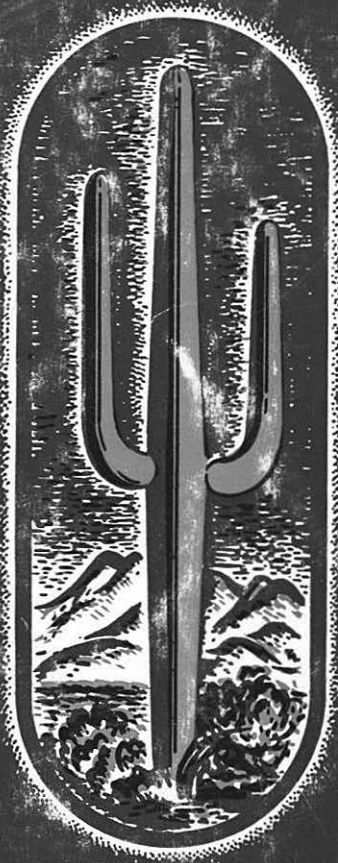


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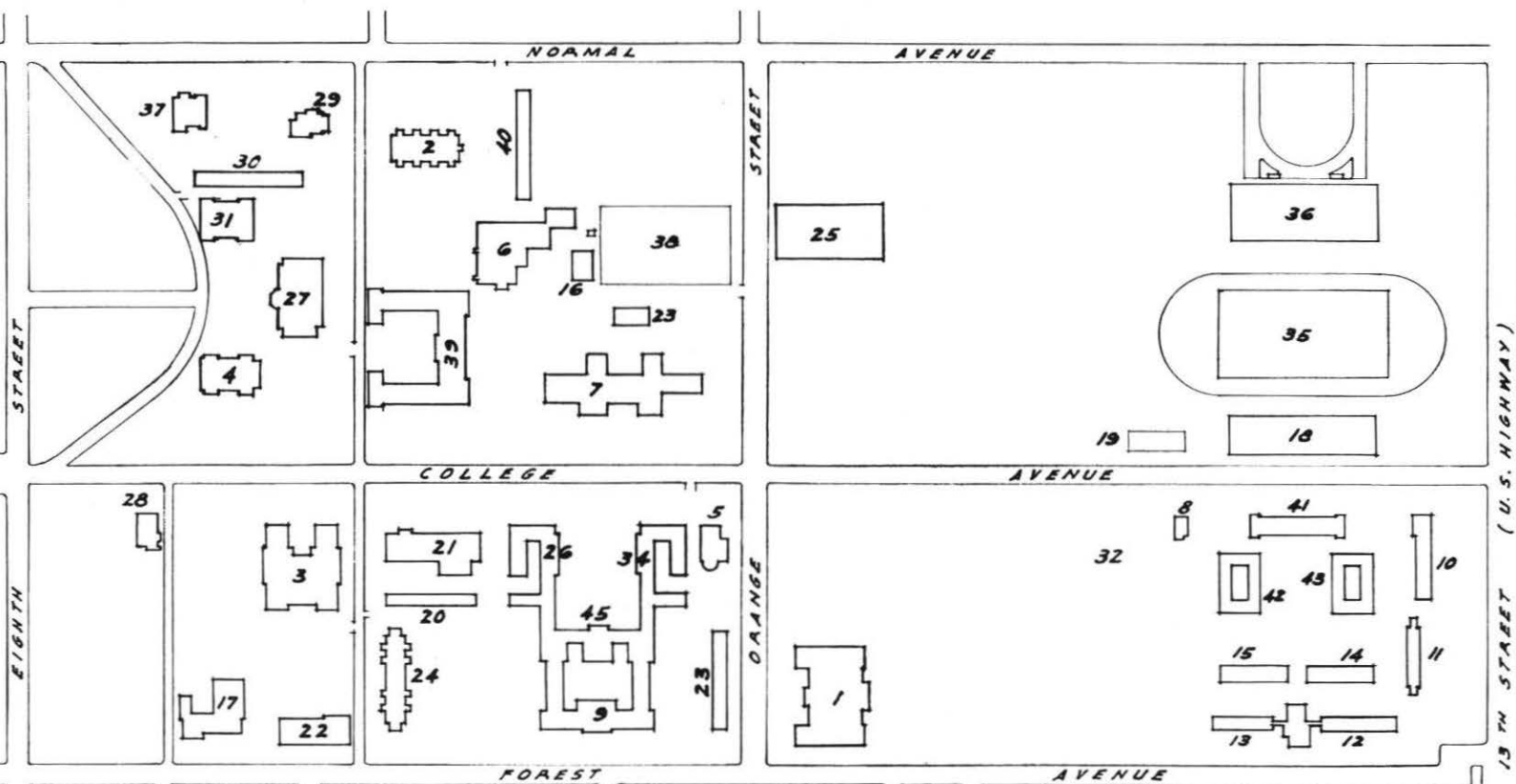
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Arizona State  
College TEMPE  
ARIZONA

GENERAL SERIES

JUNE, 1948

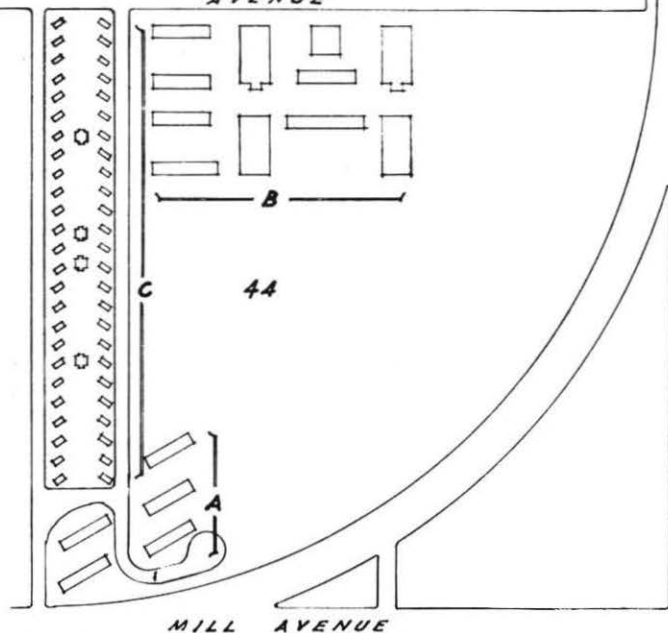
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## ARIZONA STATE COLLEGE TEMPE ARIZONA

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BULLETIN OF  
*Arizona State College*  
TEMPE, ARIZONA



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CATALOG ISSUE FOR THE YEAR 1948 49

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PUBLISHED SIX TIMES A YEAR, AND ENTERED AS SECOND-CLASS  
MATTER, NOVEMBER 30, 1931, AT THE POSTOFFICE AT TEMPE,  
ARIZONA, UNDER THE ACT OF AUGUST 24, 1912

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GENERAL SERIES JUNE 1948 NUMBER 68

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# College Calendar, 1948-1949

## Fall Semester

Faculty Planning Conference .....	Sept. 9, 10, Thurs., Fri.
Residence Halls and Dining Hall Open .....	Sept. 11, Sat.
Freshman Week Events .....	Sept. 14, 15, 16, 17, 18
First Freshmen Assembly .....	Sept. 14, Tues., 8:30 a. m.
Registration .....	Sept. 17, 18 Fri., Sat.
Instruction Begins .....	Sept. 20, Mon.
Last Day of Registration for Credit .....	Oct. 2, Sat.
Armistice Day—No Classes .....	Nov. 11, Thurs.
Deficient Scholarship Reports Due .....	Nov. 12, Friday
Thanksgiving Recess .....	Nov. 24; Wed. 5:00 p. m. to Nov. 29, Mon., 8:00 A. M.
Christmas Vacation .....	Dec. 18, Sat. Noon to Jan. 3, Mon., 8:00 a. m.
Final Examinations .....	Jan. 24, 25, 26, 27, Mon., Tues., Wed. Thurs.

## Spring Semester

Residence Halls Open to New Students .....	Jan. 29, Sat.
Registration .....	Jan. 31, Feb. 1 Mon., Tues.
Instruction Begins, Second Semester .....	Feb. 2, Wed.
Last Day of Registration for Credit .....	Feb. 15, Tues.
Washington's Birthday .....	Feb. 22, Tues.
Deficient Scholarship Reports Due .....	Mar. 25, Fri.
Easter Vacation .....	Mar. 24, Thurs. 5:00 p. m. to Mar. 28, Mon. 8:00 a. m.
Senior Scholarship Reports Due .....	May 16, Mon. Noon
Graduate Scholarship Reports Due .....	May 18, Wed. Noon
Baccalaureate Service .....	May 22, Sun.
Commencement Exercises .....	May 24, Tues.
Final Examinations .....	May 23, 24, 25, 26, 27, Mon., Tues., Wed., Thurs. Fri.

## Summer Session

Summer Session Begins, Registration .....	June 6, Mon.
First Summer Term Ends .....	July 9, Sat.
Second Summer Term Begins, Registration .....	July 11, Mon.
Summer Session Ends .....	Aug. 13, Sat.

# Board of Regents of The University and State Colleges of Arizona

---

## Ex-Officio

SIDNEY P. OSBORN.....Governor of Arizona  
L. D. KLEMMENDSON, B.S., M.S.....State Superintendent of  
Public Instruction

## Appointed

	TERM EXPIRES
MRS. JOSEPH MADISON GREER, B.A.....	January, 1949
CLARENCE E. HOUSTON, B.A., LL.B.....	January, 1949
W. R. ELLSWORTH.....	January, 1951
SAMUEL H. MORRIS, A.B., J.D.....	January, 1951
CLEON T. KNAPP, LL.B.....	January, 1953
JOHN M. SCOTT.....	January, 1953
LYNN M. LANEY, B.S., J.D.....	January, 1955
WALTER R. BIMSON.....	January, 1955

## Officers of Administration

GRADY GAMMAGE, M.A., Ed.D. LL.D., President of the College  
J. O. GRIMES, M.A., Ph.D. - Dean of the College; Director  
of Summer Session and Extension  
HAROLD D. RICHARDSON, Ph. D. - Director of Graduate Division  
Dean of Instruction.  
IRA D. PAYNE, M.A. - - - - Director of Teacher Training  
and Placement  
GILBERT L. CADY, B.A. in Ed. - - Comptroller; Chairman,  
Division of Business Management  
MILDRED B. SAYRE, Ph.M. - - - Dean of Women; Chairman,  
Division of Student Affairs  
GEORGE C. YATES, M.S. Chairman, Division of Special Services  
H. W. BATCHELOR, M.S. - - - - Librarian  
ALFRED THOMAS, JR. - - - - Registrar

## Officers of Instruction

---

- GAMMAGE, GRADY** - - - - - President of the College  
B.A., M.A., LL.D., Arizona; Ed.D., New York
- ALDREDGE, MILES I.** - - Instructor in Business Administration  
M.A. in Ed., Arizona State, Tempe
- ANDERSON, C. M.** - - - - - Instructor in Foreign Languages  
B.A., B.T., Eastern Theological Seminary; M.A., Arizona State, Tempe
- AUTENRIETH, BERTHA H.** - - - - - Instructor in Music  
B.M., New England Conservatory; M.A., Michigan
- BAKER, EMILY V.** - - - - - Associate Professor of Education  
B.A., Illinois State Normal; M.A., George Peabody; Ed.D., Columbia
- BALL, RACHEL STUTSMAN** - - Associate Professor of Psychology  
A.B., Cornell; Ph.D., Chicago
- BARKLEY, BESS** - - - - - Associate Professor of Music  
B.A., Arizona
- BATCHELOR, H. W.** - - - Assistant Professor of Library Science  
Head Librarian  
B.A., Oregon; B.S., M.S., in L.S., Illinois
- BATEMAN, GEORGE M.** - - - - - Professor of Chemistry  
Head of the Science Department  
B.A., Utah State Agricultural; M.S., Ph.D., Cornell
- BENEDICT, GORDON MARSH** - Assistant Professor of Social Studies  
A.B., A.M., Ph.D., Harvard
- BENEDICT, JOEL A.** - - - - - Assistant Professor of Education;  
Director of Visual Aids  
B.A. in Ed., M.A. in Ed., Arizona State, Tempe
- BERGAMO, DOROTHY J.** - - - - - Instructor in Art  
Ph.B., Chicago; B.F.A., Chicago Art Institute; M.A., Northwestern
- BOWERS, CHARLES O.** - - - Instructor of Woodwinds; Assistant  
Band Director  
B.S., Southeast Missouri State; M.M., Eastman School of Music
- BRATCHER, AUSTIN S.** - - - Associate Professor of Business  
Administration  
B.A., Trinity; M.A., M.B.A., Texas
- BUCKLEY, FRANK M.** - - - - - Instructor in English  
B.A., Holy Cross; M.A., Boston
- BULLOCK, ARNOLD** - - - - - Assistant Professor of Music  
Mus.B., Yale; M.A., Arizona State, Tempe
- BUNTE, MARY L.** - - - - - Instructor in Business Administration;  
Secretary to the President  
B.A. in Ed., Arizona State, Flagstaff; M.A., Arizona State, Tempe
- BURKE, DONA BOYLE** - - - - - Assistant Professor of English  
B.A., M.A., Michigan
- BURKHARD, SAMUEL** - - - - - Professor of Education  
Head of the Department  
B.A., Goshen; M.A., Columbia; Ph.D., New York
- BURTON, A. R.** - - - - - Associate Professor of Business  
Administration  
B.S., M.S., Kansas State Teachers; Ph.D., Nebraska; C.P.A., Arizona



- BYERS, FRANK R. - - - - - Associate Professor of English  
B.A., M.A., Cincinnati
- BYERS, NELLIE B. - - - - - Assistant Professor of Education  
B.A., Cincinnati; M.A., Ohio State
- CARL, LORING MONROE - - - - - Instructor in Audio-Visual Aids  
B.A., Iowa State Teachers; M.A., Iowa
- CAVALLIERE, WILLIAM A. - - - - - Instructor in Industrial Arts  
B.A. in Ed., M.A. in Ed., Arizona State, Tempe
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Geography  
B.A., M.A., Arizona State, Tempe
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B.A., Santa Barbara State; M.S. in Ed., Ph.D., Southern California
- CURTIS, LT. COL. COY L. - - - - - Military Science  
B.S., U. S. Military Academy
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B.A. in Ed., M.A. in Ed., Arizona State, Tempe
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A.B., Earlham; M.A., Ph.D., Radcliffe
- DOHERTY, EDWARD A. - - - - - Head Football Coach  
B.A., Boston
- DRESSKELL, MILES A. - - - - - Associate Professor of Music  
A.B., San Jose State; B.M., Northwestern; M.A., Columbia
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B.S., Bowling Green State; M.A., Columbia
- ELLIFF, ROWAN E. - - - - - Associate Professor of Home Economics  
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- SMITH, SYDNEY RUSSELL - - Assistant Professor of Psychology  
B.A., M.A., California

- SOUTHERN, CLARENCE EDWARD** - - - - - Associate Professor  
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- STAHNKE, HERBERT L.** - - - Professor of Zoology; Director,  
Poisonous Animals Research Laboratory  
B.A., La Grange; B.S., Chicago; M.A., Ph.D., Iowa State
- STEWART KENNETH M.** - - - Associate Professor of Sociology  
and Education  
A.B., M.A., Ph.D., California
- THOMSON, RONALD G.** - - - Assistant Professor of Physical  
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- \*TILDEN, ARNOLD** - - - Professor of Social Studies  
B.A., M.A., DePauw; Ph.D., Southern California
- TURNER, F. BERNADETTE** - - - Associate Professor of Sociology  
and Education  
B.S., Minnesota; M.A., Northwestern; Ph.D., St. Louis
- TURNER, KATHARINE C.** - - - Assistant Professor of English  
B.Ed., Illinois State Normal; M.A., Ph.D., Michigan
- VAN PETTEN, DONALD R.** - - - - - Associate Professor  
of Social Studies  
B.A. in Ed., Arizona State, Tempe; M.S., Southern California; Ph.D.,  
Stanford
- WAHLE, COL. CARL BUDD** Director, Department of  
Military Science
- WEXLER, CHARLES** - - - - - Professor of Mathematics  
Head of the Department  
B.S., M.S., Ph.D., Harvard
- WILSON, IRMA** - - - Associate Professor of Foreign Languages  
B.A., Montana; M.A., Ph.D., Columbia
- WILLSON, LORETTA** - - - - - Instructor in English  
B.A., South Dakota; M.A., Northwestern
- WYLLYS, RUFUS KAY** - - - - - Professor of Social Studies  
Head of the Department  
B.A., M.A., Michigan; Ph.D., California; Litt.D., Hilldale
- YATES, GEORGE C.** - - - - - Associate Professor of English  
Chairman, Division of Special Services  
B.J., M.S., Missouri
- YOUNG, GEORGE P.** - - - Assistant Professor of Psychology  
B.A., Colorado State; M.A., Colorado; Ph.D., Yale
- ZACHER, ROBERT V.** - - - Instructor in Business Administration  
B.S., M.S., Alabama
- ZIMMERMAN, J. E.** - - - - - Assistant Professor of English  
B.A., M.A., Baylor

\* On Leave

## Assistants in Administration

---

ALVAREZ, JOSEPHINE - - - - Assistant, Registrar's Office  
ANDERSON, JOHN L. - - - - Supervisor of Business Methods  
ARNHOLD, KATHRYN - - - - - - - - - - Film Librarian  
ASHLEY, ALETHA - - - - - Secretary, Graduate Division  
ATKINSON, A.A., D.Sc. - - - - - Executive Adviser  
BAAS, BARBARA - - - - - Secretary to the Comptroller  
BELTZ, VICTOR V. - - - - Office Manager, Business Office  
BOWEN, JEANNE - - - - - Assistant in Registrar's Office  
BRAWNER, FRANCES - - - - Recorder in the Registrar's Office  
BUCKLEY, FRANK M., M.A. - Head Resident, Irish Hall, Unit B  
BUNTE, MARY L. M.A. - - - - Secretary to the President  
BUSTAMENTE, TONY - - - - - Assistant, Business Office  
CACCARD, JEAN M. - - - - - - - Switchboard Operator  
CALLAWAY, ARTHUR L. - - - - Veterans Educational Adviser  
CAWDREY, MARJORIE E., B.A. - Director of Student Housing  
CREASMAN, JAMES, B.A. in Ed. - - - - Alumni Secretary  
CRUMBAKER, J. W., B.S. - - - - - - - Farm Manager  
DECHANSO, JOYCE - - - - - Assistant, Business Office  
DEVULT, BARBARA - - - - - Assistant, Business Office  
DOBBS, LAURA - - - - - Assistant in the Business Office  
DUBLIN, ARLENE F. - - - - Supervisor, Mimeograph Office  
ELLIS, DON - - - - - - - Assistant Graduate Manager  
FANNING, PEARL - - - - - Kitchen Supervisor, Dining Hall  
FILBY, ELECTRA - - - - - Secretary in the Placement Office  
FRIDAY, ROY REINER - - - - Assistant in the Business Office  
GREEN, MAVIS, B.A. - - - - Claims Clerk in the Business Office  
HALL, MARTHA J., B.A. - - - - Head Resident in South Hall  
HARRIS, FENN - Superintendent of Buildings and Grounds  
HAYDEN, SALLIE DAVIS - - - - Head Resident in Matthews Hall  
HENDRIXSON, MARY ELAINE, M. N., R.N. Director of Student  
Health Service  
HENRIE, WILLIAM - - - - - - - Supervisor of Janitors  
HIGHT, DORIS - - - - Stenographer, Division of Student Affairs  
KINSEY, F. JEAN, B.S. - - - - Assistant in the Registrar's Office  
KRENKEL, MARGARET A. Assistant Recorder, Registrar's Office



## Training School Staff

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COOL, DWIGHT W.	Principal, Eighth Grade
B.A., Colorado; M.A., Colorado State	
BENEDICT, FRANCES	Librarian, Training School and Curriculum Laboratory
A.B., Oklahoma	
CASSITY, FRANCES PERRY	Kindergarten
B.A. in Ed., M.A. in Ed., Arizona State, Tempe	
CHASE, VERA A.	Third Grade
B.A., M.A., Southern California	
DARDEN, BYRNS L.	Industrial Arts
B.A. in Ed., M.A., in Ed., Arizona State, Tempe	
JAMES, ELIZABETH HAMPTON	Sixth Grade
B.A., M.A. in Ed., Arizona State, Tempe	
MORRIS, MARY SCOTT	Art
A.B., Western Kentucky State; M.A., Northwestern	
ROBBINS, W. KATHERINE	First Grade
B.A., Central Washington; M.A., Iowa	
ROBINSON, DOROTHY F.	Fifth Grade
B.A., M.A., Southern California	
THOMAS, CATHERINE R.	Music
B.A., M.A., Arizona State, Tempe	
ZAREMBO, HELEN	Second Grade
B.S., M.A., New York	
LYND, LOUISE B.	Principal, Rural Training School
B.S., Columbia	
MCKEMY, H. M.	Superintendent of Grade Schools
B.S., Arizona; M.S., Southern California	

## Matthews Library Staff

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KEMP, PATRICIA	Library Clerk
LLOYD, HELEN	Second Reference Librarian
B.Ed., Western Illinois State Teachers; B.S. in L.S., Illinois	
LOWE, HELEN M.	Public Service Librarian
B.A., Flora Stone Mather; B.S. in L.S., Western Reserve	
OVERTON, ISABEL	Library Clerk for Reserves
PHILLIPS, RUTH F.	Second Catalog Librarian
B.A., Cornell College; Library Science Certificate, Wisconsin	
SHAFFER, GLENN	First Catalog Librarian
B.A., Pennsylvania State; B.S. in L.S., Drexel Institute	
WHITWELL, DORIS	First Reference Librarian
B.A., Baldwin-Wallace; B.S. in L.S., Western Reserve	



# The Institution

## Purposes of the College

The College aims to serve the people of Arizona by providing an educational program that appropriately reflects the community interests of the people of the State as a whole as well as the needs and desires of the individual students who enroll. Institutional objectives that define and give direction to the educational program of the College are the result of the growth and evolution of the institution over a period of more than fifty years.

The Act of the Territorial Legislature, passed March 12, 1885, creating the Territorial Normal School, set forth its objectives as follows:

"the instruction of persons, both male and female, in the art of teaching and in all the various branches that pertain to a good common school education (the term, "common schools," is now quite generally used as an expression implying a general reference to both elementary and secondary schools); also, to give instruction in the mechanical arts and in husbandry and agricultural chemistry, in the fundamental law of the United States, and in what regards the rights and duties of citizens . . ."

The Act also set forth in the requirements for admission and elsewhere other important objectives as follows:

"Every applicant for admission shall undergo an examination in such manner as shall be prescribed by the Board, and if it shall appear that the applicant is not a person of good moral character, and will not make an apt and good teacher, such applicant shall be rejected. The Board of Education may, in their discretion, require any applicant for admission, to sign . . . a declaration of intention to follow the business of teaching . . . and provided further, that the pupil may be admitted without signing such declaration of intention on such terms as the Normal School Board may require or prescribe . . . shall exercise a watchful guardianship over the morals of the pupils . . ., but no religious or sectarian tests shall be applied . . ."

Thus, it may be observed, the founders of the institution set forth the following five objectives: (1) preparation of teachers, the chief purpose; (2) provision for a broad curriculum; (3) development of ethical character; (4) obligatory instruction in fields other than teaching; (5) training for good citizenship.

It is this set of broad purposes, so wisely stated by the founders of the institution, that has served to project the growth and development of the College. Of course, during the more than sixty years of progress, there have been certain changes in emphasis placed on the

various objectives. At the present time, institutional purposes and objectives may be set forth as follows:

Traditionally, and by legal definition, one of the chief functions of the college is the selection and preparation of teachers for the elementary and secondary schools of Arizona. The people of the State have a right to expect that the children in the public schools will be taught by teachers possessing high mentality, broad social-cultural background of general education, high ideals of citizenship, thorough knowledge of subject matter, high scholarship, objective and scientific point of view, professional training and spirit, proven skill in the art of teaching, culture and efficiency in social relations, wholesome personality, vigorous health, and sound character. The College aims to serve in the selection, development, and preparation of teachers of this type.

Another purpose of the College is to provide a basic program of general education. Provision for a broad social cultural base is an essential in programs of education for all vocations. Objective related to good citizenship, personal efficiency, aesthetic appreciation, general knowledge, and vigorous health are, after all, fundamental and basic in all program of higher education.

The college serves efficiently and well students desiring basic professional courses such as pre-dental, pre engineering, pre agriculture, pre-forestry, pre law, pre medical, pre nursing, pre optometry, and pre-veterinary.

The College offers curriculums in the Arts and Sciences leading to the Bachelor of Arts or the Bachelor of Science degree with areas of concentration in various departments of the College.

The College accepts its responsibility for providing in service help, guidance, and instruction for teachers. It also accepts its responsibility for cultural and educational leadership and service in the community. These professional and community services are provided through special evening courses, correspondence courses, summer sessions, educational conferences, dramatic performances, musical concerts, speech clinic services, published bulletins, radio services, placement services, alumni organizations, school visitation, and speaker and consultant service.

Through its carefully organized program of higher education both general and specialized and through its provision for these related extension services, Arizona State College at Tempe takes its place along with the other state institutions of higher learning in serving the people of Arizona.



Matthews Library and Administration Building. Here is housed one of the finest library collections in the Southwest with more than fifty thousand volumes. The reference library is particularly noteworthy.

## History

An act of the Thirteenth Legislative Assembly of the Territory of Arizona, approved March 12, 1885, made provision for the establishment at Tempe of a Normal School. The Normal began on February 8, 1886, with thirty one in attendance. The first class of five members graduated in June, 1887. At that time the entire institution was housed in the northwest room of a single four-room one-story building. During the years which followed, the attendance gradually increased, and with the growing public interest, the course of instruction was expanded year by year, new buildings replaced the historical structure, and from time to time additions were made to the faculty personnel.

For many years it was found necessary to provide facilities for high school training preparatory to the two-year normal school course, but, by the year 1919, the growth of the high schools throughout the state had made it possible to eliminate the high school curriculum from the program of studies offered by the Normal School, and the entire attention of the faculty was devoted to the two year normal school curriculum offered to high school graduates and leading to a diploma entitling the holder to teach in the elementary schools and the junior high schools of the state.

In 1922 the Tempe Normal School Alumni Association sponsored a movement to raise the grade of their Alma Mater to that of a standard Teachers College. After three years of public discussion, in January, 1925, a bill was presented to the Seventh State Legislature which was passed unanimously by that body and signed by Governor Geo. W. P. Hunt on March 7, 1925. By the provisions of this bill, the Tempe Normal School became Tempe State Teachers College, with the power to establish a four-year college curriculum, and the authority to confer upon its graduates the degree of Bachelor of Education.

An act of the Ninth Legislature changed the name of the college to read, Arizona State Teachers College at Tempe, and at the same time authorized the College to grant the degree of Bachelor of Arts in Education.

In March, 1937, an Act of the Thirteenth Legislature authorized the College to grant the advanced degree of Master of Arts in Education. This degree was conferred for the first time on May 31, 1938.

On March 9, 1945, a bill was passed by the State Legislature changing the name of the College to ARIZONA STATE COLLEGE AT TEMPE, and placing the management of all three state educational institutions under the control of one board called the Board

of Regents of the University and State Colleges of Arizona. Each institution retains its identity. The Board of Regents has broad powers. It may "establish curriculums and designate such courses at the several institutions as in its judgment will best serve the interests of the state, and award such degrees and diplomas upon the completion of such courses and curriculum requirements as it deems appropriate."

The College has had a gradual evolution from the narrow, limited curriculum of a Normal School to a college composed of fourteen strong departments each offering a major and minor. From the granting of a Normal School diploma, the college has progressed to where it now grants both the Bachelor of Arts and the Master of Arts degrees. From a single building there has evolved a campus containing twenty-nine fine buildings, and the original attendance of thirty-one has grown to a maximum of 2960 students for the first semester of 1947-1948.

## Recognition by Accrediting Agencies

Arizona State College is fully accredited by the recognized agencies of evaluation in its field. The College ranks Class A in the American Association of Teachers Colleges, and in the North Central Association. It also has institutional membership in the American Council of Education. Students transferring from the College to other colleges and universities are given the same recognition in respect to transfer of credits, graduate study, and other privileges as are enjoyed by other universities and colleges of the country.

## The College Setting

### The Environment

*Location.* Arizona State College is located in the City of Tempe at the very center of the Salt River Valley, probably the finest irrigated district in the United States. Tempe is located on the Southern Pacific main line, which makes connections at Phoenix, the capital of the State, with the Santa Fe Railway. Four transcontinental highway systems, 60, 70, 80, 89, make the College easily accessible to all parts of the country, and there is regular bus service between Tempe and Phoenix, nine miles distant.

*Climate.* The climate is ideal during practically all of the college year. Snow is a novelty. Rain seldom mars plans for picnics or other outdoor activities, and high winds are infrequent. Cloudless skies and bright sunshine permit the work of physical education and athletics to be conducted outdoors throughout the entire year.

*Historical and Scenic Features.* Within easy reach by automobile are found Superstition Mountains, Apache Trail, Casa Grande Pre-historic Ruins, Pueblo Grande, Boyce Thompson Arboretum, Roosevelt and Coolidge dams, Canyon Lake, Hieroglyphic Canyon, and other places of historical and scenic interest. Papago Park, a national monument, lies just north of the city. A large natural amphitheater, a chain of lakes, Hole in-the-Rock, and the Elfin Hills make this 2000-acre park an ideal spot for hiking and picnicking.

## The College Grounds

*The Campus.* There are 120 acres in the college grounds. The campus proper comprises 85 acres of fine, level land, and is arranged in a most attractive manner with its broad shady lawns, and a profusion of trees, shrubs, and flowers.

The twenty-nine modern buildings are distributed over the grounds in two groups, between which College Avenue runs the full length of the campus. In the distance one looks toward the mountains with their ever-changing lights, shadows, and wonderful coloring. Portions of the lawn are arranged for flood lighting, and are used by students for parties, receptions, and other social functions.

*Men's Athletic Field.* The men's athletic field is located just south of the men's gymnasium. The football field, the baseball diamond, and the track are maintained in excellent condition. Goodwin Stadium seats about 10,000 spectators. A modern lighting system permits the use of the field for games and pageants.

*Women's Athletic Field.* This field is located just south of the Moer Activity Building. The field is well equipped for the various activities carried on by a modern physical education department.

*Recreational Areas.* In various parts of the campus are found areas and equipment for outdoor recreation. In these areas are found tennis courts of concrete, screened basketball courts, and fields for speedball, volleyball, women's baseball, archery, and golf.

*Model Farm.* The model farm of thirty-five acres is located one mile south of the campus. It is used for experimental and practical work in various phases of agriculture, including the preparation of teachers for 4-H and other club work.

## College Buildings

*Old Main.* The early traditions of the Territorial Normal School cluster about Old Main with its three stories of ivy covered brick. It was erected in 1894, and is the oldest of the college buildings. For years it was the scene of all student activities. Now, it is devoted

chiefly to classrooms for academic work. It is located on the south side of the old quadrangle.

*Science Hall.* This building is located on the east side of the old quadrangle. The lecture rooms and laboratories for Chemistry and Physics are located on the first floor, and those for Biology and Agriculture occupy the second floor.

*The College Auditorium.* The Auditorium is located on the west side of the old quadrangle. It seats 1,000 persons. Its forty-foot stage and modern equipment permit the staging of dramatic work of high order.

*Arts Building.* This is a modern, fire proof building of concrete construction faced with cream brick. It houses the departments of Art, Business Administration, Home Economics, and Music. The College Book Store, the State Press, and student offices are located in the building.

*Ira D. Payne Training School.* This is a one-story structure of brick in the Spanish-Colonial style with open corridors or colonnades enclosing an attractive patio. The classrooms, furniture, apparatus, and equipment are in keeping with a modern, progressive school system.

*Arthur J. Matthews Library.* This is a modern, fire-proof, air-conditioned, brick building. The main floor and basement contain the offices of administration and several classrooms.

*The Dining Hall.* The dining hall is centrally located, and is conveniently reached from all dormitories. The building and its equipment are thoroughly modern and meet the highest sanitary and health standards. The dining hall is under the supervision of a graduate dietitian.

*Home Management House and Nursery School.* A fine, new building in which students majoring in Home Economics live for a part of a year.

*Student Health Center.* This is located in a quiet section on the east side of the campus. It is fully equipped to care for the needs of college students.

*The President's Residence.* This is a substantial, two story, brick structure located on the east side of the campus.

*The Lyceum.* This is one of the attractive new buildings. It contains an auditorium, a stage, a lovely reception room, a kitchen, and a fine large basement room. It is used for meetings of small groups, receptions, and many other purposes.

*Men's Gymnasium.* The men's gymnasium is located on the north side of the athletic field. The floor space is ample for the regular gymnasium work, basketball, and other public events. A gallery is provided for spectators.

*B. B. Moeur Activity Building.* This is the center for the women's physical activities, and for the social life of the student body. The building is modernistic in structure. It was named in honor of the late Governor Moeur who served longer than any other man on our Board of Education.

*Alpha Hall.* This dormitory has a capacity of about sixty students. It is located on the east side of the campus.

*Carrie J. Matthews Hall.* This hall was named after Carrie J. Matthews, the wife of the late president, Arthur J. Matthews. It accommodates about seventy-five students.

*North Hall.* This hall is located on the north side of the dormitory quadrangle. It accommodates about seventy students.

*South Hall.* South Hall accommodates about seventy students. It is located on the south side of the dormitory quadrangle.

*West Hall.* This is a large dormitory located on the west side of the dormitory quadrangle. It houses over 100 girls.

*Dixie Dees Gammage Hall.* This is a recently constructed, modern structure housing about ninety girls. The hall was named in honor of Dixie Dees Gammage, the wife of President Gammage.

*East Hall.* This dormitory houses 125 students. It is located at the center of the campus.

*Irish Quadrangle.* This comprises three men's dormitories located just west of Goodwin Stadium. These are designated Unit A, Unit B, and Unit C. They house 184 men.

*Green Gables.* Green Gables has six frame buildings obtained from the United States Government. The e units house 184 men.

*Stadium Hall.* This dormitory housing 120 men is located underneath the east section of Goodwin Stadium.

*Victory Village.* In this Village there are 66 apartments and 50 trailers for the accommodation of veterans and their families.

*Palm Grove.* These apartments are located one mile south of Tempe and will accommodate 16 families.

*Heating Plant.* The plant is located centrally just south of the dining hall. It furnishes steam heat and hot water to all college buildings.



*Goodwin Stadium.* The Stadium was named after the late Garfield Goodwin, an early graduate of the Territorial Normal School, and a member of the Board of Education for many years. The west unit has a seating capacity of over 4,000. A new unit located on the east side of the field increases the total seating capacity to about 10,000.

*Industrial Arts Building.* The Industrial Arts Building is the west wing of Goodwin Stadium. The building houses one of the best equipped shops in the Southwest for woodwork, metal work, and aviation.

*North Campus Cottage.* A brick home formerly occupied by President Emeritus Matthews. It is now used as a residence for a faculty member.

*South Campus Cottage.* A brick cottage now used as a residence for a faculty member.

*Farm Buildings.* A home and barns are located on the farm one mile south of the campus.

*Danforth Meditation Chapel.* A chapel for devotions by individuals and small groups made possible by a gift of \$5000.00 by William Danforth supplemented by gifts from numerous students, faculty, and friends of the college.

*New Science Building.* A fine new science building is now under construction. It is located on College Avenue just west of Goodwin Stadium. The science department expects to move into it in September.

# Entrance and Graduation Information

## Admission to College

### General Requirements

*Personal Qualities.* Arizona State College desires to admit only persons possessing good character, and serious purpose. They should possess such degree of health that success in the vocation selected may be expected. In addition candidates for the professions should rank high in personality traits including native ability.

*Transcripts.* Before any student may register for work in the regular sessions of the college, and be admitted to regular standing and classification, his transcripts of high-school and college work done must be on file in the Registrar's Office. Students should request

the high-school principal or college registrar to mail the transcript directly to the Registrar. Transcripts should be in the hands of the Registrar at least thirty days in advance of the registration date. Transcripts are not required at the time of admission of those taking work in the summer session, in extension, or by correspondence.

*Physical Examination and X ray.* A physical examination and an X ray of the chest are required at entrance of all students attending regular day classes of the regular session, excepting those who are registered for not more than five semester hours of work. They are not required of summer session students, extension students, nor of students taking night and Saturday classes only. Students failing to comply with this requirement may upon payment of a fee of one dollar (\$1.00) secure forms to be filled in by their family physician within one week. The College does not assume financial responsibility for such examinations.

*Aptitude Tests.* With the exception of graduate students, students who are registered for not more than five semester hours of work, and students taking work only at night or on Saturday, all students enrolled in the regular sessions of the college are required to take at entrance all aptitude tests. These tests are used for guidance purposes only.

### Admission of High-School Graduates

Graduates of an approved high school may be admitted to freshman standing in any of the curriculums offered by the college.

The units listed below are specified for admission. To meet these specifications, credits will be accepted for any subjects in these fields usually given in high schools. In addition credits will be accepted for general or unified courses, irrespective of the names or organization of the courses, provided the subject matter covered falls within the fields specified.

English .....	3 units
Social Studies .. .. .	2 units
Mathematics (Arithmetic is accepted) ... ..	1 unit
Science .....	1 unit

### Conditional Admission

*Graduates of Unapproved High Schools.* Graduates of unapproved high schools may be admitted provisionally upon passing satisfactorily the regular aptitude tests. Provisional admission will be removed on the successful completion of the first thirty semester hours of college work.

### Non-Graduates of High Schools

1. *High-School Seniors.* High-school seniors under 21 years of

age with only a limited amount of work to complete in order to meet the requirements for the high-school diploma may be admitted under the following conditions:

- (a) The written recommendation of the high-school principal and an affirmative vote of the Admissions and Standards Committee.
- (b) A plan for completing high school work with the written approval of the high school principal, and an affirmative vote of the Admissions and Standards Committee.
- (c) The completion of high-school graduation requirements prior to the admission to sophomore standing.

2. *Adult Civilians, and Veterans Over 18.* Civilians over 21 years of age, and veterans over 18 years of age who are not graduates of approved high schools may be admitted to undergraduate standing with conditions. Such students are required to present transcripts of all previous high school and college credits. They may become candidates for degrees after deficiencies have been satisfactorily removed, as determined by the Admissions and Standards Committee.

### Admission with Advanced Standing

1. Students from approved institutions of higher education ordinarily will be given credit, hour for hour, for work done in these institutions in so far as it applies to the requirements of the curriculum pursued at Arizona State College. Advanced standing credit for educational experience in the armed services will be granted in terms of the policies and practices recommended for all colleges and universities by the American Council of Education.

2. Failure to report previous college attendance at the time of registration is sufficient cause for cancellation of the student's enrollment, of any credits earned, or both.

3. Students who are disqualified in another college because of scholarship, conduct, or any other reason will not be admitted until such disqualification is removed.

4. Experienced teachers who become candidates for the bachelor's degree may be permitted to substitute academic credits for a part, or, in some cases, all of the required directed teaching, but no academic credit is allowed for teaching experience.

5. Junior college students planning to transfer to Arizona State College at the end of their first or second year should plan their junior college courses to meet the requirements of the curriculum selected. Loss of time often results from failure to do this.

The maximum credit that can be accepted from a junior college is sixty-four semester hours or ninety-six quarter hours. In general, required upper division professional courses cannot be taken in junior colleges for credit. Ordinarily, courses transferred from junior colleges cannot be accepted as upper division credit. Students who have been allowed sixty four semester hours of advanced standing credit may not have additional credit accepted toward degree requirements for work done in a junior college or a two year institution.

### Admission to Summer Session

Excepting those who plan to complete the degree requirements in summer sessions only, students will be admitted to the summer session without presentation of transcripts.

### Admission of Graduate Students

See the section of the catalog headed, "The Graduate Division."

## Registration

*Registration Dates.* Students should register on the registration dates announced in the College calendar. Students registering late will be charged a late registration fee. Residence halls will be open to students on the dates given in the College calendar.

*Prerequisites to Registration.* Before registering in the regular sessions, all students seeking admission with regular standing and classification must present transcripts of high school or college work, or both, and take all required aptitude and physical examinations described under the heading, "Admission to College." In addition certain groups of students must meet special requirements given hereafter.

*Classification of Students.* Freshmen are those students who have acquired less than 30 semester hours of credit; sophomores, those with 30 or more semester hours, but less than 62; juniors, those with 62 or more, but less than 94; seniors, those with 94 or more; graduate students, those holding a bachelor's degree from Arizona State College at Tempe, or other recognized institutions.

*Curriculum Advisers.* Upon entering college each student must select, tentatively at least, a curriculum. Curriculum advisers are designated for each curriculum. The student's registration card must bear the signature of his curriculum adviser.

*Course Loads.* Students carrying twelve or more semester hours of work are classified as full-time students. The normal course loads

of students vary from 15 to 17 semester hours. Students who wish to carry more than 17½ semester hours must petition the Admissions and Standards Committee. Students having a low scholarship record may be required to carry a light load. Students carrying a full-time school job will be asked to carry a light load unless their previous records in scholarship and on aptitude tests are high. During the semester in which a student is registered for student teaching, the load should not exceed 16 semester hours.

Students registered for a full load will generally find it necessary to carry classes both in the forenoon and the afternoon.

*Course Restrictions.* Freshmen may not register for courses numbered 200-299 without the recommendation of their advisers and the approval of the heads of the departments concerned and the Registrar. Courses numbered 300 and above are open to graduate students only.

*Freshmen Registration.* Freshmen registering for the first semester are expected to be present at all events scheduled for Freshman Week beginning at 9:00 A.M., Tuesday, on the date shown in the college calendar. Failure to attend any of these events may delay the student's registration, and will require the payment of the late fee for any examinations missed.

Before registering, each student must decide what curriculum to follow, then he will be assigned a curriculum adviser. This adviser approves the student's schedule of studies, signs his registration cards, and continues as his adviser throughout his four years in college.

Freshmen entering college the second semester should report to the Registrar's Office not later than noon on the Friday preceding the date scheduled for the beginning of classes. Those who do not arrive in time to complete their registration and examinations as scheduled will be charged the late fees. No physical examinations are given on Saturday afternoon.

*Registration of Sophomores, Juniors, Seniors, and Graduates.* Sophomores, juniors, seniors, and graduate students will register on the dates indicated in the College calendar. The physical examination, X-ray, and aptitude tests described previously under the heading, "General Requirements," are required. New students should report to the Registrar's Office not later than Thursday, 9:00 a. m., preceding the date set for the beginning of classes. A student who fails to complete his registration or examinations as scheduled during registration week will be charged the late fees.

*Auditors.* Students may register as auditors in one or more courses without credit with the approval of the Registrar and with the consent of the instructor involved. Courses audited count toward the student's load. Persons who wish to register as auditors only, will register in the same manner as regular students and pay the same fees. Those who wish to audit classes for short periods of time may obtain a visitor's permit from the Registrar. Usually visitors will pay a nominal fee after the first day of visitation.

*Late Registration.* Late registration fees are charged beginning the day class instruction begins. Ordinarily, students registering during the second week of a semester are required to take less than the normal load. Registration for a given semester is closed on Monday of the third week. A student may not register for credit after this date.

*Incomplete Registration.* Registration is not complete until all fees have been paid and all required examinations have been taken. Failure to satisfy any of the admission or registration requirements is sufficient cause for dropping a student from all classes.

*Changes in Registration.* After a student's registration program card has been signed by his curriculum adviser, it cannot be changed. Programs should be carefully planned under the guidance of the curriculum adviser so that changes in registration will not be necessary. Changes may be made as late as *Tuesday of the second week of the semester*, by means of a Drop-Add card. *After Tuesday of the second week of a semester, courses may not be added.* Drop Add cards for changes in registration may be obtained at the Registrar's Office.

*Dropping Courses after Tuesday of the Second Week.* The courses for which a student is registered at the close of Tuesday of the second week of a semester constitute his official registration and semester load. A student may drop a course from his official registration any time prior to the beginning of the final examination period. To drop a course after Tuesday of the second week, the student will obtain from the Office of the Dean of the College recommendation blanks for dropping; have these signed by instructors; return them to the Dean's office and obtain an Authorization for Dropping Card; take it to the Business Office; pay the 50 cent fee; take receipt and card to Registrar's Office and obtain the drop card. An official drop notice is sent to instructors from the Registrar's Office after drop card has been filed. A final semester grade of Wp or We will be reported by the instructor for a course dropped after the second week of the semester.

*Withdrawal from College.* Students who find it necessary to withdraw from college should withdraw officially as follows: (1) Obtain a

withdrawal card from the Registrar's Office. (2) Secure the signatures of the Dean of the College, the Chairman, Division of Student Affairs, the Dean of Men (men students), the Veterans Educational Adviser (Veterans only), the Librarian, the Comptroller, Business Office, and the Registrar. (3) Obtain refund of breakage deposit or other fees from the Business Office.

