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ACADEMIC CALENDAR
1975-1976

1975 Summer Sessions

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<th>Date</th>
<th>Event</th>
</tr>
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<td>June 2-20</td>
<td>Term I summer session (3 weeks). Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
</tr>
<tr>
<td>June 12</td>
<td></td>
</tr>
<tr>
<td>June 23-August 1</td>
<td>Term II summer session (6 weeks). Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.</td>
</tr>
<tr>
<td>June 28</td>
<td></td>
</tr>
<tr>
<td>July 12</td>
<td>Last day to apply for summer graduation with an advanced degree, Graduate Division Office.</td>
</tr>
<tr>
<td>August 2</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
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<tr>
<td>August 4</td>
<td>Final day for submitting theses to the Thesis Review Service, Love Library.</td>
</tr>
<tr>
<td>August 4-22</td>
<td>Final day for depositing completed approved theses at Aztec Shops for processing for summer graduation. Also last day for reporting results on comprehensive examinations to the Graduate Division Office by department, school, or college.</td>
</tr>
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Fall Semester

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<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>August 1-31</td>
<td>Applications for admission or readmission to San Diego State University for the spring semester 1976. Accepted after this date only until enrollment quotas are met. Testing, advising and registration. Opening date of the academic year. Holiday—Labor Day.</td>
</tr>
<tr>
<td>August 18-29</td>
<td>First day of classes. Also the earliest date to apply for graduation this semester. Last day to apply for refunds.</td>
</tr>
<tr>
<td>August 25</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office. Last day to withdraw from class or change program. Holiday—Columbus Day.</td>
</tr>
<tr>
<td>September 1</td>
<td>Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.</td>
</tr>
<tr>
<td>September 2</td>
<td></td>
</tr>
<tr>
<td>September 15</td>
<td>Applications for admission or readmission to San Diego State University for the fall semester 1976. Accepted after this date only until enrollment quotas are met.</td>
</tr>
<tr>
<td>September 27</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office. Application for admission or readmission to San Diego State University for the fall semester 1976. Accepted after this date only until enrollment quotas are met.</td>
</tr>
<tr>
<td>September 29</td>
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<td>October 10</td>
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<td>October 18</td>
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<td>November 1-30</td>
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<td>November 7</td>
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<td>November 11</td>
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<td>November 27-30</td>
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1. Graduate Division Office
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>December 1</td>
<td>Final day for submitting theses to the Thesis Review Service, Love Library.</td>
</tr>
<tr>
<td>December 12</td>
<td>Last day of classes before final examinations.</td>
</tr>
<tr>
<td>December 13</td>
<td>Graduated Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
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<tr>
<td>December 19</td>
<td>Final day for depositing completed approved theses at Aztec Shops for processing for mid-year graduation.</td>
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<td>December 22</td>
<td>Winter recess begins.</td>
</tr>
<tr>
<td>December 31</td>
<td>Last day of fall semester. Last day for reporting results on comprehensive examinations to the Graduate Division Office by department, school, or college.</td>
</tr>
<tr>
<td>January 12-23</td>
<td>Testing, advising and registration.</td>
</tr>
<tr>
<td>January 12</td>
<td>First day of spring semester.</td>
</tr>
<tr>
<td>January 17</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
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<tr>
<td>January 26</td>
<td>First day of classes. Also the earliest date to apply for graduation this semester.</td>
</tr>
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<td>February 3</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 6:15-10:00 P.M., by appointment four weeks in advance, Test Office.</td>
</tr>
<tr>
<td>February 7</td>
<td>Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.</td>
</tr>
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<td>February 9</td>
<td>Last day to apply for refunds.</td>
</tr>
<tr>
<td>February 12</td>
<td>Holiday—Lincoln's Birthday.</td>
</tr>
<tr>
<td>February 13</td>
<td>Holiday—Washington's Birthday.</td>
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<tr>
<td>February 24</td>
<td>Last day to withdraw from class or change program.</td>
</tr>
<tr>
<td>February 28</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
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<td>March 6</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
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<td>March 12</td>
<td>Last day to apply for May graduation with an advanced degree, Graduate Division Office.</td>
</tr>
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<td>April 5</td>
<td>Final day for removing incompletes and for submitting theses to the Thesis Review Service, Love Library, for processing for May commencement.</td>
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<tr>
<td>April 10</td>
<td>Last day of classes before spring recess.</td>
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<tr>
<td>April 12-18</td>
<td>Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.</td>
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<td>April 19</td>
<td>Spring Recess.</td>
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<td>April 23</td>
<td>Classes resume.</td>
</tr>
<tr>
<td>April 24</td>
<td>Final day for depositing completed approved theses at Aztec Shops for processing for May commencement. Also last day for reporting results on comprehensive examinations to the Graduate Division Office by department, school, or college.</td>
</tr>
<tr>
<td>May 8</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
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<tr>
<td>May 10</td>
<td>Final day for submitting theses to the Thesis Review Service, Love Library, for processing for June graduation.</td>
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<td>May 12</td>
<td>Last day of classes before final examinations.</td>
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<tr>
<td>May 15-22</td>
<td>Final examinations.</td>
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<td>May 23</td>
<td>Commencement.</td>
</tr>
<tr>
<td>May 28</td>
<td>Final day for depositing completed approved theses at Aztec Shops for processing for June graduation.</td>
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<tr>
<td>May 31</td>
<td>Holiday—Memorial Day.</td>
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<td>June 1</td>
<td>Last day of spring semester.</td>
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<td>June 1-18</td>
<td>1976 Summer Session</td>
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<td>June 1</td>
<td>Term I summer session (3 weeks).</td>
</tr>
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<td>June 12</td>
<td>Earliest date to apply for graduation in the summer session.</td>
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<td>June 21-July 30</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
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<tr>
<td>June 26</td>
<td>Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.</td>
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<tr>
<td>July 5</td>
<td>Holiday—Independence Day.</td>
</tr>
<tr>
<td>July 9</td>
<td>Last day to apply for summer graduation with an advanced degree, Graduate Division Office.</td>
</tr>
<tr>
<td>July 10</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
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<tr>
<td>July 30</td>
<td>Final day for submitting theses to the Thesis Review Service, Love Library.</td>
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<tr>
<td>August 2-20</td>
<td>Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.</td>
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<tr>
<td>August 7</td>
<td>Final day for depositing completed approved theses at Aztec Shops for processing for summer graduation. Also last day for reporting results on comprehensive examinations to the Graduate Division Office by department, school, or college.</td>
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</table>
SCHEDULE OF FEES

FEES MUST BE PAID AT TIME OF REGISTRATION. CHECKS ACCEPTED FOR EXACT AMOUNT OF FEES. IF YOUR CHECK IS RETURNED BY THE BANK FOR ANY REASON, YOUR REGISTRATION WILL BE CANCELED AND YOU WILL BE BILLED $15.00.

FEES for Student Services—All Students: on basis of units carried. (Auditors pay same fees as students carrying courses for credit.)

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<thead>
<tr>
<th>Units</th>
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<tr>
<td>0</td>
<td>73.00</td>
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<tr>
<td>4</td>
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<td>8</td>
<td>85.00</td>
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<tr>
<td>12</td>
<td>94.00</td>
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</table>

The above fees also include a student activity fee of $10.00, a student union fee of $9.00 and a nonrefundable facilities fee of $3.00.

Tuition for Nonresident Student (Foreign and Domestic)

<table>
<thead>
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<th>Units</th>
<th>Fee</th>
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<tr>
<td>1 - 3.9</td>
<td>$28.00</td>
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<tr>
<td>4 - 7.9</td>
<td>$30.00</td>
</tr>
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<td>8 - 11.9</td>
<td>$33.00</td>
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<tr>
<td>12 or more</td>
<td>$36.00</td>
</tr>
</tbody>
</table>

Tuition paid for a course scheduled to continue for an entire semester may be refunded in accordance with the following schedule, if application is received by the Cashier's Office within the following time limits:

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<th>Time Limit</th>
<th>Amount of Refund</th>
</tr>
</thead>
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<td>(1) Before or during the first week of the semester</td>
<td>100 percent of fee</td>
</tr>
<tr>
<td>(2) During the second week of the semester</td>
<td>90 percent of fee</td>
</tr>
<tr>
<td>(3) During the third week of the semester</td>
<td>70 percent of fee</td>
</tr>
<tr>
<td>(4) During the fourth week of the semester</td>
<td>50 percent of fee</td>
</tr>
<tr>
<td>(5) During the fifth week of the semester</td>
<td>30 percent of fee</td>
</tr>
<tr>
<td>(6) During the sixth week of the semester</td>
<td>20 percent of fee</td>
</tr>
</tbody>
</table>

PARKING FEES

- $33.00

Nonresident student enrolled for 15 units or more

- $650.00

Nonresident student enrolled for less than 15 units or fraction thereof—per unit

- $43.00

(Tuition paid for a course scheduled to continue for an entire semester may be refunded in accordance with the following schedule, if application is received by the Cashier's Office within the following time limits:

<table>
<thead>
<tr>
<th>Time Limit</th>
<th>Amount of Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Before or during the first week of the semester</td>
<td>100 percent of fee</td>
</tr>
<tr>
<td>(2) During the second week of the semester</td>
<td>90 percent of fee</td>
</tr>
<tr>
<td>(3) During the third week of the semester</td>
<td>70 percent of fee</td>
</tr>
<tr>
<td>(4) During the fourth week of the semester</td>
<td>50 percent of fee</td>
</tr>
<tr>
<td>(5) During the fifth week of the semester</td>
<td>30 percent of fee</td>
</tr>
<tr>
<td>(6) During the sixth week of the semester</td>
<td>20 percent of fee</td>
</tr>
</tbody>
</table>

Parking fee

For a refund, the parking sticker must be removed from the vehicle by a University Police Officer. The refund application is obtained from the Cashier's Office, CL-108.

The late registration fee is not refundable. The Cashier's Office should be consulted for further details.

SUMMER SESSION FEES

<table>
<thead>
<tr>
<th>Session</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term I</td>
<td>$30.00</td>
</tr>
<tr>
<td>Term II</td>
<td>$30.00</td>
</tr>
<tr>
<td>Term III</td>
<td>$30.00</td>
</tr>
</tbody>
</table>

EXEMPTIONS

Students under Public Law 894, 87-815, California state veterans' dependents, or state rehabilitation programs will have fees paid for tuition and materials and service under provisions of these respective programs.

No fees of any kind shall be required of or collected from those individuals who qualify for such exemption under the provisions of the Alan Pattee Scholarship Act.

STUDENT SERVICES FEE

The Student Services fee for 1975-76 was recently established by the Trustees of The California State University and Colleges in lieu of the Materials and Service fee; however, the fee level was maintained at $1.44 (for 12 or more units for the academic year). It is intended that this new fee will provide financing for the following student services programs not covered by state funding:

1. Social and Cultural Development Activities: provides for the coordination of various student activities, student organizations, student government and cultural programs.
2. Counseling: includes the cost of counselor's salaries and clerical support plus operating expenses and equipment.
DEBTS OWED TO THE INSTITUTION

From time to time the student may become indebted to the institution. This could occur, for example, when the student fails to repay money borrowed from the library, or when the student fails to pay for other services provided by the institution. In such cases, the California Administrative Code authorizes the institution to withhold permission to register, to use facilities for which a fee is authorized to be charged, to receive services, or to operate as if the debt is paid. For example, under these provisions the institution may withhold permission to register, and may withhold other services, such as grades and appointments, until the debt is paid. The student should contact the Controller, in the business office, or another office on campus to which the student may wish to present, and will advise the student of its conclusions with respect to the debt.

NOTICE

The Board of Trustees of The California State University and Colleges, in Section 43800 of Title 3 of the California Administrative Code, has reserved the right to add, procedures, in whole or in part, at such time as it may choose. None shall be construed to apply to or effect any of its regulations, rules, or resolutions, standing orders, or rules of procedure as, or have the effect of an abridgement or limitation of any rights, powers, or duties of its Executive Orders, at such time as it may choose, and the President of the University, in consulting with the Board of Trustees, the Chancellor, and the Board of Regents, shall be the final arbiter of the University's policies, including, but not limited to, the determination of faculty and staff positions and the adoption of new or revised policies or procedures. No limitation of any rights, powers, or privileges of the Chancellor or shall have the effect of an abridgement of or limitation of any rights, powers, or privileges of the President.

PART ONE

SAN DIEGO STATE UNIVERSITY

PRINCIPAL OFFICERS OF ADMINISTRATION

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Brage Golding</td>
</tr>
<tr>
<td>Vice President for Academic Affairs</td>
<td>Trevor Colbourn</td>
</tr>
<tr>
<td>Vice President for Planning and External Affairs</td>
<td>Ernest B. O'Byrne</td>
</tr>
<tr>
<td>Dean of Student Affairs</td>
<td>Daniel B. Nowak</td>
</tr>
<tr>
<td>Director of Business Affairs</td>
<td>William L. Erickson</td>
</tr>
</tbody>
</table>

ACADEMIC ADMINISTRATION

GRADUATE DIVISION

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dean of the Graduate Division and Research</td>
<td>James W. Cobble</td>
</tr>
<tr>
<td>Associate Dean</td>
<td>Irving Alan Sparks</td>
</tr>
<tr>
<td>Assistant Dean</td>
<td>Marion J. Kahn</td>
</tr>
<tr>
<td>Assistant Dean</td>
<td>Dennis J. Selder</td>
</tr>
<tr>
<td>Assistant Dean of the Graduate Division</td>
<td>William F. Barber</td>
</tr>
<tr>
<td>Assistant Dean of the Graduate Division</td>
<td>Larry Bennett</td>
</tr>
<tr>
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<td>Marybelle Bigelow</td>
</tr>
<tr>
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<td>Clarence Fishburn</td>
</tr>
<tr>
<td>Assistant Dean of the Graduate Division</td>
<td>Barbara Cuning</td>
</tr>
<tr>
<td>Assistant Dean of the Graduate Division</td>
<td>William A. Hunrichs</td>
</tr>
<tr>
<td>Assistant Dean of the Graduate Division</td>
<td>G. Krishnamoorthy</td>
</tr>
<tr>
<td>Assistant Dean of the Graduate Division</td>
<td>Glenn Sandstrom</td>
</tr>
<tr>
<td>Assistant Dean of the Graduate Division</td>
<td>Arthur W. Silver</td>
</tr>
<tr>
<td>Assistant Dean of the Graduate Division</td>
<td>E. Percil Stanford</td>
</tr>
</tbody>
</table>

THE GRADUATE COUNCIL

The Graduate Council of San Diego State University consists of the Dean of the Graduate Division and Research (chairman), the Vice President for Academic Affairs, the Associate Dean of the Graduate Division, and members of the faculty from the various schools and colleges appointed by the President. For the academic year 1974-75, the membership of the Council was as follows:

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<thead>
<tr>
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<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>(Vice President for Academic Affairs)</td>
<td>Irving Alan Sparks</td>
</tr>
<tr>
<td>Associate Dean</td>
<td>Marion J. Kahn</td>
</tr>
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<td>Assistant Dean</td>
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<td>E. Percil Stanford</td>
</tr>
</tbody>
</table>

(COLLEGES, SCHOOLS AND DEPARTMENTS)

<table>
<thead>
<tr>
<th>College of Arts and Letters</th>
<th>Chairmen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Dean</td>
<td>Frank Marini, Dean</td>
</tr>
<tr>
<td>Assistant Dean for Student Affairs</td>
<td>Joyce Appleby</td>
</tr>
<tr>
<td>Astro-American Studies</td>
<td>Alvord G. Branan</td>
</tr>
<tr>
<td>Anthropology</td>
<td>Robert John</td>
</tr>
<tr>
<td>Classical and Oriental Languages and Literatures</td>
<td>Larry L. Leach</td>
</tr>
<tr>
<td>Economics</td>
<td>Fred Sebold</td>
</tr>
<tr>
<td>French and Italian Languages and Literatures</td>
<td>Elizabeth Jackson</td>
</tr>
<tr>
<td>Geography</td>
<td>Elmer Keen</td>
</tr>
</tbody>
</table>

(Membership for 1975-76 will be determined prior to the beginning of the academic year.)
PART TWO

GENERAL INFORMATION

SAN DIEGO STATE UNIVERSITY

San Diego State University is a publicly supported institution of higher learning which, since its founding in 1897, has been dedicated to the service of men and women in the pursuit of their educational goals. The southernmost link of the California State University and Colleges system, the University offers postbaccalaureate study and research in a wide variety of professional and graduate programs, leading to credentials, master's, and doctoral degrees.

The campus is situated near the eastern boundary of San Diego on a mesa overlooking Mission Valley, the site of the first mission founded in California by Father Junipero Serra. Greater San Diego is a large metropolitan area located in an ideal climate well suited to academic and cultural pursuits. Three other institutions of higher learning, as well as the famous San Diego Zoo, the Old Globe Theatre, the Fine Arts Gallery, the Timken Gallery, and the Museum of Natural History are within easy driving distance of the campus. The San Diego Stadium, Sports Arena, a number of fine beaches and the nearby Laguna Mountains and desert provide ample opportunity for recreational activities.

The faculty of the University is made up of over 1,400 scholars and teachers who are distinguished members of their professions coming from over 100 colleges and universities in the United States or abroad. Committed to good teaching, they are also engaged in research, scholarship and professional activities so necessary in maintaining a stimulating and exciting academic climate which is such an essential part of graduate training.

The degree of intellectual leadership which the University plays in higher education has been recognized by a number of learned societies which are located on campus, including the Phi Beta Kappa and Phi Kappa Phi honor societies. The University is fully accredited by the Western Association of Schools and Colleges, the National Council for Accreditation of Teacher Education, the California State Board of Education, and is approved by the Veterans Administration for the education and training of veterans. The master's degree programs in Business Administration are accredited by the American Association of Collegiate Schools of Business. 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 Department of Music is a member of the National Association of Schools of Music. Public Administration and Urban Studies is a member of the National Association of Schools of Public Affairs and Administration. The School of Engineering is accredited in the fields of aerospace, civil, electrical and electronic, and mechanical engineering by the Engineer's Council for Professional Development. The Master of Social Work degree is accredited by the Council of Social Work Education.

San Diego State University also has memberships in the Western Association of Graduate Schools and the Council of Graduate Schools in the United States.

THE MALCOLM A. LOVE LIBRARY

The centrally located Malcolm A. Love Library, with its open stacks, adjoining study areas, and many individual carrels, has been designed to facilitate study, research and reading. It has spaces for some three thousand readers and will ultimately accommodate over a million volumes.

Presently the collection comprises some 870,000 volumes including books, bound periodicals, and government documents. Additional resources include some 963,000 microfiche and microopaque cards, 38,000 reels of microfilm, 12,000 college catalogs, 61,000 items of curriculum materials, 25,000 scientific reports, 290,000 archival papers, and 1600 phonograph records. The library receives some 10,000 periodical and serial titles, excluding government documents. It is a depository for United States and California government publications. It receives all United Nations and Organization of American States publications, as well as many publications of other national and international bodies.
Significant research collections in the social sciences and humanities are business, medieval history, American history, Civil War history, Latin American history, colonial French African history, English literature (sixteenth and eighteenth centuries), music of the Middle Ages and the nineteenth century, medieval philosophy, American philosophy, and public administration. Strong research and special collections in the sciences are the history of science, paleontology, biology, archeology, astronomy, the history of astronomy, mathematics, chemistry, geology, the geologic history of Pacific Ocean invertebrate fauna, and the geology of San Diego County and Baja California.

The library provides a general and a specialized reference service in the social sciences and humanities, as well as separate reference services for sciences and engineering, government publications, and educational resources. Reference librarians assist students and faculty in their research and study, and librarians with advanced degrees in particular subject areas are available for research consultation.

Among the conveniences provided by the library are locational information desks in the main lobby, the periodicals reading room, and the microforms and listening center; numerous inexpensive photocopying machines including one for microfiche and microfilm; and inexpensive multiple-copy duplicating machine; several typing rooms with coin-operated electric and manual typewriters; coin-operated electronic calculators; listening equipment for cassettes, open-reel tape, and phonograph records; and most of the required textbooks at the limited-loan (reserve) room of the library.

**RESEARCH**

The importance of research in graduate instruction is recognized by the faculty and all graduate programs contain provisions for research experience on the part of the graduate student. Among the facilities for research which may be utilized by students are those provided in organized bureaus, centers, and institutes located on the campus.

**ASIAN STUDIES**

Alvin D. Cox, Director

The Center for Asian Studies is an interdisciplinary organization in the College of Arts and Letters. Drawing upon faculty members from many areas, it performs such services in Asian studies as (1) securing and administering grants and other support for research and development in Asian-centered studies; (2) coordinating and publicizing the activities of faculty engaged in relevant curricula at the undergraduate and graduate levels; (4) responding to campus and community requests for information and services; (5) fostering campus and community interest in Asian studies. The center’s reading room and study facility, located in LE-469, contains Asian periodicals, books, pamphlets, dictionaries, and maps.

**BUSINESS AND ECONOMIC RESEARCH**

John B. McFall. Director

The Bureau of Business and Economic Research is a center for organized research activity serving the needs of the School of Business Administration. Operationally, it is an addition as a coordinating agency for studies which concern the university as a whole. The principal objectives of the bureau are to (1) conduct research in problems of business and economics, with special reference to local and regional problems; (2) arrangements with outside individuals and organizations for conducting specific research investigations; (3) seek cooperative projects; (4) analyze and interpret local and regional data; (5) publish the results of its research.

Graduate students and faculty are encouraged to make use of bureau facilities. The bureau is a member of the Association for University Business and Economic Research.

**COUNSELOR EDUCATION**

Raymond Howard, Director

The Center for the Study of Counselor Education is an interdisciplinary task force under the administrative jurisdiction of the Dean of the School of Education. Fiscal matters are coordinated through the San Diego State University Foundation. The center is designed to draw together faculty members from relevant disciplines such as psychology, social welfare, social work, sociology, anthropology, economics, education, and counseling. The University Counseling Center for such purposes as (1) securing and administering grants and other support for research and development in counselor education and guidance and (2) conducting programs or rendering services related to counselor education and guidance through contractual agreements with public or private agencies or organizations.

**ECONOMICS RESEARCH CENTER**

Robert Barckley, Director

The Economics Research Center collects research materials, publishes occasional monographs, and encourages research of special interest to faculty and students in economics and related areas. The center's facilities are currently utilized by the Economics Department for faculty seminars and economics conferences, by the Center for Research in Economic Development, by the Institute of Labor Economics, and by the local chapter of Omicron Delta Epsilon.

**EUROPEAN STUDIES CENTER**

Ernest M. Wolf, Director

The European Studies Center coordinates and supports teaching and research related to the European area. It supervises the major in European studies for the A.B. degree. It sponsors the annual San Diego State University Summer Seminar and Travel Study Tour to Europe. It administers the European Studies Center Laboratory in LE-470 which contains books, pamphlets, English and foreign language periodicals, and a slide collection on European art and geography. The laboratory room is open several hours each day for study and research by students and instructors in courses dealing with any aspect of European studies. The center also assists in the development of the curricular and degree programs in the Department of Economics and to be of service to related disciplines. Publications are exchanged with 75 similar institutes at other universities. Research materials and facilities to assist research and publications in the area of labor economics are maintained in the Social Science Research Laboratory, located on the lower level of the West Commons. A technical assistant is available to help you from 8:30 a.m. - 4:30 p.m., Monday through Friday.

**INSTITUTE OF LABOR ECONOMICS**

Clinton Jencks, Director

The Institute of Labor Economics is a faculty of the Department of Economics to encourage research by students and faculty in all phases of labor problems, collective bargaining, labor legislation and social security. The center is designed to complement the curricular and degree programs in the Department of Economics and to be of service to related disciplines. Publications are exchanged with 75 similar institutes at other universities. Research materials and facilities to assist research and publications in the area of labor economics are maintained in the Social Science Research Laboratory, located on the lower level of the West Commons. A technical assistant is available to help you from 8:30 a.m. - 4:30 p.m., Monday through Friday.
LATIN AMERICAN STUDIES
Philip F. Fleminson, Director

The Center for Latin American Studies seeks to encourage teaching and research related to Latin America. It has primary responsibility for the administration of the Latin American undergraduate and graduate degrees and the Mexican Summer School programs. The center sponsors a Latin American lecture series which provides the campus with public lectures given by guest speakers and members of the San Diego State University faculty who discuss a variety of Latin American topics. The center also assists in the development of the university library's Latin American holdings and has created a special collection of Latin American materials which is available in the center's reading room, EE-543.

CENTER FOR MARINE STUDIES
Richard F. Ford, Director

The Center for Marine Studies was established to coordinate and represent the multidisciplinary marine studies programs offered by departments within the University. To aid in the development of instructional, research, and public services aspects of the program, and to provide special supporting services to those involved. The center is operated as a special unit of the College of Sciences. Supporting services sponsored by the center include advising students concerning marine studies, assistance to faculty and students in research and publications, a boat operations program, and the University Diving Safety Program. The center is administered by a director, associate directors, and an executive committee consisting of faculty members elected from participating departments in the College of Sciences; the College of Arts and Letters, the College of Professional Studies, the School of Business Administration, and the School of Engineering.

PALEOBIOLOGY COUNCIL
Jason A. Lillegraven, Chairman
An interdisciplinary research and teaching agency to explore the fossil record. Composed of faculty members from the departments of Geology, Physical Science, and Zoology at San Diego State University in addition to professional paleontologists in other research and educational institutions in the greater San Diego area.

PUBLIC AND URBAN AFFAIRS
W. Richard Bigger, Director

The Institute of Public and Urban Affairs is a part of Public Administration and Urban Studies, San Diego State University, organized to conduct research into community and governmental problems. It also sponsors institutes and conferences related to public administration and public policy, and serves as a clearinghouse for interdisciplinary and joint research efforts with the various departments of the university.

PUBLIC ECONOMICS
George Babiol, Director

The Center for Public Economics is a faculty of the Department of Economics to encourage research by students and faculty in all phases of nonmarket economic and local fiscal systems, including the provision for and financing of public goods at each bearing on urban and local economic problems; (3) the economic dimensions of social programs in the Department of Economics and to be of service to related disciplines. It of public economics. Fiscal matters are coordinated through the San Diego State faculty research projects on subjects in public economics. The center funds a number of Public Economics is located in OL-307.

REGIONAL ENVIRONMENTAL STUDIES
Charles F. Cooper, Director

The Center for Regional Environmental Studies coordinates and encourages interdisciplinary research, educational and public service programs related to environmental quality and improved use of environmental resources. Physical, biological, social and institutional aspects of environmental problems are emphasized. The center endeavors to serve as a point of contact between the University and governmental and private institutions concerned with environmental quality. Although the San Diego region receives primary attention, the center's activities include statewide, national and international environmental programs.

RESEARCH IN ECONOMIC DEVELOPMENT
Murugappa Madhavan, Director

The Center for Research in Economic Development is part of the Economics Department's effort to encourage research by students as part of their education and by the faculty. The center, temporarily located in the Economics Research Center in SS-340, provides material and aid for research in problems related to less developed countries.

SOCIAL RESEARCH
Douglas Kirby, Director

The Social Research Center is a facility of the Department of Sociology. It provides physical equipment and space for the planning and processing of sociological research in such areas as urban growth and development, demographic factors, and others. The Social Research Center is administered by a director, associate directors, and an executive committee consisting of faculty members elected from participating departments in the College of Sciences; the College of Arts and Letters, the College of Professional Studies, the School of Business Administration, and the School of Engineering.

SURVEY RESEARCH
Oscar Kaplan, Director

The Center for Survey Research was established to encourage nonprofit research in the sample survey field. The center is prepared to undertake surveys requested by government or nongovernment organizations, and to do field work on a local, state or national basis. Faculty members who wish to submit applications for off-campus support in survey research in the name of the center may do so, upon approval of the project by the center's advisory committee. The center is administered by a director.

COMPUTER CENTER

The Computer Center was established to encourage and support the use of computers in all instructional, research and administrative activities of the University. The present equipment includes a medium-size electronic digital computer, an IBM 360 Model 40 with 262,144 bytes of core storage, disks, tapes, a printer, card reader and punch. The supervisor is the Disc Operating System which supports the Assembler.

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RESIDENCE HALLS

Accommodations for 1669 single students are available in six residence halls on campus. Each of the buildings is fireproof and air-conditioned throughout. Five red-brick residence halls accommodate 211 students each, with sleeping and study facilities on a two-room-per-floor basis. The sixth residence hall, which is a high-rise building, accommodates 614 students. Study hours are agreed on by residents and staff. Participation in campus activities is encouraged. Student government representatives are also on duty when school is in session. Pastries, cakes, and other delicacies are served in the residence halls. Each of the residence halls is staffed by personnel reporting to the Director of Housing.

The cost of room, including linens, is approximately $300 to $400 per semester. Three food service plans (19, 14 or 10 meals per week) are offered. The cost of each is approximately $230 to $310 per semester, on an optional basis.

CAREER PLANNING AND PLACEMENT CENTER

San Diego State University provides a centralized placement service in cooperation with the various departments of the institution. Students are aided in securing part-time, full-time and summer employment and cooperative education programs through this office.

Information concerning occupational trends is also provided. Counselors maintain constant liaison with schools, businesses and industries. These counselors, as well as special counselors to minority students, are available at the Career Planning and Placement Center.

Students should seek out the counselor appropriate to their academic and vocational goals early in their college careers.

Credit courses relating to career planning are offered by the Center.

Going to college is regarded as a full-time job. Students are normally expected to spend in class and study a total of three hours a week for each unit of college work. A normal 15-unit load, therefore, represents a 45-hour week. Students should consider this when ready to seek a full-time career position, the student registers with the Career Planning and Placement Center so that he is able to fully take advantage of all the services that are offered.

At the beginning of the student's last semester, one should come to the Career Planning and Placement Center to obtain the information necessary to start a career folder.

COST OF LIVING

Each student should plan his budget based on individual needs. The wide range of financial resources of students in a university as large as ours makes it difficult to give specific information on costs. At San Diego State University, it is possible to live simply and participate moderately in campus life on a modest budget. The following table is based on systemwide figures provided for the purpose of determining financial aid.

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Cost (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books and Supplies</td>
<td>$200 to $300</td>
</tr>
<tr>
<td>Housing</td>
<td>$300 to $400</td>
</tr>
<tr>
<td>Meals</td>
<td>$600 to $800</td>
</tr>
<tr>
<td>Fees</td>
<td>$100 to $150</td>
</tr>
<tr>
<td>Total</td>
<td>$1100 to $1800</td>
</tr>
</tbody>
</table>
General Information

Estimated Expenses for the Academic Year:

<table>
<thead>
<tr>
<th></th>
<th>Living on Campus</th>
<th>Commuting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials, service, student activity, student union fee, facilities fee</td>
<td>$187</td>
<td>$187</td>
</tr>
<tr>
<td>Books and supplies</td>
<td>180</td>
<td>180</td>
</tr>
<tr>
<td>Personal</td>
<td>450</td>
<td>400</td>
</tr>
<tr>
<td>Room, board, health</td>
<td>1350</td>
<td>500</td>
</tr>
<tr>
<td>Board, incidentals</td>
<td>-</td>
<td>450</td>
</tr>
<tr>
<td>Transportation, parking</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Total: $2167 $1717

In addition, foreign students and out-of-state students pay an annual tuition of $1300. Typical expenses for married students without children average $4250 for a nine-month period.

PART THREE

THE GRADUATE DIVISION

The Graduate Division is composed of all departments and academic units of the University that offer graduate study and programs leading to advanced degrees. The Graduate Council is delegated University-wide jurisdiction over all matters relating to graduate studies, subject only to the right of review by the Senate. The Council's responsibility is broad and includes, but is not limited to, the development of University-wide policy on graduate programs, graduate student affairs, graduate research and scholarship, and the participation of faculty in graduate programs.

Graduate study is highly individualistic and requires in-depth study and scholarship and not merely the completion of a prescribed set of courses. Further, thesis and dissertation research require the development of intellectual skills and the demonstration of creativity which can only be achieved through dedicated and persistent scholarship. The University has the necessary faculty and facilities to offer such opportunities in over fifty different areas of knowledge.

AUTHORIZED GRADUATE DEGREES

DOCTOR OF PHILOSOPHY

Chemistry  Ecology  Genetics

MASTERS OF ARTS

American Studies  Anthropology  Art  Asian Studies  Biology  Chemistry  Drama  Economics  Education  English  French  Geography  German  Health Science  History  Industrial Arts  Latin American Studies

Linguistics  Mathematics  Music  Philosophy  Physical Education  Physical Sciences  Physics  Political Science  Psychology  Radio and Television  Russian  Social Science  Sociology  Spanish  Speech Communication  Speech Pathology and Audiology

MASTERS OF SCIENCE


MASTERS OF BUSINESS ADMINISTRATION

MASTER OF CITY PLANNING

MASTER OF PUBLIC ADMINISTRATION

MASTER OF SOCIAL WORK
GRADUATE TEACHING ASSISTANTSHIPS

Graduate teaching assistantships may be obtained by qualified graduate students in the areas of anthropology, art, astronomy, biology, business administration, chemistry, drama, economics, engineering, English, French, geography, geology, German, health science and safety, family studies and consumer sciences, industrial arts, mathematics, microbiology, physical education, physics, political science, psychology, public administration, Russian, sociology, Spanish, speech communication, and telecommunications and film.

Qualifications for appointment include admission to San Diego State University with classified graduate standing for the purpose of obtaining an advanced degree, and enrollment in not less than six units of 500-, 600-, or 700-numbered courses each semester in the area in which the degree is sought.

Appointment to a graduate teaching assistantship is for a period of either one semester or the academic year. Reappointment following an appointment of one semester or one year, and continuation for a second semester of a one-year appointment, is dependent upon satisfactory performance in graduate studies, as prescribed by the Graduate Division, and upon departmental need for the continued service in the department.

The combined teaching assignment and course work permitted during one semester is 15 units unless an excess of this amount is authorized by the Dean of the Graduate Division. Information concerning an appointment as a graduate teaching assistant may be obtained from the head of the department, school, or college in which the applicant wishes to obtain the master's degree.

GRADUATE ASSISTANTSHIPS

Graduate assistantships not involving teaching duties and requiring 20 hours of service per week for full-time appointment are available in several departments and University units with classified graduate standing, and enroll in and complete at least six units in the area of their degree interest each semester in which they hold the appointment.

Appointment to a graduate assistantship is for a period of either one semester or the academic year. Reappointment following an appointment of one semester or one year, and continuation for a second semester of a one-year appointment, is dependent upon satisfactory performance in graduate studies, as prescribed by the Graduate Division, and upon departmental need for the continued service in the department.

Information concerning an appointment as a graduate assistant may be obtained from the head of the department, school, or college in which the applicant wishes to obtain the master's degree.

GRADUATE SCHOLARSHIPS AND AWARDS

Graduate students interested in the following scholarships and awards may obtain application forms and further information from the Scholarship Office, unless otherwise indicated.

CALIFORNIA CONGRESS OF PARENTS AND TEACHERS, INC.

Six Education Scholarships of $500 to be granted only to upper division or graduate must assume an obligation to teach in the public schools of California. A scholarship recipient immediately following graduation, or the award shall be repaid in full. Applications are automatically mailed to each State Graduate Fellowship recipient in mid-April.
SCHOLARSHIPS AND FELLOWSHIPS ADMINISTERED BY DEPARTMENTS

During the 1974-75 academic year, about 150 graduate students received scholarships, fellowships, grants, or stipends totaling approximately $250,000 through the various departments. Students should check with the department of their major to determine what scholarship, fellowship, grant or stipend might be available to them.

FINANCIAL AID

At San Diego State University every effort is made to see that students who wish to attend are not prevented from doing so because of inadequate financial resources. To this end, financial aid in the form of loans and opportunity for part-time employment on or off campus is made available to qualified applicants. In a majority of cases, a student will be offered a package financial aid plan which may include a loan and part-time employment. The programs explained below are administered by the Financial Aid Office located in the Campus Laboratory School.

SAN DIEGO STATE UNIVERSITY FOUNDATION LOAN PROGRAM

Through the generosity of a number of individuals and groups, funds have been established to assist students with emergency loans. Completion of at least one semester of full-time attendance at the University is required before the student is eligible. The student borrower must also be currently in full-time attendance. The amount that may be borrowed, based on college-related need, is normally $100 or less but may not exceed $200. Repayment is generally made during the semester. Most loans under this program are free of interest. Applications are available throughout the academic year.

NATIONAL DIRECT STUDENT LOAN PROGRAM

National Direct Student Loans under the National Defense Education Act of 1958 are available to entering and continuing students who can meet the specific qualifications. The amount that may be borrowed, based on college-related need, may not exceed $2,000 per year for a graduate student. The interest rate is three percent simple interest per year starting nine months after the student enters the military service. Repayment period may be interrupted when a borrower enters the military service, Peace Corps, VISTA, or continues as a student at an institution of higher education. This loan program may provide a borrower with partial cancellation of his loan each year for service as a full-time teacher in certain public or other nonprofit elementary or secondary schools. The loan may be cancelled at the rate of 12 1/2 percent per year up to a maximum of 50 percent for certain specified military service performed after July 1, 1970.

UNITED STUDENT AID FUND PROGRAM

United Student Aid Fund Loans in conjunction with the student's participating hometown bank are available to graduate students meeting specific requirements. The amount that may be borrowed, based on college-related need, may not exceed $1,500 per year for graduate students. Repayment begins nine months from the time the student enters the military service. Repayment is over a period of three to ten years depending on the amount borrowed. Interest begins nine months thereafter, if the student meets prescribed criteria. Application forms are available at the Financial Aid Office. Students from other states may also secure forms.

FEDERALLY INSURED LOAN PROGRAMS

These long-term loans are made by participating banks and credit unions and provide deferred payment until graduation or the termination of higher education. Graduate percent per year begins when the loan is made. This interest, however, may be nine months thereafter, if the student meets prescribed criteria. Repayment is over a period of three to ten years depending on the amount borrowed. Application forms are available at the Financial Aid Office. Students from other states may also secure forms.

UNIVERSITY WORK-STUDY PROGRAM

Students demonstrating financial need may be employed in positions for up to an average of twenty hours per week when classes are in session and up to a maximum of forty hours per week during vacation periods. The rate of pay for such employment, based upon individual skills, is from $1.90 to $3.01 per hour. Job opportunities are available both on campus and with selected community and government agencies in the San Diego area.

MINIMUM REQUIREMENTS FOR ALL APPLICANTS

San Diego State University participates in the College Scholarship Service (CSS) of the College Entrance Examination Board. As a participant the institution subscribes to the principle that the amount of financial aid granted a student should be based upon financial need. The CSS assists the university in determining the student's need for financial assistance. All students who have resided with their parents for over two weeks during the past year, or who have received over $600 of financial assistance from their parents, are required to submit a copy of the Parent's Confidential Statement form to CSS, designating San Diego State University as one of the recipients. Other necessary forms and an information brochure may be obtained at the Financial Aid Office.

ELIGIBILITY FOR AID

All the above aid programs, except the San Diego State University Foundation Loan Program, are available only to United States citizens or persons who are in the United States on an immigrant basis.

APPLYING FOR AID

Students may request assistance for all programs explained above on financial aid forms contained in the Application for Admission booklet.

GRADUATE STUDY IN THE SUMMER SESSIONS

In San Diego State University summer sessions, a graduate student may earn credit in residence which may be used to satisfy the requirements for an advanced degree or for credentials. If a student plans to offer work taken in a summer session to satisfy the requirements for an advanced degree, he must make early application for admission to the University with classified graduate standing at the Office of Admissions.

GRADUATE STUDY FOR FOREIGN STUDENTS

The facilities of San Diego State University for graduate study are available to qualified graduates of foreign universities on the same basis and under the same regulations as apply to graduates of colleges and universities in the United States. Admission procedures for foreign graduate students are stated in the section on Admission of Graduate Students in this bulletin.
VETERANS AND GRADUATE STUDY
San Diego State University has been approved by the Veterans Administration and the California State Department of Education to offer graduate study 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 Affairs Office at 5525 Hardy Avenue for information and counseling regarding veteran's benefits, prior to the date of registration.

TEACHING CREDENTIALS
Anyone wishing to teach or provide other types of professional service in the public schools of California must hold a valid teaching/service credential. Assembly Bill 122 has markedly changed the requirements for credentials in the state. Some of these new credential programs have been defined (see below). Others are in a state of development. Students are advised to consult with the department in which they are interested to obtain advising that is current.

List of Credentials

<table>
<thead>
<tr>
<th>School Service Authorized</th>
<th>List of Credentials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach in any self-contained classroom kindergarten through twelfth grade.</td>
<td>1. Multiple subjects credential</td>
</tr>
<tr>
<td>Teach single subject area in grades K through 12.</td>
<td>2. Single subject credential</td>
</tr>
</tbody>
</table>

Fisher Credentials*

<table>
<thead>
<tr>
<th>School Service Authorized</th>
<th>List of Credentials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach kindergarten and grades one through nine twelve</td>
<td>(1) A standard teaching credential with specialization in:</td>
</tr>
<tr>
<td>Teach major and minor in grades seven through twelve</td>
<td>(a) Elementary Teaching</td>
</tr>
<tr>
<td>The following applies to both (a) and (b):</td>
<td>(b) Secondary Teaching</td>
</tr>
<tr>
<td>By completing specialized preparation, additional authorization may be earned in:</td>
<td>(1) Specialization in Teaching of Exceptional Children, authorizing teaching in the area of mentally retarded in kindergarten and grades one through fourteen; and (2) Librarianship in kindergarten and grades one through fourteen.</td>
</tr>
<tr>
<td>(3) Specialization in Elementary School Special Education</td>
<td></td>
</tr>
<tr>
<td>(2) The community college instructor credential</td>
<td>Teach in grades thirteen and fourteen, any course in an occupational or subject matter area which appears on the credential document</td>
</tr>
<tr>
<td>(3) A standard designated subjects credential</td>
<td>Teach trade or technical courses at grade levels specified on the credential</td>
</tr>
<tr>
<td>(4) A standard designated services credential</td>
<td>Perform pupil personnel services or health services as specified on the credential</td>
</tr>
<tr>
<td>(5) A standard supervision credential</td>
<td>Serve as supervisor, consultant, or other intermediate administrative position including school principal</td>
</tr>
<tr>
<td>(6) A standard administration credential</td>
<td>Serve as a district superintendent or in intermediate level administrative positions, including those services authorized by the standard supervision credential</td>
</tr>
<tr>
<td>(7) A restricted credential</td>
<td>Serve as a speech and hearing specialist at all grade levels</td>
</tr>
</tbody>
</table>

NEW CREDENTIALS
Assembly Bill 122 (Ryan Bill) has changed the credential structure in the State of California. Students who did not complete credential requirements by September 14, 1974, should consult with departmental advisers in order to determine their status and needed requirements. Information on these new credentials is available in the offices of the several departments of the School of Education. The multiple subjects credential (elementary) and the single subject credential (secondary) together with the specialist credentials listed below, have been approved by the Commission for Teacher Preparation and Licensing.

