

MINUTES OF MEETING OF THE FACULTY SENATE OF THE UNIVERSITY OF ARIZONA
Tuesday, January 5, 1960 Room 101, Law Building

The Faculty Senate convened in regular session at 3:40 P.M. on Tuesday, January 5, 1960, in Room 101 of the Law Building. Thirty-five members were present with President Harvill presiding. Mr. Arthur T. Grant acted as Secretary in the absence of Mr. Windsor.

PRESENT: Andersen, Blitzer, Bogart, Brewer, Carlson, Casaday, Crowell, Ewing, Forrester, Gegenheimer, Harvill, Haury, Humphrey, Hurlbutt, Irwin, Little, Livermore, Lyons, Martin, Mead, Mees, Merritt, Murphy, Myers, Nugent, Patrick, Picard, Pistor, Rhodes, Rosaldo, Roy, Slonaker, Tucker, Wallraff, Zapotocky.

ABSENT: Bateman, Carpenter, Denton, Gaines, Hausenbauer, McDonald, Marcoux, Windsor.

APPROVAL OF MINUTES: The minutes of the meeting of December 7, 1959 were approved as distributed to members of the Senate.

CATALOGUE MATERIAL: The following catalogue materials were accepted without change:

NEW COURSES: Regular Session

B.A. 140 Consumer Finance (3) I, II O'Neill
History, scope, operation, and regulation of the several types of financial institutions providing financing for consumers, not including real estate. Emphasis on management and competitive problems. P, Econ. 1b or 2h.

NEW COURSES: Continuing Education

C.E. 7256 Boundary Surveys and Legal Principles (3) II Newlin
Restoration of lost or obliterated corners; retracement of boundary lines; subdivision of sections of the U.S. Public Land Surveys. Land survey descriptions; metes and bounds conveyances; subdivisions; adverse possession, eminent domain, reversion and riparian rights; mineral surveys; state laws and court decisions. The surveyor and his rights, duties and liabilities. 2R, 3L. P, 152. Fee, \$5.

Nurs. 7030 Introduction to Team Relationships in Nursing (2) II Hudson
A study of the fundamentals of team relationships in nursing, with consideration of the basic principles of organization in nursing service. Open only to student nurses currently registered in a school of nursing offering a Diploma Program.

Nurs. 7032 Current Problems in Nursing (2) II Sister Mary Arthur
An introduction to the professional field of nursing, with consideration of its historical, social and professional trends. Open only to student nurses currently registered in a school of nursing offering a Diploma Program.

New Courses - Continuing Education (Continued)

Speech 7003 Principles and Methods of Conference Speaking (3) II Patterson
A background of theoretical information about conference speaking and practice in group leadership and conference participation skills.

NEW COURSES - Summer Session

Agr.Educ.222s Basic Evaluation Adapted to Extension Teaching (2) I Boone
Evaluation and clarification of program objectives. Techniques that extension workers can use in the collections, analysis, and interpretation of data for program planning. Course content is planned to give the student a broad concept of program analysis and systematic methods of appraising educational outcomes. P. Graduate standing with 16 credits in agriculture or home economics. 10:30-12:40 (June 13-29).

Agr.Educ.224s Principles in the Development of Youth Programs (2) I Foster
Philosophy, objectives, and organization of your programs. Emphasis will be given to the needs of young people and motivation of the individual, program development and execution, and recruiting and training local leaders. The place of Extension youth programs in relation to school and other educational groups will be considered. P, Senior or graduate standing with 16 credits in agriculture or home economics. 8:10-10:20 (June 13-29).

Agr.Educ.302s Administration of County Extension Service (2) I Schruben
Principles, policies, and procedures of administration as they relate to the County Extension Service. The organization and administration of the County Extension Service and its relation to the State and Federal Service. The functions of county staffs as representatives of the Land-Grant College system, channels of communication within the Extension Service, and delegation of responsibility and authority. P, Graduate standing with 16 credits in agriculture or home economics. 8:10-10:20 (June 13-29).

Botany 2101 Modern Botany (4) I Hoshaw
A course designed to give an understanding of important basic biological concepts with the use of plants as the primary illustrative organisms. The topics for discussion will be selected primarily from the fields of physiology and genetics and will include photosynthesis, enzymes, intermediary metabolism, relation of auxins to plant growth and development, Drosophila and physiological genetics. A residence of three or four days is planned for field study at the Southwestern Research Station of the American Museum of Natural History in the Chiricahua Mountains of southern Arizona. Prerequisites: 12 credits in biological science plus an additional 4 credits in modern concepts of biology taken within the last three years.