Unless the student withdraws officially, he is regarded as registered in all courses and runs the risk of receiving E grades in all subjects at the end of the semester. If a student is unable personally to withdraw officially as prescribed above because of illness or other reason, he should notify the Registrar in writing without delay and request that he be officially dropped and that his instructors be notified.

## Graduation Requirements and Degrees

The College grants the following four degrees: Bachelor of Arts in Education, Master of Arts in Education, Bachelor of Arts, and Bachelor of Science. The degree of Bachelor of Arts in Education is granted to students who complete satisfactorily the requirements of any one of the teacher-education curriculums offered by the College. The degree of Master of Arts in Education is granted to those who complete satisfactorily the five-year secondary curriculum. The Bachelor of Arts degree, and the Bachelor of Science degree are granted to those who complete satisfactorily one of the Arts and Sciences curriculums. To obtain a second bachelor's degree, the student must do an additional 30 hours of work or more to meet all the requirements of the degree sought.

### Requirements for the Bachelor of Arts Degrees

*The Unit of Credit.* The semester-hour is the unit of credit. It represents one fifty-minute class exercise per week with two hours of outside preparation or the equivalent in laboratory work.

*Credit Requirements.* A total of 126 semester hours is required for graduation with the degree of Bachelor of Arts in Education.

*Curriculum and Course Requirements.* In addition to the semester-hour requirements, the candidate must meet all the course requirements of the particular curriculum selected. Alternative courses may not be substituted for required courses, nor may curriculum or course requirements for graduation under a particular curriculum be waived without the approval of the Admissions and Standards Committee.

*Scholarship Requirements.* In order that a student may be eligible for graduation, his cumulative scholarship index must be 1.75 or

better for all work taken after September 1, 1941, or for all work taken while a student at this College.

*Residence Requirements.* A minimum of one year in residence as a regular student is required of every candidate for the bachelor's degree, and the final 12 semester hours immediately preceding graduation must be taken in residence. For purposes of record, a year in residence is defined as 30 semester hours of credit earned in on-campus courses offered by regular members of the teaching staff. The phrase, *in residence*, means in regular classes held on the campus. It has no reference to living in dormitories or in Tempe. Credit earned in extension or correspondence courses cannot be used to meet residence requirements. The 12 semester hours of final residence may be taken during a semester of the regular academic year or during the summer terms. Exception to the residence regulation may be made by the Admissions and Standards Committee. Petitions for an exception must be made in writing and addressed to the Registrar.

*Application for Graduation and Teaching Certificates.* Students who plan to complete requirements for graduation at the end of either summer term or the first semester should pay the graduation fee and file their applications for graduation with the Registrar before registering for their final term or semester. Those planning to complete requirements for graduation in May should pay the graduation fee and file their application for graduation with the Registrar before November 15.

Application blanks are obtained in the Registrar's Office. Candidates who fail to pay the graduation fee and file applications at the times specified are required to pay the late fee, and may be scheduled for graduation at a later date. Upon filing an application for graduation, a final check on graduation requirements is made for each student by the Registrar's Office. A check sheet showing the remaining requirements for graduation under the curriculum designated in the application is furnished the student as a guide to his final semester's registration.

Applications for teaching certificates should be obtained at the Registrar's Office at the time of filing applications for graduation. Applications should be filed promptly after taking the oath of allegiance.

*Graduation Fees.* The graduation fee is \$10.00 if paid on or before the dates specified in the preceding paragraph. After that date the fee is \$15.00. Five dollars of the regular graduation fee is for membership in the Alumni Association. If a student is granted permis-



sion to receive a degree in absentia, he shall pay an additional fee of \$7.50.

*Attendance at Commencement Exercises.* Candidates for degrees are required to be present at the commencement exercises in the prescribed academic costume. Exceptions to this rule will be made only in extreme cases, and upon petition to the President of the College. If the petition is granted, a fee of \$7.50 is charged for a degree taken in absentia.

*Financial Clearance.* Before a student may participate in the commencement exercises or receive his diploma he must obtain financial clearance at the Business Office. Financial clearance indicates that the regular fees, library, dining hall, and all other fees have been paid.

### Requirements for the Master's Degree

See the section of the catalogue headed "The Graduate Division."

## The College Guidance Program

Excellent instruction is one of the chief responsibilities of a progressive college. Instruction is excellent just to the extent that it fits the abilities, interests, and personality traits of the students. The purpose of the guidance and counseling program of the College is to discover those traits possessed by each student in order that each one may undertake such a program of work as will best fit his individual needs, and will inspire him to complete it with genuine satisfaction, and with the highest degree of achievement possible for him.

*Aptitude Tests.* On entering the College each student is given several aptitude tests. The results of these tests are used only in the counseling and guidance of students. The specific purposes of these tests are to discover the student's native ability or quickness of learning; his ability in reading, English, etc.; and certain personality traits. Vocational and other tests are administered if the student desires them.

*Choosing a Curriculum.* During Freshman Week a number of programs and conferences are held to assist students in deciding wisely upon the curriculum which they will select. This is an exceedingly important decision for the student. His happiness and success in college depends, in part, upon a selection fitted to the abilities, interests, and personality of the student.

*Curriculum Advisers.* As soon as a curriculum is chosen the student is assigned a curriculum adviser. The curriculum adviser assists the student in making out his schedule of studies and signs his registra-

tion card. He continues to counsel the student throughout his college life. At the close of each quarter of each year he gives the student his grade card and counsels with him then, and at various other times.

*Personal Counseling.* Personal counseling is directed by the Chairman of the Division of Student Affairs, the Dean of Women, the Dean of Men, and the Dean of the College. In many cases the personal problems of students are referred to other faculty members or the agency best qualified to help. Likewise the counseling often begins with the faculty and is referred to the deans for assistance.

*Orientation.* An orientation program under the supervision of the Division of Student Affairs is presented by members of the faculty to all new students. Emphasis is placed on study skills, social competence, vocational and educational guidance, and the development of a personal philosophy appropriate for the college-educated individual.

## Housing

*Residence Halls.* There are six halls occupied by women students. These are Alpha Hall, Matthews Hall, North Hall, South Hall, West Hall, and Dixie Dees Gammage Hall. There are six halls ordinarily occupied by men. These are East Hall, Stadium Hall, Green Gables, and units A, B, and C of Irish Quadrangle.

*Apartments.* The following temporary facilities are available: twenty apartments in Victory Annex; sixty-six Federal Public Housing Apartments; sixteen Palm Grove Apartments; fifty trailers in Victory Village; and twenty apartments for faculty members. All are located on the campus excepting Palm Grove which is one mile south of Tempe.

*Reservations.* A deposit of \$5.00 for a residence hall accommodation and of \$10.00 for an apartment accommodation is required. Students are placed on reservation lists according to date of receipt of fee. Reservations for rooms and all apartments excepting Victory Village should be addressed to The Housing Office, Matthews Library Building. Reservations for trailers in Victory Village should be addressed to George Morrell, Matthews Library Building.

Refunds on cancellation of reservations cannot be made after September first of a given school year. Preferences for halls may be stated at the time of making reservation. Assignments to men's halls are made on consultation with the Dean of Men; assignments to women's halls are made on consultation with the Dean of Women.

*Occupancy.* Housing accommodations are available for occupancy the Saturday preceding freshman week for freshmen only; for upper class students, the day preceding official registration. Students are expected to vacate accommodations by midnight Saturday of the last

week of school. Students are admitted to the assigned housing accommodations only upon presentation of the proper assignment card to the head resident or apartment supervisor.

*Hall Facilities.* All student rooms are provided with electric light, steam heat, city water, and are furnished with a study table, a dressing table, book rack, and chairs. Sleeping porches are used the year round. No student may sleep in his room without the permission of the student health service. There is a laundry room in each dormitory furnished with ironing boards for the laundering of personal belongings.

*Residence Regulations.* No single college influence may contribute more to the development of the personality and character of a student than that of dormitory life. The halls are so equipped and managed as to secure the maximum values at a minimum cost. For this reason women are asked to live in residence halls. A parent who desires to have a daughter room outside the halls must make written request to the Dean of Women. Such permission is granted only under special circumstances. No cooking of any kind is permitted in students' rooms. Vocal or instrumental music may not be practiced in any of the halls. Arrangements for such practice may be made through the music department. If radios are used, they must be adjusted so as not to interfere with the rights of others. Young women may be absent from the halls overnight only with the written consent of their parents, which must be on file with the head resident at the time of departure. A nominal fee is collected in each hall for the expenses of the social program. This fee may not be refunded.

*Personal Equipment.* The following list is the minimum with which students should be equipped when entering a hall: blankets and comforts for a single bed, one white bedspread, six sheets, four pillow slips, four bath towels, four hand towels, dresser scarf, washable laundry bag, and a study lamp. All linens should be clearly marked with the name of the student.

*Regulations Concerning Guests.* Guests may be accommodated in residence halls when space is available on the following conditions: (a) that the permission of the head resident has been secured; (b) that guests do not accept invitations from residents for the first four nights of the week or during examination time unless absolutely necessary; (c) that guests do not ask for accommodations for more than a three-day period. Visiting student groups may be accommodated when previous arrangements are made through the Housing Office. A nominal rental fee is charged for these accommodations.

*Care of Halls and Apartments.* The College attempts to furnish comfortable and artistic living conditions for students. Students are

expected to cooperate by keeping them so. Should any injury, beyond the usual wear, occur to the decorations and furniture of a room, the cost of redecoration or repair will be charged to the occupants of the room.

*Off-Campus Housing.* Women students may room off-campus only if approved by the Dean of Women. Men must obtain the approval of the Dean of Men. All such housing must be approved by the College, and both the student and the home owner must agree to cooperate in observing the College regulations.

## Fees, Deposits, and Expenses

*Changes in Fees.* The Board of Regents reserves the right to change fees from time to time without notice when necessary.

*Extending Credit.* The College cannot extend credit, therefore students must have on hand when registering sufficient funds to pay for registration, incidental fees, books, and board and room for one month.

*Definitions.* *Regular fees* are those paid by all students. *Special fees* are those paid by certain students only, and under the conditions indicated. *Deposits* are made to cover certain contingencies. All or part of the deposit may be returned depending upon the charges incurred by the student.

### Regular Fees

The following are the regular fees paid each semester both by regular students and by auditors:

Registration Fee .....	\$15.00
<small>Paid by all excepting extension students.</small>	
Student Activity Fee.....	\$9.00
<small>Excepting extension and correspondence students, this fee is paid by all who carry six or more semester hours. Only those students paying this fee receive activity tickets.</small>	
College Series Fee.....	\$1.25
<small>Paid by all excepting extension and correspondence students and those students.</small>	
Health Fee .....	\$2.75
<small>Paid by all excepting extension and correspondence students and those carrying less than six semester hours.</small>	
Gymnasium Fee .....	\$2.00
<small>Paid by all freshman and sophomore students.</small>	
Library Fee .....	\$2.00
<small>Paid by all excepting extension students.</small>	

### Special Fees

Special fees are paid by certain students under the conditions given below.

Non-resident Tuition Fee (per semester).....	\$125.00
<small>Every non-resident undergraduate student carrying six or more semester hours pays this fee. Every non-resident graduate student who is not registered for graduate work and not actively working toward the Master's degree pays this fee if registered for six or more hours. Graduate students doing full graduate work</small>	

are exempt from the non-residence fee, but they pay all the "regular fees." All students registering for less than six hours pay only the registration and library fee. Such students receive no football tickets or other activity benefits. Students will be exempted from this fee only when satisfactory evidence is presented to show that the following requirements have been met:

- (1) Students under 21 years of age must show that the supporting parent or guardian has been a bona fide resident of the State of Arizona for at least one year next preceding registration. If a legal resident of Arizona is appointed, the minor does not become a resident until the expiration of one year from the date of such legal appointment, and then it must be shown that such appointment was not made to avoid payment of the non-resident fees.
- (2) Students over 21 years of age must show that they have been bona fide residents of the State of Arizona for at least one year next preceding registration, and that they are eligible to become registered voters. Article VII, section 3, of the Constitution of Arizona provides: "For the purpose of voting, no person shall be deemed to have gained or lost a residence by reason of his presence or absence while employed in the service of the United States, or while a student at any institution of learning."
- (3) Aliens who have their first naturalization papers must show residence for the preceding year at least.

Responsibility for registering properly as a non-resident rests solely upon the student, and any false or misleading statements concerning residence constitute sufficient grounds for dismissal from the College. If there is any question concerning legal residence, the student is responsible for obtaining a blank from the registrar's office; filling it out completely; taking it to a notary public in the Business Office, and making a sworn statement concerning the facts given, and returning the blank to the Registrar's Office.

If the College records indicate that the student is a non-resident, the fee will be assessed. If the student is declared a resident, the fee will be refunded. Claims for refunds should be filed within 30 days of the date of registration.

**Applied Vocational and Technical Fees (per month).....\$50.00**

A fee of \$50.00 per month or fraction thereof is charged for this work. This includes the cost of tools, textbooks or other supplies. This applies to students enrolled under public law 346 and public law 16.

**Room Reservation and Breakage Deposit.....\$5.00**

A room will be reserved in one of the dormitories when the student makes a deposit of \$5.00 in the Business Office. On withdrawal from the College this deposit will be refunded less any damage done by the student to College property.

**Apartment Reservation Deposit .....\$10.00**

**Transcript Fee**

There is no charge for the first transcript. For each additional transcript there is a fee of \$1.00. Requests for transcripts should be in the hands of the Registrar one week in advance of the time needed.

**Senior Check-Out**

Each senior is entitled to one official check-out, without charge, under the curriculum designated in his application for graduation. A fee of \$1.00 will be charged for any additional check-outs.

**Auditor's Fees.....Same as regular students**

A student registered as an auditor in any course will not receive credit under any circumstances. Students carrying a full load will not be permitted to audit additional courses, unless the overload is approved.

**Laboratory Fees.....See course descriptions**  
With few exceptions such fees are not returnable.

**Special Examination Fee.....\$1.00**

When, because of absence, or for any reason, it becomes necessary for a student to request a special examination in any course, a fee of \$1.00 may be required for this special privilege.

**Comprehensive Examination Fee.....\$5.00 per semester hour**  
Paid by all students seeking to establish credit by examination.

**Teaching Entrance Test Fee.....\$0.50**

Candidates for directed teaching pay this fee for the cost of tests, giving, and scoring.

**Graduation Fee** .....\$10.00

See description under another section of the bulletin headed **Graduation Requirements and Degrees.**

**Cap and Gown Rental Fee**.....\$2.00 to \$4.50

Bachelor's cap and gown for baccalaureate and commencement exercises, \$2.00. Master's cap and gown, \$2.25. Master's hood, \$2.25.

**Fee for Dropping Course**.....\$0.50

Charged beginning Wednesday of the second week.

**Late Fees**

**Late Registration** .....\$5.00

All students registering on the date specified for the beginning of classes, or thereafter, pay this fee.

**Late Aptitude Tests**.....\$2.00

Paid by students taking the aptitude tests on the date specified for the beginning of classes or thereafter.

**Late Physical Examination**.....\$1.00 to \$3.00

Charged beginning at noon of the last day scheduled for registration.

**Late X-ray**.....Actual Cost

Charged all students who fail to take the X-ray on the date specified by the College.

**Deposits**

Deposits are required of those students wishing certain privileges or services. The deposits are returnable less any charges which may have been incurred during the term of the service being rendered.

**Locker Key Deposit**.....\$1.00

Students pay the fee at the Business Office and present the receipt to the Superintendent of Buildings and Grounds to obtain locker keys.

**Science Breakage Deposits**

Chem. 110, 111, 114, 180, Bot. 220, Zool. 232.....\$2.50  
Chem. 112, 141, 142, 211, 212, 215g, 251g, 252g, 270g, 280g.....\$5.00

**Women's Gymnasium Deposit (per semester)**.....\$5.00

This deposit will be refunded if the gymnasium suit, towels, leotard, and lock are returned in good condition.

**Military Uniform Deposit (returnable)**.....\$25.00

**General Expenses**

**Board and Room (per semester)**.....\$199.75

This fee is payable in advance at the beginning of the semester, however partial payments at approximately monthly intervals will be accepted on fixed dates set by the Business Office. No fees are charged for board or room during the Christmas vacation. No refund will be made for absences on week-ends or for short vacations. No student will be permitted to room in a dormitory unless he is carrying at least twelve semester hours of work and boarding in the college dining hall. Board-and-room tickets are good beginning the Sunday preceding the opening of classes, and ending on Saturday of the last week of the semester. Students arriving at the college before the Sunday dates mentioned may eat in the dining hall and pay for meals as served. No charge is made for rooms occupied by students during Freshman week. The right is reserved to adjust charges for board and room.

**Extra Room Charge, One in Room**.....(extra per month) \$5.00

This extra charge per month is made when one person is given the exclusive use of a double room. Ordinarily, two students share a room.

**Meals for Guests**.....regular rates per single meal

**Textbooks** .....\$20.00 up

The outlay for books and stationery will probably vary from \$20.00 to \$30.00 per year. All books and supplies can be obtained at the College Book Store.

*General Summary.* The following summary includes the fees and minimum expenses incurred by a student living in a dormitory for one college year:

Registration Fee	\$ 30.00
Activities, Health, etc.	34.00
Tuition (free to Arizona students)	0.00
Books and stationery (approximately)	25.00
Laboratory fees (approximately)	5.00
Board and room (two semesters)	399.00

\$493.00

## Payment And Refund Of Fees

### Payment of Fees

The payment of fees cannot be deferred. By regulation of the Board of Education based on a ruling of the Attorney General, registration and other college fees are payable on the day of registration.

### Method of Payment

Checks, drafts, and post office or express money orders should be made payable to the Arizona State College.

## Refunds

### Activities and Other Fees

Students officially withdrawing from the College before noon of Saturday of this first week of classes will be refunded the following fees less a \$5.00 charge for registration: The registration fee, activity fee, College series fee, health fee, library fee, and any unexpended portion of laboratory and music fees if approved by the head of the department concerned.

During the second week, one-half of these fees will be refunded, and one-fourth will be refunded during the third or fourth week. After the fourth week no refunds will be made.

### Out-of-State Tuition

Students who officially withdraw from the College before noon Saturday of the first week of any semester will be granted a refund of all the tuition fee. Those officially withdrawing during the second or third week will be granted a refund of \$75.00, and those withdrawing officially during the fourth, fifth, or sixth week will be granted a refund of \$50.00. After the sixth week, no refund will be made.

### Forfeiture of Refunds

All refunds and deposits due students for any reason whatsoever will be forfeited unless called for on or before June 30 of the College year in which they are due. Should June 30 fall on Sunday or on a day when the Business Office is closed, the refund will be made on the next business day.

# Regulations Affecting Students

## Marking System

*Undergraduate Scholarship Ratings.* Scholarship grades on the student's report card and on his permanent record card are indicated by the letters and explanations given below.

A, Highest.	D, Lowest passing.
B, Above average.	Cr., Credit, without definition.
C, Average.	E, Failure.
Wp., Withdrew, work passing.	We., Withdrew, work failing.
Inc., Incomplete, given and removed as specified below.	

*Incomplete.* A mark of Inc. is given only when a course is unfinished because of sickness or other conditions beyond the control of the student. Negligence or indifference are never accepted as reasons for giving an Inc. Incompletes must be removed in a manner prescribed by the instructor, not later than the middle of the following semester. If the Inc. is not removed, the instructor will report a mark of Wp or We.

*Marks of E.* Students receiving marks of E must repeat the course in the regular class if they desire credit. Both the E and the new mark remain as a part of the student's permanent record.

*Mark of Wp.* The mark of Wp is given whenever a course is dropped and the instructor rates the student's work as passing.

*Mark of We.* The mark, We, is given if the instructor rates the student's work as failing at the time of withdrawal.

*Dropping Course at Instructor's Request.* A faculty member will drop a student from his class with a mark of Wp or We whenever, because of absence or other reason, he thinks the work of the student is such as to justify it.

*Change of Grade.* A grade once reported to the Registrar's Office may be changed only if the faculty member certifies in writing that a clerical error has been made.

*Grade Points.* For the purpose of computing the scholarship index, grade points are assigned to each of the grades as follows: A, 4 points for each semester hour; B, 3 points; C, 2 points; D, 1 point; E, 0 point; and We, 0 point.

*Scholarship Index.* The scholarship index is obtained by dividing the total number of grade points earned by the number of semester hours in the student's course load. Courses in which marks of Wp



and Inc. are given are not included in determining the number of semester hours in the course load, but courses in which the mark, We, is given are included.

*Low Scholarship List.* All students, who, at any grading period, have cumulative scholarship indices so low as to indicate possible inability to meet the college standard of 1.75, are placed in the Low Scholarship List. Conferences with these students are held, and letters may be written to their parents to enlist their cooperation.

*Probation List.* All students, who, at the mid-semester or at the close of any semester, fail to receive passing marks in fifty percent of the semester hours for which they are registered on the second Monday of a given semester are placed on the probation list. In addition, all students, even though passing in more than fifty percent of their work, who fail to receive an average scholarship index of 1.00, are placed on the probation list.

*Disqualification.* All students whose names are on the probation list at the close of any semester are disqualified for the next succeeding semester. Students disqualified at the close of the second semester are not eligible to attend summer session or the following semester. Where mitigating circumstances are deemed sufficient, a student may be reinstated by a vote of the Reinstatement Committee. Any disqualified student has a right to be heard by this committee after making written application to the Dean of the College.

*Reports to Students.* Each student receives a report at the mid-semester of courses in which his marks are D or E. At the close of each semester he receives a report showing his standing in each course taken. These reports are handed to the student by his adviser during a conference held for the purpose of giving guidance to the student. Only the final mark for the semester is entered on the student's permanent record card.

*Reports to Parents.* A duplicate of the student's report card showing his standing in each class is mailed to the parent at the close of each semester. The mid-semester report will be mailed to any parent who sends a self-addressed envelope to the Registrar's Office.

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## Attendance

The college has no uniform system of cuts. The loss incurred by a student for absences depends upon the nature and the amount of work missed, of which the instructor is the sole judge. The instructor will

drop a student from class, and will send a drop card to the Registrar's Office whenever, in his opinion, the student has missed sufficient work that continuation in the course seems to be of questionable value to the student or to the class.

No excuses for absence from class are granted either by the administration or by instructors. The student alone assumes full responsibility for all absences. Instructors will permit students to make up tests and other work missed only when the absence was from a cause beyond the control of the student or on account of activities assigned by the College. The instructor is the judge of the validity of the reasons given for absence.

## Conduct of Students

It is the policy of the College to give students the largest degree of liberty consistent with good work and orderly conduct. Both within and without the College, students are expected to show such respect for good order, morality, personal honor, and the rights of others as good citizenship demands. Failure in these matters or neglect of academic duties will be considered sufficient cause for removal from the College.

The authority of the College is exercised over all students individually and over all student groups or organizations bearing the name of the College, or representing or purporting to represent the College in any student enterprises, to the extent necessary to safeguard the good name and well-being of the College. Any proposed enterprises by such students or organizations must receive the official sanction of the College before announcements are made of such enterprises.

The possession, serving or use of intoxicants of any kind whatsoever is prohibited on the campus, at all social functions held under the auspices of college-sponsored organizations or groups, wherever held, or at any other event in which college students participate where such possession, serving or use may reflect on the good name and reputation of the College.

The College assumes that the act of registering as a student implies full acceptance of these standards of conduct.

# Assistance to Students

## Loan Funds and Foundations

The College is anxious to be of service in assisting worthy students. A number of organizations have loan funds for this purpose. The Dean of the College keeps a list of these in his office and will lend all aid possible to students who desire loans.

*Alumni Endowment Fund.* Loans are made to second semester seniors based on need, scholarship, and character. The maximum loan is \$150.00. The interest is 4% until the date of maturity; thereafter, it is 8%

*Arizona Federation of Women's Clubs Loan Fund.* Juniors and seniors may borrow \$100.00 or more from this fund at a low rate of interest.

*D. A. R. Loan Fund.* The Charles Trumbull Hayden chapter of the Daughters of the American Revolution has a fund available for the use of responsible and worthy students during their senior year.

*DeMund Foundation.* Grants for tuition or sustenance are made deserving and needy Arizona students, based upon character, intelligence, effort, aptitude and need. Recipients must be at least partially self-supporting.

*Dixon Fagerberg Revolving Fund.* Loans are made to junior and senior women at 4% interest to be repaid within two years after graduation.

*W. K. Kellogg Foundation Loan Fund.* Loans are made in unlimited amounts to students in medical technology, either in their clinical or the pre-clinical years of their courses. The interest rate is not to exceed 2½%.

*Methodist Loan Fund.* Methodist students attending Arizona State College may borrow limited sums of money in their sophomore, junior, or senior year.

*Rotary Club Student Loan Fund.* Open to junior and senior students who are residents of Maricopa County. Rate of interest, 4%. Loan must be approved by a Rotary Club Committee.

*Harold V. Smith Educational Fund, Inc.* Loans are made to students between the ages of 18 and 25, based on integrity, intelligence, character, competency, and aptitude. Loans are made only to students who are self-supporting in whole or in part. The maximum loan for the school year is \$300.00 at 4% interest.

*Applications.* Students interested in loans or grants should make application at the office of the Dean of the College.

## Honors and Awards

*The Arizona Society of Public Accountants Award.* Made to a senior graduating with the B. S. degree with an area of concentration in accounting. Based on scholarship and contributions to business.

*Association for Childhood Education Award.* A silver trophy to a kindergarten-primary junior or senior girl, outstanding in scholarship and service.

*Business Administration Award.* A trophy is presented annually to a graduating senior for high scholarship, personality, and service.

*The Dunbar Award.* A gold key is awarded the colored graduating senior with the highest cumulative index for at least sixty semester hours of work taken at Tempe.

*The Fred M. Jahn Award.* An award of fifteen dollars presented annually to a student doing outstanding work in journalism.

*The Gibbons Leadership Awards.* Each year, Mr. M. L. Gibbons of Mesa offers two prizes of \$25.00 each to a man and a woman who stand highest on a scale based on character, leadership, scholarship, and promise of future contributions to society.

*Graduation Honors.* The honor, "With Distinction," is given to those whose index of scholarship, for all work taken at the College, is from 3.00 to 3.49 points. "With High Distinction" is given those whose index is from 3.50 to 4.00.

*Harvard Club Award.* A book or set of books given each year by the Arizona Harvard Club for excellence in some field of study designated by the donor.

*Home Economics Awards.* Two awards are given by the Home Economics department and Beta Chi to an outstanding senior and an outstanding sophomore for achievement in Home Economics and high general scholarship.

*Kappa Delta Pi Award.* An award of twenty five dollars by Kappa Delta Pi to the student having the highest cumulative index for all courses taken in the freshman and sophomore years at Tempe. The minimum number of hours is sixty.

*Kappa Delta Pi Pin.* This award goes to a graduating senior who attains the highest cumulative index for the junior and senior years under the conditions prescribed for Kappa Delta Pi award.

*The Moeur Award.* This award of \$50.00 is given by Sidney B. and Annie Laurie Lassator Moeur, both graduates of the class of 1914, to the graduate of any four year curriculum who attains the highest standing in academic work during the four years immediately preceding graduation.

*Pasteur Scientific Award.* An award of the Handbook in Chemistry is given to a freshman outstanding for achievement in general scholarship and in freshman chemistry.

*Pi Omega Pi Award.* Alpha Iota Chapter of Pi Omega Pi presents an award to the graduating senior selected as the most outstanding prospective commercial teacher.

*The Pleiades Freshman Award* is presented at the close of each year to the most outstanding woman in the freshman class.

*The Pleiades Plaque.* Awarded at the end of each semester by Pleiades to the hall having the highest collective undergraduate scholarship index. Off-campus men and off-campus women are considered as two of the groups. The group winning it three times in succession retains the plaque.

*The Robert R. Krause Award.* An award of twenty-five dollars is given to the student ranking highest in a comprehensive examination in the Biological and Chemical Sciences. The examination is held on the last Saturday of April annually.

*Rosenzweig Trophy.* This trophy is given annually by I. Rosenzweig & Sons to an outstanding letterman having the highest total point rating on athletic ability, general aptitude index, and scholarship index.

*Secretarial Award.* An award given in the business administration department to the outstanding student of the year in secretarial courses.

*Theta Chi Epsilon Award.* This award is given annually to a senior student for excellence in scholarship and Art achievement.

*West Hall Award.* An award to a resident of West Hall for outstanding achievement in scholarship, and service to the hall and to the College for four years.

*The Will H. Robinson Award.* An award of twenty five dollars, in honor of Will H. Robinson, is given at the beginning of the second semester annually to a freshman. The award is based on high scholarship for the first semester taking into consideration the number of hours the student gives to self-support.

## Scholarships and Fellowships

*Alpha Kappa Alpha Scholarship.* Alpha Sigma Chapter of Alpha Kappa Alpha Sorority presents annually a scholarship of \$50.00 to an outstanding student of the Carver High School.

*Elenore Altman Scholarship.* One scholarship is given each third year to an A. S. C. student majoring in piano. The scholarship defrays all fees for one year's study of piano.

*Alumni Scholarships.* At least two fifty-dollar scholarships are awarded annually to seniors outstanding in ability and service to the college.

*American Legion Scholarships.* Ten scholarships are given to sons of deceased veterans of World War I and II. Selections are made from the United States at large. The awards are \$400.00 for the first year, and \$100.00 for three months of actual attendance thereafter.

*Arthur Emery Harvey Scholarship in Applied Music.* A scholarship in applied piano is given yearly by Hazel Harvey Quaid to the freshman ranking highest in piano sight reading, repertoire and general musicianship. Examinations are given during freshman week.

*Associated Women Students Scholarship.* This one hundred dollar scholarship is awarded to a high-school, senior girl, outstanding in scholarship, personality, and extra-curricular activities.

*Chinese Scholarships.* Six scholarships are awarded yearly to worthy students residents of China who wish to continue their education in America. Such students should be able to read and speak English with a fair degree of understanding. These scholarships pay registration and local fees, and out of state tuition.

*Community Concerts Association Scholarships in Music.* A scholarship in voice and one in piano are awarded annually to juniors and seniors who have spent the first two years of their college study at Arizona State College and have given evidence of musical ability, sincerity of purpose, and financial need. Each scholarship is valued at \$54.00 per year.

*Delta Sigma Theta Scholarship.* Beta Theta Chapter of Delta Sigma Theta Sorority presents each year to the girl student of Carver High School who ranks highest in scholarship an award of \$50.00.

*Eastern Star Scholarship.* The Grand Chapter of the Order of Eastern Star of Arizona gives annually a scholarship of \$100.00 each semester to an outstanding woman graduate of an Arizona high school selected primarily on the basis of character, leadership, and scholarship. Preference is given to members of O. E. S., or daughters from Masonic families. Similarly qualified male veterans will be considered if no woman qualifies. On evidence of scholarly attainment the scholarship may be continued for a maximum of four years.

*Freshman Scholarships.* Several scholarships are awarded by the College each year to outstanding high-school seniors. They pay the registration, and all other regular fees for the freshman year excepting fees for private lessons. They are valued from \$55.00 to \$70.00 per year.

*W. K. Kellogg Foundation Scholarship.* Students in the last or clinical year (within one year of active service) of the medical technology course may be awarded scholarships after they have completed at least 10 weeks of the work of this year. The scholarships vary in amount. At present the amount is \$75.00. A given student is eligible both for a scholarship and for a Kellogg loan.

*Ladies Auxiliary Scholarship.* The Ladies Auxiliary to the Department of Arizona Veterans of Foreign Wars give annually a scholarship of \$125.00 to the Arizona high school student ranking highest in the National Ladies Auxiliary Essay Contest. The winner may select the Arizona state institution of higher learning which he wishes to attend.

*Latin American Scholarships.* Six scholarships are given to students from Latin American countries. These cover registration and other local fees and the out-of state tuition fee.

*Los Conquistadores Scholarships.* Members of Conquistadores have raised in Phoenix and Hayden \$200.00 each to be awarded to a worthy Spanish speaking graduate, class of 1948, of a high school in Hayden and Phoenix. Scholarships are awarded on the basis of need, scholarship, character, and promise of future success.

*Mexican Scholarship.* Six scholarships are given to qualified student residents of Mexico. They must be able to speak and read English passably. These scholarships cover registration and other local fees, and out-of state tuition fee.

*Pepsi Cola Scholarships and Merit Awards.* Scholarships pay full tuition and required fees for four years plus an allowance of \$25.00 a month during the school year and travel allowance. Scholarships are allotted on a regional basis. Winners select their own colleges.

Merit awards of \$50.00 are made to certain strong contestants failing to win a scholarship. Information concerning scholarships and merit awards may be obtained from high school principals or directly from the Pepsi Cola Scholarship Board, 532 Emerson Street, Palo Alto, California.

*Rhodes Scholarships.* These are competitive scholarships. Three candidates are chosen from the State of Arizona to compete with candidates from five other states. From these 18 candidates, six Rhodes scholars are chosen for Oxford University. The stipend is £400 per year and may be held for 3 years. Scholars must be citizens of the United States, unmarried and between 19 and 25 years of age.

*Write for Information.* Apply or write to the Dean of the College for information concerning any of these scholarships.

## Placement Service

### Placement Of Teachers

*Purpose.* The Placement Bureau of the College is maintained to assist graduating students in securing suitable teaching positions, and to help promote successful Tempe teachers in the field. It seeks at the same time to serve the best interests of the superintendents, principals, and school trustees of the state who desire to secure teachers adapted to the peculiar needs of their particular schools. Every effort is made to place all graduates in positions suitable to their preparation and ability, but the Placement Bureau does not guarantee the placement of graduates.

*Enrollment.* All graduating students may enroll with the Placement Bureau, filling out the appropriate blanks and receiving full information and instructions relative to securing a position. Complete records are kept on file in the Placement Office. Enrollment must be renewed each year if help is desired after graduation. These records consist of recommendations from faculty members who are familiar with the student's academic work, reports of supervisors and critics on the quality of work done in directed teaching, and scholarship ratings. The record also includes personality ratings and a photograph. Copies of these records are sent out upon application to superintendents, principals, or trustees, or they can be examined and reviewed by them when they visit the Placement Office.

*Interviews.* Superintendents usually prefer to select teachers after personal interviews, and by seeing them at work in their classrooms. Many visit the training schools and observe the performance of prospective teachers.

*Placement in Business.* There are many opportunities for employment in positions other than teaching. Students who desire such positions should register with the Bureau.

*Write for Information.* Requests for teachers to fill positions, reports of vacancies, and all other correspondence relative to placement should be addressed to I. D. Payne, Director of Placement.

## Student Employment

Every effort is made through consultations and records to assist students to select jobs which tend to supplement their educational goals through training and experience. If a student finds it necessary to earn part of his expenses for college, he should write to the Student Employment Office located in Room 121, Matthews Library Building, for information.



*Classes of Jobs.* Student jobs on campus fall into the following categories: office, janitorial and housekeeping, library assistants, dining hall assistants, building and grounds assistants, laboratory assistants, and general faculty assistants. In addition, a file of off-campus jobs is maintained with the cooperation of the community.

*Hours, Wages and Student Responsibility.* Student rates of pay vary from 55c to 65c per hour according to training and skill required. Students may work from five to twenty hours per week according to the requirements of the job assigned. Students working twenty hours a week will be asked to carry a reduced class schedule. All students holding jobs are expected to maintain at least a 2.00 scholarship index. Students failing to maintain this standard will be asked to drop their job and apply for other financial assistance if needed to continue their studies. Assignments are made on a semester basis. No change will be made unless an emergency arises. See also *Student Employment Bulletin* "Planning for a Student Job" page 5; "Balancing Class Schedule and Job" page 7; and "Assignments" page 7.

## Student Health Service

*Student Health Service.* This service is maintained for the purpose of constant supervision over the health of students. A dispensary and infirmary are staffed by a consulting physician and three registered nurses. The Student Health Service is located on Normal Avenue.

*Health Examination.* A health examination including Kahn and tuberculin tests and chest x rays is required of all new, entering students prior to registration. A physician's certificate of smallpox vaccination within the past four years must be furnished at the time of the examination. Students are urged to have all remediable defects, such as eyes, ears, teeth, tonsils, etc. corrected in advance of matriculation to prevent possible loss of time from studies. The Student Health Service reserves the right to make recommendations involving the health of students in regard to any activity in connection with their college program. Restricted class schedules or physical activity programs may be recommended by the Student Health Service on the basis of findings in the health examination.

*Dispensary and Infirmary Treatment.* Dispensary services are available during regularly posted hours and at any hour for emergencies to all regularly registered students. No illness will be cared for in the dormitories, nor will any prescription be made for a student not reporting in person to the Health Service. Infirmary care is given according to need as determined by the staff. No student may have

more than one week's bedside care without cost. Contagious diseases must receive care off-campus immediately following diagnosis.

*Illness or Injury Must Be Reported.* Any illness or injury must be reported to the Student Health Service without delay. A campus resident is required to report illness immediately to the head resident of his or her hall. Failure to do so may result in his being asked to leave the hall. Before leaving the campus because of illness, students are to report to the Student Health Service. Upon their return they are to report for approval to re-enter classes. In all cases diagnosed as contagious, the student, on his return to the college, will present to the college nurse a written statement from the attending physician. Health reports are sent to the family physician upon request of the student.

*Financial Responsibility.* With the payment of the health fee of \$2.75 each semester, all regularly registered students are entitled to student health service care according to established policies. Students may be referred to consultant specialists when the college physician considers it advisable, but such fees must be borne by the student. When hospitalization or surgical attention is considered necessary, the college assumes no financial responsibility. Parents are consulted in advance of hospitalization if at all possible. A fee of \$4.00 a day is charged for Infirmary care after one week.

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# Student Group Activities

## Student Government

*Associated Students.* Every student of the college is automatically a member of the Associated Student Body. By encouraging student participation in the government of the college, the Board of Regents, the President, and the faculty challenge every student to accept his responsibility for stimulating and regulating student activities, and customs, and for promoting the intellectual, moral, and social welfare of all students in a truly democratic manner. A Council selected from the student organization and elected by the student body functions as the executive body of the Associated Students.

*Associated Men Students.* Every man registered in the College is a member of the Associated Men Students. The purpose of this organization is to promote the highest standards of college life, to aid men students in problems of adjustment and social relationship, and

to make provisions for social activities and for such other functions as may be in the best interests of the men students and the College. The group is governed by officers elected by the members of the organization.

*Associated Women Students.* Every girl registered in the College is a member of the Associated Women Students. The object of this organization is to promote the special activities of interest to the women students. A governing body called the Activities Council is composed of duly elected officers, the vice-presidents of the women's dormitories, and a representative from each women's society on campus.

## Student Organizations

*Objectives.* A wholesome, integrated program for the college student is provided through student organizations. According to the individual interest and available time, any student may choose those activities which meet his desire for congenial companionship, his need for group security, his need for recognition, his need for creative effort, his need for growth physically or socially—or supplement his classroom work in the many activities which are an extension of classroom programs in their professional emphasis.

*Scholastic Requirements.* In order to be eligible for admission to membership in any student organization, a student must have a scholarship index of 2.00 or better in all courses carried for the semester immediately preceding. Any member of such an organization whose semester report shows a scholarship index of less than 2.00 shall be suspended from active work in the organization for one semester.

### Recognition and Departmental Organizations

*"A" Club (Men).* Consists of all varsity letter winners in all major sports.

*The "A" Club (Women).* An honorary group of women who have earned 1,000 points in dance and sports.

*Alpha Mu Gamma.* A national honorary fraternity for students of foreign language.

*Alpha Psi Omega.* A national honorary dramatic society open to those who acquire twenty points in dramatics.

*Beta Chi Epsilon.* For girls whose major interest is in home economics. Affiliated with the National Home Economics Association.

*Blue Key.* A national honorary service organization composed of men students of the junior and senior class.

*Geographic Society.* An organization of students who excel in geography, general scholarship, and character.

*Kappa Delta Pi.* A national honorary education society fostering high professional and scholastic standards, and service.

*Mu Rho Alpha.* An honorary fraternity which aims to recognize and develop musical ability and appreciation.

*Pasteur Scientific Society.* Affords opportunities for student activity in the biological and physical sciences.

*Pi Kappa Delta.* National honorary forensic society, is open to those who make outstanding records in inter-collegiate debate and oratory.

*Pi Omega Pi.* A national honor society for commerce majors interested in becoming teachers of commercial subjects.

*Pleiades.* An honorary women's service organization composed of twelve women selected from the junior and senior classes.

*Psychology Club.* Open to majors and minors in Psychology. Promotes interest in Psychology as a science.

*Sigma Pi Sigma.* A local honorary accounting society, stressing originality, scholarship, and sociability.

*Theta Chi Epsilon.* An honorary art fraternity, aims to develop an appreciation for art and enrich aesthetic experiences.

*Women's Physical Education Club.* A departmental organization promoting physical education objectives.

### Special Interest Organizations

*Aggie Club.* Open to all majors and minors in agriculture. Promotes the interest of agricultural education.

*American Association of Engineers.* For all students taking engineering.

*Aristavets.* A veterans' organization devoted to the improvement of student-veteran's interests in general.

*Association for Childhood Education.* A branch of the international organization. Promotes kindergarten-primary education.

*Camera Club.* The State Camera Club is open to all those interested in photography.

*Chess Club.* For all interested in the game of chess.

*Dunbar Literary and Social Club.* Organized by Joe Lewis. Provides literary and social opportunities for colored students.

*Future Teachers of America.* An organization devoted to the interests of prospective teachers.

*4 H Club.* Trains for leadership in 4 H clubs. Said to be the only club of its kind in the United States.

*La Liga Panamericana.* A club which promotes friendly relations among those interested in things Spanish.

*Los Conquistadores.* Promotes the welfare of the Spanish-speaking students on the campus.

*Racquet Club.* A club interested in tennis.

*Red Cross College Unit.* For those interested in community work sponsored by the Red Cross.

*Russian Circle.* Purpose is a better understanding of Russia and its language and literature.

*Winged Foot.* Promotes interest in the sport of track and field.

*Women's Athletic Association.* Cooperates in furthering opportunities for participation in sports and dance activities.

*The Religious Council.* Composed of representative students from all denominations. Promotes religious programs, and fosters religious living.

*Campus Religious Organizations.* Opportunity for participation in religious activities is offered through various organizations for college students meeting on the campus.

Campbell Club (Christian); Canterbury Club (Episcopal); Hillel Foundation (Jewish); Lambda Delta Sigma (L. D. S.); Newman Club (Catholic); Pilgrim Fellowship (Congregational); Student Association (Lutheran); Wesley Foundation (Methodist); Westminster Club (Presbyterian); Youth Fellowship (Baptist).

## Sororities and Fraternities

*Inter Fraternity Council.* Composed of presidents of all fraternities and the Dean of Men. Sponsors meet with fraternities.

*Inter Sorority Council.* The Inter Sorority Council is composed of the president and sponsor of each sorority and the Dean of Women.

*Ulysses Club.* Composed of men and women members of national fraternities not represented on this campus.

*Sororities.* The following Greek letter societies carry on the traditional objectives of each group:

<i>Kappa Kappa Alpha</i>	<i>Phi Beta Epsilon</i>	<i>Pi Alpha Gamma</i>
<i>Chi Sigma</i>	<i>Kappa Theta</i>	<i>Philomathian</i>
	<i>Zeta Sigma</i>	

*Fraternities.* The following local Greek letter societies carry on the traditional objectives of each group:

*Lambda Phi Sigma*

*Pi Delta Sigma*

*Mu Sigma Chi*

*Tau Sigma Phi*

## Special Group Activities

### Physical Activities

The College is a member of the Border Conference and is represented in such sports as football, basketball, field and track, baseball, tennis, and golf. In addition to the intercollegiate program is a well-planned intramural organization. This program includes all of the major sports with several additions to the intercollegiate program.

Both the men's athletic field and the women's field afford excellent facilities for the various types of sports, games and athletic events conducted by the College. Goodwin Field is equipped with a system of flood lighting permitting football and track events to be held at night. The Men's Gymnasium cares for all men's indoor events, while the Women's Activity Building serves a double purpose. It is the center for the social activities of the College, and for all women's indoor physical activities.

### Speech and Dramatics

*Debate.* The College offers an extensive program of intramural and intercollegiate debating. The division of speech arts is affiliated with three forensic leagues. The Arizona Speech Arts League, which sponsors a tournament among five colleges in the state; the Western Association of Teachers of Speech, which sponsors a fall tournament for all western states; and the Pi Kappa Delta league, which holds several tournaments, most of them in the coast states. Students who become members of winning teams are eligible for membership in Pi Kappa Delta, national honorary forensic society.

*Oratory.* Campus orators are given opportunity to compete in a number of contests, local, state, and interstate. In the state contest three cash prizes aggregating \$100.00 are offered for the best original orations on international peace.

