

MINUTES OF THE MEETING OF THE FACULTY SENATE OF THE UNIVERSITY OF ARIZONA
Monday, May 3, 1954 Room 101, Law Building

The meeting of the Faculty Senate convened in regular session at 3:40 P.M. on Monday, May 3, 1954, in Room 101 of the Law Building. Thirty-four members were present with Dr. Nugent presiding.

The minutes of the meeting of April 5, 1954, as previously distributed to members of the Senate, were approved.

Catalog changes, approval of: The following catalog changes, approved by the Advisory Council at its meeting on April 28, 1954 were accepted by the Senate without objection:

Department of P.E. for Women:

P.E.158 Change from second semester to first semester offering for 1954-55.

Department of Mechanical Engineering:

New courses -

M.E.190a Engineering Statistics & Quality Control I (3) I Hawks & Dahms
Fundamental statistics, calculus of probabilities, tests of hypotheses, analysis of variance and design of experiments with applications in both mechanical and electrical engineering. (New course effective 1954-55).

M.E.190b Engineering Statistics & Quality Control II (3) II Hawks & Dahms
Basic Quality control Techniques, Process, Machine and Instrumentation Analysis, Macro-Statistics, Micro-Statistics, Non-Parametric Statistics, Sequential Analysis, Seminar Meetings on Special Industrial Problems and New Developments. (New course effective 1954-55).

Change in listing -

M.E.30a, 30b These courses are deleted. Need is met with the approval of E.E.50.

M.E.10a, 10b Delete "Yr" and add "I, II". Add to the descriptive paragraph "M.E.10a and M.E.10b are offered each semester."

M.E.110a, 110b Change "Yr" to "I, II" and add to the descriptive paragraph "M.E.110a and M.E.110b are offered each semester."

Department of Electrical Engineering:

New course -

E.E. 50 Physical Basis for Electrical Engineering (4) II Staff
A qualitative discussion of the electrical, magnetic, and dielectric properties of materials and their practical applications in electrical and electronic components. 4R. P, Concurrent registration in Phys.10b. (New course effective 1954-55).

Graduate Study Program: The following report was received in explanation of a proposed program of graduate study in the Department of Electrical Engineering. It was understood that with the approval of the program at this time, the offering of new courses in 1954-55 will depend upon the demand.

"I. FACTORS REQUIRING THE CHANGE

The demand for graduate instruction by the Electrical Engineering department is very insistent and originates from the following sources:

- (1) Motorola Research Laboratory - A group of about 25 students are anxious to pursue graduate study in electronics toward the M.S. degree through the Extension program in Phoenix.
- (2) Public and Private Power Companies - A group of about 25 students from The Arizona Public Service Company, Salt River Power District, and Bureau of Reclamation are anxious to pursue graduate study in Electrical Power toward the M.S. degree through the Extension program in Phoenix.
- (3) Hughes Aircraft Company - We were recently notified that the Hughes Aircraft Company is considering the possibility of establishing a cooperative program for graduate study in electronics here in Tucson. The potential students work 25 hours a week for Hughes and pursue half time graduate study on the campus toward the M.S. degree. Similar programs have been very successful at U.C.L.A. and U.S.C. in cooperation with the Culver City plant. We were told to expect from 5 to 15 students if the program materializes.
- (4) Ft. Huachuca - We have been told to plan on presenting graduate instruction to personnel at Ft. Huachuca, either at Huachuca or in Tucson, in the Electronics field. It is expected that this program will not start before the 1955-1956 academic year, but we have been requested to make our program of study known.
- (5) Regular Graduate Students - Lately we have received a number of requests for information concerning our graduate program from potential regular graduate students. We expect a number of such students to enroll within the next two year period as our sponsored research activities increase.

The magnitude of the demand from all of these sources is so great that it is imperative that we have a well organized graduate program that will appeal to the various groups.

"II. STATUS OF THE EXISTING GRADUATE PROGRAM

The present graduate program consists of 12 courses, totalling 35 units, that grew like Topsy without regard to any overall plan or any design to meet future needs. It was improvised to meet one crisis after another as the department tried to meet the demand for courses without time to acquire adequate staff or to thoughtfully consider the program in its entirety.