New Courses - Summer Session (continued)

Chemistry 210i Organic Mechanisms (4) I Seeley
The nature of organic functional groups will be studied through the use of mechanisms of reactions and oxidation states. Emphasis will be on predication of kinds and concentrations of products formed in the reactions of different classes of organic molecules by the use of a statistical and probalilistic interpretation of equilibrium in mechanisms. Trivial, common, and I,U.C. nomenclature will be compared. Prerequisites: 12 credits in chemistry plus an additional 4 credits in modern concepts of chemistry taken within the last three years.

Chemistry 215i Introduction to Chemical Bond (4) I Steelink
A detailed study of the structural concepts of matter as a basis for chemical behavior. Specific topics include a historical development of quantum theory, atomic spectroscopy, quantum mechanics, aufbau principle, variation principle, molecular orbital, valance bond and resonance treatments; structure of many-electron atoms; aromatic molecules; ionic crystals, metallic bonds; crystal field theory; spectra, infrared, Raman and molecular resonance; generalized Pauli principle. Laboratory will emphasize special topics and research techniques. Prerequisites: 12 credits in chemistry plus an additional 4 credits in modern concepts of chemistry taken within the last three years. One semester of calculus recommended.

Education 200s Workshop on Counseling and Rehabilitation of Handicapped Children and Adults (3) I Smith-Staff
A course designed to acquaint counselors with problems of physically disabled individuals. The role to be played by the school counselor, teacher, school nurse, and agency personnel for the rehabilitation of handicapped will be considered. Study will be made of pre-vocational evaluation techniques. Counseling techniques to be used with disabled individuals will be presented.

Education 263s Workshop in Education of Migrant Children (3) II Sherman
This workshop will concentrate on exploration and development of the curriculum for children of migratory families of Arizona. Special attention will be given to: (1) learning more about children of migratory families; (2) analyzing problems of migrant children in relation to their education; and (3) developing curriculum materials that will aid teachers in teaching these children.

Education 297 Educational Sociology (2) II (also to be offered in second semester regular session) Hambenne
The school as a social institution. The social functions of the school. The social processes, socialization, and stratification in education. The informal and formal systems, and the bureaucratic structure of the school. P, Soc.1 or 2.

New Courses-Summer Session (Cont'd)

Education 353 Advanced Educational Psychology: Creativity (3) I Rhodes
(also to be offered second semester regular session)
The concept of creativity from a variety of approaches.
Criteria for recognizing the process of creativity. Teaching
so as to cultivate creativity.

English 113s Introduction to Poetry (3) I Childs
The nature and purpose of poetry; metrics and scansion;
poetic language and convention; familiarity with a number of
great poems with close reading and analysis of selected poems.

Home Ec. 200As Communications in the Professions (1) II Hall-Coulter
An intensive course dealing with the basic principles
of communications and their application to some selected
disciplines, such as Nursing, Home Economics, and Business.
(Identical with Nursing 200s). (August 15-19).

Mathematics 104i UICSM Modern Geometry (4) I Marston
The main emphasis is on the content and techniques of
teaching the University of Illinois Committee on School
Mathematics second course. The language of sets, and applica-
tions to the theory of relations and functions, and to
Euclidean geometry. Necessary background material and more
advanced topics will also be considered insofar as these sup-
port and give enrichment to the standard content. Course is
intended mainly for senior high school teachers of mathematics
who have previously studied the UICSM ninth grade program.

Mathematics 106i SMSG Secondary School Mathematics (4) I Steinbrenner
Necessary background material to strengthen the
teacher's understanding of the fundamentals of elementary
mathematics. Several topics selected from School Mathematics
Study Group materials: the development of our number system,
deductive reasoning in mathematics, intuition in mathematical
discovery, the concept of groups and fields, modular arithmetic,
statistics and probability, non-metric and metric geometry,
function concept. This course is intended mainly for junior
high school teachers of mathematics.