Specialist Credentials*
- Early Childhood
- Bilingual/Cross-Cultural
- Special Education
- Reading, Specialist

Services Credentials*
- Administrative Services
- Library Services
- Pupil Personnel Services

*These credentials may be obtained only after completion of the single subject or multiple subjects credential.
ADMISSION TO POSTBACCALAUREATE AND GRADUATE STUDY

APPLICATION PROCEDURES

All applicants for postbaccalaureate study (e.g., advanced degree applicants, those seeking credentials, and those interested in taking courses for professional growth, etc.) must file a complete application within the appropriate filing period. Second baccalaureate degree aspirants should apply as undergraduate degree applicants. A complete application for postbaccalaureate study includes all of the materials required for undergraduate applicants plus the supplementary graduate admissions application. Postbaccalaureate applicants who completed undergraduate degree requirements and were graduated from this University the preceding term are also required to complete and submit an application and the $200 nonrefundable application fee. Since campus on each application, redirection to alternative campuses or later changes of campus choice will be minimal. In the event that a postbaccalaureate applicant wishes to submit a separate application (including fee) to each, Applications may be obtained from the Admissions Office or the Graduate Studies Office of any California State University.

GENERAL ADMISSION REQUIREMENTS

All applicants for any type of postbaccalaureate study at San Diego State University must: (a) hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by the Dean of the Graduate Division; (b) have attained a grade point average of at least 2.5 (when A equals 4) in the last 60 semester (90 quarter) units who does not qualify for admission under provisions (a) and (b) may be admitted by the Dean of the Graduate Division if on the basis of other evidence he deems educational objectives to merit such action.

ADMISSION CATEGORIES

All applicants seeking admission to postbaccalaureate study at San Diego State University must apply and be accepted in one of the following categories:

POSTBACCALAUREATE STANDING (UNCLASSIFIED)

A student wishing to enroll in courses at the University with a personal or professional growth objective, but not necessarily with an objective of an advanced degree or (unclassified) when he meets the criteria specified under General Requirements. Ineligible to enroll in 600-numbered courses, but are granted advanced degree curriculum. Admission with consideration for admission to advanced degree curricula.

POSTBACCALAUREATE STANDING (CLASSIFIED)

A student wishing to be admitted to a program leading to an advanced degree must meet the criteria specified under General Requirements. A student must also meet the professional, personal, and scholastic standards as stated in Part Four of the Graduate Bulletin under "Fields of Study and Courses of Instruction." Applicants for such continuing students are available at the Graduate Division Office.

GRADUATE STANDING (CLASSIFIED)

A student wishing to be admitted to a program of study leading to an advanced degree and meeting the criteria specified under General Requirements but having deficiencies in the criteria for graduate standing (classified) may be admitted conditionally. A student attending a program leading to an advanced degree may be granted conditional graduate standing (classified) if the deficiencies can be met by specific additional preparation, including qualifying examinations. Students admitted with conditional graduate standing (classified) are admitted to authorized advanced degree curricula and may enroll in 600-numbered courses. Once the conditions established by the department or school have been met, the student will be accorded full graduate standing (classified).

CONDITIONAL GRADUATE STANDING (CLASSIFIED)

A student who is already enrolled in the University with postbaccalaureate standing may request acceptance into an advanced degree curriculum with graduate standing (classified). Applications for such continuing students are available at the Graduate Division Office.

REQUIRED OFFICIAL FORMS

The following official forms must be submitted to the Admissions Office.

1. Application for admission or readmission, accompanied by a $20 nonrefundable application fee. Make check or money order payable to San Diego State University.

2. Health history record.

3. Residency statement.

These forms may be obtained from the Admissions Office. Letters from applicants signing intention to enroll will not be considered as applications for admission. The official forms must be filed.

FILING OF RECORDS

The applicant must file promptly with the Admissions Office transcripts from each college attended (including all extension, correspondence, summer session, or evening courses). Graduate students must file transcripts in duplicate if they plan to enter an advanced degree program.
A transcript will be considered official and accepted and to meet the regulations governing the institution attended. The applicant must request the school or college to send the transcript to the Admissions Office of San Diego State University. All records or transcripts received by the university become the property of the university and will not be released nor will copies be made.

Timeliness of official transcripts is absolutely essential. Failure to furnish such records will delay or preclude consideration for admission to postbaccalaureate and graduate study at the University.

RESIDENCY DETERMINATION

New and returning students of The California State University and Colleges are classified for the purpose of determining the residence of each student for nonresident tuition purposes. The Residence Questionnaire and, if necessary, other evidence furnished by the student is used in making these determinations. A student may not register and enroll in classes until his Residence Questionnaire has been received by the Admissions Office.

The following statement of the rules regarding residency determination for nonresident tuition purposes is not a complete discussion of the law, but a summary of the principal rules and their exceptions. The law governing residence determination for tuition purposes by The California State University and Colleges is found in Education Code Sections 22800-22865, 23763.1, 23754-23754.4, 23758.2 and 23752, and in Title 5 of the California Administrative Code, Article 4 (commencing with Section 41901) of Chapter 1, Part V. A copy of the statutes and regulations is available for inspection at the campus Admissions Office.

Legal residence may be established by an adult who is physically present in the state while, at the same time, intending to make his California his permanent home. Steps must be taken at least one year prior to residence determination date to evidence the intent to residen
t. Some of the relevant indicia of an intention to establish and maintain resident California state income tax obligations on total income; ownership of residential one's permanent belongings are kept; maintaining active resident memberships in operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in the military service, etc.

The student who is within the state for educational purposes only does not gain the status of resident regardless of the length of his stay in California. In general, the student is considered a nonresident. A person, or, in the case of permanent separation of the parents, from the student have changed by an order of the minor or that of the minor's guardian, so long as the minor's parents are living.

A man or a woman may establish his or her residence; marriage is not a governing factor.

The general rule is that a student must have been a California resident for at least one year immediately preceding the residence determination date in order to qualify as a resident student. A residence determination date is set for each residence determination date for the 1975-1976 academic year are September 20, 1975 campus Admissions Office can give you the residence determination date for the term for.

There are several exceptions for nonresident tuition. Some of the exceptions provide for:

1. Persons below the age of 19 whose parents were residents of California but who age 18, the exception continues for one year to enable the student to qualify as a resident student.

2. Persons below the age of 19 who have been present in California for more than a year before the residence determination date and entirely self-supporting for that period of time.

3. Persons below the age of 19 who have lived with and been under the continuous direct care and control of an adult, not a parent, for the two years immediately preceding the resident determination date. Such adult must have been a California resident for the most recent year.

4. Dependent children and spouses of persons in active military service stationed in California on the residence determination date. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.

5. Legal residence may be established by an adult who is physically present in the state while, at the same time, intending to make his California his permanent home. Steps must be taken at least one year prior to residence determination date to evidence the intent to reside in California. Some of the relevant indicia of an intention to establish and maintain resident California state income tax obligations on total income; ownership of residential one's permanent belongings are kept; maintaining active resident memberships in operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in the military service, etc.

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4. Dependent children and spouses of persons in active military service stationed in California on the residence determination date. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.

5. Legal residence may be established by an adult who is physically present in the state while, at the same time, intending to make his California his permanent home. Steps must be taken at least one year prior to residence determination date to evidence the intent to reside in California. Some of the relevant indicia of an intention to establish and maintain resident California state income tax obligations on total income; ownership of residential one's permanent belongings are kept; maintaining active resident memberships in operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in the military service, etc.

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A man or a woman may establish his or her residence; marriage is not a governing factor.

The general rule is that a student must have been a California resident for at least one year immediately preceding the residence determination date in order to qualify as a resident student. A residence determination date is set for each residence determination date for the 1975-1976 academic year are September 20, 1975 campus Admissions Office can give you the residence determination date for the term for.

There are several exceptions for nonresident tuition. Some of the exceptions provide for:

1. Persons below the age of 19 whose parents were residents of California but who age 18, the exception continues for one year to enable the student to qualify as a resident student. The Office of General Counsel may make a decision on the issue, or it may send the matter back to the institution with instructions for a further review on campus.

Students classified incorrectly as residents or incorrectly granted an exception from nonresident tuition are subject to reclassification as nonresidents and payment of nonresident tuition in arrears. If incorrect classification results from false or concealed facts the subject is subject to discipline pursuant to Section 41301 of Title 5 of the California Administrative Code. Resident students who become nonresidents, and nonresident students qualifying for exceptions whose basis for so qualifying changes, must immediately notify the Admissions Office. Applications for a change in classification with respect to a previous term are not accepted.

The student should also note that changes may have been made in the rate of nonresident tuition, in the statutes, and in the regulations between the time this catalog is published and the relevant residence determination date.
ADMISSION AS AN INTERNATIONAL (FOREIGN) STUDENT
An international (foreign) student holding the equivalent of a U.S. baccalaureate degree from a recognized foreign university and wishing to engage in graduate study at San Diego State University should write directly to the Dean of Admissions, San Diego State University, San Diego, California 92182 for information on admission requirements and procedures.

The admission of international (foreign) students is governed by separate requirements. Prospective applicants from abroad should consult the individual campus catalogs and international (foreign) student information brochures available from the campuses. Health insurance coverage is mandatory for international (foreign) students. Present acceptable health insurance is available on campus at $33 per year or $20 per semester. Applicants for admission as either graduates or undergraduates whose education has been in a foreign country should file an application for admission; official certificates and detailed records of record from each secondary school and college institution attended several months in advance of the opening of the semester in which the applicant expects to attend. International students from outside the United States will be considered for admission only for the fall semester. Only those foreign students already in the United States will be considered for the spring semester. Students applying to transfer from a college or university in the United States must have completed a full year in English language program. English language program students in planning an appropriate course of study. All students, undergraduate and performance on the placement test: Study Skills 131, 132, 133, or English 100. During the student's first semester at San Diego State University, English will be given for the purpose of placing students in an English language program. Students in English language program. Students may take one or more of the following courses, depending upon courses must be taken in consecutive semesters, with first required course being taken transfer from another U.S. college may be required to take an English placement test.

A change in schedule of classes 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 sections of the same course. Consult calendar for deadline dates for change of schedule.

WITHDRAWALS
A graduate student who has been admitted to a graduate degree curriculum but has completed no courses at this university within the last calendar year is considered to have withdrawn from the curriculum. He may be required to file application for readmission to the Graduate Division if he wishes to resume his graduate study. A student who withdraws from a graduate curriculum will be required to comply with regulations and requirements in effect at the time he gains readmission to the Graduate Division.

A student who was not in attendance during the semester preceding the semester in which he wishes to enroll and was not granted a leave of absence for that period must apply for readmission to San Diego State University.

UNCLASSIFIED POSTBACCALAUREATE STUDENT ENROLLMENT
An unclassified postbaccalaureate student is not eligible to enroll in 600- and 700-numbered courses, except with permission of the instructor and concurrence of the Graduate Council to take for concurrent master's degree credit. All credit earned by an unclassified postbaccalaureate student is subject to evaluation as to its acceptance for graduate credit in a master's degree curriculum.

CHANGES IN CLASS SCHEDULE
A student is responsible for any change in his semester's schedule of classes 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 change in schedule of classes 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 sections of the same course. Consult calendar for deadline dates for change of schedule.

CONCURRENT MASTER'S DEGREE CREDIT
A senior who is within 12 units of completing requirements for the bachelor's degree and whose overall grade point average is 3.0 or above may petition in the Graduate Council for permission to enter a curriculum leading to the second master's degree. A student may be admitted into only one master's degree program at a time.
REGULATIONS OF THE GRADUATE DIVISION

Graduate students are individually responsible for complying with the procedures, regulations, and deadlines as set forth in the General Catalog of the university and in this bulletin. All questions concerning graduate study at San Diego State University should be referred to the Graduate Division Office.

All graduate students admitted to San Diego State University after August, 1975 will be expected to follow the procedures and regulations stated in the 1975-1976 editions of the General Catalog and this bulletin. A student who was admitted to a graduate degree curriculum at this university prior to that date and who has been enrolled in one or more courses during each consecutive semester since last 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 his official master's degree program was approved.

NUMBERING OF COURSES

Courses numbered from 100 to 299 are lower division (freshman or sophomore) courses; those numbered 300 to 499 are upper division (junior or senior) courses intended primarily for undergraduates; those numbered 500 to 599 are upper division courses also acceptable for advanced degrees in the major area; those numbered 600 to 799 are graduate courses. Courses numbered X-900 to X-999 are those courses offered exclusively in the extension program to meet the professional needs of specific community groups and are listed in the Extension Bulletin only. These courses are not acceptable on advanced degree programs.

GRADING SYSTEM

At the end of each semester or summer session in which a student is enrolled, a grade point average is sent to the student. Grades are assigned as follows: A (outstanding); B (very good); C (satisfactory); D (at least acceptable); F (unsatisfactory). No grade point average can be used in the calculation of a student's grade point average; NC (no credit) will be recorded on the student's record, unless the student has been granted a specific extension of time for completion, due to extenuating circumstances, has been recommended in advance by the Thesis Committee Chairman and the Department Chairman, and is approved by the Dean of the Graduate Division. A second registration in Course 799A, Thesis, is expressly prohibited.

A student who has been assigned the grade symbol SP for the thesis is required to register for Course 799B (0 units, Cr/NC) in any semester or term (within the two-year period, as outlined above) in which the student expects to use graduate resources of the university; and he must be registered in the course when the completed thesis is granted final approval.

WITHDRAWALS

OFFICIAL WITHDRAWAL

Students who wish to withdraw from the University must initiate action formally through the Registrar's Office. Failure to file will result in a failing grade in all courses. Under certain circumstances, complete withdrawal is possible up to three weeks preceding the last day of the semester; however, refunds are obtainable only for the first 14 days after the semester begins. Students withdrawing during the refund period is no longer considered a continuing student and is required to apply for readmission. Withdrawal from a course, or courses, is permitted without restriction or penalty before the end of the third week of classes. Such courses will not appear on the permanent record.

Withdrawal from a course, or courses, after the third week of classes and prior to the last three weeks of instruction is permissible only for serious and compelling reasons. Permission to withdraw during this time period is to be granted only with the approval of the instructor and the Department Chairman, and approvals are made in writing on the prescribed forms.

Withdrawal shall not be permitted during the final three weeks of instruction except in cases such as accident or serious illness where the cause of withdrawal is due to circumstances beyond the student's control and the assignment of an incomplete is not practicable. Ordinarily, withdrawals in this category will involve total withdrawal from the University, except where sufficient work has been completed to permit an evaluation to be made. Requests for permission to withdraw under these circumstances are to be handled as indicated above, except that such requests also must be endorsed by the Dean of the Graduate Division or his designee.

Improper Registration in Graduate Courses. The unauthorized registration of undergraduate students in all courses numbered in the 600 and 700 series, and the unauthorized registration of graduate students who have not met the stated prerequisites for Course 799A, Thesis, at the time of registration, will be cancelled.

SATISFACTORY PROGRESS GRADE

The "SP" symbol is used in connection with courses that extend beyond one academic term. It indicates that work is in progress and has been evaluated and found to be satisfactory to date, but that assignment of a precise grade must await completion of additional work. Cumulative enrollment in units attempted may not exceed the total number applicable to the student's educational objective. Work is to be completed within a stipulated time period. This may not exceed one year except for graduate degree theses, for which the time may be up to two years, but may not exceed the overall time limit for completion of all master's degree requirements. Any extension of time limit must receive prior authorization by the Dean of the University College for undergraduate courses or the Dean of the Graduate Division and Research for graduate courses.

INCOMPLETE GRADE

An Incomplete grade signifies that a portion of required course work has not been completed and evaluated in the prescribed time period due to unforeseen, but fully justified reasons. The student is required to bring pertinent information to the instructor and to reach agreement on assigned work which has been agreed upon has been completed and evaluated. An Incomplete must be made up within one calendar year immediately following the student maintains continuous enrollment. Failure to complete the assigned work within an "NC" for grade point average and progress point computation. Students desiring to have their names listed on the May Commencement Program degree programs before the deadline date listed in the Academic Calendar of this
UNOFFICIAL WITHDRAWAL
A student withdrawing unofficially from class or from the University will receive failing grades in all courses which he stops attending. An unofficial withdrawal is one in which a student stops attending classes without filing official withdrawal forms within the established deadlines.
Veterans unofficially withdrawing will have veteran's allowances immediately suspended and will be subject to full repayment of allowances received after date of unofficial withdrawal.

EDUCATIONAL LEAVE OF ABSENCE
Students are permitted to take a total of two semesters of approved leave of absence during their matriculation at San Diego State University if it can be clearly established that the leave will contribute to a student's educational objective. No fees are involved.
At least five weeks prior to registration period for the semester during which he wishes a leave, a student must file application for the leave at the Registrar's Office. Deadlines for filing may be obtained at that office. Requests will be reviewed by appropriate officials designated by the Vice President for Academic Affairs. Leaves cannot be revoked once granted, and no student will be permitted to register for a semester for which he has filed application for leave.
Approval for leaves of absence will not be granted to students who have been admitted but will not have completed at least one semester before the leave of absence must be eligible to return as an undergraduate; students qualifying for change in status from undergraduate to graduate are not eligible.

READEMISSION
A student who withdraws from the University must file application for readmission if a full semester elapses between his withdrawal and his return. A $20 application fee is required if the applicant was not regularly enrolled in either of the two if the student was enrolled at another institution subsequent to the last attendance at San Diego State University.

REPEATED COURSES
A graduate student may not repeat courses which have been taken as part of his official master's degree program, except in the case of courses required as prerequisites for that program.

PROBATION AND DISQUALIFICATION
SCHOLASTIC PROBATION
A student who is enrolled in a graduate degree program in a classified standing shall be placed on academic probation if he fails to maintain a cumulative grade point average of at least 3.0 in all units attempted subsequent to admission to the program. A student who is enrolled in an upperclass standing shall be placed on academic probation if he fails to maintain a cumulative grade point average of at least 2.5 in all units attempted subsequent to admission to the University. A student who is placed on academic probation is subject to disqualification if he fails to earn sufficient grade points to remove himself from academic probation. Disqualification may be either from further registration in a particular program or from further enrollment at the University, as determined by the Dean of the Graduate Division.

SCHOLASTIC DISQUALIFICATION
Any postbaccalaureate student who has been admitted to a graduate degree curriculum in the Graduate Division and whose performance therein is judged to be unsatisfactory with respect to scholastic or professional standards as judged by the Graduate Division and his official status will be changed from classified graduate to unclassified postbaccalaureate standing.

ADMINISTRATIVE-ACADEMIC PROBATION
A student may be placed on administrative-academic probation by action of appropriate campus officials for any of the following reasons:
1. Withdrawal from all or a substantial portion of a program of studies in two successive terms or in any three terms.
2. Repeated failure to progress toward the stated degree objective or other program objective (when such failure appears to be due to circumstances within the control of the student).
3. Failure to comply, after due notice, with an academic requirement or regulation which is routine for all students or a defined group of students (example: failure to take placement tests, failure to complete a required practicum).

ADMINISTRATIVE-ACADEMIC DISQUALIFICATION
A student who has been placed on administrative-academic probation may be disqualified from further attendance if:
1. The conditions for removal of administrative-academic probation are not met within the period specified.
2. The student becomes subject to academic probation while on administrative-academic probation.
3. The student becomes subject to administrative-academic probation for the same or similar reason for which he has been placed on administrative-academic probation previously, although not currently in such status.

PETITION FOR READMISSION
A postbaccalaureate student disqualified from the university under the foregoing regulations may be readmitted to the university by the Board of Admissions. Application for readmission must be made on forms available at the Office of Admissions.

STUDENT DISCIPLINE AND ATTENDANCE
Any student may be expelled, suspended, placed on probation or given a lesser sanction for one or more of the following causes which must be campus related:
(a) Cheating or plagiarism in connection with an academic program at a campus.
(b) Forgery, alteration or misuse of campus documents, records or identification, or knowingly furnishing false information to a campus.
(c) Misrepresentation of oneself or of an organization to be an agent of a campus.
(d) Obstruction or disruption, on or off campus property, of the campus educational process, administrative process or other campus function.
(e) Physical abuse on or off campus property of the person or property of any member of the campus community or of members of his family or the threat of physical abuse.
(f) Theft of, or nonaccidental damage to, campus property or property in the possession of, or owned by, a member of the campus community.
(g) Unauthorized entry into, unauthorized use of, or misuse of campus property.
(h) On campus property, the sale or knowing possession of dangerous drugs, restricted dangerous drugs, or narcotics as those terms are used in California statutes, except when lawfully prescribed pursuant to medical or dental care, or when lawfully permitted for the purpose of research, instruction or analysis.
(i) Knowing possession or use of explosives, dangerous chemicals or deadly weapons on campus property or at a campus function without prior authorization of the campus president.
(j) Engaging in lewd, indecent or obscene behavior on campus property or at a campus function.
(k) Abusive behavior directed toward, or hazing of, a member of the campus community.
(l) Violation of any order of the campus president, notice of which had been given for committing such physical abuse.
(m) Any violation of any other of the provisions of this Section.
STUDENT GRIEVANCES

If a student believes that a professor's treatment of him is grossly unfair or that a professor's behavior is clearly unprofessional, he may bring his complaint to the proper university authorities and official reviewing bodies by following the Procedures for Handling Student Grievances Against Members of the Faculty, adopted by the Faculty Affairs (AD-231).

TRANSCRIPTS OF RECORD

A student may obtain an official transcript of his record by filing an application at the Registrar's Office. A fee of $1 is charged for all transcripts and must be paid in advance. Transcripts released or copies be made.

AUDITORS

A student who does not wish to take a course for credit may, with the consent of the instructor, enroll as an auditor during the regular change of program period. Students may not enroll in courses for audit at registration. An auditor must meet all admissions change from regular registration to audit, or from audit to regular registration, will be permitted during the semester. An auditor is not held for examinations and does not receive credit or a final grade in the course.

FINAL EXAMINATIONS

No final examination shall be given to individual students before the regular time. Any student 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 grades.

TRANSFER OR EXTENSION COURSE CREDIT

The amount of transfer and extension course credit acceptable on master's degree programs is limited to a total of six units for the Master of Arts, the Master of Science, the Master of Business Administration, and the Master of Public Administration degrees; 26 units (including a maximum of six units of extension credit) for the Master of City Planning degree; and 32 units (including a maximum of six units of extension credit) for degrees. All credit earned in other colleges or extension courses must be approved by the Graduate Council, the Dean of the Graduate Division. 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 the Graduate Division. No course can be deleted from an official program after the course has been completed.

STUDY LIST LIMITS IN THE GRADUATE DIVISION

Section 40601 (j) of the Administrative Code defines the term "full-time student" to mean any student whose program while in attendance at a college averaged twelve or more semester units per semester, or the equivalent.

Graduate students are advised that 12 units of 600- and 700-numbered courses or 15 units of a combination of 500-, 600- and 700-numbered courses are the recommended maximum programs for any one semester. Graduate students who are employed full time should not attempt to earn more than six units per semester.

Graduate students who are employed as graduate teaching assistants at San Diego State University are limited to 15 units of combined teaching assignments and coursework unless a request for excess load is approved by the Dean of the Graduate Division. Graduate teaching assistants who enroll for more units than authorized will not receive credit on their official degree programs for the excess number of units completed.

OFFICIAL PROGRAMS OF STUDY

Official master's degree 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 having taken no courses during a calendar year.

When courses listed on an official master's degree program deviate from the prescribed requirements as stated in the Graduate Bulletin, a statement indicating a justification for approval of the proposed deviation must be submitted to the Dean of the Graduate Division by the department concerned.

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 the Graduate Division. No course can be deleted from an official program after the course has been completed.
GENERAL REQUIREMENTS FOR DOCTORAL DEGREES

The degree Doctor of Philosophy (Ph.D.) is offered by three disciplines at San Diego State University in cooperation with their counterparts at University of California campuses—in chemistry with the University of California, San Diego; in ecology with the University of California, Riverside; and in genetics with the University of California, Berkeley. The general requirements in these programs are identical; however, each program has some specific requirements which will be found in Part Four of this Bulletin under Chemistry, Ecology, and Genetics.

Students who wish to become candidates for the degree Doctor of Philosophy in Chemistry, Ecology or Genetics should realize that the degree is granted for the capacity for original, independent, imaginative, and self-critical research rather than for the fulfillment of residence or course requirements alone. For those candidates who wish to prepare for a career in an academic institution the degree is also oriented toward excellence and enthusiasm in teaching. Students with acceptable baccalaureate degrees will normally spend at least three years of full-time study in earning the degree.

ADMISSION TO GRADUATE STUDY

An applicant for admission to a doctoral program must first be admitted to regular graduate standing in the University of California campus appropriate to his degree programs and to San Diego State University. Fees and regulations governing the doctoral programs are found in the Graduate Division Bulletin of San Diego State University and in the University of California campuses.

ADMISSION TO THE PROGRAMS

After a student has been formally admitted to the two Universities with appropriate graduate standing, he must declare his intention to enter the doctoral program by filing an application with the Graduate Adviser. The application must be approved and signed by the Graduate Adviser on each campus and forwarded to the Graduate Deans for formal certification of admission to the doctoral program. Entry occurs when the student is formally accepted by the Graduate Deans of each of the two Universities. The Graduate Adviser on each cooperating campus is the person consulted by the student for assessment of his background and research interests and for planning of his program.

RESIDENCY REQUIREMENTS

After formal admission to a doctoral program, the student must spend at least one year in full-time residence on each of the two campuses. The definition of residence at San Diego State University the minimum of one year of full-time residence consists of at least seven semester units each semester of the required year's residence.

FOREIGN LANGUAGE REQUIREMENTS

Candidates for the Doctor of Philosophy degree in Ecology must have demonstrated a reading knowledge of at least one foreign language. This requirement must be satisfied before the student takes his qualifying examination. In Genetics foreign language preparation will usually be required for students whose area of research necessitates extensive reading of foreign language papers. The foreign language requirement in Chemistry has recently been discontinued.

QUALIFYING EXAMINATIONS, ADVANCEMENT TO CANDIDACY AND THE DISSERTATION

Although the procedural details of each doctoral program vary somewhat within the different programs, the general requirements are:

1. The student is examined by a committee representing the faculty of the cooperating institutions for his knowledge of the field in which he is enrolled. This examination, called a Qualifying Examination, ordinarily consists of written and oral parts. The student must satisfy the cooperating departments that he is prepared in his field by passing this examination.

2. After passing the Qualifying Examination the student must apply to the Graduate Dean at the University of California campus with which he is associated for advancement to candidacy. After approval by both Graduate Deans, the student will be notified of his advancement to candidacy by the Graduate Dean, University of California (San Diego, Riverside, or Berkeley).

3. A dissertation (thesis) on a subject chosen by the candidate and approved by a committee chosen by the Graduate Councils of the cooperating institutions is required of every candidate. Approval of the dissertation by this committee implies that the candidate has conducted an organized, independent investigation which has added significantly to the body of knowledge in his particular field and which has been reported in a satisfactory manner. Upon completion of the dissertation, the candidate must pass an oral examination conducted by a joint committee in which he is required to show the relationship of the dissertation to the general field in which the subject lies and to answer specific questions concerning his investigations.

AWARD OF DEGREE

The degree Doctor of Philosophy in Chemistry, Ecology or Genetics will be awarded jointly by the Regents of the University of California and the Trustees of the California State University and Colleges in the names of the University of California (San Diego, Riverside or Berkeley, respectively) and San Diego State University.

PROCEDURES

The time required for a student to complete the requirements for the degree is not expressed in terms of units of credit or number of semesters but will ultimately depend upon the amount of time required to master the subject matter field and to complete a satisfactory dissertation. Information on records, transcripts, fees, details of registration, petitions and rules and regulations governing graduate students enrolled in the doctoral program is available from the Graduate Dean at each of the two cooperating institutions for each degree program.
BASIC REQUIREMENTS FOR THE MASTER'S DEGREE

To receive the master's degree at San Diego State University, the candidate must have completed the following general requirements of the Graduate Division and the specific requirements listed in the appropriate sections of Part Four of this bulletin, Fields of Study and Courses of Instruction for the Master's Degree.

A. EXAMINATIONS:

As part of the admission procedure for classified graduate standing, all students desiring an advanced degree must take the Graduate Record Examination or the Graduate Study Aptitude Test, except for students holding a master's or higher degree from an institution which is a member of the Council of Graduate Schools of the United States.

Examinations required in the various subject matter fields of study are listed in the appropriate sections of Part Four, Fields of Study and Courses of Instruction for the Master's Degree. (See below for the foreign language examinations and for the comprehensive examination required in lieu of thesis under Plan B).

B. FOREIGN LANGUAGE REQUIREMENT:

When a student is required to satisfy this requirement in French, German or Spanish, he should make arrangements with the Test Office to take the Educational Testing Service, 1947 Center Street, Berkeley, California 94704. Passing scores on these examinations are established by the Graduate Council.

C. ADVANCEMENT TO CANDIDACY:

A student who holds classified graduate standing at San Diego State University and who meets its Scholastic, professional, and personal standards provided he has filed an official program of study approved by the appropriate Graduate school, foreign language examination if required; and (5) have been recommended for advancement to candidacy by the appropriate Graduate Council. Written notification of advancement to candidacy will be sent to the student from the Graduate Division Office.

A minimum of nine units of courses listed on the official program of study Master of Arts, the Master of Science, the Master of Public Administration, and programs of study for the Master of City Planning and the Master of Social Work degrees must be enrolled in and completed after advancement to candidacy.

D. UNIT REQUIREMENTS:

- Master of Arts, Master of Science, and Master of Public Administration degrees:
  - Thirty units (36 units for the Master of Science in Counseling degree and the Master of Science degree in Psychology with a concentration in clinical psychology) of approved 500-, 600- and 700-numbered courses earned in graduate standing, at least 24 of which must be completed in residence. At least 15 units must be in 600- and 700-numbered courses. Not more than a total of six units in approved extension and transfer courses may be used to satisfy the minimum 30 units required for the degree. Courses required to remove undergraduate deficiencies are in addition to the minimum 30 units required for the degree. Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.

- Master of Business Administration degree:
  - Between 30 and 60 units (depending upon the student’s background) of 600- and 700-numbered courses specified by the School of Business Administration at least 24 of which must be completed in residence. Not more than six units of approved transfer credit are acceptable for this degree. Credit earned by correspondence is unacceptable. Not more than a total of six units in courses 797, 798, Special Study, will be accepted for credit toward the degree.

- Master of City Planning degree:
  - Fifty-six units of approved 500-, 600- and 700-numbered courses earned in graduate standing, at least 30 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 56 units for the degree. Credit earned by correspondence is unacceptable. Not more than a total of nine units in courses 797A, 797B, and 798 will be accepted for credit toward the degree.

- Master of Social Work degree:
  - Fifty-six units of approved 600- and 700-numbered courses specified by the School of Social Work at least 24 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 56 units for the degree. Credit earned by correspondence is unacceptable. Not more than a total of nine units in courses 797A, 797B, and 798 will be accepted for credit toward the degree.

E. COURSE REQUIREMENTS:

In all master's degree curricula offered at San Diego State University, any course completed more than seven years prior to the date on which all requirements for the degree are completed cannot be used to satisfy the requirements for the degree and cannot be used to add to the time for students who pass a comprehensive examination in the relevant course. A course completed more than seven years prior to the date on which all requirements for the degree are completed cannot be used to satisfy the requirements for the degree and cannot be used to add to the time for students who pass a comprehensive examination in the relevant course unless the maximum of six units may be validated for recency by examination. With the approval of the appropriate graduate adviser and the Dean of the Graduate Division, a more recently completed course may be substituted for an outdated one, or substitute coursework of equal unit value, not yet completed, may be assigned.

In the event that more than six units of coursework become invalid in the semester following the seven-year deadline, the departmental graduate advisor shall determine which units may be validated by comprehensive examination. Substitute coursework shall be assigned for the remaining outdated courses. A course completed prior to seven years of the date that the official master's degree program is approved cannot be listed on the program.
Specific courses required in the basic 30, 36, 30-60, or 56 units and the requirements concerning foreign languages are listed in the appropriate sections of Part Four, Fields of Study and Courses of Instruction under Specific Requirements for the Master's Degree.

F. THESIS:

Plan A, requiring a thesis, may be selected by a student seeking the master's degree provided the department or school concerned approves the listing of Course 799A, Thesis, on the official program of study. Three units of "Cr" are granted for the satisfactory completion of the thesis or project following its acceptance by the student's thesis committee, the department or school concerned, and the Graduate Council. Assigning of "Cr" grade for the thesis is the responsibility of the Graduate Division Office. Registration in Course 799A, thesis, is required; however, students will not be permitted to register for this thesis until they have received official notification of advancement to candidacy from the Graduate Division Office and have an officially appointed thesis or project committee. Theses or projects must be completed in advance of the date of the convocation at which the degree is conferred. Refer to the calendar in Part One of this bulletin for deadline dates.

The thesis must be completed within two calendar years following the date of the end of the semester or term in which the student has registered in Course 799A, Thesis. (Refer also to the section on Uncompleted Thesis in this bulletin.)

Two microfiche copies and one bound copy of all master's theses or projects are accessioned by the library of San Diego State University and are subject to the regulations of the library with respect to the circulation or duplication of its cataloged materials. All theses or projects must be typed on special watermarked thesis paper available at the Aztec Shops. Students are advised to purchase a current copy of the Manual of Instruction for the Preparation and Submission of the Master's Thesis or Master's Project at the Aztec Shops.

Plan B, requiring a comprehensive examination in lieu of a thesis, may, with the approval of the department or school concerned, be followed in certain graduate degree curricula as indicated in Part Four of this bulletin. Dates on which comprehensive examinations in lieu of thesis are given are determined by the department or school concerned. Results on comprehensive examinations must be reported to the Graduate Division Office by the department or school. Refer to the calendar in Part One of this bulletin for deadline dates.

G. GRADE POINT AVERAGES:

Grade point averages of at least 3.0 (B) must be maintained on:
1. All programed courses required for the removal of undergraduate deficiencies.
2. All programed courses including courses accepted for transfer credit and courses taken concurrently with or subsequently to courses accepted for transfer.
3. All courses taken at San Diego State University concurrently with or subsequently to the earliest course listed on the official master's degree program.

No transfer or extension credit may be used to improve the grade point average of units completed at San Diego State University.

H. GRADE RESTRICTIONS FOR MASTER'S DEGREE PROGRAMS:

No 500-numbered courses graded Credit/No Credit are acceptable on a master's degree program. No undergraduate courses graded Credit/No Credit may be assigned to the deficiencies and/or foreign language option(s) of a master's degree program. At least 70% of the units used to fulfill the minimum requirements on a master's degree program shall be graded on an A, B, C, D, F basis.

I. FINAL APPROVAL:

The student's official program of study as approved by the appropriate graduate adviser and the Graduate Council and all required examinations must be completed in a satisfactory manner before the student will be recommended for the degree by the Graduate Council.

J. APPLICATION FOR GRADUATION:

Graduation is not automatic on the completion of degree requirements. The student must file an application in the Graduate Division Office (after having paid the graduation fee at the Cashier's Office) during the semester or term in which he expects to graduate. Refer to the calendar preceding Part One of this bulletin for deadline dates.

In the event that the student does not graduate in the semester or term in which he applies, he must reapply (and pay the graduation fee in the subsequent semester or term in which he expects to graduate.)

K. AWARD OF DEGREES:

The Board of Trustees of the California State University and Colleges, upon recommendation of the faculty of San Diego State University, awards the appropriate diploma or degree to a student who has completed the prescribed course of study.

L. DIPLOMA:

The appropriate diploma is awarded at commencement or is forwarded to the student by the Office of Admissions and Records.
PART FOUR
FIELDS OF STUDY
AND COURSES OF INSTRUCTION

This section contains the specific requirements for all graduate degrees authorized at San Diego State University by the Board of Trustees of the California State University and Colleges. These specific requirements of departments or schools supplement and are in addition to the basic requirements for the master's degree as stated in Part Three of this bulletin. All official master's degree programs must be prepared in conformity with the basic and specific requirements for the degree in question.

In addition, courses acceptable for credit toward a master's degree are listed under major fields and areas of concentration. Each course is listed by department number, title, and units. Graduate level (600- and 700-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 at the Aztec Shops prior to the date of registration of each semester, or the Summer Session Bulletin which is available prior to the opening of summer session.

San Diego State University 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.

PREREQUISITES FOR GRADUATE COURSES

Graduate level (600- and 700-numbered) courses require, as general prerequisites, graduate standing, and competence in the specified field as indicated by a substantial amount of upper division study in the field or in a closely related field. Unless otherwise specified in the course description, graduate level courses are open to classified graduate students with the permission of the instructor. Unclassified postbaccalaureate students must obtain the permission of the instructor and the concurrence of the Dean of the Graduate Division before they may enroll in a graduate level course. Undergraduate students are not permitted to enroll in 600- and 700-numbered courses except under special circumstances (see section "Concurrent Master's Degree Credit"). Unauthorized enrollment of undergraduate students in 600- and 700-numbered courses may be cancelled or, if the course is completed before graduate standing is attained, only undergraduate credit will be earned for the course.

Registration in Course 798, Special Study, must be arranged by the student through the instructor, the major adviser, and the chairman of the department concerned. Forms for this purpose are available in the departmental offices.

Only those students who have been advanced to candidacy and who have an officially appointed thesis committee are permitted to register for Course 799A, Thesis. Clearance for registration in this course must be obtained by the student from the Graduate Division Office.

THESIS EXTENSION (799B)

This course is intended solely for those graduate students who have had prior registration in Thesis 799A, with an assigned grade symbol of SP. A student is required to register in TE799B (0 units, Cr/NO in any semester or term following assignment of SP in Course 799A in which he expects to use the facilities and resources of the university; also he must be registered in the course when the completed thesis is granted final approval.

UNIT OR CREDIT HOUR

In the listing of courses that follows, figures in parentheses indicate the the unit value of the course. One unit or credit hour represents 50 minutes of recitation or lecture, together with the required preparation, or three hours of laboratory work or two hours of activities, each week for a semester of 18 weeks.
The thesis requirement for Plan A may be met in one of several ways. The American Studies thesis may consist of a single extended work dealing with a problem interdisciplinary in nature or from an interdisciplinary perspective; or it may consist of three papers (one of which may be a project), bearing upon a cultural problem from a convergent or divergent focus. Exploration of these options should be taken up with the adviser.

All programs will be approved by the American Studies Committee.

**COMMITTEE ON AMERICAN STUDIES**

Pershing Vartanian, Chairman
C. F. Drake
K. Jahnke
L. Ford
H. J. Lewin
F. S. Foster
J. Miller
R. W. Redding
R. M. Somerville
C. Wall

**FACULTY**

Coordinator of Graduate Programs in American Studies: Pershing Vartanian
Graduate Advisers: Members of the American Studies Committee, as assigned by the Coordinator.

Faculty members in the departments participating in the degree program are listed in the appropriate sections of this bulletin.

**APPLICABLE GRADUATE COURSES**

(A) LITERATURE AND PHILOSOPHY:

**English**

(The English courses listed are acceptable when content relates to American Studies.)

625. (223.) American Literature (3)
700. (295.) Seminar: A Major Author (3)
710. (292.) Seminar: A Cultural Period (3)
720. (293.) Seminar: A Literary Problem (3)

**History**

630. (247.) Directed Reading in United States History (3)
635. (257.) Seminar in United States History (3)

**C) SOCIAL SCIENCE AND EDUCATION:**

**Geography**

(The geography seminars listed are acceptable when content relates to American Studies.)

620. (220.) Seminar in Regional Geography (3)
650. (250.) Seminar in Systematic Geography (3)

**Political Science**

620. (215.) Seminar in American National Government (3)
625. (221.) Seminar in Political Participation (3)

**Education**

682. (202.) Social Foundations (3)

(D) FINE ARTS:

**Art**

(The art seminars listed are acceptable when content relates to American Studies.)

760. (292E.) Seminar in Modern Art (3)
767. (292F.) Seminar in Primitive Art (3)
Music
652E. (252E.) Seminar in Music History: American Music (3)

Speech Communication
780. (280.) Seminar in American Public Address, 1600-1850 (3)
781. (281.) Seminar in American Public Address, 1850 to Present (3)

All 798 (Special Study) courses in named departments, when relevant, are also applicable upon approval of the Graduate Program Coordinator.

Refer to course descriptions in the sections of this bulletin under the appropriate departments.

ANTHROPOLOGY

GENERAL INFORMATION

The Department of Anthropology, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Anthropology. For graduate study in connection with the Master of Arts degree in Social Science, refer to the section of this bulletin under Social Science. The Master of Arts degree with a major in Anthropology is designed to provide systematic advanced training for (a) students who anticipate additional work leading to the doctoral degree in anthropology, and also for (b) students who plan to terminate their graduate training at the master's level.

Research and special instructional facilities provided by the Department of Anthropology include laboratories for California Archaeology, Ethnology, Linguistics, Physical Anthropology, and World Prehistory. Additional facilities available in the community include the Museum of Man and the San Diego Zoo.

ADMISSION TO GRADUATE STANDING

All students must satisfy the general requirements for admission to the University with classified graduate standing. In addition, students seeking the Master of Arts degree in Anthropology must have completed or complete at least 15 upper division units, including Anthropology 301: Principles of Physical Anthropology; Anthropology 302: Principles of Archaeology; Anthropology 303: Principles of Cultural Anthropology; Anthropology 304: Principles of Anthropological Linguistics; and Anthropology 305: History of Anthropological Theory, or the equivalent to those required for an undergraduate major in anthropology at San Diego State University. The student must have an overall 3.0 (B) grade point average in undergraduate courses or consent of the department.

