organization and Methods (2) II Staff
- Soc. 203 Cultural Change (3) II 1957-58 Spicer
- Soc. 210 The Individual in the Group (3) I, II MacKinnon
- Soc. 220 Minority Peoples of the U.S. (3) I Spicer
- Soc. 276 Comparative Social Organization (3) I Spicer
- Soc. 277 Modern Communities (3) II Getty
- Soc. 279 Culture and the Individual (3) II Hackenberg

Coll. Bus. & Pub. Adm. - cont'd

(2) Delete the alternate year designations on the following courses so that they may be offered each year:

- Soc. 252 Social Stratification (3) II Delete: 1958-59
- Soc. 284 Regional Sociology (3) I Delete: 1958-59
- Soc. 285 Sociology of the Family (3) II Delete: 1958-59
- Soc. 286 Sociology of Industry (3) I Delete: 1958-59
- Soc. 289 Population Problems (3) Delete 1957-58 and change from II to I
- Soc. 290 Problems of Aging Population (3) II Delete: 1958-59
- Soc. 293 Rural and Urban Communities (3) II Delete: 1957-58
- Soc. 295 Social Ecology (3) II Delete: 1957-58
- Soc. 315 History of Social Thought (3) I Delete: 1958-59
- Soc. 316 Contemporary Sociological Theories (3) II Delete: 1958-59

(3) NEW COURSES:

Soc. 40 INTRODUCTION TO SOCIAL ADMINISTRATION (2) I Mulligan

An over-all view of the background and functions of the major institutions, public and private, in the fields of public health, welfare, and labor.

Soc. 212 SOCIOLOGY OF COLLECTIVE BEHAVIOR (3) I Yoshino

An analytical approach to the principles common to such aspects of collective behavior as the crowd, the public, and such social movements as those having a political, religious, or minority context. P.Soc. 1 and 2.

Soc. 222 SOCIOLOGY OF MINORITY RELATIONS (3) II Yoshino

A critical approach to the social processes involved in minority relations in terms of race, class, ethnicity, politics, and religion. The sources of minority attitudes; patterns of minority adjustments; trends in minority relations. P, Soc. 1 and 2.

Soc. 261 INTRODUCTORY SOCIAL STATISTICS (3) I, II Ireland

Methods of processing and presenting social data, with emphasis on tabular and graphic presentation, elementary statistical inference, and distribution-free measures.

Soc. 280 INTRODUCTORY SOCIOLOGICAL THEORY (3) I Hamberne

A critical review of the leading sociologists from August Comte to the present day. P, Soc. 1.

Soc. 288 CRIMINAL PSYCHOPATHOLOGY (2) I Vedder

This course concerns itself with specific mental and emotional disorders of criminal behavior from the point of view of causation and development of abnormal behavior. Consideration of various approaches of diagnosis and treatment in psychiatric settings. P, Soc. 2, 87; Psych. 1b.

Soc. 387 THEORY OF CRIMINOLOGY (2) I Vedder

Historical and theoretical aspects of academic criminology. Contributions of the great individual thinkers with special emphasis on the recognized schools of criminological theory. P, Soc. 288.

Soc. 341 THEORY OF JUVENILE DELINQUENCY (2) I Mulligan

Analysis of the sociological and psychological variables in the etiology of juvenile delinquency in American society. Some emphasis on a socio-psychological explanation of juvenile delinquency and the application of theory to rehabilitation and prevention. P, Soc. 241; Psych. 1b.

College of Business & Public Administration - cont'd

(1) Miscellaneous changes: (page 302 ff., 157-59 catalogue):

- p. 304. From the description of B.A. 200, delete the phrase "identical with E.E.200" and insert new description, change title. Reason: Electrical Engineering is no longer offering such a course. New description will read:

Delete

Bus.Adm. 200 ELECTRONIC DATA PROCESSING(AND COMPUTER PROGRAMMING)(3) I,II Raaf
Business operational data systems. Computer characteristics and feasibility. Digital computer programming.

(Change: B.A. 200 - Electronic Data Processing and Computer Programming.

Dr. Martin suggested that this course be retitled in order to avoid duplication and changed to read "Electronic Data Processing." The Senate voted approval of the change with the understanding that it would be confirmed by Dr. Martin, the Registrar, and the head of the department and Dean concerned.)

- p. 306. Change number of B.A. 249, Bank Organization and Management, to B.A. 349, add "open to qualified seniors and graduate students," and offer in alternate years, 1959-60, first semester. Reason: Content of the course is on the graduate level. New description is to read:

Bus.Adm. 349 BANK ORGANIZATION AND MANAGEMENT (3) I 1959-60 Staff
Problems of bank organization, responsibilities of officers and directors, relationship of correspondents, government agencies and the money market; management of bank funds, bank credit and bank policies. P, Econ. 248.

- p. 306. Add, to the description of B.A. 243, the words "Not open to students who have credit in B.A. 131a." Reason: Students who are accounting majors or who have taken B.A. 131a will find some duplication of accounting material. The course is designed for non-accounting majors. New description will read:

Bus.Adm. 243 MANAGERIAL ACCOUNTING (3) II Staff
Designed to acquaint users of accounting data with basic accounting concepts, methods of analyzing accounting reports, and use of accounting in management planning and control. Not open to students who have credit in Bus.Adm. 131a. P, 31b or 32.