Mathematics 204i Probability and Statistics (4) I Rogers
Traditional topics of populations, variables, probability,
distributions, measures of location and variability. Confidence
intervals, tests of statistical hypotheses, decision theory are
treated with an emphasis on the idea of models. The latter part
of the course will make use of the IBM 650 computer in solving
some of the problems. Course is open to either junior or senior
high school teachers of mathematics.

Mathematics 206i Development of Mathematics (4) I Staff
An historical development of key concepts of the field of
modern elementary mathematics covering arithmetic, geometry,
algebra, and analysis. Some topics included are the axiomatic
method, structure of geometries, structures of algebras, concepts
from meta-mathematics. Course is open to either junior or senior
high school teachers of mathematics.

New Courses-Summer Session (Continued)

P.E. for Men 294 Foundations of Physical Fitness (2) I (also to be offered in second semester regular session) Roby
Scientific basis for physical fitness; analysis of fitness programs; analysis of fitness tests; literature; research. P. Zoology 57, 6 units Education, 6 units in P.E.

Physics 201i Intermediate Classical Physics (4) I Evelt
A development of the important concepts in classical physics with emphasis on the origin and nature of these concepts. The calculus will be used freely in developing the physical concepts and, to a lesser extent, in problem solving. Prerequisites: Mathematics through integral calculus and 12 credits in physics.

Physics 203i Foundations of Modern Physics (4) I Robson
An introduction to the important concepts in modern physics. Emphasis will be upon the origin and nature of these concepts but the ability to use these concepts quantitatively in solving problems will be used as the best measure of understanding. The calculus will be used freely in developing the physical concepts and, to a lesser extent, in problem solving. Prerequisites: 12 credits in physics and mathematics through integral calculus.

Speech 283s Internship in Speech Therapy (4) I Lorenzen-Staff
Supervised clinical practice in The Samuel Gompers Rehabilitation Clinic in Phoenix. Integration of Speech Therapy as part of total rehabilitation program including medicine, audiology, psychology, occupational and physical therapies. Daily therapy session. P. 267, 270, 277.

Watershed

Management RM228s Principles of Range Management (2) I Staff
History and management of ranges and range livestock; range administration; range surveys and ranch planning; multiple use and technical field problems. (June 30 through July 16, all day field trip July 9). P. RM 202 or 208s and Botany 1.

Zoology 210i Genetics and Evolution (4) I Lowe
The principles of genetics and the mechanisms of evolution with emphasis on modern concepts of chromosome structure and replication, gene action in development, population genetics, and the factors affecting the Hardy-Weinberg equilibrium in the formation of races and species of plants and animals. Laboratory experiments are designed for the student to gather, analyze and interpret data, with emphasis on sampling, probability and statistical methods. A residence of three or four days is planned for field study at the Southwestern Research Station of the American Museum of Natural History in the Chiricahua Mountains of Arizona. Prerequisites: 12 credits in biological science plus an additional 4 credits in modern concepts of biology taken within the last three years.

Change of Level - Regular Session (II-1959/60)

Astronomy 110 The Structure of the Galactic System. (To be raised to Astronomy 210).

Change of Level - Summer Session 1960.

Psychology 100s Introduction to Clinical Psychology. (To be raised to Psychology 200s).

CAPITAL ITEMS REQUEST, REFERENCE TO: President Harvill informed the Senate that the Board of Regents would submit to the legislature a capital outlay request of \$3,300,000 for new buildings and campus improvements of a major kind and \$500,000 for land acquisition. In addition, authorization of the legislature will be requested to issue bonds in the amount of \$500,000 to finance an expansion of the Student Union food service.

75th ANNIVERSARY OBSERVANCE, REFERENCE TO: The President referred to several features of the observance of the 75th Anniversary of the founding of the University currently in progress. He mentioned particularly the publication of ARIZONA PLACE NAMES by Byrd Granger, publication of THE HISTORY OF THE UNIVERSITY OF ARIZONA by Douglas Martin, and publication of WESTERN CIVILIZATION IN THE INDIANS OF THE SOUTHWEST - A CULTURAL HISTORY 1533-1960, by Edward H. Spicer.

The President mentioned also a special Founders' Day convocation to be held on the campus the morning of March 1, 1960, and a special Latin-America convocation planned for the fall of 1960.