Copies of transcripts and GRE scores are to be sent to the Admissions Office. In addition to these and the University admission forms, students applying to the department are asked to submit (1) at least three letters of recommendation from persons in a position to judge academic ability; and (2) at least one typewritten example of their previous work (e.g., a term paper or an original experiment). Materials should be submitted by December 1 for admission for spring semester and May 1 for the fall semester.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, the students must: (1) satisfactorily complete two of the four core seminars (601, 602, 603, and 604); (2) be recommended for advancement to candidacy by the faculty of the Department of Anthropology; and (3) according to the specific recommendation of the Department of Anthropology, pass either an examination demonstrating reading knowledge of an appropriate foreign language, or complete a sequence of at least one lower division and one upper division course in statistics.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the basic requirements for the Master of Arts degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units of which at least 24 units must be in 600- and 700-numbered courses in anthropology, to include:

1. Anthropology 601, 602, 603, and 604 (with a grade point average of 3.0 or better in these courses);
2. Six units of 500-numbered courses in anthropology or related fields, as approved by the graduate adviser;
3. Six additional units of elective 600- and 700-numbered courses in anthropology or related fields, as approved by the graduate adviser;
4. Anthropology 797, Research (3) (to be taken after advancement to candidacy);

A final oral examination on the general field of the thesis must be passed as a requirement for the degree. Only Plan A, requiring the thesis, is permitted for the Master of Arts degree in Anthropology.
ASSISTANTSHIPS

Graduate teaching assistantships in anthropology are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY

Chairman, Department of Anthropology: L. L. Leach
Coordinator of Graduate Programs in Anthropology: M. E. Shutler
Graduate Advisers:
Archaeology: M. E. Shutler
Physical Anthropology: L. K. Lippold, A. Sonek, Jr.
Ethnology: V. Goldkind, D. D. Whitney
Ethnohistory: P. H. Ezell
Social Anthropology: P. J. Dubbs, W. C. Pendleton
Ethnolinguistics: P. J. Greenfeld, R. S. Himes
Professors: Ezell, Goldkind, Leach, Shutler, Watson, Whitney
Associate Professors: Greenfeld, Himes, Lippold, Pendleton, Stanford
Assistant Professors: Dubbs, Moore, Pillsbury, Rohrl, Sonek, Wagner

COURSES ACCEPTABLE ON MASTER'S DEGREE

PROGRAMS IN ANTHROPOLOGY

UPPER DIVISION COURSES

500. (115.) Primatology (3)
501. (176.) Human Paleontology (3)
510. (122.) Language in Culture (3)
511. (126.) Field Methods in Linguistics (3)
520. (150.) Ethnological Field Methods (3)
521. (151-) Ethnographic Field Research Project (6)
523. (149.) Kinship and Social Organization (3)
524. (153.) Primitive Religion (3)
525. (155.) Peasant Society and Culture (3)
526. (156.) Cultural Change and Processes (3)
527. (158.) Economic Anthropology (3)
528. (159.) Cultural Ecology (3)
529. (164.) Urban Anthropology (3)
530. (187.) Political Anthropology (3)
531. (179.) Applied Anthropology (3)
532. (165.) Culture and Personality (3)
533. (168.) Evaluative Procedures in Culture and Personality (3)
540. (148.) Cultures of Europe (3)
541. (167.) The California Indian (3)
542. (162.) Cultures of South America (3)
543. (163.) Contemporary Latin American Cultures (3)
545. (177.) Ethnology of North America (3)
546. (178.) Ethnology of Asia (3)
547. (175.) Cultures of Southeast Asia (3)
548. (178.) Cultures of Oceania (3)
549. (185.) Cultures of Sub-Saharan Africa (3)
550. (186.) Cultures of India (3)
551. (191.) Chinese Society (3)
552. (192.) Japanese Society (3)
560. (173.) Advanced Archaeological Field Methods (3)
561A-561B. (188A-188B) Archaeological Laboratory Methods (3-3)
570. (147.) Prehistory of South America (3)
571. (170.) Archaeology of North America (3)
572. (172A) Southwestern Prehistory (3)
573. (174.) Prehistoric Archaeology of Europe (3)
574. (176.) Early Near and Middle Eastern Civilizations (3)
575. (180.) Preclassic Cultures of Mesoamerica (3)

GRADUATE COURSES

600. (200.) Seminar (3)
601. (201.) Seminar in Physical Anthropology (3)
602. (202.) Seminar in Archaeology (3)
603. (203.) Seminar in Ethnology (3)
604. (204.) Seminar in Linguistics (3)
605. (205.) Seminar in Regional Anthropology (3)
606. (206.) Seminar in Topical Anthropology (3)
610. (210.) Seminar in Historical Linguistics (3)

630. (222.) Historical Linguistics (3)
Prerequisites: Anthropology 304 or 511.
Principles and techniques of historical linguistics, with concentration on the dynamics of language change; the history and reconstruction of non-indo-European languages.

631. (232.) Social Structure (3)
Prerequisites: Twelfth upper division units in anthropology.
A study of the analysis of social organization in a variety of social systems. An examination of theories and generalizations regarding the stability and change of the social structure.

632. (255.) Culture and Society in the Nahua Area (3)
Prerequisites: Anthropology 100 or 101 and 12 upper division units in anthropology.
A course designed to permit concentrated studies of the Nahua and related societies, and to permit various approaches to such studies.
634. (257) Classical Nahuacl (3)
Prerequisites: Anthropology 100 or 101 and 12 upper division units in anthropology including Anthropology 361 or 575 or 576; reading knowledge of Spanish recommended.
Nahuacl language study and analysis for translation of 16th-17th century texts; use of ancient and modern grammatical works and vocabularies; reading of manuscripts; relationship of the language to appropriate aspects of Nahua culture.

635. (258) Ethnoscience (3)
Prerequisite: Twelve upper division units in anthropology. Analysis and comparison of native categories, classifications, and bodies of systematic knowledge as demonstrated in preliterate and literate societies.

797. (297) Research (3) Cr/NC
Prerequisite: Advancement to candidacy.
Independent investigation in the general field of the thesis.

798. (298) Special Study (1-3) Cr/NC
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study directed toward the preparation of a paper on a specific problem. Maximum credit six units.

799A. (299) Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. (300) Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis, 799A, with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

ART
GENERAL INFORMATION
The Department of Art, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Art.

The Art Department is prepared to offer advanced study to graduate students in the fields of painting, sculpture, crafts, printmaking, graphic communication, and the history of art. In addition to the excellent equipment of the Art Building at San Diego State University, the Fine Arts Gallery, the Putnam Foundation collection in the Timken Gallery, and the La Jolla Museum of Contemporary Art, the Museum of Man in Balboa Park, and the La Jolla Museum of Contemporary Art in the Museum of Man in Balboa Park, and the La Jolla offer valuable original materials as well as specialized libraries for research. In addition, there are numerous private galleries with a wide variety of offerings.

ADMISSION TO GRADUATE STUDY
All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In general, the student must have completed an undergraduate major in art with a minimum of 24 upper division units, including a course in the principles of art appreciation and two courses in art history. 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 by a formal presentation to the graduate committee of a portfolio of examples of the candidate's undergraduate work in art, including painting, crafts, and sculpture. The range should be great enough to give the committee a knowledge of the candidate's strengths and weaknesses. A statement of the candidate's objectives in the graduate program should accompany this presentation. 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 sufficiently advanced for classified graduate standing may enroll for courses under guidance of the department, in order to meet the standard requirements.

ADVANCEMENT TO CANDIDACY
In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, all students will be required to pass a comprehensive examination covering the fields of history of art of western civilization, the principles of art appreciation, and the techniques and materials of the artist, or to have completed a year course in the history of art of western civilization and nine undergraduate units of art history.

Students working for a Master of Arts degree in Art in the field of art history must complete the following courses or their equivalents before advancement to candidacy:
Anthropology 101
Art 258, 259, 264, 265, 557, 560, 561, 562, 567, 571, 572, 573, and 574

Students with an emphasis in art history must also pass a written and oral comprehensive examination in the field of art history and demonstrate a reading knowledge of French or German before advancement to candidacy.

A student with an emphasis in studio arts must have: (1) completed at least 12 units listed on his or her official program with a minimum grade point of 3.0 (B); and | (2) been reviewed by the tenured and tenure-track faculty of the emphasis area and received approval of an acceptable body of graduate work completed since classified standing fulfilling the requirements of the area of specialization.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of a minimum of 30 units which includes at least 24 units in art courses listed below as acceptable on master's degree programs in art, of which at least 16 units must be in 600- and 700-numbered courses. Those
electing programs in studio arts must complete a minimum of 18 units in the area of specialization. One course in the Art 700 series, one course in the Art 760 series, and Art 799A are required. Art 790 is required of those students planning to submit a thesis under Art 799A, but is not required of those electing a creative project as fulfillment of Art 799A.

In connection with the thesis or project, each candidate for the degree must present an exhibition on the campus of representative graduate work, including the project if applicable, and a portfolio of additional graduate work. An oral examination over the field of the thesis or project and related material is required.

**THESIS AND PROJECTS IN ART**

The thesis required for the Master of Arts degree in Art is a written document; the project is an original work of creative art, accompanied by a written report. All theses and written reports accepted in satisfaction of a requirement for the master's degree are cataloged and accessioned in the library; projects remain in the custody of the Department of Art.

**ASSISTANTSHIPS**

Graduate teaching assistantships in art are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

**FACULTY**

Chairman, Department of Art: P. A. Lingren
Graduate Advisor: J. D. Swiggett (Coordinator), W. F. Bowne, J. H. Dirks, W. H. Higgins
Credential Adviser: J. L. Tanzer
Associate Professors: Bowne, Groover, Hodge, Hunter, Miller, Orth, Papworth, Peterson
Assistant Professors: Austin, Childress, Frick, Moaney, Perczel, Ray

**COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ART**

**UPPER DIVISION COURSES**

500. (100A-100B) Advanced Drawing (3)
502. (120A-120B) Industrial Media (3)
503. (115C-115D) Life Drawing and Painting (3)
504. (116C-116D) Advanced Painting (3)
505. (118B) Advanced Aquatic Media (3)
506. (112B) Design and Composition (3)
509. (106A-106B) Relief Printmaking (3)
510. (126D-126E) Intaglio Printmaking in Color (3)
511. (136C-136D) Lithography Printmaking in Color (3)
512. (146A-146B) Serigraphy (3)
516. (117C) Advanced Sculpture (3)
517. (127) Advanced Figurative Sculpture (3)
521. (117B) Industrial Design (3)
522. Design Crafts (3)
523. (113C-113D) Advanced Furniture Design (3)
525. (119C-119D) Ceramics (3)
526. (1211) Clay and Glaze Technology in Ceramic Design (3)
529. (116B-161C-161D) Design in Enamels (3)
531. (170C-170D) Jewelry and Metalwork (3)
532. Metalsmithing (3)
534. (180C-180D) Advanced Weaving (3)
535. Advanced Nonwoven Textile Construction (3)

**GRADUATE COURSES**

600. Drawing (3) I, II
Six hours. Prerequisite: Art 500. Projects synthesizing process and concept in visual field ordering. Maximum credit six units applicable on a master's degree.

604. (216A-216B) Painting (3)
Six hours. Prerequisites: Art 405, 504 and 506. Organization with visual subject matter. Maximum credit six units applicable on a master's degree.

609. (206A-206B) Printmaking (1-3)
Two hours for each unit of credit. Advanced creative work in selected printmaking media based upon the analysis of the history and philosophies of printmaking from its inception through contemporary concepts. Maximum credit six units applicable on a master's degree.

616. (217A-217B) Sculpture (3) I, II
Six hours. Prerequisites: Art 516 and classified graduate standing. Aesthetic organization of selected subject matter in the media of sculpture. Maximum credit six units applicable on a master's degree.
625. (299A-299B) Crafts (1-3)
Two hours for each unit of credit.
Prerequisite: Six units completed in upper division courses in sculpture or ceramics or
inglass or a combination of these courses.
Advanced creative work in selected craft media. Maximum credit six units applicable
on a master's degree.

627. (291) Advanced Clay and Glaze Technology in Ceramic Design (3)
Six hours.
Prerequisite: Art 425.
Experiential work with the use of ceramic material and techniques as an integral part
of the design process. Maximum credit six units applicable on a master's degree.

628. Enamel Workshop (3) I, II
Six hours.
Prerequisite: Art 529.
Workshop in enamel technology and its application to the craft. Maximum credit six
units applicable on a master's degree.

631. (270) Seminar in Jewelry and Metalwork (3)
Prerequisite: Art 331.
Problems in the design and execution of works in precious metals. Projects will be
determined by the individual student in consultation with the instructor. Maximum credit
six units applicable on a master's degree.

634. (280) Seminar in Textile Design (3)
Prerequisite: Art 334A.
Problems in textile design and technology. Projects will be determined by the
individual student in consultation with the instructor. Maximum credit six units
applicable on a master's degree.

641. (214) Graphic Communication (1-3)
Two hours for each unit of credit.
Prerequisite: Art 5418.
Advanced individual study in graphic design. Maximum credit six units applicable
on a master's degree.

650. (295) Creative Environmental Design (103)
Prerequisite: Six upper division units in interior design, architecture or city planning.
Creative work in interior design, architecture and civic design. Maximum credit six
units applicable on a master's degree.

694. (294A-294B) Seminar in the Principles of Design in the Space Arts (3)
Prerequisite: A semester course in art appreciation. An intensive study of the activity of creative expression and aesthetic appreciation in the area of visual experience. The aesthetic analysis of original works of art. Maximum credit six units applicable on a master's degree.

700. (291) Seminar in the Practice of Art (3)
Prerequisite: M.A. standing.
Independent research in specified areas including the presentation of a paper with its
oral defense. Each course may be taken to a maximum of six units. No more than six units of 700
are applicable on a master's degree.
A. Seminar in Painting
B. Seminar in Sculpture
C. Seminar in Printmaking
D. Seminar in Ceramics
E. Seminar in Crafts
F. Seminar in Graphic Communication
G. Seminar in Environmental Design

767. (292F) Seminar in Primitive Art (3)
Prerequisite: Art 559.
Studies in problems of the development of art styles or important artists within broad
limits of primitive art.

769. (292A) Seminar in Ancient Art (3)
Prerequisites: Art 258 and 259.
Studies in problems of the development of art styles or important artists within broad
limits of ancient art.

773. (292C) Seminar in Medieval Art (3)
Prerequisites: Art 258 and 259.
Studies in problems of the development of art styles or important artists within broad
limits of medieval art.

775. (292D) Seminar in Renaissance Art (3)
Prerequisites: Art 258 and 259.
Studies in problems of the development of art styles or important artists within broad
limits of renaissance art.

785. (222) Art Education Colloquium (3)
Prerequisite: Fifteen upper division units in art, Historic and current art education philosop
bibliography, preparing for a specialized introduction to research methods and materials. It's
bibliography, preparation for writing a master's thesis.

796. (298) Thesis or Project (3) Cr/NC
Prerequisite: Consent of the staff; to be arranged with department chairman and the
instructor.

799A. (298) Thesis or Project (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to
candidacy.
Preparation of a project or thesis for a master's degree.
ASIAN STUDIES

GENERAL INFORMATION

The Master of Arts degree in Asian Studies with an emphasis on East Asia is an interdisciplinary degree offered by designated faculty members in the Departments of Anthropology, Art, Business Administration, Classical and Oriental Languages and Literatures, Comparative Literature, Economics, Education, English, Geography, History, Philosophy, Political Science, Religious Studies, and Sociology. It is administered by the Center for Asian Studies through a Graduate Committee consisting of the Director of the Center and representatives from the several departments. The program is designed to offer systematic advanced training (a) for those planning to enter educational, business, government, or community service involving Asian Studies, and (b) for those in a specific academic discipline who have regional interest in Asian Studies and wish to promote more effective understanding of the culture, societies, people, and social forces at work in the Asian/Pacific world.

ADMISSION TO GRADUATE STUDY

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student must present a Bachelor of Arts degree with a major in Asian Studies or its equivalent, as approved by the Graduate Committee of the Center for Asian Studies. A student whose preparation is deemed inadequate by the Graduate Committee will be required to complete specific courses in addition to the minimum of thirty (30) units required for the degree.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, all students must demonstrate a reading knowledge, at least at the intermediate level, of a relevant foreign language approved by the Graduate Committee of the Center for Asian Studies. If Chinese or Japanese is required, the requirement may be fulfilled by completing 16 units of coursework in that particular language, the last four units with a grade of C or better.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Three of this bulletin, the student must complete a minimum of 30 units from courses listed below as acceptable courses of Asian content, distributed as shown below. A minimum of 18 of the above 24 units shall be in courses of East Asian emphasis.

<table>
<thead>
<tr>
<th>Courses</th>
<th>500- 600- and</th>
<th>600- and 700-numbered</th>
<th>700-numbered</th>
<th>Courses</th>
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<tr>
<td>Asian Studies</td>
<td>3 units</td>
<td>3 units</td>
<td>3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Department A</td>
<td>6 units</td>
<td>3 units</td>
<td>3 units</td>
<td></td>
</tr>
<tr>
<td>Department B</td>
<td>12 units</td>
<td>9 units</td>
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</tbody>
</table>

The remaining nine of the total of 30 units will be elective, selected from the above or other relevant departments, as approved by the Graduate Committee. The total program may elect Plan A (with thesis) or Plan B (comprehensive examination in lieu of thesis) in consultation with the graduate coordinator.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ASIAN STUDIES

UPPER DIVISION COURSES

Anthropology
547. (175.) Cultures of Southeast Asia (3)
550. (186.) Cultures of India (3)
551. (191.) Chinese Society (3)*
552. (192.) Japanese Society (3)*
581. (190.) Archeology of East Asia (3)*

Art
565. (152A.) The Art of India and Southeast Asia (3)

Comparative Literature
530. (170.) Asian Literature (3)

History
561. (191A-191B.) The Far East (3-3)*
562. (196A-196B.) India—Hindu, Muslim and Modern (3-3)
564. (190A-190B.) Southeast Asia (3-3)
566. (192.) Chinese Civilization (3)*
567A-567B. (193.) Modern and Contemporary Chinese History (3-3)
569. (194.) Japanese Civilization (3)
570. (195.) Rise of Japan as a Modern State (3)*
571. (197A-197B.) Intellectual History of Modern Asia (3-3)*
<table>
<thead>
<tr>
<th>Department</th>
<th>Courses</th>
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</thead>
<tbody>
<tr>
<td>Philosophy</td>
<td>575. (175.) A Major Philosopher (3)**</td>
</tr>
<tr>
<td></td>
<td>596. (176.) Topics in Asian Thought (3)**</td>
</tr>
<tr>
<td>Political Science</td>
<td>562. (187.) Governments and Politics of the Far East (3)*</td>
</tr>
<tr>
<td></td>
<td>561. (191.) Governments and Politics of the Developing Areas (3)**</td>
</tr>
<tr>
<td>Religious Studies</td>
<td>501. (121.) Religions of India (3)</td>
</tr>
<tr>
<td></td>
<td>503. Religions of the Far East (3)*</td>
</tr>
<tr>
<td></td>
<td>580. (180.) A Major Figure (3)*</td>
</tr>
<tr>
<td></td>
<td>581. (181.) A Metaphysical Doctrine (3)*</td>
</tr>
<tr>
<td></td>
<td>*Courses always applicable toward the minimum of 18 units of East Asian emphasis required for the master's degree program.</td>
</tr>
<tr>
<td></td>
<td>**Acceptable when of relevant content.</td>
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</tbody>
</table>

**APPLICABLE GRADUATE COURSES**

### Anthropology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>600</td>
<td>Seminar (3)**</td>
</tr>
<tr>
<td>620</td>
<td>Seminar in Regional Anthropology (3)**</td>
</tr>
<tr>
<td>630</td>
<td>Historical Linguistics (3)**</td>
</tr>
<tr>
<td>631</td>
<td>Social Structure (3)**</td>
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</tbody>
</table>

### Art

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>609</td>
<td>Printmaking (1-3)**</td>
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</table>

### Business Administration

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>654</td>
<td>Seminar in International Finance (3)**</td>
</tr>
<tr>
<td>765</td>
<td>Marketing Institutions (3)**</td>
</tr>
<tr>
<td>769</td>
<td>Seminar in International Marketing (3)**</td>
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</tbody>
</table>

### Economics

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>635</td>
<td>Seminar in Economic History (3)**</td>
</tr>
<tr>
<td>660</td>
<td>Seminar in International Economics (3)**</td>
</tr>
<tr>
<td>665</td>
<td>Seminar in the Economics of Underdeveloped Countries (3)**</td>
</tr>
<tr>
<td>728</td>
<td>Development Planning (3)**</td>
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</tbody>
</table>

### Education

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>683</td>
<td>Comparative Education (3)**</td>
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</table>

### Geography

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>610</td>
<td>History of Geography (3)**</td>
</tr>
<tr>
<td>620</td>
<td>Seminar in Regional Geography (3)**</td>
</tr>
<tr>
<td>650</td>
<td>Seminar in Systematic Geography (3)**</td>
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</table>

### History

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>601</td>
<td>Seminar in Historical Method (3)**</td>
</tr>
<tr>
<td>650</td>
<td>Directed Reading in Asian History (3)**</td>
</tr>
<tr>
<td>655</td>
<td>Seminar in Asian History (3)**</td>
</tr>
<tr>
<td>795</td>
<td>Area Studies in History (3)**</td>
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</tbody>
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### Linguistics

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<tr>
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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>795</td>
<td>Seminar in Linguistics (3)**</td>
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</table>

### Philosophy

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>635</td>
<td>Seminar in Philosophy of Religion (3)**</td>
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<td>636</td>
<td>Seminar in Philosophy of Art (3)**</td>
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<tr>
<td>795</td>
<td>Seminar in Selected Topics (3)**</td>
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### Political Science

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<tr>
<th>Course Code</th>
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<tr>
<td>655</td>
<td>Seminar in General Comparative Political Systems (3)**</td>
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<td>658</td>
<td>Seminar in Communist Political Systems (3)**</td>
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<td>661</td>
<td>Seminar in the Political Systems of the Developing Nations (3)**</td>
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<td>675</td>
<td>Seminar in International Relations (3)</td>
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<tr>
<td>685</td>
<td>Seminar in Theories of International Relations (3)**</td>
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### Sociology

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<tr>
<th>Course Code</th>
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<tr>
<td>770</td>
<td>Seminar in Population and Demography (3)**</td>
</tr>
<tr>
<td>775</td>
<td>Directed Readings in Population and Demography (3)**</td>
</tr>
</tbody>
</table>

All 797 (Research) and 798 (Special Study) courses in named departments, when relevant, are also applicable upon approval by the Graduate Committee.

Refer to graduate course descriptions in the sections of this bulletin under the appropriate departments.

*Courses always applicable toward the minimum of 18 units of East Asian emphasis required for the master's degree program.
**Acceptable when of relevant content.
***Required of all students who offer history as Department A, except that Asian Studies 601 is an acceptable substitute.
ASTRONOMY

GENERAL INFORMATION

The Department of Astronomy, in the College of Sciences, offers graduate study leading to the Master of Science degree in Astronomy. This degree is designed to augment the student's undergraduate training by a fifth year of more advanced study in the field of astronomy and the associated fields of mathematics and physics. San Diego State University has excellent facilities. A 24-inch reflecting telescope and two 16-inch reflecting telescopes, equipped with photoelectric photometers and a spectograph, are located at Mount Laguna Observatory 40 miles east of campus, at an elevation of 6,100 feet. An 8-inch photographic refractor of long focus and several other telescopes, ranging from 6 to 12 inches in aperture, are located on campus. Campus computing facilities include an IBM 360/50 and an IBM 1130 digital computer.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, the student must have an overall grade point average of at least 2.75 in the last 60 units of his undergraduate work and must have preparation in astronomy and related sciences substantially equivalent to that required for the Bachelor's degree in astronomy at San Diego State University. Students transferring to San Diego State University must submit two letters of recommendation.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy as specified in Part Three of this bulletin. In addition, students may be required to take a qualifying examination during their first semester of residence.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must also meet the following departmental requirements in his 30-unit program:

1. Complete at least 15 units of 600- and 700-numbered courses in astronomy not including 799A.
2. Complete at least nine units of graduate level or approved upper division courses in astronomy or related fields as approved by his departmental committee.
3. If a student elects Plan A, he must enroll in Astronomy 799A, Thesis. If a student, with the approval of the department, elects Plan B, he must complete at least three additional units of graduate level or approved upper division courses in astronomy or related fields and pass a final comprehensive examination in lieu of the thesis.
4. Complete six units of electives selected with approval of the adviser.
5. A reading knowledge of scientific French, German, or Russian is recommended. Facility with a scientific computing language is desirable.

ASSISTANTSHIPS

Graduate teaching assistantships in astronomy are available to a few qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY

Chairman, Department of Astronomy: B. Nelson
Graduate Adviser: J.D. Schopp
Professors: Daub, Nelson, Schopp, Young
Associate Professor: Angione
Assistant Professor: Talbert
799A. (299) Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university and also student must be registered in the course when the completed thesis is granted final approval.

BIOLOGICAL SCIENCES

GENERAL INFORMATION

The departments of Biology, Botany, and Zoology, in the College of Sciences, offer graduate study leading to the degrees of Master of Arts and Master of Science in Biology. In addition, the ecology group offers a joint doctoral program with the College of Biological and Agricultural Sciences at the University of California, Riverside, and the genetics group offers a joint doctoral program with the University of California, Berkeley.

A new Life Sciences building provides increased facilities for graduate study in the biological sciences. Additional facilities available in the community include the San Diego Zoo Hospital, the United States Department of Agriculture, Fish and Game Commission, and the Alvarado Filtration Plant of the City of San Diego. San Diego State University is establishing a biological research center on a 3,000-acre area in Temecula, Riverside County, has acquired acreage in the Camp Elliot area, and has the use of a small agricultural area in the El Cajon Valley, leased by the San Diego State University Foundation.

SECTION I: MASTER'S DEGREE PROGRAMS

The Master of Arts degree is considered to be essentially an academic degree which is planned to serve as a stepping stone to a higher degree, if the student so desires. The Master of Science degree is an applied or more technical degree, but is also acceptable as preparatory to many more advanced degree programs. Study concentration for either of these degrees must be completed in one of the following six program areas: Botany, Ecology, Genetics and Developmental Biology, Invertebrate Zoology, Physiology, and Vertebrate Zoology.

ADMISSION TO GRADUATE STUDY

In addition to the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, a student must satisfy the following requirements before he will be recommended for admission to a program with classified standing:

1. Meet the requirements of an undergraduate major in a biological sciences department at San Diego State University in which graduate work is contemplated.
2. Have a grade point average of 2.75 or better on work taken for the baccalaureate degree.
3. Have a grade point average of 3.0 or better in upper division courses (at least 24 units) in the biological sciences.
4. Have a score of 7100 or better on the Graduate Record Examination Aptitude Test.
5. Have a score above the 60th percentile rank on the Graduate Record Examination Advanced Test in Biology. The student should take this test during the last semester in his undergraduate major in biological sciences.
6. Be considered as capable of graduate work in the biological sciences by two references submitted to the Biology Coordinator of Master's Degree Programs.
7. Be accepted by a program area and be sponsored by a faculty member of the area.

NOTE: Admission to a program area within the biology graduate program will be limited to the number of students for which adequate facilities and faculty sponsorship are available. Students should, therefore, be as specific as possible in their indication of their research interests and career goals. Individual program areas will admit students solely on the basis of merit in relation to space and faculty availability.

Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing at the discretion of the program area. Students so admitted will be advised as to the nature of their deficiency and the time to be allowed to achieve full classified graduate standing.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Three of this bulletin.
SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected, with the approval of the graduate adviser, from the biological sciences as listed below or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses in the biological sciences, including course 799A. Thesis. A reading knowledge of scientific, French, German, Russian, or Spanish, and a final oral examination on the field of the thesis and its implications in the broad fields of biology are also required.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected, with the approval of the graduate adviser, from the biological sciences as listed below or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses in the biological sciences, including course 799A. Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in the School of Education. A final oral examination on the field of the thesis and its implications in the broad fields of biology is also required.

MASTER'S DEGREE PROGRAM AREAS

Botany: The areas of emphasis for graduate study in the botany program area include plant morphology and physiology, mycology and plant pathology, phycology, and plant evolution.

Ecology: The overall program emphasizes quantitative approaches to ecological research and the framing of problems within the general context of ecological theory. Faculty and student research currently falls into the areas of limnology, marine ecology, aquatic culture and fisheries ecology, animal population ecology and energetics, ecosystems management, and systems ecology.

Genetics and Developmental Biology: The genetics program offers an opportunity for graduate study in population genetics, biochemical genetics, developmental genetics, cytogenetics, and mutagenesis.

Invertebrate Zoology: The emphasis of this program area is based on the study of invertebrates as whole organisms. Faculty and graduate student research interests are invertebrates, development, and behavior, and a variety of related fields. At least 15 of the units selected must be in 600- and 700-numbered courses in the biological sciences, including course 799A. Thesis. A reading knowledge of scientific, French, German, Russian, or Spanish, and a final oral examination on the field of the thesis and its implications in the broad fields of biology are also required.

ASSISTANTSHIPS

Graduate teaching, assistantships and graduate nonteaching assistantships in biology are available to a limited number of qualified students. Application blanks and additional information may be secured from the Coordinator of the Biology Graduate Program.
STAFF

Faculty members of the staff in ecology of the cooperating institutions who will act as principals in the doctoral program in ecology and be available for direction of research and as members of doctoral committees are as follows:

University of California, Riverside:
Graduate Adviser: W. W. Thomson
Principals: Carpelan, Gillett, Johnson, Luck, Mayhew, Pengelley, Rubal, Shoemaker, Ting, Vasek

San Diego State University:
Graduate Adviser: J. B. Zedler
Principals: Atkins, Carpenter, Clark, Cohn, B. D. Collier, C. F. Cooper, Cox, Dexter, Ebert, Etheridge, Farris, Fittner, Ford, Hays, Hazen, Hurlbert, A. W. Johnson, Lillegraven, Miller, Sloan, J. B. Zedler, P. H. Zedler

GENETICS

Both San Diego State University and the University of California, Berkeley, cover a wide range of specialized fields in genetics in which the student may prepare himself for his qualifying examination or, in greater depth, for his research. At San Diego, the specific fields best represented are population genetics, radiation genetics, physiological and developmental genetics, and behavior genetics. At Berkeley, the fields are population genetics, evolution, biochemical and developmental genetics, human genetics, and cytogenetics.

An undergraduate major in genetics or its equivalent in biological sciences can be considered as standard preparation for admission to the doctoral program in genetics, although completion of additional courses in mathematics and statistics, language, physical chemistry and biochemistry, and in biology generally are helpful and will often reduce the time required for the doctoral program. Other majors in related fields may be considered for admission to the doctoral degree program in genetics.

On admission to the program, the student is guided by the requirements for the doctoral degree program given in Part Three of this bulletin. The student should normally spend his first year in the program completing his year of residency at the University of California, Berkeley. It is desirable for the student to complete his foreign language requirement, if any, and his qualifying examination during this year and to be advanced to candidacy.

STAFF

The following faculty members of the staff in ecology of the cooperating institutions will act as principals in the doctoral program in ecology and be available for direction of research and as members of doctoral committees:

University of California, Berkeley:
Graduate Adviser: J. Fristrom, A. D. Keith
Principals: Brown, Cameron, Fogel, Fristrom, Keith, Lerner, Libby, Jr., Palmour, St. Lawrence, Spieth

San Diego State University:
Graduate Adviser: W. P. Diehl
Principals: Awbrey, Baer, Barnett, Daugherty, Jr., Davis, Diehl, Futch, A. W. Johnson, Kelly, Ratty, Rinehart, Taylor, Thwaites, Wedberg

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS

UPPER DIVISION COURSES

Biology

505. (161) History of Biology (3)
506. (162) Source Material in the History of Biology (3)
519. (175) Statistical Methods in Biology (3)
520. (110) Ecology (4)
521. (714) Advanced Ecology (3)
525. Agricultural Ecology (3)
527. (116) Environmental Measurement (3)
530. (117) Limnology (4)
531. (113) Biological Oceanography (4)
532. (112) Fisheries Biology (3)
533. (111) Systems Ecology (5)
536. (122) Environmental Measurement (3)
537. (123) Simulation of Ecological Systems (4)
540. (115) Genetics (4)
541. (156) Developmental Biology (4)
544. (158) Human Genetics (4)
545. (157) Cytogenetics (4)
546. (171) Mutagenesis (3)
547. (163) Microbial Genetics (3)
548. (172) Behavioral Genetics (3)
549. (160) Evolution and Population Genetics (3)
550. (169) Ecological Genetics (3)
553. (177) Advanced Genetics (3)
560. (101) Cellular Physiology (4)
561. (181) Advanced Cellular Physiology (3)
562A-562B. (142A-142B) Comparative Animal Physiology (4-4)
564. (144) Comparative Endocrinology (3)
564L. (144L) Comparative Endocrinology Laboratory (2)
566. (148) Photophysics (3)
566L. (148L) Photophysics Laboratory (1)
568. (182) Immunchemistry (3)
568L. (182L) Immunchemistry Laboratory (1)
570. (150) Radiation Biology (3)
570L. (150L) Radiation Biology Laboratory (2)
571. (175) Radioscopie Techniques in Biology (3)
580. (179) Regional Field Studies in Biology (1-3)

Botany

500. (100) General Botany (4)
501. (101) Phycology (4)
502. (102) Mycology (4)
503. (103) Vascular Plants (4)
511. (171) Advanced Physiology (3)
512. (172) Plant Taxonomy (3)
526. (126) Plant Pathology (4)
530. (130) Plant Physiology (4)
531. (132) Plant Metabolism (3)
533. (133) Experimental Plant Metabolism (3)
540. (140) Plant Anatomy (4)
562. (162) Agricultural Botany (2)
572. (172) Palynology (3)
580. (182) Selected Topics in Botany (2-3)

Microbiology

510. (175) Advanced General Microbiology (4)
515. (174) Bacterial and Viral Genetics (2)
515L. (114L) Bacterial and Viral Genetics Laboratory (2)
520. (102) Pathogenic Bacteriology (4)
525. (104) Medical Microbiology (4)
530. (109) Hematology (4)
535. (107) General Virology (2)
535L. (110L) General Virology Laboratory (2)
560. (116) Marine Microbiology (2)
560L. Marine Microbiology Laboratory (2)
570. (130) Experimental Immunology (4)
580. (120) Animal Viruses (4)
590. (180) Electron Microscopy (4)
GRADUATE COURSES

Biology

600. (200) Seminar (2-3)
Prerequisite: Consent of instructor. An intensive study in advanced biology. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

610. (231) Seminar in Ethology and Comparative Psychology (3)
Prerequisite: Biology 520, or Psychology 414 or 417, or Zoology 570, and consent of the graduate advisor. Current problems in ethology and comparative animal behavior. Maximum credit six units applicable on a master's degree.

615. (250) Biogeography (3)
Prerequisite: Biology 520 or 549. Concepts and principles of the distributional history of plant and animal groups, and the origins and dispersal of modern faunas and floras.

620. (242) Population and Community Ecology (3)
Two lectures and three hours of laboratory. Prerequisite: Biology 520. Formulation, analysis, and experimental testing of the theories of the structure and dynamics of ecological systems at the population and community level.

621. (243) Physiological Ecology (3)
Two lectures and three hours of laboratory. Prerequisites: Biology 520 and consent of instructor. The comparative physiological characteristics of natural plant and animal populations in relation to their habitats and environments.

622. (246) Behavioral Ecology (3)
Two lectures and three hours of laboratory. Prerequisites: Biology 520 and consent of instructor. Recommended: Zoology 570 or Psychology 461. Behavioral mechanisms relating animals to their physical and biotic environment.

625. (244) Physical Aspects of Ecology (3)
Two lectures and three hours of laboratory. Prerequisite: Biology 520. Analysis and measurement of physical factors of the environment and of the processes by which energy and matter are exchanged between organisms and the environment; the significance of the physical environment in ecological processes.

626. (245) Aquatic Ecology (3)
Two lectures and three hours of laboratory. Prerequisites: Biology 520 and consent of instructor. Application for collecting permit must be made at least six weeks before class begins at the Center for Marine Studies (AS-111). Ecological concepts as applied to benthic and pelagic populations and communities in fresh water and marine environments.

630. (240) Seminar in Terrestrial Ecology (2)
Prerequisite: Biology 520. Ecological concepts as applied to the terrestrial environment. May be repeated with new content. Maximum credit four units applicable on a master's degree.

631. (243) Seminar in Aquatic Ecology (2)
Prerequisite: Biology 520. Ecological concepts as applied to the fresh water and marine environment. May be repeated with new content. Maximum credit four units applicable on a master's degree.

640. (270) Seminar in Genetics (2)
Prerequisite: Biology 540. Maximum credit four units applicable on a master's degree.

641. (220) Seminar in Developmental Biology (2)
Prerequisite: Biology 541. May be repeated with new content. Maximum credit four units applicable on a master's degree.

642. (271) Developmental Genetics (3)
Prerequisites: Biology 541 and 560. Regulation of genetic information in developing systems.

643. (222) Morphogenesis (3)
Prerequisites: Biology 541 and 560. Regulation of pattern formation in developing systems; cell migration, cell division, cell death, dependent differentiation.

649. (230) Speciation (3)
Prerequisites: Biology 540 and 544, or 549. Concepts and principles of the origin of species.

651. (276) Physiological Genetics (3)
Prerequisites: Biology 540 or 544; Chemistry 231. Recommended: Chemistry 361A-361B. Biochemical aspects of genetics of microbial and human systems.

660. (270) Seminar in Cellular Physiology (2)
Prerequisites: Biology 550 and consent of instructor. Maximum credit four units applicable on a master's degree.

661. (260) Seminar in General Physiology (2)
Prerequisite: Biology 550. May be repeated with new content. Maximum credit four units applicable on a master's degree.

662. (261) Seminar in Comparative Physiology (2)
Prerequisites: Biology 562A or 562B and consent of instructor. Comparative aspects of function at the molecular through organismal levels. Maximum credit four units applicable on a master's degree.

663. (267) Seminar in Environmental Radiation (2)
Prerequisites: Biology 570 and 571. The sources, characteristics, distribution, measurement, and fate of radioactive contaminants in the biosphere and interactions with the biota. Maximum credit four units applicable on a master's degree.
670. (262.) **Cytoplasmic Inheritance** (3)  
Prerequisite: Botany 540, 560 and consent of instructor.  
Literature and techniques related to research in non-Mendelian genetics.

671. (264.) **Methods in Physiology** (2)  
Six hours of laboratory.  
Prerequisite: Botany 560.  
Current methods employed in physiological measurements. Maximum credit four units applicable on a master's degree.

672. (265.) **Molecular Biophysics** (3)  
Prerequisites: Biology 560 and Mathematics 122.  
The description and analysis of biological processes and systems in terms of the properties of molecules and of basic principles.

697. (297.) **Investigation and Report** (3)  
Analysis and research techniques in biology.

790. (290.) **Bibliography** (1)  
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

797. (297.) **Research** (1-3) Cr/NC  
Research in one of the fields of biology. Maximum credit six units applicable on a master's degree.

798. (298.) **Special Study** (1-3) Cr/NC  
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.  
Individual study. Maximum credit six units.

799A. (299.) **Thesis or Project** (3) Cr/NC  
Prerequisite: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for the master's degree.

799B. **Thesis or Project Extension** (0) Cr/NC  
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.  
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; granted final approval.

897. **Doctoral Research** (3-6) Cr/NC  
Prerequisite: Admission to the doctoral program.  
Independent investigation in the general field of the dissertation.

899. **Doctoral Dissertation** (3-6) Cr/NC  
Prerequisite: An officially constituted dissertation committee and advancement to candidacy.  
Preparation of the dissertation for the doctoral degree.

**Botany**

600. (260.) **Seminar** (2-3)  
Prerequisite: Consent of instructor.  
An intensive study in advanced botany. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

601. (261.) **Seminar in Physiology** (2)  
Prerequisite: Botany 501.  
Recent developments in physiology. Maximum credit four units applicable on a master's degree.

602. (262.) **Seminar in Mycology** (2)  
Prerequisite: Botany 502.  
Current problems in the taxonomy, morphology or physiology of the fungi. Maximum credit four units applicable on a master's degree.

683. (263.) **Seminar in Vascular Plants** (2)  
Prerequisite: Botany 503.  
Problems in the evolution of the vascular plants. Maximum credit four units applicable on a master's degree.

626. (226.) **Seminar in Plant Pathology** (2)  
Prerequisite: Botany 526.  
Advanced topics in the biology of plant pathogens. Maximum credit four units applicable on a master's degree.

630. (230.) **Seminar in Plant Physiology** (2)  
Prerequisite: Botany 530.  
Current investigations in one of the areas in plant physiology. Maximum credit four units applicable on a master's degree.

797. (297.) **Research** (1-3) Cr/NC  
Research in one of the fields of botany. Maximum credit six units applicable on a master's degree.

798. (298.) **Special Study** (1-3) Cr/NC  
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.  
Individual study. Maximum credit six units.

799A. (299.) **Thesis or Project** (3) Cr/NC  
Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for a master's degree.

799B. **Thesis or Project Extension** (0) Cr/NC  
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.  
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; granted final approval.

**Microbiology**

600. (200.) **Seminar** (2-3)  
Prerequisite: Consent of instructor.  
An intensive study in advanced microbiology; topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

610. (240.) **Seminar in General Microbiology** (2)  
Prerequisite: Microbiology 320.  
May be repeated with new content. Maximum credit four units applicable on a master's degree.

620. (205.) **Seminar in Medical Microbiology** (2)  
Prerequisite: Microbiology 320.  
May be repeated with new content. Maximum credit four units applicable on a master's degree.

630. (260.) **Seminar in Immunology and Serology** (2)  
Prerequisite: Microbiology 330.  
May be repeated with new content. Maximum credit four units applicable on a master's degree.