It was the decision of the department that the entire program should be revised.

"III. GENERAL DESCRIPTION OF THE PROGRAM

The courses are arranged into three main sub-divisions of subject material:

- (1) general interest
- (2) electronics
- (3) electrical power

This follows the general trend in graduate E.E. curricula throughout the country. Indeed, all of the courses have their exact counterparts at any of the well-known Universities throughout the country.

(A) GENERAL INTEREST

E.E. 210	Transients in Linear Systems	(3)
E.E. 215	Servomechanisms	(3)
E.E. 300	Research	
E.E. 310	Thesis	

(B) ELECTRICAL POWER

E.E. 219	Symmetrical Components	(3)
E.E. 221	Protective Relaying	(3)
E.E. 225	High Voltage Engineering	(3)
E.E. 226	Advanced Alternating Current Machines	(3)
E.E. 227	Power System Stability	(3)

(C) ELECTRONICS

E.E. 230	Advanced Electronic Circuits I	(3)
E.E. 231	Advanced Electronic Circuits II	(3)
E.E. 232	Advances in Electronics	(3)
E.E. 250	Microwave Circuits	(3)
E.E. 251	Microwave Electronics	(3)

Supporting courses offered by the physics and mathematics department in sufficient amount to allow easy development of the minor program.

"IV. SUMMARY OF THE CHANGES REQUIRED TO PRODUCE THIS PROGRAM

(A) The following courses are added with this report:

(1)	E.E. 210	Transients in Linear Systems	(3)
(2)	E.E. 215	Servomechanisms	(3)
(3)	E.E. 219	Symmetrical Components	(3)
(4)	E.E. 221	Protective Relaying	(3)
(5)	E.E. 225	High Voltage Engineering	(3)
(6)	E.E. 226	Advanced Alternating Current Machinery	(3)
(7)	E.E. 232	Advances in Electronics	(3)
(8)	E.E. 250	Microwave Circuits	(3)
(9)	E.E. 251	Microwave Electronics	(3)

(B) The following courses are deleted by substitution of the new courses:

(1)	E.E. 213	Transient Electrical Phenomena	(3)
(2)	E.E. 217	Electrical Design for Industry	(3)
(3)	E.E. 220E	Electrical Transients	(3)
(4)	E.E. 223E	Grounding of AC Power Systems	(2)
(5)	E.E. 221E	Protection of Power Transmission Systems	(3)
(6)	E.E. 219Ea	Fault Problem of Power Transmission Systems	(3)
(7)	E.E. 219E	Fault Problem of Power Transmission Systems	(3)
(8)	E.E. 240a	Advanced Communications	(3)
(9)	E.E. 240b	Advanced Communications	(3)

The following courses given in the Extension Division are approved as offerings in the regular year:

- (1) E.E. 227 Power System Stability (3)
- (2) E.E. 231 Advanced Electronic Circuits II (3)

New Courses Approved:

- E.E. 210 Transients in Linear Systems (3) I Hausenbauer
Use of the Laplace Transform in the solution of linear integro-differential and difference equations arising in the formulation of electrical, mechanical and electro-mechanical systems.
- E.E. 215 Servomechanisms (3) G II Wittmeyer
Analysis and Synthesis of closed loop control systems. P. Graduate Standing.
- E.E. 219 Symmetrical Components (3) I Knickerbocker, Clark
Analysis of unbalanced polyphase power systems; sequence impedances and networks; fault calculations. Application to problems of grounding, relaying, and unbalanced operation of apparatus.
- E.E. 221 Protective Relaying (3) G Knickerbocker
System protection by relays against abnormal conditions; steady state and transient conditions; single and multiple faults. P. E.E.219.
- E.E. 225 High Voltage Engineering (3) II 1954-55 Clark
Materials and methods. Present practice and probable developments. Emphasis upon high voltage transmission of power. Open to graduate students.
- E.E. 226 Advanced Alternating Current Machinery (3) II Knickerbocker, Clark
Harmonic analysis of the magnetic density in the air gap, and the effect of harmonics on e.m.f., torque, and vibration; transient conditions following sudden load changes; stability criteria; unbalanced operation.
- E.E. 232 Advances in Electronics (3) Martin, Wittmeyer
New developments in electronic components and circuitry; principles of transistors, magnetic, and dielectric amplifiers; some types of transducers.
- E.E. 250 Microwave Circuits (3) Stewart
Application of electromagnetic field equations to the analysis of wave propagation and reflection, waveguides, resonators, and waveguide discontinuities. Measurement of power, wavelength, standing wave ratio, impedance, and attenuation in microwave systems.
- E.E. 251 Microwave Electronics (3) Stewart
Introductory study of fundamental electronic concepts and their application to the analysis of UHF triodes, klystrons, magnetrons, travelling-wave tubes, and related devices.