- p. 307. Change number of Bus.Adm.278 to 225; change course from Bus.Adm. to Econ. but cross-list in Business Adm. Reason: The other transportation courses are Economics courses and this will need to be listed in Economics pending the creation of the new major in Transportation. Since this is a "management" course it should also be cross-listed in Bus.Adm. The description in the Bus.Adm. section will be:

Bus.Adm. 225 INDUSTRIAL TRAFFIC MANAGEMENT (3) II Gifford.
(Identical with Econ. 225).

- p. 308. Change title and catalogue description of B.A. 356 to conform to new emphasis on both business and public administration. New description is:

College of Business and Public Administration - cont'd

Bus. Adm. 356. SAMPLING THEORY AND METHODS (3) II 1958-59 Raaf
Theory and applications of sampling methods useful
in various areas of business and governmental operations and research.
Experimental design. P, 255 or equivalent.

(2) NEW COURSES:

B.A. 233 BUSINESS BUDGETING (2) II Raby
Relationship of budgeting to management functions; principles
and procedures of profit planning and financial control for both
manufacturing and non-manufacturing organization. P, B.A. 31b or B.A.32.

B.A. 334a-334b. ACCOUNTING SYSTEMS (2-2) Yr. Thierman
Steps in design and installation of systems, including
general aim of the system, designing of general ledger and expense
classifications, types and use of codes, the basic plans of sum-
marizing, the designing of business papers and forms; internal
check and accounting control; special problems of small bus-
inesses; methods and procedures in handling business data;
systems reports and systems manuals; punched card accounting.
P, B.A. 131b, 233a.

Department of Economics - 1957-59 cat. p. 324

p.325. Change department and number of Bus. Adm. 278, Industrial Traffic
Management to: Econ. 225, Industrial Traffic Management. Include
description in Economics Department but cross-list in Bus.Admin.
Dept. under new number, 225.

The description in the Economics Department section will be:

Econ. 225 INDUSTRIAL TRAFFIC MANAGEMENT (3) II Gifford
Transportation from the viewpoint of the shipper; rates
and services of the various carriers, classifications and rules,
freight rates and tariffs. P, Economics 221. (Identical with B.A. 225).

ELECTRICAL ENGINEERING DEPARTMENT

A major change in the EE course sequence in Circuit Theory from a two-
semester sequence of 10 units to a three-semester sequence of 11 units is neces-
sary. This requires the introduction of one new course, EE-22, and extensive
rearrangement of the courses in the EE curriculum because of the introduction
of this new course. The only actual additions or deletions to the list of re-
quired courses, other than those of Circuit Theory, are:

- (a) deletion of Physics 260; and
- (b) addition of Physics 205L.

All of the other changes are merely mechanical changes in name, description,
or prerequisites which accumulated experience indicates to be necessary.

Electrical Engineering Department - cont'd

NEW COURSES:

A theory course and laboratory, EE-230 and EE-231, have been introduced in Electronic Analog Computers to broaden the usage of the equipment now available on the campus by students in EE and other scientific and engineering departments. One new graduate course, EE-341, is introduced to round out the graduate sequence in Servomechanisms.

Six new courses have been introduced to cover the primary areas associated with Nuclear Engineering. These courses will be administered by the EE Department, but will be given a designation of Engineering Physics as that is what they are. They consist of:

- (a) a general introductory course, EP-200, which serves as a basic prerequisite to all others;
- (b) three major course sequences in -
 - (1) Isotopic Techniques, EP-210, EP-211
 - (2) Materials in Radiation Fields, EP-212
 - (3) Nuclear Power Sources, EP-220, EP-221

We have already in the catalogue EE, ME-260, Elements of Nuclear Engineering (3 units), which will remain. It is an introductory and also a terminal course for those students who wish to know something about the field of Nuclear Engineering but do not care to pursue a whole sequence of courses in this field. It does not take the place of EP-200, which is an introductory course to a sequence of courses in this field.

NEW COURSES:

EE-22 INTRODUCTION TO CIRCUIT THEORY (3) I, II Staff
CR EE-23 and Math. 200. Replaces EE-120
Difficulties in coordinating the course sequence in circuit theory with the electronics sequence have made it necessary to reorganize the circuit theory into 3 courses commencing in Semester II of the Sophomore year, rather than 2 courses beginning in Semester I of the Junior year.

EE-230 ELECTRONIC ANALOG COMPUTERS (3) I, II Korn
CR-231 - Senior Standing in EE, or instructor's approval.
Electronic analog computers are firmly established as basic engineering design tools (computation, simulation, partial system tests); they are becoming increasingly important as components of modern automatic control systems. Considerable demand exists - 25 to 30 seniors/year.

EE-231 BASIC ANALOG COMPUTER LABORATORY (1) I, II Staff
CR 230.

EE-261 NUCLEAR ENGINEERING LABORATORY (1) I, II Wittmeyer
CR in 260

We expect laboratory facilities next year for the first time and this course will utilize these facilities in support of the corresponding theory course, EE-260.