*Dramatics.* The work in dramatics is designed to accomplish the following objectives: (1) To develop talent through participation in plays, recitals, and production. (2) To fulfill the social and therapeutic functions of dramatics in cases of defective personality. (3) To improve audience standards of entertainment. Active participation in dramatics may lead to membership in Alpha Psi Omega, national dramatic fraternity.

## Music Activities

Opportunities are given for the expression of musical talent in recitals by the students of voice, piano, violin, brass and woodwind instruments; by the glee clubs; and by the orchestra. College credit is given for regular work in these organizations. During the year concerts are presented on the campus.

## Student Publications

*The State Press.* Under the auspices of the Associated Students, there is published, weekly through out the college year, a seven-column, six page newspaper. It serves as a record of current events of campus life and is used as a laboratory for students in classes in journalism. The journalism instructor serves as adviser. The editor and the business manager are appointed by the publications board. Subscription to the publication is included in the activities fee.

*The Sahuaro.* The Sahuaro, traditional yearbook of the college, is published annually by a student staff. It is customary that members of all four classes have individual portraits in the class section of the annual. The book is financed from three sources, the student activity fee, advertising, and student subscriptions.

## Student Social Program

The college calendar brings together programs and functions held on the college campus. A wide variety of activities is scheduled throughout the year: Athletic events, social events, including dances, dinners, banquets, teas, and special meetings. Residence halls, both men and women, play an important part in carrying out the social program of the campus under the supervision of carefully selected personnel officers who are members of the faculty. In addition to the all college social functions, the various organizations offer social opportunities varying with their interests and fields of specialization.

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# General Information

## Alumni Association

*Membership.* The Alumni Association was organized under the leadership of President E. L. Storment, in June, 1894. Keeping pace with the tremendous growth of the college, the association employed a full-time executive secretary in September, 1947, and has embarked on a broad program of activities with a permanent staff now expanded to four members and a distinguished board of officers and directors.

There are about 7000 members including the class of 1947. All students become active members when they pay their graduation fee. All students who have attended the College at least one semester are listed as associate members.

*Endowment Fund.* Under the leadership of the late Clarence M. Paddock, '03, and Leona M. Haulot, '02, the Association raised an endowment fund of \$10,000.00 for the assistance of worthy students. The fund has now increased to more than \$20,000.00, and more than 400 students have received aid from the fund. Loans are made only to seniors in the second semester.

*Alumni Scholarships.* At least two scholarships are given each year to outstanding students. See description under "Awards and Prizes."

*Alumni Housing.* To meet the need of housing returning veterans and their families, the Alumni Association has financed a \$40,000 emergency housing development that includes fifty trailer homes and twenty faculty apartments.

*Alumni Magazine.* The Association's official magazine, the *Statesman*, is published quarterly for all active members. Present circulation is now 3,000.

*Alumni Induction Ceremony.* This ceremony is held annually during commencement week. Members of the graduating class receive alumni membership cards and are acquainted with other alumni and with the Alumni Association program.

*Alumni Register.* The Alumni Association maintains a card file of the names, addresses and occupations of all active members of the Association. This is a difficult task because names and addresses are constantly changing. Alumni and friends can be of real service by sending a post card to the Alumni Secretary giving changes in names and addresses.

### Officers of the Alumni Association

Sidney B. Moeur, '14, President.....	Phoenix
Pat Downey, '38, First Vice-President.....	Phoenix
Joe Selleh, '32, Second Vice-President.....	Tempe
William Baxter, '35, Third Vice-President.....	Phoenix
Worth L. Phelps, '37, Secretary.....	Mesa
George Morrell, '41, Treasurer.....	Tempe
Lynn Laney, '03, Board of Directors.....	Phoenix
John R. Sandige, '14, Board of Directors.....	Phoenix
John R. Kendall, '33, Board of Directors.....	Phoenix
Charles A. Stauffer, '01, Board of Directors.....	Phoenix
Hascall Henshaw, '41, Board of Directors.....	Tempe
Lyle Trimble, '35, Board of Directors.....	Mesa
James W. Creasman, '35, Executive Secretary.....	Arizona State College



## Extension Division

Many teachers who desire to continue their studies while actively engaged in teaching find it impossible to attend the regular sessions of the College. In response to this demand, the Extension Division has been established and offers two special types of service: extension classes and correspondence courses. By these two methods, the regular College courses are made available to the teacher in service at a moderate cost.

In addition, the College offers its services to teachers and communities through radio service, speaker and consultant service, bureau of audio visual aids, school visitations, published bulletins, and other means.

### Extension Classes

Extension classes are those given by regular members of the college faculty in the cities or towns within easy reach of the College. By taking advantage of courses thus offered, teachers are enabled to accumulate the credits needed for the renewal of certificates or for the completion of requirements for the degree. These courses carry either two or three hours of credit, and are identical in content with the corresponding courses offered in the regular session. Work done in extension classes or by correspondence does not meet the residence requirements.

Courses in any department of the college will be offered if there is sufficient demand for them. For the organization of a class, a minimum of twelve students must be registered. Classes are organized in September of each year. Since the selection of courses to be offered is determined largely by the number of applications received, it is important that applications for specific courses be filed with the Director as soon after September first as possible.

The fee for all extension courses is \$7.50 per semester hour, and is payable at the time of registration. For further information concerning extension courses, write the Director of Extension.

### Correspondence Courses

Through the use of the mails, the privileges of the college campus and services of the teaching faculty are extended to the student whose daily occupation prevents enrollment in the regular sessions.

Persons desiring to enroll for correspondence courses will write to the Correspondence Division for an enrollment blank and a copy of the Bulletin which gives a list of the courses offered. When this enrollment blank, properly filled out and accompanied by remittance

to cover the fee, is received, the first lesson assignments will be mailed to the student.

The fee for correspondence courses is \$7.50 per semester hour of credit carried. Credit earned in extension classes and in correspondence courses may be applied toward the bachelor's degree; however, not more than one-fourth of any curriculum leading to the degree shall be taken in extension classes or by correspondence, and not more than half of this shall be done by correspondence. Correspondence courses are not accepted for credit toward the degree of Master of Arts in Education.

No student doing work in residence may register for a course in extension or by correspondence without obtaining the approval of the Admissions and Standards Committee. All inquiries concerning extension classes or correspondence courses should be addressed to the Director of Extension.

### Bureau Of Audio Visual Aids

The College maintains an audio-visual library of films, slides, and film-strips, valued at \$25,000. The films are cooperatively owned by forty one schools, including thirty elementary and eleven high schools. Any school in central Arizona may become a member by depositing films in the library in ratio to the school population. Information concerning membership may be obtained by writing to the Director, Bureau of Audio-Visual Aids.

In addition to the approximately five hundred school-owned films, the library contains seventy five government and industrial films which may be used by any responsible organization. Possible sources of other audio-visual aids may be obtained from the Bureau files. The latest service of the Bureau is the rental circulation of a series of five teacher education films, visualizing classroom activities and analyzing and evaluating teaching techniques. They are designed to help teachers improve their methods.

## The Summer Session

*Two Terms.* The summer session consists of two terms of five weeks each. It meets the needs of superintendents, principals, supervisors, regular college students, and recent graduates of high schools who wish to earn credits to meet the requirements for the degree of Bachelor of Arts, or the degree of Master of Arts in Education, or for the renewal of certificates.

*Air Cooling.* The Matthews Library is air cooled by the latest refrigeration system. Students can study in comfort and attend classes in comfort in any of the classrooms in the library.

*Forenoon Classes.* Classes meet in the forenoon only, leaving the afternoons open for study, reference reading, laboratory work or recreation. This gives students a fine opportunity to have individual conferences with faculty members as desired.

*College Credit.* Since the class periods are extended from fifty to sixty minutes, students can earn six semester hours for each term, or twelve hours for the entire summer session. No student will be permitted to register for more than six semester hours per term. Full residence credit is given. In three full summer sessions, the residence requirements of the college can be met. By attending summer sessions, students can graduate in three years or less.

*Admission to the Summer Session.* In general, applicants for admission are expected to present evidence of graduation from an approved four year high school, or evidence of good standing in an accredited college. Mature students, over 21 years of age, are admitted without the above qualifications, but with the understanding that all admission requirements must be satisfied before they can become candidates for the bachelor's degree.

*Graduate Study.* The summer session offers an excellent opportunity for superintendents, principals, supervisors, and other teachers, who have already acquired the bachelor's degree, to do graduate work leading to the degree of Master of Arts in Education, without loss of time in their professional capacity or sacrifice of salary.

*Fees and Expenses.* The tuition fee is \$32.50 per term, both for residents and non residents of Arizona. Textbooks and stationery may be purchased at the college book store on the campus. Board and room for the summer are furnished on campus at the prevailing rates.

*Write for Bulletin.* Those teaching in Arizona schools will receive the summer session bulletin in March. Others should send their requests for bulletins or for other information to the Director of Summer Session.

## Directed Teaching

*Admission to Directed Teaching.* Admission requirements for directed teaching are as follows:

1. Senior rank.
2. Cumulative scholarship index of 1.75 or better.
3. Passing grades in teaching entrance tests.
4. Credit in required courses of the first and second years of a teacher education curriculum.
5. Education courses prerequisite to teaching. (See a list of these under the heading, Teacher Education Curriculums.)

*Requirements.* All students who are candidates for the bachelor's degree and elementary certification teach in the training schools for one-half day for one semester either the first or second half of the fourth year. Students who are preparing for secondary certification teach for one quarter day for one full semester in either the first or second half of the fourth year. Regular class work in school law and techniques of school management parallels the directed teaching. The student's load is limited to sixteen semester hours during the semester in which he is teaching. Student teachers are not permitted to take part in activities that interfere with their directed teaching, conferences, or other duties in the training school.

*Training Schools.* The College has available several schools for the training of student teachers. Many students do directed teaching in the Phoenix schools. Each school presents its own particular type of problems, so that the institution is enabled to provide special training for all types of teaching, from the nursery to the twelfth grade. All these schools are regular public schools, and class conditions parallel those in the other public schools of the state.

*Ira D. Payne Training School.* This modern building is located on the college campus. It houses a kindergarten, the elementary school composed of grades one to five, inclusive, and the junior high school composed of grades six to eight, inclusive. A well-designed activity and reading-readiness program is carried on in the kindergarten. Special attention is given in the elementary school to the social development of children, activity units, auditorium work, music, and play activities. The distinguishing characteristics are a flexible program, departmentalized work, limited electives, work adjusted to individual differences, and emphasis on the practical arts and activity work in addition to the regular subjects.

*Nursery School.* A modern, well-equipped nursery school is located in one wing of the Home Management House. This school provides experience, through directed teaching in this field, for students who are preparing for vocational certification in home making.

*Rural School.* Located two miles south of Tempe, this six-room school under the direction of a trained supervisor prepares teachers for the rural schools of Arizona. Every effort is made to keep conditions typical of rural situations elsewhere so the student may learn to handle actual rural problems. Student teachers are furnished transportation on college buses.

*Tempe Grammar School.* A limited number of students do directed teaching in the city schools under the supervision of the director of training schools and the regular teachers. The equipment and the program are similar to those of the other schools.

*Phoenix Grade Schools.* Directed teaching may be done in some of the elementary schools by students interested in certain types of teaching.

*Phoenix High School.* Students preparing to teach in secondary schools may do their directed teaching in Phoenix Union High School, under the guidance of the supervisor of high school teaching, the director of teacher training of the College, and the head of the department in which the teaching is done.

## The College Libraries

*Matthews Library.* The library occupies the entire upper floor of the Matthews Library and Administration Building. The reading rooms have a seating capacity of approximately three hundred students. The library contains an excellent reference collection, the Arizona collection, as well as other special collections. A growing collection of bound periodicals is available for reference and research. The library is a recent United States government depository for federal documents. The periodical subscription list includes the outstanding general and professional magazines and journals, as well as leading newspapers of the nation and state. The Carnegie Endowment for International Peace maintains a collection of books in the library for the International Relations Club.

*Training School Library.* In addition to the general library, there is a children's library in the Training School. This collection contains more than 5,000 carefully selected juvenile books covering all types of literature. The book collection is supplemented by a file of pamphlets, pictures, and other materials; by a selection of outstanding juvenile periodicals; and by a textbook collection for the enrichment of directed teaching as well as for the children's use.

*Curriculum Center.* Housed in rooms 2 and 4 of Matthews Library Building is the curriculum laboratory, the work of which is closely tied in with the audio-visual facilities. These two projects are designed to serve the needs of teachers in training and Arizona teachers in service by bringing together pertinent books, courses of study issued by outstanding school systems, publications of the various state departments of education, textbooks used in Arizona elementary and secondary schools, monographs, teaching units, films and film-strips, and other supplementary materials which teachers are finding increasingly valuable in enriching classroom practices and extra-curricular activities. Materials useful in the guidance process, including most of the recent standardized tests and testing aids, are also available.

# The Graduate Division

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## The Graduate Program

*Organization.* In March, 1937, an Act of the Thirteenth Legislature authorized the Arizona State College to grant the advanced degree of Master of Arts in Education. A program of graduate work has been offered since the 1937 summer session.

The Graduate Council is responsible for the development and formulation of general policies and for the approval of procedures. The members of the Council are appointed by the President of the College. The Director of Graduate Study acts as chairman of the Graduate Council and is directly responsible for the administration of its policies and program. The Committee on the Graduate Offering is responsible to the Graduate Council for the development, supervision, appraisal, and approval of courses that shall constitute the graduation offering. This Committee includes the heads of the departments of the College and the Director of Graduate Study as chairman.

*Purpose.* The program of graduate work at Arizona State College has for its primary purpose the preparation of professionally competent teachers and other educational workers.

The interests, needs, abilities, and purposes of each student are utilized in organizing a unified and balanced program of work. Programs of graduate work leading to the degree of Master of Arts in Education are provided for students who have as a central purpose preparation for (1) primary, elementary, or secondary teaching, (2) administration and supervision of elementary or secondary schools, (3) special educational services such as remedial reading, student personnel, and guidance work, or (4) educational pursuits other than public school work.

High scholarship and professional competency are required in one or more of these areas. Students whose major purpose is preparation for teaching, particularly at the secondary school level, will be expected to include in their programs such courses in fields other than education as may be essential for the development of competency in a major teaching field.

The degree of Master of Arts in Education is conferred upon the satisfactory completion of the five-year secondary curriculum or upon the completion of an appropriately chosen program of at least thirty semester hours of graduate work following graduation from any teacher-education curriculum.

The graduate program is designed to serve not only the needs of students who desire the master's degree, but to meet the needs of students who may wish to continue their professional preparation, meet certification requirements, or broaden their education without reference to the requirements for a degree.

## Admission to Graduate Work

A student who has received the bachelor's degree, or its equivalent, from an approved college or university, may be admitted to graduate study at Arizona State College. Graduate students are admitted to Regular or Special Standing.

*Regular Standing.* To be admitted to regular standing, graduate students must file an Application for Admission to Graduate Study leading to the master's degree, and file official transcripts of all college work done elsewhere. More specifically, the following criteria may be employed in determining an applicant's eligibility for admission to regular standing: (1) A bachelor's degree from an approved institution. (2) An acceptable scholastic average in undergraduate work. (3) High scholarship in graduate work done elsewhere. (4) An undergraduate program showing breadth of content, and a satisfactory concentration in special fields.

*Special Standing.* Graduate students not seeking the master's degree are admitted to special standing on filing an Application for Admission to Graduate Study. Credit earned as a special graduate student may be applied toward the requirements for the master's degree only upon the approval of the Director of Graduate Study after transfer from special to regular standing.

*Transcripts.* Transcripts of undergraduate and of graduate work done elsewhere should be sent to the office of the Registrar 30 days prior to initial registration. Graduate students qualifying for an Arizona teaching certificate must file two copies of transcripts of undergraduate and of graduate work done elsewhere. The second copy will be sent to the State Department of Public Instruction with the application for the teaching certificate.

*Registration.* Graduate students register on the regular registration days at the beginning of each semester or summer term.

*Course Load.* Graduate students may not register for more than sixteen hours of work, inclusive of thesis, in any semester, nor for more than six semester hours, inclusive of thesis, in a single summer term. Students employed part time may not register for a full course load. In-service teachers, employed full time, are permitted a maximum load, inclusive of thesis, of five semester hours in any semester.

*Advisement.* The Director of Graduate Study is general adviser to all graduate students until their advisory committees have been appointed. Students starting graduate work in either semester of the academic year or either term of the summer session shall request the appointment of his committee before the middle of the first semester of residence, or the end of the first summer term.

## Admission to Candidacy

Admission to graduate study does not imply admission to candidacy for a master's degree. Admission to candidacy for the degree of Master of Arts in Education is contingent upon the recommendation of the student's advisory committee and the approval of the Graduate Council.

Before being accepted as a candidate for the degree of Master of Arts in Education, a student will be expected to have: (1) Given evidence of personal and professional fitness to become a candidate for a professional degree in Education. (2) Attained a satisfactory level of competence as a teacher through pre-service or in-service teaching experience. (3) Selected a balanced program of graduate work directed toward the realization of a definite and worthy objective. (4) Demonstrated ability to do satisfactory and creditable work at the graduate level. (5) Selected a suitable thesis problem. (6) Shown promise of ability to do critical thinking and of ability to carry forward an original and independent study or investigation.

Before filing an Application for Admission to Candidacy, students may be required to take certain qualifying examinations. Advisers may arrange with the Director of Graduate Study for the administration of such examinations, oral or written, to individual students before recommending them for admission to candidacy.

Each student shall file with the Director of Graduate Study an Application for Admission to Candidacy not later than four months prior to the end of the semester or summer term in which he expects to complete the requirements for the degree, but not until he has completed at least twelve semester hours of graduate credit, inclusive of current registration, at Arizona State College.

## Requirements for the Master's Degree

*Program of Course Work.* The degree of Master of Arts in Education may be conferred upon a student who, having been accepted as a candidate for the degree, completes with high credit the program of work outlined in his application for admission to candidacy. This program shall include a minimum of thirty semester hours of advanced



work so planned as to meet the approval of the student's advisory committee and the Graduate Council.

*Prerequisites.* Graduate students who intend to become candidates for the master's degree are required to present a minimum of twenty-four semester hours of undergraduate credit in Education and related courses. Graduate work in both education and academic courses presupposes certain undergraduate course prerequisites or an equivalent background. In general the student will be expected to have completed twenty-four semester hours of credit, or the equivalent, in a given field before enrolling in graduate courses in the same or closely related field. Fifteen semester hours of credit, or the equivalent, in the given field is the usual prerequisite for graduate credit in approved upper division courses in the same or closely related fields.

*Residence.* Candidates for the master's degree are required to complete a program of twenty-six hours of graduate course work (four semester hours for thesis excepted) in residence at this institution. This requirement is designed to assure for most students a minimum of residence study of two semesters or five summer terms.

*Graduate Credit Earned During Senior Year.* A senior student, regularly enrolled at Arizona State College, who is within twelve semester hours of completing the requirements for the bachelor's degree, may register for a sufficient number of hours in approved upper division courses to complete his semester or term program.

*Transfer of Graduate Credit Earned Elsewhere.* Under certain circumstances, a student who holds a bachelor's degree from Arizona State College, and who has taken graduate work at some other approved institution, may transfer as many as six semester hours to be applied toward the requirements for the master's degree.

*Graduate Credit in Extension Courses.* A maximum of six semester hours of credit earned in approved graduate extension courses may be applied toward the requirements for the master's degree.

*Graduate Credit for Summer Work.* All of the course requirements for the master's degree may be completed in summer residence. Six semester hours of graduate credit may be earned in a single summer term.

*Time Limit.* Graduate work will be accepted for credit on the master's degree only if completed within a period of five years preceding the date on which the degree is conferred.

*Course Grades and Credit.* The college grading system, A, B, C, D, E, and Inc., is used. The twenty-six semester hours of graduate credit (exclusive of thesis) accepted in fulfillment of the requirements for

the master's degree shall average not lower than "B" grade. Course work, other than thesis, reported "Incomplete" must be completed within one year of the official ending of the course.

*Thesis.* A thesis is required in partial fulfillment of the requirements for the master's degree. The thesis may count for not more than four semester hours of graduate credit. In the selection of a suitable thesis problem, the student shall be guided by his adviser. The adviser shall assist the student in the selection of a problem, inspect and approve the preliminary and final drafts of the thesis, and exercise general supervision over matters pertaining to the organization, development, and preparation of the study in final form.

On or before April 1, the student shall deliver to the office of the Director of Graduate Study: (1) Two typed copies (the original and the first carbon) of his complete thesis, approved and signed by his adviser. (2) Two typed copies of an abstract of his thesis, approved and signed by his adviser. (3) A receipt from the Business Office for a \$5.00 deposit covering the cost of binding the two copies of his thesis. The Director of Graduate Study will countersign the receipt covering the cost of binding to indicate that the two copies of the thesis have been accepted for binding. The two bound copies shall be deposited in the college library.

*Final Examinations.* Candidates for the master's degree are required to pass final written and oral examinations. Upon final approval and signature of the student's thesis, the adviser will arrange with the student dates for the examinations. The written examination is prepared, administered, and evaluated by the student's adviser, and is filed in the office of the Director of Graduate Study. The oral examination is conducted by a committee of three consisting of the student's adviser, his committeeman, and a member appointed by the Director of Graduate Study.

*Application for Graduation.* Following admission to candidacy, and not later than March 1, the student shall pay a graduation fee at the Business Office and shall obtain from the Registrar's Office an application for graduation and shall file it there.

*Conferring the Master's Degree.* Candidates for the master's degree are required to be present at the commencement exercises in the prescribed academic costume. Exceptions to this regulation shall be granted only upon petition to the Director of Graduate Study and the President of the College.

## The Graduate Offering

*Approved Graduate Courses.* Courses which have been approved for graduate credit by the Committee on the Graduate Offering and the Graduate Council constitute the graduate offering. Courses open only to graduate students are numbered 300 and above. Candidates for the master's degree must present at least fifteen semester hours of credit, inclusive of thesis, in courses numbered 300 and above. Courses numbered 200-299 followed by "g" are upper division courses approved for graduate credit. Not to exceed fifteen semester hours in approved upper division courses will be accepted toward the master's degree.

*Individual Problems.* A special type of graduate work is provided through Individual Problem courses. Individual Problem courses carry the number 390 in each department. Ordinarily registration for such courses is limited to students who have been admitted to regular standing and have completed, or are currently registered for, five or more semester hours of graduate course work. Ordinarily not more than six semester hours in Individual Problem courses will be accepted toward the master's degree.



The Arts Building. Splendid facilities for instruction in the fields of Art, Music, Commerce, and Home Economics are provided in this commodious, modern structure.

# The Curriculums

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*Grouping of Curriculums.* The curriculums offered by the college are listed under three headings: (1) Teacher-Education, (2) Arts and Sciences, (3) Pre professional and Professional, (4) Technical and Semi Professional. Several curriculums are found under each heading.

*Selecting a Curriculum.* Each student must designate at the time of registration the curriculum he proposes to follow. Selection of curriculums should be made with great care since a change of curriculum may retard the student's progress toward graduation. Students who have their goals well fixed on entering college have a distinct advantage over others who do not.

On entering the College, a faculty member will be assigned to each student as a curriculum adviser. See the section entitled, "Curriculum Advisers and Guidance," under the heading marked, "General Information."

*Meeting New Requirements.* When new curriculum requirements are made, students are asked to conform to them in so far as this is possible without working a hardship upon the students concerned.

*Withdrawal of Courses.* The College does not offer each year all of the courses listed in the catalog. The right is reserved to cancel any offerings if conditions justify it.

*Selection of Courses.* In any curriculum, freshmen and sophomores should select courses numbered from 100 to 199; juniors and seniors, those numbered from 200 to 299; and graduates, those numbered from 300 to 399 or those numbered 200 to 299 with a "g" attached. Exceptions may be approved by curriculum advisers.

*Special Problem Courses.* Courses numbered 290 indicate special problem courses. These are really honor courses given only to outstanding students capable of carrying on individual work effectively. The approval of the instructor and the head of the department must be obtained before a student will be registered for a special problem course. Freshmen and sophomores are not eligible to take special problems.

*Individual Problems.* These are strictly graduate courses. See description under the heading, "The Graduate Offering".

*Starred Courses.* In a number of the curriculums given below, certain courses have a star placed in front of them. This indicates that the course is given both the first and second semester of that year. The desire is to have one-half of the students take the course the first semester, and the other half the second semester.

*Morning and Afternoon Classes.* Students registered for a full load will generally find it necessary to carry classes both in the forenoon and the afternoon.

## Teacher-Education Curriculums

*Curriculums and Degrees.* There are three teacher education curriculums: Kindergarten-Primary, Elementary, and Secondary. Each of these curriculums leads to the degree of Bachelor of Arts in Education requiring a minimum of 126 semester hours of work. The secondary curriculum provides a five-year program requiring thirty hours of graduate work of which at least six hours must be in Education. This five-year program may lead to the degree of Master of Arts in Education. Students who complete the kindergarten-primary, or the elementary curriculum may also arrange for a program of studies leading to the degree of Master of Arts in Education.

*Arizona Certification.* The State Board of Education issues the following types of certificates: (1) Kindergarten-Primary, (2) Elementary, (3) Pre-Secondary, (4) Secondary, (5) Administrative, (6) Special in Art, Music, Physical and Health Education. Students already working on special certificates in Commerce, Home Economics and Industrial Arts must complete them before September 1, 1950, but no student may hereafter start work leading to these certificates. For complete details concerning certification, students should refer to the Rules and Regulations published by the State Board of Education, or consult with Mr. Payne in the Placement Office.

*General Education.* It is assumed that all teachers should have a background of general knowledge and culture. Therefore, many of the required courses in the first two years in all of the teacher-education curriculums are identical. Liberal allowance has been made for electives to meet individual needs and desires for service in public education.

*Major and Minor Teaching Fields.* A major or minor teaching field is not required of students pursuing the kindergarten-primary or the elementary curriculum. In the five-year secondary curriculum the student must complete at least one major teaching field consisting of forty five hours and one minor teaching field of at least fifteen hours. It is recommended that those seeking the secondary certificate should complete one major and two minor teaching fields. By so doing they will increase their opportunities for employment because they will be prepared to teach in at least three fields. The required studies count toward the completion of major and minor teaching fields in all curriculums. In selecting major and minor teaching fields, such students should keep in mind the requirements of the North Central Association,

the Arizona State Board of Education, and the combinations of subjects usually assigned beginning teachers in Arizona high schools. Information concerning these matters can be obtained at the office of the Director of Teacher Training. Students registered under one of the teacher-education curriculums and pursuing a major teaching field in science or social studies are permitted to substitute the lower division course requirements in the respective major fields for the generalization requirements: G. S. 100 and 110; History 101 and 102 or 103 and 104.

*Admission to Directed Teaching.* All candidates for directed teaching must meet the following requirements:

- (1) Have senior standing.
- (2) Have a cumulative scholarship index of 1.75 or better.
- (3) Pass the teaching entrance tests.
- (4) Have credit in the required courses of the first two years of the teacher-education curriculum being followed.

In addition, those pursuing the kindergarten-primary curriculum must, before admission, have credit in Construction Activities, Play Education, Kindergarten-Primary Curriculum, Elementary Science, Language Arts, and Educational Measurements. (Kindergarten-Primary curriculum and Educational Measurements may be taken concurrently with directed teaching.)

Those taking the elementary curriculum must, before admission, have credit in Educational Psychology, Language Arts, Elementary Curriculum, and Educational Measurements. (Curriculum and Measurements may be taken concurrently with directed teaching.)

Those taking the secondary curriculum must, before admission, have credit in Educational Psychology, Secondary School, Methods of Teaching in the Secondary School, and Educational Measurements. (Educational Measurements and Secondary Methods may be taken concurrently with directed teaching.)

### Kindergarten-Primary Curriculum

Leading to the degree of Bachelor of Arts in Education and to certification for teaching in the kindergarten and grades one, two and three.

#### FRESHMAN YEAR

First Semester		Hours	Second Semester		Hours
Eng. 101 First Year English		3	Eng. 102 First Year English		3
*G. S. 100 Introduction to the Physical Sciences		4	*G. S. 110 Introduction to the Biological Sciences		4
*Psych. 100 Elementary Psychology		3	*Soc. 120 Sociology		3
P. E. 101 Activity (women)		0.5	P. E. 102 Activity (women)		0.5
P. E. Activity (men)		0.5	P. E. Activity (men)		0.5
Electives		5	Electives		6
		15.5			16.5

## SOPHOMORE YEAR

First Semester		Hours	Second Semester		Hours
*Speech 110 Elements of Speech	2		*P. E. 100 Hygiene	2	
Psych. 141 Growth and Development	2		Psych. 142 Growth and Development	2	
Hist. 101 Western Civilization or			Hist. 102 Western Civilization or		
Hist. 103 U. S. History	3		Hist. 104 U. S. History	3	
Mus. 125 Music Fundamentals for			Mus. 126 Music Fundamentals for		
K-P Teachers	2		K-P Teachers	2	
*Ed. 160 Children's Literature	3		P. E. Activity	0.5	
P. E. Activity	0.5		Electives	7	
Electives	3				
		15.5			16.5

## JUNIOR YEAR

First Semester		Hours	Second Semester		Hours
*Ed. 205 Construction Activities	4		*Ed. 212 Play Education	3	
*Sci. 231 Science, Elem. School	3		P. E. 215 Health, Elem. School	3	
Mus. 227 K-P Music	2		Ed. 202 Language Arts	3	
Ed. 201 Language Arts	3		*Ed. 209 K-P Curriculum	3	
Electives	4		Electives	4	
		16			16

## SENIOR YEAR

First Semester		Hours	Second Semester		Hours
*Ed. 260 Directed Teaching	10		*Ed. 211g History of Education or	3	
			*Ed. 250g Philosophy of Education	3	
*Psych. 200 Ed. Measurements	3		*P. S. 206 Constitutional Government	3	
Electives	2		*Ed. 233 Visual Aids Education	2	
		15	Electives	7	
					15

\*May be taken either semester.

Recommended courses for electives: Art 101, Eng. 171, Geog. 100, H. Ec. 103, 207, L. S. 203, Math. 205, Mus. 130, Speech 230, 240.

Students desiring the kindergarten-primary certificate must follow the kindergarten-primary curriculum with directed teaching in the kindergarten and grades one, two or three.

A piano test is given at the close of each semester. Students not able to play piano accompaniment sufficient to meet the needs of young children may take Mus. 121, 122, 123, and 124 to help meet the requirements of the piano test. Those who are interested in young children but are not interested in certification may choose any of the kindergarten-primary professional courses.

## Elementary Curriculum

Leading to the degree of Bachelor of Arts in Education and to certification and teaching in the elementary school.

## FRESHMAN YEAR

First Semester		Hours	Second Semester		Hours
Eng. 101 First Year English	3		Eng. 102 First Year English	3	
*G. S. 100 Introduction to the Physical Sciences	4		*G. S. 110 Introduction to the Biological Sciences	4	
*Psych. 100 Elementary Psychology	3		*Soc. 120 Sociology	3	
P. E. 101 Activity (women)	0.5		P. E. 102 Activity (women)	0.5	
P. E. Activity (men)	0.5		P. E. Activity (men)	0.5	
Electives	6		Electives	6	
		16.5			16.5



## SOPHOMORE YEAR

First Semester		Hours	Second Semester		Hours
Psych. 141 Growth and Development	2		Psych. 142 Growth and Development	2	
*Speech 110 Elements of Speech	2		*P. E. 100 Hygiene	2	
*Ed. 160 Children's Literature	3		*Geog 100 Elements of Geography	3	
Hist. 101 Western Civilization or			Hist. 102 Western Civilization or		
Hist. 103 U. S. History	3		Hist. 104 U. S. History	3	
P. E. Activity	0.5		P. E. Activity	0.5	
Electives	5		Electives	5	
		15.5			15.5

## JUNIOR YEAR

First Semester		Hours	Second Semester		Hours
*Psych. 200 Ed. Measurements	3		*Psych. 213 Ed. Psychology	3	
Ed. 201 Language Arts	3		Ed. 202 Language Arts	3	
*Math. 205 Arithmetic, Elem. School	2		*Ed. 233 Visual Aids Education	2	
*P. E. 215 Health, Elem. School	3		*Sci. 231 Science, Elem. School	3	
Electives	5		Electives	5	
		16			16

## SENIOR YEAR

First Semester		Hours	Second Semester		Hours
*Ed. 260 Directed Teaching	10		*P. S. 200 Constitutional Government	3	
*Ed. 230 Elementary Curriculum	3		*Ed. 211g History of Education or	3	
*Art 210 Public School Art	2		*Ed. 250g Philosophy of Education	3	
		15	*P. E. 220 Playground Leadership	2	
			Electives	7	
					15

\*May be taken either semester.

The elementary curriculum provides a four-year sequence of courses that leads to the degree of Bachelor of Arts in Education and to state certification in the elementary schools, grades one through nine inclusive. Students who wish to secure a special certificate in art, music, or physical education, may do so by arranging elective courses to cover the requirements of thirty semester hours of academic work and five hours of directed teaching in the special field. Students who plan to teach at the junior high school level may group their electives in major and minor teaching fields to suit their teaching interests.

The following courses are recommended for students planning to teach in elementary grades: Mus. 141, 142, 251; Art 101, 118; P. E. 223; Eng. 171. Language Arts, Ed. 201, is a prerequisite to Ed. 202.

## Secondary Curriculum

Leading to the degree of Bachelor of Arts and Master of Arts in Education and certification for teaching in the secondary schools.

## FRESHMAN YEAR

First Semester		Hours	Second Semester		Hours
Eng. 101 First Year English	3		Eng. 102 First Year English	3	
*G. S. 100 Introduction to the Physical Sciences	4		*G. S. 110 Introduction to the Biological Sciences	4	
*Psych. 100 Elementary Psychology	3		*Soc. 120 Sociology	3	
P. E. 101 Activity (women)	0.5		P. E. 102 Activity (women)	0.5	
P. E. Activity (men)	0.5		P. E. Activity (men)	0.5	
Major, minor, or electives	5		Major, minor, or electives	5	
		15.5			15.5

## SOPHOMORE YEAR

First Semester		Hours	Second Semester		Hours
*Speech 110 Elements of Speech	2		*P. E. 100 Hygiene	2	
Psych. 141 Growth and Development	2		Psych. 142 Growth and Development	2	
Hist. 101 Western Civilization or			Hist. 102 Western Civilization or		
Hist. 103 U. S. History	3		Hist. 104 U. S. History	3	
P. E. Activity	0.5		P. E. Activity	0.5	
Major, minor or electives	9		Major, minor or electives	9	
		16.5			16.5

## JUNIOR YEAR

First Semester		Hours	Second Semester		Hours
*Psych. 213 Ed. Psychology	3		*Psych. 200 Ed. Measurements	3	
*Ed. 215 Secondary School	3		*Ed. 226 Methods, Secondary School	3	
Major, minor, or electives	10		Major, minor, or electives	10	
		18			18

## SENIOR YEAR

First Semester		Hours	Second Semester		Hours
*Ed. 211g History of Education or			*P. S. 200 Constitutional Government	3	
*Ed. 250g Philosophy of Education	3		Major, minor, or electives	12	
*Ed. 260 Directed Teaching	8				
Major, minor, or electives	7				
		15			15

## GRADUATE YEAR

First Semester		Hours	Second Semester		Hours
Ed. 300 Thesis Preparation	2		Thesis	4	
Electives	13		Electives	11	
		15			15

\* May be taken either semester.

A teaching course in the major teaching field may be substituted for Ed. 228.

*Major and Minor Teaching Fields.* Students under the secondary curriculum are required to complete a major and a minor teaching field. It is recommended that a second minor teaching field be completed if possible. A major teaching field shall consist of a minimum of 45 semester hours of work, 25 semester hours of which shall be in courses in a subject field from one department, and the remaining 20 hours in courses from the same or related departments. A minimum of 18 semester hours in the major teaching field shall be upper-division courses.

A minor teaching field shall consist of at least 15 semester hours in a subject field in a department exclusive of courses in the generalization requirements as listed on page 99.

In selecting major and minor teaching fields students should keep in mind the requirements of the North Central Association, the Arizona State Board of Education, and the combinations usually assigned beginning teachers in Arizona high schools. Information concerning these matters can be obtained at the office of the Director of Teacher Training.

Recommended electives: The following electives are recommended

for students registered under the secondary curriculum: Art 101, Mus. 130, Eng. 171, Geog. 100, Hist. 110, Ed. 232, 233g, Math. 105.

*Professional Sequence.* In addition to the required professional courses, as listed on pages 69, 70, it is essential that each student plan the proper sequence of professional courses. Education 215, Secondary School, is a prerequisite for all methods courses, History of Education, and Philosophy of Education. If a special methods course is taken in lieu of 228, Methods of Teaching in the Secondary School, it must be taken in the student's major teaching field.

*Teaching Entrance Tests.* Teaching entrance tests under the secondary curriculum include English fundamentals and the major and minor teaching fields of the student.

## Arts and Sciences Curriculums

Below there are given in parallel columns the requirements for the Bachelor of Arts and the Bachelor of Science degrees. A total of 126 semester hours of credit is required for graduation with either one of these degrees. For either degree the candidate must meet the Generalization Requirements of 40-48 semester hours, and the Concentration Requirements of at least 36 semester hours as outlined below, and take the remaining hours in electives. The figures given below in parentheses indicate the required minimum number of semester hours.

### Generalization Requirements

#### For the B. A. Degree (48)

Eng. 101, 102 First Yr. English (6)  
Foreign Language (8)

#### For the B.S. Degree (40)

Eng. 101, 102 First Yr. English (6)  
Foreign Language (Optional)

The foreign language requirement may be met by completing satisfactorily one of the following: Span. 101-102, Ger. 101-102, Fr. 101-102, Rus. 101-102, Lat. 101-102. Students who have received a grade of C or above for three years' work in one high-school foreign language or who can show the equivalent by examination, are exempt from this requirement.

P. E. 100 Hygiene (2)  
P. E. Activity (2)

P. E. 100 Hygiene (2)  
P. E. Activity (2)

#### Humanities (6)

Art. 101 Introduction to Art (2)  
Eng. 171 Introduction to Lit. (3)  
Eng. 252 Semantics (2)  
Mus. 130 Introduction to Music (2)  
Phil. 200 Introduction to Philos. (3)

#### Humanities (6)

In Art, Literature, Music, Philosophy, Speech. (Not more than 3 semester hours in any one subject)

Eng. 151, 152, or 221-222, or 153 may be substituted for Eng. 171.

**Social Science (12)**

Bus. Ad 130 Introduction to Econ. (3)  
 Hist. 102 Western Civilization (3)  
 Hist. 104 U. S. Since Civil War (3)  
 Psych. 100 Elementary Psych (3)  
 Soc. 120 Sociology (3)

**Social Science (12)**

In Economics History, Political Science,  
 Psychology Sociology, Geography. (Not  
 more than 6 semester hours in any one  
 subject.)

Hist. 120 may be substituted for Hist. 102, and Hist 110 for Hist. 104

**Science and Mathematics (11)**

G. S. 100 Introd. to Phys Science (4)  
 G. S. 110 Introd. to Biol. Science (4)  
 Math. 105 Basic Mathematics (3)

**Science and Mathematics (12)**

In Biology, Chemistry, Geography, Math-  
 ematics, Physics. (Not more than 8  
 semester hours in any one subject.)

Chem. 110 or 111, and 112 or 114, or Phys 111 112 may be substituted for G S. 100.  
 Zool 111 and Bot. 110 may be substituted for G S 110. Math 120 may be substituted for  
 Math 105.

## Concentration Requirements

A. Not later than the beginning of the junior year, each student will be required to designate an area of concentration.

B. An area of concentration shall consist of at least 36 semester hours of credit in related courses, in addition to the required generalization courses. When a course listed under the generalization requirements falls within a student's area of concentration, he may, upon approval of his adviser, substitute another course within the same subject-field.

C. The 36 or more semester hours of course work in the area of concentration shall consist of: (1) From 15 to 24 semester hours in a single department or departmental subdivision as described in the catalog. (2) At least 15 of the 36 semester hours from upper division courses. (3) A required sequence or pattern of related courses. (4) A pattern of related optional courses, designed to meet individual needs, to be selected under the guidance of an adviser from a list of recommended courses.

D. Areas of concentration to be offered leading to bachelors' degrees in arts and sciences are:

FOR THE B. A. DEGREE		FOR THE B. S. DEGREE	
<i>Department</i>	<i>Concentration Area</i>	<i>Department</i>	<i>Concentration Area</i>
Art	<i>Fine Arts</i>	Business Administration	<i>Accounting Economics and Management Marketing and Advertising Secretarial Science</i>
English	<i>English</i>		
Foreign Language	<i>Spanish</i>	Education and Others	<i>Social Welfare</i>
Mathematics	<i>Mathematics</i>	Psychology and Others	<i>Human Growth and Adjustment</i>
Music	<i>Music</i>	Home Economics	<i>General Home Economics</i>
Sciences	<i>Physical Sciences Biological Sciences</i>	Industrial Arts Mathematics Physical Education	<i>Industrial Arts Mathematics Physical Education</i>
Social Studies	<i>Social Studies</i>	Sciences	<i>Physical Sciences Biological Sciences</i>

### Elective Courses

Sufficient elective courses from the entire offering of the college will be chosen by the student in order to complete the 126 semester hours required for graduation.

## Preprofessional and Professional Curricula

The curricula outlined below meet the needs of two classes of students: those who desire one, two, or more years of work before transferring to a professional school such as Law or Medicine, and those who wish a degree without certification as a teacher.

The basic college courses necessary for entering professional schools are given as a part of the regular program of the college. Credits earned in these courses, if properly selected, can be transferred without loss to schools of Law, Medicine, and other fields in which students plan to complete their work.

The following curriculums are arranged so that the general requirements of most of the schools are met. It is important that each student obtain a catalog of the institution to which he plans to transfer, and consult his adviser so that his course of study may be planned most wisely.

### Pre-Agriculture, Pre-Veterinary, Pre-Forestry

The requirements for the first two years of agriculture, forestry and veterinary work vary considerably in the different colleges offering these programs. The student is advised to obtain a copy of the catalog from the school he plans to attend and select his program accordingly. The following course of study will meet most of the requirements if the student carefully selects electives to meet the requirements of the college that he plans to attend.

#### FIRST YEAR

First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English .....	3	Eng. 102 First Year English .....	3
Zool. 111 General Zoology.....	4	Zool. 112 General Zoology or	
Chem. 110 or 111 General Chemistry.....	4	Bot. 110 General Botany.....	4
Ag. 101 Crop Production .....	2	Chem. 114 General Chemistry.....	4
Ag. 107 Animal Industry .....	4	Ag. 102 Forage Crops.....	3
Physical Education activity .....	0.5	Physical Education activity .....	0.5
		Electives .....	3
	17.5		17.5

#### SECOND YEAR

Bot. 171 Plant Anatomy.....	4	Bot. 172 Plant Physiology.....	4
Bot. 220 General Bacteriology.....	4	Chem. 180 El. Organic Chemistry .....	4
*Econ. 130 Introduction to Econ. ....	3	Electives chosen from Ag. 114, 116,	
Phys. 111 General Physics.....	4	123, 126, 143 and Phys. 112 .....	8
Ag. 125 Principles of Horticulture .....	2	Physical Education Activity .....	0.5
Physical Education activity .....	0.5		
	17.5		16.5

### Pre-Dental

The following two-year curriculum will satisfy the general requirements for entrance to most dental schools. The selection of electives should be based on the requirements of the catalog of the school at which the student plans to complete his dental training. If three or four years of pre-dental training is desired it is suggested that the pre-medical curriculum be followed.

FIRST YEAR			
First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English _____	3	Eng. 102 First Year English _____	3
Chem. 110 or 111 General Chemistry _____	4	Chem. 112 or 114 General Chem. _____	4 or 5
Zool. 111 General Zoology _____	4	Zool. 112 General Zoology _____	4
Foreign Language or elective _____	4	Foreign Language or elective _____	4
Physical Education activity _____	0.5	Physical Education activity _____	0.5
	15.5		15.5

SECOND YEAR			
Bot. 220 General Bacteriology _____	4	Chem. 180 El. Organic Chemistry _____	4
Phys. 111 General Physics _____	4	Phys. 113 General Physics _____	4
Ed. 120 Sociology _____	3	Psych. 100 Elementary Psychology _____	3
Foreign Language or elective _____	4	Foreign Language or elective _____	4
Physical Education activity _____	0.5	Physical Education activity _____	0.5
	15.5		15.5

## Pre-Dietetics

The following curriculum will meet the lower division requirements for most dietetics courses.