Biochemistry and Nutrition, Change in Committee on: The Council approved the listing of the name of Dr. Raymond Reed, Department of Animal Pathology, with the Committee on Biochemistry and Nutrition to take the place of Dr. B. P. Cardon, who has resigned from his position in the University.

History and Political Science: The Council authorized the following changes in the catalogue announcement of this department.

- 103a, b Instead of every year, this course should be listed for 1954-55 and alternate years.
- 113a, b Should be listed for 1953-54 and alternate years.
- 132a,b This course is deleted for balance of biennium.
- 134a,b Should be listed for 1954-55 instead of 1953-54. This will be an alternate year course.
- 152 Should be listed for 1954-55 rather than 1953-54.

Mining Engineering and Metallurgy:

- Min.Engr.310 Thesis. Change credit from "1 to 2" to "1 to 6."
- Met. 310 Thesis. Change credit from "1 to 2" to "1 to 6."

School of Music:

Music 10-C Choral Society. Add fee of \$1 to this course. Note: This change covers the purchase of individual pieces of music for members of the society. The students heretofore have been required to purchase the music themselves.

Administrative Section: The following changes were authorized upon recommendation of the Committee on Residence Matters.

- (1) Change name of committee from "Committee on Residence Standing" to "Committee on Legal Residence."
- (2) Substitute the word "Housing" for the word "Residence."
- (3) Change title "Director of Residence" to "Manager of Student Housing".
- (4) Change title "Department of Residence" to "Department of Student Housing."
- (5) Change "Residence Fees" to "Dormitory Fees."

The following proposals of the College of Agriculture were submitted as a result of further consideration in the College of Agriculture faculty, to which the Senate had referred the original request for changes in admission requirements:

- 1. On page 51, under "SUMMARY OF REQUIREMENTS BY COLLEGES FOR ADMISSION TO FRESHMAN STANDING," change "College of Agriculture and School of Home Economics Requirements" to:

Plan A:* English, 3 units; Algebra, 1 unit; Geometry, 1 unit; History, 1 unit; Laboratory science, 2 units; Choice from Groups 1, 2, 3, 4 or 5, 2 units; electives, 5 units.

Note: Plan A is highly recommended for all students.

Plan B:* English, 3 units; Algebra, 1 unit; Choice from Groups 1, 2, 3, 4 or 5, 6 units; electives, 5 units.

Note: One unit in geometry will be required for students who plan to major in Agricultural Engineering or Agricultural Chemistry and Soils.

* For the time being, the present subject matter plan, as published, continues in effect as an alternative to either of the above.

2. On page 108, under "III. GENERAL REQUIREMENTS," delete "Mathematics 70 (or equivalent)....4 units," and add, "Mathematics 20 or 22....3-5 units." Change minimum units to "17".

On page 108, under "VII. ELECTIVES", change "46" to "47".

On page 109, under "COLLEGE OF AGRICULTURE LOWER-DIVISION SCHEDULE, FRESHMAN YEAR" delete "Mathematics 70 (or equivalent)....4 units" and add "Mathematics 20 or 22....3-5 units." Under "Total" delete "17" and add "16-18."