Electrical Engineering Department - cont'd

EE-341 SYNTHESIS OF CONTROL SYSTEMS II (3) II Staff

P, EE-340

- (1) Completes a sequence of two graduate courses in the area of Control Systems in the new numbering system.
- (2) On campus demand will be about 5-10 students.

EP-200 PHYSICAL BASES FOR NUCLEAR ENGINEERING (3) I, II Wittmeyer

P, EE-50 (or Physics lab.) and Math. 200.

This is part of a complete sequence of courses being introduced for a course in Nuclear Engineering. Estimated enrollment - 20 per semester.

EP-210 ISOTOPIC TECHNIQUES (3) I, II Wilde

P, EP-200 or Physics 218b

This course is one of a sequence of new courses in the area of Nuclear Engineering. It is felt that a course of this type is necessary to provide the student with a full curriculum in addition to allowing both the student and faculty member to make more efficient use of the isotope producing capability of the Triga nuclear reactor. Expected enrollment: 16 to 25 students per year.

Agr. 321 and Zoo.356 appear to duplicate this course in part. The Agricultural and Zoology courses deal with highly specialized applications of isotopes. The proposed course will present a study of the engineering fundamentals of isotopic applications from a more unified point of view.

EP-211 ISOTOPIC LABORATORY METHODS (1) I, II Wilde

CR EP-210

This is the laboratory aspect of EP-210 Isotopic Techniques. It normally will be taken concurrent with the theory course. The course will provide the student with some experience in handling radioactive materials as well as introducing him to instrumentation techniques and isotope production in a nuclear reactor. Expected enrollment: 16 to 25 students per year.

EP-212 MATERIALS IN RADIATION FIELDS (3) I, II Chapman

P, EP-200

This is one of a connected sequence of courses being assembled for a degree in nuclear engineering. From 15 to 25 students are expected to be enrolled in the course.

EP-220 NUCLEAR POWER SOURCES (3) I, II Chapman

P, EP-200, Math. 202a

This is one of a connected sequence of courses being assembled for a degree in nuclear engineering. From 15 to 25 students are expected to be enrolled in this course.

EP-221 NUCLEAR POWER SOURCES LABORATORY (1) I, II Chapman

CR EP-220

This is one of a connected sequence of courses being assembled for a degree in nuclear engineering. Enrollment is expected to be from 15 to 25 students.

Mechanical Engineering Department - Course additions:

ME-290a, b ENGINEERING STATISTICS AND QUALITY CONTROL (3-3) Yr. Bottaccini
This is a reactivation of a course dropped from the last catalogue due to lack of staff.

ME-261 NUCLEAR ENGINEERING LABORATORY (1) I, II Staff
Identical to EE-261. P, 260.

ME-300 ADVANCED PHYSICAL PROPERTIES OF ENGINEERING MATERIALS (3) II Marcoux
Senior standing.
Advanced study of the special physical properties of certain engineering materials used where high strength and toughness, wear and abrasion resistance, high temperature, or chemical corrosion are a factor. P, 125.

ME-IA-E PIPING DESIGN (0) Extension only Jordan
CE-3 or equivalent
This is a non-credit course for which there is a heavy local demand. It cannot be rated as a college level course in its entirety, but as some parts of it are at this level only the University is capable of offering it.

Department of Electrical Engineering

p.191 and 193 - change to read as follows:

(1) Semester II - Sophomore year

EE 22	(Introduction to Circuit Theory)	3
EE 23	(Basic Circuits Laboratory)	1
EE 50	(Physical Basis for EE)	3
Engl. 8	(Expository Writing)	2
Math. 200	(Differential Equations)	3
Phys. 10b	(Engineering Physics)	5
Mil.Sci.2b		1
		<u>18</u>

(2) Semester I - Junior Year

EE 122	(Electric Circuit Theory I)	3
EE 123	(Circuits Laboratory)	1
EE 150	(Principles of Electronics)	4
EE 151	(Electronics Laboratory)	1
EE 160	(Energy Storage and Conversion)	3
Math.202a	(Advanced Calculus)	3
Phys.211a	(Electricity and Magnetism)	3
		<u>18</u>

(3) Semester II - Junior Year

EE 152	(Electronic Circuits)	4
EE 153	(Electronic Circuits Laboratory)	1
EE 162	(Energy Conversion Devices)	4
EE 163	(Electrical Machinery Lab.)	1
EE 222	(Electric Circuit Theory II)	3
CE 113	(Analytical Mechanics)	5
		<u>18</u>

Department of Electrical Engineering - cont'd

(4) Semester I - Senior Year

- (a) Replace Phys. 211a with
- (b) CE 114 (Mechanics of Materials) 3

(5) Semester II - Senior Year

- (a) Delete Phys. 260
- (b) Add Phys. 205L (Thermodynamics Lab.) 1
- (c) Change total from 18 to 17

(6) p. 194 - Semester I - Senior Year

- (a) Change ME 126 to ME 118a (Thermodynamics) 4
- (b) Delete Phys. 211a
- (c) Add EE 261 (Nuclear Engineering Laboratory) 1
- (d) Change total to 17

(7) Semester II - Senior Year

- (a) Delete Phys. 260
- (b) Add Math. 202b (Advanced Calculus II) 3
- (c) Change units on non-tech. electives to 3

p.338 (1) - Change number and description of EE 120, as follows:

EE 122 ELECTRIC CIRCUIT THEORY I (3) I, II Manhart, Wilde, Rogers, Korn
A detailed treatment of basic concepts in modern network theory based upon the general concepts introduced in EE 22. Emphasis upon vector diagrams, locus diagrams, and energy considerations in single and variable frequency, steady state solutions. Introduction to the Fourier and Laplace transforms. P, 22 and CR 123.