FIRST YEAR			
First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English _____	3	Eng. 102 First Year English _____	3
Chem. 110 or 111 General Chemistry _____	4	Chem. 114 General Chemistry _____	4
H. Ec. 161 Elementary Nutrition _____	2	*Ed. 120 Sociology _____	3
*Psych. 100 Elementary Psychology _____	3	H. Ec. 162 Clothing Selection _____	3
*P. E. 100 Hygiene _____	2	Physical Education activity _____	0.5
Physical Education activity _____	0.5	*G. S. 110 Introduction to Biological Science _____	4
Speech 110 Elements of Speech _____	2		
	16.5		17.5

SECOND YEAR			
Chem. 211 General Organic Chemistry or Chem. 141 Elementary Quantitative Analysis _____	4	Chem. 212 General Organic Chemistry or Chem. 180 Elementary Organic Chemistry _____	4
H. Ec. 165 Applied Food Principles _____	3	H. Ec. 205g Food for Family _____	3
Zool. 171 Human Anatomy _____	3	Zool. 172 Human Physiology _____	3
Eng. 171 Introduction to Literature _____	3	Social Science elective _____	3
Social Science elective _____	3	*Econ. 130 Introduction to Economics _____	3
Physical Education activity _____	0.5	Physical Education activity _____	0.5
	16.5		16.5

## Pre-Engineering

Completion of the following curriculum will fulfill the lower division requirements for a degree in general engineering. The pre-engineering student is urged to obtain a catalog of the engineering school that he plans to attend, and alter the following curriculum to meet the lower division requirements of that school. The student's choice of courses for electives depends on whether he plans to specialize in civil, mechanical, chemical or electrical engineering.

## FIRST YEAR

First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English _____	3	Eng. 102 First Year English _____	3
Chem. 110 or 111 General Chemistry _____	4	Chem. 114 General Chemistry _____	4
Math. 119 Algebra & Trigonometry _____	4	Math. 120 Analytic Geometry _____	4
I. A. 113 Mechanical Drawing _____	3	I. A. 114 Descriptive Geometry _____	3
Bus. Ad. 130 Introduction to Econ. _____	3	I. A. 109 Calculations _____	3
Phys. 121 Engineering Physics _____	5	Physical Education activity _____	0.5
	<hr/> 17.5		<hr/> 17.5

## SECOND YEAR

I. A. 155 Mechanisms _____	3	I. A. 156 Machine Design _____	3
Math. 122 Differential Calculus _____	4	Math. 123 Integral Calculus _____	4
Phys. 121 Engineering Physics _____	5	Phys. 122 Engineering Physics _____	5
Physical Education activity _____	0.5	Physical Education activity _____	0.5
Electives chosen from I. A. 145, Chem. 141 Bus. Ad. 101, 205, Geol. 151 _____	5	Electives chosen from I. A. 100; Bus. Ad. 101, 206; Geol. 152; Chem. 142 _____	5
	<hr/> 17.5		<hr/> 17.5

## Pre-Law

The requirements for admission to law schools vary from a minimum of two years of pre-legal college work to a college degree. The American Bar Association has prescribed a minimum of two years. However, higher standards are required by many of the leading law schools. The pre-law student should obtain a copy of the catalog of the law school that he plans to attend and he should plan his course of study under the guidance of his adviser.

Most law schools now recommend courses in accounting, taxes, finance, and other business administration courses. Many universities now offer a six-year program leading to a bachelor's degree in business administration at the end of the fourth year and the degree of Bachelor of Law at the end of the sixth year. Because of the ever-increasing importance of training in the field of business for present-day law practice, the student is urged to give serious consideration to the combined program of Business Administration and Law.

The following two-year, pre-legal curriculum is presented merely as an aid to the student in planning his course of study in accordance with the foregoing suggestions.

## FIRST YEAR

First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English _____	3	Eng. 102 First Year English _____	3
Bus. Ad. 101 Elementary Accounting _____	4	Bus. Ad. 102 Elementary Accounting ...	4
*Psych. 100 Elementary Psychology _____	3	*Ed. 120 Sociology _____	3
Social Science elective _____	3	*Hist. 110 American Institutions _____	3
Elective _____	3	Elective _____	3
Physical Education activity _____	0.5	Physical Education activity _____	0.5
	<hr/> 16.5		<hr/> 16.5



**SECOND YEAR**

Bus. Ad. 205 Business Law _____	3	Bus. Ad. 206 Business Law _____	3
Bus. Ad. 130 Introduction to Economics _____	3	Bus. Ad. 132 Current Economic Prob. _____	3
Science elective _____	4	Science elective _____	4
Electives _____	6	Speech 220 Public Speaking _____	2
Physical Education activity _____	0.5	Electives _____	4
		Physical Education activity _____	0.5
	<hr/>		<hr/>
	16.5		16.5

Medical Technology

The following curriculum meets the needs of those specializing in Medical Technology. It is ranked Class A by the American Medical Association. The work of the senior year is given at St. Joseph's Hospital, Phoenix. At the conclusion of the fourth year, the student will take an examination formulated by the Board of Registry of the American Society of Clinical Pathologists. Upon the successful completion of this four-year curriculum the student will be granted the degree of Bachelor of Science. Through the W. K. Kellogg Foundation worthy students in Medical Technology may obtain loans of money and scholarships. Fee, \$10.00 per month at hospital plus college registration.

**FIRST YEAR**

First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English _____	3	Eng. 102 First Year English _____	3
Chem. 110 or 111 Gen. Chem. _____	4	Chem. 112 General Chemistry _____	5
Zool. 111 General Zoology _____	4	Zool. 112 General Zoology _____	4
Ed. 120 Sociology _____	3	Psych. 100 Elementary Psychology _____	3
P. E. 100 Hygiene _____	2	Humanities Elective _____	2
Physical Education Activity _____	0.5	Physical Education Activity _____	0.5
	<hr/>		<hr/>
	16.5		17.5

**SECOND YEAR**

Chem. 141 Quantitative Analysis _____	4	Chem. 142 Quantitative Analysis _____	4
Bus. Ad. 130 Introd. to Economics _____	3	Soc. Studies elective _____	3
Chem. 180 Elem. Organic Chem. _____	4	Zool. 163 Comparative Anatomy _____	4
Humanities Elective _____	2	Humanities Elective _____	2
Mathematics _____	3	Elective _____	2
Physical Education Activity _____	0.5	Physical Education Activity _____	0.5
	<hr/>		<hr/>
	16.5		15.5

**THIRD YEAR**

Phys. 111 General Physics _____	4	Phys. 112 General Physics _____	4
Bot. 220 General Bacteriology _____	4	Chem. 280 Biochemistry or restricted science elective _____	4
Zool. 171 Human Anatomy _____	4	Zool. 172 Human Physiology _____	3
Elective _____	4	Elective _____	4
	<hr/>		<hr/>
	15		15

**FOURTH YEAR**

Biol. 240 Laboratory Techniques _____	4	Biol. 250 Histology _____	4
Biol. 225 Pathogenic Bacteriology _____	4	Biol. 265 Serology _____	2
Chem. 282a Biochemistry _____	4	Biol. 271 Parasitology _____	2
Biol. 273 Hematology _____	4	Chem. 284 Blood Chemistry _____	4
		Chem. 285 Urinalysis _____	2
		Chem. 288 Chemistry of Digestion _____	3
	<hr/>		<hr/>
	16		16

## Pre-Medical

The minimum requirement for admission to accredited medical schools is a four-year high school education and two, three, and in some cases four years of work in general education leading to a B. S. or B. A. degree. A three-year curriculum is offered for the guidance of the pre-medical student, but he may complete two, three or four years of the following program to meet the specific requirements of the medical school that he plans to attend. A student who plans to take this curriculum should bring a catalog of the medical school selected and consult with the pre-medical adviser.

### FIRST YEAR

First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English .....	3	Eng. 102 First Year English .....	3
Zool. 111 General Zoology .....	4	Zool. 112 General Zoology .....	4
Chem. 110 or 111 Gen. Chem. ....	4	Chem. 112 General Chemistry .....	5
P. E. 100 Hygiene .....	2	Art 101 Intro. to Art .....	2
Math 106 or 107 Algebra .....	3	Bus. Ad. 130 Intro. to Economics .....	3
Physical Education Activity .....	0.5	Physical Education Activity .....	0.5
	16.5		17.5

### SECOND YEAR

Foreign Language .....	4	Foreign Language .....	4
Chem. 141 Quantitative Analysis .....	4	Chem. 142 Quantitative Analysis .....	4
Zool. 163 Comparative Anatomy .....	4	Bot. 220 General Bacteriology .....	4
Psych. 100 Elementary Psychology .....	3	Soc. 120 Sociology .....	2
Physical Education Activity .....	0.5	Physical Education Activity .....	0.5
	15.5		15.5

### THIRD YEAR

Chem. 211 General Organic Chem. ....	4	Chem. 212 General Organic Chem. ....	4
Phys. 111 General College Physics .....	4	Phys. 112 General Physics .....	4
Biol. 204 Genetics .....	3	Zool. 254 Embryology .....	4
Social Studies elective .....	3	Elective .....	3
Humanities elective .....	2		
	16		15

### FOURTH YEAR

Students who plan to complete the Bachelor's degree should take the following in their senior year.

Foreign Language or restricted elective .....	4	Foreign Language or restricted elective .....	4
Chem. 280 Biochemistry .....	4	Zool. 232 Parasitology .....	4
Humanities elective .....	2	Electives .....	8
Electives .....	5		
	15		16

## Nursing and Pre-Nursing Curriculums

The college offers a one-year and a two-year curriculum for students planning to go into nursing.

### ONE YEAR PRE-NURSING CURRICULUM

Some schools of nursing require one year of college and three years of nursing school.

First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English _____	3	Eng. 102 First Year English _____	3
*Soc. 120 Sociology _____	3	*Psych. 100 Elementary Psychology _____	3
H. Ec. 101 Elementary Nutrition _____	2	G. S. 110 Introduction to the Biological Sciences _____	4
Chem. 110 Introductory Chemistry _____	4	Elective _____	3
Zool. 171 Human Anatomy _____	3	Zool. 172 Human Physiology _____	3
Physical Education activity _____	0.5	Physical Education activity _____	0.5
	15.5		16.5

## TWO YEAR PRE-NURSING CURRICULUM

This curriculum is designed for nursing schools that require two years of general college education. The selection of electives should be made after consulting the catalog of the nursing school that the student plans to attend, and the pre-nursing adviser.

FIRST YEAR			
First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English _____	3	Eng. 102 First Year English _____	3
*Soc. 120 Sociology _____	3	*Psych. 100 Elementary Psychology _____	3
Chem. 110 Introductory Chemistry _____	4	Chem. 180 Organic Chemistry _____	4
H. Ec. 101 Elementary Nutrition _____	2	G. S. 110 Introduction to the Biological Sciences _____	4
Elective _____	3	Elective _____	3
Physical Education activity _____	0.5	Physical Education activity _____	0.5
	15.5		17.5

SECOND YEAR			
*Eng. 171 Introduction to Literature _____	3	Speech 120 Elements of Speech _____	2
Zool. 171 Human Anatomy _____	3	Zool. 172 Human Physiology _____	3
Social Science elective _____	3	Social Science elective _____	3
H. Ec. 105 Applied Food Principles _____	3	Electives _____	7
Bot. 220 General Bacteriology _____	4	Physical Education activity _____	0.5
Physical Education activity _____	0.5		
	16.5		15.5

## DEGREE CURRICULUM IN NURSING

A degree curriculum in nursing is offered which combines a general college program and a basic professional course in nursing. This curriculum is designed to meet the needs of two groups of students: (1) those who wish to pursue a program of training to be taken jointly at the College and at the Good Samaritan Hospital, Phoenix, leading to the Certificate of Registered Nurse in Arizona and to the Bachelor of Science degree, and (2) those who hold the Certificate of Registered Nurse in Arizona and who wish to complete, in addition, a program of college work that will lead to the Bachelor of Science degree.

Students of the first group may complete all of the requirements within a five-year period. Registered nurses who are graduate of approved three-year nursing schools and who have not had college work may satisfy the requirements for the Bachelor of Science degree under this curriculum with two and one-half years of regular college work.

This program of college and professional training will increase the

opportunities for placement in hospitals and elsewhere in administrative, supervisory, and teaching positions. This curriculum is approved by the Arizona State Board of Nurses.

Students without nursing training will take general college courses during the first three semesters. These students will meet the regular admission requirements. The basic training in professional nursing is given during the next five semesters at the Good Samaritan Hospital in Phoenix. The final year is spent at the College. As a prerequisite for admission to the final year at the College, the student must present an official transcript of work done at the Good Samaritan Hospital, Phoenix. Upon satisfactory completion of the college and nursing school requirements for this curriculum, the student is eligible for graduation with the Bachelor of Science degree. The Arizona State Board examinations in nursing must be passed before the student becomes a registered nurse in Arizona.

Graduates of accredited three-year training schools for nurses will, in addition to meeting the regular admission requirements, file with the Registrar well in advance of registration official transcripts of all work done in high school, college, and nursing schools together with a certified statement of registration as a nurse, and ownership of a valid nursing license. Upon acceptance of those credentials, advanced standing credit, not to exceed 46 hours including credit for hygiene, will be granted for work completed in an approved school of nursing.

#### FIRST YEAR

First Semester	Hours	Second Semester	Hours
Chem. 110 Introductory Chemistry	4	G. S. 110 Introduction to the	
Psych. 100 Elem. Psychology	3	Biological Sciences	4
Eng. 101 Freshman English	3	*Soc. 120 Sociology	3
Zool. 171 Human Anatomy	3	Eng. 102 Freshman English	3
Mathematics elective	3	Zool. 172 Human Physiology	3
Physical Education Activity	0.5	H. Ec. 101 Elementary Nutrition	2
		Physical Education Activity	0.5
	16.5		15.5

#### SECOND YEAR

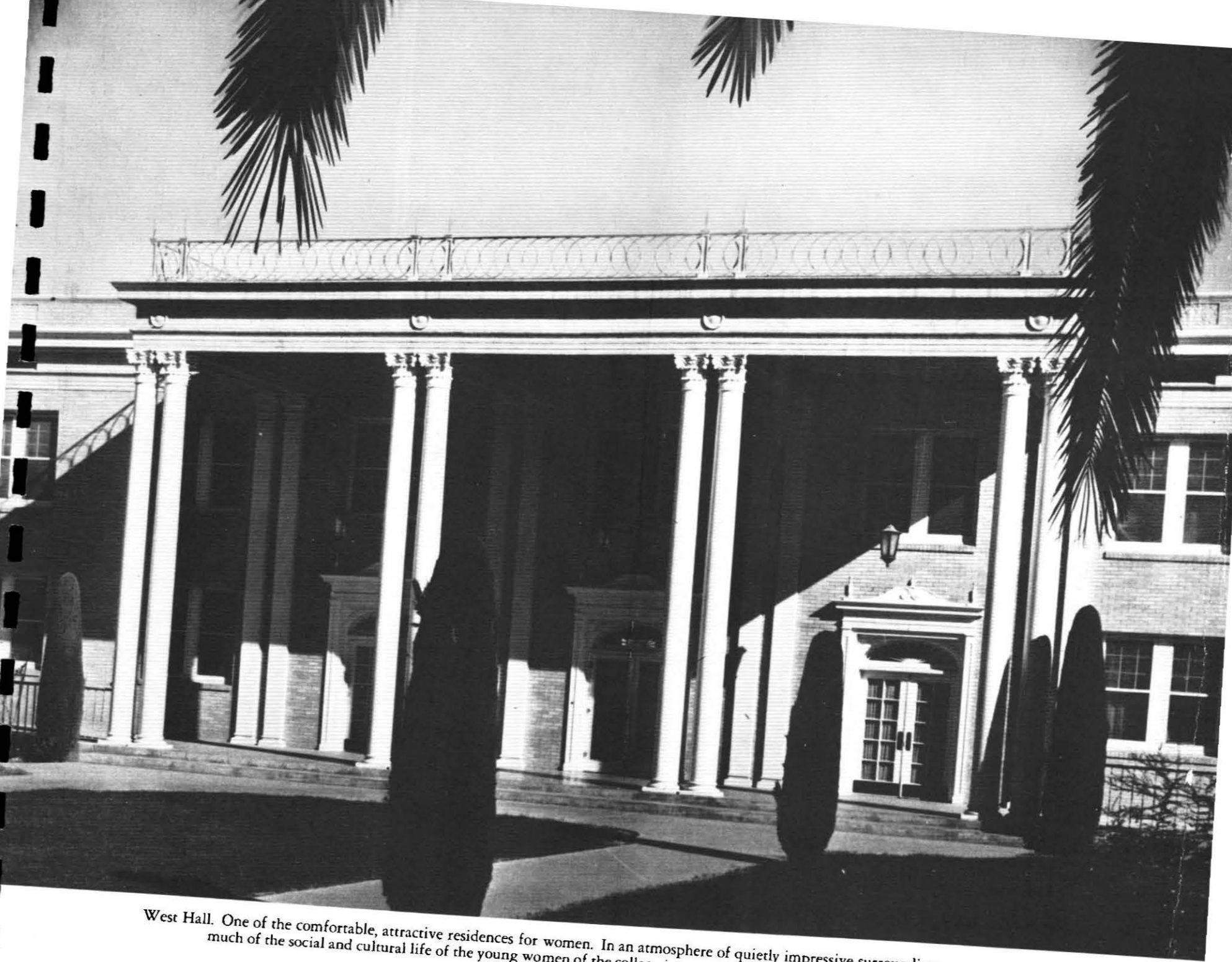
Bot. 220 Gen. Bacteriology	4		
H. Ec. 105 Applied Food Principles	3		
Eng. 110 Elements of Speech	2		
Eng. 171 Introduction to Literature	3	Hospital (In professional nurses'	
Physical Education Activity	0.5	training course)	
Major or elective	4		
	16.5		

#### THIRD YEAR

Hospital (In professional nurses' training course)

#### FOURTH YEAR

Hospital (In professional nurses' training course)



West Hall. One of the comfortable, attractive residences for women. In an atmosphere of quietly impressive surroundings, much of the social and cultural life of the young women of the college is centered in the residence halls.

## FIFTH YEAR

Chem. 180 Elem. Organic Chemistry _____	4	Social Studies Elective _____	3
Social Studies Elective _____	3	Biol. 204 Genetics or _____	
Humanities elective _____	2	Chem. 280g Biochemistry or _____	
Major or electives _____	7	Restricted science elective _____	3
		Major or electives _____	10
	16		16

The major is to be chosen under the guidance of the curricular adviser in one of the following fields: English, Education, Psychology, Education and Psychology, Home Economics, Foreign Languages, or Science. Electives are selected under the guidance of the curriculum adviser.

Graduates of accredited three-year training schools of nursing who have been admitted to this curriculum may be permitted to take electives in place of Biol. 171-172; H. Ec. 101, 105; and Math. 105.

## Pre-Optometry

The following program meets the entrance requirements of most schools of optometry.

## FIRST YEAR

First Semester	Hours	Second Semester	Hours
Eng. 101 First Year English _____	3	Eng. 102 First Year English _____	3
Chem. 110 or 111 General Chem. _____	4	Chem. 112 or 114 General Chem. _____	4 or 5
Psych. 100 Elementary Psychology _____	3	*Soc. 120 Sociology _____	3
Math. 106 or 107 Algebra _____	3	Math. 118 Trigonometry _____	3
Zool. 111 General Zoology _____	4	Zool. 112 General Zoology _____	4
Physical Education Activity _____	0.5	Physical Education Activity _____	0.5
	17.5		17.5 or 18.5

## SECOND YEAR

Phys. 111 General College Physics _____	4	Phys. 112 General Physics _____	4
Zool. 163 Comparative Anatomy _____	4	P. E. 100 Hygiene _____	2
Spch. 110 Elements of Speech _____	2	Social Science elective _____	3
Social Science elective _____	3	Electives _____	7
Electives _____	3	Physical Education Activity _____	0.5
Physical Education Activity _____	0.5		
	16.5		18.5

## Technical and Semi-Professional Curriculums

There is a growing demand for practical curriculums which do not lead to graduation, but are designed to give the student the background of skills needed for entrance into his chosen vocation. These curriculums appeal to returning veterans and many others. They may consist of very few or many courses requiring one or more semesters to complete them. The courses composing these short curriculums vary to fit the background and needs of the student concerned. Students interested in these curriculums should consult the curriculum advisers in the departments concerned for help in planning their programs.

# Department of Agriculture

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JUDD (Head of the Department), MORTENSEN, FULLER, RIGGINS

*Purposes.* The Department of Agriculture is organized for the following purposes: (1) to give students who plan to teach in rural communities a knowledge of agricultural problems; (2) to provide a broad foundation for those who later wish to study in other institutions; (3) to offer courses in applied agriculture for those expecting to enter the production and industrial fields of agriculture.

The courses offered for (1) and (2) include the generally accepted standard prerequisites for advanced study and research in all phases of agriculture. Many of these courses are prerequisites for appointment in various biological surveys, soil and game conservation, and other Federal projects.

*Applied Agriculture.* These courses are offered with the cooperation of the Veterans' Administration and the State Department of Vocational Education. They aim to give the student proficiency in the particular job or phase of work chosen. A full course runs twelve months and requires about six hours of work daily. Fractional courses may also be taken. Such courses do not give college credit.

The following non credit courses have been approved by the Veterans' Administration and will be offered by the College: Armature Winder, Repair; Auto Mechanic Helper; Automobile Body Repairman, Metal; Batteryman, repairman; Carpenter Apprentice; Dairy Farmer; Dairy Farm Hand; Milk Tester; Farmer, cash grain; Farm Hand, General; Hay Farmer; Hog Raiser; Irrigator; Milker, hand; Milking Machine Operator; Pasteurizer, Milk tester; Pasteurizer Assistant; Poultry Farmer; Truck Gardener.

Classes in Farm Management, Farm Records, Feeds and Feeding, Range Management, and other classes will be organized when needed. Through the cooperation of business concerns, instruction in processing milk products, grain milling, ginning of cotton, and meat packing may be offered. In these courses formal class instruction is reduced to a minimum, being provided largely through consultations and on-the-job visits.

The enterprises of the College Farm will serve as training centers. In general, a minimum of one year should be devoted to most of the courses. However, the length of courses may be modified to fit the needs of the students.

*4-H Club Leaders.* Students majoring in another department may qualify also as teachers of elementary science and agriculture and as 4-H club leaders in the elementary schools by completing a minor in this department.

*The Livestock Farm.* The farm is located a mile south of the campus, on a thirty-five acre tract with a modern farm home, new dairy buildings and equipment, and a modern hog unit. A selected herd of registered dairy cows supplies milk for the college dining hall. This herd, with the registered sheep and swine herds, provide excellent opportunities for students to gain first hand information and experience in livestock problems.

*Suggested Sequences.* It is suggested that the following courses be taken during the first or second year: Bot. 110, 171, 172; Ag. 101, 102, 107, 114, 116, 125, 126; Chem. 110, 114 or 111-112, 180.

## Description of Courses

*Ag. 101 Crop Production.* The principles of field crop production. Special emphasis on cultural practices in Arizona. Fee \$2.00. One lecture and one 3 hour laboratory a week. Credit, 2 hours.

*102 Forage Crops.* The principal forage crops of the United States with particular reference to the Southwest. Fee, \$2.00. Two lectures and one 3 hour laboratory. Credit, 3 hours.

*107 Principles of Animal Husbandry.* Principles of livestock management and production. Score card and judging practices. Prerequisite to other animal husbandry courses. Fee, \$1.00. One lecture and 2 hours laboratory. Credit, 2 hours.

*108 The Breeds of Livestock.* Characteristics of breeds of farm animals; origin, history, and development; pedigree studies. Credit, 2 hours.

*114 Dairy Husbandry.* Dairy farm management, feeding, breeding, herd improvement, pedigree, calf raising, dairy equipment and diseases. Fee, \$1.00. Three lectures or equivalent field work. Credit, 3 hours.

*116 Poultry Husbandry.* Poultry management, and application to local and regional conditions. Three lectures or equivalent field work. Credit, 3 hours.

*124 Vegetable Crops.* Areas of production and cultural practices. Emphasis on the vegetable garden. Prerequisites: Ag. 108, Bot. 110. One lecture, and 3 hours field work. Credit, 3 hours.

*125 Principles of Horticulture.* Plant propagation. Nursery practices.



Orchards and home grounds. Prerequisite: Bot. 110. Fee, \$1.00. One lecture and 3 hours laboratory. Credit, 2 hours.

126 *Practical Horticulture*. Ornamental trees and shrubs, flowering plants, and landscaping. Prerequisite: Ag. 125. Fee, \$1.00. One lecture and 3 hours laboratory. Credit, 2 hours.

143 *Soils*. The formation, classification, and properties of soils; the relation to crop production; soil conservation. Prerequisite: one course in college chemistry. Fee, \$2.00. Two lectures and 3 hours laboratory. Credit, 3 hours.

144 *Irrigation Principles and Practices*. History of irrigation, extent and importance, water measurements, application and conservation of irrigation water. Prerequisite: Ag. 143. Fee, \$2.00. Credit, 3 hours.

185 *Animal Nutrition and Applied Feeding*. Principles of feeding, composition of feed, physiology of nutrition, and formulating rations. Prerequisite: Ag. 107 and college chemistry. Fee, \$2.00. Credit, 3 hours.

186 *Farm Organization and Management*. Selection of the farm, management, crop selection, diversification, capital utilization, cost accounting, etc. Fee, \$2.00. Credit, 3 hours.

202 *Livestock Production*. Production, care, and management of livestock. Lectures or equivalent laboratory. Fee, \$1.00. Credit, 3 hours.

206 *Market Milk*. The classes of market milk, sanitation, milk inspection, and scoring of dairies. Three lectures or equivalent laboratory. Prerequisite: Bot. 220. Fee, \$1.00. Credit, 3 hours.

208 *Livestock Judging*. A study of various breeds of livestock. Trips to stock farms, ranches, and livestock fairs. One lecture and one laboratory. Fee, \$1.00. Credit, 2 hours.

212 *Commercial Vegetable Crops*. Soil practices, cultural methods, harvesting and marketing of leading truck crops. Alternates with Ag. 123. Prerequisite: Ag. 130. One lecture and 6 hours field work. Credit, 3 hours.

216 *Plant Breeding*. The principles of plant breeding, and selection and hybridization. Prerequisites: Ag. 108, Bio. 204, Bot. 110. Fee, \$2.00. Credit, 3 hours.

219 *Animal Breeding*. The principles of genetics applied to animal breeding. Prerequisites: Biol. 204, Zool. 111, 112. Credit, 3 hours.

230 *Soil Conservation*. The study of soil management as a conservation agency. One lecture and 3 hours laboratory. Fee, \$2.00. Credit, 2 hours.

246 *Range Management*. Grazing regions, range forage, range improvement, range plants. Prerequisites: Ag. 107, Bot. 110. Fee, \$5.00. Two lectures and 3 hours laboratory. Credit, 3 hours.

The following courses in agricultural mechanics will be taught at the Thunderbird Field No. 2 shops located north of Scottsdale.

Ag. Mech. 102 *Farm Blacksmithing*. Forge and blacksmith work in tempering, hardening and repairing machinery. Fee, \$8.00. Credit, 2 hours.

106 *Farm Machinery Repair and Construction*. Care, repair and construction of farm machinery. Fee, \$16.00. Credit, 4 hours.

108 *Farmstead Electricity*. Principles of electricity and simple farmstead wiring. Fee, \$8.00. Credit, 2 hours.

110 *Ignition and Carburetion*. Ignition trouble-shooting, testing and adjusting. Carburetor adjustment and repair. Fee, \$8.00 per credit hour. Credit, 2 hours.

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## Department of Art

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KLOSTER (Head of the Department), HARTER, REID, SANDERSON,  
MORRIS, BERGAMO.

The Department of Art offers courses to meet the needs of students in: (1) teacher training, (2) an area of concentration in art in the Arts and Sciences Curriculums, (3) basic and pre professional arts preparing the student for an art career, (4) art for general culture.

### Teacher-Education Curriculums

#### The Kindergarten Primary and Elementary Curriculum

*For Students Not Specializing in Art.* The student in the elementary curriculum will find the following courses valuable in teaching: Art 101, 105, 117, 121, 151, 161, 207, and 210.

*For Students Specializing in Art.* Students registered in the elementary curriculum wishing special work or the special certificate in art may take the following courses: Art 101, 103, 105, 106, 121, 151, 161, 207, and 211. Other courses desired should be selected from the upper division offering.

## The Secondary Curriculum

To complete a major teaching field in art, at least 45 semester hours of work must be completed in the first four years and not less than 18 of the total shall be upper division. Candidates for the master's degree planning to teach art courses in the secondary schools should complete additional art courses in the fifth year. Under the guidance of his adviser the student may elect, during the third, fourth, and fifth years, optional art courses according to his interests and abilities.

*Required Courses.* Students in any major teaching field in art must take the following 30 semester hours of work: First and second years, Art 101, 103, 105, 106, 117, 121, 123, 151, 161; third and fourth years, Art 208, 211, 212.

*Major Teaching Field in Creative Art.* In addition to the required 30 hours, those interested in painting and sculpture will select at least 15 hours from the following: Art 171, 172, 191, 203, 204, 213, 261, 265, 266, 267, 268, 271, 291, 292, 295, 296.

*Major Teaching Field in Practical Arts.* In addition to the 30 required hours, 15 hours will be selected from the following: Commercial Art—Art 203, 204, 221, 222, 223, 224, 290; Interior Design—Art 141, 142, 241, 290; Ceramics Art 152, 251, 252, 290; Fashion Design and Illustration Art 131, 135, 231, 232, 235, 290; Crafts Art 217, 218, 290.

*Minor Teaching Field in Art.* This field consists of not less than 15 hours, of which at least 7 shall be upper division. The following should be included: Art 101, 105, 208, 211.

## Arts and Sciences Curriculums

### Generalization Requirements.

Students seeking the Bachelor of Arts degree with an area of concentration in Art, must meet the "generalization requirements" listed under the Arts and Sciences Curriculums found on pages 71, 72 of the catalog.

### The Area of Concentration in Art.

The area of concentration in art has been planned to give the student good basic training in the related arts for general culture, a background for professional work, or for practical purposes. In this area the student must take a total of 36 semester hours in required and optional courses as indicated below.

*Required Courses.* Each student with art as an area of concentration

must take the following 22 semester hours of work: Art 101, 103, 105, 106, 121, 161, 211, 212, 213.

*Optional Courses.* In addition to the required courses listed above, 23 semester hours must be selected from the field of emphasis given below.

(1) *Emphasis on Creative Art.* Those interested in the creative arts will select their courses from the following: Art 117, 171, 172, 191, 203, 204, 261, 262, 271, 290, 291, 292, 295, 296.

(2) *Emphasis on Practical Arts.* Students especially interested in the professional arts will select 23 hours from the following: Art 121, 123, 131, 135, 141, 142, 151, 152, 203, 204, 217, 218, 221, 222, 223, 224, 231, 232, 235, 241, 251, 252, and 290.

## Description of Courses

*Art 100 Introduction to Art.* A study of painting, sculpture, and architecture, to develop comprehension and appreciation of the fine arts. Some laboratory experience. Each semester. Fee, \$1.00. Credit, 2 hours.

*101 Drawing and Perspective.* General drawing and principles of elliptical, parallel and angular perspective. First year, each semester, 4 hours a week. Credit, 2 hours.

*102 Drawing and Perspective.* Emphasis on drawing techniques and composition. Prerequisite: Art 101. First year, second semester, 4 hours a week. Credit, 2 hours.

*103 Life Drawing.* The basic construction of the human figure. Emphasis on solidity and proportion. Fee, \$1.00. First year, each semester. Credit, 3 hours.

*105 Basic Design.* Problems in design. A study of color and color harmony. Fee, \$1.00. First year, first semester, 4 hours a week. Credit, 2 hours.

*106 Basic Design.* Creative design in relation to painting, sculpture, ceramics and related arts. Prerequisite: Art 105. Fee, \$1.50. First year, second semester, 4 hours a week. Credit, 2 hours.

*117 Allied Crafts.* A laboratory course dealing with leather, textile decoration, metal and wood. Fee, \$3.00. Second year, each semester, 6 hours a week. Credit, 3 hours.

*121 Lettering.* Construction, spacing, and arrangement of Roman and Gothic letters. Fee, \$1.50. Each semester, 4 hours a week. Credit, 2 hours.

123 *Commercial Art*. Practical problems in six major advertising media. Recommended for journalism and commerce majors. Prerequisite: Art 121. Fee, \$1.00. Each semester, 6 hours a week. Credit, 3 hours.

131 *Fashion Design*. Initial course in designing and constructing fashions. A survey of manufacturers, retailers, designers and illustrators. Prerequisites: Art 103, 105. Fee, \$2.00. Six hours a week. Credit, 3 hours.

135 *Fashion Illustration*. Introduction to fashion illustration. Emphasis upon sketching and rendering. Prerequisites: Art 103, 105. Six hours a week. Credit, 3 hours.

141 *Interior Design*. Problems in interior design, renderings of floor plans, elevations and interior sketches. Prerequisites: Art 101, 105. Fee, \$5.00. First semester, 6 hours a week. Credit, 3 hours.

142 *Interior Design*. Coordinated planning in decorating interiors. Emphasis upon modern ways of achieving space, renderings in color and perspective, and scale models. Prerequisites: Art 101, 105, 141. Fee, \$5.00. Second semester, 6 hours a week. Credit, 3 hours.

151 *Ceramics*. A laboratory course dealing with pottery and figurine techniques. Fee, \$5.00. Second year, 4 hours a week. Credit, 2 hours.

152 *Ceramics*. Emphasis upon ceramic form and expression. Fee, \$5.00. Second year, 4 hours a week. Prerequisite: Art 151. Credit, 2 hours.

161 *Water Color*. Painting in gouache and transparent water color. Emphasis on techniques. Prerequisite for art majors: Art 101, 105. Fee, \$1.00. Each semester, 7 hours laboratory. Credit, 3 hours.

171 *Sculpture*. Modeling in round and relief, casting and mold making. Building armatures. Plaster carving. Prerequisites for art majors: Art 103, 106. First semester, 4 hours a week. Fee, \$4.00. Credit, 2 hours.

172 *Sculpture*. Various stages in development of sculpture. Emphasis upon wood carving. Prerequisites: Art 103, 106, 171. Second semester, 4 hours a week. Fee, \$4.00. Credit, 3 hours.

191 *Oil Painting*. Sketching excursions and indoor painting. Landscape, still life and figure. Prerequisites for art majors: Art 101, 105, 106. Fee, \$1.50. Each semester, 6 hours a week. Credit, 3 hours.

203 *Advanced Life Drawing*. Emphasizes form and anatomical structure of full figure and portrait. Various mediums and techniques. Prerequisite: Art 103. Fee, \$2.00. Each semester, 6 hours a week. Credit, 3 hours a week.

204g *Advanced Life Drawing*. Continuation of Art 203 with anatomical research, one hour additional each week. Group criticism. Prerequisites: Art 103, 203. Fee, \$2.00. Each semester, 6 hours laboratory, 1 hour outside preparation. Credit, 3 hours.

207 *Art in the Elementary School*. Required of those specializing in elementary school art. Emphasis on instructional methods, materials and procedures in teaching art. Two hours a week. Credit, 2 hours.

208 *Art in the Secondary School*. Required of students in the secondary curriculum with a major teaching field in art. Emphasis on methods, materials and subject areas. Two hours a week. Credit, 2 hours.

210 *Public School Art*. Emphasizes tools, materials and procedures of importance in directing children's art activities. Fee, \$2.00. Third year, each semester, 4 hours a week. Credit, 2 hours.

211 *Western Art to the Renaissance*. A survey of western art to the Renaissance with emphasis upon classic art. Fee, \$1.00. First semester, 3 hours a week. Credit, 3 hours.

212 *Renaissance Art*. Continuation of Art 211. A survey of the art of the Renaissance. Fee, \$1.00. Second semester, 3 hours a week. Credit, 3 hours.

213g *Contemporary Art*. Emphasizes aims and tendencies in art expression. A study of major artists and their contributions. Prerequisites: Art 211, 212. Fee, \$1.00. Second semester, 2 hours a week. Credit, 2 hours.

217 *Advanced Crafts*. Correlation of function with medium and design. Problems in weaving, book-binding, and costume jewelry. Individual problems. Prerequisite: Art 117. Fee, \$3.00. Six hours a week. Credit, 3 hours.

218g *Advanced Crafts*. Students specialize in a particular craft medium or technique. Prerequisites: Art 105, 106, 117, 217. Fee, \$3.00. Third year, 6 hours a week. Credit, 3 hours.

221 *Advanced Lettering*. Emphasis on arrangement and spacing. Prerequisite: Art 121. Fee, \$1.00. Each semester, 4 hours a week. Credit, 2 hours.

222 *Advanced Lettering*. Recommended only to those having a special interest in lettering. Prerequisite: Art 221. Fee, \$1.00. Each semester, 4 hours a week. Credit, 2 hours.

223 *Advanced Commercial Art*. The student specializes in areas in which he is most interested. Prerequisites: Art 103, 105, 121, 123. Fee, \$1.00. Six hours a week. Credit, 3 hours.

224 *Advanced Commercial Art*. Planning and preparation of samples of work for presentation to prospective employers. Prerequisites: Art 123, 223. Fee, \$2.50. Seven hours a week. Credit, 3 hours.

231 *Advanced Fashion Design*. Designing clothes with relation to price ranges and materials. Style forecasting. Prerequisite: Art 131. Fee, \$2.00. Six hours a week. Credit, 3 hours.

232 *Advanced Fashion Design*. Students may specialize in designing clothes for special types, for the junior miss or for children. Prerequisites: Art 131, 231. Fee, \$2.00. Six hours a week. Credit, 3 hours.

235 *Advanced Fashion Illustration*. Illustrating clothes and accessory merchandise for newspaper, magazine and catalog advertising. Prerequisites: Art 131, 135. Six hours a week. Credit, 3 hours.

241 *Advanced Interior Design*. Emphasis on fabrics, materials, wood and floor coverings used in modern interiors. Prerequisites: Art 101, 105, 141, 142. Fee, \$5.00. Six hours a week. Credit, 3 hours.

251 *Advanced Ceramics*. Students specialize in pottery or ceramic sculpture. Ceramic techniques, glaze preparation, formula interpretation, stacking and firing kiln, etc. Prerequisites: Art 105, 106, 151, 152. Fee, \$7.00. Third year, 6 hours a week. Credit, 3 hours.

252g *Advanced Ceramics*. Mastery of studio techniques of ceramic production and glazing. Prerequisites: Art 105, 106, 151, 152, 251. Fee, \$7.00. Fourth year, 6 hours a week. Credit, 3 hours.

261 *Advanced Water Color*. More advanced problems in picture construction. Prerequisite: Art 161. Fee, \$1.00. Each semester, 7 hours a week. Credit, 3 hours.

271 *Advanced Sculpture*. Experimenting with various materials and working from model. Prerequisites: Art 103, 106, 171, 172. Fee, \$5.00. First semester, 6 hours a week. Credit, 3 hours.

291 *Advanced Oil Painting*. Emphasis on design, plastic form, preparation of canvas and gesso grounds, and techniques. Prerequisite: Art 191. Fee, \$1.50. Each semester, 7 hours a week. Credit, 3 hours.

292g *Advanced Oil Painting*. For those with a serious interest in painting. Prerequisite: Art 292. Fee, \$3.00. Each semester, 6 hours laboratory and 1 hour research a week. Credit, 3 hours.

295 *Figure Painting*. Painting from posed model in oil, gouache, tempera or water color. Prerequisites: Art 103, 161, 191, 203, 291. Fee, \$4.00. Four hours a week. Credit, 2 hours.

296g *Figure Painting*. Prerequisite: Art 295. Fee, \$4.00. Four hours a week. Credit, 2 hours.

# Department of Business Administration

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HILKERT (Head of the Department), ALLDREDGE, BRATCHER, BURTON,  
JUHNKE, MAX, MCKINNON, SHEPPARD, ZACHER.

The department offers courses to meet the needs of four groups of students: (1) Those preparing for some phase of business as a career and who wish to obtain the degree of Bachelor of Science with an area of concentration in Accounting, Economics and Management, Marketing and Advertising, or Secretarial Science. (2) Those not planning to graduate but who desire one or more years of college work in preparation for business pursuits. (3) Those preparing to teach commerce, or business subjects, in public secondary schools. (4) Those pursuing any of the other curriculums of the college, but desiring certain electives in business administration.

## Teacher-Education Curriculums

### Kindergarten Primary and Elementary Curriculums.

The department does not encourage students following the elementary or the kindergarten-primary curriculum to take major or minor teaching fields in commerce, however, it is suggested that electives from the following courses may be quite helpful: Bus. Ad. 101, 102, 110, 120, 141, 233.

### The Secondary Curriculum

*Major Teaching Field in Commerce.* The major teaching field in commerce consists of the following 51 semester hours taken in the first four years: Bus. Ad. 101, 102, 120, 130, 132, 141, 171, 173, 201, 202, 205, 206, 233, 235, 236, 241, 251g, 252g.

*Minor Teaching Field in Commerce.* This field consists of a minimum of 15 semester hours including a minimum of 9 hours in Accounting or in Secretarial Science selected in consultation with the head of the department.

## Arts and Sciences Curriculums

*The degree.* The completion of a four-year curriculum, including the generalization requirements and an area of concentration in business administration as outlined below, leads to the degree of Bachelor of Science.



## Generalization Requirements

Each student seeking the Bachelor of Science degree with an area of concentration in business administration, must complete the 40 semester hours of work outlined on pages 71, 72 of the catalog, and in addition one of the four areas of concentration as outlined below.

### Areas of Concentration.

*Required Courses.* In addition to the generalization requirements, each student taking an area of concentration in business administration must take the following 31 to 33 hours of work: Bus. Ad. 101, 102, 130, 132, 141, 173, 205, 206, 224, 233. Bus. Ad. 130, 132 may be applied on the 12 hours of social studies in the generalization requirements.

In addition to the 31-33 hours of required courses, each student will select one of the areas given below and complete the work prescribed.

*Accounting.* The following 24 hours are required: Bus. Ad. 201, 202, 203, 204, 207g, 208g, 209g, 210g; and 12 hours are to be selected from the following optional courses: Bus. Ad. 103, 133, 211g, 212, 213, 217, 220, 221, 222, 226g, 266; Math. 106 or other upper-division mathematics; Eng. 128. Completion of the area of concentration with an emphasis on accounting should qualify the student to pass the C. P. A. examination, however students planning to take these examinations should select additional accounting hours in choosing optional courses.

*Economics and Management.* Students must complete the following 23 hours of work: Bus. Ad. 133, 215, 217, 219, 226g, 262, 266, 289; and 13 hours selected from the following optionals: Bus. Ad. 201, 202, 220, 221, 222, 256g, 261g, 263g, 265, 266, 293; Geog. 101; Hist. 109.

*Marketing and Advertising.* The student must complete the following 24 hours of required courses: Bus. Ad. 171, 174, 175, 277, 278, 279, 281g, 283g, 293g; and 12 hours selected from the following optionals: Bus. Ad. 133, 217, 226g, 256, 285, 286, 287, 289; Eng. 220; Geo. 101; H. E. 215, 219; Psych. 214; Hist. 109; Art 122, 201.

*Secretarial Science.* Students must complete the following 24 semester hours of required courses: Bus. Ad. 103, 120, 121, 215, 235, 236, 238, 241, 242, 243g; and 12 hours from the following optionals: 141, 171, 201, 202, 217, 265; H. E. 202; Eng. 128, 155.

## Description of Courses

### Accounting

Bus. Ad. 101 *Elementary Accounting.* A beginner's course. Covers

the bookkeeping cycle and preparation of business reports. Lectures and laboratory 5 days a week. Credit, 4 hours.

102 *Elementary Accounting*. A continuation of Bus. Ad. 101. Prerequisite: Bus. Ad. 101. Credit, 4 hours.

103 *Payroll and Miscellaneous Taxes with Accounting Procedures*. Social security laws with respect to taxes, benefits payable, merit ratings, payroll records, sales tax and payroll reports. Prerequisites: Bus. Ad. 101, 102. Credit, 2 hours.

141 *Business Mathematics*. Gives practice in arithmetic used by the business man. Each semester. Credit, 3 hours.

201 *Intermediate Accounting*. Study of corporations and corporation accounting, assets, liabilities, funds and reserves, comparative statements, working capital, ratios, etc. Prerequisites: Bus. Ad. 101, 102. Credit, 3 hours.

202 *Intermediate Accounting*. A continuation of 201. Prerequisite: Bus. Ad. 201. Credit, 3 hours.

203 *Advanced Accounting*. Partnership organization, dissolution and liquidation. Parent and subsidiary companies, consolidated balance sheets, estates, trusts, P. and L. statements. Prerequisites: Bus. Ad. 101, 102, 201, 202. Credit, 3 hours.

