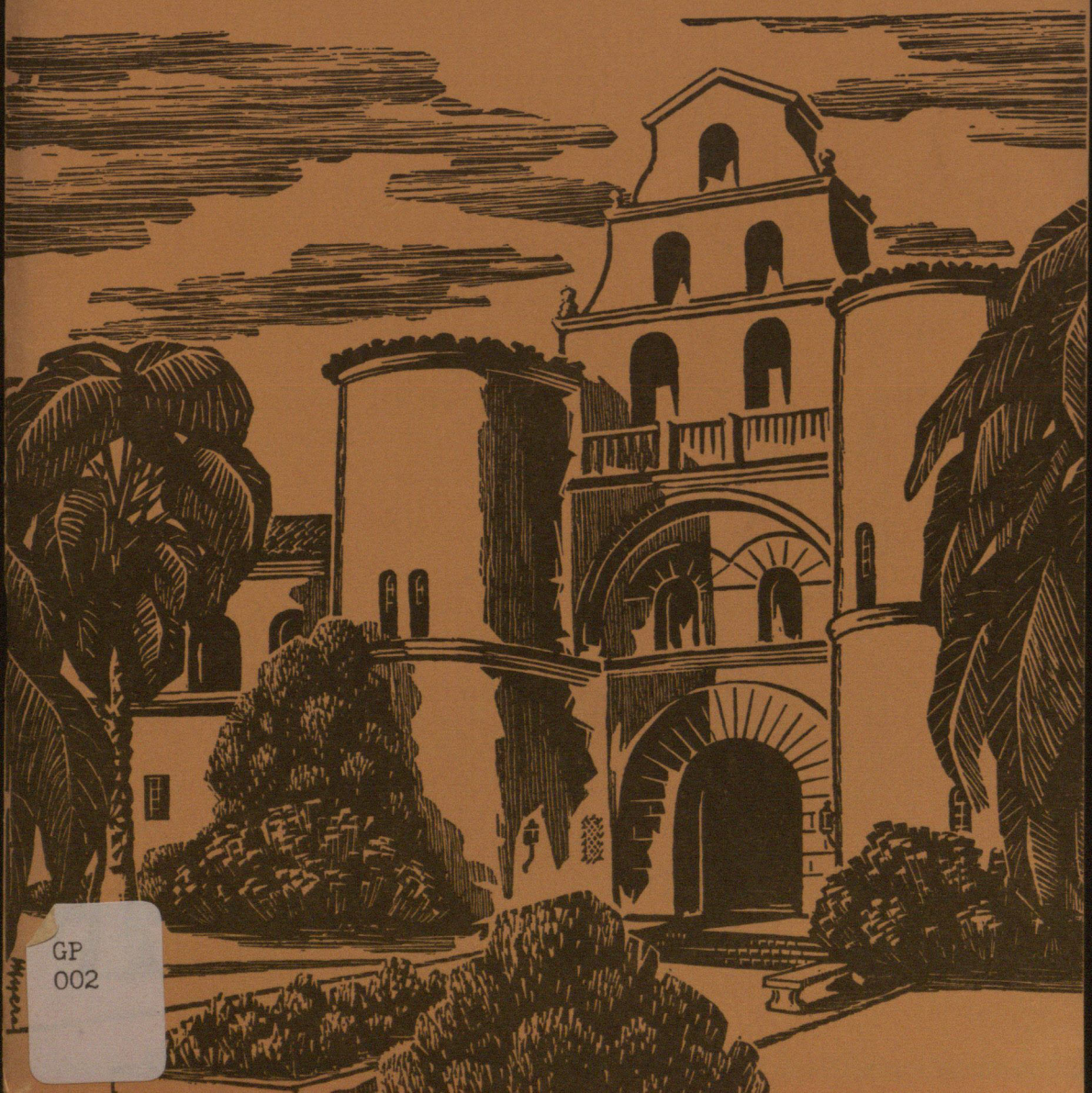


SAN DIEGO STATE COLLEGE
1958-1959 BULLETIN
OF THE
GRADUATE DIVISION

ARCHIVES
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Graduate Division Bulletin

GRADUATE PROGRAMS AT SAN DIEGO STATE COLLEGE

SAN DIEGO STATE COLLEGE

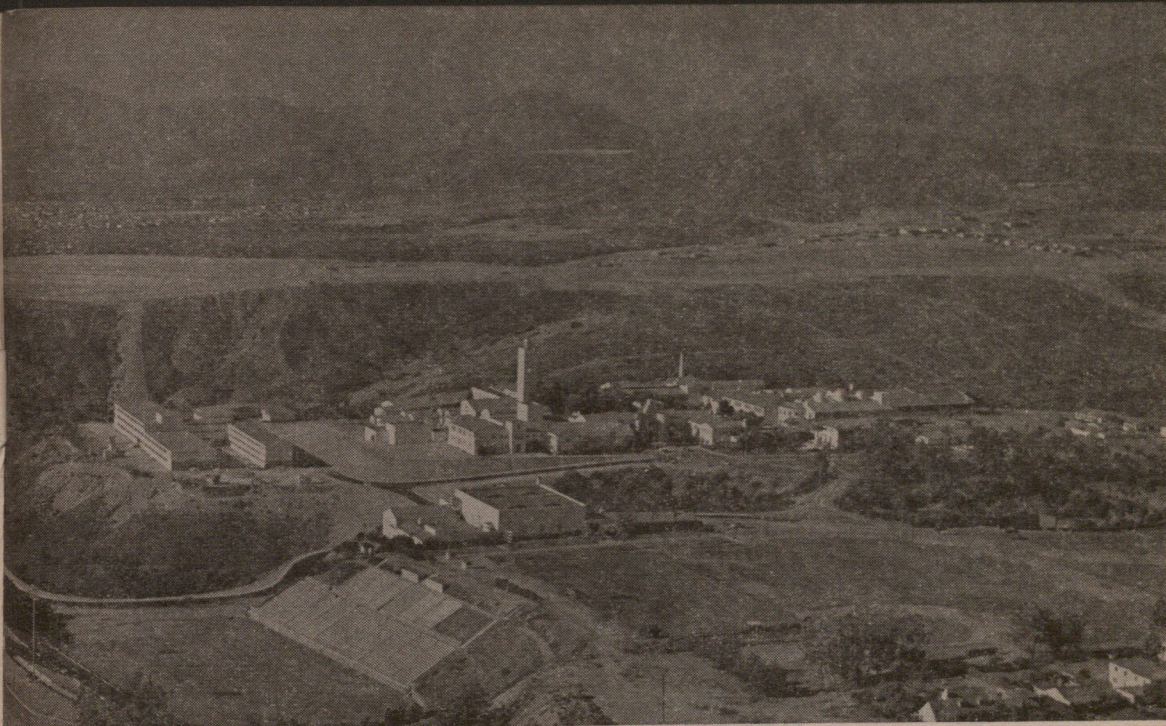
San Diego State College, founded in 1897, is located one mile north of the city's principal east-west boulevard and in the central business district.

1958-1959

The buildings, which are of San Diego architecture, include the following: Art, Business Administration, Campus Laboratory School for Teacher Training, Education Classroom Building, Engineering, Home Economics, Home Management, Residence, Humanities-Social Sciences, Industrial Arts, Life Sciences, Music, Physical Education and Gymnasium, Physical Sciences, Physics-Astronomy, Speech Arts, including radio and television studios, Library, Health Services, Little Theatre, Cafeteria, Science Cottage (a student center), Botanical, Open Air Theatre, Football Stadium, Track Field, and athletic fields and courts.

A \$10,000,000 building program now underway is expected to provide, within the next 10 years, the basis for educational opportunities for the rapidly growing population of metropolitan San Diego.

SAN DIEGO STATE COLLEGE
SAN DIEGO 15, CALIFORNIA



Aerial View, San Diego State College

Rex Photo Service Photo

SAN DIEGO STATE COLLEGE

San Diego State College, founded in 1897, is located one mile north of the city's principal east-west boulevard and about 12 miles from the central business district.

The buildings, which are of Spanish-Moorish architecture, include the following: Art, Business Administration, Campus Laboratory School for Teacher Training, Education Classroom Building, Engineering, Home Economics, Home Management Residence, Humanities-Social Sciences, Industrial Arts, Life Sciences, Music, Physical Education and Gymnasium, Physical Sciences, Physics-Astronomy, Speech Arts, including radio and television studios, Library, Health Services, Little Theatre, Cafeteria, Scripps Cottage (a student center), Bookstore, Open Air Theatre, Football Stadium, Track Field, and athletic fields and courts.

A \$20,000,000 building program now underway is expected to provide, within the next 10 years, the finest in educational opportunities for the rapidly growing population in metropolitan San Diego.

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PART ONE

THE COLLEGE AND THE GRADUATE DIVISION

DEPARTMENT OF EDUCATION OF THE STATE OF CALIFORNIA

ROY E. SIMPSON	Superintendent of Public Instruction and Director of Education
J. BURTON VASCHE	Associate Superintendent; Chief, Division of State Colleges and Teacher Education
DON YOUNGREEN	Assistant Chief, Division of State Colleges and Teacher Education

STATE BOARD OF EDUCATION

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WILBER D. SIMONS, Vice President	Redding
BYRON H. ATKINSON	Los Angeles
WILLIAM N. BUCKNAM	Ceres
RAYMOND J. DABA	Redwood City
DR. MABEL E. KINNEY	Los Angeles
MRS. SEYMOUR MATHIESEN	Fresno
MRS. EVA C. NOLAND	Salinas
MAX OSSLO	San Diego
WILLIAM G. WERNER	Alameda

ROY E. SIMPSON, Secretary and Executive Officer

SAN DIEGO STATE COLLEGE ADVISORY BOARD

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HARRY E. CALLAWAY	MRS. VIVIA E. O'TOOLE
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MRS. LLOYD W. LEWIS	President, Ninth District, California Congress of Parents and Teachers
MRS. W. HADLEY WEBB	President, San Diego Branch, American Association of University Women
KENNETH B. BARNES	President, San Diego State College Alumni Association

OFFICERS OF THE COLLEGE

President Emeritus	Edward L. Hardy, LL.D.
President Emeritus	Walter R. Hepner, Ed.D.
President	Malcolm A. Love, Ph.D., LL.D.
Assistant to the President	Arvid T. Johnson, M.A.
Vice President	Ernest B. O'Byrne, Ph.D.
College Librarian	John Paul Stone, Ph.D.
Publications and Public Relations Manager	Stanley G. Peterson, M.S.
Executive Dean—Building Program Administrator	James J. Hunter, Jr., Ph.D.
Building Assistant	Clarence E. Fishburn, Ed.D.
Dean of the College	Donald R. Watson, Ed.D.
Curriculum Evaluator; Assistant to Dean of the College	Darrell C. Holmes, Ph.D.
Assistant to Dean of the College	Alfred E. White, Ed.D.
Dean of Graduate and Professional Studies	Maurice M. Lemme, Ph.D.
Co-ordinator of Graduate Studies	Clayton M. Gjerde, Ph.D.
Dean of Education and Extended Services	Manfred H. Schrupp, Ph.D.
Co-ordinator of Extended Services	Manville R. Petteys, Ed.D.
Co-ordinator of the Evening Program	Glenn L. Hodge, Ph.D.
Co-ordinator of Audiovisual Services	James S. Kinder, Ph.D.
Secretary to the Faculty	Maurice L. Crawford, M.S.
Dean of Students	Herbert C. Peiffer, Jr., Ph.D.
Dean of Admissions and Records	Melvin A. Anderson, Ed.D.
Admissions Counselor	June Warren, B.S.
Registrar	Marion L. Parker, M.A.
Dean of Counseling and Testing	Robert T. Gray, Ed.D.
Test Officer	
Dean of Activities	Margery Ann Warmer, M.S.
Activities Adviser	Alan S. Mishne, A.B.
Activities Adviser	Marjorie Wallace, B.S.
Director of Health Services	Frank O. Robertson, M.D.
Placement Officer	William M. Kidwell, Ph.D.
Graduate Manager, Associated Students	Richard H. Thomas, A.B.
Business Manager	Selwyn C. Hartigan, A.B.
Personnel Officer	Carey D. Folger
Chief of Maintenance	Timothy V. Hallahan, A.B.
Accounting Officer	Donald G. Parker

COUNCIL OF THE GRADUATE DIVISION

Upon recommendation of division chairmen of representatives from departments offering the master of science degree or advanced credentials, and from the established divisions of the college offering the master of arts degree, the President of the College appoints the membership of the Council of the Graduate Division. Appointments for the academic year, 1958-1959, are as follows:

Dean of the College (ex officio)	Donald W. Watson, Ed.D.
Dean of Graduate Studies (chairman)	Maurice M. Lemme, Ph.D.
Division of Business Administration	D. W. Belcher, Ph.D.
Division of Education	Clayton M. Gjerde, Ph.D.
Division of the Fine Arts	Paul L. Pfaff, Ph.D.
Division of the Humanities	Abraham P. Nasatir, Ph.D.
Division of the Life Sciences	Kenneth M. Taylor, Ph.D.
Division of Physical Education, Health Education, and Recreation	Frank L. Scott, Ph.D.
Division of the Physical Sciences	Chesney R. Moe, Ph.D.
Division of the Social Sciences	Frederick L. Ryan, Ph.D.
Business Administration (M.S.)	Glenn L. Hodge, Ph.D.
Education (Graduate Credentials)	Peter C. Gega, Ed.D.
Physical Sciences (M.S.)	Ambrose R. Nichols, Ph.D.
Psychology (M.S.)	Virginia W. Voeks, Ph.D.
Public Administration (M.S.)	William R. Bigger, Ph.D.

DUTIES AND RESPONSIBILITIES

The duties and responsibilities of the Council of the Graduate Division include, but are not necessarily limited to, the following activities which are consistent with the provisions of the California Administrative Code, Title 5, Education:

1. Establishing criteria for regular graduate standing in the Graduate Division and approval of regular standing for qualified applicants.
2. Determining the number and nature of examinations required in the Graduate Division, exclusive of departmental examinations.
3. Establishing requirements for advancement to candidacy and acting on requests for such advancement.
4. Considering and acting on all graduate degree programs and petitions of students in the Graduate Division.
5. Adopting rules concerning the form of presentation, acceptability, and disposition of master's degree theses.
6. Making final recommendation to the faculty for the awarding of the master's degree.
7. Making recommendations concerning departmental requests for new graduate level (200-numbered) courses and new master's degree curriculums.
8. Co-ordinating and systematizing procedures followed by divisions or departments offering advanced degrees or credentials.
9. Making recommendations to the President, the Dean of the College, committees of the college, and the faculty on matters pertaining to the Graduate Division.

ORGANIZATION OF THE COLLEGE FOR GRADUATE STUDY

DIVISION OF BUSINESS ADMINISTRATION

	Chas. W. Lamden, Ph.D., Chairman
Department of Accounting	Vernie E. Odmark, Ph.D., Chairman
Department of Business Education	Maurice L. Crawford, M.S., Chairman
Department of Management	Frances B. Torbert, M.A., Chairman
Department of Marketing	Gerald K. Sharkey, Ph.D., Chairman (acting)

DIVISION OF EDUCATION

	Manfred H. Schrupp, Ph.D., Dean
Department of Education	George A. Koester, Ph.D., Chairman
Elementary Education	Morrow F. Stough, Ph.D., Co-ordinator
Secondary Education	E. Glen Fulkerson, Ed.D., Co-ordinator
Graduate Studies	Clayton M. Gjerde, Ph.D., Co-ordinator
Administrative Studies	Richard A. Houseman, Ed.D., Chairman
Guidance Studies	David D. Malcolm, Ph.D., Co-ordinator
Special Education Studies	Francis A. Ballantine, Ph.D., Chairman

DIVISION OF FINE ARTS

	George N. Sorenson, M.A., Chairman
Department of Art	Everett Gee Jackson, M.A., Chairman
Department of Home Economics	Ruth A. Talboy, M.A., Chairman
Department of Music	J. Dayton Smith, M.M., Chairman
Department of Speech Arts	Hunton D. Sellman, M.S., Chairman

DIVISION OF THE HUMANITIES

	John R. Adams, Ph.D., Chairman
Department of English	Harriet Haskell, Ph.D., Chairman
Department of Foreign Languages	Leslie P. Brown, Ph.D., Chairman
Department of History	Charles R. Webb, Jr., Ph.D., Chairman

DIVISION OF THE LIFE SCIENCES

	Robert D. Harwood, Ph.D., Chairman
Department of Botany	Dorothy R. Harvey, M.A., Chairman
Department of Microbiology	Mabel A. Myers, Ph.D., Chairman
Department of Psychology	Edward W. Geldreich, Ph.D., Chairman
Department of Zoology	Kenneth M. Taylor, Ph.D., Chairman

DIVISION OF PHYSICAL EDUCATION AND HEALTH EDUCATION

	William L. Terry, Ed.D., Chairman
Department of Health Education	William H. Lauritsen, Ph.D., Chairman
Department of Men's Physical Education	Carl W. Benton, M.S., Chairman
Department of Women's Physical Education	
	Dorothy J. Tollefsen, M.A., Chairman
Department of Recreation	Frank L. Scott, Ph.D., Chairman

DIVISION OF THE PHYSICAL SCIENCES

	Dudley H. Robinson, Ph.D., Chairman
Department of Chemistry	Robert W. Isensee, Ph.D., Chairman
Department of Industrial Arts	Kenneth Phillips, Ph.D., Chairman
Department of Mathematics	Lester G. Riggs, Ph.D., Chairman
Department of Physics	Lester L. Skolil, Ph.D., Chairman

DIVISION OF THE SOCIAL SCIENCES

	David S. Milne, Ph.D., Chairman
Department of Economics	Graydon K. Anderson, Ph.D., Chairman
Department of Geography	James W. Taylor, Ph.D., Chairman
Department of Political Science	Donald B. Leiffer, Ph.D., Chairman
Department of Sociology-Anthropology	Orrin E. Klapp, Ph.D., Chairman
Public Administration	William R. Bigger, Ph.D., Co-ordinator

CALENDAR

1958-1959

FALL SEMESTER

August 15	Last day for filing application for admission to the college for the fall semester.
September 10	Graduate aptitude test for master's degree applicants, by appointment, Graduate Division.
September 13	General Culture Test, 9-12 a.m., by appointment.
September 13	Education department comprehensive examination for master's degree, by appointment—Education Division Part I, 9-12 a.m. Part II, 1-3.30 p.m.
September 15-16	Testing and advising programs and residency declaration.
September 17-19	Registration and enrollment in classes for the regular day program. (Students registering in the evening program only, see the schedule in the Evening Program Bulletin.)
September 19	Last day for registration for students in the regular day program.
September 20	Registration for the evening program. (For complete information, see the Evening Program Bulletin.)
September 22	Classes begin.
September 23	Assembly for students applying for admission to teacher education, 11 a.m.
October 4	Graduate aptitude test for master's degree applicants, by appointment, Graduate Division.
October 6	Last date to apply for refunds.
October 7	Graduate aptitude test for master's degree applicants, by appointment, Graduate Division.
October 10	Last day for withdrawal from classes without penalty of class standing.
October 11	General Culture Test, 9-12 a.m., by appointment.
November 7	End of eighth week. Deficiency notices due.
November 11	Holiday—Veterans Day.
November 27-28	Thanksgiving recess.
December 5	Last date for withdrawal from classes for the semester.
December 17	Last day of classes before Christmas recess.
December 18-January 4	Christmas recess.
January 5	Classes resume.
January 7	Last date for withdrawal from the college for the semester.
January 10	Education department comprehensive examination for master's degree, Part I, by appointment—Education Division, 9-12 a.m.
January 17	Education department comprehensive examination for master's degree, Part II, by appointment—Education Division, 9-12 a.m.
January 20	Last day of classes before final examinations.
January 28	Graduate aptitude test for master's degree applicants, by appointment, Graduate Division.
January 30	Last day of the fall semester.

SPRING SEMESTER

January 2	Last day for filing application for admission to the college for the spring semester.
January 28	Graduate aptitude test for master's degree applicants, by appointment, Graduate Division.
February 2	General Culture Test, 1-4:30 p.m., by appointment.
February 2-3	Testing and advising programs and residency declaration.
February 4-6	Registration and enrollment in classes in the regular day program. (Students registering in the evening program only, see the schedule in the Evening Program Bulletin.)
February 6	Last day for registration for students in the regular day program.
February 7	Registration for evening program. (For complete information, see the Evening Program Bulletin.)
February 9	Classes begin.
February 10	Assembly for students applying for admission to teacher education, 11 a.m.
February 14	Graduate aptitude test for master's degree applicants, by appointment, Graduate Division.
February 17	Graduate aptitude test for master's degree applicants, by appointment, Graduate Division.
February 23	Holiday—Washington's Birthday.
February 24	Last day to apply for refunds.
February 27	Last date for withdrawal from classes without penalty of class standing.
March 20	Last day of classes before spring recess.
March 21	General Culture Test, 9-12 a.m., by appointment.
March 21-29	Spring recess.
March 30	Classes resume.
April 3	End of eighth week. Deficiency notices due.
May 1	Last date for withdrawal from classes for the semester.
May 1	Application for graduation with the master's degree due.
May 9	Education department comprehensive examination for the master's degree, Part I, by appointment—Education Division, 9-12 a.m.
May 16	Education department comprehensive examination for the master's degree, Part II, by appointment—Education Division, 9-12 a.m.
May 27	Last date of withdrawal from the college for the semester.
June 2	Last day of classes before final examinations.
June 5	Final date for depositing completed theses at office of the Graduate Division for June graduation.
June 12	Commencement.

1958 SUMMER SESSIONS

Term I (6 weeks)	June 30-August 8
End of Term I, August 8, final date for depositing completed theses at office of the Graduate Division for summer graduation.	
Term II (3 weeks)	August 11-August 29

1959 SUMMER SESSIONS

Term I (6 weeks)	June 29-August 7
End of Term I, August 7, final date for depositing completed theses at office of the Graduate Division for summer graduation.	
Term II (3 weeks)	August 10-August 28

FEES

FEES PAYABLE AT TIME OF REGISTRATION

Students carrying more than six units:	
Materials and service	\$22
Auditors pay same fees as students carrying courses for credit.	
Activity fee (required)	8
Total	\$30
Students carrying six units or less:	
Materials and service for one, two, or three units	\$9
Materials and service for four, five, or six units	15
Auditors pay same fees as students carrying courses for credit.	
Nonresident Tuition (in addition to fees required of resident students):	
Nonresident student enrolled for 15 units or more	\$90
Nonresident student enrolled for less than 15 units	
(per unit or fraction thereof)	6
For fee-paying purposes, zero unit courses are counted as one unit.	

MISCELLANEOUS FEES

(Fees payable when service is rendered)

Change of program	\$1
Failure to meet administratively required appointment or time limit	2
Late registration	2
Transcript of record (first copy free)	1
Organ practice	10
State teaching credentials (each credential)	4
The credential fee is collected through the college by cashier's check or post office money order made payable to the State Department of Education	
Loss or damage of equipment and library books	Cost

REGULAR SESSION FEE REFUNDS

Materials and service fees:

To be eligible for partial refunds of materials and service fees, a student withdrawing from college must file an application with the Business Office not later than 14 days following the day of the term when instruction begins; and provided, further, that the amount of \$2 shall be retained to cover the cost of registration.

Nonresident tuition:

Tuition paid for a course scheduled to continue for an entire semester may be refunded in the following amounts if application therefor is received by the Business Office within the following time limits:

Time Limit	Amount of Refund
(1) Before or during the first week of the semester	\$6 per unit
(2) During the second week of the semester	\$5 per unit
(3) During the third week of the semester	\$4 per unit
(4) During the fourth week of the semester	\$3 per unit
(5) During the fifth week of the semester	\$2 per unit
(6) During the sixth week of the semester	\$1 per unit

The late registration fee is not refundable.
The Business Office should be consulted for further refund details.

SUMMER SESSION FEES

Tuition, each session (per unit)	\$9.50
Activity fee (required) Term I	2.00

EXEMPTIONS

Students under Public Law 16, 346, 894, California state veteran, or state rehabilitation programs will have fees paid for tuition and materials and service under provisions of those respective programs.

VETERAN ALLOWANCES

Allowances for subsistence begin on the date the Business Office clears for payment of fees, or effective date of VA authorization, whichever is later, except that veterans clearing the Business Office on the regular registration days will be certified for subsistence beginning with the first day of the registration schedule.

FEES SUBJECT TO CHANGE

Fees are subject to change by law without advance notice.

THE COLLEGE

The campus of San Diego State lies on a mesa overlooking Mission Valley, the site of the first mission founded in California by Father Junipero Serra. Alvarado Freeway cuts through the valley, bringing the campus to within a few minutes drive of the center of San Diego and famous Balboa Park. Twelve miles to the west are the beautiful resort beaches on the Pacific Ocean. An hour's drive to the east are the Laguna Mountains; and Old Mexico may be reached in half an hour. The heritage of the past lives in the mission style and Spanish-Moorish architecture of San Diego State's 303-acre campus.

San Diego State, with an enrollment of more than 9,000 students, is one of 10 California state colleges. It offers a four-year liberal arts course in over 50 major fields of study and a graduate program leading to the master of arts and master of science degrees in some 24 fields, with additional areas of concentration. Programs leading to teaching credentials authorizing teaching in the public schools of California from kindergarten through junior college are available.

ACCREDITATION

San Diego State is a member of the Western College Association and the American Association of Colleges for Teacher Education. It is fully accredited by the Western College Association, the National Council for Accreditation of Teacher Education, the California State Department of Education, and is approved by the Veterans Administration for the education and training of veterans. The Department of Chemistry is on the approved list of the American Chemical Society, thereby enabling qualified students to receive the Certificate of the American Chemical Society.

THE FACULTY

The college faculty numbers over 500 members who have received their advanced training in over 100 colleges and universities of the United States or foreign countries. The faculty is distinguished not only in terms of formal education, but also represents a wide variety of practical experience in business, industry, government, and the teaching profession. Both past and present contributions to publications and research are extensive and impressive.

THE LIBRARY

The library facilities of this college are noteworthy for an institution of its size. The library consists of over 180,000 volumes and receives more than 1,000 different periodicals selected to meet the requirements of a modern educational institution. Professionally trained librarians are available to render assistance to students and faculty in their reading and reference work. The Campus Elementary School library, representing a collection of 17,000 volumes, possesses equipment and building facilities that are unique.

San Diego State also has exchange agreements with numerous specialized libraries in and near San Diego such as those at the U. S. Navy Electronics Laboratory, Convair, General Atomics Division, Natural History Museum, etc., as well as with libraries at other colleges and universities.

LIVING ACCOMMODATIONS

At present the college does not provide dormitories for students living away from home. Housing is made available through listings on file in the Office of the Dean of Activities. The college is located in a residential district of small homes and apartments. It is served by a busline connecting with all areas of metropolitan San Diego. A modern cafeteria seating 630 persons and offering full meal service is scheduled for completion during the summer of 1958. Within the next year, construction will start on five dormitories housing 1,000 students.

VETERAN HOUSING

A veteran housing project of 400 one-, two-, and three-bedroom low rental apartments, basic furniture only, is available to married veteran students. The housing project is located eight miles from the campus on the Mission Valley Freeway. Apartments are assigned to married veterans in the order in which applications are accepted by the Office of the Dean of Students. Applications will be received only after the student has been accepted for admission to the college. All correspondence on veteran housing should be directed to the Office of the Dean of Students.

PERSONNEL SERVICES CENTER

The facilities of the Personnel Services Center are available to graduate students who may desire assistance in the solution of personal, social, academic, or occupational problems. Among these facilities, the graduate student may be interested in the services provided in the test office, the reading, writing, and study laboratory, and the speech improvement program.

STUDENT HEALTH SERVICES

As part of the program of student personnel services, the college provides health services for the protection and maintenance of student health. These health services, under the direction of a medical doctor and consisting of a full-time staff, assisted on a part-time basis by several medical specialists, are available to students for consultation, treatment of minor physical difficulties and emergencies, and counsel as to additional proper procedures. Full-time nurses are on duty. During the weeks the college is in session, students may obtain appointments with specialists during the hours they are available at the Office of Health Services. A student must be currently enrolled for seven or more units of credit to be eligible for other than emergency treatment.