(2) - Change number and description of EE 121 to EE 123 as follows:

EE 123 CIRCUITS LABORATORY (1) I, II Staff
Experimental aspect of EE 122. P, CR 122. Fee \$5.00.

(3) - Change of Units

- (a) Change units on EE 150 from 5 to 4
 - (b) Change units on EE 152 from 3 to 4
- Total units remain the same.

p.339 (4) - Change description of EE 222 to read as follows:

EE 222 ELECTRIC CIRCUIT THEORY II (3) I, II Manhart, Rogers, Stock, Hausenbauer
P.83 - Graduate Catalogue
A continuation of EE 122 encompassing elementary theory of functions of a complex variable, inverse transform techniques, limitations imposed on immittances from energy considerations, and an extension of the basic concepts to networks with distributed parameters. P.122 or 120.

(5) - Change number and description of EE 223 to read as follows:

EE 23 BASIC CIRCUITS LABORATORY (1) I, II Staff
Experimental aspect of EE 22. P. CR 23 Fee \$5.00.

(6) - Change description of EE 228 to read as follows: (P.83 Graduate Catalogue)

EE 228 ADVANCED CIRCUIT THEORY (3) I, II Rogers, Hausenbauer, Enloe
Advanced topics in the Laplace and Fourier transform and pole-zero methods; treatment of frequency selective networks and elementary synthesis procedures. P. 222.

(7) - Change title and description of EE 254 to read as follows: (p.83 Grad.cat.)

EE 254 MODULATION AND CODING (3) I, II Featherston, G.Russell
Theory and techniques associated with the preparation of information for transmission and reception; modulation, encoding and

Department of Electrical Engineering - cont'd

p.339 - EE 254 cont'd

decoding processes; information content, band-width, channel capacity, and signal-to-noise considerations in information systems; emphasis upon time and frequency multiplexing. P. 152 and CR 255.

(8) - Change title and description of EE 255 to read as follows: (p.83 Grad.Cat.)
EE 255 MODULATION AND CODING LABORATORY (1) I, II Staff
Experimental aspect of 254. P. CR 254 Fee \$5.00

(9) - Change prerequisites on EE 270 to be EE 162, 222.

p.340 (10) - Change prerequisites on EE 280 to read Phys. 211a and CR 281.

(11) - Change description of EE 301 to read as follows:

EE 301 OPERATIONS RESEARCH I (3) I Hessemer (p.84 Graduate Cat.)
A study of the general nature of operations research including a definition of the problem and the use of models in the solution. The required material on probability theory and statistics applicable to these problems is developed as needed. P. Math. 202a.

(12) - Change description of EE 302 to read as follows: (p.84 Grad.Cat.)

EE 302 OPERATIONS RESEARCH II (3) II Hessemer
A study of allocation, waiting time, and competitive models. The required mathematical techniques, such as linear programming, queueing, and game theory, are introduced as needed. P. 301.

(3) - Change title and description of EE 310 to read as follows: (p.84 Grad.Cat.)

EE 310 OPERATIONAL METHODS OF CIRCUIT ANALYSIS (3) I, II Staff
A presentation of the elements of functions of a complex variable followed by application of the Fourier transform and Laplace transform techniques to the problems of signal transmission through lumped and distributed parameter systems.

(14) - Change number, title, and description of EE 315 as follows: (p.84 Grad.Cat.)

EE 340 SYNTHESIS OF CONTROL SYSTEMS I (3) I Hausenbauer, L.Enloe
Analysis and synthesis of linear, continuous, closed-loop control systems. P. 270.

p.341 (15) - Change title and description of EE 330 to read as follows: (p.85 Grad.Cat.)

EE 330 VIDEO AND FILTER AMPLIFIERS (3) I Walker, Perkins, Latorre
Design of wide band and fast amplifiers using pentodes and transistors; stagger tuning, distributed amplifiers, feedback, and noise. P.310 or CR

(16) - Change title and description of EE 331 to read as follows: (p.85 Grad.Cat.)

EE 331 PULSE AND LOGIC CIRCUITS (3) II Walker, Perkins, Blanchard, Martin
Wave shaping, trigger, and computing circuits and non-sinusoidal oscillators using vacuum tubes and semi-conductor devices. P.310.

(17) - Change title and description of EE 333 to read as follows: (p.85 Grad.Cat.)