640. (215.) **Seminar in Bacterial and Viral Genetics** (2)  
Prerequisite: Microbiology 515.  
May be repeated with new content. Maximum credit four units applicable on a master's degree.

650. (270.) **Seminar in Pathogenic Bacteriology** (2)  
Prerequisite: Microbiology 520.  
May be repeated with new content. Maximum credit four units applicable on a master's degree.

660. (230.) **Seminar in Medical Mycology** (2)  
Prerequisite: Microbiology 525.  
May be repeated with new content. Maximum credit four units applicable on a master's degree.
Seminar in Virology (2)  
Prerequisite: Microbiology 535.  
Maximum credit four units applicable on a master's degree.

Seminar in Aquatic Microbiology (2)  
Prerequisite: Microbiology 320 or 560 or Biology 531.  
Maximum credit four units applicable on a master's degree.

Advanced Pathogenic Bacteriology (3)  
Prerequisites: Microbiology 520 and consent of instructor.  
Biological and chemical nature of disease-producing bacteria. Application of experimental information to diagnostic laboratory procedures.

Biology of Animal Pathogenic Fungi (3)  
Prerequisite: Microbiology 525.  
Distribution and pathogenesis of fungi-causing disease in man and other animals.

Biology of Warm-blooded Vertebrates (2)  
Prerequisite: Zoology 160 or 506.  
Energy transformation in animals and temperature regulation.

Biology of Endothermic Animals (2)  
Prerequisite: Zoology 520 or 503.  
May be repeated with new content. Maximum credit four units applicable on a master's degree.

Seminar in Marine Zoology (2)  
Prerequisite: Zoology 517 or 518.  
Recommended a course in physiology.  
Individual study. Maximum credit six units.

Animal Energetics (3)  
Prerequisite: An upper division course in physiology. Recommended: A course in animal energetics.  
Energy transformation in animals to include the physiology of starvation, animal energetic efficiency, nutrition, and temperature regulation.

Advanced Marine Invertebrate Zoology (3)  
One lecture and six hours of laboratory.  
Prerequisite: Zoology 510.  
Selected topics in advanced marine invertebrate zoology. Maximum credit six units applicable on a master's degree.

Advanced Lower Vertebrate Zoology (2-4)  
See class schedule for lecture-laboratory format.  
Prerequisites: Either Zoology 515 or 516, depending on specific topic announced in class schedule.  
Advanced treatment of ichthyology or herpetology. May be taken twice with new content for maximum credit of eight units. Maximum credit eight units applicable on a master's degree.

Advanced High Vertebrate Zoology (2-4)  
Prerequisites: Either Zoology 517 or 518, depending on specific topic announced in class schedule.  
Advanced treatment of ornithology or mammalogy. May be taken twice with new content for a maximum of eight units. Maximum credit eight units applicable on a master's degree.

Advanced Entomology (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Zoology 521, Biology 530, Botany 300 or 503.  
Advanced treatment of some phase of entomology such as physiology, morphology, or toxicology. Topic to be announced. Maximum credit six units applicable on a master's degree.

Research Techniques (3)  
Prerequisite: Consent of graduate adviser.  
The use of basic reference books, journals, pertinent bibliographies preparatory to the writing of a master's thesis.

Research (1-3) Cr/NC  
Research in one of the fields of microbiology. Maximum credit six units applicable on a master's degree.

Special Study (1-3) Cr/NC  
Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

Thesis or Project (3) Cr/NC  
Prerequisite: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for the master's degree.

Thesis or Project Extension (0) Cr/NC  
Registration required in any semester or term following assignment of SP in Thesis 799A in which the student expects to use the facilities and resources of the university; student must be registered in the course when the completed thesis or project is granted final approval.

Bibliography (1)  
The use of basic reference books, journals, pertinent bibliographies preparatory to the writing of a master's thesis.
**BUSINESS ADMINISTRATION**

**GENERAL INFORMATION**

The School of Business Administration offers graduate study leading to the Master of Business Administration degree and to the Master of Science degree in Business Administration. The major goals in the master's degree curriculum are to educate the students for general management positions, for management in the functional areas of business, and for executive responsibilities in organizations having close relationships with business activities. The School of Business Administration is a member of the American Assembly of Collegiate Schools of Business.

The Master of Business Administration degree is designed to provide a broad education in business for the student with either a business or a nonbusiness undergraduate degree. The Master of Science degree in Business Administration is designed to provide additional education and specialization in business subjects for the student who has an undergraduate degree in one of the business subject fields. The master's degree programs with a major in business administration have been accredited by the American Assembly of Collegiate Schools of Business.

Entrance requirements for the two master's degree curriculums are the same. Either preparation for the degree are met.

All students considering graduate work in business are advised to seek further details from the Associate Dean for Graduate Studies in the School of Business Administration prior to applying for admission.

Close contacts with large and small firms, both local and national, enhance the business student's education. The generous cooperation of local business and government organizations provides opportunities for research and observation for responsibilities which have created many opportunities for the student with an advanced degree in business administration.

**BUREAU OF BUSINESS AND ECONOMIC RESEARCH**

The Bureau of Business and Economic Research is an organized research activity serving the needs of the School of Business Administration and the Department of director and a policy committee. The principal objectives of the Bureau are to (1) and regional problems; (2) facilitate research in these areas by the faculty and students; (3) seek cooperative arrangements with outside individuals and organizations for conducting specific research projects; (4) compile local and regional data; (5) publish the results of Bureau research investigations and aid the faculty in publication of research. Graduate students are encouraged to make use of Bureau facilities.

**ADMISSION TO THE GRADUATE PROGRAM IN THE SCHOOL OF BUSINESS ADMINISTRATION**

A student seeking admission to either of the master's degree curricula offered in the School of Business Administration should make application in the manner set forth in Part Three of this bulletin. All students must be eligible for classified graduate standing prior to enrolling in any graduate (600- or 700-numbered) course. Students are granted classified graduate standing if they (1) have maintained a 2.50 grade point average in the last 60 semester units of work attempted and (2) have a combination of the Graduate Management Admissions Test (GMAT) score and an overall undergraduate grade point average on the following scale:

<table>
<thead>
<tr>
<th>Undergraduate GPA</th>
<th>GMAT Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 or above</td>
<td>450</td>
</tr>
<tr>
<td>2.75</td>
<td>475</td>
</tr>
<tr>
<td>2.50</td>
<td>500</td>
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<tr>
<td>2.25</td>
<td>525</td>
</tr>
<tr>
<td>2.00</td>
<td>550</td>
</tr>
</tbody>
</table>

Points in between are rated on a comparable scale.

**Masters of Business Administration Degree**

Rules governing admission to the University and to the School of Business Administration are outlined above and in Part Three of this bulletin. For admission to the Administration, one must be a student with an advanced degree in business administration. The major goals in the master's degree curriculum are to educate the students for general management positions, for management in the functional areas of business, and for executive responsibilities in organizations having close relationships with business activities. The School of Business Administration is a member of the American Assembly of Collegiate Schools of Business.

**ADMISSION TO THE DEGREE CURRICULUM**

Requirements for the master's degree as described in Part Three of this bulletin. These requirements are applicable for the master's degree program. The requirements for the Graduate Management Admissions Test (GMAT) score and an overall undergraduate grade point average on the following scale:

<table>
<thead>
<tr>
<th>Undergraduate GPA</th>
<th>GMAT Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 or above</td>
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<tr>
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<tr>
<td>2.25</td>
<td>525</td>
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<tr>
<td>2.00</td>
<td>550</td>
</tr>
</tbody>
</table>

Points in between are rated on a comparable scale.

**ADVANCEMENT TO CANDIDACY**

All students must complete the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

**SPECIFIC REQUIREMENTS FOR THE MASTER OF BUSINESS ADMINISTRATION DEGREE**

In addition to meeting the requirements for classified graduate standing and the basic curriculum or the Master of Business Administration degree, the student must complete an approved program of studies containing between 30 and 60 units. The exact number of units for each student will depend on the extent of his previous work in business administration. Students with a previous course work in business administration or related fields will normally be expected to complete 60 units, and students with no previous course work in business administration or related fields will normally be expected to complete 30 units. Up to six units of course work may be accepted for transfer. Transfer credit will be given only for graduate course work in business administration. The exact number of units for each student will depend on the extent of his previous work in business administration or related fields.

**ADVANCEMENT TO CANDIDACY**

The requirements for the degree are as follows:

1. Complete each of the following three courses with a grade of "B" or better:
   - B.A. 602 Quantitative Methods I (3)
   - B.A. 605 Marketing (3)
   - B.A. 606 Managerial Accounting (3)

2. Complete a minimum of 36 units from the following courses:
   - B.A. 607 Organizational Behavior (3)
   - B.A. 608 Quantitative Methods II (3)
   - B.A. 610 Managerial Economics (3)
   - B.A. 611 Behavioral Economics (3)
   - B.A. 612 Organizational Behavior (3)
   - B.A. 613 Quantitative Methods II (3)
   - B.A. 614 Econometrics (3)

3. Complete a minimum of 12 units in the following two categories of concentration and electives:
   - Concentration: No more than 15 units in each of the concentrations listed below.
   - Electives: No more than 15 units in each of the categories listed below.

   a. Concentration: No more than 15 units in each of the concentrations listed below.
   - B.A. 615 Financial Principles and Policies (3)
   - B.A. 616 Behavioral Economics (3)
   - B.A. 617 Managerial Economics (3)
   - B.A. 618 Economic Analysis (3)
   - B.A. 619 Analytical Economics (3)
   - B.A. 620 Statistical Analysis (3)

   b. Electives: No more than 15 units in each of the categories listed below.
   - B.A. 621 Research and Reporting (3)
   - B.A. 622 Policy Formulation (3)
   - B.A. 623 Entrepreneurship (3)

4. Complete at least nine units of approved electives.

5. Complete a minimum of 30 units of business administration courses taken in a business administration program.

Transcripts and test scores must be on file at San Diego State University sufficiently in advance of the registered date of registration for a decision to be made. Details concerning the GMAT may be obtained from the Test Office, San Diego State University.
pass a comprehensive examination in their last semester of course work in lieu of the thesis (Plan B).

Concentrations available:

Accounting
Finance
Human Resources Administration
Information Systems
Insurance
International Business
Management
Management Science
Marketing
Production and Operations Management
Real Estate

b. Electives: At least three units in course work outside the concentration.

The distribution of the 18 units between concentration and electives, and the specific courses in each category, are to be determined by the student and graduate advisor in consultation.

4. Electives, if needed, to total at least 30 units.

5. Not more than a total of six units in courses 797, Research, and 798, Special Study, combined, will be accepted for credit toward the degree.

6. For regulations concerning grade point averages, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled "Basic Requirements for the Master's Degree," in Part Three of this bulletin.

MASTER OF SCIENCE DEGREE IN BUSINESS ADMINISTRATION

ADMISSION TO THE DEGREE CURRICULUM

In addition to meeting the requirements for classified graduate standing in the University and admission to the School of Business Administration, as described above, and in Part Three of this bulletin, the student must have satisfactorily completed the following courses or their equivalents before enrolling in 600- and 700-numbered courses listed on the official master's degree program:

B.A. 210A-210B, Principles of Accounting (4)
B.A. 140, Business Law (3)
B.A. 180, Information Processing and Computer Programming (3)
Econ. 120-121, Principles of Economics (6)
Econ. 142, Statistical Methods, or Math. 119, Elementary Statistics (3)
B.A. 301, Quantitative Analysis for Business, or B.A. 302, Quantitative Methods (3)
B.A. 323, Fundamentals of Finance (3)
B.A. 350, Fundamentals of Management (3)
B.A. 370, Marketing Principles (3)

Satisfactory completion means that the student's grade in each course must be "C" or better and that the course must have been completed within ten years prior to the first request satisfactory completion of additional prerequisite courses in the student's proposed field of concentration.

Notice of admission to a curriculum with classified graduate standing will be sent to the student by the Graduate Division Office only upon the recommendation of the Dean of the School of Business Administration.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

In addition to meeting the requirements for classified graduate standing as described above and the general requirements for master's degrees as described in Part Three of this bulletin, the student must complete a graduate program of 30 approved units including at least 21 units in 600- and 700-numbered courses in Business Administration.

799A, Thesis, is required. Business Administration 616, Managerial Economics, is required unless the student has completed sufficient advanced economics courses as a part of his undergraduate preparation. At least 24 units must be in business administration and economics. Not more than a total of six units in courses 797, Research, and 798, Special Study, may be accepted for credit toward the degree.

The following concentrations are available:

1. Accounting
2. Finance
3. Human Resources Administration
4. Information Systems
5. Insurance
6. International Business

For regulations concerning grade point averages, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled "Basic Requirements for the Master's Degree," in Part Three of this bulletin.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate nonteaching assistantships in business administration are available to a limited number of qualified students. Application blanks are available from the Dean of the School of Business Administration and additional information may be secured from the Dean.

FACULTY
COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN BUSINESS ADMINISTRATION

GRADUATE COURSES

Classified graduate standing is a prerequisite for all 600- and 700-numbered courses.

600. (200) Financial Accounting (3)
Basic concepts and principles of financial accounting; accounting as a data processing system; measurement of business income; financial statements.

601. (201A) Organization Theory (3)
The business organization viewed as a system. Development of organization theory, functions and structure of organizations, control and adaptation, interaction of systems levels and organizational values.

602. (202A) Quantitative Methods I (3)
Measure of central tendency and variation. Sampling and various statistical tests such as analysis of variance, F, t, and X² tests. Simple and multiple correlation.

604. (204) Law for Business Executives (3)
Development, significance, and interrelationships of law and business. Analysis of essential aspects of law pertaining to business including materials from the law of contracts, sales, agency, business organizations, property, negotiable instruments, secured transactions, effects of government regulation of labor and business.

605. (205) Marketing (3)
The marketing activities of a firm in relation to management and society. Application of economic theory to marketing institutions and functions. Not open to students with credit for Business Administration 370.

609. (209) Computer Programming and Systems Analysis (3)
Prerequisite: Business Administration 602.
Fundamentals of computer programming-oriented computer language, flow-charting, logic and techniques, analysis of the synthesis of computer-based systems.

610. (210) Managerial Accounting (3)
Prerequisite: Business Administration 600. Accounting in relation to the decision-making process; various cost systems, relevancy of various cost concepts: direct costing, flexible budgets, distribution costing, capital budgeting; and other techniques of management planning and control.

611. (211) Behavior in Organizations (3)
Prerequisite: Business Administration 601.
Nature of the human resource in organizations. Analysis of organizational systems and managerial actions to direct and control human behavior.

612. (212) Quantitative Methods II (3)
Prerequisite: Business Administration 602.
The design of statistical experiments and various operations research techniques such as simulation, linear programming, queuing theory, and Markov chain analysis.

615. (215) Financial Principles and Policies (3)
Prerequisite: Business Administration 600.
Finance and financial institutions as they relate to the firm and the flow of funds. Emphasis on the supply of and demand for capital, principles and tools of business finance; money and capital markets.

616. (216) Managerial Economics (3)
Prerequisite: Economics 603.
Role of economic theory in management analysis and decision. Study of demand, cost, and supply theories from a business viewpoint.

620. (220) Research and Reporting (3)
Prerequisite: Business Administration 612.
Principles of research design and data accumulation. The analysis and effective presentation of data related to business and industry.

625. (225) Seminar in Business Education (3)
Study of some phase of business education, such as administration and supervision, distributive and basic business education; trends and methods of teaching shorthand and typewriting.

630. (230) Theory and Analysis of Financial Statements (3)
Prerequisite: Business Administration 600.
The theories, principles, and concepts underlying financial statements; measurement and presentation of enterprise resources, equities, and income in accordance with generally accepted accounting principles; consideration of price level problems.

632. (232) Advanced Accounting (3)
Prerequisite: Business Administration 630.
Principles and concepts related to the measurement, determination, and objectives of fund accounting; specialized reporting for partnership, corporation, income distribution, and liquidation.

633. (233) Income Tax Accounting (3)
Prerequisite: Business Administration 600.
Provisions of the federal tax law, including interpretation of income tax law and current tax returns, refunds, and other administrative practices.

634. (234) Auditing (3)
Prerequisite: Business Administration 632.
Critical analysis of the application of auditing principles in verification of financial statements; review of AICPA and SEC bulletins and regulations; consideration of reports, procedures, sampling techniques, and report writing; trends and developments in auditing profession.

637. (237) Seminar in Accounting Information Systems (3)
Prerequisites: Business Administration 610 and 612.
The marketing activities of a firm in relation to management and society. Application of economic theory to marketing institutions and functions. Not open to students with credit for Business Administration 370.

638. (238) Seminar in Managerial Accounting (3)
Prerequisite: Business Administration 610.
Managerial cost accounting concepts and procedures, including budgetary planning, managerial control, advisory functions, measurement of divisional profitability, product pricing, and investment decisions.

639. (239) Seminar in Accounting Theory (3)
Prerequisite: Business Administration 632.
Historical development of accounting principles and theory; problems in valuation, income determination, and statement presentation.

650. (250) Seminar in Business Finance (3)
Prerequisite: Business Administration 615.
Application of principles of finance to current problems in financial management; discussion of financial accounting concepts and procedures, including budgetary planning, managerial control, advisory functions, measurement of divisional profitability, product pricing, and investment decisions.

651. (251) Seminar in Investments (3)
Prerequisite: Business Administration 615.
Principles of finance from an investment point of view: historical and current developments affecting investment values; sources of information; techniques of analysis; measurement of risks, returns, and investment values.

652. (252) Seminar in Security Analysis and Portfolio Management (3)
Prerequisites: Business Administration 609 and 615.
Security analysis; portfolio management; risk measurement; and price forecasting.

653. (253) Seminar in Quantitative Analysis for Financial Decisions (3)
Prerequisites: Business Administration 609, 612 and 615.
Quantitative techniques and the computer as employed to solve decision problems; application of techniques to the business firm.

654. (254) Seminar in International Business Finance (3)
Prerequisite: Business Administration 613.
International finance applied to the business firm.
742. (238) Computer Applications in Operations Research (3)
Prerequisite: Business Administration 740.
The study of consumer behavior in relation to marketing strategy and the changing
informatics; micromotion analysis; time standards and determination; performance
evaluation; factors affecting behavior; and determinants of consumer behavior.

743. (239A) Seminar in Management Science: Theory (3)
Prerequisite: Business Administration 740.
Examination of recent developments in management science; operations research theory and methodology.

744. (239B) Seminar in Management Science: Application (3)
Prerequisite: Business Administration 740.
Quantitative techniques for managerial planning and decision making. Applications of
operations research and other concepts to industrial situations.

745. (287) Quantitative Forecasting and Planning (3)
Prerequisite: Business Administration 740 or 741.
Mathematical approach to intermediate and long-range forecasting of economic and
technological variables which affect the firm. Development of solution algorithms and
heuristic procedures for solution of dynamic planning problems.

746. Applied Multivariate Statistics for Business (3)
Prerequisite: Business Administration 612.
Applications of various multivariate techniques such as factor analysis, multiple
regression, judgment analysis, hierarchical grouping, multiple discriminant analysis,
multivariate analysis variance, and canonical correlation.

749. Seminar in Applied Behavioral Measurement (3)
Prerequisite: Business Administration 605.
Measurement procedures useful in analyzing such areas as leadership, job
satisfaction, attitudes, motivation, etc. Development and use of scaling strategies
including Likert, Thurstone, Guttman, paired-comparison, forced-choice, semantic-
differential, and review of existing instruments used in business-related settings.

750. Production and Operations Management (3)
Prerequisite: Business Administration 612.
Theory, concepts and decision analysis related to effective utilization of major factors
of production in manufacturing and service industries. Utilizes the system approach to
not open to students who have credit for a course in production management.

751. Methods Engineering and Job Design (3)
Prerequisite: Business Administration 750.
Use of industrial engineering for management decisions—job simplification and
motion economy; micromotion analysis; time standards and determination; performance
evaluation; factors affecting behavior; and determinants of consumer behavior.

752. Quality Control (3)
Prerequisite: Business Administration 750.
Statistical techniques for controlling quality, reliability, and maintainability; types of
control and limit charts.

753. Operations Planning and Control Systems (3)
Prerequisite: Business Administration 750.
Analysis and design of single- and multiple-product integrated production and
inventory control systems. Combined detailed and aggregate planning of operations with
deterministic or stochastic demand over finite and infinite horizon.

754. Seminar in Production and Operations Management (3)
Prerequisite: Business Administration 750.
Case studies of selected industries emphasizing integration of the manufacturing and
operations functions with the major goals of the organization.

755. Seminar in Consumer Behavior (3)
Prerequisite: Business Administration 605.
The study of consumer behavior in relation to marketing strategy and the changing
environment of business.
CHEMISTRY

GENERAL INFORMATION

The Department of Chemistry, in the College of Sciences, in cooperation with the Department of Chemistry, University of California, San Diego, offers a program of graduate study leading to the Doctor of Philosophy degree in Chemistry. This degree is awarded jointly by the Board of Regents of the University of California and the Board of Trustees of the California State University and Colleges in the names of the University of California, San Diego, and San Diego State University.

Graduate programs leading to the Master of Arts degree in Chemistry and the Master of Science degree in Chemistry are also offered.

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 study is based on a sound undergraduate foundation.

The Department is well equipped for the active research program which is being carried on. Major pieces of equipment include a JEOL Model JNM-PS-100 NMR Spectrometer with Fourier Transform capability, a Hitachi RMU-6E Mass Spectrometer, Cary Model 14 and 16 spectrophotometers, a Giford Spectrophotometer, a Microwave Spectrometer, a Perkin-Elmer 621 I.R. Spectrophotometer, a Varian E-3 LSR Spectrometer, the facilities, a laser-Ash Laser Raman Spectrometer, a variety of chromatographic equipment, several high temperature calorimeters, a high voltage electrophoresis apparatus, a pulsed ND:glass laser system and optical multichannel analyzer, ultra and refrigerated centrifuges, a Durrum Stopped-Flow Spectrophotometer System interfaced with a Varian computer and a variety of radiation counters including a liquid scintillation counter. Also available on campus are IBM 360 and 1130 computer facilities. Areas of research under active investigation and available for student participation include analytical chemistry, biochemistry, inorganic chemistry, organic chemistry and physical chemistry.

SECTION I. MASTER'S DEGREE PROGRAMS

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, classified standing may be subject to satisfactory performance on orientation examinations which are administered by the Department of Chemistry. The student with a major in chemistry from another accredited institution should have met all requirements for certification of the baccalaureate degree by the American Chemical Society (statement available on request).

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Three of this bulletin. In addition, the student must pass an orientation examination in chemistry. This examination should be taken during the first semester in residence.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must satisfy the following requirements for the Master of Arts degree in Chemistry: a student must complete a graduate program which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses. Subject to excluding Chemistry 790, 797 and 798. Chemistry 711 and 791 are required. Subject to departmental approval, the student may elect Plan A with the thesis (in which case the thesis must include Chemistry 792 and 799A), or Plan B with the comprehensive examination in lieu of the thesis. A student electing Plan A must pass a final oral examination on his thesis.
SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin. He must also complete a graduate program which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses, excluding Chemistry 792, 797 and 798. Chemistry 711, 792, 791 and 794A are required. A student must pass a final oral examination on his thesis and must demonstrate a reading knowledge of scientific German or Russian. The foreign language requirement will be considered to have been met by the student who holds the American Chemical Society Certificate.

SECTION II. JOINT DOCTORAL PROGRAM

The cooperating faculties of the Departments of Chemistry at the University of California, San Diego and at San Diego State University possess complementary specialties that enable the doctoral student to gain familiarity with most areas in chemistry and to find research activity and direction in a great variety of specific problems.

In order that he may participate effectively in this program, the entering student will be required to have a mastery of the subjects usually presented in the undergraduate curriculum: physical, organic, analytical, and inorganic chemistry. All applicants will be expected to present the equivalent of one year of physics and of mathematics at least through integral calculus. Students should be prepared to take placement examinations which will be administered by a joint committee and will cover the fields of analytical, inorganic, organic and physical chemistry, and mathematics.

On admission to the program, the student is guided by Requirements for the Doctoral Degree Program given in Part Three of this Bulletin. The student will normally spend his first year in the program completing his year of residency at the University of California, San Diego. It is desirable for the student to complete his qualifying examination by the end of his fifth semester and to be advanced to candidacy.

STAFF

The following faculty members of the Departments of Chemistry of the cooperating institutions participate in the joint doctoral program being available for direction of research and as departmental members of Joint Doctoral Committees.

University of California, San Diego:

Graduate Adviser: J. R. Arnold; Alternate: J. E. Mayer
Staff: Arnold, Kamen, Kraut, Mayer, Miller, Perrin, Schrauzer, Traylor, Urey, Vold, Zimm

San Diego State University:

Graduate Adviser: R. W. Isensee; Alternate: E. P. Wadsworth
Staff: Abbott, Bennett, Grubbs, Jensen, Jones, O'Neal, Richardson, Ring, Sharts, Stewart

ASSISTANTSHIPS

Graduate teaching assistantships and graduate nonteaching assistantships in chemistry are available to a limited number of qualified students. Application blanks and additional information may be secured from the Graduate Adviser in the Department of Chemistry.

FACULTY

Chairman, Department of Chemistry: T. P. Wadsworth, Jr.
Graduate Adviser: R. W. Isensee
Credentisl Adviser: J. G. Malik
Professors: Abbott, Bennett, Cobble, Golding, Grubbs, Harrington, Hellberg, Isensee, Jensen, Jones, Landis, Malik, Mathewson, O'Neal, Richardson, Ring, Roeder, Sharts, Spangler, Stewart, Wadsworth, Walba, Woodson
Associate Professors: Coffey, Malley, Wadsworth, Jr.
Assistant Professor: Dahms

COURSES ACCEPTABLE ON ADVANCED DEGREE PROGRAMS IN CHEMISTRY

UPPER DIVISION COURSES

500A-500B. (160A-160B) Principles of Chemical Engineering (3-3)
501. (180) Chemical Oceanography (3)
502. (191) Chemical Literature (1)
510. (178) Advanced Physical Chemistry (3)
520A. (127A) Inorganic Chemistry (3)
520B. (127B) Inorganic Chemistry (3)
530. (138) Theoretical Organic Chemistry (3)
537. (154) Organic Qualitative Analysis (3)
550. (155) Advanced Instrumental Methods (2)
560A-560B. (176A-176B) General Biochemistry (3-3)
577. (170) Radiochemical Analysis (4)

GRADUATE COURSES

710. (210) Advanced Topics in Physical Chemistry (1-3)
Prerequisite: Consent of instructor
Selected topics in physical chemistry. Maximum credit six units applicable on a master's degree.

711. (211) Chemical Thermodynamics (3)
Prerequisite: Chemistry 410B
Chemical thermodynamics and an introduction to statistical thermodynamics.

712. (212) Chemical Kinetics (3)
Prerequisite: Chemistry 410B
Theory of rate processes; applications of kinetics to the study of reaction mechanisms.

713. (213) Quantum Chemistry (3)
Prerequisite: Chemistry 410B
Quantum mechanics of atomic and molecular systems; applications to chemical bonding theory.

714. (214) Molecular Structure (3)
Prerequisite: Chemistry 410B
Theory and techniques used in the determination of molecular structure.

720. (220) Advanced Topics in Inorganic Chemistry (1-3)
Prerequisite: Chemistry 520A
Maximum credit six units applicable on a selected topics in inorganic chemistry. Maximum credit six units applicable on a selected topics in inorganic chemistry.

721. (221) Mechanisms of Inorganic Reactions (3)
Prerequisite: Chemistry 520A
Mechanisms in inorganic reactions with an emphasis on coordination chemistry.

722. (222) Chemistry of the Nonmetals (3)
Prerequisite: Chemistry 520A
An advanced systematic study of the nonmetallic elements and their compounds.

730. (230) Advanced Topics in Organic Chemistry (1-3)
Prerequisite: Chemistry 520A
Maximum credit six units applicable on a selected topics in organic chemistry. Maximum credit six units applicable on a selected topics in organic chemistry.

731. (231) Mechanisms of Organic Reaction (3)
Prerequisites: Chemistry 410B and 431
Reactivity and mechanism in organic reactions.

732. (232) Advanced Organic Chemistry (3)
Prerequisite: Chemistry 431
Applications and limitations of organic reactions from the viewpoint of synthesis.
CANDIDACY. A Y constituted dissertation committee, when the student must be selected. To use the facilities and resources of the university, approval by the dissertation committee is required. Preparation of the dissertation committee and advancement to candidacy. Preparation of the dissertation for the doctoral degree.

DRAMA

GENERAL INFORMATION

The Department of Drama, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Drama. The department offers advanced study in the various areas of drama as they relate to acting, directing, playwriting, scene design, lighting, children's theatre, and costume and makeup. The center for graduate study in the various areas of drama as they relate to acting, directing, playwriting, scene design, lighting, children's theatre, and costume and makeup. The center for graduate study in the various areas of drama as they relate to acting, directing, playwriting, scene design, lighting, children's theatre, and costume and makeup. The center for graduate study in the various areas of drama as they relate to acting, directing, playwriting, scene design, lighting, children's theatre, and costume and makeup. 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The center for graduate study in the various areas of drama as they relate to acting, directing, playwriting, scene design, lighting, children's theatre, and costume and makeup. The center for graduate study in the various areas of drama as they relate to acting, direct
460. (200.) Research and Bibliography (3)
Basic reference works, scholarly and critical journals; introduction to bibliographical
methods; exercises and problems in methods and exposition of research as it relates to
the various areas of speech. Recommended for first semester of graduate work, and
prerequisite to advancement to candidacy.

635. (235.) Seminar in Children's Theatre (3)
Prerequisites: Drama 310 and 315.
Modern developments and trends in children's theatre in educational, civic, and
professional programs in the United States and England.

643. (243.) Seminar in Staging Practices for Theatre and Television (3)
An investigation of the recent developments of modern staging facilities. The
application of technological advances and electromechanical devices to the scenic arts
for theatre and television.

644. (244.) Seminar in Stage Direction (3)
Prerequisite: Drama 557.
Projects in the aesthetic principles and the practices of stage direction with an
emphasis on styles and historic periods.

645. (245.) Seminar in Lighting for Stage and Television (3)
Prerequisite: Drama 545A or 545B.
Projects concerned with the aesthetic and technical problems of stage lighting.

646. (246.) Seminar in Design for Stage and Television (3)
The principles of design in the theatre with an emphasis on the historical
development of theatrical costume or scenic environment. The investigation of recent
tendencies in styles and their evolution. Each section may be taken once for credit.
A. Costume Design
Prerequisite: Drama 552A or 552B.
B. Scenery Design
Prerequisite: Drama 5408 or 548.

647. (247.) Seminar in History of Theatre and Drama (3)
Prerequisites: Drama 520, 560A, and 560B.
A. British and Continental Theatre
B. American Theatre

648. (248.) Seminar in Dramatic Theory (3)
Prerequisites: Drama 520, 560A, 560B, and 600.
Problems in producing works of such playwrights as Ibsen, Strindberg, Chekhov,
Shaw. Maximum credit six units applicable on a master's degree.

798. (298) Special Study (1-3) Cr/NC
Individual study. Maximum credit six units applicable on a master's degree.
Prerequisite: Consent of staff; to be arranged with department chairman and
instructor.

799A. (299) Thesis or Project (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to
candidacy.
Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course
Registration in which the student expects to use the facilities and resources of the university;
also student must be registered in the course when the completed thesis is granted final
approval.

# Not more than 3 units of Drama 598 are acceptable on master's degree programs in drama.
ECONOMICS

GENERAL INFORMATION

The Department of Economics, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Economics. For graduate study in connection with the Master of Arts degree in Social Science, refer to the section of this bulletin under Social Science. Research activities provided by the Department of Economics include the Economics Research Center, the Institute of Labor Economics, the Center for Public Economics, and the Center for Research in Economic Development.

ADMISSION TO GRADUATE STUDY

All persons applying for graduate study in economics must have graduate record verbal and quantitative test scores sent to the Graduate Division, and have three letters of recommendation sent to the Department of Economics. General requirements for admission to the University with classified graduate standing are described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Economics must have completed at least 18 units of upper division courses in economics including Economics 447, and either 320 and 321 or 324 and 325, or their equivalents, and six units of upper division courses in economics or related fields as approved by the graduate advisor.

A student with a bachelor's degree in a field other than economics who has completed the core courses, Economics 320 and 321 or 324 and 325 and Economics 447, or their equivalents, may, with the consent of the Department of Economics, offer more than six upper division units in fields other than economics as part of this undergraduate preparation for admission to classified graduate standing.

ADVANCEMENT TO CANDIDACY

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

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of at least 24 units in economics, of which at least 21 units must be in 600- and 700-numbered courses in economics. Economics 620, 621, 541, and either 799A, for Plan A, or 799, for Plan B, are required courses; the remaining unit requirements may be selected from courses in economics listed below or by petition to the Department Graduate Study Committee, from 500-, 600- and 700-numbered courses offered by other departments of the college. Written comprehensive examinations in micro and macro theory and two additional fields are required, but a grade of B or better can be substituted for the comprehensive exams, on a graduate course-by-course basis.

ASSISTANTSHIPS

Graduate assistantships in economics are available to a limited number of qualified students. Application blanks and further information may be obtained from the Chairman of the Department of Economics.

FACULTY

Chairman, Department of Economics: F. D. Sebold
Graduate Advisers: G. K. Anderson, A. Gifford, M. Parii, I. Poroy, F. D. Sebold, D. Steward, Y. Venieris
Professors: Anderson, Bahillot, Barckley, Bridenstine, Flagg, Gifford, Jencs, Teasure, Madhavan, Neuner, Poroy, Turner, Venieris
Associate Professors: Clement, Hambleton, Hardesty, Kartman, Nam, Popp, Sebold
Assistant Professors: Holt, Stewart

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ECONOMICS

UPPER DIVISION COURSES

502. (132.) Public Economics (3)
505. (105.) Welfare Economics (3)
520. (109.) Advanced Economic Theory (3)
524. (194.) Capital and Growth Theory (3)
541. (141.) Econometrics (3)
559. (139.) Location Theory (3)
561. (191.) International Trade Theory (3)
592. (152.) International Monetary Theory and Policy (3)

GRADUATE COURSES

603. (203.) Economic Analysis (3)
Prerequisite: Classified graduate standing.

606. (206.) The Public Economy (3)
Prerequisites: Economics 401 or Public Administration 550.

611. (210A.) Seminar in the Development of Economic Thought (3)
Prerequisite: Twelve units in economics.

620. (208B.) Seminar in Advanced Economic Theory (3)
Prerequisites: Economics 320 and 321, or 324 and 325, and 447.

621. (208A.) Seminar in Advanced Economic Theory (3)
Prerequisites: Economics 320 and 321, or 324 and 325, and 447.

630. (202.) Seminar in Comparative Economic Systems (3)
Prerequisite: Economics 330 or 465 or 468.

635. (210.) Seminar in Economic History (3)
Prerequisites: Economics 335 or 338A or 338B.

660. (292.) Seminar in International Economics (3)
Prerequisite: Economics 360 or 561.

665. (295.) Seminar in the Economics of Underdeveloped Countries (3)
Prerequisite: Economics 365.

701. (231.) Seminar in Public Finance (3)
Prerequisite: Economics 401.

Advanced study of public finance problems and literature; research.
728. (208) Development Planning (3)
Prerequisite: Economics 365.

741. (247) Seminar in Econometrics (3)
Prerequisite: Economics 345.
The construction of large economic models. Identification, causal ordering and estimation. Simultaneous-equation techniques and other selected topics.

756. (238) Seminar in Urban and Regional Economics (3)
Prerequisite: Economics 458.
Urban and regional economics: individual research and reports.

774. (274) Seminar in Economic Concentration and Monopoly Power (3)
Prerequisites: Economics 321 (325) and 376, or 474.
Selected topics in the field of economic concentration and monopoly.

777. (272) Seminar in Utilities and Water Resources (3)
Prerequisites: Economics 453 or 477.
Advanced study and group discussion of selected topics in utility economics and regulation, and the economics of water resource development.

783. (253) Comparative Labor Seminar (3)
Prerequisite: Economics 380 or 483.
Research in comparative labor problems, including problems of labor and social legislation, medical economics, poverty problems, labor force structural problems, and international labor movements.

790. (235) Seminar in Monetary Economics (3)
Prerequisite: Economics 490.
Analysis of the critical issues associated with the demand for money, the money supply and process of money creation. Emphasis upon interaction of monetary and real factors in domestic-international money and financial markets.

796. (290) Bibliography (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's thesis.

797. (297) Research (3) Cr/NC
Prerequisites: Classified graduate standing and consent of instructor. Independent research project in an area of economics.

798. (298) Special Study (1-3) Cr/NC
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study. Maximum credit six units.

799A. (299) Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

EDUCATION

GENERAL INFORMATION

The School of Education offers graduate study leading to the Master of Arts degree in Education with concentrations in the following: educational technology and library science, elementary curriculum and instruction, secondary curriculum and instruction, administration, supervision, special education, educational research, and multicultural education. Some of these concentrations are designed to permit concurrent completion of the requirements for the correspondingly named advanced credentials.

Graduate study is also offered leading to the degree, Master of Science in Counseling.

MASTER OF ARTS DEGREE IN EDUCATION

ADMISSION TO GRADUATE STUDY

The student must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, the student must have completed a minimum of 12 units in professional education courses, and he may either be admitted to the program of teacher education or hold a valid California credential, other than an emergency or provisional credential, before he will be recommended by the school for classified graduate standing.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE IN EDUCATION

In addition to meeting the requirements for admission to the University with classified graduate standing and the credential requirements as applicable, the student must satisfy the basic requirements for the master's degree described in Part Three of this bulletin. In addition, the student must complete a minimum of 18 units in one of the concentrations in education. Education 690 and either Education 799A or Education 795A-795B are required courses. 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. See below for further information regarding each of the concentrations.

ADVANCEMENT TO CANDIDACY

A student desiring a Master of Arts degree in Education with a concentration in educational technology and library science, elementary curriculum and instruction, or secondary curriculum and instruction may be advanced to candidacy upon completion of the basic requirements as described in Part Three of this bulletin, section on master's degree. A student desiring a concentration in administration, supervision, or multicultural education must, in addition to the above, meet specific requirements for admission to the appropriate advanced credential program. A student desiring a master's degree concentration in special education must also meet specific admission requirements. For further information, refer to the School of Education, Office of Graduate Programs, Room 179.

The Comprehensive Examination

This examination, designed to evaluate the student's achievement in the specific area of his concentration, is required of all candidates for the master's degree in Education. A student is eligible to take the comprehensive examination only if he has been advanced to candidacy.

The examination is offered near the mid-point of each semester. Reservation must be made at least one week in advance of the examination. For information on exact dates, and for reservation, check with the Office of Graduate Programs, School of Education, Room 179.

SELECTION OF PLAN A OR PLAN B

In general, applicants will be programmed 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 adviser for it. Requests for transfer to Plan A must
be prepared as an official change in program for the master's degree and countersigned by the faculty adviser and then submitted to the Office of Graduate Programs in the School of Education.

In general, Plan A is designed for students who have a particular research problem they wish to investigate in some detail. Plan B provides students the opportunity (1) to have two experiences of a writing and research nature, (2) to participate actively in the research projects of the other members of the seminar, and (3) to subject their own research to critical evaluation by the other seminar members. 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 at least as demanding as the thesis with respect to the difficulty and quantity of work required.

**Course Requirements**

Note: Students are requested to consult with the appropriate master's degree adviser prior to taking any course work leading to the master's degree. Students are urged to take Education 690 (3 units) as early as possible in their first graduate year.

**CONCENTRATIONS**

**Administration and Supervision**

The Master of Arts degree in Education with a concentration in school administration and supervision is designed to provide increased knowledge and skill for the prospective administrator or supervisor. The basic program is intended for those teachers who wish to become assistant principals, principals, supervisors, assistant superintendents and superintendents, and is coordinated with the requirements for the Administrative Services Credential (Ryan Act). For those who complete the program prior to September 15, 1976, it is also possible to qualify to complete the program prior to obtaining the Administrative Services Credential (Fisher Act).

The requirements for an Administrative Services Credential are as follows:

1. Possession of a valid California teaching credential for service in elementary or secondary schools.
2. Development of specified competencies as evidenced by successful completion of course work outlined below.
3. Possession of a master's degree. (Does not need to be in educational administration.)
4. Three years of teaching or counseling experience in elementary or secondary schools.
5. Passage of the National Teacher's Examination, Common Knowledge Section (English; social studies, literature, and fine arts; and science and mathematics) at a satisfactory level or completion of the diversified (liberal studies) major specified for an elementary teaching credential.

Those students with special interests not requiring an administrative credential, such as private school administration, department chairmen, team leaders or school business administration, are invited to seek counsel from the Coordinator of the Department of Educational Administration concerning a program which can vary from the one listed below:

1. **Prerequisite:** Possession of a valid teaching credential for service in elementary or secondary schools and teaching experience.
2. **Education 690**: Procedures of Investigation and Report (3 units).
3. **The Administrative Core Program (12 units):**
   - Educ. Admin. 600, Principles of School Administration
   - Educ. Admin. 610, Education Leadership
   - Elem. Educ. 610, Curriculum Construction and Evaluation in Elementary Education (elementary candidates)
   - or
   - Secondary Educ. 610, Curriculum Problems in Secondary Education (secondary candidates)
4. **Advanced Seminars and Field Work (9 units):**
   - Note: Advanced seminars require that the student has been fully admitted to the Department of Educational Administration. For further information about the admission process, the student is referred to the Office of Graduate Programs, School of Education, Room 179.
   - **a. Elementary Specialization**
     - Educ. Admin. 640A-640B-640C, Seminars in Elementary School Administration and Supervision
     - Educ. Admin. 660A-660B-660C, Field Experience in Elementary School Administration and Supervision
   - **b. Secondary Specialization**
5. **Research (3-6 units):** Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).
6. **Electives (0-3 units) selected with the approval of the adviser.**

Advanced seminars require admission to the program of administration and supervision, Department of Administration and Supervision. For further information the student is referred to the Office of Graduate Programs, School of Education, Room 179.