204 *Advanced Accounting*. A continuation of 203. Prerequisite: Bus. Ad. 203. Credit, 3 hours.

207g *Auditing Theory and Practice*. Auditing practices, balance sheet, profit and loss, working sheets, audit reports. Prerequisites: Bus. Ad. 101, 102, 201, 202. Credit, 3 hours.

208g *Cost Accounting*. Cost find systems, process costs, standard costs, estimate costs, cost accounting procedure. Prerequisites: Bus. Ad. 101, 102, 201, 202. Credit, 3 hours.

209g *Governmental and Institutional Accounting*. Accounting principles applied to governmental units—city, county, and state—and to public institutions. Prerequisites: Bus. Ad. 101, 102, 201, 202. Credit, 3 hours.

210g *Income Tax—Federal and State*. Laws, returns including corporations, partnerships, fiduciaries, and individuals. Prerequisites: Bus. Ad. 101, 102, 201, 202. First semester. Credit, 3 hours.

211g *Income Tax Federal and State*. Corporation income and excess profit taxes, reorganizations, holding companies, estate and gift taxes. Tax refunds, etc. Prerequisite: Bus. Ad. 210g. Second semester. Credit, 3 hours.

212 *Mathematics of Accounting*. Approved methods for computation

of income tax and consolidated balance sheet equations, etc. Prerequisites: Math. 106, Bus. Ad. 101, 102. Credit, 2 hours.

213 *Mathematics of Accounting*. Compound interest, annuities, bond valuation and amortization, and building and loan problems. Prerequisite: Bus. Ad. 212. Credit, 2 hours.

291 *Seminar in Accounting*. Students select a special field of accounting and do individual study and research. Open only to accounting majors. Prerequisite: approval of instructor. Hours arranged. Credit, 1 to 3 hours.

292 *Seminar in Accounting*. A continuation of 291. Prerequisite: Bus. Ad. 291. Credit, 1 to 3 hours.

Note: A laboratory fee of 50 cents is charged for each accounting course, but the maximum laboratory fee in any semester, regardless of the number of accounting courses taken, is one dollar.

## Economics and Management

130 *Introduction to Economics*. Theories of production, exchange, distribution and consumption. Prerequisite: sophomore standing. Each semester. Credit, 3 hours.

132 *Current Economic Problems*. Principles of economics applied to public finance, labor, foreign trade, exchange, monopolies, transportation, etc. Prerequisite: Bus. Ad. 130. Each semester. Credit, 3 hours.

133 *Economic Analysis*. Principles of price determination. Supply and demand factors. The marginal technique. Value theory. Prerequisites: Bus. Ad. 130, 132. Credit, 3 hours.

205 *Business Law*. Contracts, sales, agency, partnerships, corporations, negotiable instruments, personal property, real property, and federal and state regulation of business. Credit, 3 hours.

206 *Business Law*. A continuation of 205. Prerequisite: Bus. Ad. 205. Credit, 3 hours.

215 *Business Organization and Management*. Forms of business organization and types of management. Prerequisites: Bus. Ad. 130, 132. Credit, 3 hours.

217 *Money and Credit*. Function of money, monetary systems, credit functions, banking practices and policies. Prerequisites: Bus. Ad. 130, 132. Credit, 3 hours.

219 *Labor Relations*. Appraisal of problems confronting labor and capital as well as legislation and administrative regulations affecting employers and employees. Prerequisites: Bus. Ad. 130, 132. Credit, 3 hours.

220 *Investments*. Analysis and evaluation of various types of securities. Business cycles, currency problems, and governmental control. Prerequisites: Bus. Ad. 130, 132. Credit, 3 hours.

221 *General Insurance*. Coverage available, buying methods, procedures in settling claims, insurance companies, and vocational opportunities. Prerequisites: Bus. Ad. 130, 132. Credit, 2 hours.

222 *Life Insurance*. Policy forms, insurance companies, computation of premiums, contract settlements, sales methods, and opportunities in the field. Prerequisites: Bus. Ad. 130, 132, 221. Credit, 2 hours.

224 *Business Statistics*. Sources, classification and tabulation of data, index numbers, graphs, etc. and applications to business. Prerequisites: Bus. Ad. 130, 132. Fee, \$1.00. Credit, 4 hours.

226g *Business Cycles and Forecasting*. Historical, statistical and analytical study of business cycle theory. Comparison of theories of leading economists. Methods of control of cyclical fluctuations. Prerequisite: Bus. Ad. 130, 132, 224. Credit, 3 hours.

256 *Marketing of Agricultural Products*. Practices, processes and agencies related to marketing, livestock, farm crops. Factors affecting prices. Cooperative organizations. Prerequisites: Bus. Ad. 130, 132, 133, 173. Credit, 3 hours.

262 *Comparative Economic Systems*. Economic aspects of communism, fascism, nazism, capitalism, socialism. Prerequisites: Bus. Ad. 130, 132. Credit, 2 hours.

263g *Land Economics and Utilization*. Local, regional, and national land use problems and policies, including tenancy, valuation, credit, taxation, and conservation. Prerequisites: Bus. Ad. 130, 132. Credit, 3 hours.

265 *Personnel Management*. Personnel selection, placement, training, promotion, wage incentives, absenteeism, counseling, etc. Prerequisites: Bus. Ad. 130, 132. Credit, 3 hours.

266 *Corporation Finance*. Promotion, corporate organization, financing, selling securities, dividend policies, investments, etc. Prerequisites: Bus. Ad. 130, 132. Credit, 3 hours.

## Marketing and Advertising

Bus. Ad. 171 *Salesmanship*. Principles applicable to selling merchandise and the creation of a favorable personal impression. Prerequisite: Bus. Ad. 130. Credit, 2 hours.

173 *Principles of Marketing*. Survey of principles and trends. Prerequisite: Bus. Ad. 130. Credit, 3 hours.

174 *Marketing Practices*. Practices and problems confronting the marketing executive and the development of techniques found useful in their solution. Prerequisite: Bus. Ad. 130, 173. Credit, 3 hours.

175 *Advertising*. Introductory study of advertising theory and practice in relation to marketing and general business management. Prerequisite: Bus. Ad. 130, 173. Credit, 3 hours.

277 *Principles of Retail Merchandising*. The scope of merchandise planning and control, inventory and purchases, markup and profit. Prerequisite: Bus. Ad. 173. Credit, 3 hours.

279 *Wholesaling*. Its organization and function in the marketing channel, services, price policies, regulation and recent trends. Prerequisites: Bus. Ad. 130, 173, 174. Credit, 2 hours.

281g *Sales Administration*. Administration of a sales organization; sales planning, sales quotas, selection, training, and compensation. Prerequisites: Bus. Ad. 171, 173, 279. Credit, 3 hours.

283g *Marketing Research*. Types and use of market research, analysis procedures, planning the investigation, interpretation, presentation of results, etc. Prerequisites: Bus. Ad. 173, 174, 224. Credit, 3 hours.

285 *Advertising Copy*. A study of the writing of effective advertising copy including practice in the preparation of copy. Prerequisites: Bus. Ad. 173, 175, 233. Credit, 2 hours.

286 *Advanced Advertising Technique*. Preparation of advertising material, selection of media, and the creation of the advertisement from the layout through the processes of engraving and printing. Prerequisites: Bus. Ad. 173, 175. Credit, 2 hours.

287 *Radio Advertising*. Techniques and problems of radio advertising, including program selection and planning, preparation of continuity, and coordination with other forms of advertising. Prerequisites: Bus. Ad. 173, 175. Credit, 2 hours.

289 *Foreign Trade*. Fundamentals underlying foreign trade, international commercial policies, developing markets abroad, importing and exporting. Prerequisites: Bus. Ad. 130, 132, 173. Credit, 3 hours.

293g *Price Policies*. Price making on organized exchanges; pricing and price systems. Prerequisites: Bus. Ad. 130, 173, 174, 175, 278, 279. Credit, 2 hours.

## Secretarial Science

110 *Techniques in Typewriting*. Fundamentals of touch typewriting. Emphasis upon technique and elementary application. Fee, \$2.00. Each semester, daily. Credit, 2 hours.

113 *Elementary Shorthand*. The study and application of the principles of Gregg Shorthand. Daily. Credit, 3 hours.

114 *Elementary Shorthand*. A continuation of 113 with increasing emphasis on dictation and transcription. Prerequisite: Bus. Ad. 113. Daily. Credit, 3 hours.

120 *Projects in Typewriting*. Advanced instruction in applied typewriting with emphasis upon skill requirements needed in a modern office. Prerequisite: Bus. Ad. 110. Fee, \$2.00. Daily. Credit, 2 hours.

121 *Projects in Typewriting*. A continuation of 120. Prerequisite: Bus. Ad. 120. Fee, \$2.00. Daily. Credit, 2 hours.

233 *Business Correspondence*. Business writing effectively applied to various forms of business communication. Prerequisites: Bus. Ad. 110, Eng. 101, 102. Each semester. Credit, 3 hours.

235 *Advanced Shorthand*. Review of the principles of the Gregg system and continuing with graded dictation and transcription. Prerequisites: Bus. Ad. 113, 114, 120. Fee, \$1.00. Daily. Credit, 3 hours.

236 *Advanced Shorthand*. Minimum objective, to perform as an efficient stenographer with dictation of 120 words and transcription of 25 words per minute. Prerequisite: Bus. Ad. 235. Fee, \$1.00. Daily. Credit, 3 hours.

238 *Secretarial Problems*. The understandings, attitudes, and appreciations required of the personal or private secretary in a modern office. Prerequisites: Bus. Ad. 120, 235. Fee, \$1.00. Credit, 2 hours.

241 *Office Machines*. Operation of selected office machines and their adaptation to office needs and procedures. Prerequisites: Bus. Ad. 110, 141. Fee, \$5.00. Daily. Credit, 2 hours.

242 *Secretarial Office Practice*. Training in the operation of selected office equipment specifically designed for use by secretaries. Prerequisite: Bus. Ad. 241. Fee, \$5.00. Daily. Credit, 2 hours.

243g *Office Organization and Management*. Analysis of function and costs of operating office departments. Prerequisites: Bus. Ad. 110, 141, 241. Credit, 3 hours.

## Commercial Teacher Training

251g *Commercial Teaching Methods*. Methods and material used in the teaching of business subjects in Arizona public schools. Prerequisites: Bus. Ad. 101, 102, 120, 114, Ed. 215. Credit, 2 hours.

252g *Commercial Teaching Methods*. Study of business offerings in public secondary schools. Prerequisite: Bus. Ad. 251g. Credit, 2 hours.

# Department of Education and Sociology

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BURKHARD (Head of the Department), PAYNE, RICHARDSON, RICE, BENEDICT, TURNER, MENKE, KUYKENDALL, STEWART, BYERS, BAKER, CRAWFORD, CARL.

The purpose of this department is to promote interest in the teaching profession and to prepare students to carry on effective work as teachers and administrators in the public school. To accomplish this end the aim is to acquaint the student with human nature, educational subject matter, methods of teaching and administration, and methods of social reconstruction commensurate with democratic social theory.

## Teacher-Education Curriculums

Detailed outlines concerning curriculums leading to the B. A. and M. A. degrees in Education and also to certification for teaching in kindergarten primary, elementary, and secondary schools of Arizona will be found on pages 67-70.

### Kindergarten Primary Curriculum

The Kindergarten-Primary Curriculum offers specialized training for students who wish to teach young children. The teaching certificate covers the kindergarten and grades one, two and three. The courses are designed to give the student a better understanding of young children and of their total personality development during the first years of their school adjustment. Special emphasis is given to the growth and development of the child and how he learns rather than to specific subject matter. There is a wide demand for teachers who complete the kindergarten-primary curriculum.

### Elementary Curriculum

This curriculum prepares students for service in the elementary school. No major or minor teaching fields are required. It is advisable that the student take some work in the various departments of the college so as to have a broad knowledge covering many fields. Opportunities for employment as teachers are greatest in the elementary fields. By proper selection of courses of instruction it is possible for students who care to take the necessary extra time to qualify eventually

for the secondary certificate also. Interested students will consult an educational adviser who will explain how both certificates may be obtained.

## Secondary Curriculum

The secondary curriculum provides a five-year program requiring a minimum of 126 semester hours of work for the Bachelor of Arts in Education degree and an additional 30 semester hours of work, including at least 6 semester hours in Education, for the degree of Master of Arts in Education.

*Generalization Requirements.* The following courses totaling 35 semester hours are required of all students registered under the secondary curriculum: Eng. 101, 102, Psych. 100, Soc. 120, Speech 110, G. S. 100, 110, Hist. 101, 102, or 103, 104. P. S. 200, P. E. 100, and P. E. Activity.

*Professional Requirements.* In addition to the courses listed under the generalization requirements, all students registered under the secondary curriculum are required to take the following 24 semester hours of work in education and psychology: Ed. 215, 211g or 250g, 228, 260, Psych. 141, 142, 200, 213.

*Major and Minor Teaching Fields.* Students under the secondary curriculum are required to complete a major and a minor teaching field. It is recommended that a second minor teaching field be completed if possible.

A major teaching field shall consist of a minimum of 45 semester hours of work, 25 semester hours of which shall be in courses in a subject field from one department, 20 semester hours of which shall consist of courses from the same or related departments. A minimum of 18 semester hours in the major teaching field shall be upper division courses.

A minor teaching field shall consist of at least 15 semester hours in a subject field in a department exclusive of courses counted toward the major teaching field. Each of the courses included in the generalization requirements, as listed on this page, count toward the total number of semester hours required for the respective major and minor teaching fields.

In selecting major and minor teaching fields students should keep in mind the requirements of the North Central Association, the Arizona State Board of Education, and the combinations usually assigned beginning teachers in Arizona high schools. Information concerning these matters can be obtained at the office of the Director of Teacher Training.



*Recommended Electives.* The following electives are recommended for students registered under the secondary curriculum: Art 101, Ed. 232, 233, Eng. 171, Geog. 100, Hist. 110, Math. 105, Mus. 130.

*Professional Sequence.* In addition to the required professional courses, listed on page 67-70, it is essential that each student plan the proper sequence of professional courses. Education 215, Secondary School, is prerequisite for all methods courses, History of Education, and Philosophy of Education. If special methods courses are taken in lieu of Ed. 228, Methods of Teaching in the Secondary School, they must be taken in the major teaching field of the student.

*Teaching Entrance Tests.* Teaching entrance tests under the secondary curriculum include English fundamentals and the major and minor teaching fields at the secondary level.

*Secondary and Elementary Certificates.* Students planning to meet the requirements for the secondary certificate and also desiring the elementary certificate must take Ed. 230, Elementary Curriculum, and five additional semester hours of directed teaching in grades four to eight, inclusive. The additional teaching shall be in grades exclusive of those in which the first five semester hours of directed teaching were taken.

## Arts and Sciences Curriculums

Students wishing to prepare for service in the field of social welfare will pursue the program of studies listed below. Students completing the Arts and Sciences Curriculum with an area of concentration in social welfare will receive the B. S. degree. The generalization requirements for this degree are listed on pages 71, 72 of this catalogue.

### Area of Concentration in Social Welfare

*Purposes and General Requirements.* The area of concentration in social welfare provides a broad background of study and preparation for students who expect to enter graduate schools of social work or for those who plan on taking social work positions in communities where graduation from a school of social work is not a requirement. Professional training in social work is taken in graduate schools of social work. The courses offered here are on the undergraduate level and are for the purpose of orienting students to the field of social welfare.

The American Association of Schools of Social Work recommends that prospective students of social work or social administration be urged to take not less than 12 semester hours in economics, political science, psychology and sociology including social anthropology. The association also recognizes the value of courses in biology, history,

education, and English literature and composition, as well as other courses which contribute to a broad cultural background. Some schools of social work require that the student, in addition to taking introductory courses in economics, political science, sociology, psychology and biology, complete at least 18 hours of selected courses in one of these subjects. A total of 50 semester hours of required and optional courses must be taken as indicated below:

*Prerequisites.* The following 17 semester hours: Soc. 120; G. S. 100, 110; Com. 130, Psych. 100.

*Required Courses.* The following 30 semester hours are required: Hist. 103, 104, 105, 106, Psych. 208, Soc. 205, 212, 215, P. S. 102, 203.

*Optional Courses.* Twenty semester hours to be selected from the following: Spanish, 8 hours, mathematics, 6 hours, Hist. 109, Psych. 200, 211, 213, 224, 231g, 234, 240, Com. 219g, 225g, P. S. 200, 201, 204, Econ. 131, Biol. 130, 140, 204, Phil. 200, Eng. 171.

## Description of Courses in Education

160 *Children's Literature.* Folk and modern literature for elementary school children; a study of types; wide reading; story telling and reading aloud. Prerequisite: Eng. 101, 102. Second year, each semester. Credit, 3 hours.

201 *Language Arts.* For the kindergarten and grades 1, 2, 3. Emphasis on teaching beginning reading and prevention of reading difficulties. Other phases of language arts considered. Credit, 3 hours.

202 *Language Arts.* For intermediate and upper grades. Emphasis on the development of skill in reading as a means of doing research work. Spelling, handwriting, composition, and creative writing are considered. Prerequisite: Ed. 201. Credit, 3 hours.

205 *Construction Activities in the Kindergarten-Primary School.* Work with clay, paper, textiles, wood, paint, etc. contributing to creative expression in the integrated activity program. Fee, \$5.00. Third year, each semester. Eight hours a week. Credit, 4 hours.

209 *Kindergarten-Primary Curriculum and Teaching Problems.* The philosophy, principles, and practices of kindergarten primary education. Discusses all phases of the curriculum. Prerequisites: Ed. 201 and one course in K P education. Third or fourth year, each semester. Credit, 3 hours.

211g *History of Education.* The social life, ideas, and institutions that gave direction to western civilization. A background for understanding and evaluating present educational and social problems. Credit, 3 hours.

212 *Play Education*. Theories of play with emphasis on utilization of play interests in rhythms, plays and games. Third year, each semester. Credit, 3 hours.

213g *Evaluation of Children's Literature*. Social and educational concepts expressed in literature and changes in values and principles that are needed. Prerequisite: at least one course in literature. First semester, alternate years. Credit, 2 hours.

215 *Secondary School*. The principles of secondary education: its functions, objectives, curriculum, methods, problems, and trends. Credit, 3 hours.

216g *Educational Sociology*. A study of education in relation to social institutions. Considers methods of gathering data in social research, the family, problems of educational reconstruction, social relationships, and social measurements. Credit, 3 hours.

217g *Modern Practice in the Kindergarten-Primary School*. Practices, materials, and policies with emphasis on curriculum trends, methods of instruction, pupil teacher and teacher-parent relationships. Credit, 2 hours. Not offered 1948-49.

218g *Diagnostic and Corrective Reading Techniques*. Reading difficulties in learning and teaching situations are investigated. Considers techniques of diagnosis and corrective procedure. Prerequisites: Ed. 201, 202, or teaching experience. Credit, 3 hours.

219g *Evaluation in the Kindergarten-Primary School*. Techniques for understanding the young child with the purpose of adjusting the school program to his needs. Credit, 2 hours. Not offered 1948-49.

220g *Arizona School System, Laws, and Records*. The organization and legal set-up of the Arizona school system, with special reference to the work of the teacher and administrator. Credit, 2 hours.

226g *Safety Education*. Various phases of safety education: home, school, on-the-job, and driver education and training. Emphasis on special interests of class members. First semester. Credit, 3 hours.

228 *Methods of Teaching in the Secondary School*. Objectives of secondary education, methods of instruction, socialized procedures, individual differences, testing procedures, individual work in field of interest. Prerequisite: Ed. 215. Credit, 3 hours.

230 *Elementary School Curriculum and Techniques*. Considers curriculum factors such as contemporary life and concept, principles and scope of curriculum construction, and problems of instruction. Credit, 3 hours.

232 *Introduction to Guidance*. The need, objectives, prevailing practic-

es, and the development and administration of guidance programs. Credit, 3 hours.

233 *Audio-Visual Aids in Education*. Principles underlying the selection and use of materials for instructional purposes. Advantages, limitations, and uses of each type of material. One hour class and 3 hours laboratory a week. Credit, 2 hours.

237g *Production of Audio-Visual Aids*. Making of photographs, slides, filmstrips, motion pictures, and recordings. Preparation of scripts. Technical problems of production. Prerequisite: Ed. 233. One hour class and 3 hours laboratory a week. Credit, 2 hours.

238 *Extra-Curricular Activities*. Types of activities, their function, importance, and relationship to the regular program of the elementary and high school. Credit, 2 hours.

250g *Philosophy of Education*. Study of social and educational theories. Designed to give students a perspective of life enabling them to give excellent professional services to society. Each semester. Credit, 3 hours.

260 *Observation and Directed Teaching*. Students seeking kindergarten-primary or elementary certification observe and teach for a half-day session during the first or second semester of the senior year. Those seeking the secondary certificate teach one quarter day. Class work in school management. Credit, 5 or 10 hours.

264 *4-H Club Organization and Leadership*. History, scope, plan of organization, and methods. Students organize and conduct a 4-H Club supervised by the Extension Department, University of Arizona. A certificate of proficiency is granted on completion of course. Prerequisite: approval of department head. Each semester. Credit, 1 hour.

265 *Youth Organizations and Leadership*. Special youth problems, character-forming organizations, juvenile problems, and community leadership. Intensive study of one organization and participation in its leadership. Fee, 50 cents. First semester. Credit, 2 hours.

266 *The School and Community Relationships*. Underlying philosophy and techniques used to bring about better relationships between the school and community. Credit, 2 hours.

300 *Seminar: Thesis Preparation and Research*. Acquaints the student with the nature of the thesis, library resources and facilities, essential techniques and skills used in research studies, and suitable research problems. Credit, 2 hours.

304 *Basic Course in Guidance*. Acquaints the student with all im-

portant aspects of a student personnel program. Required of those who have not had Ed. 232 or equivalent preparation. Credit, 2 hours.

305 *Education and Social Control.* A study of human affairs designed to give satisfactory direction to them. Considers social measurement and techniques for carrying on investigations. Credit, 4 hours.

306 *Character Education.* Problems of educating for citizenship are evaluated in the light of democratic ideals and conflicting social theories. Credit, 2 hours.

309 *The Kindergarten Movement.* Development of the kindergarten; foreign influences contributing to its establishment; early pioneers; progressive techniques in kindergarten practices. Second semester. Credit, 3 hours.

312 *Modern Elementary Curriculum Development.* An analysis of the best educational thought, practices, and trends of the elementary program. Special attention given to innovations of proven value. Credit, 2 hours.

314 *Secondary School Administration and Supervision.* Procedures and techniques in administration and supervision of the secondary school. Individual and group research projects. Credit, 2 hours.

315 *Public School Administration.* A functional approach to problems of organization, administration and supervision. Includes observation in public schools. Credit, 2 hours.

316 *Supervision in the Elementary School.* Principles of supervision, types of supervisory programs, techniques of supervision, and evaluation of supervisory practices. Credit, 2 hours.

317 *Elementary School Administration and Supervision.* The place of the elementary school in the public school system; its internal organization; relationship of school to community; problems of the principal. Credit, 2 hours.

318 *Guidance Methods and Techniques.* Nature and use of the interview, tests, inventories, records and reports, observation, rating scales, and the case study. Course should precede Ed. 320. Credit, 2 hours.

320 *Counseling.* Concerned with the understanding and application of principles, methods, and techniques of counseling individual students effectively. Ed. 318 should precede this course. Credit, 2 hours.

323 *Audio Visual Education.* Principles of audio-visual methods of teaching. Survey of literature of field, and experience in constructing teaching units. Not open to students having credit in Ed. 232. Two classes a week and laboratory hours arranged. Credit, 2 hours.

325 *Vocational Guidance*. Origin, philosophy, principles, practices, and services of vocational guidance; its relationship to other types of guidance, to organized education, and to the student personnel program. For secondary teachers, counselors, principals, and directors of guidance. Credit, 3 hours.

326 *Educational and Occupational Information*. An appraisal of programs in secondary schools. Considers educational opportunities in higher institutions, technical institutes, trade schools, etc.; executing a job analysis program; occupational families; standard sources of data; occupational opportunities. Should be preceded by Ed. 325. Credit, 2 hours.

327 *Organization and Administration of Guidance Program*. For those directing or preparing to direct the guidance program. Specific organizational patterns, procedures, and problems. Credit, 2 hours.

329 *Administration of Audio Visual Aids Programs*. The qualifications and duties of the director, preparing the budget, buying equipment, handling materials, in service training, and evaluation of the program. Credit, 2 hours.

330 *Contemporary Social Movements*. Current social theories and social reconstruction. A sociological approach to the problem of education in relation to social control. Credit, 2 hours.

332 *War and Education*. Present-day trends and their impact upon established social practices and educational institutions. Study of problems in an era of power and technology in which various social philosophies are contending for control. Credit, 3 hours.

333 *Secondary School Curriculum Development*. Principles of the secondary school curriculum, methods and techniques of instruction, curriculum-making programs and trends, and experimental practices. First semester. Credit, 3 hours.

334 *Directed Learning*. The principles of learning and application to the teaching learning situations of the secondary school. Emphasizes the improvement of assignments, the use of class time, and the evaluation of learning outcomes. Credit, 3 hours.

337 *Public School Finance*. Methods and problems of financing public education, current problems in school support, and the legal basis of public school finance. Credit, 2 hours.

338 *School Grounds, Buildings and Equipment*. Includes planning building programs, school plant, school furniture and equipment, maintenance, financing, and legal regulations of school construction. Credit, 2 hours.

340 *Seminar: Improvement of Teaching in the Secondary School.* Principles of teaching and their significance are taken up in light of the needs of the members of the class. Individual reports. Credit, 3 hours.

348 *Philosophic Foundations of Education.* The aim is to evaluate assumptions on which different philosophies rest with a view to constructing a philosophy to meet the needs of modern life. Credit, 3 hours.

## Sociology

120 *Sociology.* Study of human relationships, human wants, and social institutions. Aims to discover foundations basic to a stable and progressive civilization. Each semester. Credit, 3 hours.

125 *Elementary Anthropology.* Primitive society, religion, material culture, the origin and antiquity of man and civilization, modern races, the linguistic phases of culture, and the principles of anthropology. Credit, 3 hours.

204 *Urban Sociology.* A study of contemporary city life and its effect on the individual personality and on the social organization. Rural-urban conflicts of culture. Prerequisite: Soc. 120. Credit, 3 hours.

205 *History of Social Welfare.* Methods of helping the poor from ancient times to the present. Systems of relief in Europe, England, and the United States. Credit, 3 hours.

206 *Social Anthropology.* Social organization, social institutions, and cultural diffusion; acculturation; culture and personality; the community study; selected primitive cultures. Prerequisite: Soc. 120 or 125. Credit, 3 hours.

207 *The American Indian.* Archaeology and ethnology of the American Indian with emphasis upon current, social and economic problems of the Indians of the Southwest. Prerequisite: Soc. 120. Credit, 3 hours.

212 *Introduction to Social Work.* Class discussion and field trips to help students with their relationships with others. Student of social agencies and their approach to human problems. Credit, 3 hours.

215 *Community Organization.* A study of the methods by which a coordinated social agency functions in the community and utilization of community resources. Credit, 3 hours.

220 *Principles of Criminology.* Causation of crime; juvenile delinquency; apprehending, convicting, and sentencing of criminals; probation and parole; penology. Prerequisite: Soc. 120. Credit, 3 hours.

225 *Modern Social Problems.* Current problems of race relations, poverty and unemployment, mental disease, mental deficiency, etc. Prerequisite: Soc. 120. Credit, 3 hours. Not offered 1948-49.

# Department of English

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MYERS (Head of Department) BUCKLEY, BURKE, BYERS, DAVIES,  
FIELDING, GIRDLER, JOHNSON, MCSLOY, OSENBURG, PILCHER, PLUMMER,  
PORTNOFF, SCHILLING, SOUTHERN, TURNER, WILSON, YATES,  
ZIMMERMAN

The department offers courses in the English language and literature, writing, journalism, speech, and dramatics. These offerings are designed: (a) for students who plan to teach or to supervise language activities at any level from kindergarten to college; (b) for students who desire a cultural background and wish to increase their competence in the use of the language; (c) for students planning to pursue writing, journalism, speech, or dramatics as a career or hobby.

## Teacher-Education Curriculums

### Kindergarten Primary and Elementary Curriculums.

*For Students Not Specializing in English.* Prospective teachers following either one of these curriculums will find Speech 230, 240g and 257g especially helpful as professional training. They may also wish to take other English and speech courses for personal development.

*For Students Specializing in English.* Students wishing a limited number of courses will choose them with the advice of the head of the department. Those wishing a major teaching field, see below under secondary curriculum.

### Secondary Curriculum.

This department offers major teaching fields in English and in speech and dramatics as outlined below. To complete either of these, at least 45 semester hours in the field must be completed in the first four years. At least 20 of these hours must be upper division. Candidates for the master's degree planning to teach English, speech, or dramatics in secondary schools should complete additional courses in these subjects during the fifth year.

*Major Teaching Field in English.* First year, Eng. 101 and 102. Second year, Eng. 105, 106, 128, 151, and 152; Speech 110; Hist. 105 and 106. Third year, Eng. 221, 222, 232, or Ed. 228, and 6 hours of upper division English electives. Fourth year, Eng. 231g, 252, or 254g, and 2 or 3 hours of upper division English electives.

*Major Teaching Field in Speech and Dramatics.* First year, Speech



110 and 121. Second year, Speech 119, 127, 170, Eng. 128. Third year, Speech 220, 230, 235, Eng. 252. Fourth year, Speech 257g, 260, and Eng. 254g. *Plus* 14 additional hours during the four years of which at least 3 must be in the upper division selected from the following courses: Eng. 203, 205, 206, 217, 218, Psych. 240, any other courses in speech.

Minor teaching fields are offered in English, journalism, speech, and dramatics. Each consists of at least 15 hours of which at least 6 hours must be in the upper division (except in journalism, where only 5 hours of upper division work are required). The requirements for each are given below:

*Minor Teaching Field in English.* Twenty two hours are required including Speech 110; Eng. 101, 102, 103, 104, 152.

*Minor Teaching Field in Journalism.* Eng. 101, 102, 128, 130, 140, 240 and 250.

*Minor Teaching Field in Speech.* Speech 110, 121, 127, 170, 220, 257g, 260.

*Minor Teaching Field in Dramatics.* Speech 110, 119, 121, 122, 230, 235.

## Arts and Science Curriculum

*Degree.* Students completing the Arts and Sciences Curriculum with an area of concentration in English receive the degree of Bachelor of Arts.

### Generalization Requirements.

Students seeking the B.A. degree must meet the generalization requirements listed on pages 71, 72 of the catalog.

### Area of Concentration.

The area of concentration in English requires a minimum of 49 semester hour in addition to the generalization requirements. These include the five groups as outlined below.

*Required Courses.* Eng. 128, 151, 152, and Speech 110 are required.

*Group Electives.* Fifteen semester hours must be selected from the following six groups, with a minimum of 3 semester hours each in at least four different groups. Group I, Eng. 253, 254. Group II, Eng. 208, 211, 212, 221, 222. Group III, Eng. 201, 203, 213, 214, 215, 216, 217, 218, 226. Group IV, Eng. 204, 205, 206, 223, 224, 244. Group V, Eng. 130, 140, 234, 240, 250. Group VI, Selections made from speech and dramatics courses.

*Speech Courses.* Two or three hours chosen from: Speech 121, 122, 124, 127, 170, 220.

*Related Courses.* The following 8 or 9 semester hours must be taken: Hist. 105, 106, and one of the following: Psych. 214, 220, 240.

*Optional Courses.* The remaining 11 to 13 hours may be chosen from the complete departmental offering or concentrated within one of the three divisions listed below. With the consent of the adviser, up to nine hours of courses in closely related fields may be substituted for English courses.

## Description of Courses

### Writing and Journalism.

101 *First Year English.* Narrative and descriptive writing; emphasis on paragraph structure, correctness in English fundamentals, exactness and concreteness of statement; dictionary and library practice; intensive and extensive reading. Credit, 3 hours.

102 *First Year English.* Expository writing; emphasis on organizing and unifying long papers, improvement in style, expansion of vocabulary. Introduction to word study; practice in research, including the writing of a model term paper. Intensive and extensive reading. Prerequisite: Eng. 101. Credit, 3 hours.

107 *Report Writing.* For students interested in accurate, factual writing with no literary tinge. Especially appropriate for commerce and industrial arts students. Prerequisites: Eng. 101, 102. Credit, 3 hours.

128 *Advanced Composition.* For students interested in further training in organization and expression of ideas. Factual and imaginative discourse are treated. Prerequisites: Eng. 101, 102. Credit, 3 hours.

130 *Introduction to Journalism.* Study of basic principles of news-writing. Study and evaluation of news sources with illustrations from representative newspapers. Prerequisite to other courses in journalism. Fee, \$1.00. Credit, 3 hours.

140 *Journalism: Reporting.* A study and practice in the writing of all types of stories covered by a reporter. Covers problems confronted by the adviser of high school publications. Prerequisite: Eng. 130. Fee, \$1.00. Credit, 3 hours.

234 *Creative Writing.* Writing laboratory. Lectures and conferences dealing with the techniques of writing for publication. Prerequisite: Eng. 128. Credit, 3 hours.

Speech 237, 238. See under Speech and Dramatics.

240 *Advanced Reporting and Editing*. Technique of copy editing, headline writing and newspaper page make-up. Emphasis on practical application. Prerequisites: Eng. 130 and 140. Fee, \$1.00. Credit, 3 hours.

250 *Journalism Staff Work*. Technical preparation and management of campus publications and, in special cases, practical work on weekly and daily papers in Tempe, Phoenix, and nearby communities. Prerequisite: Eng. 240. One lecture, 1 laboratory hour a week. Credit, 2 hours.

## Literature and Language

103, 104, 105, 106 *Directed Reading for English Minors*. Supervised reading with a weekly individual conference with instructor. Credit, 1 hour.

151 *Survey of English Literature*. English literature considered chronologically against the social and political background from Anglo-Saxon times to the end of the eighteenth century. Required of those specializing in English. Prerequisites: Eng. 101, 102. Credit, 3 hours.

152 *Survey of English Literature*. Nineteenth century literature. The major writers in relation to the aesthetic, social, and economic trends of the century. Prerequisites: Eng. 101, 102. Required of those specializing in English. Credit, 3 hours.

153 *World Literature*. Selections from the great literature of the world in translation. Lectures on the cultural background out of which the writings grew. Prerequisite: Eng. 101. Credit, 3 hours.

171 *Introduction to Literature*. An introduction to literature and literary types. Reading of short stories, essays, novels, biographies, plays, and poetry, mainly from modern writers. Not open to those specializing in English. Prerequisite: Eng. 102. Credit, 3 hours.

201 *History of the Novel*. The origins of prose fiction, the novel in England and America, with attention to significant examples of foreign literature. Analysis of typical examples and reading of outside assignments. Prerequisite: Eng. 152. Credit, 3 hours. Not offered 1948-49.

203 *History of the Drama*. The English drama from the Middle Ages to the present with selective examples of foreign influences. Reading of representative plays of each period. Prerequisite: Eng. 152. Credit, 3 hours. Not offered 1948-49.

205 *Shakespeare: The Tragedies*. Critical study of five plays. An

introduction to the problems of Shakespearean scholarship. Prerequisite: Eng. 151. Credit, 3 hours. Not offered 1948-49.

206 *Shakespeare: The Comedies*. A rapid reading of all the comedies. Studies of the comic spirit and Shakespeare's comic genius. Prerequisite: Eng. 151. Credit, 3 hours. Not offered 1948-49.

Ed. 207 *Literature for the Kinder: ten-Primary Grades*. See under the Department of Education. To be counted toward the English major.

211g *Nineteenth Century Poetry: Romantic Period*. Study of and readings in the poetry of Wordsworth, Coleridge, Shelley, Keats, Byron. Prerequisite: Eng. 152. Credit, 3 hours.

212g *Nineteenth Century Poetry: Victorian Period*. The poetry of the second half of the century. Special study of Tennyson, Browning, Arnold. Prerequisite: Eng. 152. Credit, 3 hours.

213 *Modern Fiction*. A study of the modern novel beginning with Meredith. Prerequisite: Eng. 152. First semester. Credit, 3 hours.

214 *Contemporary Fiction*. A study of important contemporary writers; their careers and distinctive traits, with particular attention to the relationship of their ideas with present-day problems. Prerequisite: Eng. 152. Second semester. Credit, 3 hours.

215 *Contemporary British Poetry*. British poetry of the twentieth century; techniques, aims, and significance. Prerequisite: Eng. 152. First semester. Credit, 3 hours.

216 *Contemporary American Poetry*. American poetry of the twentieth century; techniques, aims, and significance. Prerequisite: Eng. 152. Second semester. Credit, 3 hours.

217 *Modern Drama*. The chief dramatic writers of the generation preceding World War I, with special attention to experimental techniques. Prerequisite: Eng. 152. Second semester. Credit, 3 hours. Not offered 1948-49.

218 *Contemporary American Drama*. A study of the American Drama since World War I, with special attention to experimental techniques. Prerequisite: Eng. 152. Second semester. Credit, 3 hours. Not offered 1948-49.

221 *American Literature*. From colonial times to the Civil War, including the growth of nationalism and the rise of the New England school. Open to those specializing in other departments who have junior standing. Prerequisites: Eng. 101, 102. Credit, 3 hours.

222 *American Literature*. From Whitman to the present. The in-

fluence of westward expansion, the growth of regionalism, the literature of social protest. Open to those specializing in other departments who have junior standing. Prerequisites: Eng. 101, 102. Credit, 3 hours.

223g *Milton*. The life of Milton, his relation to the literary and social background of his period, and textual study of his chief works. Prerequisite: Eng. 151. Second semester. Credit, 3 hours.

226 *Short Story*. The development of the short story as a literary form; analysis of its technique through study of examples from the work of representative authors. Prerequisite: Eng. 152. Second semester. Credit, 3 hours. Not offered 1948-49.

231g *Literature for Junior and Senior High School Students*. A study of prose and poetry which meets the interests, desires and capabilities of the high school boy and girl. Recent literature stressed. Prerequisites: Eng. 152, 232, Ed. 215. First semester. Credit, 3 hours.

232 *Method of Teaching English in the Junior and Senior High School*. Those specializing in English should substitute for Ed. 228. Preparation of units in high school literature and composition, methods of teaching, and construction of measurement devices. Prerequisites: Eng. 152, Ed. 215. Second semester. Credit, 3 hours.

244g *Chaucer*. A study of Chaucer's language, poetry, and intellectual background. Prerequisite: Eng. 151. Second semester. Credit, 3 hours.

252 *Introduction to Semantics*. Nature of meaning and the function of language, designed to improve accuracy of communication and to provide a technique for analyzing false or misleading statements. Credit, 2 hours.

253g *History of the English Language*. Development of the language from the earliest times to the modern period. Prerequisites: Eng. 128, 151. Credit, 3 hours.

254g *Current English Usage*. Recent changes and current trends in the language, with emphasis on American English and the factual bases of grammar. Prerequisites: Eng. 128, 151. Credit, 3 hours.

### Speech and Dramatics

Speech 110 *Elements of Speech*. Diagnosis of speech needs, with clinical service for those who need it. The minimum essentials of public speaking, the scientific attitude toward problems of pronunciation, principles of good conversation. Fee, \$1.00. Credit 2 hours.

119 *Drama Techniques*. A study of the various types of drama with reference to their theatrical representation. Credit, 3 hours.

121 *Dramatic Interpretation*. Principles of oral interpretation. Readings and selections for practice. Sample plays studied for characterization and interpretation. Credit, 2 hours.

122 *Acting*. Reading in theory; laboratory projects. Prerequisites: Speech 110, 119. Credit, 3 hours.

127 *Principles of Argumentation*. Essential to students engaging in intercollegiate debate. Prerequisite: Eng. 110. First semester. Credit, 2 hours.

170 *Radio Speech*. A background for greater listening enjoyment. Practice in microphone delivery, script writing, and acting. Auditions given for participation in radio dramatizations over local stations. Prerequisite: Speech 110. Two class meetings and one rehearsal a week. Fee, \$1.00. Credit, 2 hours.

220 *Public Speaking*. Organization and delivery of various types of speeches. Emphasis on types which occur most often in everyday life. Prerequisite: Speech 110. Second semester. Credit, 2 hours.

227 *Intercollegiate Debating*. Preparation for and participation in intercollegiate debates. Prerequisites: Speech 110, 127. Credits, 2 hours.

230 *Creative Dramatics*. Uses of dramatics in schools; methods of making a play from a lesson or story; methods of getting children to improvise their own roles. Prerequisites: Speech 110, Ed. 204, 214, or 215. Credit, 3 hours.

235 *Play Production*. Problems connected with staging of plays in elementary and secondary schools. Prerequisites: Speech 110, 119. Fee, 50c. Credit, 3 hours.

237 *Play Writing*. Writing of one act and full-length plays. Prerequisites: Eng. 234, Speech 235, or consent of instructor. Credit, 2 hours.

238 *Radio Script Writing*. Principles of writing for radio and practice of the composition of radio scripts. Prerequisites: Speech 170, Eng. 235, or consent of instructor. Credit, 2 hours.

240 *Creative Speech Activities for Children*. Interpretation of children's poetry, choral speaking, and story telling. Theories of creative dramatics. Prerequisites: Speech 110, Ed. 204 or 214. Credit, 2 hours.

241 *Children's Dramatics Laboratory*. Practice in creative and formal dramatics. Work with training school children. Prerequisites: Speech 235, 240, or equivalent. Credit, 2 hours.

242 *Children's Dramatics Laboratory*. Continuation of 241. Prerequisite: Speech 241. Credit, 2 hours.

257g *Speech Pathology.* Cause and correction of disorders of speech. Clinical practice in the College Speech Correction Clinic. Three times a week, and 1 hour in clinic. Credit, 3 hours.

258g *Speech Correction.* A clinical-laboratory course for practice in correction of speech defects. Seminar for extensive acquaintanceship with literature in the field. Prerequisite: Speech 257g. One hour lecture, 2 hours clinic a week. Credit, 2 hours.

259g *Clinical Practice in Speech Correction.* Purely a laboratory course consisting of clinical practice in the College Speech Clinic. Prerequisites: Speech 257g and 258g. Credit, 1-3 hours.

260 *Phonetics.* Study of phonetics, including phonetic symbols, the production, the general characteristics and the application of the sounds of American speech to the acquisition and teaching of good pronunciation. Credit, 2 hours.

## Department of Foreign Languages

PORTNOFF (Head of Department), WILSON, ANDERSON, d'ORSSAUD,  
HATCH

The Department of Foreign Languages offers courses designed to serve the professional and cultural needs of the student. The aim of the courses is to give facility in reading, writing, and speaking the language. In view of our proximity to the Latin-American countries, special emphasis is placed on Spanish and Hispano American literature and civilization.

### Teacher-Education Curriculum

Kindergarten Primary and Elementary Curriculum.

*For Students Not Specializing in Language.* It is suggested that students wishing to take some work in Spanish may elect courses from among the following: Span. 101, 102, 103, 104, 120.

*For Students Specializing in Language.* Students wishing a limited number of courses will choose them with the advice of the head of the

department. Those wishing a major teaching field, see below under secondary curriculum.

### The Secondary Curriculum.

*Major Teaching Field in Spanish.* The field consists of 45 semester hours of work of which 15 hours should be in upper division courses. The following courses are required: Span. 101, 102, 103, 104, 203g, 204g, 205g, 206g, 220g, 224g, Eng. 151, Fr. 210.

*Minor Teaching Field in Spanish.* The following courses or their equivalents are required: Span. 101, 102, 103, 104, 210 or 103, 104, 203, 204, 210.

*Minor Teaching Field in French.* The following courses are required: Fr. 101, 102, 103, 104, 210.

## Arts and Sciences Curriculums

*Degree.* Students completing the Arts and Sciences Curriculum with an area of concentration in Spanish receive the degree of Bachelor of Arts.

### Generalization Requirements.

All students seeking the B. A. degree must meet the generalization requirements of 48 semester hours listed under the Arts and Sciences Curriculums pages 71, 72 of the catalog.

### Area of Concentration in Spanish.

Students electing Spanish as a field of concentration must complete a minimum of 49 semester hours, exclusive of generalization requirements as outlined below.

*Prerequisite Courses.* Span. 101, 102 or their equivalents are prerequisites.

*Required Courses.* In addition to the 8 hours in prerequisite courses, the following 23 semester hours are required: Span. 103, 104, 203, 204, 205, 206, and 207 or 224.

*Optional Courses.* From the following optional courses, 18 semester hours must be selected: Eng. 151, 152, 153; Fr. 103, 104, 203g, 210g; Ger. 103, 104; Hist. 116, 120, 205, 207; Gr. 101, 102; Lat. 101, 102; Rus. 101, 102; Span. 151.