EE 333 ELECTRONIC SYSTEMS (3) I, II G. Russell
Definition of large-scale systems and their electronic sub-systems in terms of block diagrams. Development of the criteria system design from

Department of Electrical Engineering - cont'd

EE 333 - cont'd

consideration of exterior requirements such as information theory and interior requirements such as probability of error or failure. The effect of coding, modulation, and transducer processes upon realization of these design criteria in practical information-handling systems.

(18) - Change description of EE 334 to read as follows: (p.85 Grad.Cat.)

EE 334 TRANSISTOR ELECTRONICS (3) I, II Walker, H.Enloe

Physical theory of the p-n junction and the transistor; equivalent circuits for small signal and switching applications; basic transistor circuitry.

(19) - Change title and description of EE 350 to read as follows: (p.85 Grad.Cat.)

EE 350 ADVANCED ELECTROMAGNETIC ENGINEERING (3) I Hessemer, Stewart

Application of the electromagnetic field equations to the solution of static field problems and high frequency potential and circuit concepts. The analysis of wave propagation and reflection in dielectrics, conductors, and waveguides. P. Phys. 211a.

(20) - Change title and description of EE 362 to read as follows:(p.86 Grad.Cat.)

EE 362 METHODS OF COMMUNICATIONS THEORY AND DETECTION THEORY (3) I, II Korn

Statistical description of a communications process. Information and channel capacity for discrete signals. Coding. Continuous signals and modulations: Nyquist-shannon theorem. Application to AM, FM, and PCM. Prediction and filtering by linear systems. Introduction to statistical detection theory. P. EE 335 - Satisfactory grade.

(21) - Change number, title, and descriptkon of EE 361, NOISE, to

EE 335 INTRODUCTION TO RANDOM PROCESSES AND NOISE I (3) Korn (p.85 Grad.Cat.)

Introduction to statistical models, with emphasis on communications systems. Description of random processes. Sampling theorems, correlation functions, and spectra. Caussian random processes. Shot noise and thermal noise. P.310.

p.342 (22) - Change description of EE 370 to read as follows: (p.86 Grad.Cat.)

Design and application of analog-computer systems for computation and control. Accuracy considerations. Design of multipliers, function generators, and noise generators. Measurement of statistical parameters. Precision electronic switches. Control circuits and computer system design. Applications to flight simulators, nonlinear control systems, random processes, modulation, and detection. Term papers on special problems. Course uses University of Arizona analog computers. P.230/231. (EE 370 - ADVANCED ANALOG-COMPUTER TECHNIQUES, title).

(23) - Change description of EE 371 to read as follows: (p.86 Grad.Cat.)

EE 371 MACHINE LOGIC (3) I, II Featherston, P. Russell

The logical basis of arithmetic and "decision making" functions of digital computers is examined using the methods of Boolean algebra. Relay and electronic designs capable of these functions are treated with some laboratory work on the IBM 650 and SPACE computers.

Department of Mechanical Engineering

Add ME 290a, b ENGINEERING STATISTICS & QUALITY CONTROL - Bottaccini (3-3) Yr.

This course appeared as ME 190a, b in the 1955-56 catalogue but was dropped from the present one due to lack of staff and demand. It is now in demand and the staff problem has been solved.

ME 283 - ENGINEERING ANALYSIS (3) I - Sutton (An advanced course, ME 303, is being proposed and this would be a prerequisite. To enable graduate students to take ME 303 the second semester this course should be moved to the first semester. (Change II to I).

ME 315 SERVO-MECHANISMS (3) II Bottaccini (Change to read - Analysis and synthesis of control systems. P.270.

ME 261 NUCLEAR ENG. LAB. (1) I, II Staff
Ideantial with EE 261. P.260 (New Reactor Course)

ME 310 Drop. It has been replaced by ME 283.

College of Fine Arts, Department of Speech

New Courses

Speech 1 SPEECH FOR FOREIGN STUDENTS (0) I, II Lynn-Lambert
A non-credit course in oral English for foreign students.

Speech 210 PROBLEMS OF SPEECH TRAINING (3) II Lynn
Teaching of Speech in the secondary schools. Study of objectives, materials, and techniques. P.15 units in Speech.

Speech 213 STUDIES IN DISCUSSION (2) II Sparks
Investigation of source materials and research literature pertaining to public and group discussion. P.113

Speech 220 CLASSICAL RHETORIC (3) I Sparks
A study of Greek and Roman rhetorical principles. The analysis of selected orations of these periods. P.2, 10.

Speech 222 BRITISH ORATORY (3) II 1958-59 Sparks
History and criticism of British Speakers from the Eighteenth Century to the present. P. 220.

SPEECH 236 THE ORAL INTERPRETATION OF SHAKESPEARE (3) I Mattingly
Character analysis and presentation of selected scenes from representative comedies, histories, and tragedies. P.137a or 137b. (Identical with Drama 236).

SPEECH 110 DELETE

Speech 218 PERSUASION (Changed from Speech 118, Persuasive Speaking) (3) I,II Sparks

College of Liberal Arts

Bacteriology and Medical Technology

Bacteriology 17. MICROBIOLOGY (4) I, II Wertman, to be changed to Bacteriology 17a, b MICROBIOLOGY (4-4) Yr. Wertman. (No change in catalogue description).