HONORARY DEGREES TO BE CONFERRED AT FOUNDERS' DAY CONVOCATION ON MARCH 1, APPROVAL OF: The Senate received four recommendations for the award of honorary degrees at the Founders' Day convocation on March 1, 1960. The Senate voted to recommend to the General Faculty and the Board of Regents the awarding four honorary degrees, as follow:

Faculty of the College of Law

Levi S. Udall

Justice Levi S. Udall was born at St. Johns, Arizona, January 20, 1891, to a family which has been prominent in the public affairs of the state since the pioneer era. He attended the University of Arizona during 1912-13, and was admitted to the Arizona bar in 1922.

From 1922 to 1931 he practiced law in St. Johns, serving two terms as County Attorney of Apache County. In 1931 he was elected Judge of the Superior Court of Apache County and continued in that office for sixteen years, until his election to the Arizona Supreme Court, of which he is now the senior Justice.

During 29 years as a member of the Arizona judiciary Justice Udall has earned the general respect and admiration of the citizens of the state. His learning and objectivity are accepted as beyond question. As a trial judge none was more sought after for assignment to difficult and important

cases outside his home county. On the appellate bench he has shown to an extraordinary degree the ability to delve through superficial issues to basic principles, which is the mark of a great judge. And he has also worked tirelessly for the more efficient administration of justice in Arizona.

No Arizonan of his generation has better exemplified the ideal of able and dedicated public service. The Faculty of the College of Law, therefore, recommends that the honorable Levi S. Udall be honored by the University with the degree Doctor of Laws, to be conferred at the Faculty Convocation or at some other appropriate event during its 75th Anniversary observance.

John D. Lyons, Dean

Faculty of the College of Law

Henry Fountain Ashurst

Henry Fountain Ashurst was very nearly a native of Arizona. Although born in Nevada, September 13, 1874, he was brought to Arizona Territory by his parents the next year, and grew up and attended the public schools in Flagstaff. He began the practice of law at Williams in 1897, served in the Territorial house of representatives in 1897 and again in 1899, was its speaker in 1899, and was a member of the Territorial Council (or senate) in 1903. During the academic year 1903-04 he studied law and political science at the University of Michigan. He was district attorney of Coconino County from 1905 to 1908, and the following year moved his practice to Prescott. Upon the admission of Arizona into the Union as a state he was elected to the United States Senate, where he represented Arizona with distinction for 29 years, 1912 to 1941.

As a public servant Henry Ashurst has played a great part in shaping the destiny of Arizona. He was an able and influential senator and held many important senate offices, including the chairmanship of the powerful Judiciary Committee. Although in the pioneer tradition he was largely self-educated, he was well educated, and every inch the literate gentleman whose presence gave the lie to Arizona's early reputation as a backwash of ignorance and iniquity.

Since Senator Ashurst's notable service to this state bridges the years between pioneer and modern days, the Faculty of the College of Law recommends that he be honored with the degree Doctor of Laws during the observance of Founders' Day at the Faculty Convocation, or at some other appropriate time during the celebration of the 75th Anniversary of the University.

John D. Lyons, Dean

Faculty of the College of Mines

Albert C. Rubel

Albert C. Rubel was graduated from the University of Arizona with the Bachelor of Science in Mining Engineering in 1917. After graduation, he entered military service in the First World War, and served as lieutenant and later as captain in the United States Corps of Engineers, where he won the Distinguished Service Cross. Upon discharge from military service, he was associated with the Richmond Severing Oil Company in New Mexico and West Texas as Exploration Geologist until 1920. He then joined the staff of the Island Oil and Refining Company as Exploration Geologist and worked in Mexico and Central America until 1923.

Mr. Rubel became associated with the Union Oil Company of California in 1923 as Assistant Geologist and successively served as Petroleum Engineer, Field Superintendent, Assistant Manager of Operations, Manager of Operations and Vice President in charge of Exploration and Development. He was made President of the Union Oil Company in 1956.

He served as Chairman of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers for the Pacific Coast in 1928 and 1929, and as Chairman of the Production Division of the American Petroleum Institute for the Pacific Coast District in 1930 and 1931.

He was the University of Arizona's first recipient of its Annual Achievement Award in 1943 and has always maintained an active interest in his Alma Mater. He served for several years as Chairman of the Engineering Advisory Board of the University of Southern California.