### French.

Fr. 101 *Elementary French.* Grammar, reading, composition, and conversation for beginners. First semester. Credit, 4 hours.

102 *Elementary French.* Emphasis on reading and conversation. Prerequisite: Fr. 101. Second semester. Credit, 4 hours.



103 *Intermediate French*. Grammar review, and reading of modern novels, plays, and short stories. Prerequisite: Fr. 102. First semester. Credit, 4 hours.

104 *Advanced French*. Emphasis on reading and conversation. Prerequisite: Fr. 103. Second semester. Credit, 4 hours.

120 *French Conversation*. Conversation to develop fluency and accuracy in the language. Oral and written reports based on articles in current periodicals. Prerequisites: Fr. 101, 102. Each semester. Credit, 2 hours.

121 *French Conversation*. Continuation of Fr. 120. Prerequisite: Fr. 120. Credit, 2 hours.

### German.

Ger. 101 *Elementary German*. Grammar, reading and conversation. First semester. Credit, 4 hours.

102 *Elementary German*. Continuation of Ger. 101, with emphasis on reading. Prerequisite: Ger. 101. Second semester. Credit, 4 hours.

103 *Intermediate German*. Reading of modern novels, plays and short stories, composition and conversation. Prerequisite: Ger. 102. Credit, 4 hours.

104 *Advanced German*. Similar to Ger. 103 with greater emphasis upon rapid reading and oral expression. Outside reading in student's field of interest. Prerequisite: Ger. 103. Credit, 4 hours.

### Latin.

Lat. 101 *Elementary Latin*. A beginner's course. Emphasizes vocabulary and derivations rather than grammar. First semester. Credit, 4 hours.

102 *Elementary Latin*. Continuation of Lat. 101 with use of a simple Latin reader. Prerequisite: Lat. 101. Second semester. Credit, 4 hours.

### Russian.

Rus. 101 *Elementary Russian*. Grammar, reading and conversation. First semester. Credit, 4 hours.

102 *Elementary Russian*. Continuation of Rus. 101. Emphasis on reading and conversation. Prerequisite: Rus. 101. Second semester. Credit, 4 hours.

103 *Intermediate Russian*. Reading of modern novels, plays and short stories. Composition and conversation. Prerequisite: Rus. 102. Credit, 4 hours.

104 *Advanced Russian*. Similar to Rus. 103 with greater emphasis upon rapid reading and oral expression. Outside reading in the student's field of interest. Prerequisite: Rus. 103. Credit, 4 hours.

### Spanish Language and Literature.

Span. 101 *Elementary Spanish*. A knowledge of the fundamentals of pronunciation and grammar. Beginners only. First semester. Credit, 4 hours.

102 *Elementary Spanish*. The reading of several elementary texts. Prerequisite: Span. 101. Second semester. Credit, 4 hours.

103 *Intermediate Spanish*. A review of grammar and reading stressing vocabulary building and accuracy of expression. Prerequisite: Span. 102. First semester. Credit, 4 hours.

104 *Advanced Spanish*. Similar to Span. 103 with greater emphasis upon rapid reading and oral expression. Prerequisite: Span. 103. Second semester. Credit, 4 hours.

120 *Spanish Conversation*. Conversation to develop fluency and accuracy. Oral and written reports based on articles in current periodicals. Prerequisites: Span. 101, 102. Credit, 2 hours.

121 *Spanish Conversation*. Continuation of Span. 120. Prerequisite: Span. 120. Credit, 2 hours.

151 *Commercial Spanish*. Develops ability in Spanish commercial vocabulary and business correspondence. Information regarding Spanish-American exports, imports and industry. Prerequisites: Span. 101, 102. Credit, 2 hours. Offered summer only.

203 *Advanced Spanish Composition*. Translating English prose into Spanish, and original composition. Grammar review through writing. Collateral reading of modern short stories, novels and plays. Conducted in Spanish. Prerequisite: Span. 104. Credit, 3 hours.

204 *Advanced Spanish Composition*. Continuation of 203. Prerequisite: Span. 203. Credit, 3 hours.

205 *Survey of Spanish Literature*. Characteristics of the Middle Ages, Renaissance and the Golden Age, the evolution of Spanish thought and literary ideals. Conducted in Spanish. Prerequisite: Span. 204. Credit, 3 hours.

206 *Survey of Spanish Literature*. Continuation of 205. Prerequisite: Span. 205. Credit, 3 hours.

207g *Spanish Literature of the Nineteenth Century*. A study of the Romantic dramatists of this century and the most representative novel-

ists and poets of the second half of the century. Second semester. Credit, 3 hours.

209g *Spanish Literature of the Golden Age.* The most important movements of the period through a study of Cervantes, Lope da Vega, Tirso de Molina, Calderon de la Barca and others. Conducted in Spanish. Prerequisite: Span. 204 or 205. Credit, 3 hours.

220 *Teaching of Spanish.* For seniors specializing in Spanish and for teachers of Spanish. Methods of presenting the subject matter in more attractive and practical ways. Prerequisites: Span. 103, 104, 203, 204. Credit, 2 hours.

224g *Spanish American Literature.* A study of the outstanding novelists and poets. First semester. Credit, 3 hours.

227g *The Regional Novel.* The chief characteristics of the Spanish regional novel. Credit, 3 hours.

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## Department of Home Economics

RANNELS (Head of Department), ELLIFF, KAGY, ELLSWORTH, ESSIG

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This department offers training designed to meet the needs of students of the following types: (1) Those who wish to prepare for the vocation of homemaking. (2) Those who wish to meet the requirements for vocational certification which prepares them to teach home economics in vocational high schools. (3) Those who wish to teach in this field in the elementary or junior high school. (4) Those wishing to secure a secondary certificate with a major in home economics. (5) Those who wish to prepare for vocations in home economics other than teaching or homemaking. (6) Those who desire a background for vocations other than those directly related to home economics.

### Teacher-Education Curriculum

Kindergarten Primary and Elementary Curriculum.

*For Students Not Specializing in Home Economics.* It is suggested that prospective teachers may profitably elect some courses from the following: H. Ec. 101, 102, 103, 104, 106, 107, 110, 202g, 203, 207g, 209g, 215, 217g, 219g, 222g, 226g.

*For students Specializing in Home Economics.* Students wishing a limited number of courses in home economics without a vocational certificate in homemaking should select courses from H.Ec. 101, 102, 105, 106, 107, 108, 203, 206, or 212g or 211, 209g, 214g, 215, 217g. Those wishing a major teaching field, see below under secondary education.

### The Secondary Curriculum.

*The Major Teaching Field in Home Economics.* To complete a major teaching field in home economics at least 45 semester hours of work must be completed in the first four years and not less than 18 of the total shall be upper division. Candidates for the master's degree planning to teach home economics in the secondary schools should complete additional courses in the fifth year. The vocational certificate may be earned in four years by meeting the following requirements: H.Ec. 100, 101, 102, 104, 105, 108, 202g, 203, 206, 207g, 208, 209g, 211, 212g, 214g, 215, 217g, Biol. 72, Art. 102, Chem. 110, 180.

*Minor Teaching Field in Home Economics.* This field requires 15 semester hours. H.Ec. 106, 107 are recommended. The remaining courses may be chosen with the approval of the head of the department.

## Arts and Sciences Curriculums

*Degree.* The arts and sciences curriculum with an area of concentration in home economics leads to the degree of Bachelor of Science.

### Generalization Requirements.

Students seeking the B.S. degree with an area of concentration in home economics must meet the generalization requirements of 40 semester hours outlined on pages 71, 72 of the catalog.

### The Area of Concentration.

In addition to the generalization requirements, the student must have as prerequisites the following 10 semester hours: Art 102, Chem. 110, and G.S. 110. The following 25 semester hours are required: H.Ec. 101, 102, 105, 108, 203, 209g, 214g, 215, 217g, and 12 hours must be selected from the following optional courses: H.Ec. 100, 104, 110, 202g, 206, 207g, 211, 212g, 219g, 226g.

## Preprofessional and Professional Curriculums

You will find an outline of these curriculums giving any requirements made by this department on pages 73-81 of the catalog.

## Description of Courses

H.Ec. 100 *Orientation to Home Economics.* A preview of the home economics field, including opportunities for employment. First year, first semester. Credit, 1 hour.

101 *Elementary Nutrition.* Principles of nutrition, diet, food in its relation to health. Open to men and women. Each semester. Credit, 2 hours.

102 *Clothing Selection.* The selection of clothing with consideration of materials, cost, style, design, the individual, and the occasion. Each semester. Credit, 2 hours.

103 *Introduction to Family Living.* Deals with children, establishment of a home, management of family life, finances, food, clothing, and art in the home. Fee, \$1.00. Credit, 3 hours.

104 *Home Nursing.* Information on health for the family, care of the sick, the mother through pregnancy and childbirth, and infant care. Credit, 1 hour.

105 *Applied Food Principles.* Principles of cookery and nutritive facts involved. Open only to those specializing in the department. Fee, \$5.00. First semester, 6 hours a week. Credit, 3 hours.

106 *Food Preparation and Meal Service.* Fundamental processes in food cookery, meal planning and table service. Fee, \$5.00. Each semester, 6 hours a week. Credit, 3 hours.

107 *Clothing Construction.* For students not specializing in home economics. Selection and construction of inexpensive garments. Emphasis on fundamental processes. Each semester, 6 hours a week. Credit, 3 hours.

108 *Clothing Construction.* Principles of dressmaking construction of inexpensive garments. Experience in the selection of materials and design. Open only to those specializing in the department. Second semester, 6 hours a week. Credit, 3 hours.

110 *Household Equipment.* Construction, selection and use of all types of household equipment. First semester. Credit, 3 hours.

202 *Problems of the Consumer.* Problems, wants, needs, and practices of the consumer buyer of foods, textiles, clothing, and home equipment. Influence of advertising, retail stores, and government agencies. Fee, 50 cents. Second semester. Credit, 2 hours.

203 *Child Development.* Physical, mental, emotional and social development of the young child. Observation in nursery school. Fee,

50 cents. Open to men and women. Each semester, 4 times a week. Credit, 3 hours.

206 *Food for the Family*. The production, economic selection, and nutritive value of foods, types of meals, and table service. Practice in planning, preparing and serving meals. Open only to those specializing in the department. Prerequisites: H.Ec. 101, 105. Fee, \$3.00. Second semester, 6 hours a week. Credit, 3 hours.

207g *Nursery School Education*. Opportunity given for teaching in the nursery school. Development of the nursery school and theories underlying current practices. Prerequisites: H.Ec. 203 or Psych. 234. Fee, \$1.00. Six hours a week. Credit, 3 hours.

208 *Home Economics Education*. Philosophy, content and methods of teaching home economics in elementary and secondary schools. Fee, \$1.00. Second semester. Credit, 3 hours.

209 *Family Relationships*. Understanding of family life and current problems including preparation for marriage. Open to men and women. Second semester. Credit, 3 hours.

211 *Clothing: Tailoring*. Wool and silk construction problems, advanced fitting problems, good style and design. Prerequisites: H.Ec. 102, 108. First semester, 6 hours a week. Credit, 3 hours.

212g *Advanced Nutrition*. Special problems in diet and nutrition. Prerequisites: H.Ec. 101, Chem. 101, 180. Fee, \$1.00. Second semester. Credit, 3 hours.

213g *Clothing: Pattern Designing*. Fundamental principles in designing, cutting, and fitting individualized garments. Flat patterns used. Prerequisites: H.Ec. 102, 107 or 108. Fee, \$2.00. Second semester, 6 hours a week. Credit, 3 hours.

214 *Home Management House*. Students live in Home Management House for a six-week period, and carry on all duties involved in homemaking. Open only to seniors specializing in home economics. Prerequisites: H.Ec. 104, 203, 206, 217. Fee, \$5.00 and board and room at regular college rate. Second semester. Credit, 3 hours.

215 *Home Furnishing*. Selection, combination, and arrangement of furniture; color schemes; choice of wall finishes, floor coverings, draperies, and accessories. Fee, 50 cents. First semester. Credit, 3 hours.

217 *Home Management*. Goals of homemaking, standards of living, budgeting of time and income, household accounting, and selection, care, efficient arrangement, and use of the house and equipment. Fee, 50 cents. First semester. Credit, 3 hours.

219 *Textiles*. Textile fibers, their construction, finish, sources, characteristics, identification, and uses. Fee, 50 cents. First semester. Credit, 2 hours.

224g *Evaluation in Home Economics Education*. Newer concepts concerning evaluation and testing instruments and techniques in elementary and secondary schools. Prerequisite: H.Ec. 208. Fee, 50 cents. Credit, 2 hours. Offered summers only.

226g *The Teaching of Art Related to the Home*. The application of principles of art to problems of daily living. Use made of pertinent illustrative material. Opportunity provided to participate in teaching projects. Fee, 50 cents. Credit, 2 hours.

227g *The Teaching of Clothing and Textiles*. For teachers of clothing selection, construction, and care. Use of equipment, motivation and standards of work, individual illustrative material, evaluation. Students bring sewing equipment including pieces of fabric. Prerequisite: H.Ec. 208. Fee, \$1.00. Credit, 2 hours. Offered summers only.

243g *Recent Developments in Nutrition*. A study of recent research in nutrition with view of finding practical applications. Prerequisite: H.Ec. 101. Credit, 2 hours.

Ed. 260 *Directed Teaching*. Students teach one-half semester under supervision of the department. Prerequisite or parallel: H.Ec. 208. Each semester, every afternoon. Credit, 5 hours.

# Department of Industrial Arts

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NEEB (Head of Department), MERRITT, CAVALLIERE, KEITH,  
BUTLER, MARTZ, ENSIGN.

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The chief purposes of the Industrial Arts program are the following: (a) Preparation for teaching, (b) preparation for work of an industrial, mechanical, electrical or academic type in order to prepare the student for service in industrial and commercial activities, and (c) preparation for the various trades.

## Teacher-Education Curriculums

### Kindergarten-Primary and Elementary Curriculum.

*For Students Not Specializing in Industrial Arts.* It is suggested that students desiring to do some work in this department may wisely select courses from the following: I.A. 100, 101, 103, 104, 105, 107, 111, 115.

*For Students Specializing in Industrial Arts.* Students desiring to specialize in industrial arts may take a minimum of 30 semester hours of work including 6 hours each in four of the following divisions of the department: building and construction, electricity, mechanics, drafting, and aeronautics, including I.A. 211, 212. In each case half of the semester hours should be in upper division courses. Students wishing the regular major or minor teaching field will follow the secondary curriculum outline.

### The Secondary Curriculum.

*Major Teaching Field in Industrial Arts.* For students planning to teach in secondary schools, a minimum of 45 semester hours of I.A. courses are required, including I.A. 109, 211 and 212. A minimum of 12 hours of work is required in each of two of the following divisions of the department: building and construction, electricity and radio, mechanics, drafting and aeronautics, including I.A. 109, 211 and 212. In each case half of these semester hours should be in upper division courses.

*Minor Teaching Field in Industrial Arts.* A minimum of 18 semester hours of work is required including I.A. 211, 212.



## Arts and Sciences Curriculums

This area of concentration is designed to provide technical training of an industrial, mechanical, electrical and academic type in order to prepare individuals for progressive service in industrial and commercial activities. A minimum of 47 semester hours in industrial arts and technical subjects is required of all students taking an area of concentration in industrial arts.

*Degree.* Completion of the Arts and Sciences curriculum with an area of concentration in industrial arts leads to the degree of Bachelor of Science.

### Generalization Requirements.

All students seeking the Bachelor of Science degree will meet the generalization requirements of 40 semester hours listed under the arts and sciences curriculums found on pages 71, 72 of the catalog. In addition they must complete the work in the area of concentration as outlined below.

### The Area of Concentration.

*Required Courses.* The following 17 semester hours or their equivalents are required: I.A. 100, 109, 111, 113, 122, 160, 211.

*Optional Courses.* The student must select at least 15 semester hours from one of the 5 groups of courses listed below. In addition he must select 15 hours which may be chosen from any of the Industrial Arts courses offered by the department.

Emphasis on Building and Construction. I.A. 158, 164, 203, 207, 208g, 217, 218, 224, 226, 258, 270g, 291g, 292g.

Emphasis on Electronics. I.A. 115, 116, 119, 123, 127, 154, 203, 205, 215, 216, 251, 287.

Emphasis on Mechanics. I.A. 101, 104, 107, 111, 112, 118, 157, 160, 170, 214, 223, 231, 219, 227, 228, 261.

Emphasis on Aeronautics. I.A. 131, 132, 135, 200, 204.

Emphasis on Drafting. I. A. 103, 105, 106, 113, 124, 125, 165, 166, 201, 202, 229, 240.

## Description of Courses

I.A 100 *Elementary Electricity.* Theory and practical application of direct and alternating current circuits. Prerequisite for all electrical and radio courses. Fee, \$6.00. Credit, 3 hours.

101 *Auto Ignition*. Prepares for commercial shop practice, and includes storage batteries, ignition coils, distributor, lighting systems, etc. Machine shop practice. Fee, \$6.00. Two lectures, 4 hours laboratory. Credit, 3 hours.

103 *Mechanical Drawing*. Elements of orthographic projection. Fee, \$3.00. One lecture, six hours laboratory a week. Credit, 3 hours.

104 *Auto Mechanics*. General repair of automobiles; complete overhaul of gasoline engines. Fee, \$6.00. One lecture, 6 hours laboratory a week. Credit, 3 hours.

105 *Architectural Drawing*. For students preparing to teach or for drafting and engineering work. Fee, \$3.00. One lecture, six hours laboratory a week. Credit, 3 hours.

106 *Architectural Drawing*. Complete plans and estimates of materials for a two story house. Prerequisite: I.A. 105. Fee, \$3.00. One lecture, 6 hours laboratory a week. Credit, 3 hours.

107 *Forge*. Elements of forging and blacksmithing, drawing, bending, upsetting, welding, casehardening, tempering, and allied topics. Fee, \$6.00. One hour lecture, 6 hours laboratory a week. Credit, 3 hours.

109 *Calculations*. Fundamental arithmetical processes applied to shop problems. Use of slide rule. Credit, 3 hours.

110 *Blue Print Reading*. Study of blue prints and symbols used in building and construction, machine shops, etc. Fee, \$2.00. Credit, 2 hours.

111 *Machine Shop*. Filing, drilling, turning, and polishing with hand tools, and general use of machines. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

112 *Machine Shop*. Making of projects using the complete machine equipment of the department. Fee, \$6.00. Prerequisite: I.A. 111. One lecture, 6 hours laboratory. Credit, 3 hours.

113 *Engineering Drawing*. Orthographic projections, lettering, tracing, and blue printing. Prerequisite: One year high school drawing, or I. A. 103. Fee, \$3.00. One lecture, 6 hours laboratory a week. Credit, 3 hours.

115 *Fundamentals of Radio*. Basic theory and practical application of radio, including tubes, power supplies, oscillators, detectors. Fee, \$6.00. Two lectures and 4 hours laboratory a week. Prerequisites: I.A. 100. Credit, 3 hours.

116 *Transmitter and Receiver Theory*. A study of oscillators, ampli-

fiers, modulators, receivers, transmission lines, antennae, and propagation. Prerequisites: I.A. 100, 115. Fee, \$6.00. Two lectures, 4 hours laboratory a week. Credit, 3 hours.

119 *Industrial Electronics*. The theory and application of electronics to the industrial field. Fee, \$6.00. One lecture, 3 hours laboratory a week. Prerequisite: I.A. 100. Credits, 2 hours.

120 *Principles of Vacuum Tubes*. Principles, construction and operation of various types of tubes, and application in electronic circuits. Fee, \$6.00. Two lectures, 4 hours laboratory. Prerequisite: I.A. 100. Credit, 3 hours.

121 *Wood Work*. Basic types of furniture construction and repair suitable for use in school shops. No machine work. Fee, \$6.00. One lecture, 6 hours laboratory a week. Credit, 3 hours.

122 *Cabinet Making*. Principles of furniture construction, and correct use of hand tools and machines. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

123 *Toy Construction*. Making and use of patterns and figures in constructing toys, children's furniture, and small projects. Individual projects. Fee, \$6.00. Credit, 3 hours.

124 *Descriptive Geometry*. Problems in warped surfaces and intersections of solids. Prerequisite: I. A. 113. Fee, \$3.00. One lecture, 6 hours laboratory a week. Credit, 3 hours.

125 *Descriptive Geometry*. Continuation of I. A. 124 with emphasis on shades and shadows. Prerequisites: I. A. 105, 106, and 124. Fee, \$3.00. One lecture, 6 hours laboratory. Credit, 3 hours.

127 *Aircraft Radio*. A study of radio used in commercial and private planes and ground installations, including questions and answers for the restricted radio telephone permit. Fee, \$6.00. Two lectures, 4 hours laboratory a week. Prerequisites: I.A. 100, 115. Credit, 3 hours.

131 *Aircraft Engines*. Disassembly and assembly of aircraft engines including complete top overhaul. Timing of engines, synchronizing magnetos, carburetion, ignition and oil systems. Fee, \$6.00. One lecture, 6 hours laboratory a week. Credit, 3 hours.

132 *Airplane Mechanics*. Types of wood rib construction, use of power sewing machine, covering, doping and painting, riveting, and uses of metals for aircraft construction. Fee, \$6.00. One lecture and 6 hours laboratory a week. Credit, 3 hours.

133 *Plastics*. Practical uses of plastics and their uses for school

work shops and hobby shops. Fee, \$10.00. Six hours a week. Credit, 3 hours.

145 *Elementary Surveying*. Care, adjustment and use of surveying instruments, and computations. One lecture, 6 hours of laboratory a week. Fee, \$6.00. Credit, 3 hours.

151 *Broadening and Finding*. Consists of model work, boats, steam engines, electrical motors, and special problems in woodworking, machine shop, radio, or electricity. Fee, \$6.00. One lecture, 6 hours laboratory a week. Credit, 3 hours.

154 *House Wiring*. Installation of lighting circuits, underwriters' regulations, conduit work, and estimation of cost. Fee, \$6.00. Two lectures, 4 hours laboratory. Credit, 3 hours.

155 *Mechanisms*. Study and design of linkages, gears, cams, screws and other machine elements with the relative motions of machine parts. Prerequisite: I. A. 124. Fee, \$3.00. One lecture, 6 hours laboratory. Credit, 3 hours.

157. *Jigs and Fixtures*. Design and construction of various devices that facilitate shop production in quantities. Fee, \$6.00. Credit, 3 hours.

160 *Sheet Metal Work*. Laying out and cutting of sheet metal; soldering, riveting; projects including utensils and toys. Prerequisite: I.A. 113. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

163 *Wood Turning*. Drills in spindle, face plate, and chuck work, with practice in finishing and polishing. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

164 *Patternmaking*. Use and operation of woodworking machinery. Study of drafts, shrinkage, finish, warp and shakes. Making patterns, molds and castings. One hour lecture, 6 hours laboratory a week. Fee, \$6.00. Credit, 3 hours.

179 *Welding*. Oxygen-acetylene welding. Various types of welds, laying, use of fluxes. Fee, \$20.00. Credit, 3 hours.

200 *C.A.A. Primary Ground School Course*. Sponsored by the Civil Aeronautics Authority. A total of 72 hours in class are required as follows: History of Aviation, 2 hours; Theory of Flight, 15 hours; Civil Air Regulations, 12 hours; Practical Air Navigation, 15 hours; Meteorology, 15 hours; Parachutes, 1 hour; Aircraft Power Plants, 5 hours; Aircraft Instruments, 5 hours; Radio Uses and Terms, 2 hours. Fee, \$4.00. Flight instruction costs are extra. Four times a week. Credit, 4 hours.

201 *Architectural Drawing*. The best classical elements in architecture, and the fundamentals of design. Prerequisites: I. A. 106, 124, 125. Fee, \$3.00. One lecture, 6 hours laboratory. Credit, 3 hours.

202 *Architectural Drawing*. Problems involving a study of the principles of architectural composition. Prerequisite: I.A. 201. Fee, \$3.00. One lecture, 6 hours laboratory. Credit, 3 hours.

203 *Direct Current Electricity*. Direct current circuits, machinery, measurement, magnetism, and allied subjects. Emphasis on installation, operation, and maintenance of equipment. Fee, \$6.00. Two lectures, 4 hours laboratory. Prerequisite: I.A. 100. Credit, 3 hours.

204 *The Secondary Ground School Course*. A minimum of 128 hours in the following: Aerodynamics, 32 hours; Navigation, 48 hours; Powerplants, 48 hours. Prerequisite: I.A. 200. Passing of Government examination required for college grade. Fee, \$8.00. Eight lectures a week. Credit, 8 hours.

205 *Radio Code*. Sending and receiving Morse Code. Practice on receiving by tape and commercial receivers. Speed required at close of course is ten words a minute. Fee, \$4.00. Credit, 2 hours.

206 *Advanced Plastics*. Emphasis on materials, machine operations, carving, cementing, embossing and inlaying. Prerequisite: I.A. 133. Six hours a week. Fee, \$10.00. Credit, 3 hours.

207 *Cabinet Making and Mill Work*. Advanced types of furniture; construction and tenoning; panels; gluing; finishing; design; power machines. Prerequisite: I.A. 122. Fee, \$6.00. One lecture, 6 hours laboratory a week. Credit, 3 hours.

208 *Carpenter and House Construction*. Use of steel square and carpenters' tools; sharpening tools; framing processes; short cuts; trade terminology. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

210 *Blue Printing and Developing*. Blue print making and developments according to industrial specifications. Fee, \$4.00. One lecture, 3 hours laboratory. Credit, 2 hours.

211 *Job Analysis*. Various steps in jobs and their relationship. Fee, \$4.00. Two lectures and 2 hours laboratory. Credit, 2 hours.

212 *Curriculum Making*. Trade and technical material, tool processes, occupational information, and job analysis. Prerequisite: I.A. 211. Fee, \$4.00. Two lectures and 2 hours laboratory. Credit, 2 hours.

213 *Sheet Metal*. Problems in roofing, cornice work, practical intersections, and use of sheet metal machines. Fee, \$6.00. One lecture, 6 hours laboratory. Prerequisite: I.A. 160. Credit, 3 hours.

215g *Micro Wave Techniques*. A study of micro-wave generating and receiving systems, measurements, theory, installation, operation, and maintenance of typical radar equipment. Fee, \$6.00 Two lectures, 4 hours laboratory. Prerequisites: I.A. 115, 116. Credit, 3 hours.

216g *Radio Frequency Tests and Measurements*. Design, construction and operation of advanced types of testing equipment with application to laboratory and field work. Fee, \$6.00. Two lectures, 4 hours laboratory. Prerequisites: I.A. 115, 116. Credit, 3 hours.

217 *Stair Building*. Construction of straight stairways, platforms, and circular stairways to one third scale. Prerequisite: I.A. 208. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

218g *Steel Square and Roof Framing*. Problems involving the steel square in carpentry, framing, stair building, and sheet metal. Prerequisite: I. A. 208. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

223 *Tool Design and Grinding*. Construction, sharpening, and honing of cutting tools. Care and use of wood cutting tools and rate and clearance needed for metal cutting tools. Fee, \$6.00. Credit, 3 hours.

224 *Estimating and Contracting*. Making cost analysis of structures and utilities placed in them. Procedures concerning titles, mechanic liens, obligations of contractors, etc. Fee, \$3.00. Credit, 3 hours.

225 *Aircraft Instruments*. Construction and operation of instruments used with aircraft powerplants and those recommended for successful flight operation. Fee, \$6.00. Credit, 3 hours.

227 *Auto Mechanics*. Cylinder boring, honing, and dual ignition systems. Fee, \$6.00. One lecture, 6 hours laboratory. Prerequisite: I.A. 104. Credit, 3 hours.

228 *Auto Ignition and Repairs*. Repairing, adjusting, and testing generators, starting motors, magnetos, and other electrical equipment in an automobile. Fee, \$6.00. One lecture, 6 hours laboratory. Prerequisite; I.A. 101. Credit, 3 hours.

231 *Machine Shop*. Care and use of milling machines, the cutting of spur, worm and bevel gears. Plan and direct indexing. Cutters and their upkeep. One lecture, 6 hours laboratory. Fee. \$6.00. Credit, 3 hours.

232 *Machine Shop*. Planers, their care, methods of holding work, uses of fixtures, gauges, and tools. Adjustment of belting for speed and power. Fee, \$6.00. One lecture, 6 hours laboratory. Prerequisite: I.A. 231. Credit, 3 hours.

233 *Electric Arc Welding*. Making satisfactory butt welds, lap welds,

ridge welds, T-welds. Fee, \$20.00. One lecture, 6 hours laboratory a week. Prerequisite: I.A. 179. Credit, 3 hours.

251 *Alternating Current Electricity*. Alternating currents and voltages, impedance, power, polyphase voltages, alternating current machines. Fee, \$6.00. Two lectures, 4 hours laboratory. Prerequisite: I.A. 100. Credit, 3 hours.

252 *Broadening and Finding*. Machine lathe practice, drill press work, milling machine work, and special problems. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

255 *Teaching of Industrial Arts*. For students preparing to teach industrial arts. Making lesson plans, and presentation of materials to students. Fee, \$3.00. Two lectures, 3 hours laboratory. Credit, 3 hours.

257g *Supervision and Administration of Industrial Arts*. Shop organization and principles of supervision applied to shop classes. Classifications of tools, tool operations, and projects. Purchasing supplies and equipment. Prerequisites: 211, 212. Fee, \$3.00. Credit, 3 hours.

258 *Utilities Service*. Pipe cutting, threading, fitting, calking, roughing in, venting pipe lines, toilet fixtures and plumbing requirements. Fee, \$10.00. One lecture, 6 hours laboratory. Credit, 3 hours.

260 *Advanced Wood Turning*. All kinds of built-up, segmented and jointed projects. Prerequisite: I.A. 163. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

261 *Sheet Metal Layout and Construction*. Layout of industrial character including air ducts, cornice work, pipe construction, irregular fittings. Fee, \$6.00. One lecture, 6 hours laboratory. Prerequisite: I.A. 213. Credit, 3 hours.

270 *History of Architecture*. Architecture of ancient Egypt, Mesopotamia, India, Greece and Rome, also the Renaissance, Gothic and Modern types. Two lectures a week with lantern slides, and 3 hours laboratory. Fee, \$3.00. Credit, 3 hours.

280 *Advanced Surveying*. Topographical surveying, including introduction to plane table, solar observations, etc. Prerequisite: I.A. 145. One lecture, 6 hours laboratory. Fee, \$6.00. Credit, 3 hours.

291g *Building Design*. Construction layouts for buildings including electric wiring, plumbing, air conditioning specifications, etc. Fee, \$6.00. One lecture, 6 hours laboratory. Credit, 3 hours.

292g *Advanced Building Design*. Concrete mixes, concrete structures, bending moments, stresses, T-beams, slabs, columns, walls and foundations. Fee, \$6.00. One lecture, 6 hours laboratory. Prerequisite: I.A. 291g. Credit, 3 hours.

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293g *Materials and Methods of Construction.* Properties, and uses of various building materials. The application of flooring, plastering, stucco work, plumbing, and other materials. Use of iron, steel, and wood in trusses. Fee, \$3.00. One lecture, 6 hours laboratory. Credit, 3 hours.

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## Library Science

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BACHELOR (Librarian)

L. S. 203 *Book Organization.* The principles and practices of the Dewey Decimal classification, cataloging, techniques, subject headings, alphabeting and filing. Fee, \$1.00. Credit, 3 hours.

205 *Library Book Selection.* Techniques and problems of selecting books for the school and public library. Attention given guides and aids, reading interests, publishers, dealers, etc. Fee, \$1.00. Credit, 3 hours.

206 *School Library Administration.* Organization and administration of the school library, its backgrounds, activities, functions, personnel, materials and equipment. Credit, 3 hours.

240 *Book Services.* Principles and practices of the loan, reference and reading guidance services suitable for the public and school library. Fee, \$1.00. Credit, 3 hours.



# Department of Mathematics

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WEXLER (Head of the Department), GENTRY

Extensive work in mathematics is absolutely essential for any kind of scientific career. The amount of necessary mathematics varies from a minimum of a course in calculus in fields such as modern biology to a large amount of graduate mathematics in such fields as astronomy and physics. For most branches of engineering, mathematics through advanced calculus and differential equations is necessary. In fact a student's ability in mathematics serves as an excellent criterion of his future success or failure in engineering or science.

Especially capable persons should seriously consider a career in mathematics. Not only is a teaching career possible, but also an increasing number of industrial organizations as well as government agencies are employing professional mathematicians. Pure mathematical research has increased and is increasing at a tremendous rate.

## Teacher-Education Curriculums

### The Kindergarten Primary and Elementary Curriculum.

Arithmetic in the Elementary School is the only course in mathematics required in the elementary curriculum, and is recommended in the kindergarten-primary curriculum as an elective. For students desiring further work in mathematics, such courses as the following are recommended: Math. 105, 106, 107, 118, 119.

### The Secondary Curriculum.

*Major Teaching Field in Mathematics.* Forty five or more hours of work in mathematics and related fields are required of students who choose mathematics as their major teaching field. Math. 119 (or 106, 107, 118), 120, 122, 123, 221, 222g make up the fundamental sequence of courses and should be finished by the junior year. Four of the following courses: Math. 241g, 242g, 243g, 244g, 245, 255g, 256g, 257g, 258g are to be taken as offered in the junior and senior years.

*Minor Teaching Field in Mathematics.* The minor teaching field in mathematics consists of at least five courses in mathematics including the first semester of advanced calculus, Math. 221.

## Arts and Sciences Curriculums

*Degrees.* Students completing the arts and sciences curriculum receive the degree of Bachelor of Arts, or Bachelor of Science depending upon the work selected to meet the generalization requirements.

### Generalization Requirements.

These requirements are outlined on pages 71, 72 of the catalog.

### Area of Concentration.

*Required Courses.* The following courses are required: Math. 119 (or 106, 107, 118) followed by 120, 122, 123, 221g, 222g and two or more upper division courses decided upon in consultation with departmental adviser.

## Description of Courses

Math. 105 *Basic Mathematics.* The role of mathematics in our culture and mastery of basic techniques. Topics include the number concept, arithmetical reasoning, direct and indirect measurement, charts and graphs, and use of formulas. For the degree of Bachelor of Arts, Math. 105 is required. Each semester. Credit, 3 hours.

106 *Intermediate Algebra.* A first course in algebra for students with little or no high school mathematics. Each semester. Credit, 3 hours.

107 *College Algebra.* Intensive review. Study of progressions, permutations and combinations, probability, determinants, theory of equations. Each semester. Credit, 3 hours.

118 *Trigonometry.* Solution of triangles, logarithms, identities and equations. Each semester. Credit, 3 hours.

119 *Algebra and Trigonometry.* Subject matter equivalent to both Math. 107, 118 in one semester. Capable students should take this course in place of Math. 106, 107, 118, if they intend to go on in mathematics. First semester. Credit, 4 hours.

120 *Analytic Geometry.* Coordinate systems, conic sections, general methods. Courses 119, 120 should be taken in the freshman year; otherwise, elementary calculus is delayed until the junior year. Prerequisite: Math. 118 or 119. Second semester. Credit, 4 hours.

122 *Calculus.* Differential and integral calculus, and more analytic geometry. Applications to physics. Prerequisite: Math. 120. Credit, 4 hours.

123 *Calculus*. Continuation, Math. 122. Prerequisite: Math. 122. Credit, 4 hours.

205 *Arithmetic in the Elementary School*. Proficiency in arithmetic; study of teaching methods. Each semester. Credit, 3 hours.

220 *Differential Equations*. Methods of solution of standard types of differential equations. Prerequisite: Math. 123. Second semester. Credit, 3 hours.

221 *Advanced Calculus*. Multiple integrals, partial differentiation and applications; line integrals; improper definite integrals; differential equations; complex variables; other topics as time allows. Prerequisite: Math. 123. Credit, 3 hours.

222g *Advanced Calculus*. Continuation, Math. 221g. Prerequisite: Math. 221g. Credit, 3 hours.

241g *Theory of Functions*. Concepts of limits, continuity, derivatives, epsilon proofs. Introduction to the theory of functions of a complex variable. Prerequisite: Math, 222g. Credit, 3 hours. Not offered 1948-49.

242g *Theory of Functions*. Continuation, Math. 241g. Prerequisite: Math. 241g. Credit, 3 hours.

243g *Analytical Mechanics*. Vectors, forces in equilibrium, dynamics. Prerequisite: Math. 122. Credit, 3 hours. Not offered 1948-49.

244g *Analytical Mechanics*. Continuation, Math. 243g. Prerequisite: Math. 243g. Credit, 3 hours. Not offered 1948-49.

245 *Mathematics in the Secondary School*. Advanced topics in algebra, geometry, trigonometry, non-euclidean geometry; teaching methods. Credit, 3 hours.

255g *Theory of Numbers*. The properties of whole numbers. Prerequisite: Math, 107 or 119. Credit, 3 hours. Not offered 1948-49.

256g *Projective Geometry*. Analytic study of the projective properties of figures. Prerequisite: Math. 120. First semester. Credit, 3 hours.

257g *Theory of Finite Groups*. Groups of permutation; the Galois theory. Credit, 3 hours. Not offered 1948-49.

258g *Differential Geometry*. Three dimensional curves and surfaces and their properties. Prerequisite: Math. 122. Second semester. Credit, 3 hours.

# Department of Military Science

WAHLE (Head of Department), CURTIS, PEEPLES

*General.* A Field Artillery unit and an Air Force unit of the Reserve Officers Training Corps have been established at Arizona State College. The training given will consist of the usual basic and advanced courses. At the close of the second year of the advanced course, distinguished military graduates will be given regular commissions as second lieutenants.

*Requirements.* With the exceptions given below, all freshman and sophomore male students, registered for more than five semester hours of college work, and who are under 23 years of age, are required to take two years of military science in the R.O.T.C., of not more than three hours per week, unless excused by the Military Science Committee. The military science requirement does not excuse students from any of the physical education requirements. The requirement shall not be retroactive. Students now in college and enrolling in 1948-1949 will not be required to take military science if they have 15 or more semester hours of credit.

*Exemptions.* Normally, exemptions will be granted to the following only: (a) Aliens. (b) Those certified as physically unfit by the college physician. (c) Those over 25 years of age. (d) Those presenting evidence of military service. (e) Those transferring sufficient credit for military training from an accredited institution. (f) Those offering other reasons satisfactory to the Military Science Committee.

*Deposits on Uniforms.* The deposit of \$25.00 is refunded if uniforms are returned in good order.

## Basic Courses

M.T. 101, 102, 103, 104 *Basic Military Training.* The first and second year of work covering the National Defense Act, obligations of citizenship, military history and policy, and fundamentals of military training. Three hours a week each semester. Credit 1 hour each.

## Advanced Courses

201, 202, 203, 204 *Advanced Military Training.* The third and fourth year of work is designed to qualify students for commissions in the Officers Reserve Corps, Army of the United States. Prerequisites: M.T. 104 and 201-204 taken in order. Five times a week. Credit, 3 hours each.

# Department of Music

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HARELSON (Head of the Department), BARKLEY, BULLOCK, MILES  
DRESSKELL, NADINE DRESSKELL, HARGISS, MCKERNAN, QUAID,  
BOWERS, AUTENRIETH, HOLFORD.

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Courses offered by the Music Department are planned to meet the needs of students registered under any of the Teacher Education, or Arts and Sciences Curriculums.

*Admission Tests in Music.* Students planning a major teaching field in music under any of the curriculums, must take certain tests to determine their general music aptitude and achievement, and their special accomplishments in voice or on instruments, as outlined below.

(1) Voice. The student must demonstrate ability to sing one or more songs with well-produced tone; good intonation, clear diction, and musicianly interpretation. Songs may be drawn from the simpler art songs such as those by Franz, from oratorios, or opera arias, or from modern compositions. (2) Piano. Students should be grounded in correct touch and reliable technique; be able to play all major and minor scales correctly at M. M. 72 in quarters, eighths, and sixteenths, and arpeggios on all major and minor triads at M.M. 72; and should have acquired systematic methods of practice. They should have studied some of the standard etudes such as Czerny Op. 299, Book I; Heller Op. 46 and 47; Bach's Little Preludes; compositions corresponding in difficulty to the Haydn Sonatas No. 11 and No. 20, and the Mozart Sonatas No. 3 in C Major and No. 13 in F major. (3) Violin. Students must show a knowledge of the following: The first five positions; scales in single tones in all keys with a variety of bowings; arpeggios in all keys; etudes Kreutzer, Mazas, Book I; Sevcik studies; concertos Viotti No. 23, DeBeriot No. 9; Sonatas Grieg F Major, Handel, Haydn, and easier Beethoven.

*Attendance at Recitals Required.* All students taking a major teaching field, or an area of concentration in music are required to attend all student and faculty recitals.

*Fees for Private Lessons.* For two half-hour lessons per week in piano, voice, violin, violincello, band and orchestral instruments, the fee is \$40.00 per semester. For one half hour lesson per week the fee is \$27.00 per semester.

*Fees for Class Lessons.* With six in a piano class, the fee for two one hour lessons a week is \$12.50 per semester. For two class lessons of one hour each in voice, the fee is \$9.00 per semester. (Class limit is ten.)

*Rentals.* The rental for school owned solo instruments is \$2.50 a semester. Students using college owned instruments are held financially responsible for damage done them from the time received until returned and inspected at the close of the semester.

Rental on grand pianos in practice rooms is \$5.00 per semester for one hour daily. No charge is made for practice on other pianos.

*Registration and Other Fees.* Students carrying six or more semester hours of work pay the registration and all other regular fees. Those carrying five hours or less pay only the registration and library fees in addition to the special fees.

*Refunds.* In case an applied music course is dropped because of actual illness or other emergency beyond the control of the student, not more than half of the semester fee paid may be refunded.

*Requirements in Private Instruction.* A one semester-hour course requires one lesson a week and one hour practice daily. A two-hour course requires twice this amount. Students taking a major teaching field in music are required to take the two-hour courses.

## Teacher-Education Curriculums

### The Kindergarten Primary and Elementary Curriculum.

Students qualifying for the kindergarten primary certificate must be able to do the ordinary sight singing, sight reading, and piano accompaniments required. Students who are not proficient in any of these phases of music may take any or all of the following: Mus. 121, 122, 123, 124, 125, 126 and 227.

### The Elementary Curriculum.

*For Students Not Specializing in Music.* Students not specializing in music may elect any work in theory, voice, or instruments for which they have sufficient background. Those who wish to teach music in their own classrooms should take Mus. 125, 126, and 229.

*For Students Specializing in Music.* Students desiring a major or minor teaching field in music will follow one of the outlines given below under secondary curriculum.

### The Secondary Curriculum.

Under the secondary curriculum, students may choose a major teaching field in vocal, instrumental, or general music. The major teaching field in vocal music prepares for teaching all vocal classes commonly taught in high schools. The major teaching field in instrumental music is for those desiring to teach band, orchestra and

instrumental ensembles. The major teaching field in general music embraces both vocal and instrumental music.

*Prerequisites.* Music 111, 112 or equivalents are requisites in all major teaching fields. These requirements may be met either by taking the courses or comprehensive examinations.

*Major Teaching Field in Vocal Music.* The courses listed below are required. Freshman year, Mus. 113, 114, 117, 118; voice, 4 hours; piano, 4 hours; ensemble, 2 hours. Sophomore year, Mus. 115, 116, 119, 120; voice, 4 hours; piano, 4 hours; ensemble, 2 hours. Junior year, Mus. 215, 217, 219, 235, 236; voice, 4 hours; ensemble, 2 hours. Senior year, Mus. 225, 226; voice, 4 hours; ensemble, 2 hours. Graduate year: 284g, 288g, 292g. All students taking this field will be required to take 8 hours of foreign language.

*Major Teaching Field in Instrumental Music.* The courses listed below are required. Freshman year, Mus. 117, 118; major instrument, 4 hours; piano, 4 hours; ensemble, 2 hours. Sophomore year, Mus. 115, 116, 119, 120; major instrument, 4 hours; piano, 4 hours; ensemble, 2 hours. Junior year, Mus. 215, 217, 219, 235, 236; major instrument, 4 hours; minor instrument, 2 hours; ensemble, 2 hours. Senior year, Mus. 225, 226, 245, 255; major instrument, 4 hours; minor instrument, 4 hours; ensemble, 2 hours. Graduate year, Mus. 284g, 288g, 292g.

*Major Teaching Field in General Music.* Only students with a good background in both vocal and instrumental music will be accepted as candidates for the major teaching field in general music. The courses listed below are required. Freshman year, Mus. 113, 114, 117, 118; voice, 4 hours; piano, 4 hours; ensemble, 2 hours. Sophomore year, Mus. 115, 116, 119, 120; voice, 4 hours; piano, 4 hours; ensemble, 2 hours. Junior year, Mus. 215, 217, 219, 235, 236; instruments, 4 hours; ensemble, 2 hours. Senior year, Mus. 225, 226, 245, 255; instruments, 4 hours; ensemble, 2 hours.