Physical examinations are required of and provided for all teacher education students at time of admission to and graduation from the various educational credential programs. These examinations are furnished by the Health Services Office only to those credential candidates who are applying for a state credential through the college, screened by the college.

PLACEMENT CENTER

The Placement Center is an integral part of the educational program of the college. Placement is considered as the action phase of both the instructional program and the vocational guidance service at San Diego State. Since the placement services rendered by the center are of great importance to the graduate student, the following information is presented for his assistance.

The Placement Center serves all divisions of the college. During the last college year, the center served 684 who received new degrees or credentials, 479 alumni and 2,787 undergraduates. Less than 1 percent of those who had filed for full-time placement were seeking employment at the end of the summer months following graduation.

The Placement Center, through its professional staff, provides placement counseling for the assistance of any student in finding a position which will meet his individual needs and utilize his abilities. Over 1,000 business firms, government agencies, and school districts actively recruit through the Placement Center each year. Many of these concerns are national in scope. On the average, each candidate is interviewed by three to five concerns in the process of finding the position best suited to him. The Placement Center maintains a vocational library of current materials and company brochures from firms and agencies which graduate students may wish to use. A part-time job placement service is provided for those who need financial aid in order to continue their education. Many of the part-time jobs are directly related to areas of student specialization. A diligent effort is made to follow up graduates in order to learn more about their success and to assist in such future job adjustment as may be necessary.

Placement services are available to all students who have completed 12 semester units acceptable to a graduate program at San Diego State. Assistance in finding part-time employment is given to all students who are enrolled for seven or more semester units.

LOANS

Short-term loans are available to students who have attended San Diego State College for at least one semester and who have demonstrated ability to do satisfactory graduate work. Long-term loans are available in limited amounts to students who are qualified scholastically and who show evidence they need loans to complete their college education. Applications for loans are made through the Office of the Activities Adviser.

THE GRADUATE DIVISION

San Diego State College has three major functions: (1) to aid the student to develop his powers of critical, independent thought and to become aware of the main streams of our Nation's cultural, social, and scientific traditions; (2) to inform the student of the political ideas and ideals that have built our democracy and to stimulate in him an interest and participation in civic life; and (3) to equip young men and women with the knowledge and skills necessary to meet the needs of California and the Nation for competence and leadership.

In accordance with the foregoing functions, the Graduate Division of the college is charged with the development and improvement of graduate curricula in many liberal arts and professional fields. One of the most important of these fields is that of teaching, supervising, or administering in the schools of California.

San Diego State College was authorized by the California State Board of Education to offer graduate work in connection with the general secondary credential in 1946. The master of arts degree was authorized in 1949 and the master of science degree in 1955. As of September, 1957, of the 1,881 graduate students enrolled in the college, 798 were registered in master's degree programs. A total of 503 master of arts degrees had been awarded.

All graduate study at San Diego State College is under the administration of the Graduate Division. Responsibility for graduate programs is delegated by the president and the faculty to the Graduate Council under the chairmanship of the Dean of Graduate Studies. The Dean of Graduate Studies serves as the administrative officer of the Graduate Division.

GRADUATE DEGREES

MASTER OF ARTS

Art	Mathematics
Business Education	Music
Chemistry	Personnel Supervision and Training
Education	Physical Education and Health
English	Education
Foreign Languages	Physics
History	Psychology
Industrial Arts	Social Science
Life Sciences	Speech Arts

MASTER OF SCIENCE

Applied Biology	Physics
Business Administration	Psychology
Chemistry	Public Administration
Mathematics	

GRADUATE TEACHING CREDENTIALS

Graduate work is offered at San Diego State leading to the following credentials:

1. General Secondary Credential.
2. Administration Credentials (Elementary and Secondary).
3. Supervision Credential.
4. General Pupil Personnel Services Credential.
5. Credential for Teaching Exceptional Children.

GENERAL SECONDARY CREDENTIAL

The general secondary credential is a basic credential authorizing its holder to teach any subject in grades 7 through 14. It requires a major and a minor in subject fields commonly taught in high school. It also requires a full year of graduate work in education and subject fields. For a more complete description of this credential, refer to Part Two of this bulletin on Advanced Credentials.

ADMINISTRATION AND SUPERVISION CREDENTIALS

Those who hold credentials in administration are authorized to serve as principals, vice principals, and other administrative personnel as authorized by boards of education at the level designated in the credential.

Those who hold the supervision credential are authorized to supervise the teaching of any subjects at the level designated by the basic credential.

For further information on these credentials, refer to Part Two of this bulletin on Advanced Credentials.

GENERAL PUPIL PERSONNEL SERVICES CREDENTIAL

The general pupil personnel services credential authorizes its holders to perform pupil personnel services in the areas of child welfare and attendance, psychology, psychometry, and pupil counseling, in elementary and secondary schools. For a more complete description of this credential, refer to Part Two of this bulletin on Advanced Credentials.

CREDENTIAL FOR TEACHING EXCEPTIONAL CHILDREN

The credential for teaching exceptional children authorizes its holder to teach mentally retarded pupils, or pupils with hearing or speech difficulties. For a more complete description of this credential, refer to Part Two of this bulletin on Advanced Credentials.

PREREQUISITES FOR GRADUATE CREDENTIALS

All of the above credentials, with the exception of the general secondary credential, are advanced credentials, and therefore require as prerequisite work the completion of all requirements for basic teaching credentials. Students not holding a California teaching credential, who wish one of the advanced credentials, should refer to the regular college catalog for information on requirements for basic credentials.

The advanced credentials in administration, supervision, and pupil personnel services also require public school teaching experience.

Students who have no background in professional education, but who have adequate background in major and minor subject areas can expect to complete requirements for the general secondary credential in approximately three semesters of full-time work.

Students who hold basic teaching credentials, who desire one of the advanced credentials, can expect to meet requirements in one full year of graduate work or its equivalent. Refer to Part Two of this bulletin on Advanced Credentials for details on requirements.

GRADUATE WORK IN THE CAMPUS EVENING SESSION PROGRAM

Graduate students who wish to engage in graduate study leading to the master's degree or graduate credentials, but who are unable to be in attendance during the day, may be able to complete the major portion of the requirements by enrolling in the Campus Evening Session. Classes offered under this program are part of the regular college offerings and are taught by the regular faculty of the college. Evening session graduate students working for the master's degree must meet all requirements established by the Graduate Division for graduate students in the day session. Not more than six units of graduate work per semester will be accepted on a master's degree program if a student is employed full time, unless permission to carry excess hours is obtained from the Dean of Graduate Studies prior to or during registration. A special Evening Program Bulletin is issued each semester and may be obtained upon request from the Office of the Co-ordinator of the Evening Program.

GRADUATE WORK IN THE SUMMER SESSIONS

San Diego State College conducts two summer sessions in each of which a graduate student may earn credit in residence which may be used to satisfy the requirements for a master's degree or for graduate credentials. Before credit earned in the summer sessions is accepted on a master's degree program, a student must meet all the requirements established by the Graduate Division for graduate students in the day session enrolled during the regular academic year.

The summer sessions are organized into two terms: Term I of six weeks, during which time six academic units may be earned; and Term II of three weeks, during which time three academic units may be earned. Students who enroll for more units than authorized, including concurrent college courses taken outside this college, will not receive graduation credit for the excess units.

GRADUATE STUDY FOR FOREIGN STUDENTS

Foreign students wishing to enroll for graduate work in the college should obtain admission forms from the Admissions Office and return the completed forms and duplicate copies of official transcripts of all college or university work completed at least six weeks before the registration date of the semester in which the student wishes to enter. Consult Part One of this bulletin, on Admission of Graduate Students, for instructions. The Graduate Council requires the applicant to take an English competency examination to determine whether or not the student has a sufficient command of English to enter graduate work. Students then may be required to enroll in remedial courses for the purpose of removing deficiencies in English.

VETERANS AND GRADUATE STUDY

San Diego State has been approved by the Veterans Administration and the California State Department of Education to offer graduate work for veterans leading to the master's degree, graduate teaching credentials, and other programs that require graduate training. Veterans who are interested in graduate work should visit the Campus Veterans Office in the Personnel Services Center for information and counseling regarding veteran benefits, prior to the date of registration.

The "graduate load" for a veteran is defined as the approved courses leading to a definite graduate objective such as the master's degree, the general secondary credential, school administration credential, etc.

Graduate veterans are required to carry graduate loads of not less than 12 officially approved units per semester for full subsistence. Half subsistence allowances may be given for six such units per semester.

GRADUATE TEACHING ASSISTANTSHIPS

Graduate assistantships are available in the areas of business administration (accounting and business management), chemistry, life sciences, mathematics, physical education and health education, and physics. For the academic year, 1958-1959, these assistantships pay \$2,148 for half time (six units) service and \$1,074 for quarter time (three units) service. Applicants must satisfy the requirements for regular graduate standing in the Graduate Division; have a 2.75 (A is 4.0) grade point average or better in the undergraduate major; and make a satisfactory score on the graduate aptitude test. Application blanks and further information may be obtained from the Office of the Graduate Division.

GRADUATE SCHOLARSHIPS AND AWARDS

Graduate students interested in the following scholarships and awards may obtain application forms and further information from the Office of the Dean of Activities, unless otherwise specified.

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN. Awarded each June to a graduating woman senior who will begin work in an accredited college or university toward a higher degree or credential. \$100.

CONVAIR SCHOLARSHIPS. Awarded to graduate students in engineering and the allied sciences. Maximum amount of \$1,000 (payable in 10 monthly payments of \$100). Awards are made by Convair and applications must be sent directly to the company. Interested students planning graduate work in engineering, chemistry, mathematics, or physics at San Diego State or some other college may obtain application forms from the Office of the Graduate Division.

FED-MART SCHOLARSHIPS. Awarded to graduate students on the basis of scholarship, although need is also given weight. \$100 per semester. Further information may be obtained at the Office of the Graduate Division.

PUBLIC ADMINISTRATION INSTITUTE ON GOVERNMENT FELLOWSHIP. Awarded annually to a graduate student in political science. \$200 per year.

SAN DIEGO CITY TEACHERS ASSOCIATION. Awarded to two students preparing for teaching. \$100 each, per year.

SAN DIEGO COUNTY TEACHERS ASSOCIATION. Awarded to four students in the field of education. \$100 each, per year.

SOROPTIMIST INTERNATIONAL OF SAN DIEGO. A \$200 scholarship to a senior or graduate woman student regularly enrolled in the Division of Physical Sciences, with preference being given to a student enrolled in engineering, chemistry, or physics. In selecting the student, particular weight will be given to leadership qualities, scholastic ability and attainment.

TEACHER EDUCATION SCHOLARSHIP. Awarded to a fifth year student in training for the general secondary credential. \$400 per year.

DOROTHY CRANSTON STOTT. Awarded to a graduate of San Diego State College with a major in English. Selection is made by the Department of English. \$100 per year.

K. W. STOTT. Awarded to a graduate of San Diego State College with a major in history. Selection is made by the Department of History. \$100 per year.

ZONTA INTERNATIONAL CLUB SCHOLARSHIP. Awarded to a graduate or upper division student with a major in Speech Correction. Applicants must be recommended by the Speech Arts Department and the recipient must spend eight hours a week in the clinical work of the Speech Arts Department. \$300.

ADMISSION OF GRADUATE STUDENTS TO THE COLLEGE

ADMISSION PROCEDURES

All graduate students (including graduates of San Diego State College) anticipating enrollment at this college must comply with the following procedures:

1. **File Application for Admission to the College.** This application should be filed during the semester preceding the one in which the student expects to enroll. The following forms must be filed in the Admissions Office: (1) Application for Admission (or readmission) and (2) Health History Record. These forms may be obtained from the Admissions Office. Letters from students signifying intention to enroll will not be considered as applications for admission. The official forms must be filed. The calendar in this bulletin gives final dates for filing of applications. Applications received after the final date for filing cannot be accepted for admission to the semester immediately following.

2. **File Official Transcripts.** The student must file official transcripts from EACH college or university attended (including extension, correspondence, summer session, or evening courses). If a student plans to enter a master's degree program or a graduate credential program, he must file all transcripts in duplicate. An official transcript is one sent directly between registrars of schools. The student should request the college or university attended to send the transcript to the Admissions Office, San Diego State College. All records or transcripts received at the Admissions Office become the property of the college and will not be released nor will copies be made.

3. **Take Qualifying Examinations.** Graduate students may be required to take one or more of the examinations listed below. Consult the calendar in this bulletin for dates on which examinations are given.

- (a) **Fundamentals Test.** This test is required of graduate students only if they are candidates for any of the elementary teaching credentials. This test must be taken prior to admission to teacher education.
- (b) **Co-operative English Test.** This test is required of graduate students only if they are candidates for any of the secondary teaching credentials. For further information, check with the Co-ordinator of Secondary Education.
- (c) **General Cultural Test.** This test is the achievement test required of all applicants for the master of arts degree. The test is also required of all graduate students planning to earn a general secondary credential through the teacher education program at this college. Applicants for the master of arts degree (without taking the credential program) must make reservations for the test at the Office of the Graduate Division. All graduate students planning to earn a general secondary credential, either with or without a master of arts degree, should make reservations in the Education Division Office, and report for the test as scheduled.

- (d) **Graduate Aptitude Test.** This test is required of all graduate students who intend to enroll in a master's degree program. A reservation for this test must be made at the Office of the Graduate Division. This test may be taken during the last semester of the senior year.

No preparation for this test is necessary and students desiring the master's degree should make arrangements to take the test before registration. Consult the calendar in this bulletin for dates on which the test is scheduled or call the Office of the Graduate Division for information.

HEALTH EXAMINATION

A chest X-ray and health clearance from the Office of Health Services are required of all students entering or re-entering the college after an absence of more than one semester, except that students enrolled in the Campus Evening Program only (for six units or less) are not required to take the chest X-ray. Appointments for the chest X-ray and health clearance are scheduled during the testing and advising period and are part of required registration procedures.

RESIDENCY STATUS CLEARANCE

Each student enrolling in the college must be classified as a resident or nonresident student, prior to the payment of registration fees. The Residency Status Office will issue instructions to the applicant on the procedure to follow in obtaining residency classification. Specific instructions will be found in the *Class Schedule and Instructions for Registration*, which is issued prior to the beginning of each semester. Applicants for the Evening Program only will find instructions on procedure to follow in obtaining residency classification in the *Evening Program Bulletin*, which is also issued prior to the beginning of each semester.

The residency classification received by any student is subject to review and change. Each student is held responsible for notifying the Residency Status Office of any change in his legal status as a resident of California. A new residency declaration must be made whenever a student interrupts continuous attendance at this college.

CHANGES IN PROGRAM

A student is responsible for any change in his program after the official study list has been filed. Forms for changes in the official study list may be obtained at the Registrar's Office. A fee of \$1 is charged for change of registration.

A change of program includes the following: withdrawal from a class; adding a class; adding or reducing units to a class for which the student is already registered; changing from audit to credit or from credit to audit; and changing sections of the same course. Consult calendar for deadline dates for change of program.

GRADUATE STANDING IN THE COLLEGE

If the application of a graduate student for admission to the college is approved, the Dean of Admissions and Records will notify the student that he has been admitted to the college in one of the following classifications:

- (1) As an **unclassified graduate**, if the student holds an acceptable bachelor's degree from an accredited college; or
- (2) As a **special graduate**, if the applicant's degree is from a nonaccredited college.

After the student has completed requirements for admission to the Graduate Division, he will be reclassified to regular graduate standing.

Unclassified Graduate Student

An unclassified graduate student is not eligible to enroll in graduate level (200-numbered) courses, except with permission of the instructor and concurrence of the Dean of Graduate Studies. Credit earned as an unclassified graduate may be accepted on a master's degree program upon petition by the student and approval of the graduate adviser and the Dean of Graduate Studies.

Special Graduate Student

A special graduate student is not eligible to enroll in graduate level (200-numbered) courses. Under supervision of the Dean of Admissions and Records, a special graduate student may be admitted to nongraduate level courses for the purpose of removing the undergraduate deficiencies for which he may be held. Upon the completion of at least 12 units of approved upper division postgraduate work with a grade point average of not less than 2.5 and removal of all deficiencies, the Dean of Admissions and Records may change the student's standing from special graduate to unclassified graduate.

ADMISSION TO THE GRADUATE DIVISION

After a graduate student has received notification from the Dean of Admissions and Records of his admission to the college as an unclassified graduate student, he may apply for admission to the Graduate Division and **regular graduate standing**. Students who expect to enter a master's degree program, or a graduate credential program, must file an application for Admission to the Graduate Division in duplicate. These forms may be obtained at the Office of the Graduate Division.

Regular Graduate Standing

To become eligible to enter and continue in a master's degree program, the student must attain regular graduate standing and be admitted to the Graduate Division. Requirements for regular graduate standing are as follows:

- (1) Completion of requirements for unclassified graduate standing in the college.
- (2) A minimum grade point average of 2.5 in all undergraduate work taken for the bachelor's degree.
- (3) Completion of the Graduate Aptitude Test described above.
- (4) Satisfactory completion of the minimum requirements of the division or department, including an appropriate major or its equivalent and the additional departmental qualifying examinations or requirements as described in Part Three of this bulletin under the major field of concentration.

Assignment of a Graduate Adviser

An applicant for admission to the Graduate Division who meets the above qualifications will be admitted to the Graduate Division with regular graduate standing upon the recommendation of his major department or division.

Each student with regular graduate standing is assigned to a graduate adviser at the Office of the Graduate Division, following a conference with the Dean of Graduate Studies.

Graduate students who wish to work for a graduate credential but not for an advanced degree will be referred to the appropriate co-ordinator in the Division of Education.

If a student does not meet the minimum grade point average of 2.5 in his undergraduate work, or if he has not met the minimum requirements of a division or department, he will be referred to his major department or division where, under guidance, he may continue postgraduate work as an unclassified graduate for the purpose of removing deficiencies and otherwise demonstrating ability to succeed in a master's degree program.

Limitations on Candidacy for a Degree

Admission to the Graduate Division with regular graduate standing does not necessarily imply the acceptance of the student as a candidate for the master's degree program.

A graduate student who has begun work on a graduate program but has completed no courses at this college within the last calendar year is considered to have withdrawn from the college. Such students must file applications for readmission to the college and the Graduate Division if they wish to resume their graduate work. A student who withdraws from a graduate program may be required to comply with regulations and requirements in effect at the time he gains readmission to the Graduate Division.

GRADUATE-SENIOR REGISTRATION

A student who is within seven units of completing requirements for the bachelor's degree whose overall grade point average is 2.75 or above may petition at the Office of the Graduate Division to earn graduate credit concurrently with the remaining requirements for the bachelor's degree. The degree must be completed in the same semester for which the petition is approved. The rules of the Graduate Division shall prevail in regard to academic load. (Refer to the section of this bulletin on Regulations of the Graduate Division for information on study list limits.)

REGULATIONS OF THE GRADUATE DIVISION

Graduate students are held individually responsible for complying with regulations and deadlines established by the Graduate Division. Questions concerning graduate study at San Diego State College should be referred to the Office of the Graduate Division.

All graduate students matriculating after August, 1957, will be held to the regulations contained in this bulletin. A student whose master's degree work began prior to that date and who has been enrolled in one or more courses during each consecutive semester since first enrolling as a graduate student, or whose attendance has not been interrupted by more than two consecutive semesters, will be held responsible for the regulations in effect at the time of his application for the masters' degree.

NUMBERING OF COURSES

Courses numbered 1 through 99 or by letters (A, B, C, etc.) are in the lower division (freshman and sophomore years); those numbered 100 through 199 are in the upper division (junior and senior years); and those numbered 200 through 299 are strictly graduate courses. Courses numbered 300 or over are professional education courses in the graduate credential program.

GRADING SYSTEM

At the end of each semester or summer session in which a student is enrolled, a report of courses taken, showing units and grades earned, is sent to the student. Grades and grade points used in reporting are as follows: Grade of A (outstanding achievement), 4 points; B (commendable), 3 points; C (satisfactory), 2 points; D (passing), 1 point; F (failure), 0 points; Inc (incomplete), counted as units attempted, 0 points; WP (withdrawal passing), not counted in grade point average; WF (withdrawal failing), counted as failing in the grade point average; Cr (credit), signifying units earned, but not counted in the grade point average. The mark "Cr" is used in reporting satisfactory completion of certain courses where letter grades would be inappropriate. No course in which a final grade below "C" was earned may be used to satisfy the requirements for a master's degree.

GRADE POINT AVERAGES

In the calculation of grade point averages for graduate students, the number of units attempted is determined by all work taken at this college used in an official program leading to the master's degree, including all courses required as prerequisites, directed student teaching where applicable, and courses taken as remedial work. Courses for which WP is received are not counted as units attempted. The grade point average is determined by dividing the total number of grade points earned by the total number of units attempted.

INCOMPLETE GRADE

One calendar year beyond the end of the term when an incomplete grade is assigned will be allowed for making up the incomplete. After this time has lapsed, the student may not make up the work, but may repeat the course if he desires. The incomplete remains on the permanent record as units attempted and no grade points. This regulation does not apply to thesis courses numbered 299 which are not counted as units attempted until the final credit has been recorded, provided that the course is completed within the time permitted by the Office of the Graduate Division.

WITHDRAWALS AND CHANGES OF PROGRAM

OFFICIAL WITHDRAWAL OR CHANGE OF PROGRAM

Official Withdrawal or Change of Program. A student withdrawing from college or from a class must file an official withdrawal form or change of program form with the Registrar. Forms may be obtained at the Registrar's Office.

Withdrawal Deadline Dates and Penalties. If a student officially withdraws from college or from a class by the end of the third week of the semester, a grade of WP (withdrawal passing) will be recorded upon his permanent record for each class from which he has withdrawn. If he withdraws after the third week and not later than the end of the eleventh week of the semester, either a WP or WF (withdrawal failing) will be recorded, depending upon whether he is passing or failing the course on the date of filing the request for withdrawal. (WF is equivalent to a failing grade.) After the eleventh week, withdrawal from a class is not permitted. A final grade will be recorded for each class for which the student is enrolled. Check calendar for last date of withdrawal from college.

UNOFFICIAL WITHDRAWAL

Unofficial Withdrawal. A student unofficially withdrawing from class or from college will receive failing grades in all courses from which he unofficially withdraws. An unofficial withdrawal is one in which a student stops attending classes without filing official withdrawal forms with the Registrar within the deadline dates established for withdrawal.

REPEATED COURSES

A graduate student may not repeat courses which have been taken as part of the master's degree, except in the case of courses required as prerequisites to a master's degree program. Such courses may be repeated under the overall college regulations for repeated courses. (Refer to the general catalog.)

PROBATION

Any student whose scholarship record falls below a "C" average (2.0) for all postgraduate work attempted, or all postgraduate college work attempted at San Diego State College, will be placed on probation. Probation may be continued, provided that the student obtains a "C" average or better each semester while on probation. The student will be removed from probation when he has attained a "C" average or better on all postgraduate work attempted and on all postgraduate college work attempted at San Diego State College.

DISQUALIFICATION FROM THE COLLEGE

Disqualification for Scholarship. Any student on probation whose scholarship falls below a "C" average (2.0) in any single semester or summer session will be disqualified from further attendance at the college. Veterans who are disqualified from further attendance at this college forfeit their rights to veteran benefits. Specific information may be obtained from the Veterans Administration regarding disqualification of veterans in graduate programs.

Reinstatement After Disqualification. A disqualified student may be readmitted to the college for reasons satisfactory to the Board of Admissions. Applications for readmission must be made on forms which may be obtained at the Admissions Office. Students petitioning for readmission are required to have personal interviews with members of the Board of Admissions.

TRANSCRIPTS OF RECORD

An official transcript of record may be obtained by filing an application for transcript at the Registrar's Office. A fee of \$1 is charged for each transcript (first copy free). Transcripts sent from one college to another are considered as official. Transcripts presented by a student to a college are considered to be unofficial and are usually not accepted. Once a student has matriculated in this college or has had an official evaluation made, transcripts from other schools or colleges become the property of this college and will not be released nor will copies be made.

AUDITORS

A graduate student who wishes to enroll in a course for "audit" instead of "credit" must meet the requirements for admission to the college and comply with all regulations for which the student taking the course for credit is held. An auditor pays the same fees and has the same privileges as do students who take equivalent work for credit, but are not held for final examinations and do not receive final credit in courses.

FINAL EXAMINATIONS

No final examination shall be given to individual students before the regular time. Any student who is passing in a course who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination within the time allowed for making up incomplete grades.

TRANSFER OR EXTENSION COURSE CREDIT

A total of not more than six units of work earned in residence at another college, or work earned in regularly organized extension courses at San Diego State College, if recommended by the graduate adviser and approved by the Dean of Graduate Studies, will be accepted as part of the requirements for the master's degree. Approval for extension courses must be obtained by the student before the close of registration for the semester during which the course is offered. Work taken by correspondence is not acceptable.

STUDY LIST LIMITS FOR THE GRADUATE DIVISION

A full-time graduate student who is not taking any graduate level (200-numbered) courses may register for 17½ units of credit during any semester. If one or more graduate level (200-numbered) courses is included in the study list, the maximum number of units permitted is 15. An excess study load requires the approval of the Dean of Graduate Studies at the beginning of the semester in which the credit is to be earned.

Graduate students enrolled in either day or evening sessions who are employed full time will not be permitted to earn more than six units of credit per semester which may be applied to the official master's degree program. Graduate students attending summer sessions are limited to one unit of credit per week of attendance.

Graduate students who are employed on a half-time basis as graduate assistants at San Diego State College are limited to nine units of course work unless their request for excess load is approved by the Dean of Graduate Studies.

Students who enroll for more units than authorized will not receive credit on their official master's degree programs for the excess number of units completed.

OFFICIAL PROGRAMS OF STUDY

Official programs of study, as signed or revised by the graduate adviser and accepted by the Graduate Council, are binding unless a student withdraws from the Graduate Division. Withdrawal is defined as taking no courses during a calendar year. Students who have withdrawn must file a request for readmission to the Graduate Division before they will be permitted to register for any courses leading to the master's degree.

It is the student's responsibility to complete the specific courses listed on his official program of study. No changes will be permitted unless approved by the graduate adviser and the Dean of Graduate Studies.

APPLICATION FOR GRADUATION

An application for graduation must be filed in the Office of the Graduate Division four weeks in advance of the date of graduation.

or closely related field since Education 290A is the only specific course to-
graduate program must have the approval of the graduate adviser and the
graduate council.

PART TWO GRADUATE STUDY PROGRAMS—GENERAL REQUIREMENTS

MASTER OF ARTS DEGREE

GENERAL REQUIREMENTS

The fundamental purpose of the master of arts degree program is the improve-
ment of the individual's professional competence in educational service and the
development of his ability for continued self-directed study in the field of his
professional service. Students receiving the degree must hold a valid regular day
school service California credential (other than a provisional credential) or be a
licensed teacher from another state with one year of experience, or complete all
requirements for a California credential and receive it concurrently with the
master's degree. Exceptions to the foregoing requirement may be made in the
following cases:

- (1) For students who because of citizenship in a foreign country are ineligible
for a California credential, but who are teachers or are preparing to teach
in a foreign country.
- (2) For students preparing to teach or supervise in institutions not requiring
teaching credentials, provided that a minimum of 12 semester units of pro-
fessional education be included in their graduate program.

1. COURSE AND UNIT REQUIREMENTS:

- A. A minimum of 30 units in approved courses numbered 100 or above. Thirty
units must be earned within the seven-year period immediately preceding the
date when all of the requirements for the degree are completed. In unusual
circumstances, the student may petition for an extension of time. A student
may be required to validate courses outside the seven-year period for
recency by comprehensive examinations over their content or by substi-
tuting other approved courses (already completed or to be completed) for
outdated courses.
- B. A minimum of 10 units must be in graduate level (200-numbered) courses.
- C. All applicants for the master of arts degree must complete two units of
Education 290A, or its equivalent.
- D. The minimum requirements for a concentration in a major are:
 - (a) Eight units in graduate level (200-numbered) courses, which may include
a thesis or project, course 299, and one unit of bibliography (except in
English which requires two units), course 290; and
 - (b) Six additional units in the major or an approved related field selected
from upper division (100-numbered) or graduate level (200-numbered)
courses.