Bacteriology 319a, 319b GENERAL PATHOLOGY (3-3) Schloss

The reactions of the tissues of man and experimental animals to the invasion by microorganisms will be studied. This includes changes due to inflammation, degeneration and neoplasia. Gross and microscopic examinations. P.Bact.219b. Fee \$7.00.

Bacteriology 237 RADIOISOTOPES: PRINCIPLES AND TECHNICS (4) Yall II.

Fundamental knowledge of nuclear technology necessary for its meaningful application to research in the life sciences. 2R, 6L. P.Chem.20 or 22, 140a, b. Fee \$10.00. (Senate meeting - Dr. Gegenheimer explained that there has been some question as to the duplication with courses in other departments as related to the content of this course. Mention was made in this regard to Zoology 356, Chemistry 392, and a proposed course in Electrical Engineering Physics. Dean Roy explained that fundamental knowledge of nuclear technology is necessary for its meaningful application to research in the life sciences. He explained, however, that Dr. Wertman, head of the Department of Bacteriology, is appreciative of the fact that it may be desirable to recommend that there be one basic course in the University to cover this need.

Dr. Patrick reported that, while there may be some duplication in the courses mentioned, he would prefer the Senate accept this course since it was designed according to specifications approved by the Atomic Energy Commission and will be offered on a grant from that commission. On his motion, seconded by Dr. Mead, the Senate approved the course subject to review of the question of duplication by the heads of the departments and college Deans concerned, together with the Vice President for Academic Affairs and the Chairman of the Coordinating Committee.)

Bacteriology 377 MICROBIAL SYSTEMS: ENZYMES AND METABOLISM (4) Yall I 1959-60.

Studies of the metabolic pathways of selected bacteria, rickettsiae and viruses. The use of radioactive techniques and cell free enzyme isolation and purification techniques will be emphasized. 2R, 6L. P, 327 and Chem. 260. Fee \$10.00. (Senate meeting - Bacteriology 357, course number changed to 377. Course approved with the understanding that Professors Kurnick and Yall confer in order to avoid duplication of the content of this course and Biochemistry & Nutrition 312. (Approved by Senate, but withheld until new catalogue.))

Anthropology

Anthropology 40a, b - Change from Anthropology 90a, b. Change course to read INTRODUCTION TO FAR EASTERN CIVILIZATIONS

Evolution of the great Far Eastern civilizations, with special reference to social, political and thought patterns, and to problems of modern change. I. India and Southeast Asia; II. China, Japan, Korea. (Identical with History 40a, b).

Anthropology 208. To be withdrawn from curriculum

Anthropology 209. To be withdrawn from curriculum

Anthropology 211. To be changed from alternating to annual, II. Semester

Anthropology 242a, b. To be withdrawn from curriculum.

Anthropology 245a, b. To be withdrawn from curriculum.

Anthropology 345a, b. Drop a and b. Change to Anthropology 245. II

Anthropology 255. QUANTITATIVE STUDIES IN CULTURAL ANTHROPOLOGY (3) I. Hackenberg.

Review of the quantitative studies which have been made by cultural anthropologists. Discussion of the types of problems, populations and conceptual approaches which involve or require the use of quantitative assumptions and inferences. P.Anthrop.25a, 25b.

History 40a, b INTRODUCTION TO FAR EASTERN CIVILIZATIONS (3-3) Yr. Hucker.

Evolution of the great Far Eastern civilizations, with special reference to social political and thought patterns and to problems of modern change. I: India and Southeast Asia. II. China, Japan, Korea. (Identical with Anthropology 40a, b).

History 219a, b. HISTORY OF THE UNITED STATES SINCE THE CIVIL WAR (3-3) Yr. Bateman.

At present this is an alternate year course. To be given annually, beginning in 1958-59.

History 241 STUDIES IN CHINESE HISTORY (3) Hucker

To be expanded to a year course, History 241a, 241b, with the title changed to History of China. Credits (3-3). No change in course description.

Political Science 254. POLITICS IN THE UNITED STATES. To be withdrawn if new courses in Political Science (231, 232) are approved.

Political Science 265 PRINCIPLES OF CONSTITUTIONAL LAW. To be withdrawn if the new course, P.S. 272a, 272b, is approved.

History 202a, b INTELLECTUAL HISTORY OF EUROPE SINCE THE END OF THE MIDDLE AGES

Dominant ideas in Western Civilization from the eve of the Italian Renaissance to the period of World War One. P, Upper division standing.

History 244a, b HISTORY OF THE NEAR AND MIDDLE EAST (3-3) Yr. Mamatey.

A broad historical survey of the Near and Middle East from Mohammed to the present time. P. Upper division standing.

Political Science 1 INTRODUCTION TO POLITICAL SCIENCE (3) I. Kelso

A comprehensive introduction to political science designed for both majors and non-majors. The meaning of political science and relation to other disciplines. The state and forms of government. Legal systems. The theory and organization of the modern state. Public opinion, parties and propaganda.