For many years he has been a leader in the long range research program to determine the possibilities of future production of hydrocarbon fuels and other hydrocarbon products from the oil shales of Colorado and the tar sands of California.

The Committee on Honorary and Professional Degrees in the College of Mines recommend that Mr. Albert C. Rubel be proposed as a candidate for the honorary degree, Doctor of Science, at the forthcoming Founders' Day Convocation of the University in 1960.

J. D. Forrester, Dean

Faculty of the College of Mines

Charles R. Kuzell

Charles R. Kuzell was graduated from Case School of Applied Science in 1910 with a Bachelor of Science in Mining Engineering. In 1914 he received the degree of Metallurgical Engineer from the same institution.

After graduation he became associated with Anaconda Copper Mining Company at Great Falls, Montana, and in 1914 he was made Superintendent of Reverberatory Smelting. He joined the staff of the United Verde Copper Company in

Arizona in 1918 as Smelter Superintendent and later became General Superintendent.

In 1935, the United Verde Copper Company property was acquired by the Phelps Dodge Corporation and in 1940 Mr. Kuzell was made Manager of the United Verde Branch of that corporation.

He was transferred to Douglas, Arizona in 1944, as Director of Labor Relations and Consulting Metallurgist, later successively becoming Assistant General Manager, General Manager, and Vice President in charge of Western Activities for the Phelps Dodge Corporation. He is now a Director of that corporation and President of the Apache Powder Company.

He was recipient of the James Douglas Gold Medal in 1956 from the American Institute of Mining, Metallurgical and Petroleum Engineers for outstanding contributions to nonferrous metallurgy. He is recognized nationally as an authority in research, operation and management in the field of nonferrous metallurgy and in the fields of labor relations and labor legislation. He has taken an active interest, as a citizen and as a company official, in the improvement of educational facilities; he has served as a member of school boards and is now a Director of the University of Arizona Foundation.

The Committee on Honorary and Professional Degrees in the College of Mines recommend that Charles R. Kuzell be proposed as a candidate for the honorary degree, Doctor of Science, at the forthcoming Founders' Day Convocation of the University in 1960.

J. D. Forrester, Dean.

President Harvill reminded the members of the Senate that proposals to award honorary degrees were confidential and that no announcement was to be made until the degrees had been approved by the Board of Regents. Before being considered by the Board of Regents, the proposed degrees must be approved by the General Faculty.

PREPARATION OF BIENNIAL CATALOGUE FOR 1961-62, 1962-63, REFERENCE TO: President Harvill stated he hoped to obtain approval of the Board of Regents to proceed with the preparation of the next biennial catalogue under the time table earlier adopted by the various faculty bodies concerned. He reminded the Senate that every effort is being made to issue the next catalogue early in the spring preceding the September it is to take effect. He mentioned that a question might be raised as to whether or not the catalogue should be prepared before the financial support needed to implement any added programs had been appropriated. It was pointed out, however, that the catalogue could carry a statement that any proposed course work announced in the catalogue is subject to supporting appropriation being provided by the legislature.

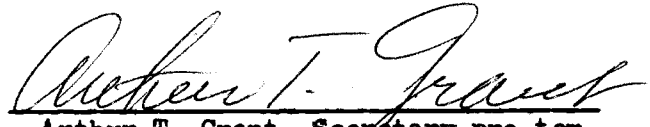
In answer to a question from the President, Dr. Gegenheimer, Chairman of the University Coordinating Committee, stated that while a substantial number of new courses are being proposed for the new catalogue, the number was much smaller than the number of additions made to the 1957-58, 1958-59 catalogue when the 1959-60, 1960-61 issue was prepared.

Dr. Harvill pointed out that every care must be exercised to see to it that full justification can be made for additions to the course offerings. A real need for such additions to the curriculum must be demonstrated. The President emphasized he was not referring to the additional courses necessary in the development of expanded graduate programs.

The President emphasized also that even though the Regents authorize additions to the course offerings of the University, they are insisting that the student-faculty ratio be held to 20 to 1.

Dr. Haury asked if there was a possibility of returning to an annual catalogue. Dr. Harvill replied there was not. One reason for this is that the University should be able to plan its work at least two years in advance. Further, the cost for two years of issuing a catalogue annually is much greater than the cost of issuing one catalogue biennially.

The meeting adjourned at 4:45 P.M.


Arthur T. Grant, Secretary pro tem