In approving the above changes in admission requirements the Senate provided that a special note would be included in the catalogue to indicate that one unit in geometry will be required of those students who plan to major in fields where this subject is a necessary prerequisite. In connection with this provision Dean Hawkins suggested that the University might well provide a course in Plane Geometry for those students who have not had it in high school but find it necessary as a prerequisite to University courses. Dr. Carpenter took exception to this proposal, emphasizing the need on the part of the student for proper selection of his high school program and of the desirability of having the University catalogue point out specifically the need for Plane Geometry, especially in certain fields of study. It was on Dr. Carpenter's motion that the Senate voted to clarify the need for Plane Geometry as an entrance requirement in a catalogue statement.

The following additional changes in catalogue material were approved directly by the Senate without reference to the Advisory Council because of the lack of time:

Plant Pathology

The changes proposed in the catalogue description, p.309, are:

- (1) Change course number 105 to 5
- (2) Change title from General Plant Pathology to Introductory Plant Pathology
- (3) Change hours from 2R, 6L to 3R, 3L
- (4) Change prerequisites from Botany 1, Bacteriology 107 to Botany 1.
- (5) Include in statement of major that Bacteriology 107 is required.

Note: Bacteriology 107 will be required of all major students in Plant Pathology but will not be required as a prerequisite to any courses in the department.

In connection with Plant Pathology, the above changes were approved by the Senate with the provision that Bacteriology 107 would be a prerequisite to all upper-division courses in Plant Pathology. However, after review of this question by Dean Hawkins and Dean Roy, it was agreed that Bacteriology 107 would be required of all majors in Plant Pathology but that Plant Pathology courses in general would carry the prerequisite of Plant Pathology 5 (now listed as 105) rather than Bacteriology 107.

Home Economics

1. On page 114 of the present catalogue:

Sophomore Year

First Semester

Change line 2 - substituting
Elective for H.E. 64

Second Semester

Change line 1 - substituting
Elective for H.E. 11

Major in Food and Nutrition, Freshman year, Second semester

Change line 5 - substituting Elective for H.E. 11

2. On page 267
H.E. 64 - change to 134 (2) I, same description - 6L.
3. On page 268
H.E. 194 - change year to 1955-56.

Business Administration

- p.226: 272. Administrative Report Writing
Add: Prerequisite: 271 and 299c (Seminar in Methods of Business Research)
- p.226: 271. Business Policies
Add: Prerequisite: 171a, b or its equivalent

Registration Committee Report, consideration of: Mr. Leshner, Chairman of the Special Senate Committee to Study Registration Policies and Procedures, presented the following report with action as noted. Following some general discussion the recommendations of the committee were considered and disposed of item by item. Consideration of the proposals effecting the plan of registration for the second semester was postponed until the fall when they could be considered in the light of the effect of the quota system on enrollment to be tried out in September.

REPORT OF COMMITTEE TO STUDY REGISTRATION POLICIES AND PROCEDURES

Your committee held a series of meetings both before and after Registration for the Second Semester. The Second Semester registration plan was examined by members of the committee in company with members of the Student Committee on Registration. The committees have met in joint sessions to discuss problems which were encountered at the time of registration and possible adjustments in the present plan. In this connection reports of registration procedures in twenty-seven institutions in the western area were reviewed.

The problem most apparent at the time of registration was that of overcrowding in certain areas occasioned by the opening of registration to all students at the same time. Lengthy lines of waiting students were seen in three departments during the morning hours.

A number of proposals have been made for adjustments in the present plan of registration and it was found that there were various points of agreement in the two committees. As result of the discussions and the study made by your committee, it recommends the following modifications in the present plan of registration and moves that these be adopted:

First Semester Registration

1. Regular registration scheduled for a two-day period with new students registering the first day and old students the second day. (Delete words "with new students registering the first day and old students the second day, statement to end with word "period"). Approved.
2. Provision to allow upper-division and graduate students to register during Freshman Week with the understanding that such registrations are acceptable only during a three-hour period 9 to 12 each morning. (Such registration is to include payment of fees.) Not Approved.