Political Science 231. POLITICAL PARTIES (3) I Hennessy

An examination of the nature, structure and functions of political parties. Emphasis on the role and activities of parties in western democracies. Special attention to American parties, their history and current problems of organization, ideology and leadership. P.1, or 51a.

Political Science 232 PRESSURE GROUPS (3) II Hennessy

Analysis of the formation, structure and place of pressure groups in the democratic society; the function of interest groups in the political process; the problems of leadership, internal organization and membership loyalties. P.Pol.Sci.1 to 51a.

Political Science 237 THE LEGISLATIVE PROCESS (3) I Mann

A study of the role of the legislature in the framework of national and state governments. Consideration of the influence of parties, pressure groups, public opinion, constituencies, the "committee" system, the "administration," the Constitution, etc., in the law-making process. P. Pol.Sci. 1 or 51a.

Political Science 272a, b PRINCIPLES OF CONSTITUTIONAL LAW (3-3) Yr. Burke

A study of the principles and concepts of the Constitution as revealed in leading decisions of the Courts. Part I: The development of the concepts and principles of judicial review, federalism, separation of powers, and the "implied" powers. Part II: The development and current usages of Constitutional limitations such as "due process of law", "equal protection", the Contract clause, etc. P. 51a or Pol.Sci.1.

Political Science 277 JURISPRUDENCE AND LEGAL SYSTEMS (3) II Burke 1958-59.

A study of the nature, sources and theories of law; the role of law in modern society; the application of various theories of law to the legal and political systems of major governments. P. P.Sci.1 or 51a.

Political Science 291 RECENT POLITICAL THOUGHT (3) II Gomez 1958-59

An examination and analysis of the main political doctrines since the mid-nineteenth century with emphasis on socialism, communism, fascism and democracy. (No prerequisites).

Oriental Studies Committee

Chinese 101a, b ELEMENTARY LITERARY CHINESE (4-4) 1958-59

An introduction to pre-20th Century Chinese styles through readings in Classics of Filial Piety and the Analects of Confucius. Oriental Studies 100a-100b is not a prerequisite. (To alternate with 100a, 100b). P. Upper division standing.

Physics

Physics 220 ATOMIC, MOLECULAR AND X-RAY SPECTRA (change from annual to alternate year course, next to be offered in 1959-60.)

Physics 306a, b ELECTROMAGNETIC THEORY (To be changed from an alternate year to an annual course, effective in 1958-59. Add: P. Math. 202a.)

Romance Languages

French 1g, 2g TRAINING IN READING FRENCH FOR GRADUATES (0-0) Yr. Staff.

A summary of basic grammar essential to a reading knowledge of the language will be accompanied by readings of increasing difficulty both in the general literature and the student's chosen field of specialization. No prerequisites.

Zoology 18a,b SCIENTIFIC ILLUSTRATION (4-4) Yr. Sayner

Principles and practice of executing drawings of scientific specimens, maps and graphs for the thesis and the press. An approach to realistic representation of subject matter by means of modern materials and methods. 2R, 6L. Fee \$5.00 (no prerequisites).

In connection with the discussion regarding the above changes, President Harvill emphasized the need of avoiding duplication in courses and pointed out that our catalogue was studied carefully elsewhere and that such duplication could be made a matter of criticism.

Medical School, proposals re: President Harvill reported the interest of people in the Phoenix area in establishing a medical school at Arizona State College at Tempe, particularly through a gift of \$500,000 which was promised if the State Legislature would indicate its support of such a school by 1960. The President explained that the medical profession itself in this state has given much study to the question of establishing a medical school. The Western Interstate Commission on Higher Education also has been making a study of eleven western states, but this study is not yet available.

The President explained he had met a number of times with members of the medical groups and others and had made a report to the Board of Regents. It was felt in general that medical requirements in this state are effectively met through the present plan under which training is subsidized to some extent in institutions in other states. Most of the members of the medical profession in this state agree that there is no need for a medical school at this time, be it either a two-year or a four-year institution. They are concerned on the other hand that the state give proper support to its higher education program as now organized.

He reported that three things came out of the meeting of the House of Delegates of the Arizona Medical Association at a recent meeting in Chandler, as follow: (1) Arizona is not ready yet for a two-year or a four-year medical school; (2) The medical education requirements and needs of the youth of Arizona are being well served today by the Western Interstate Commission arrangement whereby students can go to other states and the State of Arizona pays in effect the extra cost over and above the resident cost of medical education of other states; and (3) The Medical Association stands ready to act through committee and other arrangements in an advisory capacity to the Board of Regents on this question of medical education.

The President added that there was a preponderance of view in the medical profession that if a medical school were established, it should be on the basis of a four-year school from the outset rather than to begin as a two-year institution. It was possible also, he added, that a study would be made by some outside group to determine the medical education needs of this state.

At the present time, President Harvill added, twenty-six Arizona students are studying under the state plan and there are some thirty-four openings available. Most Arizona students, he said, prefer to go to medical schools other than those which are available with the Western Interstate Commission. It was the opinion of qualified specialists that to properly establish the medical school would take some two millions of dollars for a two-year school and the annual operating expense would run from \$350,000 to \$600,000. A four-year institution, on the other hand, would cost twenty million dollars to establish and would require \$2,000,000 per year in operating costs. Under the Western Interstate Commission plan the annual cost per student is approximately two thousand dollars.