Note: The minimum requirements stated above hold for a graduate student
who is earning his master of arts degree and general secondary credential
simultaneously. *Students who are preparing to teach in institutions not re-
quiring a credential must include 12 units of professional education (includ-
ing Education 290A) in their official graduate program. The remaining 18
units may be taken in the major or closely related field, provided at least
eight units of graduate level (200-numbered) courses are included as in
(a) above and the official graduate program is approved by the graduate
adviser and the Graduate Council. Students who hold a valid regular day
service California credential at the time they are admitted to the Graduate
Division and students who are licensed teachers from another state with
one year of teaching experience may elect as much as 28 units in the major*

AUDITORS

A graduate student who wishes to enroll in a course for "audit" instead of
credit must meet the requirements for admission to the college and comply with
all regulations for which the student enrolling in the course for audit is held. An
auditor pays the same fees and has the same privileges as the student who takes
credit. Auditors are not eligible for credit but are not held for final examinations and do not
receive final credit in courses.

FINAL EXAMINATIONS

No final examination shall be given to individual students before the regular
time. Any student who is passing in a course who finds it impossible to take a final
examination on the date scheduled must make arrangements with the instructor to
have an independent study contract and take the deferred final examination
within the time allowed for making up incomplete studies.

TRANSFER OR EXTENSION COURSE CREDIT

A student may not more than six units of work earned in previous institutions col-
lege or work earned in previous institutions transferred to San Diego State
College. It is recommended by the graduate adviser and approved by the Dean of
Graduate Studies that the student be accepted as part of the requirements for the master's
degree. Approved for extension courses must be obtained by the student before
the close of registration for the semester during which the course is offered. Work
taken by correspondence is not acceptable.

STUDY LIST LIMITS FOR THE GRADUATE DIVISION

A full-time graduate student who is not taking any courses level 100 and
below may carry a maximum of 12 units of credit during any semester. If not in
more graduate level (200-numbered) courses is included in the study list, the
maximum number of units permitted is 12. An excess study load requires the
approval of the Dean of Graduate Studies at the beginning of the semester in
which the excess is to be carried.

Graduate students enrolled in either day or evening sessions who are employed
full time will not be permitted to carry more than six units of credit per semester
which may be applied to the official master's degree program. Graduate students
studying summer sessions are limited to one unit of credit per week of study.
Graduate students who are employed on a half-time basis as graduate assistants
at San Diego State College are limited to nine units of credit per semester unless
their request for excess load is approved by the Dean of Graduate Studies.

Students who enroll for more units than authorized will not receive credit on
their official master's degree program for the excess number of units completed.

OFFICIAL PROGRAMS OF STUDY

Official programs of study, as signed or marked by the graduate adviser and ap-
proved by the Graduate Council, and including names of students who have been
accepted by the Graduate Division, is defined as a plan of study during a certain
year. Students who have entered must file a request for permission to
the Graduate Division before they will be permitted to register in any course
leading to the master's degree.

It is the student's responsibility to complete the specific courses listed on his
official program of study. The student will be permitted to register in any course
graduate adviser and the Dean of Graduate Studies.

APPLICATION FOR GRADUATION

An application for graduation must be filed in the Office of the Graduate Div-
ision four weeks in advance of the date of graduation.

or closely related field, since Education 290A is the only specific course requirement involved. Of the 28 units so elected, at least eight units of graduate level (200-numbered) courses must be included as in (a) above. The official graduate program must have the approval of the graduate adviser and the Graduate Council.

Students who because of citizenship in a foreign country are ineligible for a California credential will be advised to follow the requirements listed above for students preparing to teach in institutions not requiring a credential.

E. A minimum grade point average of 3.0 (B) on all postgraduate work taken at this college for the master's degree, including courses taken to remove deficiencies. Credit for courses in which a grade lower than "C" is received cannot be used to satisfy requirements for graduate degrees.

F. Twelve units must be earned after advancement to candidacy.

2. RESIDENCE:

Applicants must complete at least 24 units of their programs in residence at San Diego State College.

3. ADVANCEMENT TO CANDIDACY:

In addition to holding regular graduate standing in the Graduate Division, a student desiring advancement to candidacy for the master of arts degree must file a complete graduate program of study, approved by his graduate adviser, in the Office of the Graduate Division. An application for advancement to candidacy will be sent to the student after (a) he has earned at least 12 units in his graduate program at this college with a minimum grade point average of 3.0 (B) or six units for graduates of San Diego State College, provided their undergraduate grade point average was at least 2.75; (b) he has removed all undergraduate deficiencies and has completed all departmental or divisional requirements; (c) he has attained satisfactory scores on the Graduate Aptitude Examination and the achievement examination (General Culture Test); (d) he has been recommended for advancement to candidacy by the department or division concerned; and (e) final approval has been given by the Graduate Council. Written notification of advancement to candidacy will be sent to the student from the Office of the Graduate Division.

4. EXAMINATIONS:

Every student desiring the master of arts degree must take the Graduate Aptitude Examination and the Achievement Examination prior to or during his first semester in residence. (See below for comprehensive examinations in Plan B.)

5. THESIS:

Plan A, requiring a thesis or project, may be chosen by a student majoring in any field in which the master of arts degree is offered. Three units of credit are granted for the thesis or project, course 299, upon its acceptance by the student's thesis committee and the Graduate Council. Students will not be permitted to register for course 299 until they have received official notice of advancement to candidacy from the Office of the Graduate Division and have an officially appointed thesis or project committee. Theses or projects must be completed four weeks in advance of the date of the convocation at which the degree is to be conferred. Information as to specific requirements for typing, binding, number of copies, etc., may be obtained at the Office of the Graduate Division.

Plan B, involving a comprehensive examination in lieu of a thesis, may be chosen by students majoring in education, business education, foreign languages, and mathematics. Dates at which comprehensive examinations in lieu of theses are given are determined by the department or division concerned. Results on comprehensive examinations must be reported to the Office of the Graduate Division by the department or division. Students majoring in education must pass the comprehensive examination to become eligible to take Education 295A-295B, the writing seminars required in their major concentration, or Education 299, the thesis course.

6. FINAL APPROVAL

The student's graduate program of study as approved by the graduate adviser and the Graduate Council must be completed before the degree can be granted.

MASTER OF SCIENCE DEGREE

GENERAL REQUIREMENTS

Graduate studies in applied biology provide concentrations in botany, general biology, microbiology, and zoology, thus permitting a graduate student to receive advanced training for a wide variety of occupational specialties.

Graduate studies in business administration provide a broad graduate education in business or specialized preparation in such fields as accounting, banking and finance, business management, industrial management, insurance, marketing, and personnel management. Persons with undergraduate degrees in engineering can arrange programs especially planned to meet their needs in the fields of business management or industrial management.

Graduate studies in chemistry provide for concentration in the traditional subdivisions of chemistry: physical, inorganic, organic, biochemistry, and analytic. Special seminars planned for their applicability to industry are available to the student.

Graduate studies in mathematics provide the basic concepts of advanced work and such techniques of applied mathematics as may be required by local industry.

Graduate studies in the physics program offer two areas of concentration: atomic and nuclear physics and electronics; however, students may pursue advanced studies in a number of specialized fields. A wide variety of courses is available in the various fields of physics used in industrial and laboratory practice.

Graduate studies in public administration are designed to prepare students for public service and to give additional training to those persons in public service who wish to do advanced study. The program offers a broad education in basic administrative knowledge, political science, and related social science fields.

1. COURSE AND UNIT REQUIREMENTS:

A. A minimum of 30 units in approved courses numbered 100 or above and the satisfactory completion of six units of directed field experience, course 296, except that all or part of these six units may be waived if the student's professional work experience is judged adequate both in quality and quantity. All 30 or 36 units must have been earned within the seven-year period immediately preceding the date when all of the requirements for the degree are completed. In unusual circumstances, the student may petition for an extension of time. A student may be required to validate courses outside the seven-year period for recency by comprehensive examinations over their content or by substituting other approved courses (already completed or to be completed) for out-dated courses.

B. A minimum of 10 units must be in graduate level (200-numbered) courses, exclusive of course 296. Some departments require 12 units.

C. Minimum requirements for concentration in a major are 24 units of approved upper division (100-numbered) or graduate level (200-number) courses.

D. A minimum grade point average of 3.0 (B) on all postgraduate work taken at this college for the master's degree, including courses taken to remove deficiencies. Credit for courses in which a grade lower than "C" is received cannot be used to satisfy requirements for advanced degrees.

E. Twelve units of work must be earned after advancement to candidacy.

2. RESIDENCE:

Applicants must complete at least 24 units of their programs in residence at San Diego State College.

3. DIRECTED FIELD EXPERIENCE:

Each department offering the master of science degree will determine whether an applicant's present or previous experience may be substituted for all or part of the six units of directed field experience at the date that the student applies for graduate study in the department. If a department decides that the applicant's previous experience is acceptable, it notifies the Office of the Graduate Division of the decision, stating (1) the place of employment, (2) the type of work performed, and (3) the length of time employed. The official program of the applicant will then be adjusted to show a requirement of 30 units for graduation.

If an applicant's previous experience cannot be accepted as a substitute for the entire six units of directed field experience, or if the student is without experience, the official program must show a total of more than 30 required units for graduation including course 296, Directed Field Experience. The department will make provision for the scheduling of this course as a part of its regular offerings, and will have the student enroll officially in it. Arrangements must be made with local government or social agencies or industries whereby the proper field experiences may be obtained. The department will determine the type of field experience, supervise the work being done by the student at the place where he is obtaining the field experience, require from the student progress and/or work reports as appropriate, and report the credit earned to the Office of the Registrar at the close of the semester or summer session. The symbol "Cr" (credit) is used in reporting the satisfactory completion of course 296.

4. ADVANCEMENT TO CANDIDACY:

In addition to holding regular graduate standing in the Graduate Division, a student desiring the master of science degree must file a complete graduate program of study, approved by his graduate adviser, in the Office of the Graduate Division. An application for advancement to candidacy will be sent to the student after (a) he has earned at least 12 units in his graduate program at this college with a minimum grade point average of 3.0 (B) or six units for graduates of San Diego State College, provided their undergraduate grade point average was at least 2.75; (b) he has removed all undergraduate deficiencies and has completed all departmental or divisional requirements; (c) he has obtained satisfactory scores on the Graduate Aptitude Examination and any required departmental examinations; (d) he has been recommended for advancement to candidacy by the department or division concerned; and (e) final approval has been given by the Graduate Council. Written notification of advancement to candidacy will be sent to the student from the Office of the Graduate Division.

5. EXAMINATIONS:

Every student desiring the master's degree must take the Graduate Aptitude Examination prior to or during his first semester in residence. Certain departments require additional examinations as listed in Part Three of this bulletin under the major field or area of concentration.

6. THESIS:

Plan A, involving a thesis, is required for the master of science degree in business administration, psychology, and public administration. A thesis is not required for the degree in chemistry, mathematics, or physics; however, subject to the department's approval, a student may elect Plan A.

Plan B requires the comprehensive examination in lieu of a thesis. (Refer to departmental or divisional requirements in Part Three of this bulletin under the major field or area of concentration, for further information.)

7. FINAL APPROVAL:

The student's graduate program of study as approved by the graduate adviser and the Graduate Council must be completed before the degree can be granted.

ADVANCED CREDENTIALS

GENERAL SECONDARY CREDENTIAL

The general secondary credential authorizes its holder to teach any subject in grades 7 through 14. It requires a satisfactory major and minor in subjects commonly taught in high school, and specific requirements in professional education. It requires a full year of graduate work.

ADMISSION REQUIREMENTS

The requirements for admission to the credential program are in addition to the requirements for admission to the college. Students are admitted to teacher education for the general secondary credential on the basis of the following requirements:

1. A satisfactory score on the college aptitude test taken at the college.
2. Competence in the areas of English, arithmetic, handwriting, reading, and spelling, as evidenced by satisfactory scores on the fundamentals test given at the college.
3. Basic subject area background as evidenced by satisfactory scores on the general culture test given at the college.
4. Quality of speech habits and voice control as evidenced in interviews and oral speech test given at the college.
5. Adequate health status as evidenced by a health examination given for teaching credential candidates.
6. Interviews with representatives of the Teacher Education Admissions Committee, and with a faculty representative of the department in which the student is a major.
7. A minimum grade point average of 2.5 in all college work, and 2.75 in the major teaching subject.
8. An official evaluation and program approved by the authorized departmental representative in the student's major field, and by a representative in secondary education.

COURSE REQUIREMENTS

For the general secondary credential, students must satisfy course requirements in a major subject field, in a minor subject field, in general education, and in professional education courses. In addition, a two-unit course in Health Education for Teachers (Health Education 151) is required. Complete requirements are outlined in the regular college catalog.

The Major Field

Majors for the credential are offered in the following subjects: art, business education, English, French, health education, homemaking education, industrial arts, language arts, life science and general science, mathematics, music, physical education, physical science and general science, psychology (requiring two minors), romance languages, social science, Spanish, and speech arts.

Majors for the credential usually require as much as 40 semester units, depending upon subject fields, including both undergraduate and graduate (200-numbered) courses. In most cases, approximately four to six graduate (200-numbered) units are required as part of the major.

The Minor Field

Teaching minors for the credential are offered in the following subjects: art, business education, economics, English, French, health education, history, homemaking education, industrial arts, life science and general science, mathematics, music, physical education, physical science and general science, social science, Spanish, and speech arts. Teaching minors usually require 21 to 27 semester units, including lower division and upper division work. Graduate courses (200-numbered) are not required in the minor.

General Education

The credential requires completion of at least 40 semester units in general education with a minimum of six units in each of the following areas: (1) science and mathematics, (2) practical and fine arts, such as art, music, homemaking, health education, physical education, industrial arts, and similar fields, (3) social studies, and (4) the communicative arts, such as languages, literature, speech arts, and similar fields. Courses offered in fulfillment of this general education requirement may also be applied toward the fulfillment of major and minor requirements, provided the courses are within the same subject field as the major and minor.

Professional Education

For all general secondary candidates, regardless of major or minor subject fields, the following professional education courses, or their equivalents, are required either as undergraduate or graduate units: Education 100, The Secondary School (4 units); Education 110, Development and Learning (4 units); Education 120, The Teaching Process (4 units); Education 180 or 316A, Directed Teaching—Secondary (6 units); Education 121, Methods and Materials of Instruction and Audiovisual Aids (4 units); Education 230, Guidance Problems in Secondary Education (3 units); and Education 250, Curricular Problems in Secondary Education (3 units). In addition, Health Education 151, Health Education for Teachers (2 units) is also required.

ADVANCED STANDING

Students who hold the bachelor's degree, who may have graduate work applicable to the credential, may have their credits evaluated to determine additional needed requirements by applying for an official evaluation at the Evaluations Section, Admissions Office, Administration Building of the college.

RELATIONSHIP TO THE MASTER OF ARTS DEGREE

Students may fulfill master's degree requirements and the general secondary credential concurrently. The total number of units required will depend upon the adequacy of the undergraduate work in the major and minor fields, and in professional education. Students working for both the credential and the master's degree concurrently may choose as master's degree majors either the subject field of their major or one of the concentrations in education.

ADMINISTRATION AND SUPERVISION CREDENTIALS

Students may earn credentials in elementary administration, secondary administration, and supervision. A person who holds an administration credential is authorized to serve as principal, vice principal, or other administrative officer as assigned by boards of education on the grade level designated by the credential. A person who holds the supervision credential is authorized to supervise the teaching of any subject on the grade level designated by the basic credential.

The elementary administration credential requires the completion of 30 semester hours of upper division or graduate work beyond the A.B. degree or general elementary credential. The secondary administration credential requires 18 semester hours of upper division or graduate work in addition to completion of requirements for the general secondary credential. The supervision credential requires the completion of 24 semester hours of upper division or graduate work concurrent with, or subsequent to, public school service.

ADMISSION REQUIREMENTS

Students desiring to earn any of the administration or supervision credentials must be admitted to the program of administrative studies prior to the completion of the first 12 units of the program. Admission is granted on basis of the following requirements:

1. *Academic ability* as indicated by (a) regular graduate standing (refer to the section of this bulletin on Admission to the Graduate Division for specific information), (b) satisfactory scores on the Graduate Aptitude Examination (not required of students who hold the master's degree from an accredited college or university), and (c) a grade average of B on all graduate work applicable to credential requirements.

2. *Personal qualities* as evidenced in (a) a minimum of two interviews with members of the Administrative Studies Committee, (b) data recorded by the student on a personal data sheet, and (c) class participation during initial graduate course work.

3. *Professional competence* as evidenced in present or past teaching position by (a) leadership in education, (b) service to the profession, and (c) success as a teacher.

4. *Previous preparation* as evidenced by an official evaluation for the credential desired, obtained from the Evaluations Section, Admissions Office of the college. A general elementary or general secondary teaching credential is a prerequisite.

Students interested in administration or supervision credentials should apply for admission to the credential program at their first opportunity. Application forms and additional information are available in the Office of the Chairman of the Administrative Studies Committee, Education Division.

COURSE REQUIREMENTS

Courses required for administration and supervision credentials are usually available in evening sessions and summer sessions. Applicable course offerings are more limited during regular day sessions.

Elementary Administration

Prerequisites: 5 units to include Education 101, History and Philosophy of Education; and Education 151, Measurement and Evaluation in Elementary Education; and the general elementary teaching credential.

Credential requirements: 21 units to include Education 240, Curriculum Construction and Evaluation in Elementary Education; Education 115, Guidance in Elementary Education; Education 260, Federal, State, County and City School Organization and Administration; Education 270, School Finance, Business Administration and Law; Education 262, The Organization and Administration of Elementary Schools; Education 264, Elementary School Supervision; and either Education 266, Field Experience in Elementary School Administration and Supervision, or Education 316B, Directed Internship.

Additional courses for the master of arts degree: 12-15 units to include (1) Education 290, Procedures of Investigation and Report; (2) one of the following: Education 205, History of Education; Education 206, Philosophy of Education; Education 207, Educational Sociology; or Education 220, Advanced Educational Psychology; (3) Education 278, Educational Leadership; and (4) either Education 295A-295B, Seminar, or Education 299, Thesis.

Secondary Administration

Prerequisites: 10-14 units to include Education 101, History and Philosophy of Education, or Education 100, The Secondary School; Education 250, Curricular Problems in Secondary Education; Education 152, Measurement and Evaluation in Secondary Education, or Education 120, The Teaching Process; and Education 230, Guidance Problems in Secondary Education; and the general secondary teaching credential.

Credential requirements: 15 units to include Education 260, Federal, State, County and City School Organization and Administration; Education 270, School Finance, Business Administration and Law; Education 263, The Organization and Administration of Secondary Schools; Education 265, Secondary School Supervision; and either Education 267, Field Experience in Secondary School Administration and Supervision, or Education 316B, Directed Internship.

Additional courses for the master of arts degree: 12-15 units to include (1) Education 290, Procedures of Investigation and Report; (2) one of the following: Education 205, History of Education; Education 206, Philosophy of Education; Education 207, Educational Sociology; or Education 220, Advanced Educational Psychology; (3) Education 278, Educational Leadership; and (4) either Education 295A-295B, Seminar, or Education 299, Thesis.

School Supervision

Prerequisites: The holding of the appropriate basic teaching credential (general elementary or general secondary).

Credential requirements: 24 units of postgraduate work concurrent with or subsequent to public school service to include (1) Education 240, Curriculum Construction and Evaluation in Elementary Education, or Education 254, Advanced Problems in Secondary School Instruction; (2) Education 264, Elementary School Supervision, or Education 265, Secondary School Supervision; (3) Education 278, Educational Leadership; (4) Education 240, Curriculum Construction and Evaluation in Elementary Education, or Education 250, Curricular Problems in Secondary Education; (5) Education 266, Field Work in Elementary School Administration and Supervision, or Education 267, Field Work in Secondary Administration and Supervision, or Education 316B, Directed Internship; (6) Education 262, The Organization and Administration of Elementary Schools, or Education 263, The Organization and Administration of Secondary Schools; (7) Education 270, School Finance, Business Administration, and Law; and (8) Education 207, Educational Sociology, or Education 260, Federal, State, County and City School Organization and Administration.

Additional courses for the master of arts degree: 6-9 units to include (1) Education 290, Procedures of Investigation and Report; (2) Education 295A-295B, Seminar, or Education 299, Thesis.

ADVANCED STANDING

Students who have already completed courses which may apply to these credentials may have their credits evaluated to determine needed additional work to qualify for any of the credentials by applying for an official evaluation at the Evaluations Section, Admissions Office, Administration Building of the college.

EXPERIENCE

Before a student can be granted an administration credential, he must verify a minimum of two years of successful teaching experience at the appropriate grade level. For the supervision credential, he must verify desirable personal characteristics for supervision by recommendations from two persons associated with him in a school administrative or supervisory relationship within the last five years.

RELATIONSHIP TO THE MASTER OF ARTS DEGREE

Students who fulfill admission requirements for administration or supervision credential programs will need to meet additional requirements for advancement to candidacy for the master's degree. (Refer to this section of this bulletin on master of arts degree programs for further information.) Students who meet course requirements for the credential will be required to complete additional course work to fulfill master's degree requirements, as indicated under the sections above on additional courses for the master of arts degree.

GENERAL PUPIL PERSONNEL SERVICES CREDENTIAL

The credential for general pupil personnel services authorizes the holder to perform any pupil personnel services in the fields of child welfare and attendance, psychology, psychometry, and pupil counseling, in elementary and secondary schools, except for the specialized function of testing for special class placement, which can be performed only by those who have completed the school psychometrist specialization, and only then if they are working under the supervision of one holding the school psychologist authorization. The special authorization of "school psychologist" is an extension of the general credential, requiring a second graduate year of applicable work.

In general, counselors and other pupil personnel workers who are employed more than half time are required to hold the general pupil personnel services credential.

ADMISSION REQUIREMENTS

Students who plan to complete requirements for this credential must be formally admitted to the credential program prior to the completion of the first 15 units of the program. Admission is granted on basis of the following requirements:

1. **Academic ability** as indicated by (a) regular graduate standing (refer to the section of this bulletin on Admission to the Graduate Division for specific information), (b) satisfactory scores on the graduate aptitude examination (not required of students holding the master's degree from an accredited college or university), and (c) a minimum grade point average of 3.0 (B) on all postgraduate work, including at least 12 units on the credential program.

2. **Personal qualities** as evidenced in interviews and other personal data.

3. **Professional background and experience** as described in a paper of five pages or less, which includes a self-evaluation as a guidance worker.

4. **Previous preparation** as evidenced by an official evaluation for the credential obtained from the Evaluations Section, Admissions Office of the college.

Applicants for the master's degree must meet additional requirements. (Refer to the section of this bulletin on master of arts degree for further information.) Students interested in this credential should apply for admission to the program at their first opportunity. Application forms and additional information are available in the Office of the Chairman of Guidance Studies, Education Division.

COURSE REQUIREMENTS

To satisfy the requirements for the credential, a student must complete a minimum of 30 units of postgraduate work which is composed of field experiences and classwork. All students are required to complete a general core of work and one specialized area selected from pupil counseling (elementary or secondary), child welfare and attendance, or school psychometry. Students desiring the school psychology authorization must first complete the specialized area in psychometry, and then complete an additional 30 units of specialized work in psychology and educational psychology.

Courses required for this credential are usually available in evening sessions and summer sessions. Applicable course offerings are more limited during the regular day sessions.

Prerequisite

A minimum of 12 semester units of education, including growth and development, educational psychology, and measurement and evaluation, is required in prerequisite work.

The General Core Area

For students planning to specialize in pupil counseling (elementary or secondary) or in child welfare and attendance, the general core area consists of the following courses: either Education 115, Guidance in Elementary Education (3 units), or Education 230, Guidance Problems in Secondary Education (3 units); Psychology 104A, Statistical Methods in Psychology (3 units); Education 231, Techniques of Pupil Appraisal (3 units); Education 170, Exceptional Children (3 units); Education 233, Guidance Counseling Techniques (3 units); and Education 234, Administration of Pupil Personnel Services. Students planning to specialize in school psychometry or school psychology are advised to substitute Psychology 105, Psychological Testing, for Education 231, above, and to add to the general core area, Psychology 151, Introduction to Clinical Appraisal.

Areas of Specialization

For each of the specialized areas, a minimum of 9 to 12 units is required, as indicated below:

School Counseling—Elementary: Education 247, Advanced Diagnosis and Treatment of Learning Difficulties (3 units); and Education 316B, Directed Internship—Counseling (6 units).

School Counseling—Secondary: Education 232, Problems in Vocational Guidance (3 units); and Education 316B, Directed Internship—Counseling (6 units).

Child Welfare and Attendance: Sociology 230, Principles of Social Casework (3 units); Sociology 231, Fieldwork in Social Casework (3 units); and Education 316B, Directed Internship—Child Welfare and Attendance (3 units).

School Psychometry: Psychology 204, Individual Psychological Testing (3 units); Psychology 205, Advanced Mental Testing (3 units); Education 220, Advanced Educational Psychology (3 units); and Education 316B, Directed Internship (3 units).

School Psychologist: Requires completion of the general core area, the specialization area for school psychometry listed above, and an additional 30 units of graduate work.

ADVANCED STANDING

Students who have already completed graduate work may have their credits evaluated to determine additional work needed for the credential by applying for an official evaluation at the Evaluations Section, Admissions Office of the college.

EXPERIENCE

Before a student can be granted the credential, he must verify a minimum of two years of successful teaching experience. Under certain conditions, students may substitute two years of supervised field experience in school social work, school psychometry, or school psychology, of which at least one year must have been in a public school.

RELATIONSHIP TO THE MASTER OF ARTS DEGREE

Students who fulfill admission requirements for the credential program will need to fulfill additional requirements for advancement to candidacy for the master's degree. (Refer to the section of this bulletin on master of arts degree for further information.) Students who complete the course requirements for the credential will usually have completed all requirements for the master's degree in education with a concentration in pupil personnel services, except for Education 290A-290B, Procedures of Investigation and Report, and Bibliography (3 units) and either Education 295A-295B, Seminar (6 units) or Education 299, Thesis (3 units).

CREDENTIAL FOR TEACHING EXCEPTIONAL CHILDREN

The credential for teaching exceptional children is available with two areas of concentration: teaching of the mentally retarded, and speech correction and lip reading. The first authorizes the holder to teach special classes designed for mentally retarded pupils in elementary and secondary schools, and the second authorizes the teaching of special classes for elementary or secondary pupils who need speech correction or training in lip reading.

ADMISSION REQUIREMENTS

Students desiring to complete requirements for this credential must be formally admitted to the credential program prior to the completion of 15 units of the required courses. Admission is granted on the basis of the following requirements:

1. *Academic ability* as indicated by (a) a grade point average on all college work of 2.2 and (b) satisfactory completion of a basic credential program or admission to same.
2. *Personal qualities* as evidenced in interviews with at least two members of the Special Education Studies Committee of the Education Division.
3. *Professional background and experience* as described in a paper of five pages or less, which includes a self-evaluation as a teacher of exceptional children.
4. *Previous preparation* as indicated by an official evaluation for the credential obtained from the Evaluations Section, Admissions Office of the college.

Students interested in the credential for teaching exceptional children should apply for admission to the program at their first opportunity. Admission forms and additional information are available in the Office of the Chairman of the Special Education Studies Committee, Education Division.

COURSE REQUIREMENTS

Course work leading to the credential for teaching exceptional children is usually available in regular day sessions, evening sessions, and summer sessions. Some of the required courses are usually offered only in evening and summer sessions.

Prerequisites

A student desiring this credential must hold, or concurrently earn, a general elementary, junior high school, or general secondary credential.