**Educational Research**

The Master of Arts degree in Education with a concentration in educational research is designed to prepare students having a basic background in education to conduct measurement, research, and evaluation activities at a professional level. Emphasis is upon preparation for research activities at the school district level.

1. **Prerequisite:** A basic background in education (a minimum of 12 units of professional education including at least one course in tests and measurement.
2. **Education 690**: Procedures of Investigation and Report (3 units).
3. **Core program (9 units):**
4. **Electives (15 units) selected with adviser's approval.**
5. **Education 799A, Thesis (3 units).**

**Educational Technology and Librarianship**

The Master of Arts degree in Education with a concentration in educational technology and librarianship is designed for persons seeking a career in administration of school library media centers, or administration of instructional materials design and production; and for the classroom teacher or training director interested in increasing his effectiveness. For those interested in administration of school library media centers, the degree program is generally taken in conjunction with work towards specialized preparation in school librarianship. Those students who plan to seek employment as school librarians or specialists must hold a valid teaching credential. For further information see the Coordinator of Educational Technology and Librarianship. Course requirements follow:

1. **Prerequisite:** Varies with the career goal of the student—see adviser.
2. **Education 690**: Procedures of Investigation and Report (3 units).
3. **Core program (15 units):**
   - **The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests and goals. A minimum of nine units must be taken in courses at the 600 and 700 level.**
4. **Electives (6-9 units) selected with the approval of the adviser.**
5. **Research (3-6 units):** Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).
Elementary Curriculum and Instruction

The Master of Arts degree in Education with a concentration 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, either generally or in selected areas of specialization. Course requirements are as follows:

1. Prerequisite: A 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 690, Procedures of Investigation and Report (3 units).
3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests, goals and his needs as evidenced by results on the qualifying examination. A minimum of nine units of education shall be taken in courses at the 600 and 700 level.
4. Electives (6-9 units) selected with the approval of the adviser.
5. Special Study and Research (3-6 units): Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).

Multicultural Education

The Master of Arts degree in Education with a concentration in multicultural education is designed to provide specialized and advanced skills in dealing with bilingual/cross-cultural school and community situations. Students select one of four culture areas in which to specialize: Afro-American, Asian-American, Mexican-American, or Native American.

1. Prerequisites:
   a. A basic background in education (8A or teaching credential or certificate).
   b. Experience in the selected culture. (In the Mexican-American specialization, this means proficiency in Spanish.)
2. Education 690, Procedures of Investigation and Report (3 units).
3. Multicultural education core program (12 units):
   a. Education 550, Philosophy of Cultural Pluralism in Education.
650, Bilingual/Cross-Cultural Curriculum Development.
651, Bilingual/Cross-Cultural Teaching Strategies.
4. Education courses (6 units) selected with adviser's approval.
5. Electives (3-6 units) selected from academic disciplines or ethnic studies with approval of adviser.
6. Research (3-6 units): Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).

Secondary Curriculum and Instruction

The Master of Arts degree in Education with a concentration in secondary curriculum and instruction is designed to assist the applicant in improving performance in his roles as a classroom teacher. Twelve units in basic education courses are prerequisite to the program. Course requirements are as follows:

1. Education 690, Procedures of Investigation and Report (3 units).
2. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests, goals and his needs as evidenced by results on the qualifying examination. A minimum of nine units of education must be taken in courses at the 600 and 700 level.
3. Electives (6-9 units) selected with the approval of the adviser.
4. Research (3-6 units): Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).

Special Education

The Master of Arts degree in Education with a concentration in special education is designed to assist the applicant in improving performance in his roles as a classroom teacher. Individuals designed programs have as goals increased knowledge and skill in the areas of the gifted, educationally handicapped, and mentally retarded. With advisor's approval, in this 30-unit program, up to 12 units (Plan B) or up to 15 units (Plan A) of electives may be chosen from courses in the elementary, secondary and special education departments, and related academic departments.

1. Prerequisite: A basic background in education (minimum of 12 units) to include such courses as curriculum and methods, educational psychology, growth and development, and history and philosophy of education.
2. Education 690, Procedures of Investigation and Report (3 units).
3. Core program (9 units) to include: Education 660, Advanced Educational Psychology, Special Education 670, Seminar in Education of Exceptional Children; and a 600- or 700-level education course in area of specialization.
4. Electives selected with advisor's approval.
5. Additional required courses (3-6 units): Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).

MASTER OF SCIENCE IN COUNSELING DEGREE

APPLICATION FOR ADMISSION

In seeking admission to the program leading to the Master of Science in Counseling degree, or work in rehabilitation counseling, the student should write directly to Dr. John D. Chamley, Chairman, Department of Counselor Education, or Dr. Fred R. McFarlane, Director of Rehabilitation Counselor Program, requesting appropriate application and applications must be received by the Department of Counselor Education not later than March 31.

ADMISSION TOGRADUATE STUDY

A student seeking admission to the curriculum leading to the Master of Science in Counseling degree, or work in rehabilitation counseling, must meet the requirements for admission to the University with classified graduate standing, as stated in Part Three of this bulletin. Criteria for admission require that the student submit evidence in written form and through interviews demonstrating personal, professional, and academic adequacy for the Master of Science in counseling degree. Only students who show reasonable promise of success in counseling as a career will be admitted to this curriculum. In order to continue in the program the student must demonstrate on-going academic and personal growth. A student who has completed the program leading to the Master of Arts degree in Counseling degree will not be eligible for admission to the program leading to the Master of Science in Counseling degree.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

In addition to meeting the requirements for classified graduate standing, as described in Part Three of this bulletin, and for advancement to candidacy, the requirements must be met for the specific program in which the student is enrolled, as described below.
MASTER'S DEGREE IN ACADEMIC AREAS

Suggested Professional Education

For those candidates working toward a master's degree in an academic subject matter area as designated in Title 5, no formal courses are required; however, it is strongly suggested that graduate students enroll in the professional courses in teacher education in order to enhance employment possibilities, as most community colleges and teachers need. Further information is urged to consult with the Higher Education Programs Coordinator, Room 128, Education Building.

Most departments on the San Diego State University campus have developed education courses concurrently in as little as one year of full-time study. The courses in education are typically offered after 3 p.m. and in the evening each semester, and Education 664* and 680 are offered in Summer Session.

The following courses are suggested to enhance employment in the community college:

- Education 630, Professional Methods and Materials: Community College (2 units)
- Education 666, Educational Psychology: Community College (2 units)
- Education 680, The Community College (3 units)
- Education 700, Directed Teaching (4 units)

* Not required for psychology majors.

NOTE: Directed teaching can be accomplished only in a community college day assignment.

Masters of Arts Degree in Education

Curriculum and Instruction—Occupational Education

A Master of Arts in Education with a concentration in curriculum and instruction, specializing in occupational education, is offered in all of the community college occupational subject matter listed in Title 5, Section 5, #52210, except agricultural services and processing, animal production, cosmetology, and barbering, fire science, forestry, and law. With advisor's approval in this 30-unit program, up to 12 units of electives may be selected in the appropriate fields related to the major occupational field. Course requirements are as follows:

1. Prerequisites: 12 units of education courses, preferably Education 380, 381, 565, and 382 or Edc. Tech. and Librnm, 541.
2. Education 690, Procedures of Investigation and Report (3 units).
3. Core program (12 units): The core program is composed of courses in education and/or related fields selected with the approval of the advisor on the basis of the student's needs, interests and goals.
4. Research (3-6 units): Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).
5. Electives (6 units) selected with approval of the advisor.

Teaching Credentials

San Diego State University offers credential programs requiring at least one year of post-baccalaureate course work at the upper division or graduate level for the following credentials:

- The Standard Teaching Credential with a Specialization in Elementary Teaching
- The Standard Teaching Credential with a Specialization in Secondary Teaching
- The Standard Teaching Credential with a Specialization in Community College Teaching

In addition, graduate programs are offered for the following credentials:

- The Standard Designated Services Credential with a Specialization in Pupil Personnel Services (including the school psychologist and school psychologist endorsements)
- The Standard Designated Services Credential with a Specialization in Health
- The Standard Supervision Credential
- The Restricted Credential (Speech and Hearing Specialist)
A student who completes the prescribed programs for any of the above credentials will be recommended by the university to the Commission for Teacher Preparation and Licensing for the credential.

For information regarding admission to teacher education and requirements for these credentials, refer to the university General Catalog or contact the School of Education. The above credentials, authorized under the Fisher Bill, are available only to students who meet newly established special requirements. Complete information is available at the School of Education.

NEW CREDENTIALS

Assembly Bill 122 (Ryan Bill) has changed the credential structure in the State of California. Students not eligible for the credentials listed above must meet the requirements of the new credentials offered under Assembly Bill 122. Information on these new credentials is available in the offices of the several departments of the School of Education.

The Multiple Subjects Credential (elementary) and the Single Subject Credential (secondary) have been approved by the Commission for Teacher Preparation and Licensing.

In addition, the following specialist and administrative service credentials have been approved by the Commission:

- Specialist Credentials
  - Early Childhood
  - Bilingual/Cross-Cultural
  - Special Education
  - Reading

- Service Credentials
  - Administrative Services

The Librarian and Pupil Personnel Services Credential are being considered by the Commission at the present time and should be approved in the academic year 1975-76.

SCHOLARSHIPS

The following scholarships are available to graduate students in education:

- **San Diego Teachers Association.** Awarded to two students preparing for teaching. $100 each per year.
- **California Congress of Parents and Teachers, Inc.** Awarded to a fifth-year student in training for the General Secondary Credential. $400 per year.

FACULTY

Dean of the School of Education: T. A. Arciniega
Associate Dean for Academic Affairs: R. R. Nardelli
Assistant Dean, Program Planning, Budgeting and Scheduling: S. S. Blanc
Assistant to the Dean for Student Affairs: C. D. V. Becklund
Coordinator of Counselor Education: J. D. Chamley
Coordinator of Educational Administration: H. B. Holt
Coordinator of Educational Technology and Librarianship: E. W. Groff
Coordinator of Elementary Education: J. M. Kaatz
Coordinator of Secondary Education: D. A. Meek
Coordinator of Special Education: F. A. Ballantine
Coordinator of Higher Education Programs: R. D. Smith, Jr.
Coordinator of Graduate Programs in Education: To be named

Graduate Advisers:
- Counseling (Master of Arts): J. D. Chamley
- Counseling (Master of Science): J. D. Chamley
- Educational Research: L. A. Becklund
- Educational Technology and Librarianship: E. W. Groff
- Elementary Administration and Supervision: H. B. Holt
- Elementary Curriculum and Instruction: J. E. Inkeep

Secondary Administration and Supervision: H. B. Holt
Secondary Curriculum and Instruction: C. E. Fishburn
Special Education: F. A. Ballantine


Associate Professors: Becker, Bee, Berg, Botkin, Chamley, Clark, Cleveland, Doorlag, Duckworth, Elliott, Fearn, Farbly, Ford, Harrison, Halman, Howard, Kaatz, Mason, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, Mooers, Moreno, Morris, Murphy, Nagel, Peirson, McCabe, McLevy, Melton, Merino, 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Special Education

550. (170) Workshop in Special Education (2-4)
561. (176) Measurement and Evaluation in Special Education (4)
562. (162) Emotionally Disturbed Children and Youth (3)
563. (163) Curriculum and Methods for Teaching Emotionally Disturbed Children and Youth (3)
564. (164) Education of the Neurologically Handicapped (3)
567. (167) Exceptional Children (3)
568. (168) Curriculum and Methods for Teaching Mentally Retarded Children in the Elementary School (3)
569. (169) Curriculum and Methods for Teaching Mentally Retarded Children in the Secondary School (3)
572. (172) Counseling Exceptional Children (3)
573. (173) Education of the Severely Mentally Retarded (3)

GRADUATE COURSES

Students without classified graduate standing are not admitted to 600- and 700-numbered courses in Education.

Twelve units of professional education are prerequisite for enrollment in all graduate courses, except Education 630, 666, and 680, which require special clearance from the Coordinator of Higher Education Programs; and courses in Counselor Education.

Education

630. (251) Instructional Methods and Materials: Community College (2)
Prerequisite: Education 666 and concurrent registration in Education 700. The teaching process at the community college level, including lesson planning, utilization of audiovisual and other instructional materials, and procedures of evaluation.

650. Bilingual/Cross-Cultural Curriculum Development (3)
Prerequisite: Advanced to candidacy or teaching credential. Study of competency-based education techniques; development of skills in devising performance criteria and criterion-referenced tests in bilingual-bicultural cross-cultural situations; development of individualized instruction and program planning strategies.

651. Bilingual/Cross-Cultural Teaching Strategies (3)
Prerequisite: Advanced to candidacy or teaching credential. Examination of existing bilingual/cross-cultural teaching materials and skills in adapting these materials for instruction; emphasis on methodology for the bilingual/cross-cultural classroom.

660. (220) Advanced Educational Psychology (3)
Prerequisite: Elementary Education 362 or Secondary Education 411. Advanced study of the research in educational psychology and its application to learning and human growth.

661. (221) Seminar in Educational Measurement (3)
Problems in educational testing. Emphasis on construction, administration and validation of teacher-made tests.

666. (223) Educational Psychology: Community College (2)
Prerequisite: Credit or concurrent registration in Education 680. The nature of the community college student; the learning process, including contributions of audiovisual materials. The functions of student personnel services in the community college.

680. (201) The Community College (3)
Two lectures and three hours of activity. Overview of philosophy, history, aims, scope, function, outcomes, principles and problems of the community college. Relation of the community college to secondary and higher education.

682. (202) Social Foundations (2 or 3)
Prerequisite: Admission to teacher education. Sociological, historical, and philosophical foundations of American education and their influences on present-day educational practices.

683. (204) Comparative Education (3)
The contemporary educational ideas and practices of various countries of the world and their impact on our culture and education.

685. (206) Philosophy of Education (3)
Prerequisite: Education 383. Advanced study of philosophical backgrounds of educational thought; a study of comparative philosophies, and an analysis of selected current trends and problems.

686. (207) Educational Sociology (3)
Prerequisite: Education 383. A study of the social, economic, political and moral setting in which present-day American education functions.

687. (208) Workshop in Community Influences on Learning and Curriculum Planning (1-3)
Prerequisite: Teaching experience. 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. Maximum credit six units.

688. (209) Workshop in Community College Education (2-6)
Prerequisite: Teaching or administrative experience in a community college. To provide community college faculty members with opportunities to explore ways to improve curriculum and instruction in the community college.

690. (211) Procedures of Investigation and Report (3)
Research methods in education. Location, selection and analysis of professional literature. Methods of investigation, data analysis and reporting. Required of all applicants for advanced degrees in education.

691. (212) Educational Research Design (3)
Prerequisite: Education 690. Principles and methods of planning and conducting systematic investigations of educational problems— including historical, descriptive and experimental methods of research. Practice in the definition of problems, formulation of hypotheses, construction of samples, control of variables, and interpretation of results.

700. (316) Directed Teaching: Community College (4)
Prerequisites: Education 666 (not required for psychology majors) and 680. Approval of the Community College Admissions Committee, and concurrent registration in Education 690. Systematic observation, participation, and teaching under supervision in a community college. A weekly seminar or conference is required. Application to take this course must be made in the preceding semester by pre-registration with the Higher Education Programs Coordinator.

795A-795B. (295A-295B) Seminar (3-3)
Prerequisites: Education 690 and advancement to candidacy for the Master of Arts degree in education. 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.

798. (298) Special Study (1-6 Cr/NC)
Individual study. Maximum credit six units.
Prerequisite: Consent of staff: to be arranged with department chairman and instructor.

799A. (299) Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.
Counselor Education

600. (24.) Administration of Pupil Personnel Services (3)  
Prerequisite: Secondary Education 667.  
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.

610A-610B. (225A-225B.) Determinants of Human Behavior (3-3)  
Implications of theory and research in behavioral sciences for the understanding of  
human behavior. Counselor Education 610A deals with personality theories and  
psychological determinants of behavior; 610B with social and cultural determinants.

620. (26.) Guidance Services in Public Education (3)  
Prerequisite: Counselor Education 561, or Elementary Education 362 and 372.  
Focus on major diseases and impairments resulting in vocational disability. Lecture and  
clinical seminars.

623. (220.) Orientation to Community Rehabilitation Agencies (3)  
Prerequisite: Consent of instructor.  
Applying principles and procedures to specific situations for improvement of  
counseling services. Individual problems emphasized.

640. (231.) Theory and Process of Counseling (4)  
Three lectures and three hours of laboratory.  
Measurement of theory and procedures, including interpretation of test results. Not  
open to students with credit in Counselor Education 690-S. Offered during summer  
sessions only in combination with Counselor Education 650 as 690-S.

650. (232.) Theory and Process of Vocational Choice (4)  
Three lectures and three hours of laboratory and/or field work.  
Vocational choice theory, occupational and educational materials used in career  
planning. Not open to students with credit in Counselor Education 690-S. Offered during  
summer sessions only in combination with Counselor Education 640 as 690-S.

660. (233.) Theory and Process of Counseling (4)  
Prerequisites: Counselor Education 610A and 640.  
Counseling process theories, approaches to and techniques for counseling, and  
research concerning counseling effectiveness. Supervised practice in counseling,  
analyzing counseling, and writing counseling reports. Not open to students with credit  
in Counselor Education 700-S or Psychology 452 or 650. Offered during summer sessions  
only in combination with Counselor Education 640 as 690-S.

670. (234.) Theory and Process of Group Counseling (4)  
Prerequisites: Counselor Education 610B and 660.  
Group process and individual growth, theories of group interaction, sensitivity  
training and group leadership techniques. Not open to students with credit in  
Counselor Education 700-S. Offered during summer sessions only in combination with  
Counselor Education 660 as 700-S.

680A. (235A.) Introduction to the Rehabilitation Process (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Admission to counselor education.  
Background and legislation related to vocational rehabilitation; overview of client  
services and role and function of the rehabilitation counselor as a professional person.

680B. (235B.) Medical Aspects of Disability (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Counselor Education 680A.  
Orientation to medicine and illness in relation to work capacity and work outlook.  
Focus on major diseases and impairments resulting in vocational disability. Lecture and  
clinical seminars.

680C. (235C.) Psychological Aspects of Disability (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Counselor Education 680B.  
Analysis of the psychological component to illness and disease: focus on functional  
disorders and vocational implications. Lecture and clinical seminars.

680D. (235D.) Placement of the Disabled (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Counselor Education 680C.  
Determination of employment needs of disabled clients, case study method. Follow-  
through to placement. Continuous survey of employment needs and opportunities in the  
broader community.

690-S. (237-S.) Appraisal and Vocational Choice (6) S  
Five lectures and three hours of laboratory.  
Measurement theory, interpretation of test results, vocational choice theory,  
occupational and educational information in career planning. Not open to students with  
credit in Counselor Education 640 or 650. Application to take the course must be made  
early during the preceding semester.

700-S. (238-S.) Counseling: Individual and Group (6) S  
Five lectures and three hours of laboratory.  
Counseling theory and techniques, individual and group. Not open to students with  
credit in Counselor Education 660 or 670. Application to take the course must be made  
early during the preceding semester.

710A-710B. (239A-239B.) Seminar in Guidance (3-3)  
Prerequisites: Education 690-S; six units from Counselor Education 640, 650, 660 and  
670.  
Study of selected areas in counseling and rehabilitation culminating in a written  
project with emphasis on research, counseling, and/or rehabilitation as a profession.  
Topic to be announced in class schedule.

720. (330.) Internship (2-6) Cr/NC  
Supervised experience in group and individual counseling and study of problems,  
issues, and research. Application to take the course must be made early during the  
preceding semester. May be repeated with new content. Maximum credit six units applicable on a master's degree.

730. (331.) Field Work in Counseling (2-6) Cr/NC  
Supervised internship experience in counseling activities. Application to take the  
course must be made early during the preceding semester. May be repeated with new  
content. Maximum credit six units applicable on a master's degree.

740. (332.) Practicum in Counseling (3) Cr/NC  
Supervised experience in group and individual counseling and career planning.  
Application to take the course must be made early during the preceding semester.  
Maximum credit six units applicable on a master's degree.

750. (333.) Advanced Seminar and Practicum in Counseling (3-6) Cr/NC  
Supervised experience in group and individual counseling and study of problems,  
issues, and research. Application to take the course must be made early during the  
preceding semester.

Educational Administration

600. (260.) Principles of School Administration (3)  
Federal state and local school administrative relationships including the financial and  
legal structure at these three levels.

610. (261.) Education Leadership (3)  
Prerequisite: Teaching credential.  
Supervised experience in 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.
620. (262.) Legal and Financial Aspects of School District Policies (3)
Prerequisite: Teaching credential.
Relationship of the school district to attendance units. The legal basis for policy formation in the selection and retention of certified personnel, in the admission and assignment of pupils, in the instructional programs and in related budgetary considerations.

630. (263.) Curriculum Development and Evaluation (3)
Prerequisite: Teaching credential.
Curriculum development in both elementary and secondary schools, with emphasis on interrelationships between these levels, responsibilities of curricular and supervisory personnel, and use of research.

640A-640B-640C. (264A-264B-264C) Seminar in Elementary School Administration and Supervision (2-2-2)
Prerequisites: Educational Administration 600, 610, 620, 630, and admission to Program of Educational Administration; concurrent registration in 660A-660B-660C.
Analysis of theories and practices in the administration and supervision of the elementary school.

Prerequisites: Educational Administration 600, 610, 620, 630, and admission to Program of Educational Administration; concurrent registration in 670A-670B-670C.
Analysis of theories and practices in the administration and supervision of the secondary school.

660A-660B-660C. (266A-266B-266C) Field Experience in Elementary School Administration and Supervision (1-1-1) Cr/NC
Prerequisite: Concurrent registration in Educational Administration 640A-640B-640C.
Field experience in the elementary schools. Approval of local school district required in the semester prior to registration.

Prerequisite: Concurrent registration in Educational Administration 650A-650B-650C.
Field experience in the secondary schools. Approval of local school district required in the semester prior to registration.

680. (268.) Seminar in School Administration and Supervision (3)
Prerequisites: Teaching credential, Educational Administration 600, 610, 620, 630, consent of instructor, and admission to Program of Educational Administration.
School administration and supervision in a specialized field, such as the community college, a subject field, or designated services. Field experience required. May be substituted for Educational Administration 640C or 650C.

700. (280.) Legal and Financial Aspects of School District Management (3)
Prerequisites: Teaching credential, and Educational Administration 600, 610, 620, 630.
Principles and practices of law and finance as an aspect of school business administration, school plant planning and development, and the operation and maintenance of school facilities and services.

710. (281.) School-Community Relationships (3)
Prerequisites: Teaching credential, and Educational Administration 600, 610, 620, 630.
Sociological aspects of school administration with particular emphasis on broad social policy, contemporary issues, community-school relationships, other social and service agencies of the community.

720. (282.) School District Personnel Management (3)
Prerequisites: Teaching credential, and Educational Administration 600, 610, 620, 630.
Personnel relationships to include administrative relationships with the Board of Education and the school staff. Central office personnel procedures, including recruitment, employment, placement, evaluation, promotional and training procedures.

730. (283.) District Curriculum Development, Evaluation and Improvement (3)
Prerequisites: Teaching credential; and Educational Administration 600, 610, 620, 630.
School district curricular development from kindergarten through community college. Relationships of the superintendent and central administrative staff to regular staff and supervisory staff.

740. (284.) Advanced Seminar in School Administration and Supervision (3)
Prerequisites: Teaching credential, and Educational Administration 720, 710, 720, 730.
An intensive study of a selected area in school administration and supervision. Typical courses in this area are school law, school finance, school supervision, personnel procedures. May be repeated with new content. Maximum credit nine units.

750A-750B. (286A-286B) Seminar in School Building Construction and Utilization (3-3)
Prerequisite: Possession of Administration or Supervision Credential, or consent of instructor. Credit or concurrent registration in Educational Administration 750A is prerequisite to 750B.
School building construction and utilization: the development of new facilities from the planning stage to complete utilization; remodeling.

760. (360.) Internship in School Administration and Supervision (3-6) Cr/NC
Prerequisites: Teaching credential and consent of instructor.
Internship for prospective school administrators in the public schools. Released time, permission of school district, and preregistration with Coordinator of Program of Educational Administration previous semester required.

Educational Technology and Librarianship

674. (274.) Seminar in Educational Technology (3) I
Prerequisite: Educational Technology and Librarianship 540.
Research reviewed and the findings related to current practices. Relationships of educational technology to educational philosophies and current issues. Recent trends evaluated.

675. (275.) Seminar in the Administration of Instructional Media Centers (3) I, II
Prerequisites: Educational Technology and Librarianship 445 and 540.
The relationship of school, district, and regional media centers to the educational program. Concepts of leadership and management, review of current practices and policies.

676. (276.) Seminar in Instructional Design (3) I, II
Prerequisite: Educational Technology and Librarianship 541.
Design and production of self-instructional sequences. Instructional materials design will be investigated. Student entry behavior, objectives, media characteristics and learning will be considered.

677. (277.) Reference Materials in Subject Areas (3)
Prerequisite: Educational Technology and Librarianship 546.
Reference materials in humanities, social sciences, and sciences with emphasis on their use in the school library media center.

678. (278.) Literature for Children (3)
Prerequisite: Educational Technology and Librarianship 547.
Literature and other library materials suited to the elementary school student. Standard, classic and current books for children; aids and criteria for selection.

679. (279.) Literature for Adolescents (3)
Prerequisite: Educational Technology and Librarianship 547.
Literature and other library materials suited to the high school student. Standard, classic and current books for the adolescent; aids and criteria for selection.

775. (175.) Directed Internship for the Instructional Media Specialist (2-4) Cr/NC
Application to take the course must be made during the preceding semester. Supervised internship in an instructional media center.
Elementary Education

610. (240.) Curriculum Construction and Evaluation in Elementary Education (3)
Prerequisite: Credit or concurrent registration in Education 690.
Advanced study of the research in curriculum development, construction and evaluation.

611. (242.) Seminar in Reading in Elementary Education (3)
Prerequisite: Credit or concurrent registration in Education 690.
Advanced study of trends in reading instruction. 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.

612. (244.) Seminar in Language Arts in Elementary Education (3)
Prerequisite: Credit or concurrent registration in Education 690.
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 the scientific research in the field.

613. (247.) Seminar in Mathematics in Elementary Education (3)
Prerequisite: Credit or concurrent registration in Education 690.
A study of research and practice in the methods of teaching and in the curriculum of elementary and junior high school mathematics.

614. (243A.) Seminar in Social Studies in Elementary Education (3)
Prerequisite: Credit or concurrent registration in Education 690.
Problems in teaching social studies in the elementary school with emphasis on the study of the scientific research in the field.

615. (248.) Seminar in Science in Elementary Education (3)
Prerequisite: Credit or concurrent registration in Education 690.
Advanced study of the problems of teaching science in the elementary school with emphasis on the literature of science education.

618. (247.) Advanced Diagnosis and Treatment of Learning Difficulties (3)
Prerequisites: A teaching credential and Elementary Education 562 or Secondary Education 563.
Principles and techniques of diagnosis and treatment of difficulties in learning the school subjects. Supervised experience in working with individual pupils and their parents.

621. (246.) Advanced Diagnosis in Reading (3)
Prerequisites: Psychology 654 and Elementary Education 521.
Principles and techniques of individual and group diagnosis of reading difficulties. Experience in administration and interpretation of individual and group instruments in diagnosis.

624. (243B.) Seminar in Elementary Social Studies Curriculum Development (3)
Prerequisite: Elementary Education 414, and credit or concurrent registration in Education 690.
Current theories of instruction pertaining directly to elementary social studies teaching and curriculum development; critique of current social studies courses of study and guides; experience in elementary social studies curriculum planning at the classroom, school and district levels.

Secondary Education

610. (250.) Curricular Problems in Secondary Education (3)
Prerequisite: Student teaching or teaching experience.
Present status and development of the secondary school curriculum with emphasis on curriculum construction and curriculum evaluation. Opportunities provided for study of problems submitted by students.

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

614. (255.) Advanced Curriculum and Instruction in Mathematics (3)
Prerequisites: Twelve units in secondary education and consent of instructor.
Factors directing the changing mathematics curriculum; recent trends and current research in the teaching of secondary mathematics.

616. (256.) Recent Trends in Secondary Curriculum (3)
Prerequisites: Credit or concurrent registration in Education 690.
Current practices and trends in secondary schools. Extensive individual work on related problems of interest to members of the class.

617. (258.) Research in Curricular Problems (1-3)
Prerequisites: Consent of the Coordinator of Secondary Education and instructor.
Individual study by graduate students who have demonstrated exceptional ability.

618. Simulation and Games (3)
Prerequisite: Open to teachers and those enrolled in education credential programs.
Use and construction of simulations and games for education.

667. (259.) Guidance Problems in Secondary Education (3)
The theory and practice of guidance, emphasizing advanced mental hygiene concepts needed by teachers and counselors.

681. (259.) Seminar in Secondary School Reading (3)
Prerequisite: Education 690.
A study of research on reading; reading and criticism of selected studies; identification of research trends and needs.

685. Schools and Changing Sex Roles (3)
Prerequisite: Open to teachers and those enrolled in education credential programs.
Impact of schools upon the role of males and females and the role the educational systems play in maintaining traditional roles.

689. (257.) Workshop in Intercultural Education (4)
A cooperative workshop sponsored by the university and the San Diego City Schools to study trends in intercultural education in American schools, including units, curricular and instructional materials and techniques.

Special Education

622. (222.) The Gifted Child (3)
Prerequisites: Elementary Education 362 and 372, or Secondary Education 411.
The abilities and characteristics of the intellectually gifted or talented; related problems of curriculum, teaching, administration and guidance.

670. (270.) Seminar in Education of Exceptional Children (3)
Prerequisites: Special Education 567.
Principles, trends and research in the education of exceptional children.

671. (271.) Seminar in Emotionally Disturbed Children and Youth (3)
Prerequisites: Special Education 562 or 563, and 670.
Advanced study of the theories, principles and practices in working with the emotionally handicapped.

672. (272.) Seminar in Education of the Gifted (3)
Prerequisites: Special Education 622 and 670.
Review of studies and investigations in education of the gifted, including assessment, classification, curriculum provisions, and social and emotional adjustment.

771. (371.) Directed Internship: Mentally Retarded (4) Cr/NC
Application to take the course must be made during the preceding semester.
Extensive daily participation or teaching in public schools; preparation for the teaching of exceptional children in the area of the mentally retarded.

774. (374.) Directed Internship: Speech Correction (4) Cr/NC
Application to take the course must be made during the preceding semester.
Extensive daily participation or teaching in public schools; preparation for the teaching of exceptional children in the area of speech correction.
GENERAL INFORMATION

The School of Engineering offers graduate study leading to Master of Science degrees in Aerospace, Civil, Electrical, and Mechanical Engineering. These curriculums are designed to augment the student's undergraduate training by advanced study in one of the various fields of engineering. Recognizing the increasing importance in modern technology of the engineer-scientist team, San Diego State University has developed an academic pattern which offers to one holding a first degree in engineering an opportunity to pursue advanced study in a specialized area of knowledge.

The undergraduate curriculum in engineering, with options in aerospace, civil, electrical, and mechanical engineering, is accredited by the Engineers' Council for Professional Development.

Within the region served by San Diego State University are to be found many organizations which employ a considerable number of engineers holding the master of science degree.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the Graduate Division with classified graduate standing as described in Part Three of this bulletin. In addition, the student must have a bachelor's degree in a field of engineering appropriate to the field in which he desires to earn an advanced degree or in a field closely related thereto from an institution acceptable to the School of Engineering. If a student's undergraduate preparation is deemed insufficient, he will be required to take specified courses for the removal of the deficiency. Such courses, taken as an unclassified student, are in addition to the minimum of 30 units for the master's degree in engineering.

ADVANCEMENT TO CANDIDACY

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

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREES

In addition to meeting the requirements for classified graduate standing as stated above, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin. With the approval of the appropriate department the student working toward the master of science degree may elect either Plan A, requiring a thesis, or Plan B, requiring a comprehensive written examination. In either case, a final oral examination will be required.

The student shall arrange his course pattern, in conference with his graduate adviser, according to the following requirements for the specific degree:

AEROSPACE ENGINEERING

Specific requirements for the degree: The student's program prepared in conference with his graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in aerospace engineering and/or engineering mechanics including EM643, EM601 and EM621, and at least nine units in one area of concentration (designated as Group A, Group B, and Group C below) and excluding Engineering 790, 798, and 799A.
2. At least six additional units of 500-, 600- and 700-numbered courses in the School of Engineering or in the Departments of Mathematics, Physics, or Astronomy, including Engineering 799A (Plan A), if elected.
3. Six elective units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

Areas of Concentration in Aerospace Engineering

Group A: Fluid Dynamics
AE 600. (AE 200.) Seminar (1-3)
EM 744. (EM 244.) Advanced Fluid Mechanics II (3)
AE 612. (AE 243.) Supersonic Flow Theory (3)
AE 716. (AE 242.) Theory and Aerodynamics of Transonic Flight (3)

Group B: Engineering Mechanics
EM 600. (EM 200.) Seminar (1-3)
EM 725. (EM 225.) Theory of Plates (3)
EM 726. (EM 226.) Theory of Shells (3)
EM 727. (EM 227.) Elastic Stability (3)

Group C: Flight Dynamics
AE 600. or EM 600. (AE 200. or EM 200.) Seminar (1-3)
AE 671. (AE 205.) Flight Dynamics—Theory of Flight Paths (3)
AE 771. (AE 204.) Flight Dynamics—Stability and Control (3)
EM 703. (EM 203.) Theory of Vibrations (3)

CIVIL ENGINEERING

Specific Requirements for the Degree: The student's program, prepared in conference with his graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in civil engineering, excluding Engineering 790, 798, and 799A.
2. At least six additional units of 500-, 600- or 700-numbered courses in the School of Engineering or in the College of Sciences, including Engineering 799A, (Plan A), if elected.
3. Six elective units of 500-, 600- or 700-numbered courses approved by the graduate adviser.

ELECTRICAL ENGINEERING

Specific Requirements for the Degree: The student's program, prepared in conference with his graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in electrical engineering. A maximum of six units of 600- and 700-numbered courses in mathematics may be used in partial fulfillment of this 18-unit requirement.
2. At least six additional units of 500-, 600- or 700-numbered courses in the School of Engineering or in the Departments of Mathematics or Physics.
3. Six elective units of 500-, 600- or 700-numbered courses approved by the graduate adviser.

MECHANICAL ENGINEERING

Specific Requirements for the Degree: The student's program, prepared in conference with his graduate adviser, must satisfy the following requirements:

1. Fifteen units of 600- and 700-numbered courses in mechanical engineering excluding Engineering 790, 798, 799A, and Mechanical Engineering 797.
2. At least nine additional units of 500-, 600- or 700-numbered courses in the School of Engineering.
3. Six elective units of 500-, 600- or 700-numbered courses approved by the graduate adviser.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate nonteaching assistantships in engineering are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the appropriate department.
Dean, School of Engineering:
Associate Dean, School of Engineering: F. T. Quiett
Chairman, Department of Aerospace Engineering and Engineering Mechanics: R. D. McChie
Chairman, Department of Civil Engineering: F. E. Stratton
Chairman, Department of Electrical Engineering: Shu-Yun Chan
Chairman, Department of Mechanical Engineering: R. A. Fitz
Graduate Advisers: R. D. McChie, Aerospace Engineering; F. E. Stratton, Civil Engineering; Shu-Yun Chan, Electrical Engineering; R. A. Fitz, Mechanical Engineering

Professors: Bauer, Bedore, Chan, Chang, Conly, Dharmarajan, Fitz, Golding, Johnson, Krishnamoorthy, Learned, Lin, Lodge, McChie, Morgan, Murphy, Noorany, Ohnysty, Quiett, Rao, Shutt, Skaar, Stone, Stratton
Associate Professors: Chou, Craig, Crooker, Harris, Hussain, Mann, Mansfield, Narang, Panos
Assistant Professors: Bakhru, Bilterman, Brown, Drake, Marino, Stuart

COURSES ACCEPTABLE ON MASTER’S DEGREE PROGRAMS

UPPER DIVISION COURSES IN ENGINEERING

In order to provide the individual graduate student with a maximum of flexibility in pursuing his advanced studies, a maximum of six units in engineering courses other than those listed below may be elected by the student subject to the approval of his graduate adviser and the department chairman.

Aerospace Engineering Programs

501. (187B) Methods of Analysis (3)
502. (188) Advanced Engineering Topics (1-3)
503. (196B) Advanced Engineering Topics (3)
530. (109) Nonmetallic Materials (3)
532. (146B) Advanced Machine Design (3)
534. (147B) Vibration, Shock and Noise Measurements (3)
535. (149) Automatic Control Systems (3)
537. (142) Elements of Energy Conversion (3)
539. (144) Thermal Environmental Engineering (3)
554. (144B) Communication Principles and Circuits (3)
554L. (134L) Communication Circuits Laboratory (1)
568. (169J) Feedback Control Systems Laboratory (1)
569. (169L) Feedback Control Systems Laboratory (1)
569L. (169L) Advanced Feedback Control Systems (3)
569M. (169M) Feedback Control Systems Laboratory (1)
570. (173) Advanced Pulse and Digital Circuits (3)
571. (177) Advanced Logic Design and Switching Circuits (3)
573. (178) Computer Organization (3)

Mechanical Engineering Programs

501. (187B) Methods of Analysis (3)
502. (188) Advanced Engineering Topics (3)
503. (196B) Advanced Engineering Topics (3)
530. (109) Nonmetallic Materials (3)
532. (146B) Advanced Machine Design (3)
533. (147A) Advanced Machine Design (3)
534. (147B) Introduction to Mechanical Vibrations (3)
535. (148) Vibration, Shock and Noise Measurements (3)
535. (149) Advanced Thermodynamics (3)
537. (142) Elements of Energy Conversion (3)
538. (143) Gas Dynamics (3)
539. (144) Thermal Environmental Engineering (3)
540A-540B. (160A-160B) Principles of Chemical Engineering (3-3)
541. (183B) Advanced Logic Design and Switching Circuits (3)

Aerospace Engineering

GRADUATE COURSES

600. (200J) Seminar (1-3)
Prerequisite: Consent of the graduate adviser and instructor.
Intensive study of topics in aeroelasticity, aerodynamic noise, aerothermal structural analysis, hydrodynamic stability, hypersonic flow theory, magnetofluid mechanics, rarified and real gas flows, electromagnetic propulsion, boundary layers, and other areas of aerospace engineering.

612. (243) Supersonic Flow Theory (3)
Prerequisite: Engineering 381.
Theory of flow at supersonic speeds. Linearized theory, three-dimensional wings in steady flight, slender-body theory, methods of characteristics.

671. (205J) Flight Dynamics—Theory of Flight Paths (3)
Prerequisite: Engineering 381.
Analysis of trajectories of aircraft, missiles, satellites, and spacecraft subjected to uniform or central gravitational forces, aerodynamic forces, and thrust.

716. (242J) Theory and Aerodynamics of Transonic Flight (3)
Prerequisite: Aerospace Engineering 612.
Application of engineering principles to the analysis of transonic flight.
Civil Engineering

**GRADUATE COURSES**

600. (200.) Seminar (2 or 3)
Prerequisite: Consent of the graduate adviser and instructor.
An intensive study in advanced civil engineering, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

601. (201.) Advanced Theory of Structures (3)
Prerequisites: Engineering 510 and Mathematics 340A.
Analysis of statically indeterminate structures based on principles of deflected structures. Approximate analysis of structures under lateral loads for rigid and shear wall structures.

602. (202.) Design of Thin Shell Structures (3)
Prerequisite: Engineering 510.
Analysis and design of typical civil engineering thin shell structures.

603. (201.) Plastic Design in Steel (3)
Prerequisite: Engineering 510.
Analysis and design of steel framed structures for ultimate load. Connections, secondary design problems, column stability, and repeated loading.

605. (205.) Prestressed Concrete Structures (3)
Prerequisite: Engineering 510.
Fundamental concepts of prestressed concrete theory. Design applications to various types of structures.

606. (206.) Matrix Analysis of Structures (3)
Prerequisite: Engineering 310.

607. (207.) Dynamics of Structures (3)
Prerequisite: Engineering 310.
Dynamic disturbances, structures with variable degrees of freedom, free vibrations of slender elastic beams; continuous beams, rigid frames, floor systems. Energy methods in structural dynamics.

608. (208.) Numerical Methods in Structural Engineering (3)
Prerequisite: Engineering 510.
Moments and deflections in beam systems; elastic and inelastic stability, columns and beams on elastic supports, vibration of structural systems.

609. (209.) Computer Analysis of Structures (3)
Prerequisites: Engineering 170 and 510.
Fundamentals of matrix notation, equilibrium equations, compatibility relations, constitutive equations, joint releases. General algorithms for writing computer programs for space structures, trusses and frames. Use of existing programs such as ICES/STRUDL, NASTRAN, etc., for solving structural problems.

610. (210.) Finite Element Analysis of Structures (3)
Prerequisites: Engineering 170 and 310.
General procedure, various types of finite elements; analysis and design of isotropic and orthotropic plates and shells, deep beams, and shear walls using finite element technique; use of digital computers for solutions. Application to civil engineering structures.

620. (220.) Traffic Engineering (3)
Prerequisite: Engineering 421.
Traffic characteristics and studies. Control and regulation of street and highway traffic. Parking facilities, mass transportation, traffic engineering administration.

622. (222.) Mass Transit Engineering (3)
Prerequisite: Engineering 420.
Urban transportation and land use, characteristics of urban travel patterns, estimation of transit usage, planning of transit systems, economic problems of mass transportation. Case studies of existing and proposed systems.

630. (230.) Open Channel Hydraulics (3)
Prerequisite: Engineering 414.
Open channel flow theory, analysis, and problems, including studies of critical flow, uniform flow, gradually varied and rapidly varied flow, all as applied to the design of channels, spillways, energy dissipators, and gravity pipelines.

631. (231.) Engineering Hydrology (3)
Prerequisite: Engineering 414.
Measurement and interpretation of precipitation, evapotranspiration, stream flow and groundwater flow; hydrologic methodology and applications.