3. Enrollments on the regular days of registration to be controlled by an hourly quota system, based on a lottery administered by the student body. Approved.
4. Medical examinations for new students to be distributed throughout Freshman Week by appointment. Approved.
5. Student identification photographs for all students distributed throughout Freshman Week by appointment. Approved.

Second Semester Registration (The following proposals were tabled until the fall following a study of the first semester quota system registration).

The general plan of registration for the first semester will be followed, actual registration being restricted to the two days regularly scheduled under the hourly quota system. Provision is made as follows, however, for the -

Mid-year Advisory Program

1. Provision is made to distribute registration materials and schedules of hours immediately after the reopening of classes following the Christmas holidays. No class cards, however, are issued until the registration days as scheduled.
2. Students are encouraged to arrange their program and have these approved by the advisor; that is, the Dean or major professor or special advisor as may be assigned. It is understood that only one such approval of the general program is required.
3. Students report for class cards and complete registration in the usual manner under the hourly quota system on the regular days of registration.

Absences, policy re, report on: Upon motion by Dr. Roberts, the Senate voted its approval of another meeting at which time the report of the Committee on Absences could be considered, if this plan meets with the approval of the President.

Honorary Degrees, approval of: The following recommendations for the award of Honorary Degrees of Doctor of Laws were accepted with recommendation to the General Faculty and the Board of Regents for their approval:

The Faculty of the College of Business and Public Administration recommends to the University Senate and the University Faculty that the Honorary Degree of Doctor of Laws be conferred on Thomas Lafayette Popejoy.

The facts on which this recommendation is based are as follows:

Education administrator; President of the University of New Mexico

b. Raton, New Mexico, Dec. 2, 1902; son of Fred and Ellen (Floyd).

Education: B.A., Univ. of N.M., 1925; student Univ. of Ill. summers, 1925-26; A.M., University of New Mexico, 1929; Student Univ. of Calif. summers 1934-35.

Married Bessie Larue Kimball, June 21, 1921; children Jeanne Kimball, Tom Lafayette.

Instructor in Economics, Univ. of N.M., 1925-29; Asst. Professor, 1929-33; Assoc. Professor since 1933; Executive Assistant to President, 1936-1948; President since 1948; Comptroller 1938-48; Acting Registrar 1941-44; Chairman Board of Deans, 1944-45.

Research Director New Mexico Taxpayers' Assn. 1932; State Director, National Youth Administration, 1935-39; Administr., Washington, D.C., 1939-40; Regional Consumer Relations Rep. O.P.A., Denver, May-Sept., 1942.

Member Com. on Faculty Fellowships Fund for Advancement of Education; Member Khatali, Alpha Phi Omega, Pi Gamma Mu, Sigma Chi, Phi Kappa Phi, Tau Kappa Alpha, Alpha Kappa Psi, Democrat, Episcopalian. Clubs: Albuquerque Country, Rotary (President 1946-47).

Author: "The Causes of Bank Failures in New Mexico, 1920-25", published by Univ. of N.M. Press, 1931; "A Calculated Risk"; contributor of articles to N.M. Business Review.

The Faculty of the College of Business and Public Administration recommends to the University Senate and the University Faculty that the Honorary Degree of Doctor of Laws be conferred on Dr. Alexander Mackenzie Tuthill.

The facts on which this recommendation is based are as follows:

State Director, Selective Service; Surgeon, Lieutenant General, Arizona National Guard, Retired.

b. S. Lebanon, N.Y., Sept. 22, 1871. Son of William H. and Christina (Mackenzie) T.

Education: Public Schools, Los Angeles, 1890; University of Southern California, M.D. 1895.

Married May E. Heinmann, Los Angeles, November 16, 1896; children - Dorothy Ila (Lange), Christine Elizabeth (Warbasse).

Private practice, Los Angeles, 1895; assistant surgeon, Arizona Copper Co., Detroit Min. Co., 1898; Chief Surgeon, Detroit Copper Co., Morenci, Arizona, 1903-16; State Supt. of Public Health, Arizona 1921-22.