General Core Subjects for All Students

Thirteen units of subjects in a general core are required of all students for either area of concentration: teaching of the mentally retarded, or speech correction and lipreading. The following courses must be completed: Education 170, Exceptional Children; Education 115, Guidance in the Elementary School, or Education 230, Guidance Problems in Secondary Education, or Psychology 152, Introduction to Methods of Counseling; Speech Arts 170, Speech Development; and Education 182 or Education 316B, Directed Internship in the field of specialization, or one year of verified successful teaching experience in the area of specialization.

Areas of Specialization

Teaching of the Mentally Retarded. In addition to the general core of 13 units, a minimum of 11 units from the following courses, plus electives to bring the total units for the credential to a minimum of 24: Education 171, Curriculum and Methods of Teaching the Mentally Retarded, or Education 172, Workshop for Teachers of the Mentally Retarded; Art 61A, Arts and Crafts, or Education 172, Workshop for Teachers of Mentally Retarded when taken for six units; and Psychology 109, Mental Deficiency.

Speech Correction and Lipreading. In addition to the general core of 13 units, a minimum of 21 units to include the following courses: Speech Arts 174, Principles and Methods of Speech Correction; Speech Arts 176, Stuttering and Neurological Disorders; Speech Arts 177, Aural Rehabilitation; Speech Arts 178, The Teaching of Lipreading; Speech Arts 179, Clinical Methods in Speech Correction; and Speech Arts 180, Fieldwork in Clinical Practice in Speech Correction.

ADVANCED STANDING

Students who have completed applicable courses, either graduate or undergraduate, may have their credits evaluated to determine needed additional course requirements by applying for an official evaluation at the Evaluations Section, Admissions Office of the college.

RELATIONSHIP TO THE MASTER OF ARTS DEGREE

Students who meet admission requirements for the credential program will need to meet additional requirements for advancement to candidacy for the master's degree. (Refer to the section of this bulletin on the master of arts degree for further information.) Students who fulfill the course requirements for the credential will be required to complete additional courses for the master's degree, including Education 290A-290B, Procedures of Investigation and Report, and Bibliography (3 units) and Education 295A-295B, Seminar (6 units) or Education 299, Thesis (3 units).

PART THREE

MAJOR FIELDS AND AREAS OF CONCENTRATION

COURSES OF INSTRUCTION

Courses offered by the college for which credit may be applied toward a master's degree are listed under major fields and areas of concentration on the following pages. Each course is listed by department number, title, units in parentheses, and semester of the academic year in which the course is offered, indicated by Roman numeral. Graduate level (200-numbered) courses carry course descriptions. Full descriptions for other courses may be found in the general catalog. Not all courses are offered every semester or every year. Ordinarily each listed course will be offered not less than once during a two-year period. For courses offered in any given semester, together with the time and place of meeting, consult the semester *Class Schedule*, which is available prior to the date of registration of each semester, or the summer session bulletin which is available prior to the opening of summer session.

The college reserves the right to withdraw any course listed in the class schedule for which the enrollment is not sufficient to warrant the organization of a class.

Graduate level (200-numbered) courses are open to students with regular graduate standing in the Graduate Division. Unclassified graduate students must obtain the permission of the instructor and the Dean of Graduate Studies before they may enroll in a graduate level (200-numbered) course.

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree as described in Part Two of this bulletin under Master of Arts Degree. A thesis or creative project is required.

SPECIFIC REQUIREMENTS FOR MASTER OF ARTS PROGRAM

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree as described in Part Two of this bulletin under Master of Arts Degree. A thesis or creative project is required.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete four units of Art 200A-200B, Special Problems as required in the teaching major in art.

ADVANCEMENT TO CANDIDACY

For information on general requirements for advancement to candidacy, refer to Part Two of this bulletin, the section on Master of Arts Degree-General Requirements.

FACULTY

Department Chairman: E. G. Jackson
 Graduate Advisor: E. G. Jackson
 General Secondary Credential Advisor: E. G. Jackson
 Professor: E. G. Jackson, M.A., J. D. Switzer, M.A.
 Associate Professor: Lowell Houser, Ed.D., Chicago Art Institute; The H. Knoke, M.A.; G. M. Sorenson, M.A.
 Assistant Professor: Michelle S. Bicklow, M.A.; Walter Brock, M.A.; J. H. Dink, A.B.; Paul Hingston, M.A.; Martha W. Longnecker, M.A.; Robert Wallace, D.M.
 Instructor: Joann E. Tanner, M.A.

ART

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Art offers graduate work leading to the master of arts degree with a major in art and also graduate work leading to the general secondary credential with a teaching major or minor in art.

The Art Department is equipped to offer advanced work to graduate students in the fields of painting, sculpture, ceramics, printmaking, and the history of art. In addition to the excellent equipment of the Fine Arts Building at the college, the Fine Arts Gallery of San Diego and the Museum of Archaeology, both located in Balboa Park, offer valuable original materials as well as specialized libraries for research in those fields.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under "Admission to the Graduate Division." In general, the student must have completed an undergraduate major in art with a minimum of 24 upper division units before he will be permitted to begin work on the graduate program. The student must also be able to show that he is adequately advanced both in drawing and design to carry out projects which measure up to graduate standards. This requirement will be measured through an examination of examples of the student's undergraduate work. If it is determined that the student is capable of doing graduate art work, he may be permitted to begin such work even though he has not completed an appropriate undergraduate major in art. Those students whose work is insufficiently advanced for regular graduate standing may enroll for courses, under guidance of the department, in order to meet the standard requirements.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, as described in Part Two of this bulletin under Master of Arts Degree. A thesis or creative project is required.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete four units of Art 200A-200B, Special Problems, as required in the teaching major in art.

ADVANCEMENT TO CANDIDACY

For information on general requirements for advancement to candidacy, refer to Part Two of this bulletin, the section on Master of Arts Degree-General Requirements.

FACULTY

Department Chairman: E. G. Jackson
 Graduate Adviser: E. G. Jackson
 General Secondary Credential Adviser: E. G. Jackson
 Professors: E. G. Jackson, M.A.; J. D. Swiggett, M.F.A.
 Associate Professors: Lowell Houser, Diploma, Chicago Art Institute; Ilse H. Ruocco, M.A.; G. N. Sorenson, M.A.
 Assistant Professors: Maybelle S. Bigelow, M.A.; Walter Bock, M.A.; J. H. Dirks, A.B.; Paul Lingren, M.A.; Martha W. Longnecker, M.F.A.; Robert Wallace, D.Litt.
 Instructor: Joann L. Tanzer, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ART

UPPER DIVISION COURSES

- | | |
|--|--|
| 106A-106B. Printmaking (2-2) I, II | 116A-116B. Advanced Painting (2-2) I, II |
| 106C. Illustration (2) II | 117A-117B. Advanced Sculpture (2-2) I, II |
| 106D. Advanced Furniture Design (2) I, II | 119A-119B. Ceramics (2-2) Year, I |
| 107. Color and Design in Merchandise (2) I, II | 120A-120B. Advanced Design (2-2) Year, I, II |
| 111A-111B. Industrial Design (2-2) I, II | 195A-195B. Interior Design (2-2) I, II |
| 112A-112B. Design and Composition (2-2) Year, I | 199. Special Study (1 to 6) I, II |
| 115A-115B-115C-115D. Life Drawing and Painting (2-2-2-2) I, II | |

Aesthetics

150. Appreciation and History of Art (2) II

GRADUATE COURSES

- 200A-200B. Special Problems (2-2) I, II

A graduate course in which students may carry out projects in various fields of art under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply work within a certain field after discussions with the art faculty.

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

298. Special Study (1 to 6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis or Project (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

BUSINESS ADMINISTRATION

DIVISIONAL REGULATIONS

GENERAL INFORMATION

The Division of Business Administration offers graduate study leading to the master of science degree in business administration. This program with concentrations in accounting, business management, finance, industrial management, marketing, insurance, and personnel management is offered to equip business leaders for the complicated and diverse responsibilities they must accept in the future. It is designed to provide not only breadth of preparation, but also intensive professional training in several special fields. Close contacts with large and small firms, both local and national, facilitate the type of research projects available to graduate students in business administration. The demand by industry and government for students with graduate training in business administration is a growing one; such students command a premium upon graduation.

Students who have a degree in engineering and who plan to serve in an executive capacity will find it advisable to complete the master of science degree in business administration. The usual business administration prerequisites are necessary, but may be taken during the undergraduate program. Those desiring the combination of an undergraduate major in engineering to be following by the master of science degree with specialization in the fields of industrial or business management should obtain the assistance of an adviser in planning their program at the beginning of their undergraduate college work. Information may be obtained from the Co-ordinator of Industrial Management in the Division of Business Administration.

For a description of the program leading to the master of arts degree in business education, refer to the section of this bulletin on Business Education, which follows this section.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. In addition, the Division of Business Administration requires the following:

- A. An acceptable undergraduate grade point average, related to scores on the Graduate Aptitude Examination as follows:
 - (1) Students who have a "B" average and a stanine of five or better on the test will be recommended by the division for regular graduate standing in the Graduate Division.
 - (2) Students who have a "B" average but have a stanine less than five on the test may be recommended for regular graduate standing, subject to a satisfactory formal interview.
 - (3) Students who do not meet the requirements stated in (1) and (2) above, will be continued in unclassified graduate standing until proficiency for graduate study has been demonstrated by excellence in approved upper division courses. Usually the student will be assigned a minimum of 12 upper division units which he must complete in accordance with accepted graduate standards.
- B. Completion of the Admission Test for Graduate Study in Business. The student should arrange to take this test prior to enrolling in the college, and must take it early in the first semester of residence. Details concerning this test, fees, and dates on which the test may be taken may be obtained from the Test Officer, San Diego State College, or by writing directly to the Educational Testing Service, 20 Nassau Street, Princeton, New Jersey.

- C. The student must have completed the following undergraduate core courses or include them in his graduate program as prerequisites or, in exceptional cases, as part of his master's program. In some cases, these courses may be taken by qualifying examinations for removal of the requirement.

Course Prerequisites

Business Administration 1A-1B, Principles of Accounting (6 units)
 Economics 1A-1B, Principles of Economics (6 units)
 Business Administration 30A-30B, Business Law (6 units)
 Business Administration 134, Business and Industrial Management (3 units)
 Business Administration 160, Marketing Principles (3 units)
 Economics 140, Statistical Methods (3 units)
 Business Administration 131, Corporation Finance, or Economics 135, Money and Banking (3 units)

- D. Students taking the master's program with personnel management as their field of concentration who have completed their undergraduate general major program at San Diego State in personnel management, with areas in business administration, economics, and psychology, will not be required to meet the pattern requirements presented in "C" above. Applicants from other institutions will be held for the following core subjects in the personnel management general major as prerequisites:

Course Prerequisites

Business Administration 1A, Principles of Accounting (3 units)
 Economics 1A-1B, Principles of Economics (6 units)
 Psychology 1, General Psychology (3 units)
 Psychology 6, Learning and Integrated Behavior (3 units)
 Business Administration 134, Business and Industrial Management (3 units)
 Business Administration 144, Personnel Management (3 units)
 Economics 150, Labor Problems (3 units)
 Psychology 104A, Statistical Methods in Psychology (3 units)
 Psychology 105, Psychological Testing (3 units)

These requirements may be met by examination, or in exceptional cases, a few of these courses may be included in the graduate program.

SPECIFIC DIVISIONAL REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

In addition to meeting the requirements for regular graduate standing and the general requirements for the master of science degree, described in Part Two of this bulletin under Master of Science Degree, the student must include 12 units of graduate level (200-numbered) courses. The 30 to 36 required units of postgraduate work must include the following courses:

	Units
Business Administration 299, Thesis	3
Business Administration 200, 220, 221, 222, 223, 250, Economics 200A-B, 201	9 or more
Total required in the 200-series	12
Additional courses in the 100- or 200-series (maximum of 6 units outside of Business Administration or Economics; to include Economics 100A or 100B, unless student has had other advanced work in Economics)	18
Business Administration 296, Directed Field Experience (required only of students who do not have satisfactory experience in their occupational area)	0-6
Total number of units required	30-36

Students in the master's program with the personnel management concentration may substitute for the listed business administration courses up to six units of appropriate courses in the fields of psychology or sociology, if approved by the graduate adviser.

ADVANCEMENT TO CANDIDACY

In addition to the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Science Degree, the Division of Business Administration also requires a satisfactory score on the admission test for graduate study in business before recommending an applicant for advancement to candidacy.

SCHOLARSHIPS AND ASSISTANTSHIPS

Teaching assistantships are available for a limited number of outstanding students. Application should be made to the chairman of the department concerned. Refer to Part One of this bulletin for list of scholarships available to graduate students.

FACULTY

Division Chairman: Charles W. Lamden

Department Chairmen:

Accounting Department: V. E. Odmark

Management Department: Frances B. Torbert

Marketing Department: G. K. Sharkey (acting)

Graduate Advisers:

Accounting: E. P. Brown, C. W. Lamden, V. E. Odmark

Business Management and Industrial Management: D. W. Belcher, O. Galbraith, G. L. Hodge, A. C. Pierson, Simon Reznikoff

Finance: E. P. Brown, G. K. Sharkey

Insurance: R. K. Castetter

Marketing: P. M. Carrick

Personnel Management: D. W. Belcher, Frances B. Torbert

Professors: D. W. Belcher, Ph.D.; E. P. Brown, M.A., P.A.; R. E. Cameron, Ph.D.; C. W. Lamden, Ph.D., C.P.A.; R. S. Vaile, M.A.; W. H. Wright, Ph.D.

Associate Professors: R. K. Castetter, LL.M.; G. L. Hodge, Ph.D.; V. E. Odmark, Ph.D., P.A.; Frances Torbert, M.A.

Assistant Professors: Arthur Brodshatzer, M.B.A., C.P.A.; B. E. Brown, M.A., C.P.A.; P. M. Carrick, Ph.D.; L. J. Dodds, M.B.A., C.P.A.; D. B. Ferrel, M.B.A., C.P.A.; D. I. Fellers, M.S.; Oliver Galbraith, M.B.A.; E. A. Hale, Ph.D.; W. H. Hippaka, J.D.; K. E. Larsen, M.A.; D. F. Lawson, M.S.; A. C. Pierson, M.B.A.; Simon Reznikoff, LL.B.; G. K. Sharkey, Ph.D.; L. J. Shuster, M.B.A.; D. E. Williamson, M.B.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN BUSINESS ADMINISTRATION

UPPER DIVISION COURSES

- | | |
|---|--|
| 100. Intermediate Accounting (3) I, II | 121. Property and Casualty Insurance (3) I, II |
| 101. Advanced Accounting (3) I, II | E-123A-B. C.P.C.U. Preparation (3-3) (Special permission required) |
| 102. Cost Accounting (3) I, II | 124. Life Insurance Principles and Practices (3) I, II |
| 103. Advanced Cost Accounting (3) I, II | 125. Life Insurance Underwriting (3) I, II |
| 106. Income Tax Accounting (3) I, II | E-126A-B. C.L.U. Preparation (3-3) (Special permission required) |
| 107. Advanced Income Tax Accounting (3) I, II | 128. Credits and Collections (3) I, II |
| 108. Governmental Accounting (3) I | 129. Credit Management (3) II |
| 112. Auditing (3) I | 130A-130B. Advanced Business Law (3) I, II |
| 113. Advanced Auditing (3) II | 131. Corporation Finance (3) I |
| 114. Accounting Systems (3) I | 133. Investments (3) I, II |
| 115. Financial Statements (3) I, II | |
| 116. Internal Auditing and Controlling (3) II | |
| 119. C.P.A. Review (3) I | |
| 120. General Insurance (3) I, II | |

- | | |
|---|--|
| 134. Business and Industrial Management (3) I, II | 150. Marketing Principles (3) I, II |
| 135. Production Planning and Control (3) I, II | 151. Problems of Marketing Management (3) II |
| 136. Motion and Time Study (3) I, II | 152. Retailing Principles (3) I, II |
| 137. Plant Layout and Materials Handling (3) II | 153. Advertising Principles (3) I, II |
| 138. Industrial Purchasing (3) I | 155. Public Relations (3) I |
| 139. Quality Control (3) | 156. Radio and Television Station Management and Advertising (3) I |
| 140. Organization and Management Theory (3) | 157. Market Research (3) II |
| 141. Electronic Data Processing (3) I, II | 158. Consumer Income Management (3) I, II |
| E-142. Manufacturing and Tooling Administration (3) (Special permission required) | 159. Color and Design in Merchandise (2) I, II |
| 143. Systems and Procedure Analysis (3) | 160. Merchandise Analysis (3) I |
| 144. Personnel Management (3) I, II | 161. Traffic Management (3) II |
| 145. Human Relations in Management (3) I, II | 170. Real Estate Principles and Practices (3) II |
| 146. Wage and Salary Administration (3) I | 171. Law of Real Property (3) II |
| 147. Supervisory Staff and Employee Training (3) II | 172. Property Management (3) I |
| 149. Personnel Management Laboratory (1) I, II | 173. Real Estate Finance (3) I, II |
| | 174. Real Estate Appraisal Theory (3) I |
| | 175. Appraisal of Real Estate (3) II |
| | 198A-198B. Investigation and Report (1 to 3) each semester |
| | 199. Special Study (1 to 6) I, II |

GRADUATE COURSES

200. Seminar in Accounting Theory (3) I

Current trends in accounting in relation to the historical development of accounting principles and theory.

205. Advanced Problem Analysis (Accounting) (2) II

The study of conditions causing various accounting problems, with special emphasis upon the theory and practices involved in their solution. Prerequisites: Business Administration 100, 101, 102, and 112.

220. Seminar in Industrial Organization and Management (3) I, II

Analysis of selected topics in industrial organization and management directed to the development of a theory of organization and to an understanding of the operation of industrial enterprise. Emphasis on planning, co-ordination, leadership, and decision-making. Prerequisites: Business Administration 134 and permission of instructor.

221. Seminar in Personnel Management (3) I, II

Contemporary problems in personnel and industrial relations. Investigations by seminar members of aspects of human factors in management, labor relations, and other personnel-related topics. Case problems involving such areas as communication, participation, status, control, and effects of technological changes. Prerequisites: Business Administration 144 and Economics 150; and permission of instructor.

222. Seminar in Finance (3) I, II

Principles and problems involved in financing business firms from both internal and external sources. Stressing of student research and knowledge of literature in the field of finance. Prerequisites: Business Administration 131 and/or Economics 135; and permission of instructor.

223. Seminar in Insurance (3) I, II

Advanced study of insurance management including underwriting, investment, and other problems related to effective business operation. Programing of personal, partnership and corporation estates. Prerequisites: Business Administration 120, 124, 125; and permission of instructor.

250. Seminar in Marketing (3) I, II

Selected phases of marketing, such as pricing policies and practices, channels of distribution, sales promotion activities, distribution cost analysis. Written reports on special aspects of the semester's subject matter are required. Prerequisites: Business Administration 150 and permission of instructor.

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

296. Directed Field Experience (1-6) I, II

Students lacking practical experience in the occupational area will be required to obtain such experience in the field, subject to approval by the faculty adviser. Required in addition to the 30 units for the master of science degree, when experience is lacking or not acceptable. Not open to students who have already qualified.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

**COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS
IN BUSINESS EDUCATION**

BUSINESS EDUCATION

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Business Education, in the Division of Business Administration, offers graduate work leading to the master of arts degree with a major in business education and the general secondary credential with a teaching major or minor in business education. The master of arts degree is designed for students in the teaching service and is expressly fitted to the needs and interests of each student with special consideration being given to his past college work, his California teaching credentials, and his work experience in teaching and/or industry. San Diego State College is particularly well equipped with the most modern office machines and devices, enabling the graduate student to work in excellent business education laboratory surroundings.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, as described in Part Two of this bulletin under Master of Arts Degree. The student may choose to write a thesis or a project report, or may elect to take a comprehensive departmental examination composed of the following parts:

- (a) A general section designed to test the student on core information in the business teaching field.
- (b) Two special sections designed to test the student on the two business education subfields set forth on his California teaching credential.

**SPECIFIC DEPARTMENTAL REQUIREMENTS FOR THE GENERAL
SECONDARY CREDENTIAL**

Applicants for the general secondary credential must complete six units of Business Administration 270, Seminar in Business Education, as required in the teaching major in business education. Refer to Part Two of this bulletin on Advanced Credentials for further information on the general secondary credential.

ADVANCEMENT TO CANDIDACY

All students are required to satisfy the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts Degree.

FACULTY

Department Chairman: M. L. Crawford
Graduate Adviser: M. L. Crawford
General Secondary Credential Adviser: M. L. Crawford, Evangeline LeBarron
Professor: E. E. Gibson, Ed.D.
Associate Professors: M. L. Crawford, M.S.; Evangeline LeBarron, B.A., B.S.; Laura Lynn Straub, M.C.S.
Assistant Professor: E. C. Archer, Ed.D.
Instructors: J. C. Barrons, M.E.; L. A. Pemberton, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN BUSINESS EDUCATION

UPPER DIVISION COURSES IN BUSINESS ADMINISTRATION

- | | |
|--|---|
| 184. Office Management (3) I, II | 181. Administration and Supervision of |
| 185. Office Systems (3) I, II | Distributive Education (3) II |
| 186. Office Machines Methods (2) I, II | 183A-183B. Executive Secretarial Proce- |
| 188. Records Management (1) I, II | dures (3-3) Year, I |
| 180. Workshop in Business Education | 189. Objectives and Curricula in Busi- |
| (2) Summer | ness Education (3) I |
| | 196. Work Experience (2) I, II |

Any other upper division course listed in the Division of Business Administration may be selected with approval of the graduate adviser.

GRADUATE COURSES IN BUSINESS ADMINISTRATION

270. Seminar in Business Education (2) I, II

An intensive study of some phase of Business Education such as administration and supervision, distributive education, and basic business education. May be repeated with new subject matter for additional credit. Maximum of six units may be applied for the master's degree program.

271. Seminar in Office Management (2)

An intensive study of the problems of office management and their solution. The relation of records, reports, budgets, and manuals to managerial control. Prerequisites: Business Administration 1A-1B, 173.

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Students have an option of a comprehensive examination or a thesis or project. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

CHEMISTRY

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Chemistry offers graduate work leading to the master of arts degree or master of science degree in chemistry. The general secondary credential with teaching majors and minors in physical science and general science is also offered. The master of arts degree is primarily of interest to students preparing for the teaching service. The master of science degree is designed to augment the student's undergraduate training by an additional year or more of advanced study in the various fields of chemistry used in industrial and laboratory practice. The curriculum provides for a concentration in the traditional subdivisions of chemistry, such as physical chemistry, organic chemistry, inorganic chemistry, biochemistry, and analytical chemistry.

The facilities, staff, and equipment of the Department of Chemistry meet the requirements of the American Chemical Society, and students obtaining the A.B. or B.S. degree with the approved curriculum are granted the A.C.S. certification. All graduate work is based on this sound undergraduate foundation. Specialized equipment is available for research projects and a new three million dollar chemistry building is in the planning stages with occupancy expected by September, 1959.

Within a 100-mile radius of San Diego are to be found chemical operations of great diversity, including steel mills, petroleum refineries, and all types of food processing plants. Within San Diego proper are medical, industrial, and governmental laboratories concerned with marine products, aircraft materials, atomic energy, and many other research fields. Arrangements may be made with these installations which, in addition to providing stimulation and illustration, will permit summer employment or the acquisition of industrial field experience.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. In addition, the student with a major in chemistry from another accredited institution should have included in the undergraduate program a year-course in each of the following fields: general chemistry, analytical chemistry, organic chemistry, and physical chemistry. The course in physical chemistry must have included laboratory work. In addition, the student should have had enough specialized elective courses in chemistry to give a minimum of 24 units in upper division courses, including at least one course which has three years of chemistry as a prerequisite.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable the student must satisfy the general requirements for the master of arts degree, as described in Part Two of this bulletin under Master of Arts Degree. A thesis is required.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF SCIENCE PROGRAMS

In addition to meeting the requirements for regular graduate standing, the student must satisfy the general requirements for the master of science degree, as described in Part Two of this bulletin under Master of Science Degree. Subject to departmental approval, the student may elect Plan A, with the thesis, or Plan B, with the comprehensive examination. The student must also meet the following departmental requirements:

- (a) Take the qualifying examination in chemistry no later than the first semester in residence.
- (b) Prepare a program of studies in consultation with his departmental advisory committee to incorporate the following:
 - (1) Twelve units of graduate level (200-numbered) courses in chemistry, including Chemistry 220 and excluding Chemistry 290, 296, 298, and 299.
 - (2) Nine units of graduate level or approved upper division courses in chemistry excluding Chemistry 290, 296, and 299.
 - (3) Nine units of electives approved by the student's departmental committee.
- (c) Complete the requirement for Chemistry 296, Directed Field Experience, as described in Part Two of this bulletin in the section on the Master of Science Degree.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete four units selected from graduate level (200-numbered) courses in Chemistry or Physics, as required in the teaching major in physical science and general science. Refer to Part Two of this bulletin on Advanced Credentials for further information on the general secondary credential.

ADVANCEMENT TO CANDIDACY

Master of Arts: For information on general requirements for advancement to candidacy, refer to Part Two of this bulletin, the section on Master of Arts Degree-General Requirements.

Master of Science: For information on general requirements for advancement to candidacy, refer to Part Two of this bulletin, the section on Master of Science Degree-General Requirements. In addition to these general requirements, the student must pass a qualifying examination in chemistry administered by the Department of Chemistry.

SCHOLARSHIPS AND ASSISTANTSHIPS

Graduate teaching assistantships are available in limited number. These assistantships offer an annual stipend of \$2,148 for half-time service in the Department of Chemistry. Refer to Part One of this bulletin, section on Graduate Scholarships and Awards, for information on scholarships.

FACULTY

Department Chairman: R. W. Isensee

Graduate Advisers:

Master of Arts: A. R. Nichols, Jr.

Master of Science: R. W. Isensee

General Secondary Credential Adviser: L. E. Smith

Professors: R. W. Isensee, Ph.D.; Lionel Joseph, Ph.D.; A. R. Nichols, Jr., Ph.D.; R. D. Rowe, Ph.D.; J. A. Spangler, Ph.D.

Associate Professors: Harold Walba, Ph.D.

Assistant Professors: V. J. Landis, Ph.D.; J. G. Malik, Ph.D.; J. C. Sheppard, Ph.D.; C. J. Stewart, Ph.D.; E. P. Wadsworth, Jr., Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN CHEMISTRY

UPPER DIVISION COURSES

- | | |
|---|---|
| 115. General Biochemistry (4) I | 144A-144B. Principles of Chemical Engineering (3-3) Year, I |
| 118. Colloid Chemistry (2) II | 154. Organic Qualitative Analysis (3) I |
| 127. Advanced Inorganic Chemistry (3) II | 155. Instrumental Methods of Analysis (3) I |
| 131. Theoretical Organic Chemistry (3) II | 170. Radiochemistry (3) II |

GRADUATE COURSES

200. Seminar (2 or 3) I, II

An intensive study of some phase of advanced chemistry, such as chemical kinetics; molecular structure; photochemistry, electrochemistry. May be repeated with new subject matter for additional credit.

220. Chemical Thermodynamics (3) I

An introduction to the study of chemical thermodynamics. Prerequisites: Mathematics 52 and Chemistry 110B.

221. Quantum Chemistry (3) II

Selected topics in thermodynamics and quantum chemistry, including an introduction to the statistical approach to quantum mechanics. Prerequisite: Chemistry 220.

222. Chemical Kinetics (2) I

Theory of rate processes; applications of kinetics to the study of reaction mechanisms. Prerequisites: Mathematics 52 and Chemistry 110B.

223. Physical Chemistry of Electrolytic Solutions (2) II

Theory of ionic solutions; electrode potentials, determination of activity coefficients, partial molal quantities and their applications. Prerequisite: Chemistry 220.

230. Advanced Organic Chemistry (2) I

Applications and limitations of organic reactions from the viewpoint of synthesis. Prerequisite: Chemistry 101B.