632. (232.) Fluvial Hydraulics (3)
Prerequisite: Engineering 414.
Characteristics of rivers; mechanics of sediment transport; hydraulics and design of alluvial channels; channel stability; model studies.

635. (235.) Water Quality Engineering (3)
Prerequisite: Engineering 514.

636. (236.) Water Quality Processes (3)
Two lectures and three hours of laboratory.
Prerequisite: Engineering 514.
Theoretical and laboratory study of the chemical and microbiological processes which govern modern water and wastewater treatment.

640. (240.) Advanced Soil Mechanics (3)
Prerequisite: Engineering 416.
Advanced theories of soil mechanics and their applications to design, including physicochemical behavior of soils, theories of compaction, consolidation, stress distribution, shear strength, settlement analyses, lateral pressures, and bearing capacity of soils.

641. (241.) Advanced Foundation Engineering (3)
Prerequisite: Engineering 417.

642. (242.) Seepage and Earth Dams (3)
Prerequisite: Engineering 416.
Principles governing the flow of water through soils and their application in the design of earth and rock fill dams. Stability analysis and design of earth dams.

643. (243.) Experimental Soil Mechanics (2)
One lecture and three hours of laboratory.
Prerequisite: Credit or concurrent registration in Civil Engineering 640.
Techniques of laboratory testing for the determination of the engineering properties of soils. Applications in foundation engineering, earth dams, highways, airports and underwater soil engineering.
644. (244.) Soil Structure Interaction (3)
Prerequisite: Consent of the graduate adviser and instructor.
Analysis of stresses and deformations of structural elements supported by soil.
Analysis of pile foundations subject to lateral, vertical and combined loads by numerical
and finite element methods. Solutions of slabs and mat foundations.

606. (206.) Seminar in Computer Engineering (1-3)
Prerequisite: Consent of the graduate adviser and instructor.
An intensive study in computer engineering topics. Maximum credit six units
applicable on a master's degree.

610. (210.) Linear System Analysis (3)
Prerequisites: Engineering 351 and credit or concurrent registration in Engineering 501
or Mathematics 340B.
State-space and transfer function representation of linear systems.
Analysis of stability, controllability and observability of linear systems.
Introduction to design techniques of feedback control systems.

611. (211.) Synthesis of Active and Passive Networks (3)
Prerequisite: Electrical Engineering 610.
Advanced topics in synthesis of active and passive networks.
Introduction to state-space representation of systems.

614. (214.) Computer-aided Network Analysis and Design (3)
Prerequisites: Engineering 361 or equivalent computer-aided circuit design, Electrical
Engineering 610, and Fortran programming.
Analysis and synthesis of active and passive networks.
Computer-aided analysis and synthesis of active and passive networks.

620. (220.) Feedback Control Systems (3)
Prerequisite: Engineering 568.
Analysis and synthesis of feedback control systems using feedback compensation.
Multiple-loop control systems; a-c feedback control systems; optimization.

622. (222.) Sampled-Data Systems (3)
Prerequisite: Engineering 568.
Analysis of sampled-data systems.
Design of sampled-data systems.

625. (225.) State Space Analysis of Control Systems (3)
Prerequisite: Engineering 568.
State-space representation of control systems.
Analysis and synthesis of state-space models of control systems.

631. (231.) Integrated Circuits (3)
Prerequisite: Engineering 470.
Analysis and synthesis of integrated circuits.
Analysis and synthesis of integrated circuits using computer-aided design.

632. (232.) Linear and Atmospheric Control Systems (3)
Prerequisite: Engineering 568.
Field-effect transistors and circuits: quantitative behavior of transistor
parameters; differential and chopper-stabilized circuits; high efficiency switching
mode power amplifiers, converters and inverters; noise, reliability considerations and
high speed switching.

650. (250.) Quantum Electronics (3)
Prerequisite: Engineering 564.
Mathematics for engineers concerned with its application to solid-state
deVICES. Basic principles and engineering applications of lasers.
### 652. (252.) Optical Communications (3)
Prerequisite: Electrical Engineering 650.
Fundamentals of electro-optical technology from ultraviolet through infrared. Characteristics of thermal and laser radiation including generation, transmission, detection, data processing and display.

### 653. (263.) Coding Theory (3)
Prerequisite: Engineering 553.
The theory of coding to combat noise over communication channels. Redundancy added to messages to assure arbitrarily small error rates at a given information rate. Discussion of channels and capacity. Block codes, cyclic codes, BCH codes, convolutional code.

### 654. (234.) Semiconductor RF Circuit Design (3)
Prerequisite: Engineering 554.
Wide band amplifiers, low level RF amplifiers and mixers, IF amplifiers, AGC, tuning and stability problems, unilateralization and mismatching techniques, harmonic oscillators, VHF power amplifiers including varactor multipliers.

### 655. (240.) Antennas and Propagation (3)
Prerequisite: Engineering 556.
Impedance characteristics and radiation patterns of thin linear antenna elements; field intensity calculations. Tropospheric and ionospheric propagation; propagation anomalies.

### 656. (242.) Microwave Networks (3)
Prerequisite: Engineering 556.
Equivalent circuits for waveguide discontinuities developed on the basis of mode theory, linearity, reciprocity, and symmetry. Application of general network theory to wave guides, cavity resonators and antennas.

### 657. (246.) Radar Systems (3)
Prerequisite: Engineering 556.
The radar equation; characteristics of CW, FM, MTI, pulse-doppler and tracking radar system, transmitters, antennas and receivers; detection of signals in noise, extraction of information; propagation effects; system engineering and design.

### 658. (264.) Digital Processing of Signals (3)
Prerequisite: Engineering 555.

### 660. (260.) Modern Communication Theory I (3)
Prerequisite: Engineering 553 or Mathematics 550.
Probability theory, random processes, Gaussian process, random signals through linear systems, noise considerations, optimum receiver design, applications to digital and wave-form communication.

### 661. (261.) Modern Communication Theory II (3)
Prerequisite: Engineering 660.

### 670. (270.) Microprogramming (3)
Prerequisite: Engineering 573.
Fundamentals of microprogramming and read only storage technology as related to the design of digital computers.

### 671. (271.) Computer Input/Output Devices and Systems (3)
Prerequisite: Engineering 573.
Control programs, interrupt procedures, I/O programming techniques, interfaces, channels, magnetic recording techniques, I/O devices.

### 672. (272.) Minicomputer Design and Applications (3)
Prerequisite: Engineering 573.
Current minicomputer architectures, CPU-oriented and universal bus-oriented machines.

### 676. (276.) Fault Tolerant Computing (3)
Prerequisite: Engineering 370.
Triple modular redundancy, standby sparing, quadded logic, parity and residue checking of computer systems and subsystems. Diagnostic programming and fault testing fundamentals.

### 677. (277.) Topics in Logic Design (3)
Prerequisite: Engineering 571.
Review of current technical periodic literature in logic design and digital systems. Stress on specialized synthesis techniques and recent theoretical developments.

### 678. (278.) Electronic Digital Systems (3)
Prerequisite: Engineering 573.
Design of arithmetic, control and memory units. Detailed comparative analysis of the system organization and operation of several digital computers, with special attention to the interdependence of design decisions and their dependence upon the intended system application.

### 796. (296.) Advanced Topics in Electrical Engineering (2 or 3)
Advanced study in the field of electrical engineering, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

### 797. (297.) Research (1-3) Cr/NC
Prerequisite: Consent of graduate adviser. Research in engineering. Maximum credit six units applicable on a master's degree.

### Engineering Mechanics

**GRADUATE COURSES**

### 600. (200.) Seminar (1-3)
Prerequisite: Consent of the graduate adviser and instructor. Intensive study of topics in nonlinear vibrations, random vibrations, continuum mechanics, anisotropic elasticity, energy methods, plasticity, and other areas of engineering mechanics.

### 601. (201.) Advanced Dynamics (3)

### 621. (221.) Theory of Elasticity (3)
Prerequisites: Engineering 306 and credit or concurrent registration in Engineering 501 or Mathematics 340B. Analysis of stress and strain: stress-strain relations; the equations of elasticity; uniqueness theorems; compatibility conditions; flexure and torsion, Vector and tensor notation will be used.

### 643. (243.) Advanced Fluid Mechanics I (3)
Prerequisites: Engineering 302 and credit or concurrent registration in Engineering 501 or Mathematics 340B. Fluid kinematics and kinetics. Conservation of mass, energy, and momentum, applied to Newtonian fluids. Navier-Stokes equations. Couette and Poiseuille flow. Potential flow. Introduction to turbulence and boundary layer theory. Vector and tensor notation will be used.

### 703. (203.) Theory of Vibrations (3)
Prerequisites: Engineering Mechanics 601 and credit or concurrent registration in Engineering 501 or Mathematics 340B. Linear and nonlinear periodic phenomena as applied to discrete systems and continuous media with application to physical problems.
### Mechanical Engineering

**GRADUATE COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<td>Seminar</td>
<td>2-3</td>
<td>Consent of the graduate adviser and instructor.</td>
</tr>
<tr>
<td>611</td>
<td>Stress Analysis</td>
<td>3</td>
<td>Engineering 501 and 532.</td>
</tr>
<tr>
<td>613</td>
<td>Engineering Design: Advanced Mechanisms</td>
<td>3</td>
<td>Engineering Design 331, 501 and 541.</td>
</tr>
<tr>
<td>614</td>
<td>Bearing Design and Lubrication</td>
<td>3</td>
<td>Engineering 501.</td>
</tr>
<tr>
<td>615</td>
<td>Fluid Power and Control Systems</td>
<td>3</td>
<td>Engineering 535.</td>
</tr>
<tr>
<td>617</td>
<td>Advanced Topics in Engineering Mechanics (2 or 3)</td>
<td></td>
<td>Consent of graduate adviser.</td>
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<tr>
<td>618</td>
<td>Advanced Topics in Automatic Controls (3)</td>
<td></td>
<td>Engineering 535.</td>
</tr>
<tr>
<td>620</td>
<td>Physical Metallurgy for Engineers (3)</td>
<td></td>
<td>Engineering 304 and 330.</td>
</tr>
<tr>
<td>621</td>
<td>Mechanical Metallurgy for Engineers (3)</td>
<td></td>
<td>Engineering 304 and 330.</td>
</tr>
<tr>
<td>622</td>
<td>Cryogenic Engineering</td>
<td>3</td>
<td>Engineering 437.</td>
</tr>
<tr>
<td>623</td>
<td>Aircraft and Missile Propulsion</td>
<td>3</td>
<td>Engineering 501, 537 and 538.</td>
</tr>
</tbody>
</table>

#### Notes
- Prerequisites: Principles of regeneration, reheat and intercooling, Thermodynamic analysis and performance of turbojet engines and rocket motors. Dynamics of rocket propulsion free of gravity and air resistance.
683. (281.) Propulsion Systems for Spacecraft (3)
Prerequisite: Engineering 436 and 501.
The physical and chemical laws that govern the performance, selection and design of non-air-breathing propulsion systems for space applications.

684. (284.) Theory of Turbomachines (3)
Prerequisite: Engineering 380 or 538.
Application of the fundamental laws of fluid mechanics to the problems of energy transfer between fluid and rotor. Performance characteristics of turbomachines. Study of efficiency loss mechanisms.

685. (285.) Direct Energy Conversion (3)
Prerequisites: Engineering 536 or Mechanical Engineering 651, and Engineering 301.
Application of physical and chemical laws to the analysis, design, and evaluation of a variety of direct energy conversion systems.

696. (296.) Advanced Topics in Mechanical Engineering (2 or 3)
Advanced study in the field of mechanical engineering, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

697. (297.) Research (1-3) Cr/NC
Research in engineering. Maximum credit six units applicable on a master's degree.

FAMILY STUDIES AND CONSUMER SCIENCES

GENERAL INFORMATION
Family Studies and Consumer Sciences, in the College of Professional Studies, offers graduate study leading to the Master of Science degree in Home Economics.

ADMISSION TO GRADUATE STUDY
All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Three of this Bulletin. In addition, the student must have a bachelor's degree in home economics, or a related field, and meet the prerequisites of the courses selected. If a student's undergraduate preparation is deemed insufficient, the student will be required to complete specified courses in addition to the minimum of 30 units required for the master's degree in Home Economics.

ADVANCEMENT TO CANDIDACY
All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this Bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE IN HOME ECONOMICS
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this Bulletin, the student must complete a graduate program of at least 30 units which includes at least 24 units from courses listed below as acceptable on master's degree programs in home economics, of which at least 15 units must be in 600- and 700-numbered courses in home economics, including Family Studies and Consumer Sciences 790, Bibliography and Methods of Research, and Family Studies and Consumer Sciences 799A. Thesis.

ASSISTANTSHIPS
Graduate teaching assistantships and graduate nonteaching assistantships in home economics are available to a limited number of qualified students. Application blanks and additional information may be secured from the Director, Family Studies and Consumer Sciences.

FACULTY

Director, Family Studies and Consumer Sciences: D. M. Fulcomer
Graduate Adviser: D. M. Fulcomer
Credentialed Adviser: K. J. Martin
Professors: Cannon, Fulcomer, Somerville, Warmer
Associate Professors: Anderson, Gunning, Milne, Price
Assistant Professors: Dickerson, Hambleton, Hewes, Kvalek, Martin, K. J., Martin, M., Ross, Schupp

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN HOME ECONOMICS

UPPER DIVISION COURSES

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>507</td>
<td>Processing Food and Nutrition Data</td>
<td>(3)</td>
</tr>
<tr>
<td>508 (108)</td>
<td>Advanced Food Systems Management</td>
<td>(3)</td>
</tr>
<tr>
<td>510</td>
<td>Nutrition and Community Health</td>
<td>(3)</td>
</tr>
<tr>
<td>518 (178)</td>
<td>Clothing Design: Flat Pattern</td>
<td>(3)</td>
</tr>
<tr>
<td>519</td>
<td>Textile Analysis and Testing</td>
<td>(3)</td>
</tr>
<tr>
<td>520</td>
<td>Clothing and Human Behavior</td>
<td>(3)</td>
</tr>
<tr>
<td>521</td>
<td>Clothing Design: Draping</td>
<td>(3)</td>
</tr>
<tr>
<td>522 (122)</td>
<td>Clothing Design: Historical Influences</td>
<td>(3)</td>
</tr>
<tr>
<td>536</td>
<td>Family Study</td>
<td>(3)</td>
</tr>
<tr>
<td>539</td>
<td>Family Relationships in Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>545 (145)</td>
<td>Family Housing</td>
<td>(3)</td>
</tr>
</tbody>
</table>
GRADUATE COURSES

Foods and Nutrition

600. (200.) Seminar: Foods and Nutrition (3)
Prerequisite: Family Studies and Consumer Sciences 401 and 402.
An intensive study of research in technological advances in the fields of foods and nutrition, with emphasis on professional organizations and ethical procedures.

603. (203.) Advanced Readings in Food Technology (3)
Prerequisite: Family Studies and Consumer Sciences 401.
Reading and analysis of selected research in food technology.

605. (205.) Assay for Nutrients in Foodstuffs and Tissues (3)
Two lectures and three hours of laboratory.
Prerequisites: Family Studies and Consumer Sciences 401 and 402.
Determination of energy values, organic nutrients, and minerals in foodstuffs and tissues by chemical, biological, and microbiological methods.

606. (206.) Physiological Bases of Diet Therapy (3)
Prerequisite: Family Studies and Consumer Sciences 401.
The biochemical and/or physiological lesions in pathological states and the modifications of diet which should accompany medical treatment to prevent or alleviate patient symptoms.

607. (207.) Child Nutrition (3)
Two lectures and three hours of laboratory.
Prerequisite: Family Studies and Consumer Sciences 402.
Nutrition, health, and biochemical growth in children. Conditions leading to malnutrition, the prevention and correction of same.

700. (204.) Advanced Readings in Nutrition (3)
Prerequisite: Family Studies and Consumer Sciences 402.
Reading and analysis of selected research in nutrition.

General Home Economics

615. (215.) Seminar: Clothing (3)
Prerequisite: Nine units in the area of clothing.
Selected problems in the field of clothing.

681. (281.) Seminar: Home Economics Education (3)
Prerequisite: Eighteen units in family studies and consumer sciences.
The study and evaluation of home economics research and philosophical principles which have implications for the secondary homemaking teacher.

682. (282.) Current Development in Home Economics Education (3)
Prerequisite: Family Studies and Consumer Sciences 483 or the equivalent, and 18 units in Family Studies and Consumer Sciences.
Current issues and recent developments in home economics education with implications for secondary and post-high school programs.
FRENCH

GENERAL INFORMATION

The Department of French and Italian Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in French. The staff in charge of the graduate program in French is composed of professors whose native tongue is French, or who have studied and traveled extensively in France and in other French-speaking areas, enabling them to represent authoritatively the French language and culture. Library facilities include rich resources in French literature and linguistics, including books, periodicals and newspapers. A foreign language laboratory with modern equipment is available to both graduate and undergraduate students.

ADMISSION TO GRADUATE STUDY

The student must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, the student must satisfy the following requirements: (1) an undergraduate major in French, or its equivalent, including 24 upper division units; at least six units of which must be in a survey course in French literature; (2) a GPA of 3.0 (on a 4-point scale) in all upper division French courses; (3) three letters of recommendation from professors, at least two of which should be from professors of French at the institution where the degree was granted; and (4) a short entrance examination, administered early in the semester by the graduate committee, to test a candidate's basic written and oral command of the language.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy as stated in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes a major of at least 24 units in French, of which at least 18 units must be in 600- and 700-numbered courses in French, including French 799A, Thesis, for those following Plan A.

Students, with the consent of the graduate staff, may elect Plan A, which includes French 799A. Thesis, or Plan B, which includes a comprehensive examination in lieu of the thesis.

ASSISTANTSHIPS

Graduate teaching assistantships in French are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY

Chairperson, Department of French and Italian Languages and Literatures: E. R. Jackson
Credentialed Adviser: H. Nelson
Graduate Adviser: H. Nelson
Professors: Max, Messier, Nelson, Piffard
Associate Professors: Branan, Glasgow, Jackson
Assistant Professor: Woodle

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN FRENCH

UPPER DIVISION COURSES

501A-501B. (112A-112B) French Poetry (3-3)
511. (117) Renaissance and Baroque Literature (3)
521A-521B. (111A-111B) Seventeenth Century French Literature (3-3)
531A-531B. (107A-107B) Eighteenth Century French Literature (3-3)
541A-541B. (110A-110B) Nineteenth Century French Novel (3-3)
543. (115) Nineteenth Century French Theatre (3)
551. (114) Twentieth Century French Novel (3)
552. (115) Twentieth Century French Theatre (3)

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

GRADUATE COURSES

601. (290) Introduction to Graduate Study (3)
Prerequisite: Eighteen upper division units in French. Purposes and methods of research in the fields of the language and literature, the collection and collation of bibliographic material, and the proper presentation of the results of such investigation.

611. (201) History of the French Language (3)
Prerequisite: Eighteen upper division units in French. The history of the French language from the beginnings through the sixteenth century.

621. (230) Methods of Literary Criticism (3)
Prerequisite: Eighteen upper division units in French. Theory and practice of various traditional and modern critical approaches to specific literary texts.

701. (202) Medieval French Literature (3)
Prerequisites: Eighteen upper division units in French and French 611. Readings in the principal movements, trends and genres of medieval French literature from the beginnings through Francois Villon.

711. (203) Literature of the French Renaissance (3)
Prerequisites: Eighteen upper division units in French and French 611. Literature and thought of the 16th century as represented in the works of Rabelais, Montaigne, Ronsard, Du Bellay, etc.

731. (250) Seminar in Seventeenth Century French Literature (3)
Prerequisite: Eighteen upper division units in French. Directed research in the works of a representative author, genre or movement. Maximum credit six units applicable on a master's degree.

731. (260) Seminar in Eighteenth Century French Literature (3)
Prerequisite: Eighteen upper division units in French. Directed research in the works of a representative author, genre or movement. Maximum credit six units applicable on a master's degree.

741. (270) Seminar in Nineteenth Century French Literature (3)
Prerequisite: Eighteen upper division units in French. Directed research in the works of a representative author, genre or movement. Maximum credit six units applicable on a master's degree.

751. (280) Seminar in Twentieth Century French Literature (3)
Prerequisite: Eighteen upper division units in French. Directed research in the works of a representative author, genre or movement. Maximum credit six units applicable on a master's degree.

796. (284) Topics in French Literature (3)
Prerequisite: Eighteen upper division units in French. Study of movement, genre, theme, myth or individual author. May be repeated with new content. Maximum credit six units applicable on a master's degree.
Special Study (1-3) Cr/NC
Prerequisites: Eighteen upper division units in French and consent of staff; to be arranged with department chairman and instructor. Individual study. Maximum credit three units applicable on a master's degree.

Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

Thesis Extension (6) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

GEOGRAPHY

GENERAL INFORMATION

The Department of Geography, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Geography. An emphasis in conservation of environmental quality within the geography degree program is also available. For graduate study in connection with the Master of Arts degree in Social Science, refer to the section of this bulletin under Social Science.

The Master of Arts degree is designed to provide advanced training for (a) students who plan to terminate their graduate studies at the master's level, and (b) those who anticipate additional work leading to the doctoral degree in geography or related fields. Research and instructional facilities provided by the Department of Geography include an excellent map library, a research center, laboratories for physical geography, soils, cartography, and meteorology, and equipment for remote sensing studies, aerial photograph interpretation, and field studies. The social science research laboratory, located adjacent to the Department, provides specialized data collections in the social sciences, and a well equipped data processing center.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified standing as described in Part Three of this bulletin. Candidates whose preparation is deemed insufficient by the graduate advising committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, as stated in Part Three of this bulletin. In addition, the student must pass a comprehensive oral examination administered by the Department of Geography covering the basic elements of the discipline and his area of specialization.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected with the approval of the Geography Graduate Committee.

Students electing the standard geography program must complete at least 24 units selected from courses in geography listed below as acceptable on master's degree programs. The student's program must include a minimum of 21 units in 600- and 700-numbered courses including Geography 600 and 610.

Students in the program may elect one of two plans, A or B, to complete the requirements for the degree. Plan A requires the writing of a thesis under Geography 799A as part of the outlined course program. If Plan B is elected, the student must complete two research papers, a minimum of three units in Geography 797, and pass a comprehensive written examination in lieu of the thesis.

Emphasis in Conservation of Environmental Quality

The requirements for students electing an emphasis in conservation of environmental quality are as follows:

1. A minimum of 30 units, including 24 units of 600- and 700-numbered courses.
2. Geography 600 (205), Geographic Research and Techniques of Presentation (3).
3. At least 12 units to be taken from the courses listed below:
   - Geography 608 (200A), Seminar in Advanced Physical Climatology (3)
   - Geography 650 (250), Seminar in Systematic Geography (3)
   - Geography 671 (270), Seminar in Theory of Resource Use (3)
   - Geography 670 (272), Seminar in Environmental Quality (3)
   - Geography 675 (275), Seminar in Recreational Geography (3)
   - Geography 687 (280), Seminar in Remote Sensing of the Environment (3)
4. At least nine units to be taken from one of the following sequences:

(a) Biology 615 (250), Biogeography (3)
Biology 620 (242), Population and Community Ecology (3)
Biology 621 (243), Physiological Ecology (3)
Biology 622 (246), Behavioral Ecology (3)
Biology 625 (244), Physical Aspects of Ecology (3)
Biology 626 (245), Aquatic Ecology (3)
Biology 630 (240), Seminar in Terrestrial Ecology (2)
Biology 631 (247), Seminar in Aquatic Ecology (2)
Biology 663 (261), Seminar in Environmental Radiation (2)

(b) Economics 505 (105), Welfare Economics (3)
Economics 701 (231), Seminar in Public Finance (3)
Economics 728 (208), Development Planning (3)
Economics 758 (238), Seminar in Urban and Regional Economics (3)
Economics 777 (272), Seminar in Utilities and Water Resources (3)

(c) Public Administration 600 (201), Scope and Method of Public Administration (3)
Public Administration 620 (250), Management of Urban Governments (3)
Public Administration 621 (255), The Metropolitan Area (3)
Public Administration 660 (260), Administration and Public Policy Development (3)
Public Administration 662 (243), Science Technology and Public Policy (3)

(d) Sociology 557 (157), Urban Sociology (3)
Sociology 750 (250), Seminar in the Community (3)
Sociology 770 (270), Seminar in Population and Demography (3)
Sociology 775 (275), Directed Readings in Population and Demography (3)

5. Three units to be selected from:
Geography 495 (296), Geographic Internship (3)
Geography 798 (298), Special Study (3)
Biology 798 (298), Special Study (3)
Economics 798 (298), Special Study (3)
Public Administration 798 (298), Special Study (3)
Sociology 798 (298), Special Study (3)

6. Three units in Geography 799A, Thesis (Plan A), or Geography 797, Research (Plan B)

ASSISTANTSHIPS
Graduate teaching assistantships and graduate nonteaching assistantships in geography are available to a limited number of qualified students. Application blanks and additional information may be secured from the Chairman of the Department.

FACULTY
Chairman, Department of Geography: E. A. Keen
Graduate Adviser: N. H. Greenwood
Professors: Eidemiller, Finch, Greenwood, Keen, Kiewiet de Jonge, O'Brien, Taylor, Wright, Yahr
Associate Professors: Blick, Ford, Heiges, Johnson, Pryde, Quastler, Stutz
Assistant Professors: Colombo, Fredrich, Griffin, McArthur

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN GEOGRAPHY

UPPER DIVISION COURSES

501. (107.) Climatic Physiography (3)
502. (108.) Structural Physiography (3)
503. (109.) Hydrological Physiography (3)
504. (104.) Coastal and Submarine Physiography (3)
505. (105.) Geography of Soils (3) II
506. (106.) Geography of Soils Laboratory (1)
507. (107.) Geography of Natural Vegetation (3) I, II
508. (100A.) Physical Climatology (3)
509. (100B.) Regional Climatology (3) II
511. (153.) Location Analysis and Geographic Theory (3)
512. (154.) Quantitative Methods of Urban Analysis (3)
513. (155.) Urban Location and Settlement Geography (3)
514. (156.) Internal Spatial Structure of Cities (3)
515. (160.) Advanced Transportation Geography (3)
516. (179.) Urban Transportation Geography (3)
517. (175.) Geography of Recreational Land Use (3)
518. (176.) Geography of Marine Resources (3)
519. (181A.) Advanced Cartography (3)
520. (181B.) Automated Cartography (3)
521. (185.) Quantitative Methods in Geographic Research (3) I, II
522. (187.) Remote Sensing of the Environment (3)
523. (188.) Advanced Remote Sensing of the Environment (3)
524. (180.) Field Geography (3)

GRADUATE COURSES

600. (205.) Geographic Research and Techniques of Presentation (3)
Prerequisite: Approval of departmental graduate advisory committee.
Seminar in the use of research materials in the different aspects of geography and the effective presentation of research findings in written and oral form.

601. (251.) Seminar in Physiography (3)
Prerequisites: One course in physiography and consent of instructor.
Directed study and research on selected topics in physiography.

608. (200A.) Seminar in Advanced Physical Climatology (3)
Prerequisites: Geography 508 and approval of departmental graduate advisory committee.
Characteristics of climatic elements for a selected area of climatic type, and a statistical analysis of the elements studied. Maximum credit six units applicable on a master's degree.

609. (200B.) Seminar in Advanced Regional Climatology (3)
Prerequisites: Geography 509 and approval of departmental graduate advisory committee.
Selected regions. An interpretation of regional variations of world climatic patterns. Maximum credit six units applicable on a master's degree.

610. (210.) History of Geography (3)
Prerequisite: Approval of graduate adviser.
The evolution of concepts concerning the nature, scope, and methodology of geography.

620. (220.) Seminar in Regional Geography (3)
Prerequisite: Approval of departmental graduate advisory committee.
-intensive study of a major world region, such as South America, Southeast Asia, or Northern Europe. Maximum credit six units applicable on a master's degree.
650. (250.) **Seminar in Systematic Geography** (3)
Prerequisite: Approval of departmental graduate advisory committee.
Intensive study of an aspect of systematic geography, such as climatology, economic geography, or graphic presentation. Maximum credit six units applicable on a master's degree.

654. (255.) **Seminar in Urban and Settlement Geography** (3)
Prerequisites: Geography 555 or 556 and approval of departmental graduate advisory committee.
Selected topics in urban geography. Field reconnaissance in the local urban "Laboratory" is essential part of the research undertaken.

655. (256.) **Seminar in Location of Urban Activities** (3)
Prerequisites: Geography 556 and approval of departmental graduate advisory committee.
Systematic analysis of the locations and linkages of activities in urban areas.

658. (258.) **Seminar in Geography of Transportation** (3)
Prerequisite: Geography 358.
Directed study and research on selected topics in transportation geography.

659. (259.) **Seminar in Urban Transportation** (3)
Prerequisites: Geography 559 and approval of departmental graduate advisory committee.
Intensive study and research on topics in urban transportation geography. Emphasis on transport innovations and their impact on urban spatial patterns.

660. (260.) **Seminar in Spatial Structure of Transport Systems** (3)
Prerequisites: Geography 358 and approval of departmental graduate advisory committee.
Transportation systems and networks, optimum route patterns, and commodity flows.

670. (272.) **Seminar in Environmental Quality** (3)
Prerequisites: Geography 170 and three upper division units in geography, or 370, and approval of departmental graduate advisory committee.
Geographic factors affecting environmental quality, such as congestion, crowding, and pollution.

671. (270.) **Seminar in Theory of Resource Use** (3)
Prerequisites: Geography 170 and three upper division units in geography, or 370 or 371, and approval of departmental graduate advisory committee.
Selected theories in resource use. Emphasis on conflicts between resource systems and conservation philosophy.

675. (275.) **Seminar in Recreational Geography** (3)
Prerequisites: Geography 575 and approval of departmental graduate advisory committee. Geography 170 or 370 and 371 are recommended.
Design and management of recreational areas. Emphasis on man-land relationship in natural parks of San Diego County.

680. (281.) **Seminar in Cartography** (3)
Prerequisites: One course in cartography and approval of departmental graduate advisory committee.
Use of the map in geographic analysis. Problems and recent trends in cartography. Maximum credit six units applicable on a master's degree.

687. (288.) **Seminar in Remote Sensing of the Environment** (3)
Prerequisite: Geography 587.
The use of remote sensing techniques in the study of man's cultural and biophysical environment.

689. (280.) **Techniques of Field Research** (3)
Three lectures and three hours of laboratory.
Prerequisites: Geography 589 and approval of departmental graduate advisory committee.
Detailed and reconnaissance field work including classification of natural and cultural features and preparation of geographical reports and maps based on field data. Maximum credit six units applicable on a master's degree.

795. (296.) **Geographic Internship** (3)
Prerequisites: Approval of departmental graduate advisory committee, and consent of instructor.
Students will be assigned to various government agencies and industry and will work under the joint supervision of agency heads and the course instructor. Maximum credit six units; three units applicable on a master's degree.

797. (297.) **Research** (1-3) Cr/NC
Research in one of the fields of geography. Maximum credit six units applicable on a master's degree.

798. (298.) **Special Study** (1-3) Cr/NC
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study. Maximum credit six units.

799A. (299.) **Thesis** (3) Cr/NC
Prerequisite: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.

799B. **Thesis Extension** (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.
GEOLOGY

GENERAL INFORMATION

The Department of Geological Sciences, in the College of Sciences, offers graduate study leading to the Master of Science degree in Geology. The curriculum provides a wide variety of advance training enabling the graduate to qualify for employment in most branches of earth science.

The present facilities include 18,000 square feet of space equipped for classroom and laboratory instruction at both graduate and undergraduate levels and for graduate research within the basic specialties of geological sciences.

In addition to these physical facilities, the departmental laboratory of the geology sciences permits year-round field work, place San Diego State University in a highly favorable location for graduate work in the geological sciences.

ADMISSION TO GRADUATE STANDING

All students must satisfy the general requirements for admission to classified graduate standing as described in Part Three of this bulletin. In addition, the student must have an overall grade point average of at least 2.75 in the last 60 units of his undergraduate work and must have a preparation in geology, mathematics, chemistry, and physics at least equivalent to the minimum required for the bachelor's degree in geology at San Diego State University.

ADVANCEMENT TO CANDIDACY

In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, students must pass the Graduate Record Examination in Geology and have completed in undergraduate or graduate work at least one course in each of the following: field geology, paleontology, stratigraphy, structural geology, petrography, and either geochemistry or geophysics.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin. Students will normally be assigned to Plan A with the thesis, but in exceptional circumstances, Plan B with the comprehensive examination may be substituted with approval of the department. The student's graduate program must include 24 units of 600- and 700-numbered courses in geology to include 797 (3 units), and 799A. Thesis, and six units of upper division or graduate electives approved by his departmental adviser or, if Plan B is elected, 18 units of 600- and 700-numbered courses and 12 units of upper division or graduate electives. Geology 308 and 508, Field Geology, or their equivalent as approved by the graduate adviser, are required as a part of the program if they were not a part of the student's undergraduate work.

ASSISTANTSHIPS

Graduate teaching assistantships in geology are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY

Chairman, Department of Geological Sciences: G. L. Peterson
Graduate Adviser: A. D. Patek
Professors: Berry, Castil, Krummenacher, McEuen, Peterson, Roberts, Thomas, Threet
Associate Professors: Abbott, Frederiksen, Kern, Patek
Assistant Professors: Bertine, Dorman, Ganus, Walawender

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN GEOLOGICAL SCIENCES

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<td>Geology of North America (3)</td>
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<td>505</td>
<td>Photogeology (3)</td>
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<td>506</td>
<td>Paleontology (4)</td>
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<td>507</td>
<td>Stratigraphy (3)</td>
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<td>Petroleum Geophysics (3)</td>
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<td>512</td>
<td>Micropaleontology (3)</td>
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<td>520</td>
<td>Ore Deposits (3)</td>
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<td>521</td>
<td>Petroleum Geology (3)</td>
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<td>524</td>
<td>Optical Mineralogy (3)</td>
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<td>525</td>
<td>Petrography (4)</td>
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<td>Sedimentology (3)</td>
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<td>Geochemistry (3)</td>
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<td>Advanced Geochemistry (3)</td>
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<td>Engineering Geology (3)</td>
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<td>551</td>
<td>Groundwater Geology (3)</td>
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<td>560</td>
<td>X-Ray Diffraction (2)</td>
</tr>
<tr>
<td>573</td>
<td>Advanced Palynology (3)</td>
</tr>
</tbody>
</table>

Related Fields: Appropriate courses in the Departments of Biology, Botany, Chemistry, Engineering, Mathematics, Physics, and Zoology may be selected in consultation with and approval of the graduate adviser.

GRADUATE COURSES

600. (200.) Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced geology. Topic to be announced in the class schedule.
Maximum credit six units applicable on a master's degree.

608. (208.) Graduate Field Geology (3)
One lecture and nine Saturday field sessions.
Prerequisite: Geology 508.
Experience in one or more specialized aspects of field mapping.

609. (209.) Igneous Petrology (3)
Two lectures and three hours of laboratory.
Prerequisite: Geology 508.
Investigation of problems in igneous petrology, using petrography, geochemistry, and experimental methods.

611. (211.) Metamorphic Petrology (3)
Two lectures and three hours of laboratory.
Prerequisite: Geology 508.
Investigation of problems in metamorphic petrology using petrography, geochemistry, and experimental methods.

612. (212.) Petrology of Carbonates (3)
Two lectures and three hours of laboratory.
Prerequisites: Geology 524 and 526.
Thin-section and hand-specimen description and classification of carbonate rocks, and other chemical sediments. Emphasis on recent depositional processes, diagenesis, and geochronology.

620. (220.) Biostratigraphy (3)
Two lectures and three hours of laboratory.
Prerequisite: Geology 507.
Development of concepts and practices in stratigraphic and geochronologic synthesis critically reviewed in context of current knowledge of the fossil record.
GENERAL INFORMATION

The Department of Germanic and Slavic Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in German. The master of arts degree provides advanced training for (a) students who plan to terminate their graduate studies at the master's level, and (b) those who plan to proceed to a doctoral degree in German or in Germanic linguistics. There is a full range of graduate courses in German literature and in Germanic linguistics, and the student may concentrate in the area of preference. Library resources, both books and periodicals, provide excellent research bases in both areas. A taped German dialect library, among the most extensive in the country, is also available for research use.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. An undergraduate major in German, including 24 upper division units, must have been completed, at least six units of which must have been in a survey course in German literature.

ADVANCEMENT TO CANDIDACY

In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, students may be required to pass a qualifying examination in German given by the Department of Germanic and Slavic Languages and Literatures.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of at least 24 units in German of which at least 15 units must be in 600- and 700-numbered courses including German 600, 601, and 799A, and six units selected from German 610, 650, 655, 665, 670, 675, and 680. If Plan B is followed, the student must pass a comprehensive examination in lieu of German 799A.

ASSISTANTSHIPS

Graduate teaching assistantships in German are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY

Chairman: Department of Germanic and Slavic Languages and Literatures: L. A. Kozlik
Graduate Adviser: C. M. Cross
Credential Adviser: H. W. Paulin
Professors: Boney, Kozlik, Lawson, Paulin, Schaber, Tanaka, Westervelt, Wolf, Wulbern
Associate Professor: Dunkle
Assistant Professor: Cross

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN GERMAN

UPPER DIVISION COURSES

505. (148) Applied German Linguistics (3)
510. (150) German Phonetics (3)
515. Germanic Linguistics (3)
540. (107) German Literature from its Beginning to the Reformation (3)
545A-545B. (103A-103B) German Literature of the Eighteenth Century (3-3)
549. (115) Faust (3)
555A-555B. (105A-105B) German Literature of the Nineteenth Century (3-3)
561A-561B. (110A-110B) Contemporary German Literature (3-3)
563. (111) Contemporary German Drama (3)
<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Description</th>
<th>Credit</th>
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<tbody>
<tr>
<td>600.</td>
<td>Research and Criticism</td>
<td>Twelve upper division units in German</td>
<td>Purposes and methods of research in the language and in the literature; theories and practice of literary criticism. Recommended for the first semester of graduate study.</td>
<td>(3)</td>
</tr>
<tr>
<td>601.</td>
<td>History of the German Language</td>
<td>Twelve upper division units in German</td>
<td>The historical development of the German language, with source readings from the Gothic Bible to Luther's translation of the Bible.</td>
<td>(3)</td>
</tr>
<tr>
<td>610.</td>
<td>Middle High German</td>
<td>Twelve upper division units in German or six upper division units in linguistics.</td>
<td>The grammatical structure of Middle High German; reading and analysis of selected literary works.</td>
<td>(3)</td>
</tr>
<tr>
<td>620.</td>
<td>Gothic</td>
<td>German 515 or 601 or three graduate units in linguistics or six upper division units in linguistics.</td>
<td>The phonology, grammar and reading of Gothic texts; the relationship of Gothic to Indo-European and to other Germanic languages.</td>
<td>(3)</td>
</tr>
<tr>
<td>650.</td>
<td>Renaissance and Baroque Literature</td>
<td>Twelve upper division units in German</td>
<td>German literature of the sixteenth and seventeenth centuries.</td>
<td>(3)</td>
</tr>
<tr>
<td>655.</td>
<td>Goethe</td>
<td>Twelve upper division units in German</td>
<td>Goethe's lyric, epic, and dramatic poetry excluding Faust.</td>
<td>(3)</td>
</tr>
<tr>
<td>665.</td>
<td>The German Drama of the Nineteenth Century</td>
<td>Twelve upper division units in German</td>
<td>Representative works of German dramatic literature from Kleist to Hauptmann.</td>
<td>(3)</td>
</tr>
<tr>
<td>670.</td>
<td>German Lyric Poetry from Hölderlin to Rilke</td>
<td>Twelve upper division units in German</td>
<td>The major German lyric poets from the beginnings of Romanticism to Rilke.</td>
<td>(3)</td>
</tr>
<tr>
<td>675.</td>
<td>The German Novelle</td>
<td>Twelve upper division units in German</td>
<td>The development of the Novelle as a literary form from Goethe to the present.</td>
<td>(3)</td>
</tr>
<tr>
<td>680.</td>
<td>The German Novel in the Twentieth Century</td>
<td>Twelve upper division units in German</td>
<td>Selected German novels of the twentieth century.</td>
<td>(3)</td>
</tr>
<tr>
<td>700.</td>
<td>Seminar in Germanic Linguistics</td>
<td>Eighteen upper division units or graduate units in German.</td>
<td>Directed research in a specialized area of Germanic linguistics or philology. Maximum credit six units applicable on a master's degree.</td>
<td>(3)</td>
</tr>
<tr>
<td>710.</td>
<td>Seminar in Eighteenth Century Literature</td>
<td>Eighteen upper division units in German</td>
<td>Directed research in the works of an important author or in a problem, type, or movement of German literature of the eighteenth century. Maximum credit six units applicable on a master's degree.</td>
<td>(3)</td>
</tr>
<tr>
<td>720.</td>
<td>Seminar in Nineteenth Century Literature</td>
<td>Eighteen upper division units in German</td>
<td>Directed research in the works of an important author or in a problem, type, or movement of German literature of the nineteenth century. Maximum credit six units applicable on a master's degree.</td>
<td>(3)</td>
</tr>
<tr>
<td>730.</td>
<td>Seminar in Twentieth Century Literature</td>
<td>Eighteen upper division units in German</td>
<td>Directed research in the works of an important author or in a problem, type, or movement of German literature of the twentieth century. Maximum credit six units applicable on a master's degree.</td>
<td>(3)</td>
</tr>
</tbody>
</table>

797. Research (3) Cr/NC
- Prerequisite: Advancement to candidacy.
- Individual research in a specialized subject in German literature or linguistics.

798. Special Study (1-3) Cr/NC
- Prerequisite: Eighteen upper division units in German and consent of staff; to be arranged with department chairman and instructor.

799A. Thesis (3) Cr/NC
- Prerequisite: An officially appointed thesis committee and advancement to candidacy.
- Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC
- Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
- Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.
HEALTH SCIENCE AND SAFETY

GENERAL INFORMATION

The Department of Health Science and Safety, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Health Science. Close liaison among the departments concerned and with community agencies provides opportunities for realistic field experiences.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin.