Security officer, policy re: President Harvill explained that some criticism had been voiced about the University's retention of a security officer not in uniform. He explained that such an officer had proved his value to the University and had been instrumental in preventing thefts and otherwise protecting University property, as well as affording protection to University students.

Advisory program for students, report re: There was brief discussion regarding the report presented to the Senate by Dr. Hurlbutt at its April meeting. The President referred particularly to the proposal to set up a centralized testing office in connection with the advisory program and explained that he was giving some attention to this and to related matters in connection with the preparation of the next budget.

In reply to his question as to the extent to which it will be necessary to centralize equipment or if a testing office could use equipment in other areas of the campus, Dr. Hurlbutt replied by saying some institutions have a centralized office for testing but use equipment provided in other areas. It was indicated that the locale of the equipment would not present a problem, but that care should be taken to eliminate duplication of effort.

Petitions, report re: The President called attention to copies of a report presented to the members of the Senate summarizing the petitions acted on during the year. This report is required by action of the Senate. In response to question by Dean Roy, Mr. Mesher explained that the records (petitions) on which the report is based are readily available for review in his office. *See report following page 460.*

Policies, effective date of Senate action affecting: The Secretary pointed out that in connection with the removal of the restriction on the transfer of credit during period of disqualification, the approval of the provision to allow the transfer of one semester course to apply in computation of the general grade average for graduation, and the approval of the application of one correspondence course to apply in a similar way, the Senate had not indicated when its actions were to become effective. In order to clarify the matter, he moved that these actions become effective with the new biennium, that is, in the fall of 1959. The motion was seconded by Dr. Patrick and passed.

Special Occasions Committee, report of: The President referred to a report which he had received from the Special Occasions Committee of which Professor Sigmund Smith is Chairman. This excellent report had to do with administrative matters, he explained, and anything involving changes in policy will be brought to the attention of the Senate next fall. It was not necessary for these to be considered at this time. Reference was made particularly to the scheduling of the baccalaureate program, there having been a question as to whether this program could be made more effective by transferring it to another time and location. It was explained, however, that the program this year will be held in the stadium as usual and on Sunday evening, May 25, with the Special Occasions Committee making every effort to augment attendance.

The President stated that he was giving thought to the possibility of special programs next year in the local churches in which faculty, students, and parents would take part, as a possible substitute for the baccalaureate service. He felt it would not be in order to make any change in the present schedule of baccalaureate unless such change were adopted also by the state colleges.

Delinquent Scholarship Report Procedures, reference to: Dr. Tucker raised a question as to Senate action regarding Point One of this report. This point had to do with the continuance of the University's policy which denies credit for courses made during a period of disqualification. It was the committee's recommendation that the practice be continued but this recommendation was not approved by the Senate. The chair had subsequently ruled that by reason of this action, the restriction on transfer of credit no longer was in effect.

Dr. Tucker moved that the original policy as stated in the catalogue be reinstated. This motion was seconded by Dr. Merritt.

Mr. Leshar explained that in the interpretation of this regulation, he had ruled that a student who had established credit elsewhere during a period of disqualification from the University cannot, upon his return, establish credit in these courses by special examination.

It was President Harvill's feeling that the student might well have the privilege of establishing the credit in that manner and Dr. Tucker felt that to withhold the privilege of establishing credit by examination would be a double penalty.

When the question was called for, the motion carried and the provision restricting the transfer of credit made during a period of disqualification was reinstated.

Mr. Leshar explained that if the student were allowed to validate credit by examination, it would, in effect, be allowing him to transfer the credit.

(Editorial note: The secretary had in mind the distinction between "Validating examination" and "Examination to establish credit." In the case of validating examinations the University practice allows departments to evaluate credits not otherwise recognized by special examinations which may be either oral or written, or both, and of brief or comprehensive nature. The examination which a student normally takes to establish credit is in a course for which he has never enrolled and as a result the examination is a written, comprehensive one. If the latter examination is required rather than a "validating examination" in allowing the students to establish credit for courses taken during the period of disqualification, it would appear reasonable to allow the privilege just as would be done in the case of a student who had during a period of disqualification prepared himself in courses for which he had never enrolled.)

Dr. Gegenheimer moved that the Senate reconsider its action on a motion which would retain the present policy of forgiving failing grades in the first two years but would change the scholarship average from 3.2 to 3.0. The motion was seconded by Dr. Bateman.

Dr. Patrick, who made the original motion, suggested that the Senate table this matter until a meeting in the fall. At this point Dean Roy moved to adjourn, but the chair ruled that the motion as seconded should be considered.

Dr. Gegenheimer explained that his motion was to change the scholarship

requirement for graduation from 3.2 to 3.0 average but to retain the present practice of forgiving failing grades.

At this point Professor Marcoux moved to table the motion until next fall. Dr. Hudson seconded the motion and it was passed.

The Senate adjourned at 5:30 P.M.

C. Zaner Leshner, Secretary