231. Mechanisms in Organic Reactions (2) II

Reactivity and mechanism in organic reactions. Prerequisites: Chemistry 110B and 131.

240. Chemistry of the Less Familiar Elements (2) II

Modern inorganic theory applied to electronic configurations, periodic relationships and uses of selected less familiar elements. Prerequisite: Chemistry 127.

250. Advanced Analytical Chemistry (2) I

Selected topics and theories in advanced analytical chemistry. Prerequisites: Chemistry 105 and 110B.

260. Advanced Biochemistry (2) II

Discussion of selected topics emphasized in current research in carbohydrates, fats, and protein metabolism such as mechanisms of biological reactions, growth factors, and hormonal control. Prerequisites: Chemistry 110B and 115.

270. Nuclear Chemistry (2) I

Chemistry of the actinides. Nuclear reactions, induced radioactivity, separation processes. Prerequisite: Chemistry 170.

290. Bibliography (1) I, II

Exercise in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

296. Directed Field Experience (1-6) I, II

Meets the requirement of directed field experience for candidates for the master of science degree, but is not limited to candidates for the degree. Required in addition to the 30-unit requirement for the degree, when previous experience is lacking or not acceptable.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

EDUCATION

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Education offers graduate work leading to the master of arts degree in education with concentrations in the following: audiovisual education, elementary curriculum and instruction, secondary curriculum and instruction, elementary administration, secondary administration, school supervision, pupil personnel services, and special education. Some of these concentrations are designed to permit concurrent completion of the requirements for the correspondingly named advanced credentials. (For information on these credentials, refer to Part Two of the bulletin, section on Advanced Credentials.)

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. In addition, the student must have completed a minimum of 12 units in professional education courses, and he must either be admitted to the program of teacher education or hold a valid regular day school service California credential, other than an emergency or provisional credential, before he will be recommended by the department for regular graduate standing. Students who are eligible to receive the master of arts degree without teaching credentials, will be given special consideration. (For information on eligibility of students to take the master's degree, refer to Part Two of the bulletin, section on Master of Arts Degree.)

ADVANCEMENT TO CANDIDACY

Students desiring master's degree concentrations in audiovisual education, elementary curriculum and instruction, secondary curriculum and instruction, may be advanced to candidacy upon completion of the general requirements as described in Part Two of the bulletin, section on Master of Arts Degree. Students desiring concentrations in administration (elementary or secondary), supervision (elementary or secondary), pupil personnel services, and special education must also meet specific requirements for admission to the appropriate advanced credential program. (Refer to Part Two of the bulletin, section on Advanced Credentials for further information.)

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS DEGREE

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of the bulletin, section on Master of Arts Degree. All applicants for the master of arts degree in education must pass a comprehensive examination and satisfactorily complete either a thesis (Plan A) or two writing seminars (Plan B). In addition, students majoring in certain concentrations are required to verify successful teaching experience, and to satisfy requirements for advanced credentials.

The Comprehensive Examination

This examination usually consists of two parts. Part I is an objective examination covering the following areas: (a) history, philosophy, sociology, and organization of education; (b) learning and teaching; (c) growth, development, and guidance; and (d) evaluation and research. Part II covers the student's area of concentration, and will be taken after Part I has been successfully completed. The comprehensive examination is given at regularly scheduled times each semester and in the summer sessions. A student is eligible to take the comprehensive examination only if he has been formally advanced to candidacy for the master of arts

degree and has completed 15 units of his program for the degree. Students will not be permitted to enroll for Education 295A-295B, Seminar, or Education 299, Thesis, until they have completed the comprehensive examination satisfactorily. Students who fail individual sections of the examination will be advised of possible remedial action, which usually consists of adding appropriate course work to their programs. Students who fail on the total score of the comprehensive will be dropped from the master of arts program.

Selection of Plan A or Plan B

After a candidate has been assigned to an adviser, he must make an appointment with that adviser to plan his program of studies for the master of arts degree. All applicants will be programed at that time for Plan B, the seminar plan. After the student has completed approximately half of his program for the degree, he may request permission to transfer to Plan A, the thesis plan, if he has by this time established a plan for his thesis and has secured a faculty sponsor for it. Requests for transfer to Plan A must be countersigned by such faculty sponsor and be submitted to the Office of the Division of Education. In general, Plan A is designed for students who have a particular research problem they wish to investigate in some detail. It is also recommended for students who plan eventually to secure the doctorate. Plan B provides an opportunity to have two experiences of a writing and research nature, thus providing a more extensive background rather than the detailed and intensive concentration resulting from the thesis. Both plans require the ability to formulate and define research problems, to assemble data pertinent to the problem, to draw conclusions and to present the study in adequate written form. It is expected that the two seminars will be approximately equivalent to the thesis with respect to the difficulty and quantity of work required.

Course Requirements

Elementary Curriculum and Instruction

The master of arts degree with a major in elementary curriculum and instruction is designed to increase professional competence in the form of more breadth, depth, and technical skill in curriculum and instruction. Twelve to 15 units of electives afford the student an opportunity to select a program to meet his needs from courses in the various elementary subject fields, child study, special study, and related academic departments. This program of work furnishes an excellent curricular background for those who may prepare later for credentials in administration and supervision. Course requirements are as follows:

1. Prerequisites: (a) a valid four-year elementary credential or equivalent course work; (b) basic background in education (minimum of 12 units) to include curriculum and methods, child growth and development, tests and measurements, educational psychology, and history and philosophy of education.
2. Education 290A, Procedures of Investigation and Report (2 units); Education 290B, Bibliography (1 unit).
3. Core program (12 units) to include: Education 206, Philosophy of Education; or 207, Educational Sociology; Education 220, Advanced Educational Psychology; Education 240, Elementary Curriculum; and Education 241 or 242 or 243 or 244, Problems in Teaching.
4. Additional required courses (3-6 units): Education 295A-295B, Seminar, or Education 299, Thesis.
5. Electives (12 units) selected with approval of the adviser.

Secondary Curriculum and Instruction

The master of arts degree in secondary curriculum and instruction is designed to assist the applicant in improving his facility as a classroom teacher. The program lends itself readily to a combined general secondary credential and the master of arts degree, with up to 15 units common to the two programs. Twelve units in basic education courses are prerequisite to the program. Course requirements are as follows:

1. Education 290A, Procedures of Investigation and Report (2 units); Education 290B, Bibliography (1 unit).
2. Core program (15 units) to include: Education 206, Philosophy of Education; Education 220, Advanced Educational Psychology; Education 230, Guidance Problems in the Secondary Schools; Education 250, Curriculum Problems in the Secondary Schools; and Education 254, Advanced Problems in Secondary School Instruction.

3. A minor concentration (6-9 units) selected from the following areas: audio-visual education, elementary education, measurement and evaluation, guidance, educational administration and leadership, reading, social foundations of education, special education, or a subject matter field.

4. Electives (0-3 units).

5. Additional required courses (3-6 units): Education 295A-295B, Seminar, or Education 299, Thesis.

Audiovisual Education

1. Twelve units in basic education courses are prerequisite to the program.

2. Education 290A, Procedures of Investigation and Report (2 units); Education 290B, Bibliography (1 unit).

3. Core program (18 units) to include: (a) Education 240, Curriculum Construction and Evaluation in Elementary Education, or Education 250, Curricular Problems in Secondary Education; (b) Education 264, Elementary School Supervision, or Education 265, Secondary School Supervision; (c) six units from the following: Education 141, Creating Audiovisual Materials for Classroom Use; Education 274A, Utilizing Audiovisual Materials in the Classroom; and Education 275, Administering the Use of Audiovisual Materials; (d) three units from the following: Industrial Arts 183, Materials and Techniques for Teaching Graphic Arts; Industrial Arts 185, Photography for Teachers; Industrial Arts 186, Advanced Photography; Speech Arts 182, Radio Workshop; Education 298, Special Study; and (e) Education 316B, Directed Internship.

4. Electives (6 units).

5. Additional required courses (3-6 units): Education 295A-295B, Seminar, or Education 299, Thesis.

TEACHING EXPERIENCE

Students majoring in pupil personnel services, or in any area of administration or supervision, must verify a minimum of two years of successful teaching experience.

ADVANCED CREDENTIAL REQUIREMENTS

Students majoring in pupil personnel services, in special education, in supervision, or in either administrative area, must complete the requirements for the appropriate credential either prior to or concurrently with completion of other requirements for the master's degree. (Refer to Part Two of the bulletin, section on Advanced Credentials for additional information.) In these majors, it is likely that total requirements will exceed the minimum of 30 units, since programs must include requirements for both the advanced credential and the master's degree.

SCHOLARSHIPS

The following scholarships are available to graduate students in education:

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN. Awarded each June to a graduating woman senior who will begin work in an accredited college or university toward a higher degree or credential. \$100.

SAN DIEGO CITY TEACHERS ASSOCIATION. Awarded to two students preparing for teaching. \$100 each per year.

SAN DIEGO COUNTY TEACHERS ASSOCIATION. Awarded to four students in the field of education. \$100 each per year.

TEACHER EDUCATION SCHOLARSHIP. Awarded to a fifth-year student in training for the General Secondary Credential. \$400 per year.

FACULTY

Dean of the Division of Education: M. H. Schrupp

Department Chairman: G. A. Koester

Co-ordinator of Elementary Education: M. F. Stough

Co-ordinator of Secondary Education: E. G. Fulkerson

Chairman of Administrative Studies Committee: R. A. Houseman

Chairman of Guidance Studies Committee: D. D. Malcolm

Chairman of Special Education Studies Committee: F. A. Ballantine

Co-ordinator of Graduate Studies: C. M. Gjerde

Graduate Advisers:

Elementary Curriculum and Instruction: P. C. Gega

Secondary Curriculum and Instruction: J. A. Apple

Elementary Administration and Supervision: Charles Lienert

Secondary Administration and Supervision: M. H. Platz

Elementary Pupil Personnel Services: E. L. Anderson

Secondary Pupil Personnel Services: R. L. Trimmer

Special Education: F. A. Ballantine

Audiovisual Education: J. S. Kinder

Professors: M. D. Alcorn, Ed.D.; J. A. Apple, Ed.D.; F. A. Ballantine, Ph.D.; A. M. Carmichael, Ph.D.; T. R. Carlson, Ph.D.; Kurt Friedrich, Ed.D.; C. M. Gjerde, Ph.D.; R. A. Houseman, Ed.D.; G. A. Koester, Ph.D.; J. M. Linley, Ph.D.; Richard Madden, Ph.D.; J. R. Schunert, Ph.D.; M. F. Stough, Ph.D.; A. E. White, Ed.D.

Associate Professors: Guinivere E. Bacon, M.A.; D. L. Baker, Ed.D.; Marguerite A. Brydegaard, M.A.; Lois B. Campbell, M.A.; J. S. Fisher, Ph.D.; R. T. Gray, Ed.D.; D. W. Griser, Ed.D.; Darrell Holmes, Ph.D.; Bjorn Karlsen, Ph.D.; J. S. Kinder, Ph.D.; Elizabeth J. Klemer, M.A.; D. D. Malcolm, Ph.D.; R. R. Nardelli, Ph.D.; Helen L. Prouty, Ph.D.

Assistant Professors: C. D. Anderson, Ed.D.; E. L. Anderson, Ed.D.; P. S. Anderson, Ph.D.; Aileen J. Birch, M.A.; R. M. Briggs, Ph.D.; Paul Bruce, Ph.D.; Charlotte C. Carey, Ph.D.; C. E. Crum, Ed.D.; Charles Falk, S.T.D.; Clarence Fishburn, Ed.D.; C. D. Foster, Ph.D.; E. G. Fulkerson, Ed.D.; G. F. Gates, Ed.D.; P. C. Gega, Ed.D.; Georgia German, M.A.; P. I. Groff, Ed.D.; W. O. Hill, Ed.D.; John Jarolinek, Ph.D.; Charles Lienert, Ed.D.; Bette McVay, M.A.; Martha Miller, M.A.; J. E. Penery, M.A.; Gerald Person, Ph.D.; M. R. Pettys, Ed.D.; M. H. Platz, Ed.D.; J. A. Rodney, M.A.; J. L. Schmidt, Ph.D.; H. R. Smith, Ph.D.; Marguerite R. Strand, Ph.D.; R. L. Trimmer, Ph.D.; M. Agnes Walsh, M.A.; W. H. Wetherill, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN EDUCATION

UPPER DIVISION COURSES IN EDUCATION

- | | |
|--|--|
| 100. The Secondary School (4) I, II | 125. Organization and Administration of Music Education (2) II |
| 101. History and Philosophy of Education (2) I, II, Summer | 126. Workshop in Secondary Education (3 or 6) Summer |
| 102. Secondary Education (3) | 130. First Elementary Education Practicum (13) I, II |
| 110. Development and Learning (4) I, II | 131. Second Elementary Education Practicum (7) I, II |
| 111. Educational Psychology (2) I, II, Summer | 132. Kindergarten-Primary Practicum (4) I, II, Summer |
| 112. Child Growth and Development (3) I, II, Summer | 133. Children's Literature in Education (3) |
| 113. Growth and Development of the Adolescent (3) | 134. Laboratory in Elementary Education (3) Summer |
| 114. Interpretation of Early Childhood Behavior (3) Summer | 135. Workshop in Elementary Education (3 or 6) Summer |
| 115. Guidance in Elementary Education (3) I, II | 136. Music Literature for Elementary Teaching (3) Summer |
| 116A-B-C. Child Study Laboratory (2-2-2) I, II | 137. Reading Difficulties (3) I, Summer |
| 118. Supervision of Child Welfare and Attendance (3) Summer | 138. Curriculum in Elementary Education (3) |
| 120. The Teaching Process (4) I, II | 140. Audiovisual Instruction (3) I, II, Summer |
| 121. Methods and Materials of Instruction and Audiovisual Aids (2) Offered in all teaching subjects. | 141. Creating Audiovisual Materials for Classroom Use (3) |
| 122. Reading in Secondary Education (3) II | 142. Television and Radio in the Classroom (3) Summer |
| 123. Driver Education (2) Summer | 150. Psychological Testing (3) I, II |
| 124. Advanced Driver Education (2) Summer | |

151. Measurement and Evaluation in Elementary Education (3) I, II, Summer
152. Measurement and Evaluation in Secondary Education (2)
170. Exceptional Children (3) I or II
171. Curriculum and Methods for Mentally Retarded Children (3) II, Summer
172. Workshop for Teaching the Mentally Retarded (3-6) Summer
173. Vision Testing and Hygiene (2)
174. Principles and Methods of Speech Correction (3) II
176. Stuttering and Neurological Disorders (3) I
177. Aural Rehabilitation (3) I
178. The Teaching of Lipreading (2)
182. Directed Internship (1-6) I, II
190. Conference on the Teaching of Mathematics (1) Summer
191. Guidance Conference (1) Summer
192. Audiovisual Conference (1) Summer
199. Special Study (1-6) I, II, Summer

GRADUATE COURSES IN EDUCATION

For requirements for admission to graduate courses, refer to the section of this catalog on Admission to the Graduate Division. In addition to these general requirements, 12 units of professional education are prerequisite for enrollment in all graduate courses.

Sociological Foundations

204. Comparative Education (3) I, Summer
- The contemporary educational ideas and practices of various countries of the world and their impact upon our culture and education.
205. History of Education (3) Summer
- Advanced study of the history of education with emphasis on educational practices as related to present day problems. Prerequisite: Education 101 or equivalent.
206. Philosophy of Education (3) Summer
- Advanced study of philosophical backgrounds of educational thought; a study of comparative philosophies, and an analysis of selected current trends and problems. Prerequisite: Education 101 or equivalent.
207. Education Sociology (3) Summer
- A study of the social, economic, political and moral setting in which present day American education functions. Prerequisites: Education 101, or equivalent, and teaching experience.
208. Workshop in Community Influences on Learning and Curriculum Planning (3 or 6) Summer
- Advanced study of community influences on learning and child growth and development, and of group techniques; implications for curriculum planning. Provides opportunity for work on individual problems of the participants. Prerequisite: Teaching experience.

Educational Psychology

220. Advanced Educational Psychology (3) I, II, Summer
- Advanced study of the research and its application to learning and human growth. Prerequisites: Education 111, or equivalent, and teaching experience.
221. Seminar in Educational Measurement (3) Summer
- Problems in educational testing. Emphasis upon construction, administration, and validation of teacher-made tests. Prerequisite, one of the following: Education 117, 150, 151, 152, or equivalent.
222. The Gifted Child (3) I, Summer
- The abilities and characteristics of the intellectually gifted or talented; related problems of curriculum, teaching, administration and guidance. Prerequisites: Education 112 and 113, or Education 110.
230. Guidance Problems in Secondary Education (3) I, II, Summer
- The theory and practice of guidance emphasizing advanced mental hygiene concepts needed by teachers and counselors. Prerequisite: Education 110, or equivalent.

231. Techniques of Pupil Appraisal (3) I, II, Summer
- Techniques of collecting, assembling, and interpreting data about individual pupils for guidance purposes. Fieldwork required. Prerequisites: Psychology 104A and either Education 152 or 151, or equivalents.

232. Problems in Vocational Guidance (3) I, Summer
- To prepare counselors for vocational guidance in secondary schools. Emphasizes group and individual procedures for assisting pupils to understand and integrate vocational and self-information. Prerequisites: Education 230 and 231, or equivalents.

233. Guidance Counseling Techniques (3) I, II
- Designed for school counselors. To stress the understandings and procedures necessary for effective interviewing. Prerequisite: Education 115, or Education 230, or Psychology 151. Not open to students with credit for Psychology 233.

234. Administration of Pupil Personnel Services (3) I, Summer
- The organization and administration of school guidance services, including the use of community resources and a study of laws relating to children and child welfare. Prerequisite: Education 230, or equivalent.

237. Research in Guidance Problems (1-3) Summer
- Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by permission of the Co-ordinator of Secondary Education and instructor.

238. Field Work in School Guidance (3) II
- Application of the principles and procedures in testing, counseling, and related personnel work in the public school. Weekly seminar sessions with college and co-operating staff. Prerequisites: 12 units in guidance and related areas and permission of instructor.

239. Workshop in Pupil Personnel Services (3) Summer
- Application of principles and procedures to specific situations for improvement of pupil personnel services. Individual problems emphasized. Prerequisites: Teaching experience and permission of director of workshop.

Elementary Education

240. Curriculum Construction and Evaluation in Elementary Education (3) I, Summer
- Advanced study of the research in curriculum development, construction, and evaluation. Prerequisites: 12 units of work in elementary education and consent of instructor.
241. Problems in the Teaching of Arithmetic (3) Summer
- A study of research and practice in the methods of teaching and in the curriculum of elementary and junior high school arithmetic. Prerequisite: Education 130A, or equivalent.
242. Problems in the Teaching of Reading (3) Summer
- Advanced study of trends in reading instructions. Topics include developmental sequences in reading skills and abilities, reading in the content fields, individual differences, and interests. Students will develop individual projects or problems. Prerequisites: Education 130E and 137, or equivalents.
243. Seminar in Social Studies in Elementary Education (3) Irregular
- Advanced study of problems in teaching social studies in the elementary school, with emphasis on the study of the scientific research in the field. Prerequisite: Permission of instructor.
244. Seminar in Language Arts in Elementary Education (3) Irregular
- Advanced study of problems in teaching language arts in the elementary school, including spelling, literature and written and oral communication. Emphasis will be on the study of scientific research in the field. Prerequisite: Permission of instructor.

245. Seminar in Elementary Education (3) Irregular
A study of the methodology of research with particular reference to the basic research in the psychology and teaching of the elementary school subjects. Prerequisites: 12 units in elementary education and permission of the instructor.

246. Advanced Diagnosis in Reading (3) II, Summer
Principles and techniques of individual and group diagnosis of reading difficulties. Experience in administration and interpretation of individual and group instruments in diagnosis. Prerequisites: Psychology 204 and Education 137, or permission of instructor.

247. Advanced Diagnosis and Treatment of Learning Difficulties (3) II, Summer
Principles and techniques of diagnosis and treatment of difficulties in learning the school subjects. Supervised experience in working with individual pupils and their parents. Prerequisites: A teaching credential and Education 151 or 152.

Secondary Education

250. Curricular Problems in Secondary Education (3) I, II, Summer
Present status and development of the secondary school curriculum with emphasis upon curriculum construction and curriculum evaluation. Opportunities provided for study of problems submitted by students. Prerequisites: 12 units in secondary education and consent of the instructor.

252. General Education in the Secondary School (3) Summer
A course designed for teachers in service. A study of the function and implementation of general education in the secondary school. Prerequisites: 12 units in secondary education and permission of the instructor.

254. Advanced Problems in Secondary School Instruction (3) II, Summer
An analysis of the scientific research and philosophical principles in secondary school instruction. Prerequisites: Teaching experience and permission of instructor.

256. Recent Trends in Secondary Curriculum (3) Irregular
Current practices and trends in secondary schools. Extensive individual work on related problems of interest to members of the class. Prerequisites: 12 units in secondary education and permission of the instructor.

257. Workshop in Intercultural Education (4) Summer
A co-operative workshop sponsored by the college and the San Diego City Schools to study trends in intercultural education in American schools, including units, curricular and instructional materials and techniques. Enrollment only by application to the Chairman of the Division of Education.

258. Research in Curricular Problems (1-3) Irregular
Individual study by graduate students who have demonstrated exceptional ability and a need for such work. Admission by permission of the Co-ordinator of Secondary Education and instructor.

School Administration and Supervision

260. Federal, State, County and City School Organization and Administration (3) I, II, Summer
A study of federal, state, county and city school organization and administration including the interrelationships of the four levels. Prerequisite: Possession of a valid teaching credential.

262. The Organization and Administration of Elementary Schools (3) I, Summer
A study of the problems of personnel, local finance, curriculum, school plant and community relations of elementary schools. Field project required. Prerequisites: Valid general elementary credential, teaching experience, Education 115, 240, 260, and 270 and admission to program of Administrative Studies.

263. The Organization and Administration of Secondary Schools (3) I, Summer
A study of the problems of personnel, local finance, curriculum, school plant, transportation and community relations of secondary schools. Field project required. Prerequisites: Possession of a valid general secondary credential, teaching experience, Education 230, 250, 260 and 270 and admission to program of Administrative Studies.

264. Elementary School Supervision (3) II, Summer
Principles and practices of supervision and methods of evaluating instruction and the curriculum in elementary education. Field project required. Prerequisites: General elementary credential, teaching experience, Education 115, 240, 260 and 270 and admission to program of Administrative Studies.

265. Secondary School Supervision (3) II, Summer
Principles and practices of supervision, curriculum and teaching methods in secondary education. Field project required. Prerequisites: General secondary credential, teaching experience, Education 230, 250, 260 and 270 and admission to program of Administrative Studies.

266. Field Work in Elementary School Administration and Supervision (3) II
Study of the administration and supervision of an elementary school with the co-operation of a local school administrator and under the supervision of a college staff member. Field projects required. Prerequisites: admission to the program of Administrative Studies, completion concurrently of all other requirements for the elementary administration or supervision credential, permission of local school administrator and instructor.

267. Field Work in Secondary School Administration and Supervision (3) II
Study of the administration and supervision of a secondary school with the co-operation of a local school administrator and under the supervision of a college staff member. Field projects required. Prerequisites: admission to the program of Administrative Studies, completion concurrently of all other requirements for the secondary administration or supervision credential, and permission of local school administrator and instructor.

268. Seminar in School Administration (3) Summer
An intensive study of research on selected problems in the field of school administration. Provision will be made for individual work on special topics of interest to students. Prerequisite: permission of instructor.

270. School Finance, Business Administration, and Law (3) I, II, Summer
A study of public school finance at federal, state and local levels; an analysis of the business administration of schools and a study of school law as it applies to finance, administration and other aspects of school administration. Prerequisite: possession of a valid teaching credential or permission of instructor.

271. Supervision of Student Teaching (2) II
Study of selection, orientation, induction, counseling and evaluation of credential candidates and student teachers; and helping student teachers plan lessons, conduct classroom learning, analyze pupils' difficulties and achievement. Open to experienced teachers interested in the teacher education program.

274A. Utilizing Audiovisual Materials in the Classroom (3) I, Summer
A critical analysis of research evaluating the use of visual, auditory, and other sensory materials in education. Prerequisite: Education 140 or equivalent.

275. Administering the Use of Audiovisual Materials (3) II, Summer
Organizing, supervising, and co-ordinating audiovisual centers as an integral part of educational systems. Prerequisite: Education 140 or by permission of the instructor.

278. Educational Leadership (3) I, Summer

An analysis of the factors and practice in procedures of group and individual leadership in four areas: (a) the community; (b) the teaching staff; (c) the student personnel; (d) the professional field of educational administration and supervision. Prerequisite: valid teaching credential or permission of instructor.

Procedures of Investigation

290A. Procedures of Investigation and Report (2) I, II, Summer

Methods of investigation, data analysis, and reporting. Procedures for selecting topics and writing papers, projects, and thesis. Exercises in locating, selecting, analyzing, and summarizing professional literature. For majors in education, concurrent registration in 290B is required.

290B. Bibliography (1) I, II, Summer

Exercises in the use of basic reference books, journals, and specialized bibliographies preparatory to a seminar project or to the writing of a thesis.

295A-295B. Seminar (3-3) I, II, Summer

An intensive study in selected areas of education culminating in a written project. Limited to students following Plan B for the master of arts degree in education. Prerequisite: satisfactory score on the Graduate Comprehensive Examination in Education.

298. Special Study (1-6) I, II, Summer

Individual Study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II, Summer

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: an officially appointed thesis committee and advancement to candidacy.

Internship

316B. Directed Internship (2-6) I, II, Summer

Extensive daily participation or teaching in public schools in preparation for a second credential when Directed Teaching has been taken for a prerequisite credential. Application should be made during the preceding semester. Preregistration required. May be repeated for additional credit with new content.

ENGLISH

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of English offers graduate work leading to the master of arts degree with a major in English and the general secondary credential with a teaching major or minor in English. The graduate student in English will find the library well stocked with books in American and English literature.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. Graduates from San Diego State College must have completed a minimum of 24 units of upper division English courses in a well-rounded program. Graduates from other colleges must complete an English major equivalent to the one at San Diego State College before admission to regular graduate standing can be recommended. If, in the opinion of the adviser, an equivalent major is not offered, the student will be required to complete such courses as may be necessary to satisfy the department's requirements before the student may enter upon the master's degree program. The English Department recommends that students study extensively some foreign language.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree. A thesis is required. By the end of the master's degree program, the student must have read widely in major authors and in the materials of a number of literary periods. He must also have done some work in the field of American literature.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

In the graduate program for the general secondary credential, the student must include two courses numbered English 200, with other courses to make a minimum of six units of approved upper division and graduate work. In exceptional cases, two units of English 298, or three units of English 191 or 192, may be substituted for two units of English 200 with the consent of the departmental representative.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts Degree.

SCHOLARSHIPS AND ASSISTANTSHIPS

The Dorothy Cranston Stott scholarship of \$100 is awarded each June to an English major who is graduating from San Diego State College and who is continuing work towards a higher degree or credential. Each year there are one or two assistantships available to graduate students. Students appointed to these positions teach sections of Freshman English.

FACULTY

Department Chairman: Harriet Haskell

Graduate Advisers: J. S. Keeney; S. L. Gulick

General Secondary Credential Advisers: C. B. Kennedy; J. N. Tidwell

Professors: J. R. Adams, Ph.D.; E. A. Block, Ph.D.; Gail A. Burnett, Ph.D.; S. L. Gulick, Ph.D.; F. L. Johnson, Ph.D.; J. S. Keeney, Ph.D.; C. B. Kennedy, Ph.D.; E. L. Marchand, Ph.D.; J. R. Theobald, Ph.D.; J. N. Tidwell, Ph.D.; Mabel Trail, Ph.D.

Associate Professors: Harriet Haskell, Ph.D.; G. L. Phillips, Ph.D.; C. F. Shouse, Ph.D.