ADVANCEMENT TO CANDIDACY

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

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE IN HEALTH SCIENCE

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the Master of Arts degree as described in Part Three of this bulletin. The minimum 30-unit program consists of at least 24 units in health science and safety selected from those courses listed as applicable on master’s degree programs, 21 units of which must be in 600- and 700-numbered courses. Students electing Plan A must include Health Science and Safety 791, 792, and 799A. Students electing Plan B will be required to pass a final comprehensive examination in lieu of the thesis. This examination may be repeated only once.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate nonteaching assistantships in health science and safety are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY

Chairman, Department of Health Science and Safety: W. C. Burgess
Credentialed Adviser: L. P. Kessler
Graduate Adviser: A. C. McTaggart
Professors: Burgess, Grawunder, Harper, McTaggart
Associate Professors: Barnes, Bender, Boskin, Fellers, Kessler, Noto, Sorochan
Assistant Professor: Beasley

COURSES ACCEPTABLE ON MASTER’S DEGREE PROGRAMS IN HEALTH SCIENCE

UPPER DIVISION COURSES

510. (154) Workshop in Health Science and Safety (1-3)
520. (153) Administration of the School Health Program (3)
545. (145) Safety Education and Accident Prevention (3)
560. (160) Introduction to Public Health (3)
561. (176) Health and Medical Care (3)
562. (176) World Health (3)
573. (175) Health in Later Maturity (3)
574. (172) Habit-Forming Substances (3)
575. (175) Sex Education (3)
597. (197) Supervised Field Experience (1-3)

GRADUATE COURSES

600. (200) Seminar (3)
   Prerequisite: Fifteen units in Health Science and Safety.
   An intensive study of advanced problems in health education. Maximum credit six units applicable on a master's degree.

601. (201) Interdisciplinary Factors in Health Education (3)
   Prerequisite: Fifteen units in Health Science and Safety.
   Synthesis of basic and cultural principles which contribute to an understanding of human well-being and life; in an intentional way has been influenced.

620. (252) Health Science Curriculum Development (3)
   Prerequisite: Health Science and Safety 320 or 321.
   Structuring educational experiences in the health sciences; developing curriculum and organizing learning environments.

640. (240) Administration of Traffic Safety (3)
   Prerequisites: Health Science and Safety 347 and 545.
   Research and trends in traffic safety with emphasis on the problems of administration.

645. (245) School Safety Programs and Procedures (3)
   Prerequisite: Health Science and Safety 545.
   Advanced consideration of school safety programs including legal bases and methods and techniques of research appropriate to health science, the processes by which potential problems in health science are analyzed, and the standards for the writing of research papers and theses.

650. (250) Analysis of Professional Literature (3)
   Prerequisite: Health Science and Safety 490.
   Investigation and study of literature in the fields which have an important bearing on health science and safety programs in the school and community.

790. (297) Research (1-3) Cr/NC
   Prerequisite: Health Science and Safety 490.
   Writing of research papers and theses.

791. (298) Special Study (1-3) Cr/NC
   Prerequisite: Consent of staff; to be arranged with department special study adviser.
   Individual study. Maximum credit six units.

799A. (299) Thesis (3) Cr/NC
   Prerequisite: An officially appointed thesis committee and advancement to candidacy.
   Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC
   Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
   Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; student must be registered in the course when the completed thesis is granted final approval.
HISTORY

GENERAL INFORMATION

The Department of History, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in History and to the Master of Arts degree for teaching service with a concentration in History.

The Master of Arts degree is designed to provide advanced training for (1) students who plan to terminate their graduate studies at the master's level, and (2) those who anticipate further study leading to a doctoral degree in history or related fields.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. As an additional requirement, the student must have completed a bachelor's degree with an undergraduate major in history. Applicants who do not have an undergraduate major in history may be admitted to conditionally classified graduate standing on the recommendation of the department, but they will be held responsible for completing the minimum requirements for an undergraduate major in history.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, as stated in Part Three of this bulletin, as well as the specific requirements of the department. All students should consult the graduate coordinator.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a major consisting of at least 24 units in history from courses listed below as acceptable on the master's degree programs, at least 18 units of which must be in 600- and 700-numbered courses. Students may elect either Plan A, requiring a thesis, or Plan B, requiring a comprehensive written and oral examination in both a major and minor field of history chosen in consultation with the graduate adviser. Required courses are History 601; six units selected from History 610, 620, 630, 640, 650, 660, or 680; three units selected from History 615, 625, 635, 645, 655, or 690; History 797; and History 799A for those students electing Plan A. Students electing Plan B must enroll in History 795 (six units) in lieu of History 797 and 799A.

Three additional units in a research seminar in history may be substituted for History 601 in either Plan A or Plan B with the consent of the graduate adviser. Candidates for this degree must demonstrate knowledge of either a relevant foreign language or an approved substitute in computer language or statistical methods. Other substitutes may be approved where the skills involved are directly related to the student's research interests.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE FOR TEACHING SERVICE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a major consisting of at least 24 units in history from courses listed below as acceptable on the master's degree programs, at least 18 units of which must be in 600- and 700-numbered courses. Students may elect either Plan A, requiring a thesis, or Plan B, requiring a comprehensive written and oral examination in both a major and minor field of history chosen in consultation with the graduate adviser. Required courses are History 601; six units selected from History 610, 620, 630, 640, 650, 660, or 680; three units selected from History 615, 625, 635, 645, 655, or 690; History 797; and History 799A for those students electing Plan A. Students electing Plan B must enroll in History 795 (six units) in lieu of History 797 and 799A.

Three additional units in a research seminar in history may be substituted for History 601 in either Plan A or Plan B with the consent of the graduate adviser. No foreign language competency is required in this degree option.

SCHOLARSHIPS

The K. W. Stott Scholarship, in the amount of $100, is awarded each June to a student who has attended San Diego State University for at least two years and who is being graduated or who has been graduated on San Diego State University with a major in history. The recipient must continue work in San Diego State University, 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.

A Copley Scholarship of $250 is awarded annually to a graduate student who is writing his thesis on some aspect of San Diego history. Selection is made by the Department of History with the approval of the Committee on Scholarships.

FACULTY

Chairman, Department of History: D. H. Strong
Graduate Advisers: A. W. Schatz (Coordinator), A. D. Coox, T. M. Davies, Jr., C. D. Hamilton
Credentia! Adviser: H. C. McDean

Professors: Appleby, J., Berge, Cox, Cox, Detweiler, Hanchett, Merrill, Munter, Norman, Pincetl, Rader, Ridout, Ruetten, Smith, R., Starr, Steele, Strong, Sutherland, Weber

Associate Professors: Check, Chu, Cunning, Davies, DeFaula, Dunn, Hemion, J., Hamilton, Hoidal, O'Brien, Smith, C., Stites, Vanderwood, Varian, Assistant Professors: Appleby, A., Bartholomew, Fillner, Hemion, P., Heyman, McDean, Oades, Phillips

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN HISTORY

UPPER DIVISION COURSES

Field (a). Ancient and Medieval

500A-500B. (111A-111B) Ancient History (3-3)
503A-503B. (121A-121B) Europe in the Middle Ages (3-3)
504. (122.) The Holy Roman Empire to the Great Interregnum (3)
505. (123.) The Byzantine Empire (3)

Field (b). Modern Europe

508. (137.) The Renaissance (3)
509A-509B. (132A-132B) Early Modern Europe (3-3)
510A-510B. (133A-133B) Europe in the 18th Century (3-3)
511A-511B. (135A-135B) Europe in the 19th Century (3-3)
512A-512B. (137A-137B) Europe in the 20th Century (3-3)
513A-513B. (141A-141B) History of Scandinavia (3-3)
514A. (142A.) The French Revolution and Napoleonic Era (3)
514B. (142B.) Modern France (3)
515A-515B. (143A-143B) The Iberian Peninsula (3-3)
516A-516B. (145A-145B) Central and Eastern Europe (3-3)
517A-517B. (146A-146B) Germany and Central Europe (3-3)
518A. (147A-147B) Modern Russia and the Soviet Union (3-3)
519. (149.) Modern Italy (3)
520A-520B. (151A-151B) England (3-3)
521A-521B. (152A-152B) Constitutional History of England (3-3)
522A-522B. (153A-153B) Tudor and Stuart England (3-3)
523A-523B. (154A-154B) Modern Britain (3-3)
526A-526B. (136A-136B) Intellectual History of Modern Europe (3-3)
527A-527B. (138A-138B) Diplomatic History of Modern Europe (3-3)
Field (c). United States
531A-531B. (171A-171B) Rise of the American Nation (3-3)
532A-532B. (172A-172B) Development of the Federal Union (3-3)
533A-533B. (173A-173B) Jacksonian Democracy; Civil War and Reconstruction (3-3)
534. (174.) The Rise of Modern America, 1868-1900 (3)
535A-535B. (175A-175B) The United States, 1901-1945 (3-3)
536. (175C.) The United States in the Nuclear Age (3)
537A-537B. (181A-181B) The Westward Movement (3-3)
538A-538B. (182A-182B) The American Southwest (3-3)
539A-539B. (183A-183B) Black American Civilization (3-3)
540. (185.) Environmental History of the United States (3)
541A-541B. (189A-189B) California (3-3)
544A-544B. (176A-176B) American Foreign Policy (3-3)
545A-545B. (177A-177B) Constitutional History of the United States (3-3)
546A-546B. (178A-178B) Development of American Capitalism (3-3)
547A-547B. (179A-179B) Intellectual History of the American People (3-3)
548A-548B. Social History of the United States (3-3)

Field (d). Latin America
551A-551B. (167A-167B) Mexico (3-3)
552A-552B. (168A-168B) History of Brazil (3-3)
553A-553B. (169A-169B) The Caribbean Area (3-3)
554. (164.) The West Coast Nations of South America (3)
557A-557B. (165A-165B) History of Latin American Popular Culture and Social Thought (3-3)
558A-558B. (166A-166B) Diplomatic History of Latin America (3-3)

Field (e). South, Southeast and East Asia
561A-561B. (191A-191B) The Far East (3-3)
562A-562B. (192A-192B) India—Hindu, Muslim and Modern (3-3)
564A-564B. (190A-190B) Southeast Asia (3-3)
566. (192.) Chinese Civilization (3-1)
567A-567B. (193.) Modern and Contemporary Chinese History (3-3)
569. (194.) Japanese Civilization (3)
570. (195.) Modern Japan (3)
571A-571B. (197A-197B) Intellectual History of Modern Asia (3-3)

Field (f). Africa and Middle East
573A-573B. (156A-156B) History of the Near East from the 7th Century to World War I (3-3)
574. (157.) The Near East in the Twentieth Century, 1914 to Present (3)
575A-575B. (158A-158B) Africa (3-3)

Field (g). Topical Subjects
582A-582B. (105A-105B) War and Civilization (3-3)
583A-583B. (106A-106B) The Quest for Peace (3-3)
584A-584B. (107A-107B) Science and Society (3-3)
596. Selected Studies in History (3)

GRADUATE COURSES

All graduate courses in the Department of History have a prerequisite of 12 units of upper division courses in history, or consent of the instructor.

601. (201.) Seminar in Historical Method (3)
Prerequisite: Six upper division units in African or Middle Eastern History.
Directed research on topics selected from a designated area of African or Middle Eastern history. Maximum credit six units applicable on a master's degree.

602. (242.) Directed Reading in European History (3)
Prerequisite: Six upper division units in European history.
Selected readings in source materials and historical literature in a designated area of European history. Maximum credit six units applicable on a master's degree.

625. (252.) Seminar in European History (3)
Prerequisite: Six upper division units in European history.
Directed research on topics selected from a designated area of European history. Maximum credit six units applicable on a master's degree.

630. (241.) Directed Reading in United States History (3)
Prerequisite: Six upper division units in United States history.
Selected readings in source materials and historical literature in a designated area of United States history. Maximum credit six units applicable on a master's degree.

635. (251.) Seminar in United States History (3)
Prerequisite: Six upper division units in United States history.
Directed research on topics selected from a designated area of United States history. Maximum credit six units applicable on a master's degree.

640. (244.) Directed Reading in Latin American History (3)
Prerequisite: Six upper division units in Latin American history.
Selected readings in source materials and historical literature in a designated area of Latin American history. Maximum credit six units applicable on a master's degree.

645. (254.) Seminar in Latin American History (3)
Prerequisite: Six upper division units in Latin American history.
Directed research on topics selected from a designated area of Latin American history. Maximum credit six units applicable on a master's degree.

650. (243.) Directed Reading in Asian History (3)
Prerequisite: Six upper division units in Asian history.
Selected readings in source materials and historical literature in a designated area of Asian history. Maximum credit six units applicable on a master's degree.

655. (253.) Seminar in Asian History (3)
Prerequisite: Six upper division units in Asian history.
Directed research on topics selected from a designated area of Asian history. Maximum credit six units applicable on a master's degree.

660. (245.) Directed Reading in African and Middle Eastern History (3)
Prerequisite: Six upper division units in African or Middle Eastern history.
Selected readings in source materials and historical literature in a designated area of African or Middle Eastern history. Maximum credit six units applicable on a master's degree.

665. (255.) Seminar in African and Middle Eastern History (3)
Prerequisite: Six upper division units in African or Middle Eastern history.
Directed research on topics selected from a designated area of African or Middle Eastern history. Maximum credit six units applicable on a master's degree.

680. (240.) Directed Reading in Selected Topics (3)
Prerequisite: Consent of the instructor.
Selected readings in source materials and historical literature of various fields of history such as war, science, technology, urbanization, minority groups, immigration, capitalism, conservation, and imperialism. Maximum credit six units applicable on a master's degree.

690. (250.) Seminar in the Philosophy of History (3)
Prerequisite: Six upper division units in the philosophy of history.
The major philosophers of history and directed research on topics selected from various philosophies of history such as Bury, Collingwood, Croce, Freud, Hegel, Marx, Pareto, Sorokin, Spengler and Toynbee.
795. (296,) Area Studies in History (1-3) Cr/NC
Prerequisite: Advancement to candidacy.
Preparation for the comprehensive examinations in the major and minor fields of
history for those students taking the M.A. under Plan B. Maximum credit six units
applicable on a master's degree.
797. (297,) Research (3) Cr/NC
Prerequisite: Advancement to candidacy and written approval of the History
Department graduate coordinator.
Independent research in a specialized subject in history.
798. (298,) Special Study (1-3) Cr/NC
Individual study. Maximum credit six units.
Prerequisite: Consent of staff; to be arranged with department chairman and
instructor.
799A. (299,) Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to
 candidacy.
Preparation of a project or thesis for the master's degree.
799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course
799A in which the student expects to use the facilities and resources of the university;
also student must be registered in the course when the completed thesis is granted final
approval.

INDUSTRIAL STUDIES

GENERAL INFORMATION
The Department of Industrial Studies, in the College of Professional Studies, offers
graduate study leading to the Master of Arts degree in Industrial Arts. The Department of
Industrial Studies makes it possible for students to gain advanced experiences in two of
the most modern industrial arts buildings in the West. Well-equipped instructional
facilities are devoted to work in woods, metals, transportation, graphic arts, electricity-
electronics, photography, industrial drawing, and industrial crafts.

ADMISSION TO GRADUATE STUDY
All students must satisfy the general requirements for admission to the University
with classified graduate standing, as described in Part Three of this bulletin.

ADVANCEMENT TO CANDIDACY
All students must meet the general requirements for advancement to candidacy, as
described in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE
In addition to meeting the requirements for classified graduate standing and the basic
requirements for the master's degree as described in Part Three of this bulletin, the
student must complete a graduate program of at least 30 units which includes a major
consisting of a minimum of 24 units in industrial arts from courses listed below as
acceptable on the master's degree program. The program must contain at least 24 units
of 600- and 700-numbered courses, including Industrial Arts 720 and 790; nine units
selected from Industrial Arts 721, 722, 723, and 724; and either Industrial Arts 799A
(Plan A) or 795 (Plan B). Students electing Plan B must pass a comprehensive examination
upon completion of Industrial Arts 795 and in lieu of the thesis.

ASSISTANTSHIPS
Graduate teaching assistantships in industrial arts are available to a limited number of
qualified students. Application blanks and additional information may be secured from
the chairman of the department.

FACULTY
Chairman, Department of Industrial Studies: H. L. Marsters
Graduate Adviser: F. J. Irgang
Credential Adviser: F. J. Irgang
Professors: Anderson, Bailey, Hammer, Irgang, McMullen, Thiel
Associate Professors: Dirksen, Guentzler, Marsters, McEowen
Assistant Professors: Blackmun, Ferree, Lybarger, Rasmussen, Sorenson

COURSES ACCEPTABLE ON MASTER’S DEGREE PROGRAMS
IN INDUSTRIAL ARTS

UPPER DIVISION COURSES

Industrial Arts

503. (103,) Advanced Industrial Crafts (3)
517. (117,) Thermoset Plastics (3)
523. (123,) Industrial Arts Drawing (3)
533. (133,) Applied Metal Forming Operations (3)
540. (140,) Photography for Teachers (3)
542. (142,) Advanced Photography (3)
553. (153,) Woodworking for Teachers (3)
563. (163,) Industrial Electronics (3)
573. (173,) Accessory Power Systems (3)
583. (183,) Industrial Arts Graphic Arts (3)
594. (194,) Recent Trends in Industrial Arts Education (2)
596. (196,) Experimental Industrial Arts (1 or 2)
GRADUATE COURSES

600. (200.) Seminar (3)
An intensive study in industrial arts; topic to be announced in the class schedule.

601. (201.) Advanced Teaching Problems (3)
Prerequisites: Teaching experience in area selected and consent of instructor.
Materials and advanced techniques of teaching specific activity areas, such as (a) industrial drawing; (b) general metalworking; (c) general woodworkg; (d) electricity-radio; (e) transportation; (f) graphic arts; (g) photography; (h) comprehensive industrial arts. Stress on project design and visual materials. Maximum credit six units applicable on a master's degree.

610. (210.) Problems in Industrial Crafts (3)
One lecture and six hours of laboratory.
Prerequisite: Industrial Arts 503.
Research in selected areas of industrial crafts with emphasis on instructional materials and techniques. Specifically designed for teachers, recreation workers and therapists.

615. (215.) Problems in Plastics (3)
One lecture and six hours of laboratory.
Prerequisite: Industrial Arts 517.
Research with selected plastics processes and materials. Development of projects, aids, resource material, oral and written presentations.

620. (202.) Industrial Arts Problems in Graphics and Design (3)
One lecture and six hours of laboratory.
Prerequisite: Industrial Arts 523.
The theories and procedures of industrial drafting, including nomographs, descriptive geometry, and graphic solutions. Emphasis on special applications to industrial arts.

630. (203.) Industrial Arts Problems in Metalworking (3)
One lecture and six hours of laboratory.
Prerequisite: Industrial Arts 533.
Problems related to industrial arts metalworking. Individual research project dealing with instructional materials or processes.

640. (204.) Problems in Photography (3)
One lecture and six hours of laboratory.
Prerequisite: Industrial Arts 443, 444 or 542.
Advanced problems in photography in industry and photography in education. Individual research project dealing with instructional materials or processes.

650. (205.) Industrial Arts Problems in Woodworking (3)
One lecture and six hours of laboratory.
Prerequisite: Industrial Arts 553.
Intensive study in selected areas of the woodworking industry as it relates to materials, production and construction. Presentation of research findings.

660. (206.) Problems in Electronics (3)
One lecture and six hours of laboratory.
Prerequisite: Industrial Arts 463.
Recent developments in the electronics area. Special research projects and resource materials.

670. (207.) Research in Vehicular Power Systems for Industrial Arts (3)
One lecture and six hours of laboratory.
Prerequisite: Industrial Arts 573.
Research in selected areas of the vehicular power systems and effective presentation of findings in oral and written form.
LATIN AMERICAN STUDIES

GENERAL INFORMATION

The Master of Arts degree in Latin American Studies is an interdisciplinary degree offered by designated faculty members in the Departments of Anthropology, Economics, Geography, History, Political Science, and Spanish and Portuguese Languages and Literatures. It is administered by the Center for Latin American Studies.

The program is designed to provide a systematic advanced training (a) for those planning to enter business or government service in the Latin American field, and (b) for those in a specific academic discipline who have a regional interest in Latin America. It is not intended as a complete vocational preparation.

ADMISSION TO GRADUATE STUDY

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student must present the Bachelor of Arts degree with not less than 10 units of courses of Latin American content in three areas. A student whose preparation is deemed insufficient by his graduate adviser or by the Latin American Studies Committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, the student must demonstrate an oral and reading proficiency in either Spanish or Portuguese, through either coursework or examination as determined by the Department of Spanish and Portuguese Languages and Literatures. He is further encouraged to acquire a reading knowledge of the alternate language.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Three of this bulletin, the student must complete at least 30 units of upper division and graduate course work with not less than 24 units in courses of Latin American content, distributed as follows:

<table>
<thead>
<tr>
<th>Department A</th>
<th>600- and 700-numbered Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 units</td>
</tr>
<tr>
<td>Department B</td>
<td>500- and 600-numbered Courses</td>
</tr>
<tr>
<td></td>
<td>6 units</td>
</tr>
<tr>
<td>Department C</td>
<td></td>
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<tr>
<td></td>
<td>3 units</td>
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<td></td>
<td>3 units</td>
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<tr>
<td></td>
<td>12 units</td>
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</tbody>
</table>

The total program shall include a minimum of 18 units in 600- and 700-numbered courses. Students may select either Plan A or Plan B in consultation with the graduate adviser. In addition to meeting the distribution requirements given above, students electing Plan A must complete the 799A (Thesis) course offered by the department selected for the 12-unit concentration (Department A). Students electing Plan B must pass a comprehensive written and oral examination in lieu of the thesis.

All programs will be approved by the Latin American Studies Committee.

COMMITTEE ON LATIN AMERICAN STUDIES

P. F. Flemion, Chairman
E. M. Barrera
J. D. Blick
T. E. Case
C. B. Christensen
N. C. Clement
R. L. Cunniff
T. M. Davies, Jr.
D. M. Dexter
W. A. Finch, Jr.
E. C. Griffin
G. L. Head
A. Jimenez-Vera
W. C. Kennedy
J. B. Kelley
J. D. Kitchen
B. E. Loveman
R. R. Nardelli
L. V. Padgett
W. D. Phillips
G. V. Segade
P. S. Stanford
P. L. Vanderwood
L. C. Watson
R. D. Weeter
D. J. Weber
R. C. Young

Graduate Coordinator: P. F. Flemion
Graduate Advisers:
Anthropology: L. C. Flemion
Economics: N. C. Clement
Geography: J. D. Blick
Political Science: L. V. Padgett
Spanish: R. D. Weeter

Faculty members in the departments participating in the degree program are listed in the appropriate sections of this bulletin.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN LATIN AMERICAN STUDIES

UPPER DIVISION COURSES

Anthropology
542. (162.) Cultures of South America (3)
543. (163.) Contemporary Latin American Cultures (3)
544. (164.) The West Coast Nations of South America (3)
545. (165.) History of Latin America (3)
546. (166.) Popular Culture and Social Thought (3-3)
547. (167.) Mexican Literature (3-3)
548. (168.) Selected Studies in History (3)

History
551A-551B. (161A-161B) Mexico (3-3)
552A-552B. (162A-162B) History of Brazil (3-3)
553A-553B. (163A-163B) The Caribbean Area (3-3)
554. (164.) The West Coast Nations of South America (3)
555A-555B. (165A-165B) History of Latin America (3)
556. (166.) Mexican Political System (3)
557. (167.) International Relations of the Latin American States (3)

Political Science
566. (194.) Political Change in Latin America (3)
567. (195.) Political Systems of Latin America (3)
568. (196.) The Mexican Political System (3)
570. (197.) International Relations of the Latin American States (3)

Portuguese
535. (135.) Brazilian Literature (3)

Spanish
504A-504B. (104A-104B) Spanish-American Literature (3-3)
515A-515B. (106A-106B) Mexican Literature (3-3)
520. (107.) Caribbean Area Countries Literature (3)
522. (108.) Andean Countries Literature (3)
524. (109.) River Plate Literature (3)
570. (170.) Spanish-American Poetry (3)
571. (171.) Spanish-American Short Story (3)
572. (172.) Spanish-American Theatre (3)
APPLICABLE GRADUATE COURSES

Refer to graduate course descriptions in the sections of this bulletin under the Departments of Anthropology, Economics, Geography, History, Political Science, and Spanish and Portuguese Languages and Literatures.

Anthropology
600. (200.) Seminar (3)
632. (235.) Culture and Society in the Nahua Area (3)
634. (257.) Classical Nahuatl (3)
797. (297.) Research (3)
798. (298.) Special Study (1-3)
799A. (299.) Thesis (3)

Economics
660. (292.) Seminar in International Economics (3)
665. (295.) Seminar in the Economics of Underdeveloped Countries (3)
797. (297.) Research (3)
798. (298.) Special Study (1-3)
799A. (299.) Thesis (3)

Geography
620. (220.) Seminar in Regional Geography (3)
797. (297.) Research (1-3)
798. (298.) Special Study (1-3)
799A. (299.) Thesis (3)

History
640. (244.) Directed Reading in Latin American History (3)
645. (254.) Seminar in Latin American History (3)
797. (297.) Research (3)
798. (298.) Special Study (1-3)
799A. (299.) Thesis (3)

Political Science
655. (280.) Seminar in Comparative Government (3)
661. (282.) Seminar in the Political Systems of the Developing Nations (3)
667. (283.) Seminar in Latin American Political Systems (3)
797. (297.) Research in Political Science (3)
798. (298.) Special Study (1-3)
799A. (299.) Thesis (3)

Spanish
640. (204.) The Spanish-American Novel (3)
650. (205.) The Gaucho Epic (3)
655. (206.) Modernism (3)
660. (209.) The Spanish-American Essay (3)
695. (210.) Contemporary Spanish-American Prose Fiction (3)
750. (250.) Seminar in Spanish-American Literature (3)
755. (255.) Seminar in Spanish-American Culture and Thought (3)
798. (298.) Special Study (1-3)
799A. (299.) Thesis (3)

LINGUISTICS

GENERAL INFORMATION

The Department of Linguistics, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Linguistics. The program, interdisciplinary in nature, is designed to provide systematic advanced training in the field of linguistics, which is increasingly relevant to our humanistic-scientific culture.

ADMISSION TO GRADUATE STUDY

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student must present the Bachelor of Arts degree in Liberal Arts and Sciences at San Diego State University, or its equivalent. A student whose preparation is deemed insufficient by his graduate adviser will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

ADVANCEMENT TO CANDIDACY

All candidates must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, a reading and speaking knowledge of at least one foreign language must be demonstrated prior to advancement to candidacy.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Three of this bulletin, the student must complete at least 30 units of upper division and graduate course work to include the following required courses:

1. Linguistics 621, Phonology; and Linguistics 622, Structure of English.
2. Three units of graduate seminar—Linguistics 795, Seminar in Linguistics.
4. Nine units chosen from Anthropology 510, 511, 604, 640; French 611; German 505, 510, 601, 610, 700; Philosophy 531, 631; Russian 580, 581, 610, 650A, 650B, 680; Spanish 548, 549, 610, 770.
6. At least 15 units, including the thesis, must be from 600- and 700-numbered courses.

All programs will be approved by the graduate adviser.

ASSISTANTSHPs

Graduate teaching assistantships in linguistics are occasionally available to a limited number of qualified students. Application blanks and additional information may be obtained from the chairman of the department.

FACULTY

Chairman, Department of Linguistics: G. F. Drake
Graduate Adviser: G. F. Drake
Professors: Frey, Tidwell
Associate Professors: Donahue, Drake, Seright
Assistant Professors: Elgin, Underhill

6—88010
COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS
IN LINGUISTICS

UPPER DIVISION COURSES

LINGUISTICS

500. (196.) General Linguistics (3)
510. (180.) History of English (3)
520. (181.) Modern English (3)
523. (184.) Phonemics and Morphemics (3)
524. (182.) American Dialectology (3)
550. (185.) Theory and Practice of English as a Second Language (3)
551. (186.) Sociolinguistics (3)
552. (187.) Psycholinguistics (3)

ANTHROPOLOGY

510. (122.) Language in Culture (3)
511. (126.) Field Methods in Linguistics (3)

GERMAN

505. (148.) Applied German Linguistics (3)
510. (150.) German Phonetics (3)

PHILOSOPHY

531. (131.) Philosophy of Language (3)

RUSSIAN

580. (130.) Russian Syntax and Stylistics (3)
581. (131.) Russian Phonology and Morphology (3)

SPANISH

548. (149.) Spanish Linguistics (3)
549. (150.) Phonetics and Phonemics (3)

GRADUATE COURSES

LINGUISTICS

610. (220.) Indo-European (3)
Prerequisite: Anthropology 304 or Linguistics 522.
611. (223.) Old English (3)
Study of Old English phonology, morphology, and syntax.
612. (224.) Middle English (3)
Modern linguistic analyses of the Middle English language; emphasis on the development of historical English dialects.
621. Phonology (3)
Prerequisite: Linguistics 500 or 510 or 520.
Phonetics, phonetic transcription, theories of phonology and phonological description.
622. Structure of English (3)
Prerequisite: Linguistics 500 or 510 or 520.
Advanced study of linguistic theory and its application to the analysis of English.
640. Field Methods in Linguistics (3)
Prerequisite: Three units of linguistics, including some knowledge of phonetic transcription and consent of instructor.
Principles and techniques of linguistic analysis working directly with native informants, including phonemic, grammatical, and syntactic analysis and text collection and interpretation.

641. (221.) Structure of a Non-Indo-European Language (3)
The structure of a non-Indo-European language, to be chosen by the instructor, including grammar, reading of texts, and sessions with a native speaker of the language, if possible.

790. (290.) Bibliography and Methods of Linguistic Research (3)
Prerequisite: Twelve upper division units in linguistics.
Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research, including editorial procedures. Recommended for the first semester of graduate work.

795. (295.) Seminar in Linguistics (3)
Prerequisite: Completion of three units of 600- and 700-numbered courses in the master's program for linguistics.
Research in linguistics, course content varying according to instructor. Maximum credit six units applicable on a master's degree.

798. (298.) Special Study (1-3) Cr/NC
Prerequisite: Consent of staff; to be arranged with department chairman and instructor. Individual study. Maximum credit six units.

799A. (299.) Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the University; also student must be registered in the course when the completed thesis is granted final approval.

ANTHROPOLOGY

604. (204.) Seminar in Linguistics (3)
630. (222.) Historical Linguistics (3)

FRENCH

611. (201.) History of the French Language (3)

GERMAN

601. (201.) History of the German Language (3)
610. (202.) Middle High German (3)
700. (265.) Seminar in Germanic Linguistics (3)

PHILOSOPHY

631. (231.) Seminar in Semantics and Logical Theory (3)

RUSSIAN

610. (201.) History of the Russian Language (3)
650A-650B. (202A-202B.) Old Church Slavic (3-3)
680. (203.) Seminar in Slavic Linguistics (3)

SPANISH

610. (201.) History of the Spanish Language (3)
770. (270.) Applied Spanish Linguistics for Teachers (3)
ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. Students may be admitted to the graduate program in literature in one of three ways.

1. Unconditional Acceptance
   For unconditional acceptance to the graduate program in English and literature students must meet the following requirements:
   a. 24 units of upper division work in English or literature
   b. 2.75 overall on a 4.0 Grade Point Scale
   c. 3.0 grade point average in the English or literature major
   d. 950 on the Graduate Record Examination

2. Conditional Acceptance
   Conditional acceptance will be granted to a candidate who is below requirements in one of the three above grade requirements. A student may be granted conditional acceptance if there is a deficiency in two or more of the above qualifications. A student accepted conditionally must achieve an average of 3.25 in nine units of School of Literature courses. These units must be taken within one calendar year. A student conditionally accepted is limited to 12 units. Any units taken above this quota will not count toward the 30 units for the Master's Degree in English.

3. Unit Deficiencies
   Students who lack 24 units of credit in upper division courses in English and literature will receive conditional acceptance if they meet the requirements of 2.75 overall and 950 on the GRE. After the completion of 24 units in the major student will be given unconditional acceptance if they meet the requirements for unconditional acceptance.

ADVEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a major consisting of at least 24 units in literature from courses listed below as acceptable on master's degree programs, of which at least 18 units must be in 600- or 700-numbered courses, exclusive of thesis.

In addition to the above requirements, the candidate must enroll in English 799A and write a thesis under departmental supervision, must pass an oral examination on his or her general knowledge of literature, and must demonstrate a reading knowledge of a relevant foreign language. A student may meet the foreign language requirement by passing the Graduate School Foreign Language Test (French, German or Spanish), by passing a local examination except German administered by one of the University's foreign language departments, or by achieving a grade of C or better in three units of upper division work in a foreign language literature course taught in the language. French, German or Latin for students planning to go on to advanced graduate study. Details concerning the oral examination are available from the graduate adviser. The student may take this oral examination at any time after being granted classified standing. The student must take this examination before enrollment in English 799A, Thesis by the end of Term II of the summer session and the beginning of the fall semester.
ASSISTANTSHIPS AND SCHOLARSHIPS

Assistant Professors: Aninger, Boe, Borkat, Brown, Butler, DeMarinis, Gervais, Karnath, Kehler, D., Malmsheimer, Rogers, Rush, Sheres, Shojai, Sullivan, Wall, Wheeler

Assistant Professors: Adams, E., Bumpus, Chater, Davis, Farber, Kehler, H., Kohler, McCoy, McLeod, Moramarco, Nelson, Nichols, Patterson, Redding, M., Redding, R., Rother, Savvas, Steihl, Taylor, Thrande, Tunberg

Assistant Professors: Aninger, Boe, Borkat, Brown, Butler, DeMarinis, Gervais, Karnath, Kehler, D., Malmsheimer, Rogers, Rush, Sheres, Shojai, Sullivan, Wall, Wheeler

Other electives (which may be in English) to make up 30-unit master of arts requirement

Total

To be advanced to candidacy in the creative writing program, a student must submit a sample of his or her writing or work in progress for approval as thesis level achievement by a committee of three of the faculty in the creative writing area.

ASSISTANTSHIPS AND SCHOLARSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in English are available to a limited number of qualified students. Application blanks and a sample of his or her writing or work in progress for approval as thesis level achievement by a committee of three of the faculty in the creative writing area.

ASSISTANTSHIPS AND SCHOLARSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in English are available to a limited number of qualified students. Application blanks and a sample of his or her writing or work in progress for approval as thesis level achievement by a committee of three of the faculty in the creative writing area.

ASSISTANTSHIPS AND SCHOLARSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in English are available to a limited number of qualified students. Application blanks and a sample of his or her writing or work in progress for approval as thesis level achievement by a committee of three of the faculty in the creative writing area.

ASSISTANTSHIPS AND SCHOLARSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in English are available to a limited number of qualified students. Application blanks and a sample of his or her writing or work in progress for approval as thesis level achievement by a committee of three of the faculty in the creative writing area.

GRADUATE COURSES

600. (290.) Introduction to Graduate Study (3)
Prerequisite: Twelve upper division units in English
Introduction to research methods and critical approaches common in the graduate study of literature. With attention to basic reference works, scholarly and critical journals, bibliographical techniques, editorial procedures, etc. Recommended for first semester graduate students. Prerequisite to graduate seminars.

610. (234.) Literature of the Middle Ages (3)
Prerequisite: Twelve upper division units in English
Selected works in the literature of the Middle Ages with emphasis on Middle English prose and poetry exclusive of Chaucer.
612. (235.) Renaissance Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the Renaissance.

614. (236.) Restoration and Eighteenth Century Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the late seventeenth and the eighteenth centuries.

616. (237.) Earlier Nineteenth Century Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the early nineteenth century.

617. (238.) Later Nineteenth Century Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the later nineteenth century.

620. (239.) Twentieth Century Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the twentieth century.

625. (233.) American Literature (3)
Prerequisite: Twelve upper division units in English, with courses in American literature strongly recommended.
Selected works of an author, period, or subject in American literature. Maximum credit six units applicable on a master's degree.

630. (243.) Poetry (3)
Prerequisite: Twelve upper division units in English.
Poetry as a literary form.

631. (244.) Fiction (3)
Prerequisite: Twelve upper division units in English.
Fiction as a literary form.

632. (245.) Drama (3)
Prerequisite: Twelve upper division units in English.
The drama as a literary form.

640. (260.) Workshop in Creative Writing (3)
Prerequisite: Consent of instructor and departmental adviser.
Criticism and coaching in the larger forms. Maximum credit six units applicable on a master's degree.

642. (279.) Tutorial in Creative Writing (3)
Prerequisites: Twelve upper division units in English, including at least six units in creative writing.
Individual guidance for advanced writers who wish to work on special projects in creative writing.

700. (291.) Seminar: A Major Author (3)
Prerequisite: An appropriate upper division or graduate level background course, and English 600.
The critical study of a major author, such as Shakespeare, Dickens, Mark Twain. May be repeated with new content. Maximum credit six units applicable on a master's degree.

710. (292.) Seminar: A Cultural Period (3)
Prerequisite: An appropriate upper division or graduate level background course, and English 600.
Advanced study, through its literature, of a cultural period such as the Renaissance, the Enlightenment, the Romantic revolution. May be repeated with new content. Maximum credit six units applicable on a master's degree.

720. (293.) Seminar: Special Topics (3)
Prerequisite: English 600.
Advanced study of such literary problems as Regionalism in America and Continental Influences on British Literature, or such topics as esthetics, the creative process, literary translation, teaching of composition and literature, and others. May be repeated with new content. Maximum credit six units applicable on a master's degree.
MASS COMMUNICATIONS

GENERAL INFORMATION

The Master of Science degree in Mass Communications is an interdisciplinary degree offered by designated faculty members of the departments of Journalism, Psychology, Sociology, Speech Communication, and Telecommunications and Film. It is administered by the Mass Communications Committee.

The program is designed to offer systematic training for students (1) who plan to continue their study in doctoral or other advanced programs in mass communications or in disciplines emphasizing areas of mass communications; (2) who plan a career in secondary or community college teaching; or (3) who seek a broad background for careers in the mass media, business, or government service.

ADMISSION TO THE GRADUATE PROGRAM

Students will be admitted to the graduate program in mass communications only after careful consideration of their qualifications by the Mass Communications Committee. Initial applications must be received prior to March 1 for the fall semester, and November 1 for the spring semester, in order to be considered.

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, a student applying for admission to the graduate program in mass communications must meet the following requirements:

1. A bachelor's degree in journalism, radio-television, advertising, communications, sociology, or psychology.
2. A grade point average of not less than 2.75 overall, and 3.0 in the last 60 units of the undergraduate program.
3. A total score (verbal and quantitative) on the GRE Aptitude Test of 950.

To be considered for admission to the graduate program in mass communications, an applicant must submit the following in addition to the common admissions form:

1. Two copies of all undergraduate transcripts as required by Part Three of this bulletin.
2. Three letters of recommendation, one of which must be from an academic reference and another from an occupational reference.
3. A written personal statement by the applicant discussing background, interests, abilities, and career goals as they apply to the applicant's desire for an advanced degree, and in particular a graduate degree in mass communications.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

In addition to meeting the requirements for the Master of Science degree as described in Part Three of this bulletin, the student must complete a minimum of 30 units from courses listed below as acceptable on master's degree programs. These units must be distributed among three of the departments cooperating in the degree program, with a minimum of 18 units in one department (Department A), and six units each in two other departments (Departments B and C). At least 18 units in the total program must be in graduate-numbered courses, to be distributed among the selected three departments as follows:

| Department A | 12 units |
| Department B | 3 units |
| Department C | 3 units |
| **Total** | **18 units** |

<table>
<thead>
<tr>
<th>Graduate- Numbered Courses</th>
<th>Upper Division for Graduate Credit or Graduate-Numbered Courses</th>
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<tr>
<td>12 units</td>
<td>6 units</td>
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<td>3 units</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>12 units</strong></td>
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A student whose preparation is deemed insufficient by his adviser or by the Mass Communications Committee for graduate level study in his selected A, B, or C department will be given conditionally classified graduate standing. Students with conditionally classified graduate standing will be required to complete specified courses to remove any deficiencies in addition to the minimum of 30 units required for the degree. All such deficiencies must be completed within one year after admission to the graduate program and with a minimum grade average of "B" before the student will be given full classified graduate standing.

Candidates may elect to follow Plan A, requiring a thesis, or Plan B, which requires a comprehensive examination agreed upon by the Mass Communications Committee in lieu of the thesis.

All programs will be approved by the Mass Communications Committee.

MASS COMMUNICATIONS COMMITTEE

H. L. Anderson, Chairman
R. L. Benjamin, Speech Communication
J. K. Buckalew, Journalism
M. M. El-Assal, Sociology

S. W. King, Speech Communication
D. G. Wylie, Telecommunications and Film

F. C. Whitney, Journalism
D. G. Wylie, Telecommunications and Film

ASSOCIATE PROFESSORS: Haberstroh, Whitney
Assistant Professors: Lancaster, Spevak

For faculty members in other departments participating in the degree program (Psychology, Sociology, Speech Communication, and Telecommunications and Film), see the appropriate sections of this bulletin.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN MASS COMMUNICATIONS

UPPER DIVISION COURSES

**Journalism**

500. (121.) Current Problems in Mass Communications (3)
502. (102.) Law of Mass Communications (3)
503. (117.) History of Mass Communications (3)
505. (118.) The Foreign Press (3)
507. (122.) Public Opinion Measurement (3)
508. (123.) Mass Communications and Society (3)
509. (177.) Research Methods in Mass Communications (3)
522. (144.) Reporting of Public Affairs (3)
526. (155.) Advanced Editing Techniques (3)
529. (197.) Investigative Reporting (3)
530. (130.) Current Problems in Mass Communications (3)
545. (145.) Ethics of Communication (3)

**Sociology**

537. (137.) Political Sociology (3)
545. (145.) Sociology of Mass Communication (3)

**Speech Communication**

530. (130.) Semantics (3)
535. (135.) Theories of Human Communication (3)
537. (137.) Empirical Study in Speech Communication (3)
540. (174.) Freedom and Responsibilities of Speech (3)
575. (175.) Intercultural Communication (3)
589. (189.) Ethics of Communication (3)
592. (192.) Persuasion (3)

A student whose preparation is deemed insufficient by his adviser or by the Mass Communications Committee for graduate level study in his selected A, B, or C department will be given conditionally classified graduate standing. Students with conditionally classified graduate standing will be required to complete specified courses to remove any deficiencies in addition to the minimum of 30 units required for the degree. All such deficiencies must be completed within one year after admission to the graduate program and with a minimum grade average of "B" before the student will be given full classified graduate standing.