## Arts and Sciences Curriculums

*Degree.* Students completing an Arts and Sciences curriculum with an area of concentration in Music receive the degree of Bachelor of Arts.

### Generalization Requirements.

Students seeking the Bachelor of Arts degree must have the generalization requirements of 48 semester hours outlined on pages 71, 72 of the catalog. In addition they must complete the area of concentration as outlined below.

## Area of Concentration.

Students taking an area of concentration in Music must take 54 semester hours of work outlined below.

*Prerequisite Courses.* The following 6 semester hours are prerequisite to other courses: Mus 111, 112. Students who pass a proficiency test in Mus. 111 and 112 may, with the permission of the adviser, be excused from taking these courses and may substitute four hours of electives, preferably academic.

*Required Courses.* The following 24 semester hours are required: Mus. 113, 114, 115, 116, 117, 118, 119, 120, 215, 217, 219, 225, 226, 228.

*Optional Groups of Courses.* Each student taking Music as his area of concentration will select one of the three phases of emphasis indicated below, and will complete 24 semester hours of work in it.

(1) *Emphasis on Voice.* Students selecting voice as an emphasis will take 12 hours in voice as follows: Mus. 101, 102, 103, 104, 201, 202, 203, 204; four hours from the following in piano: Mus. 101, 102, 103, 104; and eight hours in activity courses which may include chorus, band, orchestra, and small vocal and instrumental ensembles.

(2) *Emphasis on Violin.* Twelve hours are required in violin: Mus. 101, 102, 103, 104, 201, 202, 203, 204. Four hours are required in piano. These courses are the same as given under the "Emphasis on Voice". Eight hours are required in activity courses. See the list under "Emphasis on Voice".

(3) *Emphasis on Piano.* Twelve hours are required in piano: Mus. 101, 102, 103, 104, 201, 202, 203, 204. Four hours are required in voice or instrument. A choice may be made between voice or another instrument. Eight hours are required in activity courses. See the list under "Emphasis on Voice."

*The Minor in Music.* The minor in Music consists of at least 15 semester hours. For a minor in vocal music the following sequence of courses is suggested: Mus. 111, 112, 117, 118, 235, 236. In addition, courses should be chosen from applied music, piano, voice, glee club, or orchestra. For a minor in instrumental music the following sequence is recommended: Mus. 111, 112, 117, 118, 219. Work in band and orchestra should be included.

## Description of Courses

Mus. 101, 102, 103, 104. *Major Band Instruments—Private Instruction.* Prerequisites: courses taken in order listed. First and second year, 1 or 2 lessons a week. Credit, 1 or 2 hours each.



101, 102, 103, 104. *Minor Band Instruments Private Instruction.* Prerequisites: courses taken in order listed. First and second year, 1 or 2 lessons a week. Credit, 1 or 2 hours each.

101, 102, 103, 104 *Piano Private Instruction.* Courses arranged to meet the needs of students. Public performance provided through afternoon recitals. Prerequisites: courses taken in order listed. First and second year, 1 or 2 lessons a week. Credit, 1 or 2 hours each.

101, 102, 103, 104 *Violin Private Instruction.* Work arranged to fit the needs of students. Prerequisites: courses taken in order listed. First and second year, 1 or 2 lessons a week. Credit, 1 or 2 hours.

101, 102, 103, 104 *Violoncello Private Instruction.* Study of cello technique and of works of classical and modern composers to fit individual needs. Opportunity for public performance and for orchestra and ensemble playing. Prerequisites: courses taken in order listed. One or two lessons a week. Credit, 1 or 2 hours each.

101, 102, 103, 104, *Voice Private Instruction.* Development in technique of voice production in singing. Prerequisites: courses taken in order listed. First and second year, 1 or 2 lessons a week. Credit, 1 or 2 hours each.

111 *Fundamentals of Music.* Elements of music with emphasis on notation, rhythm, major and minor scales, sight singing, and melodic writing. First year, each semester. Credit, 2 hours.

112 *Sight Singing and Ear Training.* Music reading with attention to aural recognition and writing. Prerequisite: Mus. 111. First year, each semester. Credit, 2 hours.

113 *Sight Singing.* Study of advanced materials in sight singing and ear training. Prerequisite: Mus. 112. Second year. Credit, 2 hours.

114 *Sight Singing.* Continuation of Mus. 113. Prerequisite: Mus. 113. Credit, 2 hours.

115 *Harmony I.* Four part harmonic writing, root position and in versions. Prerequisite: Mus. 112. Second year, first semester. Credit, 2 hours.

116 *Harmony II.* Melody writing and simple composition. Prerequisite: Mus. 115. Second semester. Credit, 2 hours.

117 *Music Appreciation.* To develop judgment and discrimination in listening to music. Phonograph recordings used. First year. Credit, 2 hours.

- 118 *Music Appreciation*. Continuation of Mus. 117. Prerequisite: Mus. 117. Credit, 2 hours.
- 119 *Keyboard Harmony*. Melodic, harmonic, and rhythmic elements of music. Includes scales, intervals, triads, cadences, notation and dictation. Prerequisites: Mus. 101, 102 (piano), 111, 112. Credit, 2 hours.
- 120 *Keyboard Harmony*. Seventh chords, key relationship, modulation, and dictation. Prerequisite: Mus. 119. Credit, 2 hours.
- 121 *Class Piano*. For kindergarten-primary majors. Elements of keyboard technique and sight reading of folk song material. Two lessons a week. Credit, 1 hour.
- 122 *Class Piano*. Sight-reading, improvisation, and kindergarten primary rhythms. Prerequisite, Mus. 121. Two lessons a week. Credit, 1 hour.
- 123 *Class Piano*. For kindergarten-primary majors. Melody writing, improvisation, and chord accompaniments. Second year, first semester. Prerequisite: Mus. 122. Two lessons a week. Credit, 1 hour.
- 124 *Class Piano*. Songs, rhythms, and techniques necessary to fluency in performance. Prerequisite: Mus. 123. Second semester. Credit, 1 hour.
- 125 *Music Fundamentals for Kindergarten and Elementary Teachers*. The first of three classes planned for students following the kindergarten primary or the elementary curriculum. These three courses, Mus. 125, 126, and 227 or 229 should prepare students to teach music in their classroom. Previous musical training not required. Second year, first semester. Credit, 2 hours.
- 126 *Music Fundamentals for Kindergarten and Elementary Teachers*. Continuation of Mus. 125. Prerequisite: Mus. 125. Credit, 2 hours.
- 127 *Class Voice*. The systematic development of the principles of good singing. Twice a week. Credit, 1 hour.
- 128 *Class Voice*. Continuation of Mus. 127. Prerequisite: Mus. 127. Credit, 1 hour.
- 130 *Introduction to Music*. The correlation of music with literature, science and art. Not required of those specializing in music. Each semester. Credit, 2 hours.
- 131, 132, 133, 134 *Vocal Ensemble*. Includes madrigal group quartets and trios. Prerequisites: courses taken in order listed. Twice a week. Credit, 1 hour each.

135 *Class Violin*. Beginners only. Fundamentals of violin and viola. Daily individual practice. Twice a week. Credit, 1 hour.

136 *Class Violin*. Continuation of Mus. 135. Prerequisite: Mus. 135. Credit, 1 hour.

137 *Class Instrumental Instruction*. Brass, reed, and percussion instruments. Instrument rental, \$2.50 a semester. Twice a week. Credit, 1 hour.

138 *Class Instrumental Instruction*. Continuation of Mus. 137. Prerequisite: Mus. 137. Credit, 1 hour.

141, 142, 143, 144 *Instrumental Ensemble*. String, brass and woodwind ensembles. Prerequisite: courses taken in order listed. Twice a week. Credit, 1 hour each.

151, 152, 153, 154 *Choral Union and Concert Choir*. Open to students with reasonable vocal ability. A wide range of choral work is sung. At least one oratorio and three concerts are given annually. Superior singers selected from the Choral Union form the Concert Choir. Public appearances include church, school, radio, and an annual spring tour. Prerequisite: courses taken in order listed. Daily. Credit, 1 hour each.

161, 162, 163, 164 *Orchestra*. Study and performance of symphonic literature. Membership, selective. Prerequisite: courses taken in order listed. Twice a week. Credit, 1 hour each.

171, 172, 173, 174 *Symphonic and Marching Band*. Staging of formations and drills for football games and other events. Emphasis on symphonic works written for bands. Membership selective. Prerequisites: courses taken in order listed. Three times a week. Credit, 1 hour each.

201, 202, 203, 204 *Major Band Instruments Private Instruction*. Participation in public recitals required. Prerequisites: Mus. 104, and 201-204 in order listed. Third and fourth years, 2 lessons a week. Credit, 2 hours each.

201, 202, 203, 204 *Piano Private Instruction*. Participation in formal public recitals required. Prerequisites: Mus. 104, and 201-204 taken in order. Third and fourth years, 1 or 2 lessons a week. Credit, 1 or 2 hours each.

201, 202, 203, 204 *Violin Private Instruction*. Participation in formal public recitals required. Prerequisites: Mus. 104, and 201-204 taken in order. Third and fourth years, 1 or 2 lessons a week. Credit, 1 or 2 hours each.

201, 202, 203, 204 *Violoncello Private Instruction*. Participation in

formal public recitals required. Prerequisites: Mus. 104, and 201-204 taken in order listed. Third and fourth years, 1 or 2 lessons a week. Credit, 1 or 2 hours each.

201, 202, 203, 204 *Voice Private Instruction*. Participation in formal public recitals required. Prerequisites: Mus. 104, and 201-204 taken in order. Third and fourth years, 1 or 2 lessons a week. Credit, 1 or 2 hours each.

215 *Harmony III*. Altered chords, modulation, form, and creative writing. Prerequisites: Mus. 115, 116. Third year, first semester. Credit, 2 hours.

217 *Choral Conducting*. Elements of choral technique and interpretation. Required of music majors. Third year, first semester. Three times a week. Credit, 2 hours.

219 *Instrumentation and Conducting*. Required of majors. Prerequisite: Mus. 217. Third year, second semester. Credit, 2 hours.

225 *History of Music*. Survey of music from Grecian sources to the twentieth century. Prerequisite: Mus. 117, 118. Fourth year. Credit, 2 hours.

226 *History of Music*. Continuation of Mus. 225. Prerequisite: Mus. 225. Credit, 2 hours.

227 *Music in the Kindergarten and Primary Grades*. Techniques of music teaching, materials and problems. Prerequisites: Mus. 125, 126. Third year, first semester. Credit, 2 hours.

229 *Music Education in the Elementary School*. Techniques of music teaching, materials, and music problems. Prerequisites: Mus. 125, 126. Third year, second semester. Credit, 2 hours.

231, 232, 233, 234 *Vocal Ensemble*. Continuation of Mus. 131-134. Prerequisites: Mus. 134, and 231-234, taken in order. Twice a week. Credit, 1 hour each.

235 *Music Education Primary and Intermediate Grades*. For students preparing to be special teachers or consultants in music. Prerequisites: Mus. 111, 112. Third year, first semester. Credit, 3 hours.

236 *Music Education—Junior and Senior High School*. Problems, materials, and teaching techniques. Relationship of music department to the whole school program. Prerequisites: Mus. 111, 112, 235. Third year, second semester. Credit, 3 hours.

241, 242, 243, 244 *Instrumental Ensemble*. Continuation of Mus.

141-144. Prerequisites: Mus. 144, and 241-244 taken in order. Twice a week. Credit, 2 hours each.

245 *Band and Orchestra Method*. Survey of wind, string and percussion methods and materials used in the development of junior and senior high school bands and orchestras. Credit, 2 hours.

251, 252, 253, 254 *Choral Union and Concert Choir*. Continuation of Mus. 151-154. Prerequisites: Mus. 154, and 251-254 taken in order. Daily. Credit, 1 hour each.

255g *Organization and Administration of High School Bands and Orchestras*. Organization problems, procedures and materials. Credit, 2 hours.

261, 262, 263, 264 *Orchestra*. Continuation of Mus. 161-164. Prerequisites: Mus. 164, and 261-264 taken in order. Twice a week. Credit, 1 hour each.

271, 272, 273, 274 *Symphonic Band*. Continuation of Mus. 171-174. Prerequisites: Mus. 174, and 271-274 taken in order. Three times a week. Credit, 1 hour each.

284g *Counterpoint*. Polyphonic style of the sixteenth and seventeenth centuries. Prerequisite: Mus. 215. Fifth year, first semester. Credit, 2 hours.

288g *Composition*. Application of harmony and counterpoint to the smaller forms of composition. Prerequisite: Mus. 215, 284g. Fifth year, second semester. Credit, 2 hours.

292g *Form and Analysis*. Study of the smaller forms through the sonata and symphony. Prerequisite: Mus. 215. Fifth year, first semester. Credit, 2 hours.



The Lyceum. Artistically outstanding, the Lyceum contains a restful Lounge, an Auditorium seating three hundred and a permanent Art Gallery. It is a social and educational focal point for many state-wide groups as well as for student affairs.

# Department of Health and Physical Education

LAVIK (Head of Department), MURPHY (Director of Women),  
KINZLE, KAJIKAWA, DOHERTY, QUINN, GILLANDERS, KLANN,  
PLOCK, ONOFRIO, THOMPSON, EVANS

The purposes of this department are: (a) to provide an interesting and beneficial extra curricular activity program for each student, (b) to provide interesting and beneficial activity courses to meet core curriculum requirements, (c) to serve teachers interested in teaching health and physical education, (d) to provide experience in coaching and supervision of intramural and interscholastic athletic events, (e) to serve students registered under the Arts and Sciences curriculum.

Students are excused from the required activity courses only when a written permit is received signed by the college physician. In such cases restricted physical education classes are prescribed. For certain activity classes uniforms are required. These may be obtained at the College Book Store. Opportunity is afforded for all men to take part in intramural and intercollegiate athletics. Intercollegiate athletics are governed by the rules of the Border Faculty Athletic Conference. The intramural sports and dance programs for women are sponsored by the Women's Athletic Association. They provide opportunity for all to participate in some form of physical activity.

## Teacher-Education Curriculum

### Kindergarten Primary and Elementary Curriculums.

*For Students Not Specializing in Physical Education.* In addition to the 8-semester hours required of all students, women preparing to handle a limited program of health and physical education will find it helpful to select some of the following courses: P.E. 117, 119, 120, 131, 132, 167, 180, 223, 224, 225, 226, 232. For the same purpose, men may elect courses from the following: P.E. 167, 217, 218, 230, 240.

*For Students Specializing in Physical Education.* Students specializing in this department should take the following: Biol. 171, 172 and P.E. 109, 167, 236 or 245, and 251. In addition, women should choose from the following courses making a total of 30 semester hours excluding the core curriculum requirements: P.E. 172, 173, 174, 190, 223, 224, 225, 226, 227, 255g, 250. Men should choose additional

courses from the following: P.E. 195, 196, 217, 218 and five hours from P.E. 230, 240, 254g, making a total of 30 semester hours. A special certificate is granted to students who complete not less than 30 semester hours.

### The Secondary Curriculum.

*Major Teaching Field in Physical Education.* This teaching field consists of at least 45 semester hours done during the first four years. At least 24 hours shall be in physical education courses. At least 18 hours of the 45 must be in upper division courses. Additional courses in physical education should be completed in the fifth year. The following are the requirements for this teaching field:

First and second years. The following courses are required of both men and women: Biol. 171, 172, P.E. 109, 167. In addition, women take the following: P.E. 171, 172, 173, 174, 185, 190, 191, 192, and one semester hour each in sports and dance activity. In addition, men take P.E. 195, 196, Chem. 110.

Third and fourth years. Both men and women take the following: P.E. 236 or 245, 251. Women choose 24 hours from the following: P.E. 211, 225, 226, 227, 232, 250, 253g, 255g, Ed. 233g, 237g, 265g. Men take a minimum of 24 additional hours of physical education including P.E. 217 and 218.

Fifth year. It is suggested that students choose some of the following courses: P.E. 238g, 254g, 255g, 281g, 282g, 335, 340, Ed. 233g, 237g, 238g, 265g.

*Minor Teaching Field in Physical Education.* A minimum of 15 semester hours, including six hours in upper division courses, are required of all students. Women take P.E. 109, 224, 227, and choose the remainder from the following: P.E. 167, 171, 172, 173, 174, 185, 190, 191, 192, 225, 250, Biol. 171, 172. Men must take P.E. 109, 217 and 218, or P.E. 195 and 196, and select the remainder with the approval of the head of the department.

*Minor Teaching Field in Health Education.* Required of both men and women: P.E. 167, 185, 250. Optional courses suggested for women: Biol. 171, 172, P.E. 226, 240, 245, 251, 255g, H.Ec. 101. Optional courses for men, approved by department head. Minimum of 15 hours required including 6 in upper division courses.

## Arts and Sciences Curriculums

The area of concentration in Physical Education is designed to serve the following types of students: (a) Those who do not imme-



diately intend to teach but have a special interest in technical aspects, such as occupational and physical therapy; (b) those who plan to enter the field of school health, or public health; (c) those who wish to enter the field of community recreation.

*Degree.* Completion of the Arts and Sciences Curriculum with an area of concentration in health and physical education leads to the degree of Bachelor of Science.

### Generalization Requirements.

All students seeking the B.S. degree must meet the generalization requirements of 40 semester hours listed under Arts and Sciences curriculums found on pages 71, 72 of the catalog.

### Areas of Concentration.

The area of concentration consists of 39 semester hours as outlined below.

*Prerequisite Courses.* The following are prerequisites: Biol. 171, 172.

*Required Courses for Both Men and Women.* The following 12 hours are required: P.E. 109, 167, 251.

*Required for Women Only.* The following are required: P.E. 171, 172, 173, 174, 185, 191, 192, 211, 232, 255g.

*Required for Men Only.* The following are required: P.E. 195, 196, 217, 218, 230, 236g, 240.

*Optional Groups of Courses.* In addition to the 23 required hours listed above, each student in this area will select one of the four following groups of courses and complete 16 semester hours in it.

(1) Emphasis on Physical Education: P.E. 211, 236g, 253g, 254g, 255g, 281g, or 282g; Biol. 100; Chem. 111, 112, 180; Psych. 214, 231, 240; Ed. 120, 216; Zool. 111, 112.

(2) Emphasis on Health Education. P.E. 185, 225, 236g, 240, 254g, 255g; Biol. 100, 183, 204g; H.Ec. 101, 104, 212; Psych. 231, 234; Ed. 120, 216; Zool. 111, 112.

(3) Emphasis on Recreation. P.E. 161, 211, 230, 232, 253g; Art 115, 120, 220; I.A. 122; Psych. 231, 234, 240; Ed. 120, 216.

(4) Emphasis on the Therapies. Phys. 111, 112; Biol. 100, 183, 204g, 225; Art 106, 115, 120, 220; I.A. 163, 222; Psych. 208, 214, 225, 240g; Ed. 120, 216, 254g; Zool. 111, 112.

## Description of Courses

P.E. 100 *Hygiene*. Required of all students. Separate sections for men and women. Credit, 2 hours.

101 *Basic Physical Education*. Volleyball, basketball, folk-dancing, tennis. Required of freshmen women not specializing in physical education. Fee, \$2.00. First semester, twice a week. Credit, ½ hour.

102 *Basic Physical Education*. Softball, modern dance, archery. Required of freshmen women not specializing in physical education. Fee, \$2.00. Second semester, twice a week. Credit, ½ hour.

103 *Beginning Tap Dancing*. For men and women. Twice a week. Credit, ½ hour.

104 *Advanced Tap Dancing*. Twice a week. Credit, ½ hour.

107 *Sports Survey* (men). Individual and team sports. Required of men in freshman year. Twice a week. Credit, ½ hour.

108 *Sports Survey* (men). Continuation of P.E. 107. Credit, ½ hour.

109 *Introduction to Physical Education*. An orientation and guidance course. Required of freshmen specializing in physical education. Separate sections for men and women. Credit, 3 hours.

110 *Badminton*. Twice a week. Credit, ½ hour.

111, 112, 113, 114 *Athletics* (Women). Advanced classes in volleyball, hockey, softball, basketball, badminton, and track. Four times a week. Credit, ½ hour each.

117 *Recreational Games*. Instruction and playing experience in table tennis, shuffleboard, bowling, paddle tennis, deck tennis, croquet. Twice a week. Credit, ½ hour.

119 *Beginning Folk Dancing*. European, cowboy, early American, and Latin American dances. Twice a week. Credit, ½ hour.

120 *Advanced Folk Dancing*. Continuation of P.E. 119. Twice a week. Credit, ½ hour.

121 *Beginning Golf*. Twice a week. Credit, ½ hour.

122 *Advanced Golf*. Twice a week. Credit, ½ hour.

124 *Beginning Gymnastics*. Techniques of performing and teaching skills involving gymnastic apparatus and tumbling. Twice a week. Credit, ½ hour.

125 *Advanced Gymnastics*. Continuation of P.E. 124. Twice a week. Credit, ½ hour.

- 126 *Beginning Boating*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 127 *Intermediate Boating*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 131 *Beginning Tennis*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 132 *Intermediate Tennis*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 133 *Advanced Tennis*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 141 *Beginning Archery*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 142 *Intermediate Archery*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 143 *Advanced Archery*. Twice a week. Credit, 1 hour.
- 150 *Beginning Social Dancing*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 151 *Intermediate Social Dancing*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 160 *Fencing*. For beginners. Fee, \$1.00. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 161, 162, 163, 164 *Restricted Activities*. Limited activities for students who cannot, because of disabilities, enroll in regular physical education classes. Written recommendation of the school physician required. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 167 *First Aid*. Prevention, diagnosis, and treatment of accidents. Techniques in teaching. Credit, 2 hours.
- 171, 172, 173, 174 *Professional Activities*. The activities included are designated professional because of their value to women students specializing in physical education. Four hours are required of them. Five times a week. Credit, 1 hour each.
- 181 *Beginning Modern Dance*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 182 *Intermediate Modern Dance*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 183 *Advanced Modern Dance*. Twice a week. Credit,  $\frac{1}{2}$  hour.
- 185 *Principles of Health Education*. Principles, aims, and objectives of school health education. Study of available teaching materials and health agencies. First semester. Credit, 3 hours.
- 190 *Dance in Education*. History and values of dances. Dance composition and rhythm analysis. Use of percussion instruments in teaching rhythmic activities. Three times a week. Credit, 2 hours.
- 191 *Dance Production*. Advanced course in modern dance composition. Experience in dance production. Open to men and women. Required of women specializing in physical education. Prerequisite: P.E. 190, or equivalent. Three times a week. Credit, 1 hour.

192 *Dance Production*. Continuation of P.E. 191. Prerequisite: P.E. 191. Credit, 1 hour.

195 *Professional Activities*. History, organization and techniques of physical activities and minor sports. Present day problems confronting teachers. Two semesters required of men specializing in physical education. Credit, 2 hours.

196 *Professional Activities*. Continuation of P.E. 195. Prerequisite: P.E. 195. Credit, 2 hours.

215 *Health in Elementary Schools*. For kindergarten or elementary grade teachers. Includes materials and methods of health instruction. Required of students registered under kindergarten and elementary curriculums. Credit, 3 hours.

217 *Coaching*. Theory and techniques of football, basketball, track and baseball. Credit, 2 hours.

218 *Coaching*. Continuation of P.E. 217. Prerequisite: P.E. 217. Credit, 2 hours.

220 *Playground Leadership*. Study of games and other activities, their organization, and administration. Required for the elementary certificate. Separate sections for men and women. Credit, 2 hours.

223 *Directing Games of Low Organization*. Class organization and methods of teaching games suitable for indoors and outdoors in elementary grades. Arizona State Course of Study used. Three times a week. Credit, 2 hours.

224 *Directing Major Team Sports*. Class organization, teaching and coaching of volleyball, basketball, softball, speedball. Prerequisites for women: two hours, professional activities. Three times a week. Credit, 2 hours.

225 *Directing Individual and Dual Sports*. Class organization, teaching and coaching of tennis, archery, badminton, and golf. Prerequisites for women: two hours, professional activities. Three times a week. Credit, 2 hours.

226 *Directing Dance in Elementary Schools*. Source materials and practice in dances and rhythmic activities. Attention to rhythmic activities of the Arizona State Course of Study. Prerequisite: P.E. 190. Three times a week. Credit, 2 hours.

227 *Directing Dance in Secondary Schools*. Theory and practice of teaching dance activities in secondary schools. Sources, material, and accompaniment. Prerequisite: P.E. 190. Three times a week. Credit, 2 hours.

230 *Community Recreation*. Significance, functions, program content, methods of operation, leadership, finance, and legal aspects of municipal recreation. Credit, 3 hours.

232 *Programs and Festivals*. Production of pageants, festivals, and dance programs. Discussion of materials and national festivals. Prerequisite: P.E. 190. Three times a week. Credit, 2 hours.

236 *Organization and Administration of Health and Physical Education*. Organization, administration, and supervision of the physical education program in elementary and high schools. Separate sections for men and women. Credit, 3 hours.

238 *Related Activities*. Activities related to the physical education program for elementary and high schools. Prerequisites: P.E. 109, 236 or 245 and 251. Credit, 2 hours.

240 *Public Health Education*. A course in communicable diseases and health education. Credit, 2 hours.

241 *School Health Problems*. Helps teachers recognize and meet health problems. Emphasis on techniques in screening examinations, and use of community, state, federal, social, and health agencies. Credit, 2 hours.

245 *Tests and Measurements in Health and Physical Education*. Types of tests and uses, including classification and grading of students. Practice in administering tests. Credit, 3 hours.

250 *Health and Physical Education in the Secondary Schools*. A methods course required of women pursuing the secondary curriculum, with a major teaching field in physical education. Prerequisites: Biol. 171, 172, P.E. 109, 185. Credit, 3 hours.

251 *Applied Anatomy and Kinesiology*. Origins, insertions, and actions of muscles. Emphasis on postural problems. Prerequisites: Zool. 171, 172. Credit, 3 hours.

253g *Methods of Officiating*. Qualifications of officials, techniques of officiating, and interpretation of rules. Prerequisites: P.E. 171, 172, 173, 174, 224, 225. Three times a week. Credit, 2 hours.

254g *Physiology of Exercise*. The effects of exercise upon bodily functions. Prerequisites: Zool. 171, 172. Credit, 3 hours.

255g *Corrective Physical Education*. Health examinations, postural deviations and problems of those requiring corrective physical activities. Open to men and women. Prerequisites: Zool. 171, 172; P.E. 251. Credit, 3 hours.

281g *Advanced Dance Composition*. Theory and practice in dance

composition. Form in music related to dance composition. Study of archaic, pre-classic, and modern style. Prerequisites: P.E. 190, 191, 192, Art 215 or Mus. 202. Credit, 2 hours.

282g *Percussion and Improvisation.* Theory and practice in use of percussion instruments. Improvisation of simple dance studies. Compositions of percussion accompaniment for modern dance studies. Prerequisites: P.E. 190, 191, 192, Art 215 or Mus. 202. Credit 2 hours.

335 *Problems in Health and Physical Education.* Controversial issues in physical education, such as grading, excuses, budget, shower and locker room organization, point systems, etc. Prerequisites: P.E. 190, 236 or 245, 251. Credit, 2 hours.

340 *Curriculum Construction in Health and Physical Education.* Principles and practices and a functional philosophy of curriculum making with applications of this theory. Prerequisites: P.E. 109, 190, 236, Ed. 215. Credit, 2 hours.

## Department of Psychology

SKINNER (Head of Department), GURNLE, GRIMES, BALL, SMITH,  
HOLLY, YOUNG.

The aims of the work of the Department of Psychology are four fold: (a) to further the general educational objectives of the college, (b) to give students an understanding of the psychological principles that will enable them to make satisfactory adjustments to the problems of everyday living, (c) to enable those who are preparing to become teachers to apply psychological principles to the problems of the classroom so that children may make better adjustments and learn more efficiently, and (d) to give the background necessary to those who plan to do special work in the field of psychology.

### Teacher-Education Curriculums

*For Students Not Specializing in Psychology.* Students wishing only a few courses should consult the head of the department.

*For Students Specializing in Psychology.* Students may select with the approval of the head of the department such courses as may fit their individual interests, needs, and abilities. A minimum of 24 hours is suggested.

## Arts and Sciences Curriculums

There is no area of concentration in psychology alone, but there is an area designated as Human Growth and Adjustment. This includes courses from the Departments of Psychology, Education, Biology, Commerce, Speech, and Social Studies.

*Degree.* The completion of this curriculum leads to the degree of Bachelor of Science.

### Generalization Requirements.

Forty semester hours are required as outlined on pages 71, 72 of the catalog.

### Area of Concentration in Human Growth and Adjustment.

In addition to the 40 semester hours in the Generalization Requirements, the following 50 semester hours are required:

*Prerequisites.* The following 10 semester hours: Soc. 120; Psych. 100; G. S. 110.

*Required Courses.* The following 12 hours are required: Psych. 200; 208; 225; 213 or 234.

*Optional Courses.* A minimum of 12 semester hours in Psychology plus 16 semester hours is to be selected from 3 or more other departments. Psych. 211, 213, 214, 220, 224, 226, 231, 234, 235, 240, 241, 250, 280, 281; Biol. 171, 172, 204; Ed. 216, 232, 250, 265, 266; Soc. 205, 212, 215; H. Ec. 209; Speech 220, 257, 258; Com. 219, 265; P. S. 203; Philos. 200.

## Description of Courses

Psych. 100. *Elementary Psychology.* Considers basic principles of psychology and such activities as emotions, motives, thinking, observing, learning, and intelligence. Fee, 50 cents. Credit, 3 hours.

140 *Human Growth and Development, I.* The physical, mental, emotional and social development of the child to the age of ten. Designed especially for the needs of the teacher or others who work with children. Prerequisites: Soc. 120, Psych. 100. Fee, 50 cents. Credit, 2 hours.

141 *Human Growth and Development, II.* Continuation of Psych. 140. Emphasizes the period from age ten to maturity. Prerequisites: Soc. 120, Psych. 100, 140. Fee, 50 cents. Credit, 2 hours.

200 *Educational Measurements.* Construction, interpretation and

use of tests. Practice in simple graphical and statistical methods. Prerequisite: Psych. 100. Fee, 50 cents. Each semester. Credit, 3 hours.

Philos. 200 *Introduction to Philosophy*. Fundamental issues and terminology in philosophy. The development of philosophical thought from the early Greeks to modern times. Open to upperclassmen *only*. Prerequisites: Psych. 100, Soc. 120. Each semester. Credit, 3 hours. Philos. 202 *Principles of Ethics*. The meaning of right and wrong, the development of moral understanding, the ethical foundations of personal and social relations. Prerequisites: Psych. 100, Philos. 200. Credit, 3 hours.

208 *Mental Hygiene and Abnormal Psychology*. The psychological and environmental factors essential to mental health. Origin, development, prevention and treatment of behavior problems. Mental deficiency and prevalent types of insanity. Prerequisites: Psych. 100, 140, 141 or 213, 234. Credit, 3 hours.

211g *Statistical Methods*. Interpretation and application of statistics as employed in education and psychology. Assembling and analysis of data. Measures of central tendency, variability, reliability, and simple correlation. Prerequisites: Psych. 100, 200, 213. Credit, 3 hours.

213 *Educational Psychology*. An analysis and application of psychological facts and laws particularly relevant to the problems of education. Prerequisite: Psych. 100. Credit, 3 hours.

214 *Applied Psychology*. Application of psychological principles in business, industry, medicine, law and personnel. Prerequisite: Psych. 100. Credit, 3 hours.

220g *Individual Mental Testing*. A study of the Stanford-Binet and other scales, and of performance tests. Practice in giving these tests. Prerequisites: Psych. 100, 200, 224, 213 or 234. Fee, \$1.00. Credit, 3 hours.

224 *Clinical Psychology*. Survey of clinical work on diagnosis and adjustment of problem children. Educational and other adjustment problems are diagnosed and remedial measures suggested. Prerequisites: Psych. 100, 140, 141, 200 or 234g.

225 *Social Psychology*. The behavior of man in his social relations. Problems of crowd behavior, social control, propaganda, suggestion, imitation, competition, cooperation, and leadership. Prerequisite: at least two courses in psychology. Credit, 3 hours.

226g *Behavior Problems and Juvenile Delinquency*. A review of in-



vestigations on behavior problems and delinquency; factors contributing to delinquency; prevention and correction; case studies. Prerequisite: 3 courses in psychology. Credit, 2 hours.

231 *Psychology of Adolescence*. Methods and findings of recent studies of the development, growth and problems of the adolescent, with implications for education. Prerequisites: Psych. 100, 140, 141 or 213. Credit, 2 hours.

234 *Child Psychology*. Development, growth and psychological activities of the child. Problems of adjustment and child training. Survey of experimental and observational studies. Prerequisite: Psych. 100. Credit, 3 hours.

235g *Individual Differences*. The nature and extent of psychological differences among individuals and groups, and their significance for curriculums and educational methods. Prerequisites: Psych. 100, 200, 213. Credit, 2 hours.

240 *Psychology of Personality*. The elements of personality, and the conditions which determine the pattern and the direction of its growth. Methods of judging personality and character. Prerequisite: at least 3 courses in psychology. Credit, 2 hours.

245g *Psychology of Religion*. Problems and experiences in the field of religion. Methods and techniques for gathering and evaluating data. Prerequisites: at least 3 courses in psychology. Credit, 3 hours.

250g *Psychological Techniques*. Principles and techniques of clinical diagnosis including therapy, counseling, interviewing, projective techniques, and diagnostic tests. Prerequisites: Psych. 100, 200, 224, 220g. Credit, 2 hours.

280g *Psychological Clinic*. Laboratory practice in psychological testing and diagnosis. Intelligence, personality, interest and vocational testing and advisement. Prerequisites: Psych. 220g, 224. Fee, \$1.00. Credit, 2 hours.

281g *Psychological Clinic*. Continuation of Psych. 280g. Prerequisite: Psych. 280g. Fee, \$1.00. Credit, 2 hours.

308 *Advanced Educational Psychology*. Review of scientific publications on the facts, laws, and theories of learning, with reference to problems of education. Prerequisites: Psych. 100, 200, 213. Credit, 2 hours.

313 *Recent Studies in Educational Psychology*. Survey of the latest experimental reports relevant to current problems of teaching. Prerequisites: Psych. 100, 200, 213. Credit, 2 hours.

322 *Psychology and Education of Exceptional Children.* Psychological principles essential for the understanding and education of exceptional children. Prerequisites: Psych. 100, 200, 213 or 234. Credit, 2 hours.

335 *Aptitudes and Aptitude Tests.* The theory of aptitudes, types of aptitude tests, and use of aptitude tests in the guidance program. Prerequisites: Psych. 100, 200, 213. Credit, 2 hours.

## Department of Sciences

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BATEMAN (Head of Department), MORTENSON, STAHNKE, MILLER,  
KRUMBOLTZ, LARMORE, MCCLEARY, KOELSHE, MAUGHN, HANSON.

The department of sciences offers courses in the following fields: biology, chemistry, geography, general science, geology, physics, and zoology. This work is designed to meet the needs of the following: (a) students desiring a cultural or broadening training in the field of science, (b) prospective elementary and secondary teachers who plan to major or minor in one of the divisions of science, (c) prospective teachers who require prerequisite training in science for majors such as home economics or physical education, (d) pre-professional or other students requiring lower division science courses to meet the requirements of the various professional, academic and vocational fields such as agriculture conservation, medicine and research, and who plan to continue their work at another college.

### Teacher-Education Curriculums

#### Kindergarten Primary and Elementary Curriculum.

*For Students Not Specializing in Science.* In addition to G.S. 100, 110, and Geog. 100 required of all students, it is suggested that G.S. 231, and courses in geography will be especially helpful.

*For Students Specializing in Science.* Students doing special work in science should choose the following: G.S. 100, 110, 231, Geog. 100, Zool. 171, 172. It is suggested that they add enough courses selected from the following to make 24 semester hours: Bot. 110, Chem. 110, 180, Geog. 101, 203, 205, 210, 217, 222, Zool. 111, 112. Those desiring a major teaching field, see below under secondary curriculum.

## The Secondary Curriculum.

Students planning to teach science in the high school should take basic courses in biology, chemistry, physics and mathematics. Over-specialization is to be avoided because the prospective science teacher may find it necessary to give instruction in most of the above fields.

This department offers major teaching fields in the general sciences, biological sciences, physical sciences, and the earth sciences. To complete a major teaching field in science, at least 45 semester hours of work in one of the fields specified above must be completed in the first four years. At least 24 hours must be in one field and not less than 18 of the total shall be upper division. Candidates for the master's degree who are interested in teaching science should complete additional courses in science during the fifth year. Programs for each of these teaching fields are outlined below. The courses listed in the first and second years in each case are required. Courses listed in the third, fourth and fifth years are optional, and the student may elect, under guidance of his adviser, courses to fit his interests and background.

*Major Teaching Field in General Science.* This teaching field is recommended especially for the prospective teacher who plans to teach only general science or who may find employment in a small high school. The following are the requirements: First and second years, Chem. 110, 114, Geog. 100, Bot. 110, Zool. 111, 112; Phys. 111, 112; third and fourth years, Geol. 151, 152, Phys. 200, 210, G.S. 260, I.A. 115, Biol. 204g, Zool. 171, 172, 230, 231, Bot. 220; fifth year, Bot. 230g, 242g, Zool. 230g, 270, Chem. 262, 280g.

*Major Teaching Field in Biological Science.* The work in this field should be selected so that the student obtains at least 9 hours in both the animal and plant biology courses. First and second years, Chem. 110, 114, Geog. 100, Bot. 110, Zool. 111, 112, 171, 172, Biol. 190; third and fourth years, Phys. 111, 112, Biol. 204, G.S. 260, Chem. 180, Bot. 220, 230g, 242, Zool. 210, 230g, 231; fifth year, Bot. 230g, Zool. 230g, 254g, 270g.

*Major Teaching Field in Earth Sciences.* This teaching field is recommended especially for students planning to teach geography and social studies. Certain courses in social studies may be substituted for geography in the third and fourth years. First and second years, Geog. 100, 101, 120, Geol. 151, 152, Chem. 110, 114, Bot. 110, Zool. 111, 112; third and fourth years, Geog. 203, 204, 205, 210g, 215g, G.S. 260, Geol. 211g, 212, Phys. 111, 112, 118, 200, 210; fifth year, Geog. 210g, 215g, 217g.

*Major Teaching Field in Physical Sciences.* Those interested in teaching physics should take a minor teaching field in mathematics, while the prospective chemistry teacher may find it advisable to take a minor teaching field in either mathematics or biology. First and second years, Chem. 110, 111, 112, Math. 119, 120, Phys. 111, 112, Zool 111, 112, Bot. 110; third and fourth years, those emphasizing chemistry will take Chem. 141, 142, 211, 212, 262g, 280g, G.S. 260, Math. 122, 123, Phys. 210, Geol. 151, 152, Bot. 220; those emphasizing physics will take Phys. 118, 200, 210, 221, 222, 223, 230g, Geol. 151, 152, Chem. 141, 142, 180, Math. 122, 123, G.S. 260. Fifth year, in chemistry the following courses are suggested: Chem. 251g, 252g, 280g, Phys. 241g; in physics the following courses are suggested: Phys. 230g, 241g, Chem. 251g, 252g.

*Minor Teaching Fields in the Sciences.* Minor teaching fields are offered in general science, geography, biology, chemistry and physics. Each consists of at least 15 hours, of which at least 3 hours shall be upper division. Suggested programs for each minor teaching field are given below. The student selects from one field the courses that fit his interests or requirements.

Minor Teaching Field in Biology. Zool. 111, 112, 171, 172, 210, 230g, Bot. 110, 220, 230g, Biol. 190, 204g, G.S. 260.

Minor Teaching Field in Chemistry. Chem. 110 or 111 and 112 or 114, 141, 142, 180, 262g, 280g, G.S. 260.

Minor Teaching Field in Geography. Geog. 100, 101, 120, 203, 204, 205, 206, 210, 212, 215, 217, Geol. 151, 152, 211, 212, G.S. 260.

Minor Teaching Field in General Science. G.S. 100, 110, 260, Zool. 171, 172, Chem. 110, 114, 180, Phys. 111, 112, Geol. 151, 152, Geog. 100.

Minor Teaching Field in Physics. Phys. 111, 112, 118, 200, 210, 221, 222, 230, G.S. 260.

## Arts and Sciences Curriculums

The department of science offers the opportunity for students to concentrate in botany, chemistry, conservation, geography and geology, physics, zoology or a combination of these fields.

*Degrees.* Students completing the requirements of an arts and sciences curriculum with an area of concentration in any of the fields of science listed below may receive either the degree of Bachelor of Arts or Bachelor of Science depending upon the selection of courses to meet the generalization requirements.

## Generalization Requirements.

In addition to the 40 or 48 semester hours of generalization requirements outlined on pages 71, 72 of the catalog, the student must complete one of the areas of concentration as outlined below.

### Areas of Concentration.

*Biological Science Area.* This field affords basic training for positions in conservation, entomology, forestry, biological survey, national park service, pest control, biological research, industrial or civil service positions or entrance into a graduate school.

*Prerequisites.* The following courses are prerequisites for the biological sciences: Chem. 110, 114 or equivalent, Phys. 111, 112. At least one year of foreign language is highly recommended.

*Required and Optional Courses.* At least 48 semester hours should be completed from one of the fields of emphasis given below. In each emphasis the courses listed in the first two years are required. Those in the third and fourth years are required or optional as indicated. From the optional courses the student with his adviser will select those best fitted to his interests and abilities.

(1) *Emphasis on General Biology.* First and second years, Chem. 110, 114, Zool. 111, 112, Bot. 110, Phys. 111, 112. Third and fourth years, required courses, Bot. 230, 242, Zool. 230, Biol. 204; optional courses, Biol. 190, 290, Bot. 160, 171, 172, 220, 244, 260, Zool. 153, 171, 172, 210, 231, 232, 254, 260, 270, Ag. 124, 125, 126, 143, 216, 246, Chem. 180, 280.

(2) *Emphasis on Botany.* First and second years, Bot. 110, 171, 172, Biol. 190, Zool. 111, 112, Chem. 110-114. Third and fourth years, required courses, Biol. 204, Bot. 160 or 220, 230, 242, Phys. 111, 112; optional courses, Biol. 244, Zool. 210, Chem. 180, 280, Ag. 125, 126, 143, 216, 246.

(3) *Emphasis on Conservation.* In this area the student may emphasize wildlife or soils in the third and fourth years. First and second years, Bot. 110, Zool. 111, 112, Chem. 110 114, Geog. 100, Phys. 111, 112. Third and fourth years, required courses, wildlife interest, Zool. 210, 230, 270, 271, 276; optional courses, wildlife interest, Zool. 231, 254, Bot. 160 or 220, 230, 242, 244, Biol. 204g, 290, Ag. 219, 246. Third and fourth years, required courses, soils interest, Ag. 101, 107, 143, 230, 246, Geol. 151, Geog. 101, 217, Bot. 220; optional courses, soils interest, Ag. 102, 144, Bot. 230, 244, Zool. 210, 230, 231, 270, Biol. 204, 290, Chem. 180.

(4) *Emphasis on Zoology.* First and second years, Zool. 111,

112, 163, Bot. 110, Chem. 110, 114 or 111, 112, Phys. 111, 112. Third and fourth years, required courses, Biol. 204, Zool. 210, 230, 232, 254, 260, 270; optional courses, Biol. 290, Zool. 171, 172, 231, Bot. 220, 230, 242, Chem. 180 or 211, 212, 280, Ag. 107, 108, 114, 116, 185, 202, 208, 219.

*Physical Sciences Area.* By completing one of the fields of emphasis consisting of 48 semester hours of work as outlined below, the student may qualify for industrial or civil service positions such as junior chemist or physicist or for entrance into a graduate school.

*Prerequisites.* Students concentrating in chemistry or physics are required to complete Zool. 111, 112, Bot. 110, Math. 119, 120, 122, 123. As early as possible a reading knowledge of German, French or Russian should be developed.

*Required and Optional Courses.*

(1) Emphasis on Chemistry. First and second years, Chem. 110, 111, 112, 141, 142, 150, Phys. 111, 112 or 121, 122, Geol. 151, Math. 119, 120. Third and fourth years, required courses, Chem. 211, 212, 251, 252, Phys. 210, Bot. 220; optional courses, Chem. 215, 262, 270, 280, Phys. 230, 241, Math. 122, 123, Ag. 143, 144, 206, 230.

(2) Emphasis on Physics. First and second years, Phys. 121, 122, 118, Chem. 111, 112, Math. 119, 120, 122, 123, Geol. 151. Third and fourth years, required courses, Phys. 210, 221, 222, 223; optional courses, Phys. 200, 230, 241, Chem. 141, 142, 251, 252, Math. 221, 222, 243, I.A. 115, 116.