Assistant Professors: J. R. Baker, Ph.D.; Lee Gerlach, Ph.D.; J. P. Monteverde, Ph.D.; W. A. Perkins, Ph.D.; G. W. Sanderlin, Ph.D.; G. A. Sandstrom, Ph.D.; Lowell Tozer, Ph.D.; Dorothy C. Wanlass, Ph.D.; Kingsley Widmer, Ph.D.

Instructor: L. H. Frey, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ENGLISH

UPPER DIVISION COURSES

- | | |
|---|---|
| 101A-101B. Modern Continental Fiction (3-3) Year, I | 131. American Literature (1820-1860) (3) I |
| 106. Creative Writing (3) I | 132. The Frontier and American Literature (3) I, II |
| 110. Reading (1) I, II | 133. American Literature (1860-1910) (3) II |
| 113. American English (3) I | 134. American Literature: 1910 to the Present (3) I, II |
| 115. The Bible as Literature (3) I | 143A-143B. The English Novel (3-3) Year, I |
| 116A-116B. The Age of Elizabeth (3-3) Year, I | 149. The Study of Poetry (3) I |
| 117A-117B. Shakespeare (3-3) Year, I | 151. Chaucer (3) I |
| 118A-118B. Eighteenth Century English Literature (3-3) Year, I | 152A-152B. World Drama (3-3) Year, I |
| 119A. English Romantic Poetry (3) I | 162. The Writing of Fiction (3) II |
| 119B. Victorian Poetry (3) II | 189. Studies in American Folklore (3) II |
| 120A. The Seventeenth Century: Milton (3) II | 191. Advanced Composition (3) II |
| 120B. The Seventeenth Century: Metaphysical and Cavalier Poets (3) II | 192. The English Language (3) I, II |
| 126A. Romantic and Victorian Prose (3) I | 193. Old English (3) I |
| 126B. Late Nineteenth Century British Prose (3) II | 195. Literary Criticism (3) I |
| 129. Contemporary British Literature (3) I | 198. Comprehensive Reading and Survey (3) II |
| | 199. Special Study (1-6) I, II |

GRADUATE COURSES

200. Seminar (2) I, II
An intensive study of some phase of literature. The course may be repeated for each subject.
- (a) The critical study of a major author (such as Shakespeare, Dickens, Mark Twain)
 - (b) The study of a cultural period through its literature (Renaissance, Enlightenment, Romantic Revolution, etc.)
 - (c) The study of a literary problem (such as Regionalism in American Literature, or European influences in American Literature)
 - (d) The study of a literary type (Personal Essay, Epic, Tragedy, etc.)
260. Problems of Literary Creation (2-6) I, II
Criticism and coaching in the larger forms. Prerequisite: Consent of instructor and departmental adviser.
290. Bibliography (2) II
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.
298. Special Study (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.
299. Thesis (3) I, II
Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

FOREIGN LANGUAGES

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Foreign Languages offers graduate work leading to the master of arts degree in foreign languages with a concentration in French, Spanish, or Romance Languages (French and Spanish), and to the general secondary credential with teaching majors in French, Spanish, and Romance Languages, and to the teaching minors in French and Spanish. The staff in charge of the graduate program in foreign languages is composed of professors for whom either French or Spanish is a native tongue or whose extensive travel and study in France, Spain, Mexico, and South America enables them to represent authoritatively these various languages and cultures. The proximity of Mexico and the fact that San Diego has a Spanish-speaking population of some twenty thousand Mexicans and their descendants make possible many contacts with the spoken Spanish language and with a Spanish civilization. Library facilities offering a large collection of books, newspapers and periodicals in French and Spanish are available at the college. A foreign language laboratory with the latest equipment serves both graduate and undergraduate students.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. An undergraduate major in foreign languages with French or Spanish must be completed, at least three units of which must be allocated to a comprehensive reading and survey course. A proficiency examination in the field of specialization will be given by the Department of Foreign Languages to applicants who have already obtained a general secondary credential.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of the bulletin, section on Master of Arts Degree. The following specific courses must be taken to fulfill the minimum requirements in the three areas of concentration:

- (a) French: French 214, 220, 298; Romance Languages 290; Education 290A; and a minimum of six upper division or graduate units in French.
- (b) Spanish: Spanish 201, 204, 298; Romance Languages 290; Education 290A; and a minimum of six upper division or graduate units in Spanish.
- (c) Romance Languages: French 214, 220, 298, or Spanish 201, 204, 298; Romance Languages 290; Education 290A; and a minimum of six upper division or graduate units in French or Spanish.

The comprehensive examination, in lieu of a thesis, which is required of candidates for the master of arts degree in French, Spanish, or Romance Languages, consists of a three-hour written examination on language and literature; a two-hour oral examination on French or Spanish civilization, and oral explanation of linguistic constructions and literary passages.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

In the graduate program for the general secondary credential, the student must include the courses listed in one of the following areas of concentration:

- (a) French: French 214 and 220.
- (b) Spanish: Spanish 201 and 204.
- (c) Romance Languages: Two courses in the teaching major field to be selected from French 214, 220, and Spanish 201, 204.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts Degree.

FACULTY

Department Chairman: L. P. Brown.
Graduate Advisers: L. P. Brown, Spanish; L. N. Messier, French.
General Secondary Credential Adviser: L. N. Messier.
Professors: Elizabeth M. Brown, Ph.D.; L. P. Brown, Ph.D.; L. N. Messier, Ph.D.; W. T. Phillips, Ph.D.
Associate Professor: E. M. Wolf, Ph.D.
Assistant Professors: C. H. Baker, M.A.; R. H. Lawson, Ph.D.; Guerard Piffard, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN FOREIGN LANGUAGES

UPPER DIVISION COURSES

French	Spanish
101A-101B. Conversation and Composition (3-3) Year, I	101A-101B. Conversation and Composition (3-3) Year, I
105A-105B. Modern French Drama (3-3) Year, I	102A-102B. Introduction to Spanish Classics (3-3) Year, I
107A-107B. Eighteenth Century Literature (3-3) Year, I	104A-104B. Spanish-American Literature (3-3) Year, I
110A-110B. Modern French Novel (3-3) Year, I	105A-105B. Modern Spanish Drama (3-3) Year, I
111A-111B. Seventeenth Century Dramatic Literature (3-3) Year, I	110A-110B. Novel and Short Story in Spain (3-3) Year, I
140. French Civilization (2) I	140. Spanish Civilization (2) I
141. French Civilization (2) II	141. Spanish Civilization (2) II
150-S. Advanced Phonetics and Diction (3) Summer	198. Comprehensive Reading and Survey Course (3) II
198. Comprehensive Reading and Survey Course (3) II	

Related fields: Related courses in the fields of anthropology, geography, history, political science, comparative literature, and others, may be selected in consultation with and approval of adviser.

GRADUATE COURSES IN FRENCH

214. **Contemporary French Literature (2) I**
An intensive study of the current movements and techniques in the novel, poetry, and theater in France from 1900 to the present day. Class discussion, outside readings, written reports. Prerequisite: Nine units of upper division French.
220. **Explication de Textes (2) II**
An introduction to the analytical French approach to the detailed study of literature. Demonstrations by instructor and students. This course aims to give teachers of French a greater mastery of French language and literature. Prerequisite: Nine units of upper division French.
290. **Bibliography (1) I, II (Offered as Romance Languages 290)**
Exercises in the use of basic reference books, journals, and specialized bibliographies in the field of the Romance languages. Prerequisite: Nine units of upper division French.
298. **Special Study (1-6) I, II**
Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy. Master's degree candidates in French are expected to substitute a comprehensive examination for the thesis. In unusual cases a student may write a thesis with the permission of the department.

GRADUATE COURSES IN SPANISH

201. Old Spanish (2) I

A study of the language and literature of Spain from the 12th to the 15th centuries. Prerequisite: Nine units of upper division Spanish.

204. Seminar in Spanish-American Literature (2) II

Intensive investigation of some phase of Spanish-American literature. A single country, an author, or some special problem will be studied and reported upon. Prerequisite: Nine units of upper division Spanish.

290. Bibliography (1) I, II (Offered as Romance Languages 290)

Exercises in the use of basic reference books, journals, and specialized bibliographies in the field of the Romance languages. Prerequisite: Nine units of upper division Spanish.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy. Master's degree candidates in Spanish are expected to substitute a comprehensive examination for the thesis. In unusual cases a student may write a thesis with the permission of the department.

HISTORY

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of History offers graduate work leading to the master of arts degree with a major in history. Students may also take work leading to the master of arts degree in social science with a concentration in history. Students who wish to earn a general secondary credential with a concentration in history must secure the credential under a social science major. A history minor is available to students with a major other than social science. Libraries and special collections of materials, suitable for graduate study, are readily available in the San Diego area. These facilities make it possible to emphasize several fields of history in working for the degree.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. As an additional requirement, the student must have completed a bachelor's degree with an undergraduate major in history. Applicants who have an undergraduate major in social studies with a concentration of 18 or more upper division units in history will, with the advice of the departmental representative and the recommendation of the department, be acceptable, but will be held responsible for completing the minimum requirements for an undergraduate major in history. It is strongly recommended that students have a reading knowledge of a modern foreign language, particularly French, German, or Spanish.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree. A thesis is required.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential who wish to work toward a master's degree in history should take History 270A-270B, Seminar. History 290, which is also required in the master's degree program, may be counted as an elective in the general secondary credential program.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts Degree.

SCHOLARSHIPS

The K. W. Stott Scholarship, in the amount of \$100, is awarded each June to a student who has attended San Diego State College for at least two years and who is being graduated or has been graduated by San Diego State College with a major in history. The recipient must continue work in San Diego State College, or in any other accredited college or university, toward a higher degree or credential. The selection is made by the Department of History with approval of the Committee on Scholarships.

FACULTY

Department Chairman: C. R. Webb, Jr.

Graduate Adviser: A. P. Nasatir

General Secondary Credential Adviser: D. S. Milne

Professors: A. P. Nasatir, Ph.D.; C. B. Leonard, Ph.D.; Katherine Ragen, Ph.D.; K. J. Rohlfleisch, Ph.D.

Associate Professors: C. R. Webb, Jr., Ph.D.; J. E. Merrill, Ph.D.; L. U. Ridout, Ph.D.

Assistant Professors: William Hanchett, Ph.D.; S. J. Pincetl, Jr., Ph.D.; D. L. Rader, Ph.D.; Martin Ridge, Ph.D.; M. Van Aken, Ph.D.; W. R. Wineman, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN HISTORY

UPPER DIVISION COURSES

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| 111A-111B. Ancient History (3-3)
Year, I | 171A-171B. Rise of the American Nation (3-3) Year, I |
| 121A-121B. Medieval History (3-3)
Year, I | 172A-172B. Development of the Federal Union (3-3) Year, I |
| 131A-131B. Renaissance and Reformation (3-3) Year, I | 173A-173B. The Expansion of the United States (3-3) Year, I |
| 132-S. Culture of the Renaissance (3)
Summer | 174. Emergence of the United States as a World Power (3) I, II |
| 141. Europe in the Seventeenth and Eighteenth Centuries (3) I | 175A-175B. The United States in the Twentieth Century (3-3) Year, I |
| 142. The French Revolution and Napoleonic Era (3) II | 176A-176B. American Foreign Policy (3-3) Year, I |
| 143A-143B. Europe in the Nineteenth Century (3-3) Year, I | 179A-179B. Intellectual History of the American People (3-3) Year, I |
| 144A-144B. Europe in the Twentieth Century (3-3) Year, I | 181A-181B. History of the West (3-3) Year, I |
| 145-S. Diplomatic History of Europe, 1870-1920 (3) Summer | 189. History of California (3) I, II |
| 147A-147B. Expansion of Russia (3-3)
Year, I | 190A-190B. History of the Pacific Ocean Area (3-3) Year, I |
| 151A-151B. History of England (3-3)
Year, I | 191A-191B. History of the Far East (3-3) Year, I |
| 156A-156B. History of British and European Imperialism (3-3) Year, I | 193. History of China (3) I |
| 161. Mexico and Caribbean Countries (3) I | 194. History of Japan (3) I |
| 162. South America Since Independence (3) II | 198. Introduction to Historiography and Historical Method (2) II |
| | 199. Special Study (1-6) I, II |

GRADUATE COURSES

201. Historiography and Historical Method (3) I, II
Required of all applicants for advanced degree in history. Open to social science majors.
- 251A-B. Seminar in English History (3-3) Year, I
Directed research in selected aspects of English history. Prerequisite: Permission of instructor. History 251A is a prerequisite for 251B.
- 270A-B. Seminar in American History (3-3) Year, I
An introduction to intensive investigation of various phases of American History. Prerequisite: Permission of instructor. History 270A is a prerequisite for 270B.
- 276A-B. Seminar in Diplomatic History (3-3) Year, I
Selected topics in recent diplomatic relations. Prerequisite: Permission of instructor. History 276A is a prerequisite for 276B.
- 281A-B. Seminar in the History of the West and California (3-3) Year, I
Directed research in various topics in the history of the West and California. Prerequisite: Permission of the instructor. History 281A is a prerequisite for 281B.
290. Bibliography (1) I, II
Exercises in the use of basic reference books, journals and specialized bibliographies, preparatory to the writing of a master's project or thesis. Credit and grade may be deferred until completion of the thesis course, 299.
298. Special Study (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.
299. Thesis (3) I, II
Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

HOME ECONOMICS

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Home Economics offers graduate work for the general secondary teaching credential with a teaching major or minor in home economics. A new home economics building with specialized equipment and a home management residence have greatly increased the facilities available for graduate study.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential with a teaching major in home economics must complete four units of Home Economics 298.

FACULTY

Department Chairman: Ruth A. Talboy

General Secondary Credential Adviser: Ruth A. Talboy

Associate Professors: Norita N. Comin, B.S.; Ruth A. Talboy, M.A.

Assistant Professors: Helen L. Dorris, M.S.; Luella C. Jurrens, M.S.; Alice E. Thomas, M.A.

GRADUATE COURSE

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of instructor and departmental approval.

INDUSTRIAL ARTS

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Industrial Arts offers graduate work leading to the master of arts degree with a major in industrial arts and the general secondary credential with a teaching major or minor in industrial arts. The Department of Industrial Arts makes it possible for students to gain advanced experiences in one of the most modern shop buildings in the West. Twenty thousand square feet of floor space with new equipment are devoted to work in woods, metals, transportation (auto mechanics), graphic arts, electricity-radio, photography, industrial drawing, comprehensive general shop and handicrafts. An additional building which will more than double our facilities is being planned. Graduate students have the opportunity to participate in the planning and organization of this expanding program.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree. A thesis (not a project) is required.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential who wish to work toward a master's degree in industrial arts must take six units of Industrial Arts 200, Seminar.

ADVANCEMENT TO CANDIDACY

All students must meet the general requirements for advancement to candidacy, as described in Part Two of this bulletin under Master of Arts Degree.

ASSISTANTSHIPS

A limited number of assistantships are available in industrial arts. Application should be made to the Chairman of the Department of Industrial Arts.

FACULTY

Department Chairman: Kenneth Phillips

Graduate Adviser: Kenneth Phillips

General Secondary Adviser: Kenneth Phillips

Professor: Kenneth Phillips, Ph.D.

Associate Professor: L. W. Luce, Ed.D.

Assistant Professors: W. C. Anderson, Ph.D.; C. C. Cummins, Ed.D.; W. B. Ford, B.E.; F. J. Irgang, Ph.D.; W. L. McLoney, M.A.; D. W. Thiel, M.A.

Instructor: R. D. O'Dell, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN INDUSTRIAL ARTS

UPPER DIVISION COURSES

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| <p>101. Handicrafts for Teachers (3) I, II</p> <p>102. Materials and Techniques for Teaching Handicrafts (3) I, II</p> <p>105-S. Construction Activities for Teachers (3) Summer</p> <p>111. General Shop for Teachers (3) I, II</p> <p>112. Materials and Techniques for Teaching General Shop (3) I, II</p> <p>121. Industrial Drawing (3) I, II</p> <p>122. Industrial Drawing for Teachers (3) I, II</p> <p>123. Materials and Techniques for Teaching Industrial Drawing (3) I, II</p> <p>131. General Metalworking (3) I, II</p> <p>132. General Metalworking for Teachers (3) I, II</p> <p>133. Materials and Techniques for Teaching General Metalworking (3) I, II</p> <p>151. General Woodworking (3) I, II</p> <p>152. General Woodworking for Teachers (3) I, II</p> <p>153. Materials and Techniques for Teaching General Woodworking (3) I, II</p> | <p>161. Electricity-Radio (3) I, II</p> <p>162. Electricity-Radio for Teachers (3) I, II</p> <p>163. Materials and Techniques for Teaching Electricity-Radio (3) I, II</p> <p>171. Transportation (3) I, II</p> <p>172. Transportation for Teachers (3) I, II</p> <p>173. Materials and Techniques for Teaching Transportation (3) I, II</p> <p>181. Graphic Arts (3) I, II</p> <p>182. Graphic Arts for Teachers (3) I, II</p> <p>183. Materials and Techniques for Teaching Graphic Arts (3) I, II</p> <p>185. Photography for Teachers (3) I, II</p> <p>186. Advanced Photography (3) I, II</p> <p>190. Experimental Shop (1 or 2) I, II</p> <p>193. Industrial Arts Organization and Management (2) I, II</p> <p>194. Recent Trends in Industrial Arts Education (2) I, II</p> <p>199. Special Study (1-6) I, II</p> |
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GRADUATE COURSES

200. Seminar (3) I, II
An intensive study of one phase of industrial education: (a) development of the industrial arts curriculum; (b) shop organization and management; (c) supervision and administration; (d) evaluation; (e) problems of shop planning; (f) history and philosophy of industrial education. May be repeated with new materials for additional credit.

201. Advanced Teaching Problems (3) I, II
Materials and advanced techniques of teaching specific activity areas, such as (a) industrial drawing; (b) general metalworking; (c) general woodworking; (d) electricity-radio; (e) transportation; (f) graphic arts; (g) photography; (h) comprehensive general shop. Stress on project design and visual materials. Prerequisites: Teaching experience in area selected and permission of instructor. May be repeated with new materials for additional credit.

267. Field Work in Industrial Arts (3) I, II
Application of the principles of shop organization, management and planning in reference to the objectives of industrial arts in development of school programs. Prerequisites: Permission of instructor. Industrial Arts 200 and industrial arts teaching experience. May be repeated with different material to a total of six units of credit.

290. Bibliography (1) I, II
Exercise in the use of basic reference books, professional literature, and specialized bibliographies, preparatory to the writing of a master's thesis.

298. Special Study (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II
Guidance in the preparation of a thesis in industrial arts for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

LIFE SCIENCES

DIVISIONAL REGULATIONS

GENERAL INFORMATION

Graduate work in biology, botany, microbiology (bacteriology), and zoology is offered in the Life Sciences Division and leads to the master of science degree in applied biology and the master of arts degree in life science. The master of science degree in applied biology provides concentrations in botany, general biology, microbiology, and zoology, thus permitting a graduate student to receive advanced training for a wide variety of occupational specialties. The master of arts degree in life science is primarily for the teaching service and may be obtained with one or more of the foregoing concentrations. The general secondary credential is offered with a teaching major or minor in life science and general science.

Excellent facilities for graduate study are available in this community, such as the Zoo Hospital, affiliated laboratories of the San Diego Biomedical Research Institute, the United States Department of Agriculture, Fish and Game Commission, and the Alvarado Filtration Plant of the City of San Diego. On the campus, the Health Services offer fine facilities for persons interested in clinical fields.

ADMISSION TO REGULAR GRADUATE STANDING

In addition to the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division, a student must satisfy the following requirements before he will be recommended for regular graduate standing in the Graduate Division:

- (a) Have an undergraduate major in one of the biological sciences, including basic undergraduate courses in the precise area (biology, botany, microbiology, or zoology) of the master's degree program in life science. Courses taken to remove deficiencies in the undergraduate major are in addition to those specifically required for the master's degree.
- (b) Satisfactorily complete a qualifying examination in the biological sciences.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree. A thesis is required.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF SCIENCE PROGRAMS

In addition to meeting the requirements for regular graduate standing, the student must satisfy the general requirements for the master of science degree, described in Part Two of this bulletin, section on Master of Science Degree. The student must also meet the following departmental requirements:

- (a) A minimum of 12 units of graduate level (200-numbered) courses in one of the following fields: biology, botany, microbiology, or zoology.
- (b) A minimum of 24 units of upper division or graduate courses selected from biology, botany, microbiology, or zoology. Remaining units may be taken in these, or closely related fields.
- (c) Either (1) a thesis or a project (Plan A) or (2) a comprehensive examination in lieu of the thesis or project (Plan B). Both plans are available in the field of the thesis or project. If Plan A is selected, the student must satisfactorily defend his thesis or project. If Plan B is selected, the student must obtain a satisfactory score on the final comprehensive examination administered prior to the granting of the degree.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete a minimum of four units of graduate level (200-numbered) courses, which may be met by two

semesters of Biology 200, Seminar, or by one semester of Biology 200 and two units of Zoology 298 or Botany 298, Special Study courses.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, which are described in Part Two of this bulletin.

ASSISTANTSHIPS

A limited number of assistantships are available in the life sciences. Make application to the chairman of the Division of Life Sciences.

FACULTY

Division Chairman: R. D. Harwood

Department Chairman: D. R. Harvey, Botany; M. A. Myers, Microbiology; A. C. Olson, Biology-Zoology

Graduate Advisers:

Master of Arts: A. H. Gallup

Master of Science: Biology, E. W. Huffman; Botany, A. H. Gallup; Microbiology, M. A. Myers; Zoology, G. H. Tucker

General Secondary Credential Adviser: A. H. Gallup

Professors: J. E. Crouch, Ph.D.; R. D. Harwood, Ph.D.; M. A. Myers, Ph.D.; K. M. Taylor, Ph.D.; G. H. Tucker, Ph.D.

Associate Professors: A. H. Gallup, Ph.D.; A. C. Olson, Ph.D.; D. A. Preston, Ph.D.

Assistant Professors: E. G. Barham, Ph.D.; C. L. Brandt, Ph.D.; K. K. Bohnsack, Ph.D.; R. W. Crawford, Ph.D.; D. R. Harvey, M.A.; E. W. Huffman, Ph.D.; D. L. Jameson, Ph.D.; W. A. McBlair, Ph.D.; C. E. Norland, M.S.; F. J. Ratty, Ph.D.; D. C. Shepard, Ph.D.; M. A. Taylor, M.S.; H. A. Walch, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS

UPPER DIVISION COURSES

Biology

- 102. Principles of Taxonomy (2) I
- 103. General Cytology (3) I, II
- 110. Ecology (4) II
- 111. Aquatic Biology (4) I
- 112. Fishery Biology (2) I
- 150A-150B. Radiation Biology (2-2) I, II
- 155. Genetics (4) I, II
- 158. Conservation of Wildlife (3) II
- 160. Evolution (2) II
- 161. History of Biology (3) I, II
- 198. Methods of Investigation (2) I, II

Botany

- 101A-101B. Plant Morphology (4-4) Year, I
- 104. Plant Anatomy (3) I
- 107. Plant Physiology (4) II
- 112. Cultivated Trees and Shrubs (3)
- 114. Systematic Botany (4) II
- 126. Plant Pathology (4) II
- 162. Agricultural Botany (2) II
- 199. Special Study (1-6) I, II

Microbiology

- 101. General Bacteriology (Microbiology) (4) I
- 102. Advanced Bacteriology (4) I
- 103. Fundamentals of Immunology and Serology (4) II
- 104. Medical Mycology (3) I
- 105. Bacterial Metabolism (2) II
- 107. Virology (2) I
- 199. Special Study (1-6) I, II

Zoology

- 100. Embryology (4) I, II
- 101. Animal Physiology (4) I, II
- 106. Comparative Anatomy of the Vertebrates (4) I, II
- 108. Histology (4) I
- 109. Hematology (3) I
- 112. Marine Invertebrates (4) I
- 114. Natural History of the Vertebrates (4) II
- 115. Ichthyology (4) I
- 117. Ornithology (4) II
- 121. General Entomology (4) II
- 122. Advanced Entomology (4) I
- 123. Immature Insects (3) II
- 125. Economic Entomology (4) II
- 126. Medical Entomology (3) I
- 128. Parasitology (4) I
- 199. Special Study (1-6) I, II

GRADUATE COURSES

Biology

200. Seminar (2) I, II

Seminars are offered in one of the following fields of biology. None of the fields may be repeated for credit.

- A. Applied Biology
- B. Cellular Biology
- C. Ecology

- D. Modern Theories of Biology
- E. Morphogenesis
- F. Speciation

290. Bibliography (1) II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

296. Directed Field Experience (1-6) I, II

Experience in local laboratories (and field stations) under supervision. Meets requirements of directed field experience for candidates for the master of science degree. Required in addition to the 30-unit requirement for the degree, when previous experience is lacking or not acceptable.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Botany

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

299. Thesis or Project (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Microbiology

200. Seminar (2) I, II

A seminar is offered each semester in one of the fields in microbiology listed below. The course may be repeated for each subject for additional credit.

- A. Medical Bacteriology
- B. Industrial and Agricultural Microbiology
- C. Medical Mycology (Intensive study on an advanced level)
- D. Advanced General Microbiology (Intensive study on an advanced level)
- E. Virology (Intensive study on an advanced level)

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: permission of staff; to be arranged with department chairman and instructor.

299. Thesis or Project (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Zoology

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

MATHEMATICS

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Mathematics offers graduate work leading to the master of arts degree with a major in mathematics, the master of science degree in mathematics and the general secondary credential with a teaching major or minor in mathematics. The master of arts degree is ordinarily taken by students preparing for the teaching profession. The master of science degree is designed to provide the basic concepts and techniques of advanced mathematics required in science and industry. Close liaison with local industry (especially the aircraft industry) and with the Departments of Chemistry, Engineering, and Physics is maintained in order to provide ready applications of mathematical techniques.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree. Subject to the approval of the department, a student may elect Plan A; however, the department will require, in addition, an oral examination on the thesis. If Plan B is followed, the Comprehensive Examination will be both oral and written.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF SCIENCE PROGRAMS

In addition to meeting the requirements for regular graduate standing, the student must satisfy the general requirements for the master of science degree, described in Part Two of this bulletin, section on Master of Science Degree. The student must also meet the following departmental requirements:

- Obtain a satisfactory score on departmental examination prior to obtaining department's recommendation for advancement to candidacy.
- Complete 12 units of graduate level (200-numbered) mathematics courses, not including Mathematics 290, 296, or 299.
- Complete nine additional units of graduate level or approved upper division mathematics courses, not including Mathematics 290, 296, or 299.
- Complete nine additional units of approved electives.
- Subject to the approval of the department, select Plan A or Plan B. If Plan A is selected, the department will require an oral examination in addition to the thesis. If Plan B is followed, the Comprehensive Examination will be both oral and written.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete four units of graduate level (200-numbered) courses in mathematics.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts or Master of Science Degree.

SCHOLARSHIPS AND ASSISTANTSHIPS

Various scholarships and assistantships ranging from faculty tuition fees to \$2,148 per year are available to qualified students. Details may be obtained from the department chairman.

FACULTY

Department Chairman: L. G. Riggs

Graduate Advisers: Master of arts, J. E. Eagle; master of science, N. B. Smith

General Secondary Adviser: J. E. Eagle

Professors: J. E. Eagle, Ed.D.; V. C. Harris, Ph.D.; A. R. Harvey, Ph.D.

Associate Professor: L. G. Riggs, Ph.D.

Assistant Professors: R. D. Branstetter, Ph.D.; Bernard Gedanken, M.A.; C. V. Holmes, Ph.D.; Berthold Schweizer, Ph.D.; P. W. Shaw, Ph.D.; N. B. Smith, Ph.D.; D. P. Squier, Ph.D.; L. J. Warren, Ph.D.; Margaret F. Willerding, Ph.D.