Member, Constitutional Convention, 1910.

Enlisted as private, Troop D N G Calif., 1896; Capt. Troop A N G, Ariz., 1903-1910; Col. 1st Arizona Inf., 1910-17; appointed Brigadier General, National Guard, Aug. 5, 1917; served on Mexican border, 1916-17; assigned as commander, 79th Inf. Brig., Camp Kearny; with A.E.F., 1918-19; Brig. Gen., National Guard, U.S. Comdr., 89 Brigade, 1929; Major Gen., Nat. Guard, Arizona, commanding 45th Div. (Okla., Colo., N.M., Ariz.); retired as Maj. Gen., St. Tactical Comdr., Adj. Gen. to date. State director, Selective Service, 1940 to date.

Member, American Medical Assn., FACA, Mason, Shriner.

The College of Agriculture presents the name of Mrs. Mildred W. Wood as a candidate to receive the Honorary Degree of Doctor of Laws.

Mrs. Mildred Weigley Wood did her undergraduate work at the University of Chicago, with a B.S. and M.S. at Minnesota. She also started doctorate work with a year's work on the chemistry of sugars with Dr. C. H. Bailey, now Dean Emeritus at Minnesota, and published in this area.

She did her first teaching in Illinois high schools, then moved to a teachers' college, then to the University of Minnesota as a member of the School of Home Economics. While there she was loaned to the state Education Department as state supervisor of Home

Economics. When she returned to the University of Minnesota School of Home Economics, it was as chief of the division. Here she devised a number of technical features for the school of Home Economics which are now standard practice everywhere. There is now one Home Management House at Minnesota named for Mrs. Wood as recognition of this. She also holds an alumna award from Minnesota and an alumni medal for Distinguished Citizenship from the University of Chicago.

When her husband developed the serious illness from which he later died they moved to Arizona. In Phoenix she taught adult classes in home-making and then was state supervisor of Home Economics in the state education office. As part of those duties, she advised and helped formulate some of the early curricula for our own school of Home Economics here at the University.

Always in the forefront of new areas in Home Economics, Mrs. Wood became well known in university circles by teaching first Consumer Economics and later Family Relations in summer school special graduate work at these universities:

University of Chicago	University of Hawaii
Colorado State College (5 times)	University of Wyoming
Connecticut State	University of Washington
University of Missouri	University of Maine
University of Syracuse	University of Kentucky
Texas State College for Women	University of Nebraska
Oregon State College.	

She also conducted state conferences for Home Economics teachers in New Mexico, Idaho, Colorado, Oregon, Nebraska, Minnesota, Washington, and Arizona.

She is the co-author of three books and author of "Living Together in the Family" published under the sponsorship of the American Home Economics Association. She is the author of some twenty-five professional articles, starting with the sugar chemistry articles in the Journal of Industrial and Engineering Chemistry and ranging through the Journal of Home Economics, the H.E.A. Journal, and so forth. Mrs. Wood is also the author of many popular articles published in Better Homes and Gardens, Women's Home Companion, McCall's, Sunset, and similar magazines.

She finally settled at Phoenix Union High School where she has done a great deal of adult education over the last twenty-five years. She has represented this state at many national conferences. The Arizona P.T.A., in particular, has received national recognition because of some of the activities which she initiated for them. She prepared the statement used as a basis for the discussion in her division of the White House Conference on Child Welfare, for example. She is a member of many state and national professional and honorary societies and also somehow finds time to act as Referee for the Juvenile Court.

In connection with the above action, the Senate discussed the general policy in regard to award of honorary degrees and the question was raised as to just what criteria are set up for the award of honorary degrees. Reference was made to the Faculty constitution which indicates that recommendations for the award of honorary degrees originate in a particular college of the University. They are considered by the Advisory Council, the Faculty Senate and the General Faculty.

Dean Garretson said he felt that a definite set of criteria should be drawn up to cover the award of honorary degrees and suggested that the Secretary call this matter to the attention of the Senate in the fall.

Meeting adjourned at 5:35 P.M.


C. Zaner Lesh, Secretary