(3) Emphasis on Geography and Geology. In this area the student may emphasize either geography or geology. Prerequisite: geography and geology students are advised to complete G.S. 100 (or Chem. 110, 114, Phys. 111, 112 in cases of students emphasizing geology), G.S. 110, and one year of foreign language. By selecting courses in the third and fourth year under the guidance of his adviser, the student may emphasize either geography or geology. First and second years, Chem. 110, 114, or G.S. 100, Bot. 110, Zool. 111 or G.S. 100, Geog. 100, 101, 120, Geol. 151, 152. Third and fourth years, required courses, Geog. 203, 204, 205, 210; optional courses, Geog. 212, 215, 217, 222, Geo. 211, 212, Phys. 111, 112, 118, 200, 210, Soc. 125.

## Professional and Preprofessional Courses

Other curriculums of interest to the students concentrating in the sciences are listed in the section of the catalog on pre professional and professional curriculums. These programs include the following: pre-agriculture, pre-dental, pre dietetics, pre-engineering, pre forestry,

pre-veterinary, and pre medical. Curriculums leading to the Bachelor of Science degree are also offered in medical technology and nursing.

## Description of Courses

### General Science

G. S. 100 *Introduction to the Physical Sciences*. Principles and facts in fields of physics, chemistry, meteorology, geology, and astronomy. Does not meet science requirements in pre professional curriculums. Fee, \$1.00. Each semester. Credit, 4 hours.

110 *Introduction to Biological Sciences*. Biological principles illustrated by both plants and animals. Does not meet science requirements in pre-professional curriculums. Fee, \$2.00. Each semester, 3 lectures, 1 two hour laboratory a week. Credit, 4 hours.

231 *Science for the Elementary School*. Development of an integrated science program in each grade of the elementary school. Lectures, library reports, class discussion, field observation and a three-day camping trip. Prerequisites: G. S. 100, 110; Geog. 100. Fee, \$1.00. Credit, 3 hours.

260 *Science in the Secondary School*. Principles and methods of teaching general science, biology, chemistry and physics. Prerequisite: Ed. 215. Credit, 3 hours.

### Biology

Biol. 190 *Special Techniques in Biology*. Individual projects in the biological sciences. A type of honors course, open only to outstanding students. Approval of the instructor and head of the department required. Fee, \$1.00 per semester hour. Credit arranged.

204 *Genetics and Eugenics*. Principles and facts of heredity developed from plants and animals. Principles of race improvement. Prerequisites: Bot. 110, Zool. 111,112, or equivalent. Credit, 3 hours.

### Botany

Bot. 110 *General Botany*. Brief survey of lower plant life. More detailed study of flowering plants. Fee, \$3.00. Each semester, 3 lectures and 3 hours laboratory a week. Credit, 4 hours.

160 *General Plant Pathology*. The causes of diseases in plants and methods for control. Prerequisite: Bot. 110. Fee, \$5.00. Two lectures, 2 three-hour laboratories a week. Credit, 4 hours. Not offered 1948-49.

171 *Plant Anatomy*. Morphology of plant cells, tissues, and tissue systems. Study of prepared slides and fresh materials. Prerequisite: Bot. 110. Fee, \$4.00. First semester, 2 lectures, 6 hours laboratory a week. Credit, 4 hours.

172. *Plant Physiology*. Plant functions of absorption, food synthesis, nutrition, respiration, growth and reproduction. Prerequisites: Bot. 171, Chem. 114. Fee, \$4.00. Second semester, 2 lectures and 6 hours laboratory a week. Credit, 4 hours.

220 *General Bacteriology*. The fundamental principles of bacteriology, and their hygienic, industrial and agricultural applications. Prerequisites: Bot. 110, Chem. 110. Fee, \$5.00. Each semester, 2 lectures and 3 two-hour laboratory periods a week. Credit, 4 hours.

230g *Plant Ecology*. Origin and development of vegetation with applications to agriculture, forestry, grazing. Prerequisite: Bot. 110. Fee, \$2.00. First semester, 3 lectures and 1 laboratory a week. Credit, 4 hours.

242g *Systematic Botany*. Principles underlying the classification and naming of plants, their identification, and methods of collecting, preserving, and mounting. Prerequisite: Bot. 110. Fee, \$4.00. Second semester, 2 lectures and 4 hours laboratory a week. Credit, 4 hours.

244 *Morphology of Lower Plants*. Morphology and economic importance of thallophytes, bryophytes, and pteridophytes. Prerequisite: Bot. 110. Fee, \$4.00. Two lectures and 2 three-hour laboratory periods a week. Credit, 4 hours.

260 *Plant Histology*. Microscopic anatomy of plant tissues and methods of preparation and identification. Prerequisites: Bot. 110, 171. Fee, \$5.00. Two lectures and 2 three hour laboratory periods a week. Credit, 4 hours. Not offered 1948-49.

## Chemistry

Chem. 110 *Introductory Chemistry*. The principles of general chemistry, important nonmetals. For students with little or no training in the subject. Students may take Chem. 112, 114, or 180 the second semester. Fee, \$4.00. Three lectures, 3 hours laboratory a week. Credit, 4 hours.

111 *General Chemistry*. Principles of chemistry; important nonmetals and compounds. For physical science, pre-medical, and pre-engineering students. Prerequisite: high school chemistry. Fee, \$4.00. First semester, 3 lectures, 3 hours laboratory a week. Credit, 4 hours.

112 *General Chemistry and Qualitative Analysis*. The metallic elements. Qualitative separation of metals and their acids. Prerequisite: Chem. 110 or 111 with grade of C or higher. Fee, \$5.00. Second semester, 3 lectures, 2 recitations, 4 hours laboratory a week. Credit, 5 hours.

114 *General Chemistry*. Chemistry of metals, nonmetals and carbon. For agriculture students and others not majoring in science. Pre-



requisite: Chem. 110 or 111. Fee, \$4.00. Second semester, 3 lectures, 3 hours laboratory a week. Credit, 4 hours.

131 *Qualitative Analysis*. Principles and methods of separation of the common metals and acids. Prerequisite: Chem. 112 or 114. Fee, \$5.00. First semester, 2 lectures, 6 hours laboratory a week. Credit, 4 hours.

141 *Quantitative Analysis*. Fundamental principles of volumetric and gravimetric analysis. Standardization of acids, bases and oxidizers. Prerequisites: Chem. 112 and algebra. Fee, \$6.00. Two lectures, 6 hours laboratory a week. Credit, 4 hours.

142 *Quantitative Analysis*. Continuation of Chem. 141. Prerequisite: Chem. 141. Credit, 4 hours.

150 *Glass Blowing*. Laboratory techniques in glass blowing. Limited to science majors. Fee, \$3.00. Four hours laboratory a week. Credit, 1 hour.

180 *Elementary Organic Chemistry*. Survey of the compounds of carbon, including representative groups of aliphatic and aromatic series. For students of home economics, agriculture and biology. Prerequisite: Chem. 110 or 111. Fee, \$4.00. Second semester, 3 lectures, 3 hours laboratory a week. Credit, 4 hours.

211 *General Organic Chemistry*. Chemistry of organic compounds including aliphatic and aromatic hydrocarbons and derivatives. Prerequisite: Chem. 142. Fee, \$5.00. Three lectures, 3 hours laboratory a week. Credit, 4 hours.

212 *General Organic Chemistry*. Continuation of Chem. 211. Prerequisite: Chem. 211. Credit, 4 hours.

215g *Characterization of Organic Compounds*. Classification reactions and laboratory methods of identifying organic compounds. Prerequisite: Chem. 212. Fee, \$6.00. One lecture, 6 hours laboratory a week. Credit, 3 hours.

251g *General Physical Chemistry*. Includes gases, liquids, solids, solutions, equilibrium, phase rule, electro chemistry, thermo-dynamics, atomic structure, radioactivity, and colloids. Prerequisites: Chem. 142, Phys. 112, Math. 123. Fee, \$5.00. Three lectures, 1 three-hour laboratory period a week. Credit, 4 hours.

252g *General Physical Chemistry*. Continuation of Chem. 251. Prerequisite: Chem. 251. Credit, 4 hours.

260 *Applied Chemistry*. Industrial and community applications of chemistry to agriculture, water softening, sanitation, fuels, cosmetics. Prerequisites: Chem. 180 or 212. Credit, 3 hours.

270g *Advanced Quantitative Analysis*. Special methods of analysis such as water, food, ore, rock, steel, urine. Prerequisite: Chem. 142. Fee, \$2.00 per credit hour. Time and credit arranged.

272 *Advanced Inorganic Chemistry*. Atomic structure and the periodic table. The physical basis of compound formation. Prerequisite: Chem. 142. Not offered 1948-49.

280g *Biochemistry*. Chemistry of animal and plant life including biological compounds, tissues, foods and digestion, enzymes, etc. Prerequisites: Zool. 172; Chem. 180 or 212. Fee, \$4.00. First semester, 3 lectures, 3 hours laboratory a week. Credit, 4 hours.

## Geography

Geog. 100 *Elements of Geography*. Climate, relief, drainage, soils, plant and animal life; their inter-relationship and influence upon man. Fee, 50 cents. Each semester. Credit, 3 hours.

101 *Economic Geography*. Production, distribution, and consumption of various types of commodities of the world and relationships to the activities of man. Prerequisite: Geog. 100. Fee, 50 cents. Credit, 3 hours.

120 *Map Making and Interpretation*. Corrects the present improper use of maps and develops skill in map making and interpretation. Fee, \$1.00. Credit, 2 hours.

203 *Geography of Europe*. Natural regions of Europe, their climates, relief features, drainage, soils, plants, and animals and their influence upon man's activities. Prerequisite: Geog. 100. Fee, \$1.00. Credit, 3 hours.

204 *Geography of North America*. Physiographic provinces of the continent with their respective climates, products, and major activities of man. Prerequisite: Geog. 100 or 101. Fee, \$1.00. Credit, 3 hours.

205 *Geography of South America*. Physiographic regions, their climates, products, and human activities. Prerequisites: Geog. 100, 101, or 204. Fee, \$1.00. Credit, 3 hours.

206g *Geography of Arizona*. Landscape features, climate, soil, minerals, water resources, plant and animal life, and industries and influence on man's activities. Fee, \$1.00. Credit, 2 hours.

210 *Geography of Trade and Transportation*. Geographical analysis of the world's trade routes by land, sea and air. Prerequisite: Geog. 100, 101. Fee, \$1.00. Credit, 3 hours.

212 *World Geography*. Evolution or modification of cultures and economics influenced by natural environment. Prerequisite: Geog. 100. Credit, 3 hours.

215 *Geography of Asia*. Physical and cultural landscapes of the continent. Emphasis on U. S. S. R., its industries, resources and world relationships. Prerequisites: Geog. 100, 101. Fee, \$1.00. Credit, 3 hours.

217g *Conservation of Natural Resources*. Distribution, conservation, and most efficient use of natural resources of the United States, including soil, water, minerals, wild life, and recreational facilities. Prerequisites: Geog. 100, 101. Fee, \$1.00. Credit, 3 hours.

222 *Physiography of the United States*. Physiographic regions, geological processes in their formation and influence upon man's activities. Prerequisite: Geog. 100, or Geol. 151. Fee, \$1.00. Two lectures, 1 two-hour laboratory a week. Credit, 3 hours.

## Geology

Geol. 151 *Physical Geology*. Earth changes due to temperature, wind, water, ice, volcanoes, earthquakes, etc. Fee, \$2.00. Three lectures, 2 hours laboratory a week, and a minimum of 18 hours field work a semester. Credit, 4 hours.

152 *Historical Geology*. Origin and chronological succession of events that have developed our earth and its life. Prerequisite: Geol. 151. Fee, \$2.00. Three lectures and 2 hours laboratory a week, and a minimum of 18 hours field work a semester. Credit, 4 hours.

211 *Mineralogy*. Mineral structure and identification based on crystal forms, physical properties and chemical composition. Prerequisites: Chem. 112 or 114; Geol. 152. Fee, \$3.00. Two lectures, 3 hours laboratory a week. Credit, 3 hours.

212 *Mineralogy*. Continuation of Geol. 211. Prerequisite: Geol. 211. Credit, 3 hours.

## Physics

Phys. 111 *General Physics*. Lecture and laboratory covering mechanics, heat, sound, light, electricity, and magnetism. Fee, \$3.00. Three lectures, 3 hours laboratory a week. Credit, 4 hours.

112 *General Physics*. Continuation of Phys. 111. Prerequisite: Phys. 111. Credit, 4 hours.

118 *Meteorology*. Atmosphere, hygrometry, weather, methods of observation and prediction, frost warnings, climate. Fee, \$1.00. Credit, 3 hours.

121 *Engineering Physics*. Mechanics, heat, sound, light, magnetism. Prerequisite: parallel enrollment in calculus. Fee, \$5.00. Four lectures, 3 hours laboratory a week. Credit, 5 hours.

122 *Engineering Physics*. Continuation of Phys. 121 Prerequisite: Phys. 121. Credit, 4 hours.

200 *Astronomy*. Solar system, motions of the planets, eclipses, variable stars, stellar astronomy, and an introduction to navigation and astrophysics. Prerequisite: Phys. 112. Credit, 3 hours.

210 *Photography*. Cameras, light, lenses, exposure, photographic chemistry, filters and sensitometry. Prerequisites: Phys. 112, Chem. 112. Fee, \$4.00. First semester, 2 lectures, 3 hours laboratory a week. Credit, 3 hours.

221 *Mechanics and Heat*. A more advanced presentation than is given in general physics. Prerequisites: Phys. 112 and calculus. First semester. Credit, 3 hours.

222 *Electricity and Magnetism*. Electrostatics, magnetism, direct and alternating current theory, electromagnetic waves, radio. Prerequisites: Phys. 112 and calculus. Second semester. Credit, 3 hours.

223g *Optics*. Geometric and physical optics, reflection, refraction, lenses, wave properties, polarization, spectroscopy, and radiation. Prerequisite: Phys. 112 or 122 and calculus. Fee, \$4.00. Second semester, three lectures, 3 hours laboratory a week. Credit, 4 hours.

230g *Electronics*. Conduction of gases, vacuum tubes with emphasis on applications to communications. Prerequisites: Phys. 112, Math. 123. Credit, 3 hours.

241g *Modern Physics*. Recent developments in physics including atomic structure, radiant energy, x-rays, spectra, radioactivity, and astrophysics. Prerequisites: Phys. 112, Math. 123. Credit, 3 hours.

## Zoology

Zool. 111 *General Zoology*. Form and activities of invertebrate animals of the more important groups. Fee, \$4.00. First semester, 3 lectures, 1 three-hour laboratory a week. Credit, 4 hours.

112 *General Zoology*. Continuation of Zool. 111, dealing with vertebrates. Prerequisite: Zool. 111. Fee, \$4.00. Second semester. Credit, 4 hours.

163 *Comparative Anatomy*. Structure, development, and homology of the vertebrate systems. Prerequisites: Zool. 111, 112. Fee, \$6.00. Each semester, two lectures, 2 three-hour laboratory periods a week. Credit, 4 hours.

171 *Human Anatomy-Physiology*. Skeletal, articulatory, muscular, integumentary, and nervous systems, and special senses. Fee, \$2.00. Credit, 3 hours.

172 *Human Anatomy-Physiology*. Circulatory, respiratory, digestive, excretory, endocrine and reproductive systems. Zool. 171 should be taken first, but not required. Fee, \$2.00. Credit, 3 hours.

210 *General Entomology*. Form, activities, and classification of insects. Prerequisite: Zool. 112. Fee, \$4.00. Second semester, 4 lectures, 1 four-hour laboratory period a week. Credit, 4 hours.

230g *Animal Ecology*. Wild animals of North America—their adaptations, communities, habitat, succession, conservation, etc. Prerequisites: Zool. 111, 112. Fee, \$4.00. Second semester, 3 lectures, 1 laboratory period a week. Credit, 4 hours.

231g *Poisonous Animals of Arizona*. Form, activities, and identification of venomous animals of Arizona and others thought venomous. Prerequisite: Zool. 112. Fee, \$2.00. Two lectures, one four-hour laboratory a week. Credit, 3 hours. Offered summer 1949.

232g *General Parasitology*. Pathogenic protozoa, worms, and arthropod parasites. Prerequisite: Zool. 112. Fee, \$5.00. Three lectures, 1 four hour laboratory a week. Credit, 4 hours.

254 *Vertebrate Embryology*. Animal development from the egg to the period of extra-uterine or extra-ovular existence. Prerequisite: Zool. 112, 163. Fee, \$6.00. First semester, 3 lectures, 4 hours laboratory a week. Credit, 4 hours.

260 *Animal Histology*. Microscopic anatomy of vertebrate tissues with techniques of preparation and identification. Prerequisites: Zool. 112, 163. Fee, \$5.00. Two lectures, 2 three-hour laboratories a week. Credit, 4 hours. Not offered 1948-49.

270g *Ornithology*. Structure, activities, classification, field identification, and economic relation of birds. Prerequisite: Zool. 112. Fee, \$4.00. Two lectures, 1 three-hour laboratory a week. Credit, 3 hours.

271 *Game Animals*. Structure, activities, life histories, identification of game fish, birds, and mammals of North America. Prerequisite: Zool. 112. Fee, \$4.00. Three lectures, 1 four-hour laboratory a week. Credit, 4 hours.

276 *Wildlife Management*. Factors and principles involved in wildlife management. Prerequisites: Bot. 110, Zool. 111, 112. Three lectures, 1 three-hour field trip a week. Credit, 3 hours.

## Medical Technology and Health

The following courses are offered at St. Joseph's Hospital in

Phoenix and are restricted to seniors following the curriculum in Medical Technology and Health. Hours and fees for the following courses by arrangement with the instructor. The hospital fee is \$10.00 per month for twelve months.

Biol. 225 *Pathogenic Bacteriology*. Disease-producing bacteria studied by special stains, culturing and animal inoculation. Credit, 4 hours.

240 *Biological Laboratory Technique*. Examinations of stained smears for identification of bacteria, sputum examinations, etc. Credit, 4 hours.

250 *Histology*. Structure of tissues and organs. Preparation of stained sections. Credit, 4 hours.

265 *Serology*. Serological and immunological procedures. Complement fixation and precipitation tests for diagnosis of syphilis. Credit, 2 hours.

271 *Parasitology*. Parasites of intestines and blood. Recognition of ova, the life cycle of parasites and mode of transmission. Credit, 2 hours.

273 *Hematology*. Normal and abnormal blood cells, and alteration of the formed elements, etc. Credit, 4 hours.

Chem. 282. *Biochemistry*. Chemistry of animal life, biological compounds, etc. Credit, 4 hours.

284 *Blood Chemistry*. Examination for pathological compounds, abnormal chemical changes, abnormal substances, etc. Credit, 4 hours.

286 *Chemical Examination of the Urine*. Changes in chemical composition of the urine and abnormal values of usual constituents. Credit, 2 hours.

288 *Chemistry of Digestion*. Chemical examinations of the gastric and duodenal contents, bile, and feces. Credit, 2 hours.

# Department of Social Studies

WYLLYS (Head of the Department), CHRISTENSEN, VAN PETTEN,  
KRENKEL, BENEDICT.

Courses in the Social Studies are designed to make the student's college education well-rounded, and to produce intelligent, broad-minded and tolerant graduates of this institution. Not all students are preparing to enter the same profession, but nearly all expect to be citizens of the United States. In order to be able citizens, it is desirable to have some knowledge of human and cultural backgrounds and relationships, gained through an acquaintance with history, sociology, political science, or other Social Studies.

## Teacher-Education Curriculums

### The Kindergarten Primary and Elementary Curriculum.

*For Students Not Specializing in Social Studies.* In addition to the courses required in the teacher-education curriculums, P. S. 200, Hist. 101-102 or 103 104, the following are recommended as electives: Hist. 109, 110, 111-112, P. S. 101, 102, S. S. 100.

*For Students Specializing in Social Studies.* It is suggested that students desiring a limited number of courses choose them as follows: not less than twelve hours in lower division courses chosen from S. S. 100, Hist. 101 102, 103-104, 105 106, 110, 111 112, P. S. 101, 102, 103, 104, and twelve hours of upper division courses such as Hist. 202, 203, 204, 205, 206, 207, 208-209, 210, 211, 212, P. S. 201, 203, 204, 205, 206, 207. Students desiring a major teaching field, see below under secondary curriculum.

### The Secondary Curriculum.

It is recommended that students planning to teach social studies complete basic courses in history, sociology, economics and political science, since they may be expected to teach several branches of social science. Major teaching fields are offered in general social studies, history and political science. Courses recommended to students majoring therein include work in other related departments. A major teaching field requires the completion, within the first four years, of at least 45 semester hours of work in one of the three fields specified above. At least 25 hours must be in one subject field and not less than 20 of the total shall be upper division. Candidates for the master's degree preparing to teach social studies should complete additional courses in one or more of these fields during the fifth year. Programs for each of the teaching fields are outlined below.

*Major Teaching Field in General Social Studies.* This field is for prospective teachers who may teach several different phases of social studies. In addition to Hist. 101-102 or 103-104, and P. S. 200, this teaching field requires at least 14 hours in lower division courses chosen from the following: S. S. 100, Hist. 101-102, 103-104, 105-106, 109, 110, 111, 112, P. S. 101, 102, 103, 104, Econ. 130, 132, Geog. 101, and 17 hours in upper division courses chosen from the following: Hist. 202, 203, 204, 206, 208, 209, 210, 211, 212, S. S. 212, P. S. 201, 204, 206, Econ. 214, 219, Geog. 204, 206, 217, or from other courses selected in conference with the adviser.

*Major Teaching Field in History.* This field is for those who expect to teach mainly history. In addition to Hist. 101-102 or 103-104 and P. S. 200, the student will complete at least 14 hours in lower division courses chosen from the following: S. S. 100, Hist. 101-102, 103-104, 105-106, 107-108, 109, 110, 111-112, 113, 114, 115-116, P. S. 101, 104, Econ. 130, Geog. 101, and 17 hours in upper division courses chosen from the following: Hist. 202, 203, 204, 205, 206, 207, 208-209, 210, 211, 212, 213, S. S. 212, Geog. 203, 204, 205, 206, 212, 215, or from other related courses selected in conference with the adviser.

*Major Teaching Field in Political Science.* This field is for those who plan to teach mainly political science or civics. In addition to Hist. 101-102 or 103-104 and P. S. 200, the student will complete at least 14 hours in lower division courses chosen from the following: S. S. 100, Hist. 101 102, 103-104, 105 106, 109, 110, P. S. 101, 102, 103, 104, Econ. 130, 132, Geog. 101, and 17 hours in upper division courses chosen from the following: Hist. 203, 208 209, P. S. 201, 203, 204, 205, 206, 207, Econ. 205, 206, 217, 219, 262, 265, Geog. 203, 204, 205, 206, 212, 215, 217, or from other related courses selected in conference with the adviser.

A minor teaching field may be selected from any of the three groups of the social studies subjects. It consists of at least 15 semester hours in a subject field in the department, exclusive of courses counted toward the major field. The appropriate general education courses in social studies required by the college may be applied toward a teaching major or minor. At least 6 of the 15 hours in a minor should be in upper division courses. P. S. 200 may be counted toward a minor.

*Minor Teaching Field in General Social Studies.* First year, S. S. 100, Hist. 101-102 or 103-104, choice of P. S. 101, 102 or Econ. 130; second year, Hist. 101-102 or 103-104, choice of P. S. 103, 104, Geog. 101, Econ. 132, or Hist. 105-106, 109, 110; third and fourth years, choice of Hist. 203, 204, 206, 208-209, 211, S. S. 212, P. S. 201, 204, 206, Econ. 214, 219, Geog. 204, 205, 217, P. S. 200.

*Minor Teaching Field in History.* First year, S. S. 100, Hist. 101 102,



or 103-104, choice of Hist. 105-106, 107, 108, 109, 110, 111-112, 113, Econ. 130, P. S. 101, 102, Geog. 101; second year, Hist. 101-102 or 103-104, and choice of Hist. 105-106, 107-108, 109, 110, 111-112, 113, 114, 115-116, P. S. 103, 104, Econ. 132, Geog. 101; third and fourth years, choice of Hist. 202, 203, 204, 205, 206, 207, 208-209, 210, 211, 212, 213, P. S. 203, 204, 205, 206, 207, Geog. 203, 204, 205, 206, 212, 215, P. S. 200, S. S. 212.

*Minor Teaching Field in Political Science.* First year, S. S. 100, Hist. 101-102 or 103-104, P. S. 101, 102, choice of Hist. 109, 110, Econ. 130; second year, Hist. 101-102 or 103-104, P. S. 103, 104, choice of Hist. 105-106, Econ. 132, Geog. 101; third and fourth years, choice of Hist. 203, 208-209, P. S. 200, 201, 203, 204, 205, 206, 207, Econ. 205, 206, 219, 262, 265, Geog. 203, 204, 205, 206, 212, 215, 217, S. S. 212.

## Arts and Sciences Curricula

*Degree.* Students completing satisfactorily an Arts and Sciences curriculum with an area of concentration in the Social Studies receive the degree of Bachelor of Arts.

### The Generalization Requirements.

In addition to the 48 semester hours of generalization requirements listed on pages 71, 72 of the catalog, an area of concentration of 39 semester hours must be completed as outlined below.

#### Areas of Concentration.

*Required Courses.* Each student will select 12 semester hours from the following lower division courses: S. S. 100, Hist. 101, 103, 109, P. S. 101, 102, Geog. 103, and 12 hours from the following upper division courses: Hist. 202, 204, 206, 208, 210, 212, P. S. 201, 205, 206, 207.

*Optional Groups of Courses.* Each student choosing this area of concentration will select one of the following three fields of emphasis and complete a minimum of 15 hours in it.

(1) Emphasis on History. Select 9 hours from the following lower division courses: Hist. 105, 106, 107, 108, 111, 112, 113, 114, 115, 116, Econ. 131, Geog. 100, and 6 hours from the following upper division courses: Hist. 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213.

(2) Emphasis on Political Science. Select 9 hours from the following: P. S. 103, 104, Hist. 105, 106, 109, Econ. 131, Geog. 100. Select 6 hours from the following: P. S. 203, 204, 205, 206, 207, Geog. 203, 204, 217.

(3) Emphasis on General Social Studies. Select 9 hours from the following: P. S. 103, 104, Econ. 131, 132, Geog. 100. Select 6 hours from the following: P. S. 203, 204, Econ. 219, 225, 262, Geog. 217, Ed. 216, 265, Psych. 214, 225.

## Description of Courses

### General Social Studies

S. S. 100 *Introduction to the Social Studies*. Includes introductory material on history, economics, sociology, anthropology, political science. First semester. Five times a week. Credit, 5 hours.

212 *Teaching the Social Studies*. Methods of teaching history, civics, sites: Hist. 101, 102, 103, 104, Ed. 215. Second semester. Credit, 2 hours. and other social sciences. Given when demand is sufficient. Prerequisite-

### History

Hist. 101 *Survey of Western Civilization, I*. Origins of western civilization and its development through medieval times. First semester. Credit, 3 hours.

102 *Survey of Western Civilization, II*. Continuation of Hist. 101 through Renaissance and modern times. Second semester. Credit, 3 hours.

103 *United States Through the Civil War*. From 1783 through Civil War. First semester. Credit, 3 hours.

104 *United States Since Civil War*. Continuation of Hist. 103 to the present period. Emphasis on economic and cultural growth. Second semester. Credit, 3 hours.

105 *History of England to 1603*. A survey of the political, economic, and social development of the British people from the earliest times to end of the Tudor period. First semester. Credit, 3 hours.

106 *History of England Since 1603*. Political, economic and social development of England and the British Empire from 1603 to the present. Second semester. Credit, 3 hours.

107 *Ancient Orient and Greece*. Western ancient history through the Hellenistic period. First semester. Credit, 3 hours.

108 *History of Rome*. Roman period from the origin of Rome to the downfall of the Roman Empire. Second semester. Credit, 3 hours.

109 *Economic History of the United States*. Economic development of the American people from 1783 to the present. First semester. Credit, 3 hours.

- 110 *The Growth of American Institutions.* This course is introductory to the subject of American History. Each semester. Credit, 3 hours.
- 111 *The Southwest to 1865.* Survey of southwestern history before Civil War times. First semester. Credit, 3 hours. Not offered 1948-49.
- 112 *The Southwest Since 1865.* Development of southwestern states, people and economic life since Civil War. Second semester. Credit, 3 hours. Not offered 1948-49.
- 113 *Medieval Europe.* Development of European peoples from the fall of Rome to the Renaissance. First semester. Credit, 3 hours.
- 114 *Colonization of North America.* Colonial era of American history, both Spanish and English, with some consideration of French and other colonial peoples to 1783. Second semester. Credit, 3 hours.
- 115 *Colonial Hispanic America.* Period of exploration, conquest and colony development among Latin American peoples to 1830. First semester. Credit, 3 hours.
- 116 *Independent Hispanic America.* Nationalistic growth of the peoples of Latin America since the winning of independence. Second semester. Credit, 3 hours.
- 120 *Introduction to World History.* A general approach to the history of civilizations. Satisfies one-half of social studies requirements. Each semester. Credit, 3 hours.
- 202 *The Far East.* Early and modern history of China, Central Asia, Japan, Malaysia and India. Prerequisites: Hist. 101, 102. Second semester. Credit, 2 hours.
- 203 *American Foreign Relations.* The machinery of American diplomacy and development of American foreign policy. Prerequisites: Hist. 103, 104. First semester. Credit, 2 hours. Not offered 1948-49.
- 204 *American Frontier.* Territorial expansion and settlement of the American people since colonial times. Prerequisites: Hist. 103, 104. Second semester. Credit, 2 hours. Not offered 1948-49.
- 205 *French Revolution and Napoleon.* Period of world revolution and imperialist wars, 1763-1815. Prerequisites: Hist. 101, 102. First semester. Credit, 2 hours. Not offered 1948-49.
- 206g *Contemporary Europe.* European history since the First World War. Prerequisites: Hist. 101, 102. First semester. Credit, 2 hours.
- 207 *History of Mexico.* The formation, culture and social life of the Mexican people since colonial times. A knowledge of Spanish is desirable but not essential. Prerequisites: Hist. 103, 104. Credit, 2 hours.

208g *American Cultural History*. The development to 1860 of American ideas, ideals, literary expressions and social standards. Prerequisites: Hist. 103, 104. First semester. Credit, 2 hours.

209g *American Cultural History Since 1860*. A continuation of Hist. 208g, dealing with American culture since the middle nineteenth century. Prerequisites: Hist. 103,104. Second semester. Credit, 2 hours.

210g *Renaissance and Reformation*. Antecedents and development of the Renaissance in Italy, its spread into the rest of Europe, and the resultant revolution in religious and political thought. Prerequisites: Hist. 101, 102. Credit, 2 hours.

211g *Nineteenth-Century Europe*. Growth of nationalism in nineteenth century Europe, with emphasis upon economic, political and social trends. Prerequisites: Hist. 101, 102. First semester. Credit, 2 hours.

212 *The Pacific Area*. History of the countries surrounding and controlling the Pacific. Emphasis upon cultural backgrounds. Prerequisites: Hist. 101, 102. Second semester. Credit, 2 hours. Not offered 1948-49.

213g *Contemporary Great Britain*. Survey of British political and cultural history since 1900. Prerequisites: Hist. 101, 102, or 105, 106. First semester. Credit, 2 hours.

300 *Seminar in History*. Individual research work covering any field of history. Offered when demand is sufficient. Credit, 2 hours.

301 *Contemporary United States*. American political, social and economic history since 1900. Offered when demand is sufficient. Credit, 2 hours.

302 *Historiography and Historical Philosophy*. Studies in historical method and in the literature and theories of history. Offered when demand is sufficient. Credit, 2 hours.

## Political Science

P. S. 101 *Introduction to Political Science*. Principles of government, and theories of law and the state. Second semester. Credit, 3 hours.

102 *State and Local Government*. Workings of the typical American State government, and its principles of administration. First semester. Credit, 3 hours.

103 *Municipal Government*. Structure, methods and principles of

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American city governments and their administration. First semester. Credit, 3 hours.

104 *American Political Parties*. History of leading political parties, and principles of famous party leaders. Second semester. Credit, 3 hours.

200 *Constitutional Government*. National and Arizona government. Meets requirements for certification. Fourth year, second semester. Credit, 3 hours.

201 *Comparative National Governments*. Background of present-day typical governments, with consideration of the principles underlying each. Prerequisite: P. S. 101. First semester. Credit, 2 hours.

203 *Public Administration*. Practices and principles of government administration, chiefly in the United States. Prerequisites: P. S. 101, 102. First semester. Credit, 2 hours.

204g *International Law and Relations*. Principles and practices of national governments under the laws and customs of war and peace. Prerequisite: P. S. 101. Second semester. Credit, 2 hours.

205 *World Politics in the Pacific Area*. International problems of the Pacific area, and their background. Prerequisite: P. S. 101. First semester. Credit, 2 hours. Not offered 1948 49.

206g *Contemporary Political Thought*. Political ideas and philosophy from the French Revolution to the present. Prerequisite: P. S. 101. Second semester. Credit, 2 hours.

207g *The American Public Domain*. Political background and social-economic results of American national land policies. Prerequisites: Hist. 103, 104. First semester. Credit, 2 hours.

# Statistics

## Summary of Registration, 1946-47

### COLLEGE

#### *Residence Students—Regular Session*

	Freshmen	Sophomore	Junior	Senior	Graduate	Total	
Men	1148	293	154	94	71	1760	
Women	383	208	136	86	67	880	
	<u>1531</u>	<u>501</u>	<u>290</u>	<u>180</u>	<u>138</u>		2640
<i>Summer Session 1946</i>							
Men .....						460	
Women .....						445	
Total .....							905
<i>Extension and Correspondence</i>							
Men .....						115	
Women .....						245	
Total .....							360
<i>Vocational Training Courses</i>							
Men .....						104	
Women .....						0	
Total .....							104
<i>Total Registration in College</i>							
Men .....						2439	
Women .....						1570	
Total .....							4009
<i>Counted more than once</i>							
Men .....						341	
Women .....						<u>160</u>	
Total .....							501
<i>Net Enrollment—Different Students</i>							
Men .....						2098	
Women .....						1410	
Total .....							3508
<b>TRAINING SCHOOLS</b>							
Boys .....						369	
Girls .....						447	
Total .....							816
<b>GRAND TOTAL .....</b>						<u>4324</u>	

## Summary of Graduates, 1946-47

Through August, 1946.....6267

Bachelor's Degrees—May 28, 1947

	Men	Women	Total
B. A. Degrees.....	5	1	6
B. S. Degrees.....	27	15	42
B. A. in Educ. Degrees.....	46	63	109
	78	79	157

M. A. Degrees—May 28, 1947

	Men	Women	Total
M. A. in Education.....	12	12	24
TOTAL.....	90	91	181

Through May, 1947.....6448

## Bachelor of Arts In Education

George E. J. Baskerville	Patricia Lee Heuloth
Ava Marie Baskett	Patricia Jean Hitz
John Arthur Benscoe	Rose Frost Huber
Meredith Susan Bishop	Stevens Hughes
Paul H. Blanton	Virginia Danielson Hultse
Maryann Bowman	Lila Catherine Hunt
Paul Edmund Boyle, Jr.	Sherman Stevens Jennings
Ronald Dale Brooks	Lucy M. Jensen
Price H. Brown	Eudora Jane Garrett Jolly
Raymond Kenneth Burkhard	Betty Maxine Jones
Vera Mae Campbell	Marjorie Yvonne Jones
Lawrence C. Cantor	Margery L. Jorgenson
May Lindsay Carpenter	Patricia Alyce Kielgass
Ruth Carpenter	Herman Edgar Kirsch
Carter A. Clark	Helen Lucille Lawrence
Eleanor Pauline Cole	Rosemarie Leforbes
Kathlyeene Garrett Wells Cole	Kathryn Kurtz McCallus
Wanda Joyce Compton	William McElhannon
Clarence N. Copeland	Roberta Ruth McGregor
Leona Rae Courtney	Paul Lindell McPherson
Dorothy Cate Creasman	Annette J. McWilliams
Samuel R. Cummings	Barbara Elaine Martin
Jack F. Doyle	Lionel Salazar Martinez
Lucy Isabell Doyle	Henry L. Meador
Roy P. Doyle	Dahl G. Merrell
Allen A. Dutton	Cecil Everett Moore
Norma Irene Dykes	Ruth Marie Morgan
Gloria Emmons	Gale Kent Mortenson
Mary Olga Emmons	Robert R. Nardelli
Marion Parker Fall	Marjorie Dynah Nash
Stephen Charles Farris	Theima Fain Nickles
Frances Felshaw	Gilbert Duran Orrantia
Edwin William Fleming	Merle Packer
Gladys Loree Flint	Ardella S. Perkins
Kathleen Estelle Franklin	Rosemary Phillips
James Donald Garrett	Georgia Elizabeth Porter
Geraldine E. Godbold	Vetis LaVaughn Redden
John H. Grant	Ola Mae Rhodes
Marwin Thomas Griffin	Willard Parker Riddles
Helen Louise Hall	Harold B. Roberson
Paula Jane Hannon	Eldon Dean Rudd
Amy Lucille Hansen	Justinan William Russell
Mary Lou Harvey	Lucille Frances Lunt Sampson
Wilbert Blessing Harvey	Regina Marie Schermann
Betty Jane Heath	Carolyn Gurnee Shafer
William Francis Hendrix	Dorothy Shipley

~~Charles Denis Shorr~~  
~~James Daniel Showers~~  
~~Jack B. Smith~~  
~~Phosia Smith~~  
~~Beatrice Mickelson Spangehl~~  
~~Charles William Spencer~~  
~~Del Elden Stapley~~  
~~Cherry Anne Stauffer~~  
~~John Ferdinand Stone~~

~~Abbie Joyce Stump St. John~~  
~~Robert Stanley Swain~~  
~~Thomas Edward Thorpe, Jr.~~  
~~Willodene E. Tillotson~~  
~~Earl Udall~~  
~~Frances Walker Walters~~  
~~Patrick Michael Whelan~~  
~~Quessie May Wylie~~

## Bachelor of Arts

~~Raymond Melvin Hemphill~~  
~~Joyce Catherine Kilroy~~  
~~Patric Alcid Lucier~~

~~Vernal Philip Miller~~  
~~Warren Henry Stern~~  
~~Howard F. Thompson~~

## Bachelor of Science

~~James F. Appleby~~  
~~Lula D ra Barnes~~  
~~Mildred Harr Botsford~~  
~~Jeanne Louise Brugger~~  
~~John Daniel Bullard~~  
~~Rose Bunker~~  
~~Lovatt Francis Early Burges~~  
~~Claire Jane Campbell~~  
~~Edward Dennis Crowley~~  
~~Ben T. Dixon, Jr.~~  
~~Robert H. Fagan~~  
~~William H. Geare~~  
~~Thomas LeRoy Hardwicke~~  
~~James Earl Harelson~~  
~~Samuel Eugene Henry~~  
~~Elizabeth Jane Holloway~~  
~~Edward Lee Holtsnider~~  
~~Huela Winifred Irion~~  
~~Sidney Jack Karp~~  
~~Mary Komadin~~  
~~Harriet Jean Landis~~

~~W. Boyce Langley, Jr.~~  
~~James A. Leonard~~  
~~John William Lowe~~  
~~Gwendolyn Gayle Lynch~~  
~~Ernest Leland McCollum~~  
~~William Thomas Martin~~  
~~Bruce Merrill~~  
~~Lloyd E. Norris~~  
~~Elizabeth Josephine Pagan~~  
~~Edward Otto Pinckert~~  
~~Dorothy Kathryn Quy~~  
~~Leonard Harold Rowe~~  
~~Frank George Selbel~~  
~~Leonard Joseph Shafton~~  
~~Dean Ellis Smith~~  
~~Mary Louise Thompson~~  
~~Beverly Jane Turner~~  
~~Donald Van Camp~~  
~~Rossie I. Edgemon Voss~~  
~~Walter John Wick~~  
~~Wesley A. Wierson~~

## Master of Arts In Education

~~Aubrey Cooper Aldridge~~  
~~Winstona Hackett Aldridge~~  
~~S. Lucile Bailey~~  
~~Carl D. Bandy~~  
~~Bert Hector Belluzzi~~  
~~Francis Patrick Clevenger~~  
~~Carolyn Belle Croaff~~  
~~Thomas Joseph Croaff, Jr.~~  
~~Charles John DeWitt~~  
~~Virginia Mae Dobson~~  
~~Fred Draper~~  
~~Harriet Lillian Freye~~

~~Merrell J. Hatch~~  
~~George Jackson~~  
~~Vera Madeleine Jackson~~  
~~Marietta Johnson~~  
~~Marguerite Cramer Marshall~~  
~~Thelma A. Parks~~  
~~Llona Bosley Parsons~~  
~~Wendell Wells Pettis~~  
~~Helen Creasman Pickett~~  
~~Ruth Leisure Roman~~  
~~George A. Smith~~  
~~William David Wallace~~

\* Absentia



# Senior Honors

1947

## With High Distinction

Rose Bunker	Ernest Leland McCollum
Raymond Kenneth Burkhard	Lloyd E. Norris
Roy P. Doyle	Caroline Gurnee Shafer
Geraldine E. Godbold	Warren Henry Stern
John William Lowe	Earl Udall

## With Distinction

Ava Marie Basket	Annette J. McWilliams
Meredith Susan Bishop	Barbara Elaine Martin
Mildred Harris Botsford	Bruce Merrill
Lawrence C. Cantor	Cecil Everett Moore
Edward Dennis Crowley	Ardelia Perkins
Mary Olga Emmons	Dean Ellis Smith
Gladys Loree Flint	Howard F. Thompson
Kathleen Estelle Franklin	Rossie I. Edgemon Voss
Huela W. Irion	Wesley A. Wierson
Harriet Jean Landis	Quessie May Wylie

## Awards To Graduates

1947

Alpha Psi Omega Award—Acting.....	Charles Shorr
Alpha Psi Omega Award—Production and Acting .....	Patricia Kielgass
Alumni Scholarship.....	Lucy Jensen
	Patrick Whelan
Aristavets Award .....	Dean Ellis Smith
Arizona Society of Public Accountants Award.....	Rose Bunker
Associated Men Students' Award.....	Roy P. Doyle
Dunbar Award.....	Kathleen E. Franklin
English Department Prize.....	Barbara E. Martin
Home Economics—Department Award.....	Lucy Jensen
Fred M. Jahn Journalism Award.....	Dean Ellis Smith
Kappa Delta Pi Pin.....	Roy P. Doyle
Krause Science Award.....	Kenneth Burkhard
Moeur Medal.....	Roy P. Doyle
Moeur Pin .....	Geraldine E. Godbold
Mu Rho Alpha Award.....	Herman Kirsch
Physical Education Award.....	Ruth Morgan
Religious Council Award.....	Quessie Wylie
Theta Chi Epsilon Senior Art Award.....	Roberta McGregor
West Hall Award.....	Lila Hunt

# Gifts and Bequests

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Public-spirited individuals in increasing numbers are making gifts of money or are bequeathing part or all of their estates to the educational institutions of their choice.

Arizona State College at Tempe is a growing, progressive institution, and the State of Arizona has not been able to care for some of its special needs. Individuals with money can make their influence felt with present and future generations of young people by making gifts or bequests to the College.

Some donors name the fund given for themselves, or for a wife, son, or daughter. An investment in growing personality is a long-time investment. Moreover, it pays large dividends, and these dividends continue long after the investor is gone.

The needs are many and urgent. The student loan fund is far too small. The College should have many more scholarships for worthy students. Endowments for special types of work are needed. Money is needed for the endowment of a Student Center building. The students, themselves, have already started a fund for this purpose. There are many other needs.

It is suggested that those desiring to make such a gift or bequest go to an attorney and make out a form such as is given below.

I give, devise, and bequeath to the Board of Regents of Arizona State College at Tempe, Arizona, the sum of.....  
.....  
dollars. This is to be known as the.....  
.....  
Fund, and is to be used as indicated below:.....  
.....  
.....  
.....

# For Information

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## CONCERNING

Catalogs  
General Information  
Admission  
Transcripts  
Evaluation of Records  
Instruction and Curriculum

} Write.....OFFICE OF REGISTRAR

Student Progress  
The Summer Session  
Extension Classes  
Correspondence Courses

} Write.....DEAN OF THE COLLEGE

Questions Involving Women Students  
Residence Halls and Apartments  
Employment of Students  
Deposits for Reservations

} Write...DIVISION OF  
STUDENT AFFAIRS

General Financial Matters      Write.....BUSINESS OFFICE

Teacher Placement              Write..THE PLACEMENT BUREAU

Educational Policies  
Administrative Questions

} Write.....THE PRESIDENT

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ARIZONA STATE COLLEGE AT TEMPE

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