Instructors: B. B. Kvarda, M.A.; R. L. Shaw, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN MATHEMATICS

UPPER DIVISION COURSES

- | | |
|--|--|
| 105. College Geometry (3) II | 134. Probability (3) II |
| 106. Projective Geometry (3) I | 135. Numerical Analysis and Computation I (3) I |
| 107. Non-Euclidean Geometry (3) I | 136. Numerical Analysis and Computation II (3) II |
| 111. Theory of Algebraic Equations (3) I, II | 140A-140B. Mathematical Statistics (3-3) Year I |
| 112. Analytic Geometry of Space (3) II | 170. Partial Differential Equations (3) I |
| 118A-118B. Advanced Mathematics for Engineering Students (3-3) I, II | 177. Quality Control (3) II |
| 119. Differential Equations (3) I | 196. Advanced Topics in Mathematics (2 or 3) I, II |
| 121A-121B. Advanced Calculus (3-3) Year I | 199. Special Study (1-6) I, II |
| 124. Vector Analysis (3) I | |

GRADUATE COURSES

200. Seminar (2-3) I, II

An intensive study of one phase of mathematics, such as topology, integral equations, calculus of variations, tensor analysis, theory of numbers, ordinary differential equations, differential geometry, theoretical statistics. May be repeated with new subject matter for additional credit.

210A-210B. Mathematics of Physics. (3-3) Year, I

Selected topics from matrix theory, vector and tensor analysis, orthogonal function theory, calculus of variations and probability theory with particular emphasis on applications to physical theory. Prerequisite: Admission into a master's degree program.

214. Advanced Partial Differential Equations (3) II

Theory and application of the solution of boundary value problems in the partial differential equations of engineering and physics by various methods; orthogonal functions, the Laplace transformation, other transformation methods, Green's functions. Prerequisite: Mathematics 170 or equivalent.

224A-224B. Functions of a Complex Variable (3-3)

Concept of analytic functions, complex integration, residues, power series, conformal mapping. Prerequisites: Mathematics 119 and 121B.

224X-Y-Z. Functions of a Complex Variable (2-2-2)

Same as Mathematics 224A-224B, but given over a three-semester period.

226A-226B. Functions of a Real Variable (3-3)

Point sets, functions and limits, continuity, differentiation, Riemann and Lebesgue integration. Prerequisites: Mathematics 119 and 121B.

226X-Y-Z. Functions of a Real Variable (2-2-2)

Same as Mathematics 226A-226B, but given over a three-semester period.

230A-230B. Abstract Algebra (3-3)

Groups, rings, integral domains, fields, matrices and linear algebras. Prerequisite: Mathematics 121A.

230X-Y-Z. Abstract Algebra (2-2-2)

Same as Mathematics 230A-230B, but given over a three-semester period.

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

296. Directed Field Experience (1-6) I, II

Meets the requirement of directed field experience for candidates for the master of science degree, but is not limited to candidates for the degree. Required in addition to the 30-unit requirement for the degree, when previous experience is lacking or not acceptable.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis or Project (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

GRADUATE COURSES

200A-200B. Special Problems in Music (2-2) Year I, II
An intensive study of one phase of musicology such as topology, integral equations, calculus of variations, theory of numbers, probability, differential equations, differential geometry, theoretical mechanics, etc. by report with new subject matter for additional credit.

203A-203B. Musicology (2-2) Year I, II
Selected topics from music theory, history and general studies of musical functions, calculation of variations and probability theory with particular emphasis on applications to physical theory. Prerequisite: Admission into a master's degree program.

206A-206B. Composition (2-2) Year I, II
Theory and application of the solution of boundary value problems in the partial differential equations of engineering and physics by various methods: orthogonal functions, the Laplace transformation, other transformation methods, Green's functions, Bessel functions, Legendre functions, etc. Prerequisite: Mathematics 120 or equivalent.

214A-214B. Functions of a Complex Variable (2-2) Year I, II
Concepts of analytic functions, complex integration, residues, power series, conformal mapping. Prerequisite: Mathematics 121B.

214X-Y-Z. Functions of a Complex Variable (2-2-2) Year I, II
Same as Mathematics 214A-214B, but given over a three-semester period.

MUSIC

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Music offers graduate work leading to the master of arts degree and the general secondary credential with a teaching major and minor in music. The Music Department offers a special graduate course (Seminar in Choral Art) each summer. Guest faculty members are Robert Shaw, internationally known choral and orchestral conductor, and Julius Herford, noted musicologist, pianist, choral director, and lecturer. Guest lecturers who have assisted with the Seminar in the past have been Mack Harrell, John Wustman, Jerome Hines, Robert Kurka, Gregor Piatigorsky, and Alice Parker. The seminar emphasizes historical and theoretical studies of both choral and instrumental scores, followed by performance with the San Diego Symphony under the direction of Mr. Shaw. Six units in the Seminar in Choral Art may be applied toward the master of arts degree. An additional six units may be accepted subject to the approval of the graduate adviser in music and the Graduate Council.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree. In general, a thesis is required; however, the candidate may, with the approval of the Music Department faculty, present a lecture-recital in lieu of the thesis.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete four units to be selected from the following courses: Music 200A-200B, Special Problems in Music; 203A-203B, Musicology; and 206A-206B, Composition.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts Degree.

SCHOLARSHIPS

Information on music scholarships may be obtained by writing to the Chairman, Music Scholarship Committee, Music Department, San Diego State College.

FACULTY

Department Chairman: J. Dayton Smith

Graduate Adviser: J. Dayton Smith

General Secondary Credential Advisers: R. C. Flye; Norman Rost; J. Dayton Smith; M. S. Snider

Professor: J. Dayton Smith, M.M.

Associate Professors: D. F. Smith, M.M.; M. S. Snider, M.A.; Christine C. Springston, M.A.

Assistant Professors: P. V. Anderson, M.M.; J. D. Blyth, M.M.; M. G. Cawthon, M.M.; R. C. Flye, M.A.; C. K. Genzlinger, M.A.; B. B. Kemp, M.M.; Norman Rost, M.M.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN MUSIC

UPPER DIVISION COURSES

- | | |
|---|---|
| 102A. Chamber Music Literature (2) I | 125A. Clarinet—Elementary Class (1) I, II |
| 102B. Keyboard Literature (2) II | 125B. Oboe, Flute, and Bassoon—Elementary Class (1) I, II |
| 103A. Symphonic Literature (2) I | 126. Woodwinds—Intermediate Class (1-1-1-1) I, II |
| 103B. Song Literature (2) II | 127. Woodwinds—Advanced Class (1-1-1-1) I, II |
| 105. Modern Harmonic Practice and Four-Part Counterpoint (3) I, II | 130. Brass—Elementary Class (1-1) I, II |
| 106. Sixteenth Century Counterpoint (3) I, II | 131. Brass—Intermediate Class (1-1-1-1) I, II |
| 107. Composition (3) I, II | 132. Brass—Advanced Class (1-1-1-1) I, II |
| 109A-109B. Instrumentation and Arranging (2-2) Year, I | 135. Percussion—Elementary Class (1) I, II |
| 111. Piano—Intermediate Class (1-1-1-1) I, II | 141. Methods in Teaching Piano (3) I, II |
| 112. Piano—Advanced Class (1-1-1-1) I, II | 142. Survey of Harmony and Musical Form (2) |
| 116. Voice—Intermediate Class (1-1-1-1) I, II | 146A. Choral Conducting (1) I, II |
| 117. Voice—Advanced Voice (1-1-1-1) I, II | 146B. Instrumental Conducting (1) II |
| 120. Strings—Elementary Class (1-1) I, II | 150. Advanced Individual Study (1-1-1-1) I, II |
| 121. Strings—Intermediate Class (1-1-1-1) I, II | 152A-152B. History of Music (2-2) I, II |
| 122. Strings—Advanced Class (1-1-1-1) I, II | 153. Opera Technique (2) I, II |
| 123S. Workshop in Instrumental Techniques and Chamber Music for Strings, Woodwind, and Brass Instruments (2) Summer | 199. Special Study (1-6) I, II |

GRADUATE COURSES

200A-200B. Special Problems in Music (2-2) Year, I, II

A graduate course in which students may carry out projects in various fields of music under the direction of faculty members who are specialists in the field chosen. Students registering for this course must apply for work within a certain field after conference with the music faculty.

203A-203B. Musicology (2-2) I, II

Problems and methods of research in aesthetics, acoustics, theory, composition, music history, and related fields. Source materials, bibliography. Comparative investigations of musical systems. Analytical and structural studies. Completion of written project. Prerequisite: Permission of instructor.

206A-206B. Composition (2-2) I, II

Advanced composition for various media, development of original idiom, intensive study of modern music. Public performance of an extended original work as a final project. Prerequisite: Permission of instructor.

207A-B-C. Seminar in Choral Art (6-6-6) Summer

A study of choral and chamber music performed by seminar participants in the College Chorus, the San Diego Symphony Orchestra, and Chamber Music Concerts. Development of analytical technique; study of vocal techniques, of the larger forms, and of styles, including performing practices of the baroque and later periods. Prerequisite: Permission of instructor. Total credit for Music 207A-B-C limited to 18 units. A maximum of 12 units may be applied to the master of arts degree.

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis or Project (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

PHYSICAL EDUCATION AND HEALTH EDUCATION

DIVISIONAL REGULATIONS

GENERAL INFORMATION

The Departments of Men's Physical Education, Women's Physical Education, and Health Education offer graduate work leading to the master of arts degree in physical education and/or health education. The general secondary credential with teaching majors and minors in these fields is also available. Close liaison between these departments and community agencies offers opportunity for realistic field experiences.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the study must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete a minimum of four units of graduate level (200-numbered) courses.

Physical Education (men or women): Select from graduate level (200-numbered) courses in physical education.

Health Education: Select from Health Education 200, 202, and 205.

ADVANCEMENT TO CANDIDACY

All students must meet the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts Degree.

ASSISTANTSHIPS

Part-time assistantships are available in all three departments. Write to the chairman of the department for information.

FACULTY

Division Chairman: W. L. Terry

Department Chairmen:

Men's Physical Education: F. W. Kasch

Women's Physical Education: Dorothy J. Tollefsen

Health Education: W. H. Lauritsen

Graduate Adviser: F. L. Scott

General Secondary Credentials Advisers: Angela Kitzinger, W. H. Lauritsen

Professors: Paul Governali, Ed.D.; F. W. Kasch, Ed.D.; W. H. Lauritsen, Ph.D.; F. L. Scott, Ph.D.; W. L. Terry, Ed.D.; George Ziegenfuss, Ed.D.

Associate Professors: C. W. Benton, M.S.; H. H. Broadbent, M.S.; Angela M. Kitzinger, Ph.D.; Evelyn Lockman, M.A.; W. H. Schutte, M.S.; Marion L. Schwob, M.S.; Florence S. Shannon, M.S.; C. C. Sportsman, M.S.; Dorothy J. Tollefsen, M.A.

Assistant Professors: Mary F. Cave, M.A.; R. M. Grawunder, Ed.D.; Margaret M. Murphy, Ed.D.; C. R. Smith, M.S.

Instructor: A. W. Olsen, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PHYSICAL EDUCATION AND HEALTH EDUCATION

UPPER DIVISION COURSES

Health Education

- 145. Safety Education and Accident Prevention (3) II
- 151. Health Education for Teachers (2) I, II
- 152. Health Education Programs (3) I
- 153. Administration of the School Health Program (3) II
- 154. Workshop in Health Education (2) Summer
- 175. Health in Later Maturity (3) I
- 190. Introduction to Public Health (3) I
- 191. Supervised Field Experience (1-3) I, II
- 199. Special Study (1-6) I, II

Physical Education

- 122. Water Safety Instruction (1) II
- 141. Professional Activities: Gymnastics (men) (2) I
- 142. Professional Activities: Swimming (men and women) (1) I, II
- 143. Professional Activities: Coaching Track (men) (1) I
- 144. Professional Activities: Coaching Baseball (men) (1) II
- 145. Professional Activities: Team Sports (men) (2) I
- 146. Professional Activities: Individual Sports (men) (2) II

- 147. Professional Activities: Coaching Football (men) (1) I
- 148. Professional Activities: Coaching Basketball (men) (1) I
- 151. Folk Dancing Materials and Advanced Techniques (women) (2) I
- 153A-153B. Problems in Modern Dance (men and women) (2-2) I, II
- 154A-154B. Methods of Teaching Modern Dance (2-2) I, II
- 155. Techniques of Individual Sports (women) (1) II
- 156A-156B. Sports Methods (women) (2-2) I, II
- 157A-157B. Choreography in Contemporary Dance (men and women) (3-3) I, II
- 160. Teaching of Body Mechanics (women) (3) II
- 161. Instructor's Course in First Aid (2) I, II
- 167. Applied Anatomy and Kinesiology (3) I
- 168. Physiology of Exercise (3) II
- 169. Adapted Activities (3) II
- 170A-170B. Recreational Leadership (2-2) Year, I
- 190. Administration of Physical Education in the Secondary School (3) I, II
- 199. Special Study (1-6) I, II

GRADUATE COURSES

Health Education

- 200. Evaluation Procedures in Physical Education, Health Education and Recreation (3) I

A study of tests and measurements in the profession with practice in their use, construction and interpretation of results. Not open to students with credit for Physical Education 200.

- 202. Problems in Health Education (3) (Offered in alternate years)

Current problems in Health Education, studied through a review of the literature, discussion of trends, observation of school situations, together with the analysis and evaluation of actual problems. Written reports required.

- 205. Curriculum in Physical Education and Health Education (3)

Analysis of current curricula in physical education and health education, with special emphasis upon curriculum construction and evaluation. Not open to students with credit for Health Education 205.

- 298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

- 299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

200. Evaluation Procedures in Physical Education, Health Education and Recreation (3) I

A study of tests and measurements in the profession, with practice in their construction and use, and interpretation of results. Not open to students with credit for Health Education 200.

201. Developmental Physical Education (3)

Intensive study of postural divergencies, lack of physical development, and methods of correcting such conditions through exercise. Practice in making physical examinations, constructing individual exercise programs, and teaching remedial exercises. Consideration of ethical procedures and limitations. Prerequisite: Physical Education 167.

203. Problems in Physical Education (3)

A survey of current problems facing the physical education profession, through a review of literature, discussion of trends, and observation of school situations. Analysis and evaluation of actual problems. Written reports required.

204. Problems in Recreation (3)

A survey of current problems facing the recreation profession, through a review of literature, discussion of trends, and observation of school situations. Analysis and evaluation of actual problems. Written reports required. Not open to students with credit for Recreation 204.

205. Curriculum in Physical Education and Health Education (3)

Analysis of current curricula in physical education and health education, with special emphasis upon curriculum construction and evaluation. Not open to students with credit for Health Education 205.

210. Seminar (3) I-II

Seminars in physical education are offered for intensive study in each of the fields listed below. Prerequisites: Major or minor in physical education, or a closely related area, and consent of instructor.

- A. Facilities—indoor and outdoor activity areas.
- B. Competitive Athletics for Men, including major and minor sports.
- C. History and philosophy of physical education.
- D. Women's sports programs.
- E. Dance programs.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3)

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

PHYSICS**DEPARTMENTAL REGULATIONS****GENERAL INFORMATION**

The Department of Physics offers graduate work leading to the master of arts degree with a concentration in physics and the master of science degree in physics. The master of arts degree is primarily of interest to students preparing for the teaching service. A teaching major in physical science and general science is also authorized for the general secondary credential. The master of science degree is designed to augment the student's undergraduate training by an additional fifth year of more advanced study in the various fields of physics. The curriculum provides a choice in several areas of concentration. Students may pursue advanced studies in any of the following branches of physics: (1) acoustics, (2) astrophysics, (3) electronics, (4) microwaves, (5) nuclear physics, (6) physical optics, (7) radiological physics, (8) reactor physics, (9) solid state physics, (10) spectroscopy. Experimental facilities are available in these fields in the physics curriculum.

The present physics building was completed in 1954. The valuation of the existing facilities exceeds one million dollars. Within the next few years the planned expansion will more than triple the existing facilities in physics.

Within the San Diego area there are governmental and industrial research laboratories concerned with all the fields of physics and electronic science. Scientists from these agencies help provide stimulation through seminars and scientific meetings in the area. Excellent opportunities exist for summer employment in these agencies for the acquisition of industrial field experience.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. In addition, the undergraduate preparation in physics must have substantially satisfied the undergraduate requirements for the bachelor of arts or bachelor of science degree in physics. (Refer to the general catalog for a description of these majors.) If the student's undergraduate preparation is deficient, he will be required to take courses for the removal of the deficiency. These courses, taken as an unclassified graduate, are in addition to the minimum of 30 units for the master of arts degree or the 30 to 36 units for the master of science degree.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, as described in Part Two of this bulletin under Master of Arts Degree. A thesis is required.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF SCIENCE PROGRAMS

In addition to meeting the requirements for regular graduate standing, the student must satisfy the general requirements for the master of science degree, as described in Part Two of this bulletin under Master of Science Degree. Subject to the approval of the department, the student may elect Plan A, with the thesis, or Plan B, with the comprehensive examination in lieu of the thesis. The student must also meet the following departmental requirements:

- (a) Take the qualifying examination in physics no later than the first semester in residence.
- (b) Prepare a program of studies in consultation with his departmental advisory committee to incorporate the following: (1) 12 units of graduate level (200-numbered) courses in physics excluding Physics 290, 296, 298, and 299; nine units of graduate level or approved upper division courses in physics excluding Physics 290, 296, and 299; nine units of electives approved by his departmental committee and excluding Physics 290.
- (c) Complete the requirement for Physics 296, Directed Field Experience, as described in Part Two of this bulletin in the section on the Master of Science Degree.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete four units selected from graduate level (200-numbered) courses in Physics or Chemistry as required in the teaching major in physical science and general science.

ADVANCEMENT TO CANDIDACY

In addition to the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts or Master of Science Degree, the student must pass a qualifying examination in physics administered by the Department of Physics.

SCHOLARSHIPS AND ASSISTANTSHIPS

The Department of Physics invites applications for teaching assistantships. The applicant must qualify for admission to the Graduate Division with regular graduate standing. Appointments are made on the basis of scholastic merit. Teaching assistants devote approximately 12 hours per week to instruction in the physics laboratory. The remainder of their time must be devoted to course work. A number of \$1,000-a-year scholarships are available to qualified graduate students. For more details consult with the Chairman of the Department of Physics.

FACULTY

Department Chairman: L. L. Skolil

Graduate Advisers: Master of arts, L. E. Smith, Jr.; Master of science, L. L. Skolil

General Secondary Credential Adviser: L. E. Smith, Jr.

Professors: C. R. Moe, Ph.D.; L. L. Skolil, Ph.D.; L. E. Smith, Jr., Ph.D.

Associate Professor, H. R. Snodgrass, Ph.D.

Assistant Professors: J. D. Garrison, Ph.D.; R. H. Morris, Ph.D.; J. G. Teasdale, Ph.D.; A. N. Wilson, Ph.D.; G. H. Wolter, M.S.

Lecturers: K. A. Ehrlicke; R. A. Elliott, M.S.; H. W. Halsey, M.S.; H. J. Hansen, Jr., M.S.; Norman Rostoker, D.Sc.; John Smyth, Ph.D.; T. B. Taylor, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PHYSICS

UPPER DIVISION COURSES

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|--|--------------------------------------|
| 104B. Vacuum Tube Circuit Design (3) II | 153. Servo-System Design (3) I |
| 106. Optics (3) II | 154. Television Circuits (3) II |
| 112. Thermodynamics and Kinetic Theory (3) I | 155. Analogue Computers (3) II |
| 114. Acoustics (3) II | 156. Digital Computers (3) I |
| 120. Advanced Laboratory (2-4) I, II | 160. Circuit Analysis (3) I, II |
| 124. Radio Measurements (2) I, II | 167. Transistor Circuits (3) I |
| 125. Microwave Measurements (2) I | 170. Electromagnetic Theory (3) II |
| 148A-149B. Nuclear Physics Laboratory (3-3) | 175. Advanced Mechanics (3) II |
| 151. Nuclear Physics (3) I | 180. Solid State Physics (3) II |
| | 190. Theoretical Physics (3) II |
| | 196. Advanced Physics (2 or 3) I, II |

GRADUATE COURSES

200. Seminar (2 or 3) I, II

An intensive study of one phase of physics, such as: mechanics, heat and thermodynamics, acoustics, radiowave propagation, electronics, atomic nuclear and solid state physics. May be repeated with new subject matter for additional credit.

205. Theoretical Mechanics (3) I

An intensive study of mechanics utilizing vector and tensor methods. Study of the motion of rigid bodies, vibration, coupled circuits, Lagrange's and Hamilton's equations. Principle of least action. Prerequisite: Physics 175, or permission of the instructor.

210A-210B. Mathematics of Physics (3-3) Year, I

Selected topics from matrix theory, vector and tensor analysis, orthogonal function theory, calculus of variations and probability theory with particular emphasis on applications to physical theory. Prerequisite: Admission into a master's degree program.

240A-240B. Reactor Materials Technology (3-3)

A study of certain engineering, chemical, and nuclear properties of materials used in reactors, and of the influence of the reactor environment on these properties. Prerequisites: Physics 180 and 190; and Chemistry 161.

245A-245B. Reactor Theory (3-3)

Theory of chain reactions and their application to the operation of various types of reactors. Kinetics, theoretical design, and control of reactors in relation to the fundamental nuclear processes. Prerequisites: Physics 190.

246. Problems in Reactor Design Parameters (3) II

A combined seminar and group project course in which the class will be assigned a specific, detailed reactor problem. Subgroups will work on specific problems within the main reactor design problem. Prerequisite: Concurrent registration in Physics 240B, 245B, and 248B.

248A-248B. Reactor Laboratory (2-2)

Measurement of the static and dynamic characteristics of a reactor. Reactor operation, reactor radiations, neutron flux properties and temperature effects. Use of the reactor as an experimental tool. Prerequisites: Chemistry 161, Physics 148B; concurrent registration in Physics 245A-245B.

251. Nuclear Theory (3) II

Applications of quantum theory to nuclear physics. Theory of nuclear forces, nuclear reactions, interaction of radiation with matter, nuclear structure and high energy physics. Prerequisites: Physics 151 and 175 or permission of the instructor.

260. Advanced Electronics (3) II

Selected advanced topics in contemporary electronics. Prerequisite: Physics 104B and 160, or permission of the instructor.

270. Electromagnetic Theory (3) I

Boundary value problems; time varying electric and magnetic fields; propagation of radiation; antennas, wave guides. Prerequisite: Physics 170, or permission of the instructor.

275. Quantum Mechanics (3) II

The physical basis of quantum mechanics. Schrodinger's wave equation, and Heisenberg's matrix mechanics. Quantum theory of radiation, molecular, and nuclear systems. Approximation methods. Prerequisites: Physics 151 and 175 or permission of the instructor.

290. Bibliography (1) I, II

Exercise in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

296. Directed Field Experience (1-6) I, II

Meets the requirement of directed field experience for candidates for the master of science degree, but is not limited to candidates for the degree. Required in addition to the 30-unit requirement for the degree, when previous experience is lacking or not acceptable.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis in physics for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

PSYCHOLOGY

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Psychology offers graduate work leading to the master of arts degree with a major in psychology, the master of science degree in psychology, and the general secondary credential with a major in psychology (requiring two teaching minors). Graduate training is provided for students specializing in the fields of clinical, industrial and personnel, and theoretical-experimental psychology. Laboratory facilities for receiving training in both human and animal psychology are available, and students are required to take courses in experimental psychology and statistical methods. Practicum courses designed to fulfill the requirements for directed field experience are available in all three fields of graduate specialization. These practicum courses involve supervised training in such places as local military establishments, industrial plants, and hospitals. Many graduate courses are offered in the evening for the convenience of students having outside employment, but students working full time are permitted to carry a graduate program of no more than six semester units.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. The student must also (1) have completed 24 semester units of upper division work in psychology, including Psychology 104A, Statistical Methods in Psychology; 105, Psychological Testing; 160 or 161, Experimental Psychology, and 178, Theories of Personality, or their equivalents, (2) have an overall grade point average of 3.0 (B) in his last 60 units of work, (3) have a percentile rank of 50 or higher on the Psychology Department Comprehensive Examination "total."

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER'S DEGREE PROGRAMS

In addition to meeting the requirements for regular graduate standing, the student must satisfy the general requirements for the master of arts or master of science degree. For the master of science degree, students are required to complete at least 12 units of 200-level courses in psychology. Students who plan to specialize in industrial or personnel psychology must complete satisfactorily, either as a part of the undergraduate or graduate work, Psychology 104B, Advanced Statistics. Students who plan to specialize in another phase of psychology must complete satisfactorily the following courses (or their equivalents), either as a part of the undergraduate or graduate work: Psychology 104B, Advanced Statistics; Psychology 175, Theories of Learning; Psychology 177, History of Psychology; and two of the following: Psychology 160, Experimental Psychology; Psychology 161, Experimental Psychology; Psychology 162, Experimental Psychology; and Psychology 170, Principles of Animal Behavior. A thesis is required of all applicants for the master's degree. Applicants for the master of arts degree must satisfy credential requirements as applicable.

SPECIFIC REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete three units of Psychology 201, Seminar, and six upper division or graduate units in subject fields commonly taught in junior and senior high schools.

ADVANCEMENT TO CANDIDACY

In addition to the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts or Master of Science Degree, the student must make a satisfactory score on the graduate record area examination.

FACULTY

Department Chairman: E. W. Geldreich

Graduate Adviser: R. C. Harrison

General Secondary Credential Advisers: I. N. McCollom; W. D. Kinnon

Professors: H. B. Carlson, Ph.D.; E. W. Geldreich, Ph.D.; O. J. Kaplan, Ph.D.; I. N. McCollom, Ed.D.; W. C. Treat, Ph.D.

Associate Professors: M. B. Turner, Ph.D.; Virginia W. Voeks, Ph.D.

Assistant Professors: W. J. Crow, Ph.D.; L. O. Daniel, Ph.D.; R. C. Harrison, Ph.D.; W. A. Hunrichs, Ph.D.; W. D. Kinnon, Ph.D.; F. P. Leukel, Ph.D.; E. F. O'Day, Ph.D.; D. M. Rumbaugh, Ph.D.; J. B. Sidowski, Ph.D.; J. R. Smith, Ph.D.; W. R. Stevens, M.A.

Instructor: T. T. Psomas, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PSYCHOLOGY

UPPER DIVISION COURSES IN PSYCHOLOGY

- | | |
|--|--|
| 104B. Advanced Statistics (3) II | 160. Experimental Psychology: Learning and Cognition (3) I |
| 109. Mental Deficiency (3) I, Summer | 161. Experimental Psychology: Sensation and Perception (3) II |
| 121. Personnel and Industrial Psychology (3) I, II | 162. Experimental Psychology: Motor Processes and Fatigue (3) II |
| 122. Public Opinion Measurement (3) I | 170. Principles of Animal Behavior (3) I, II |
| 124. Engineering Psychology (3) II | 175. Theories of Learning (3) II |
| 141. Neural Bases of Behavior (3) I | 177. History of Psychology (3) II |
| 142. Physiological Psychology (3) II | 178. Theories of Personality (3) I |
| 150. Abnormal Psychology (3) I, II | |
| 151. Introduction to Clinical Appraisal (3) I, II | |
| 152. Introduction to Methods of Counseling (3) I, II | |

GRADUATE COURSES

201. Seminar (3) I

A review, integration, and supplementation of the student's knowledge of psychology. Prerequisites: 24 units in psychology, which may include educational psychology courses in the Education Department. Required of all transfer students planning to earn a master's degree in psychology.

204. Individual Psychological Testing (3)

Principles of individual testing. Instruction and practice in the administration and scoring of the Stanford-Binet, Wechsler-Bellevue, and some similar tests. One lecture and six hours of laboratory per week. Prerequisites: Psychology 104A and 105.

205. Advanced Mental Testing (3) II

The theory of mental testing and a comprehensive survey of various verbal and nonverbal individual mental tests. Supervised administration, scoring and interpretation of some individual psychological tests. Tests other than the Wechsler-Bellevue and the Stanford-Binet are stressed. One two-hour lecture and one three-hour laboratory per week. Prerequisites: Psychology 104A, 105, 151, and 204.

211. Advanced Clinical Psychology (3) I

Seminar integrating psychological testing, counseling, and clinical research. Includes supervised laboratory experience in counseling and in integrating data involved in clinical cases. One two-hour seminar and one three-hour laboratory per week. Prerequisites: Psychology 151, 152, and 204.

220. Human Relations in Industry (3) II

Applications of psychological principles and methods of investigation to problems of industrial relations and motivation of employees; factors influencing morale and employee productivity; criteria of job proficiency; psychological aspects of worker-management relationships and leadership. Prerequisites: Psychology 121 or Business Administration 145.

221. Problems in Social Psychology (3) II

Factors influencing the formation of attitudes, opinions, and stereotypes; the establishment of roles during socialization of the individual; social crises, change, and resistance to change; the causes and alleviation of interpersonal conflict. Prerequisite: Psychology 104A, 145, 160 or 161, and 175, or consent of the instructor.

222. Theoretical Psychology (3) I

Basic concepts and principles integrating information in the areas of learning, emotion, motivation, personality, and social interaction. Relationships of scientific methods to the formation and testing of hypotheses and other conceptualizations. Limited to students who have a qualifying score on the Psychology Department Comprehensive Examination. Prerequisites: Psychology 175 and 178.

223. Experimental Design (3) I

Principles and methods of planning and carrying out systematic investigations to answer questions concerning human behavior with stress on the interdependence of experimental design and statistical evaluation of results. Practice in formulation of testable hypotheses, techniques of equating groups, solution of sampling problems, and interpretation of results. Limited to students who have a qualifying score on the Psychology Department Comprehensive Examination. Prerequisites: Psychology 104B and 160 or 161 or 162.

224. Advanced Experimental (3) I, II

Methods, techniques, and apparatus applicable to questions of various types. Special attention is given to sources of error, limitations on interpretation, and psychophysical methods. Students will design and carry out experiments in preparation for original independent investigations. Prerequisite: Psychology 223.

225. Principles of Test Construction (3) II

Detailed consideration of adequate sampling techniques, item construction, item analysis, determination and enhancement of reliability and validity of tests. Prerequisites: Psychology 104B and 105.

233. Guidance Counseling Techniques (3) I, II

Designed for school counselors. To stress the understandings and procedures necessary for effective interviewing. Prerequisite: Education 115, or Education 230, or Psychology 151. Not open to students with credit for Education 233.

234. Projective Psychology (3) I

Introduction to the theory and principles underlying use of projective techniques by clinical psychologists; a review of the structure and dynamics of personality as interpreted by projective devices. Prerequisites: Psychology 104A, 105, 151, 178, and 204.

235. The Rorschach Method (3) II

A seminar and practicum in basic administration and scoring of the Rorschach Test, with critical appraisal of the problems involved in estimations of reliability and validity of this technique. Prerequisites: Psychology 104A, 105, 151, 178, 204, and 234.

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

296. Directed Field Experience (1-6) I, II

Meets the requirement of directed field experience for candidates for the master of science degree, but is not limited to candidates for the degree. Required in addition to the 30-unit requirement for the degree, when previous experience is lacking or not acceptable. Prerequisites: Limited to graduate students in psychology, with appropriate qualifications in a field of professional skill, and approved by the practicum committee of the Psychology Department.

298. Special Study (1-6) I, II

Individual study projects involving library or laboratory research in physiological, industrial, learning, clinical, and other areas of experimental psychology. May be repeated to a maximum of six units. Prerequisite: Permission of instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Credit is contingent upon acceptance of the completed thesis by the Department of Psychology. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

PUBLIC ADMINISTRATION AND PERSONNEL SUPERVISION

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

For qualified persons who wish to prepare for or to advance a professional career in public service, the Department of Political Science offers two graduate programs: (1) Master of Science in Public Administration, and (2) Master of Arts in Personnel Supervision and Training. These programs integrate the strong liberal arts program of the college and the professional attainments of faculty members drawn from the college and the ranks of governmental administrators. Major emphasis is placed on the preparation of administrative generalists, although courses of a more specialized nature are also available for those whose work dictates the need for specialized study.

Through co-operation between the college and the San Diego Chapter of the American Society for Public Administration, government officials and specialists in public administration lecture periodically on administrative topics and problems. The San Diego metropolitan community offers to the graduate student significant internship opportunities in federal, state, and local government. Intern placements range from an assistantship to a city manager in a city of moderate size to a staff or line assignment in an agency as large as the United States Department of the Navy. Through the intern experience, the student lacking work experience of an administrative nature may apply the theory learned in the classroom to the solution of practical administrative problems.

Graduate students have access to a growing collection of pamphlets, periodicals, documents, and reports housed in the Public Administration Laboratory, as well as to the standard published works available in the college library. This documentary material is of particular value in the preparation of research reports and master's theses.

The master of arts degree in personnel supervision and training and the master of science degree in public administration, as offered by the Department of Political Science, with some difference in emphasis, are designed for students who wish to prepare for public service and for those in public service who desire to do advanced study. An adequate grounding in the social sciences, with emphasis on political science, is a prerequisite for admission to the department's graduate programs. Course and seminar work for both programs can be completed in the late afternoon and evening as well as during the day sessions.

For the master of arts degree in social science with a concentration in political science, see the description under Social Science, in this part of the bulletin.

MASTER OF ARTS IN PERSONNEL SUPERVISION AND TRAINING

This degree is directed specifically toward graduate study in the field of personnel management, with emphasis on the training function. In addition to a core of study in political science, an integral part of this program is a block of course and seminar work devoted to education and training on government.

Admission to Regular Graduate Standing

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. The student must also have (1) an adequate grounding in social science courses taken on the undergraduate level or as a prerequisite for admission to regular graduate standing; and (2) an undergraduate grade point average of not less than 3.0 (B) in the major field and not less than 2.5 overall during the last two years of college.

Specific Requirements for the Master of Arts Program

In addition to meeting the requirements for regular graduate standing, the student must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree. The student must also complete a minimum of 30 units of upper division or graduate courses distributed as follows: (1) Political Science 200, The Scope and Method of Political Science, and Political Science 299, Thesis; (2) a minimum of 12 units of courses and seminars devoted to the training and supervisory functions in government, to be selected in consultation with the graduate adviser, including at least three units of Political Science 240A-240B, Seminar in Public Administration.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts Degree.

MASTER OF SCIENCE DEGREE IN PUBLIC ADMINISTRATION

This degree permits the selection under advisement, from a wide variety of courses, of a program which may be oriented toward a generalist approach or toward an emphasis on personnel administration, finance administration, engineering management, public planning, correctional administration, or social administration. Since management responsibilities are shared by administrators in a number of professional areas in the public service, the student is encouraged to supplement his study of government and administration with graduate courses offered by other departments than political science. Graduate offerings in economics, sociology, psychology, business administration, and other areas may be utilized in the student's graduate program.

Admission to Regular Graduate Standing

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. The student must also satisfy the following requirements: (1) submit a departmental application form and a statement of not less than 1,000 words justifying his desire to follow a program of study leading to the degree of master of science in public administration to the department's Graduate Committee; (2) have completed at least 30 undergraduate units in approved social science courses (students with unclassified graduate standing may remove deficiencies in courses by taking courses which are in addition to the 30-unit minimum for the degree); (3) have maintained an undergraduate grade point average of not less than 3.0 (B) in the major field and not less than 2.5 overall during the last two years of college; and (4) complete the government portion of the Graduate Record Examination. The requirements listed in (3) and (4) may be met in part by a showing by the applicant that he has a background of responsible administrative experience.

Specific Departmental Requirements for the Master of Science Program

In addition to meeting the requirements for regular graduate standing, the student must satisfy the general requirements for the master of science degree, described in Part Two of this bulletin, section on Master of Science Degree. The student must also complete: (1) Political Science 200, The Scope and Method of Political Science; Political Science 240A-240B, Seminar in Public Administration; and Political Science 299, Thesis. (2) a minimum of 12 units of upper division or graduate courses in political science or related fields selected under advisement; (3) a minimum of six units in one of the fields of concentration: general administration, personnel administration, finance administration, local government administration, social work administration, correctional administration, and public planning administration; and (4) six units of internship (directed field experience).

The internship requirement can be met either by (a) successful completion of Political Science 296, Internship in Public Administration, or by (b) a demonstration on the part of the student that he has had satisfactory qualifying experiences in the field, on the basis of which the department may recommend that the six units of internship be waived. If the student is required to enroll in Political Science 296, he will work in a governmental agency under supervision of the agency and the department jointly. He will perform duties of an administrative nature. Placements will ordinarily be made in the office of a city manager, a budget office, a personnel office, or in the office of the head of a major operating department.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Science Degree.

FACULTY

Chairman, Department of Political Science: D. B. Leiffer
Graduate Advisers: master of arts (teaching): C. G. Osborn; master of arts (personnel supervision and training): W. R. Bigger; master of science (public administration): W. R. Bigger, D. B. Leiffer

Faculty: For a listing of the faculty in the Department of Political Science, see under Faculty, in the section on Social Science in this part of the bulletin.

Work in the graduate programs in political science is given primarily by members of the Department of Political Science. In addition, a number of faculty members in other divisions and departments of the college offer course and seminar work which may be included in the program of a graduate student. Lecturers from the ranks of governmental administrators are associated with the college on a part-time basis to offer instruction in their particular areas of competence. A co-operative approach to the supervision of graduate research projects is maintained by members of the Department of Political Science and other departments.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN POLITICAL SCIENCE

UPPER DIVISION COURSES

- | | |
|--|---|
| 105. American Political Thought (3) I, II | 155. Supervisory Staff and Employee Training (3) II |
| 107A-107B. Constitutional Government (2-2) Year, I | E-157. Public Relations of Public Agencies (2 or 3) Extension. Special permission required. |
| 111A-111B. Theory of the State (3-3) Year, I | 159. Public Welfare Administration (3) II |
| 112. Modern Political Thought (3) I, II | 160. Principles of Planning (2 or 3) I |
| 115. American Institutions (3) I, II | 161. Field Studies in Government (3) II, Summer |
| 120. Political Parties (3) I | 162. Finance Administration (2 or 3) I |
| 121. Basic Factors in American Politics (3) I, II | E-163. Governmental Budgeting (2 or 3) I, Extension. Special permission required. |
| 122. Propaganda and Public Opinion (3) II | 165. Dynamics of Modern International Crises (3) I |
| 123-S. Contemporary American Politics (3) Summer | 168-S. Institute on World Affairs (3) Summer |
| 136. Administrative Law (3) II | 170A-170B. International Relations (3-3) Year, I |
| 138. Introduction to Jurisprudence (3) I | 171. Administration of American Foreign Affairs (3) II |
| 139A-139B. American Constitutional Development (3-3) Year, I | 172. International Organization (3) I |
| 140A-140B. Principles of Public Administration (3-3) Year, I | 173. Principles of International Law (3) I |
| 141. Government Report Writing (2) I | 175. International Relations of the Latin American States (3) II |
| 142. State Government (3) I | 176. International Relations of the Asian States (3) II |
| 143. Municipal and County Government (3) I | 180. Government of England (3) I |
| 144. Introduction to Public Personnel Administration (3) I, II | 181. Government of the Soviet Union (3) I |
| 145. Human Relations in Management (3) I, II | 182. Governments of Latin America (3) I |
| 146. Wage and Salary Administration (3) I | 183. Governments of Asia (3) I, II |
| 148. Government of Metropolitan Areas (3) I | 197. Investigation and Report (3) I, II |
| 151. California Law of Municipal Corporations (2) II | 198. Internship in Public Administration (2-6) I, II |
| 152. Techniques of Administrative Analysis (3) I, II | 199. Special Study (1-6) I, II |
| 153. Case Studies in Public Administration (3) II | |

GRADUATE COURSES

200. The Scope and Method of Political Science (3) I, II

The discipline of political science and systematic training in its methodology. Required of all applicants for advanced degrees in political science.

210. Seminar in Political Theory (3) I, II

May be repeated with new content to a maximum of six units with permission of the graduate adviser.

220. Seminar in Politics (3) I, II

May be repeated with new content to a maximum of six units with permission of the graduate adviser.

230. Seminar in Public Law (3) I, II

May be repeated with new content to a maximum of six units with permission of the graduate adviser.

240A-240B. Seminar in Public Administration (3-3) Year, I

270. Seminar in International Relations (3) I, II

May be repeated with new content to a maximum of six units with permission of the graduate adviser.

280. Seminar in Comparative Government (3) I, II

May be repeated with new content to a maximum of six units with permission of the graduate adviser.

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

291. Problem Analysis (3) I, II

Analytical treatment of selected problems in political science. Review of methods for investigation and reporting of data. Consideration of problems in preparation of project or thesis.

296. Internship in Public Administration (1-6) I, II

Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Admission by permission of the instructor. Required in addition to the 30 units for candidates for the master of science degree in public administration who lack practical experience.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with the department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

SOCIAL SCIENCE

DIVISIONAL REGULATIONS

GENERAL INFORMATION

The Departments of Economics, Geography, Political Science, and Sociology-Anthropology, in the Division of the Social Sciences, offer graduate work leading to the master of arts degree in social science with a concentration in economics, geography, political science, or sociology. The general secondary credential with a teaching major or minor in social science, is also available. The master of arts degree in social science with a concentration in history is described in the History section of this bulletin. Of interest to graduate students are the following laboratories and special facilities: the Economics Statistics Laboratory, the Institute of Labor Economics, the Public Administration Laboratory, the International Relations Laboratory, the Politics and Citizenship Laboratory, and the Social Research Laboratory.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division. Students in the various areas of concentration must also meet the additional departmental requirements, listed as follows:

Department of Economics: An applicant, in his undergraduate program, must have completed at least 18 units of upper division courses in economics, including Economics 100A-100B, Intermediate Economic Theory, and Economics 140, Statistics, or their equivalents. In addition, he must have completed six units of upper division courses in economics or related fields as approved by the graduate adviser.

Department of Political Science: An applicant, in his undergraduate program, must have had adequate preparation in the field of political science, particularly in the area in which the thesis is to be written.

Department of Sociology: An applicant, in his undergraduate program, must have had Sociology 50 and 51, or their equivalents, and 15 units of upper division sociology courses including Sociology 103 and 153, or their equivalents.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree. A thesis is required in all departments. Additional requirements must be met in certain departments, as follows:

Department of Economics: Sixteen units of postgraduate work in economics, including (a) 10 units of graduate level (200-numbered) courses, which must include Economics 290, Bibliography, and 299, Thesis, and six units in economics seminars, and (b) six additional units selected from upper division or graduate level (200-numbered) courses.

Department of Geography: It is recommended that Geography 180, Field Geography, and 181, Maps and Graphic Methods, be included in the master's program.

Department of Political Science: All applicants for the master's degree must complete Political Science 200, The Scope and Method of Political Science.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete a minimum of four units of upper division or graduate level (200-numbered) courses to be selected with approval of the adviser from the following fields: economics, geography, political science, and sociology.

ADVANCEMENT TO CANDIDACY

An applicant will be recommended for advancement to candidacy by any of the four departments when he has satisfied the general requirements described in Part Two of the bulletin, section on Master of Arts Degree.

FACULTY

Department of Economics:

Department Chairman, G. K. Anderson

Graduate Adviser: G. K. Anderson

General Secondary Credential Adviser: D. S. Milne

Professors: R. E. Cameron, Ph.D.; J. O. McClintic, Ph.D.; F. L. Ryan, Ph.D.

Associate Professor: G. K. Anderson, Ph.D.

Assistant Professors: R. E. Barckley, Ph.D.; Marjorie S. Brookshire, Ph.D.; L. E.

Chadwick, M.S.; D. A. Flagg, Ph.D.; Adam Gifford, Ph.D.; E. J. Neuner, Ph.D.

Instructors: George Babbitt, M.Econ.; D. C. Bridenstine, Ph.D.

Department of Geography:

Department Chairman: J. W. Taylor

Graduate Adviser: J. F. Woodruff

General Secondary Credential Adviser: D. S. Milne

Professors: L. C. Post, Ph.D.; R. W. Richardson, Ph.D.

Associate Professors: Alvena Storm, M.A.; J. W. Taylor, Ph.D.

Assistant Professors: D. I. Eidemiller, Ph.D.; J. F. Woodruff, Ph.D.; C. C. Yahr, Ph.D.

Department of Political Science:

Department Chairman: D. B. Leiffer

Graduate Advisers: master of arts (teaching): N. V. Joy; C. G. Osborn; master of arts (personnel supervision and training): W. R. Bigger; master of science (public administration): W. R. Bigger, D. B. Leiffer

General Secondary Credential Adviser: D. S. Milne

Co-ordinator of Public Administration: W. R. Bigger

Professors: D. B. Leiffer, Ph.D.; C. G. Osborne, Ph.D.; C. B. Leonard, Ph.D.; R. F. Wilcox, Ph.D.

Associate Professors: W. R. Bigger, Ph.D.; M. D. Generales, Degree in Law and Political Science, University of Athens, and additional graduate study at the University of Paris Law School and Institute of International Studies, Paris and Geneva; H. L. Janssen, Ph.D.; N. V. Joy, Ph.D.

Assistant Professors: J. D. Kitchen, Ph.D.; L. V. Padgett, Ph.D.; W. E. Rhode, M.A.

Instructor: E. R. Rusco, M.A.

Lecturers: O. K. Cope, B.A.; C. Swanson, A.B.

Department of Sociology-Anthropology

Department Chairman: O. E. Klapp

Graduate Adviser: D. S. Milne

General Secondary Credential Adviser: D. S. Milne

Professors: K. E. Barnhart, Ph.D.; O. E. Klapp, Ph.D.; D. S. Milne, Ph.D.; S. L. Rogers, Ph.D.

Assistant Professors: M. J. Daniels, Ph.D.; J. R. Delora, M.A.; P. H. Ezell, Ph.D.; B. C. Kirby, Ph.D.; Earle MacCannell, Ph.D.; Irving Tebor, Ph.D.; Aubrey Wendling, Ph.D.

Instructors: J. I. Kitsuse, M.A.; R. A. Kurtz, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS

ECONOMICS

Upper Division Courses in Economics

- | | |
|---|--|
| 100A-100B. Intermediate Economic Theory (3-3) Year, I | 140. Statistical Methods (3) I, II |
| 102. Comparative Economic Systems (3) II | 142. Business Cycles (3) I |
| 105. Theory of Consumption Economics (3) I | 150. Labor Problems (3) I, II |
| 107. Introduction to Econometrics (3) I | 151. Labor Legislation (3) I |
| 110. Economic History of Europe (3) I | 152. Collective Bargaining (3) II |
| 111. Economic History of the U. S. (3) II | 170. Government and Business (3) I, II |
| 127. Agricultural Economics (3) II | 171. Transportation Economics (3) I |
| 131. Public Finance (3) II | 172. Public Utilities (3) II |
| 133. Corporation Finance (3) I, II | 173. Economics of Energy and Water Resources (3) I |
| 135. Money and Banking (3) I, II | 185. Social Insurance (3) II |
| 138. Urban Land Economics (3) I | 190. International Economics—Principles (3) I |
| 139. Real Estate Principles and Practices (3) II | 195. International Economics—Problems (3) II |
| | 198. Investigation and Report (3) I, II |
| | 199. Special Study (1-6) I, II |

Graduate Courses in Economics

203A-203B. Seminar in Advanced Economic Theory (3-3)
Individual research, seminar reports, group discussion of problems in economic theory. Prerequisite: Economics 100A and Economics 100B.

231. Seminar in Public Finance (3)

Advanced study of public finance problems and literature; research. Prerequisite: Economics 131.

235. Seminar in Money and Banking (3)

Individual research, seminar reports and group discussion of selected economic problems related to the structure and functioning of the financial system. Prerequisite: Economics 135.

250. Seminar in Labor Economics (3)

Individual study and group discussion of selected topics in labor economics. Prerequisites: Economics 150 and Economics 151.

295. Seminar in International Economics (3)

Individual and group research into selected topics; group discussion of procedures and results. Prerequisites: Economics 190 and 195.

200A-200B. Seminar in the Development of Economic Thought (3-3) I, II

A critical study of the development of economic thought. Prerequisite: Twelve units in economics.

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

GEOGRAPHY

Upper Division Courses in Geography

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|---------------------------------------|--|
| 100. Climatology (3) II | 150. World Political Geography (3) I |
| 120. California (3) I, II | 151. Economic Geography: Primary Production (3) I |
| 121. United States (3) I, II | 152. Industrial Geography (3) II |
| 122. Canada and Alaska (3) II | 153. Conservation of Natural Resources (3) I |
| 123. Middle America (3) II | 180. Field Geography (3) II |
| 124. South America (3) I | 181. Maps and Graphic Methods (3) I |
| 125. Mediterranean Area (3) II | 182. Use and Interpretation of Aerial Photographs (2) II |
| 126. Northern Europe (3) I | 199. Special Study (1-6) I, II |
| 127. Soviet Union (3) I | |
| 128. Southern and Eastern Asia (3) II | |
| 129. Oceania (3) II | |

Graduate Courses in Geography

200A-200B. Seminar (2-2) Year, I

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

POLITICAL SCIENCE

For a listing of courses in political science, refer to the section of this bulletin on Public Administration and Personnel Supervision.

SOCIOLOGY

Upper Division Courses in Sociology

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|--|---|
| 103. Elementary Social Statistics (3) I, II | 184. Methods of Social Research (3) II |
| 110. Race Relations (3) I | 187. Urban Sociology (3) II |
| 120. Industrial Sociology (3) II | 190. Fields of Social Work (3) I |
| 135. Marriage and the Family (3) I, II | 191. Community Welfare Organization (3) II |
| 146. Collective Behavior (3) II | 192. Social Work and the Law (3) II |
| 148. Small Groups (3) I | 193. Social Group Work (3) II |
| 152. History of Social Thought (3) I | 194. Public Welfare Administration (3) II |
| 153. Modern Social Theory (3) II | 195. Methods of Social Casework (3) II |
| 170. Social Disorganization (3) I | 196. Field Assignment in Social Work (3) II |
| 173. Criminology and Penology (3) I | 199. Special Study (1-6) I, II |
| 174. Juvenile Delinquency (3) II | |
| 176. Contemporary Correctional Administration (3) II | |
| 180. Population Problems (3) I | |

Graduate Courses in Sociology

200A-200B. Seminar (2-2) Year, I

230. Principles of Social Case Work (3) I

A study of the principles and practices of social case work; problems of case recording and analysis. Directed field work and case studies. Prerequisite: Sociology 190 or Psychology 152 or Education 233.

231. Field Work in Social Case Work (3) II

Supervised practice in local social work agencies. Prerequisites: Sociology 190 and 230.

235A-235B. Case Work Supervision (3-3) Year, I

Discussion and analysis of cases and problem situations encountered by social case work supervisors. Review of basic case work techniques and principles of personnel supervision as applied to social case work. Prerequisite: Sociology 230 or permission of instructor.

290. Bibliography (1) I, II

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

298. Special Study (1-6) I, II

Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.

299. Thesis (3) I, II

Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

SPEECH ARTS

DEPARTMENTAL REGULATIONS

GENERAL INFORMATION

The Department of Speech Arts offers graduate work leading to the master of arts degree with a major in speech arts and the general secondary credential with a teaching major or minor in speech arts. Advanced work in the areas of public speaking, interpretation, speech pathology, theater, radio and television broadcasting is available. Greatly improved facilities are now in use in the new speech building and theater. Facilities in these buildings include a two-studio plant fully equipped for radio and television production. Graduate students will serve as interns in a program of field training with commercial stations in the San Diego area.

ADMISSION TO REGULAR GRADUATE STANDING

All students must satisfy the general requirements for admission to regular graduate standing, as described in Part One of this bulletin under Admission to the Graduate Division.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR MASTER OF ARTS PROGRAMS

In addition to meeting the requirements for regular graduate standing and the credential requirements as applicable, the student must satisfy the general requirements for the master of arts degree, described in Part Two of this bulletin, section on Master of Arts Degree. The student is also required to write a thesis or to complete a project involving creative work in such fields as theater design, stage direction, playwriting, broadcasting, interpretation, or an experimental project in speech pathology, with an appropriate written report thereon.

SPECIFIC DEPARTMENTAL REQUIREMENTS FOR THE GENERAL SECONDARY CREDENTIAL

Applicants for the general secondary credential must complete four units from Speech Arts 200, Seminar, and 298, Special Study.

ADVANCEMENT TO CANDIDACY

All students must meet the general requirements for advancement to candidacy, which are described in Part Two of this bulletin under Master of Arts Degree.

FACULTY

Department Chairman: H. D. Sellman

Graduate Adviser: C. C. Cunningham

General Secondary Credential Adviser: H. D. Sellman

Professors: J. W. Ackley, Ph.D.; C. C. Cunningham, Ph.D.; Sue W. Earnest, Ph.D.; P. L. Pfaff, Ph.D.; H. D. Sellman, M.S.

Associate Professors: K. K. Jones, Jr., M.A.; E. K. Povenmire, M.F.A.; D. W. Powell, M.F.A.

Assistant Professors: W. J. Adams, Ph.D.; R. L. Benjamin, Ph.D.; R. E. Lee, M.A.

Instructor: Nancy J. Reed, A.B.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN SPEECH ARTS

UPPER DIVISION COURSES

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|--|---|
| 108. Advanced Interpretation (3) I, II | 177. Aural Rehabilitation (3) I |
| 118A-118B. Play Analysis-Playwriting (3-3) I, II | 178. The Teaching of Lipreading (2) |
| 130. Semantics (3) II | 179. Clinical Methods in Speech Correction (3) II |
| 140A-140B. Scene Design for Stage and Television (3-3) I, II | 180. Field Work in Clinical Practice in Speech Correction (2-4) I, II |
| 142. Theater Workshop (3 or 6) | 181. Radio and Television Station Management and Advertising (3) I |
| 145. Stage and Television Lighting (3) II | 182A-182B. Radio Workshop (2-2) I, II |
| 150. Phonetics (3) I, II | 183A-183B. Television Workshop (2-2) I, II |
| 152. History and Design of Costume (3) I | 184. Writing for Radio and Television (3) II |
| 154A-154B. History of the Theater (3-3) Year, I | 185. Radio Production Directing (3) I |
| 155. Advanced Acting (3) I | 186. Television Production Directing (3) II |
| 156. Advanced Dramatic Production (3) II | 187. Radio and Television News (3) I |
| 159. Stage Direction (3) I | 188. Field Training in Radio and Television (2-4) I, II |
| 160. Stage Direction Laboratory (1) I, II | 189. Motion Picture Techniques for Television (3) II |
| 162. Advanced Argumentation (3) I | 190. Rhetorical Theory (3) |
| 164. Verse Choir Directing (2) I, II | 191. Organized Discussion (3) II |
| 170. Speech Development (3) I | 192A-192B. Advanced Public Speaking (3-3) Year, I |
| 174. Principles and Methods of Speech Correction (3) II | 199. Special Study (1-6) I, II |
| 176. Stuttering and Neurological Disorders (3) I | |

GRADUATE COURSES

200. Seminar (2) I, II
An intensive study of one phase of speech arts: (a) broadcasting techniques; (b) history of oratory; (c) articulatory problems of speech; (d) technical practice for theater and television; (e) stage direction; (f) oral interpretation; (g) scene design for stage and television. May be repeated with new materials for additional credit.
290. Bibliography (1) I, II
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.
298. Special Study (1-6) I, II
Individual study. Six units maximum credit. Prerequisite: Permission of staff; to be arranged with department chairman and instructor.
299. Thesis or Project (3) I, II
Guidance in the preparation of a project or thesis for the master's degree. Prerequisites: An officially appointed thesis committee and advancement to candidacy.

DEPARTMENTS OFFERING SPECIAL GRADUATE COURSES

GEOLOGY

200. Seminar (3) I, II
An intensive study of some phases of geology such as geophysics, ground water hydrology, geochemistry, seismology, volcanology, or geomorphology. May be repeated with advanced or new subject material for additional credit. Prerequisites: Bachelor's degree in physical science and Geology 198 or equivalent.