Candidates may elect to follow Plan A, requiring a thesis, or Plan B, which requires a comprehensive examination agreed upon by the Mass Communications Committee in lieu of the thesis.

All programs will be approved by the Mass Communications Committee.

MASS COMMUNICATIONS COMMITTEE

H. L. Anderson, Chairman
R. L. Benjamin, Speech Communication
J. K. Buckalew, Journalism
M. M. El-Assal, Sociology

S. W. King, Speech Communication
D. G. Wylie, Telecommunications and Film

ASSOCIATE PROFESSORS: Haberstroh, Whitney
Assistant Professors: Lancaster, Spevak

For faculty members in other departments participating in the degree program (Psychology, Sociology, Speech Communication, and Telecommunications and Film), see the appropriate sections of this bulletin.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN MASS COMMUNICATIONS

UPPER DIVISION COURSES

**Journalism**

500. (121.) Current Problems in Mass Communications (3)
502. (102.) Law of Mass Communications (3)
503. (117.) History of Mass Communications (3)
505. (118.) The Foreign Press (3)
507. (122.) Public Opinion Measurement (3)
508. (123.) Mass Communications and Society (3)
509. (177.) Research Methods in Mass Communications (3)
522. (144.) Reporting of Public Affairs (3)
526. (155.) Advanced Editing Techniques (3)
529. (197.) Investigative Reporting (3)
530. (130.) Current Problems in Mass Communications (3)
545. (145.) Ethics of Communication (3)

**Sociology**

537. (137.) Political Sociology (3)
545. (145.) Sociology of Mass Communication (3)

**Speech Communication**

530. (130.) Semantics (3)
535. (135.) Theories of Human Communication (3)
537. (137.) Empirical Study in Speech Communication (3)
540. (174.) Freedom and Responsibilities of Speech (3)
575. (175.) Intercultural Communication (3)
589. (189.) Ethics of Communication (3)
592. (192.) Persuasion (3)

A student whose preparation is deemed insufficient by his adviser or by the Mass Communications Committee for graduate level study in his selected A, B, or C department will be given conditionally classified graduate standing. Students with conditionally classified graduate standing will be required to complete specified courses to remove any deficiencies in addition to the minimum of 30 units required for the degree. All such deficiencies must be completed within one year after admission to the graduate program and with a minimum grade average of "B" before the student will be given full classified graduate standing.

Candidates may elect to follow Plan A, requiring a thesis, or Plan B, which requires a comprehensive examination agreed upon by the Mass Communications Committee in lieu of the thesis.

All programs will be approved by the Mass Communications Committee.
Telecommunications and Film
500. (101.) Broadcast Management (3)
505. (105.) Regulation of Broadcasting (3)
510. (110.) Script Writing for Broadcasting and Film (3)
530. (110.) Radio Programming (3)
540. (103.) Broadcast Advertising (3)
541. (104.) Broadcast Commercial Practices (3)
570. (110.) Educational Broadcasting (3)
580. (183.) Advanced Programming and Development for Television (4)
590. (108.) International Broadcasting (3)

GRADUATE COURSES

Journalism
600. (200.) Scope and Method of Mass Communications (3)
Intensive preparation in methodology applicable to the various fields related to mass media study.

700. (221.) Seminar: Media Problems (3)
Prerequisite: Six units in courses applicable to the Master of Science degree in mass communications, reading, investigation, and research concerning current topics in problems of mass media.

702. (202.) Seminar: Mass Media and the Law (3)
Prerequisite: Journalism 502 or Telecommunications and Film 505, case studies of legal restrictions and guarantees affecting radio, television, motion pictures, advertising, and printed media.

703. (217.) Seminar: History of Journalism (3)
Prerequisite: Journalism 503. Directed research on topics of history of American journalism.

704. (218.) Seminar in International Journalism (3)
Prerequisite: Journalism 505, in-depth exploration of the foreign press and cross-cultural communication; the place of the press in national development and international stability; national images and world opinion; censorship, propaganda and other barriers to international understanding.

707. (222.) Mass Communications and Public Opinion (3)
Prerequisite: Journalism 502 or 509. Analysis of media and their opinion-shaping role; methods and effects of pressure groups; propaganda analysis; creation and perpetuation of images and stereotypes.

708. (262.) Seminar: Mass Communications and Society (3)
Prerequisite: Journalism 508. Rights, responsibilities and characteristics of mass media and mass communications practitioners; characteristics and responsibilities of audiences and society.

740. (240.) Major Projects in Mass Communications (1-6)
Prerequisite: Journalism 500 or Telecommunications and Film 540. Design and execution of an in-depth project in one of these areas: advertising campaign, series of detailed expository articles or news stories, or model public relations campaign. Maximum credit six units.

760. (253) Seminar in Print Advertising Problems (3)
Prerequisite: Journalism 463 or 466. Investigation of the practice, responsibility, and philosophy of advertising in print media with individual projects, cases, and current literature.

782. (283.) Seminar in Public Relations (3)
Prerequisite: Journalism 480. Analysis and critique of contemporary public relations programs and theory. Development of a comprehensive public relations project involving original research.

798. (298.) Special Study (1-3) Cr/NC
Individual study. Maximum credit six units. Prerequisite: Consent of staff; to be arranged with the department chairman and instructor.

799A. (299.) Thesis (3) Cr/NC
Prerequisite: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the University; also student must be registered in the course when the completed thesis is granted final approval.

Psychology
621. (219.) Seminar in Personnel Psychology (3)
622. (220.) Seminar in Organizational Psychology (3)
700. (200.) Seminar (3)
745. (227.) Seminar in Problems in Social Psychology (3)
746. (226.) Seminar in Political Psychology (3)
798. (298.) Special Study (1-3)
799A. (299.) Thesis (3)

Sociology
710. (210.) Seminar in Social Disorganization (3)
720. (220.) Seminar in Social Organization (3)
740. (240.) Seminar in Social Psychology: Sociological Approaches (3)
760. (260.) Seminar in Research Methods (3)
797. (297.) Research (3)
798. (298.) Special Study (3)
799A. (299.) Thesis (3)

Speech Communication
700. (200.) Research and Bibliography (3)
730. (230.) Seminar in Analysis of Language (3)
735. (235.) Seminar in Communication Theory (3)
790. (290.) Experimental Procedures in Speech Communication (3)
792. (292.) Seminar in Persuasion (3)
798. (298.) Special Study (1-3) Cr/NC
799A. (299.) Thesis or Project (3) Cr/NC

Telescommunications and Film
600. (200.) Research and Bibliography (3)
601. (205.) Mass Communications Research (3)
602. (272.) Seminar in Mass Communication Theory (3)
603. (273.) Mass Communications Message Design (3)
610. (210.) Seminar in Writing for Broadcast and Film (3)
615. (212.) Criticism of Broadcasting and Cinema (3)
620. (203.) Seminar in History of Broadcasting (3)
640. (202.) Seminar in Broadcast Advertising Problems (3)
670. (270.) Seminar in Educational Telecommunications (3)
680. (284.) Seminar in Programming and Production (3)
700. (203.) Seminar in Broadcast Management (3)
798. (298.) Special Study (1-3) Cr/NC
799A. (299.) Thesis or Project (3) Cr/NC
MATHEMATICS

GENERAL INFORMATION
The Department of Mathematics, in the College of Sciences, offers graduate study leading to the Master of Arts degree in Mathematics, to the Master of Arts degree for teaching service with a concentration in Mathematics, to the Master of Science degree in Mathematics, to the Master of Science degree in Statistics, and to the Master of Science degree in Computer Science.

The Master of Arts degree in Mathematics is considered to be the basic academic degree in Mathematics. A candidate of the Master of Science degree is expected to concentrate his efforts in a technical area of mathematics. Within these limitations either degree can be considered as a stepping stone to a more advanced degree, if the student so desires.

ADMISSION TO GRADUATE STUDY
All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, the student must have passed a qualifying examination in his area.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE IN MATHEMATICS
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program consisting of at least 24 units in mathematics from courses listed below as acceptable on master's degree programs. At least 15 units must be in 600- and 700-numbered courses in mathematics, exclusive of Mathematics 600, 601, 602A, 602B, and 799A.

To satisfy the foreign language requirement either the student may present evidence that he has completed French 201, German 203, Russian 203, or Spanish 203, or their equivalent, with a grade of "C" or better, or the student may demonstrate a reading knowledge of French, German, Russian, or Spanish.

The student is required to pass the departmental comprehensive examinations in mathematics. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE FOR TEACHING SERVICE
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a concentration consisting of at least 24 units in mathematics selected from courses listed below as acceptable on master's degree programs in mathematics. The student's program must include at least 15 units in 600- and 700-numbered courses of which at least 12 units must be in 600- and 700-numbered courses in mathematics. The student is required to pass the departmental comprehensive examinations in mathematics. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE IN MATHEMATICS
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes at least 24 units in mathematics selected from courses listed below as acceptable on a master's degree program in mathematics, exclusive of Mathematics 600, 601, 602A, 602B, and 799A. The student is required to pass the departmental comprehensive examinations in mathematics. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE IN COMPUTER SCIENCE
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must meet the following departmental requirements:

1. Complete 15 units of 600- and 700-numbered courses, including:
   a. Twelve units from any two of the following year-course sequences:
      Mathematics 690A and 690B
      Mathematics 691A and 691B
      Mathematics 692A and 692B
      Mathematics 693A and 693B
   b. Three units of Mathematics 797

2. Complete nine additional units of graduate level or approved upper division mathematics courses, not including Mathematics 799A.

3. Complete six units of approved electives.

4. Pass two written examinations as determined by the department.

5. Pass a final oral examination. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE IN STATISTICS
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must meet the following departmental requirements:

1. Complete 18 units of 600- and 700-numbered mathematics courses including:
   a. Mathematics 670A and 670B.
   b. Six units selected from Mathematics 671, 672, 673, 674, 675, 676, and 677.
   c. Six units of other 600- and 700-numbered mathematics courses, except that Mathematics 660, 662A, 662B, and 799A may not be used to fulfill these units required.

2. Complete six additional units of graduate level or approved upper division mathematics courses, not including Mathematics 799A.

3. Complete six units of approved electives.

4. Pass the departmental comprehensive examinations in mathematical statistics. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed.

ASSISTANTSHIPS
Graduate teaching assistantships in mathematics are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY
Chairman, Department of Mathematics: E. I. Deaton
Graduate Advisers: Master of Arts in Mathematics, E. J. Howard; Master of Arts in Mathematics, R. A. Hager; Master of Science in Statistics, D. W. Macky; Master of Science in Computer Science, C. F. Eckberg.

Credentialed Adviser: T. P. Carpenter

Professors: Becker, Bruns, Bray, Burton, Deaton, Drob, Foss, Garrison, Ginder, Harris, Harvey, Ho, Holm, More, Nig, Saltz, Shaw, Smith, Van de Wetering, Willeland.

Associate Professors: Bryant, Burdick, Davis, Eckberg, Elwin, Hager, Howard, Kopf, Lesley, Lopez, Macky, Marcus, Marosz, Nowak, Romano, Ross, Short, Villone, Whitman.

Assistant Professors: Baase, Carpenter, Flanagan, Herndon, Hintzman, Korevaar, McLeod, Park, Salomon, Self, Vinge.
COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN COMPUTER SCIENCE, MATHEMATICS, AND STATISTICS

UPPER DIVISION COURSES

510. (105) Introduction to the Foundations of Geometry (3)
511. (106) Projective Geometry (3)
512. (107) Non-Euclidean Geometry (3)
513. (108) Differential Geometry (3)
520. (149) Linear Algebra (3)
521A-521B. (130A-130B) Modern Algebra (3)
522. (152) Number Theory (3)
523. (155) Mathematical Logic (3)
524. (156) Logical Foundations of Mathematics (3)
530. (119) Differential Equations (3)
531. (170) Partial Differential Equations (3)
532. (175) Functions of a Complex Variable (3)
533. (174) Vector Analysis (3)
534A. (127A) Advanced Calculus I (3)
534B. (127B) Advanced Calculus II (3)
535. (160) Introduction to Topology (3)
540A. (115) Numerical Analysis and Computation (3)
541B. (135B) Numerical Analysis and Computation (3)
544A. (112A) Advanced Calculus I (3)
544B. (112B) Advanced Calculus II (3)
548. (163) Computer Oriented Statistical Analysis (3)
550. (134) Probability (3)
551A. (140A) Mathematical Statistics (3)
551B. (140B) Mathematical Statistics (3)
552. (147) Statistics, Theory and Applications (3)
553. (143) Stochastic Processes (3)
557. Systems Programming (3)
570. (136) Finite Mathematics, with Computer Applications (3)
571. (137) Automata Theory (3)
574. (157) Machines and Recursive Functions (3)
575. (176) Compiler Construction (3)
576. (177) Artificial Intelligence (3)
577. Probability and Statistics (3)
578. Algorithms and Their Analysis (3)
579. Combinatorics (3)
596. (166) Advanced Topics in Mathematics (1-3)

GRADUATE COURSES

600. (202) Geometrical Systems (3)
601. (203) Topics in Algebra (3)
602A-602B. (204A-204B) Topics in Analysis (3-3)

620. (230) Rings and Ideals (3)
621. (231) Theory of Groups (3)
622. (232) Theory of Fields (3)
623. (233) Linear Algebra and Matrix Theory (3)

FUNCTIONS OF A REAL VARIABLE

630A-630B. (226A-226B) Functions of a Real Variable (3-3)
631A-631B. (224A-224B) Functions of a Complex Variable (3-3)
632. (211) Advanced Ordinary Differential Equations (3)
633A-633B. (212A-212B) Topology (3-3)
634. (212) Advanced Ordinary Differential Equations (3)

PROBABILITY AND STATISTICS


671. (214) Advanced Partial Differential Equations (3)
672. (212) Nonparametric Statistics (3)
673. (213) Sample Surveys (3)

Mathematics
674. (244.) Multivariate Analysis (3)  
Prerequisites: Mathematics 520 and 551B.  
Multivariate normal distributions, multivariate analysis of variance, factor analysis, canonical correlation.

675. (245.) Linear Statistical Hypothesis Testing (3)  
Prerequisites: Mathematics 520 and 551A.  
The multivariate normal distribution; distribution of quadratic forms; linear and curvilinear models; general linear hypotheses of full rank, regression models.

676. (246.) Statistical Decision Theory and Applications (3)  
Prerequisites: Mathematics 534A and 551B.  
Sequential and nonsequential decision methods, complete classes of decision functions, admissible decision functions, adaptive control systems, stochastic stability and control.

677. (247.) Design of Experiments (3)  
Prerequisites: Mathematics 520 and 551A.  
Experimental design models; a basic approach as well as a matrix algebra approach.

690A-690B. (260A-260B.) Theory of Computability (3-3)  
Prerequisites: Mathematics 523 or 571 and 574.  

691A-691B. (265A-265B.) Formal Languages and Syntactic Analysis (3-3)  
Prerequisites: Mathematics 570, 572 and 573 or 574.  
Definition of formal grammars; arithmetic expressions and precedence grammars, context-free and finite-state grammars. Algorithms for syntactic analysis. Relationship between formal languages and automata.

Prerequisites: Mathematics 570 and 572.  
Topics to include computer architecture, operating systems, I/O hardware and software, translators. Selected applications such as simulation, computer graphics, CAI are additional optional topics.

693A. (270A.) Advanced Numerical Analysis (3)  
Prerequisites: Mathematics 520 and 541B.  

693B. (270B.) Advanced Numerical Analysis (3)  
Prerequisite: Mathematics 693A.  
Polynomial approximation (least squares approximation, orthogonal polynomials, Chebyshev polynomials, trigonometric approximation), numerical solution of partial differential equations.

700. (206.) Applications of Computer Science (3)  
Prerequisite: Classified graduate standing in mathematics of computer science.  
Topic to be chosen from such applications as theorem proving simulation, learning theory, graphics, definition languages. Maximum credit six units applicable on a master's degree.

720. (200.) Seminar (1-3)  
Prerequisite: Consent of instructor.  
An intensive study in advanced mathematics. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

797. (297.) Research (1-3) Cr/NC  
Prerequisite: Six units of graduate level mathematics.  
Research in one of the fields of mathematics. Maximum credit six units applicable on a master's degree.

798. (298.) Special Study (1-3) Cr/NC  
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.  
Individual study. Maximum credit six units.

799A. (299.) Thesis or Project (3) Cr/NC  
Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC  
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.
COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS
IN MICROBIOLOGY

UPPER DIVISION COURSES

Biology
519. (175) Statistical Methods in Biology (3)
520. (110) Ecology (4)
530. (111) Limnology (4)
531. (113) Biological Oceanography (4)
535. (121) Systems Ecology (5)
540. (155) Genetics (4)
545. (157) Cytogenetics (4)
546. (171) Mutagenesis (3)
547. (163) Microbial Genetics (3)
560. (101) Cell Physiology (4)
561. (181) Advanced Cellular Physiology (3)
564. (144) Comparative Endocrinology (3)
564L. (144L) Comparative Endocrinology Laboratory (2)
566. (148) Photophysiology (3)
566L. (148L) Photophysiology Laboratory (1)
568. (182) Immunology (3)
568L. (182L) Immunology Laboratory (1)
570. (150) Radiation Biology (3)
570L. (150L) Radiation Biology Laboratory (2)
571. (157) Radioisotope Techniques in Biology (3)

Botany
501. (101) Botany (4)
502. (102) Mycology (4)

Chemistry
501. (180) Chemical Oceanography (3)
550. (155) Advanced Instrumental Methods (4)
570. (170) Radiochemistry (3)

Microbiology
510. (115) Advanced General Microbiology (4)
515. (114) Bacterial and Viral Genetics (2)
515L. (114L) Bacterial and Viral Genetics Laboratory (2)
520. (102) Pathogenic Bacteriology (4)
525. (104) Medical Mycology (4)
530. (109) Hematology (4)
535. (107) General Virology (2)
535L. (107L) General Virology Laboratory (2)
560. (116) Marine Microbiology (2)
560L. Marine Microbiology Laboratory (2)
570. (130) Experimental Immunology (4)
580. (120) Animal Viruses (4)
590. (180) Electron Microscopy (4)

Zoology
508. (108) Histology (4)
521. (121) General Entomology (4)
522. (122) Special Topics in Entomology (3)
526. (126) Medical Entomology (3)
535. (128) Parasitology (4)
GRADUATE COURSES

**Biology**
- 640. (270.) Seminar in Genetics (2)
- 651. (376.) Physiological Genetics (3)
- 670. (662.) Cytoplasmic Inheritance (3)
- 672. (665.) Molecular Biophysics (3)

**Botany**
- 601. (201.) Seminar in Phycology (2)
- 602. (202.) Seminar in Mycology (2)

**Microbiology**
- 600. (200.) Seminar (2 or 3)
- 610. (240.) Seminar in General Microbiology (2)
- 620. (265.) Seminar in Microbial Physiology (2)
- 630. (260.) Seminar in Immunology and Serology (2)
- 640. (215.) Seminar in Bacterial and Viral Genetics (2)
- 650. (210.) Seminar in Pathogenic Bacteriology (2)
- 660. (230.) Seminar in Medical Mycology (2)
- 670. (250.) Seminar in Virology (2)
- 680. (245.) Seminar in Aquatic Microbiology (2)
- 720. (272.) Advanced Pathogenic Bacteriology (3)
- 725. (270.) Biology of Animal Pathogenic Fungi (3)
- 790. (290.) Bibliography (1)
- 791. (291.) Research Techniques (3)
- 797. (297.) Research (1-3) Cr/NC
- 798. (298.) Special Study (1-3) Cr/NC
- 799A. (299.) Thesis or Project (3) Cr/NC
- 799B. Thesis or Project Extension (0) Cr/NC

Refer to the Biological Sciences section of this bulletin for the descriptions of the courses applicable to the Master of Science degree program in Microbiology.

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**MUSIC**

**GENERAL INFORMATION**

The Department of Music, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Music. The department is a member of the National Association of Schools of Music.

With the approval of the department, students may select courses emphasizing one of the following areas:
- Composition
- Musicology
- Music History and Literature
- Music Education
- Performance
- Theory

**ADMISSION TO GRADUATE STUDY**

Application Procedure:
1. As a part of the application for admission to the University, applicants will submit a one-page statement to set forth aims and goals in their graduate studies.
2. Applicants who plan to emphasize music education will be required to provide evidence of successful teaching experience or submit letters from two master teachers or supervisors of practice teaching.
3. Applicants admitted to the department will be accepted with conditional graduate standing. Placement examinations will be administered in music history, music theory, and performance studies. Normally two semesters will be allowed to remove deficiencies indicated by the examinations through no-credit remedial work in the form of undergraduate courses or other projects and instruction.

In addition to the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, a student must satisfy the following requirements before he or she will be recommended for classified graduate standing:
1. Complete a bachelor's degree with a major in music including full preparation in theory, literature and performance.
2. Satisfactorily complete placement examinations in theory, music history and literature, and performance. Details may be obtained from the Department of Music.
3. Be accepted in the emphasis of his or her choice by the departmental graduate committee.

**ADVANCEMENT TO CANDIDACY**

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

**SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a major consisting of at least 24 units from courses listed below as acceptable on master's degree programs in music, of which at least 16 must be in 600- and 700-numbered courses.

Plan A is required of those students whose emphasis is in musicology, music history and literature, theory, and music education, in which case the student is required to enroll in Music 690 and 799A. Thesis, and to pass a final oral examination on the thesis. Students electing the composition emphasis will be required to enroll in Music 799A and to submit an original composition in the form of a project.

Students whose emphasis is in performance may elect Plan B, and in lieu of the comprehensive examination, choose to give a full recital, or a lecture-recital with a supporting document in thesis form, which is presented to the Department of Music. Students should check the department's guidelines, rules and procedures.
SCHOLARSHIPS
Information on music scholarships may be obtained by writing to the Chairman, Music Scholarship Committee, Music Department, San Diego State University.

FACULTY
Chairman, Department of Music: J. D. Smith
Graduate Adviser: J. D. Smith
Credential Advisers: E. Savage, J. D. Smith
Professors: Anderson, Biggs, Blyth, Bruderer, Brunson, Estes, Forman, Genzlinger, Hogg, Hurd, Lambert, Macek, Rost, Savage, Sheldon, Smith, Snider, Ward-Steinman
Associate Professors: Almond, Loomis, Meadows, Mitchell, Moe, Rohlfleisch, Yates
Assistant Professors: Fly, Hill, Logan, Murphy

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS
IN MUSIC

UPPER DIVISION COURSES

600. (200.) Seminar in Music Education (3)
Prerequisite: Consent of instructor.
Seminars in music education are offered to provide an opportunity for concentrated study in the several areas listed.
A. Development and Teaching of Strings
B. Choral and Vocal Techniques
C. General Music

601. (201.) Foundations of Music Education (3)
History and philosophy of music education in relation to current trends in the teaching of music.

602. (202.) Administration and Supervision of Music Education (3)
Curriculum, scheduling, finance, human relations, organizational aspects, and the role of the supervisor-consultant.

604. (204.) Comparative Music Education (3)
Various international philosophical and technical approaches to teaching music to include the Orif, Kodaly, Suzuki and other systems.

607. (207.) Composition (2-3)
Three hours of laboratory and public performance of an extended original work as a project.
Prerequisite: Music 507.
Advanced composition for various media, development of original idiom, intensive study of modern music.

608. (208.) History and Development of Music Theory (3)
Prerequisite: Music 552B.
Survey of important theoretical approaches to music, from pre-Socratic writers to the present.

609. (209.) Advanced Orchestration (2)
Intensive work in the practical scoring for ensemble, full orchestra, and symphonic band. Score analysis. Selected works of the class members will be performed.

611. (211.) Analytical Studies of Music (3)
Melodic, formal, contrapuntal and harmonic analysis of music.

613. (213.) Seminar: Music Theory (3)
Principles of traditional harmony and ear training.

614. (214.) Electronic Music (3)
Prerequisite: Undergraduate concentration in composition.
Theory, techniques and composition of various kinds of electronic music.

648A. (246A.) Advanced Choral Conducting (2)
Prerequisite: Music 448A.
Course designed to develop skills at professional level; study of different styles of choral literature and their relationship to conductor's art; score analysis and experience in conducting.

648B. (246B.) Advanced Instrumental Conducting (2)
Prerequisite: Music 449A.
Course designed to develop skills at professional level; study of conducting style as related to band and orchestra literature; score analysis and experience in conducting.

650. (250.) Advanced Performance Studies (2)
Fifteen one-hour private lessons.
Prerequisite: Audition before music faculty.
Advanced studies in technical, stylistic and aesthetic elements of artistic performance culminating in a graduate recital. Maximum credit four units applicable on a master's degree.
A. Piano
B. Harpsichord
C. Organ
D. Voice
E. Flute
F. Oboe
G. Clarinet
H. Saxophone
I. Horn
J. Bassoon
K. French Horn
L. Trumpet
M. Trombone
N. Baritone Horn
O. Tuba
P. Percussion
Q. Violin
R. Viola
S. Cello
T. Contrabass
U. Harp
V. Classical Guitar
X. Classical Accordion
Y. Composition

652. (252.) Seminar in Music History (3)
Prerequisites: Music 552B and consent of instructor.
Seminars in music history are offered for intensive study in each of the historical eras as listed below.
A. Music of the Middle Ages and Renaissance
B. Music of the Baroque Era
C. Music of the 18th and 19th Centuries
D. Twentieth Century Music
E. American Music

655. (255.) Musicology (3)
Prerequisite: Music 552B.
Principles of musicology. Projects in bibliography, source materials, and methodology related to the music history, criticism, aesthetics and related fields.

665. (265.) Seminar in the Notation of Polyphonic Music (3)
Prerequisite: Music 552B.
Completion of Music 652A is recommended.
Problems related to the notation of Medieval, Renaissance and Baroque music.

666. (266.) Seminar: A Major Composer (3)
Prerequisite: Music 552B.
Completion of a seminar in Music 652A is recommended.
The life, milieu and works of a major composer, such as Bach, Mozart or Schubert will be studied. Maximum credit six units applicable on a master's degree.

670. (270.) Seminar: Interpretation of Early Music (3)
Prerequisites: Completion of Music 652A and 652B is recommended.
Performance practice in Medieval, Renaissance and Baroque music; projects in music performance practice in Medieval, Renaissance and Baroque music.

690. (290.) Research Procedures in Music (3)
Reference materials, bibliography, investigation of current research in music, processes of thesis topic selection and techniques of scholarly writing.
**798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study. Maximum credit six units.

**799A. Thesis or Project (3) Cr/NC**
Prerequisite: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for a master's degree.
Maximum credit six units.

**799B. Thesis or Project (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

**PHILOSOPHY**

**GENERAL INFORMATION**

The Department of Philosophy, in the College of Arts and Letters, offers a program of graduate studies leading to the Master of Arts degree in Philosophy. This curriculum is designed to provide advanced study in the field of philosophy as a basis for further graduate work and to meet the needs of students who plan to teach in colleges or hold other positions of leadership.

**ADMISSION TO GRADUATE STUDY**

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Three of this bulletin. Students may be admitted to the graduate program in philosophy with classified graduate standing in one of three ways.

1. Admission with classified graduate standing requires:
   a. An undergraduate major in philosophy or a minimum of 24 units of upper division work in philosophy;
   b. A minimum GPA of 2.5 (on a 4-point scale) in the last 60 units attempted;
   c. A minimum GPA of 3.0 in upper division work in philosophy.

2. Admission with conditional classified graduate standing requires either:
   a. Twelve units of upper division work in philosophy and satisfaction of the remaining requirements, 1.b and 1.c;
   b. Satisfaction of 1.a and either 1.b or 1.c.

Students admitted under 2.a acquire classified graduate standing by completing sufficient units of upper division work in philosophy to yield a total, with previous work, of at least 24 units. Units earned to complete this undergraduate requirement do not fulfill unit requirements for the master's degree. A minimum GPA of 3.0 is required for all units attempted after admission.

Students admitted under 2.b acquire classified graduate standing by completing at least 12 units of work in philosophy with a minimum GPA of 3.0 for all units attempted after admission. Units to complete this requirement earned in courses acceptable on master's degree programs in philosophy may fulfill unit requirements for the Master of Arts degree.

3. Admission with unclassified postbaccalaureate standing.
Students admitted to the university with unclassified postbaccalaureate standing in philosophy may acquire classified graduate standing in philosophy at San Diego State University, or their equivalent.

**SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program to include a minimum of 24 units in philosophy from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses, including Philosophy 799A. Thesis. Philosophy 798 may not be used to fulfill this 15-unit requirement. The remaining electives (six units) must be selected with the approval of the adviser from courses in philosophy, in related disciplines, or in courses required for the community college credential.
FACULTY

Chairman, Department of Philosophy: S. N. Weissman
Graduate Adviser: P. O’Reilly
Professor: Crawford, Friedman, Howard, Koppelman, McClurg, Nelson, O’Reilly, Ruja,
Schilder, Snyder, Warren, Weissman
Associate Professors: Carella, Feeney, Lauer, Rosenstein, Troxell
Assistant Professor: Weston

COURSES ACCEPTABLE ON MASTER’S DEGREE PROGRAMS

UPPER DIVISION COURSES

503. 003. Philosophy and Language Analysis (3)
510. 110. Philosophy of Law (3)
511. 111. Political Philosophy (3)
521. 211. Deductive Logic (3)
522. 212. Inductive Logic (3)
523. 213. Theory of Knowledge (3)
525. 215. Metaphysics (3)
527. 217. Values and Social Science (3)
528. 218. Theory of Ethics (3)
531. 311. Philosophy of Language (3)
532. 312. Philosophy of History (3)
533. 313. Philosophy of Education (3)
535. 315. Philosophy of Religion (3)
537. 317. Philosophy of Science (3)
541. 411. History of Aesthetics (3)
542. 412. Philosophy of Art (3)
564. 641. American Philosophy (3)
575. 751. A Major Philosopher (3)
595. 951. Selected Topics (3)
596. 961. Topics in Asian Thought (3)

GRADUATE COURSES

601. 201. Seminar in Ancient Philosophy (3)
Prerequisite: Twelve upper division units in philosophy including Philosophy 301.
Directed research in a major author (e.g., Plato or Aristotle), or a school (e.g., the
Pythagoreans or the Stoics), or a problem (e.g., causation or the state). Maximum credit
six units applicable on a master's degree.

602. 202. Seminar in Medieval Philosophy (3)
Prerequisite: Twelve upper division units in philosophy including Philosophy 302.
Directed research in a major author (e.g., Augustine or Aquinas), or a school (e.g.,
neo-Aristotelianism), or a problem (e.g., political philosophy or reason and authority).
Maximum credit six units applicable on a master's degree.

603. 203. Seminar in Modern Philosophy (3)
Prerequisite: Twelve upper division units in philosophy including Philosophy 303.
Directed research in a major author (e.g., Hume or Kant), or a school (e.g.,
continental rationalists or the British empiricists), or a problem (e.g., the nature of
substance). Maximum credit six units applicable on a master's degree.

605. 205. Seminar in Contemporary Philosophy (3)
Prerequisite: Twelve upper division units in philosophy including Philosophy 505A or
505B.
Directed research in a major author (e.g., Dewey or Wittgenstein), or a school (e.g.,
the pragmatists or the language analyst), or a problem (e.g., perception or personhood).
Maximum credit six units applicable on a master's degree.

611. 211. Seminar in Legal Philosophy (3)
Prerequisite: Twelve upper division units in philosophy.
Directed research in recurrent themes of philosophical significance in jurisprudential
literature.

612. 212. Seminar in Political Philosophy (3)
Prerequisite: Twelve upper division units in philosophy.
Directed research in a major problem in political philosophy or the work of a major
political philosopher.

621. 221. Seminar in Deductive Logic (3)
Prerequisite: Twelve upper division units in philosophy including Philosophy 521.
A comparison of deductive systems in logic. Problems of definability, consistency and
completeness. The role of logic in the foundations of mathematics.

623. 223. Seminar in Epistemology (3)
Prerequisite: Twelve upper division units in philosophy.
Basic problems concerning meaning, perception and knowledge.

625. 225. Seminar in Metaphysics (3)
Prerequisite: Twelve upper division units in philosophy.
An inquiry into the search for significant qualities of reality.

628. 228. Seminar in Ethics (3)
Prerequisite: Twelve upper division units in philosophy.
Contemporary ethical issues. Critical analysis of the works of some leading theorists,
such as Moore, Dewey, Stevenson and Toulmin.

631. 231. Seminar in Semantics and Logical Theory (3)
Prerequisite: Twelve upper division units in philosophy including Philosophy 521 and
531.
Contemporary issues in the foundations of logic and theories of language.

633. 233. Seminar in Philosophy of Religion (3)
Prerequisite: Twelve upper division units in philosophy including Philosophy 533.
A philosophical investigation of the nature of religious thought: its structure, growth
and significance.

635. 235. Seminar in Philosophy of Science (3)
Prerequisite: Twelve upper division units in philosophy including Philosophy 535.
An analysis, criticism and comparative study of selected philosophies of art.

637. 237. Seminar in Philosophy of Science (3)
Prerequisite: Twelve upper division units in philosophy including Philosophy 522 and
537.
The methodology of the empirical sciences. The logical structure of science.

795. 295. Seminar in Selected Topics (3)
Prerequisite: Twelve upper division units in philosophy.
Directed research in a major problem or movement in philosophy. Maximum credit
six units applicable on a master’s degree.

798. 298. Special Study (1-3) Cr/NC
Individual study. Maximum credit six units.
Prerequisites: Twelve upper division units in philosophy and consent of staff; to be
arranged with department chairman and instructor.

799. 299. Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to
 candidacy.
Preparation of a project or thesis for the master’s degree.

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Individual study. Maximum credit six units.
Prerequisites: Twelve upper division units in philosophy and consent of staff; to be
arranged with department chairman and instructor.

799A. Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to
 candidacy.
Preparation of a project or thesis for the master’s degree.

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Individual study. Maximum credit six units.
Prerequisites: Twelve upper division units in philosophy and consent of staff; to be
arranged with department chairman and instructor.

799A in which the student expects to use the facilities and resources of the university;
also student must be registered in the course when the completed thesis is granted final
approval.
PHYSICAL EDUCATION

GENERAL INFORMATION

The Department of Physical Education, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Physical Education.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree, described in Part Three of this bulletin. The 30-unit program includes a minimum of 21 units in physical education selected from courses listed in this bulletin as acceptable on master's degree programs, of which at least 18 units must be in 600- and 700-numbered courses. Physical Education 791, Research Techniques, and either Physical Education 799A, Thesis (Plan A), or Physical Education 795, Seminar (Plan B), are required. Students electing Plan B must pass a final written comprehensive examination in his area of specialization. Each candidate will be required to complete an area of specialization after consulting the graduate adviser.

ASSISTANTSHIPS

Graduate teaching assistantships in physical education are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY

Chairman, Department of Physical Education: R. W. Wells
Graduate Adviser: P. Governali

Professors: Andrus, Benton, Carter, Cullen, Fox, Governali, Howell, Kasch, Lockman, Murphy, Olsen, A., Olsen, L, Phillips, Schutte, Scott, Ziegenfuss

Associate Professors: Barone, Broadbent, Cave, Franz, Friedman, Moore, Selder, Sucec, Wells, Williamson

Assistant Professors: Gutowski, Holleyfield, Lamke, Landis, Quinn, Smith, Whitby, Wilhelm, Willis

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PHYSICAL EDUCATION

UPPER DIVISION COURSES

554A-554B. (754A-754B) Problems in Dance (2-2)
555A-555B. (755A-755B) Choreography in Contemporary Dance (3-3)
556. (756) History and Philosophy of Dance (2)
560. (760) Applied Anatomy and Kinesiology (3)
561. (761) Physiology of Exercise (3)
563. (763) Biomechanics of Human Movement (2)
565. (765) Prevention and Rehabilitation of Injuries to Athletes (2)
567. (767) Adapted and Special Physical Education (2)
570. (770) Psychological Bases of Physical Education (3)
585. (785) Measurement and Evaluation in Physical Education (3)

GRADUATE COURSES

600. (200) Seminar (3)
An intensive study in advanced physical education. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

604. (204) Problems in Recreation (3)
Same course as Recreation 604.
Current problems facing the recreation profession, through a review of literature. Current discussion of trends, and observation of school and community situations. Analysis of evaluation of actual problems. Written reports required.

631. (206) Seminar in Competitive Athletics (3)
Prerequisite: Major or minor in physical education or recreation.
Knowledge and appreciation of the skills, techniques and teaching methods involved in the coaching of athletics; the study of possible solutions to problems associated with the program of competitive school athletics.

660. (207) Advanced Kinesiology and Biomechanics (3)
Prerequisite: Physical Education 560.

661. (208) Advanced Physiology of Exercise (3)
Prerequisites: Physical Education 560 and 561.

662. (223) Advanced Exercise Physiology Laboratory (3)
Nine hours of laboratory.
Prerequisite: Physical Education 567.
A laboratory course designed to develop competency in respiratory metabolism. Experience in the pulmonary function; gas analysis; blood chemistry and ergometry. Examination and interpretation of exercise procedures with human subjects and analysis of results.

663. (221) Exercise Electrocardiography (3)
Principles of resting and exercise electrocardiography with emphasis on ergonomic methods and application to exercise physiology.

666. (227) Fitness of Adults (3)
One lecture and six hours of laboratory.
Prerequisite: Physical Education 567.
An understanding of the evaluation, exercise prescription and training of adults. An understanding of the underlying hypokinetic diseases of adults and the procedures used in coping with the associated health problems of an automated environment.

667. (269) Advanced Adapted Activities (3)
Prerequisite: Physical Education 567.

668. (220) Principles of Neuromuscular Tension (3)
Prerequisite: Physical Education 567.
Theories underlying the causes of muscular hypertension and the application of hypokinetic principles in daily living.

670. (261) Seminar in Motor Learning and Motor Performance (3)
Prerequisite: Physical Education 570.
A review of research in physical education and related fields plus experimental laboratory experiences in motor learning.

674. (215) Philosophical Foundations for Physical Education (3)
Major philosophies and their application in physical education.

675. (203) History of Physical Education (3)
Historical forces guiding the development of physical education from ancient to modern times.
PHYSICAL SCIENCES

GENERAL INFORMATION

The Department of Physical Sciences, in the College of Sciences, offers graduate study leading to the Master of Arts degree for teaching service in the Physical Sciences with a concentration in astronomy, chemistry, geology, and physics. This curriculum is designed specifically for prospective teachers in the fields of the physical sciences.

ADMISSION TO GRADUATE STUDY

All applicants for the degree must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Three of this bulletin. In addition, the undergraduate preparation in the physical sciences must have substantially satisfied the undergraduate requirements for the bachelor's degree in the physical sciences. (Refer to the general catalog for a description of this major.) If the physical sciences. (Refer to the general catalog for a description of this major.) If the student's undergraduate preparation is deficient, he will be required to take courses for the removal of the deficiency. These courses, taken by the student as an unclassified postbaccalaureate student, are in addition to the minimum of 30 units for the master's degree.

Attention is called to the status of an unclassified postbaccalaureate student as described in Part Three of this bulletin. An unclassified postbaccalaureate student is not eligible to enroll in 600- and 700-numbered courses, except with permission of the instructor and concurrence of the Dean of the Graduate Division. All credit earned by an unclassified postbaccalaureate student is subject to evaluation as to its acceptance for graduate credit in a master's degree curriculum.

ADVANCEMENT TO CANDIDACY

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

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

FOR TEACHING SERVICE

In addition to meeting the requirements for admission to the University with classified graduate standing, and the basic requirements for the master of arts degree, as described in Part Three of this bulletin, the student must complete a program of 30 units, of which at least 15 must be in 600- and 700-numbered courses. A minimum of 18 units must be with at least six units in each of two fields. Of the 18 units, six units must be 600- and 700-numbered courses. The program must be approved by the Coordinator of Science Education. With the approval of the adviser, the student may select Plan A or Plan B. If Plan B is selected, the department will require a comprehensive examination in lieu of the thesis.

ASSISTANTSHIPS

Graduate teaching assistantships in physical science are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY

Chairman, Department of Physical Science: C. M. Shull
Graduate Adviser: N. F. Dessel
Coordinator of Science Education: N. F. Dessel
Professors: Dessel, Merzbacher, Shull
Associate Professors: Feher, Ingmanson, Metzger, Springer, Wallace
Assistant Professors: Dowler, May, Phleger

Faculty members in the Departments of Astronomy, Chemistry, Geology, and Physics are listed in the appropriate sections of this bulletin.

7-88010
COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN THE PHYSICAL SCIENCES

With the approval of the department Graduate Committee, 500-, 600- and 700-numbered courses offered in the College of Sciences and in the School of Engineering may be used to satisfy the requirements for the degree.

GRADUATE COURSES

700. (200) Seminar (2 or 3) An intensive study in advanced physical science, topical to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

710. (210) Advanced Topics in Physical Science (3) I, II
Prerequisite: Undergraduate major or minor in one of the physical sciences. Selected topics in classical and modern physical science. Topics covered in a particular semester to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

758. (298) Special Study (1-3) Cr/NC
Individual study. Maximum credit six units.
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.

798A. (299) Thesis or Project (3) Cr/NC
Prerequisite: An officially appointed thesis committee and advancement to candidacy.
Preparation of a thesis or project in one of the physical sciences for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

PHYSICS

MASTER OF ARTS AND MASTER OF SCIENCE DEGREES IN PHYSICS

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin and pass the qualifying examination in physics. In addition, the undergraduate preparation in physics must have substantially satisfied the undergraduate requirements for the bachelor's degree and have prepared the student for advanced study. All credit earned by the student as an unclassified graduate is in addition to the minimum of 30 units for the master's degree. The results of the advanced test in physics are used as part of the evaluation of deficiencies. Attention is called to the status of an unclassified student as described in Part Three of this bulletin under Unclassified Student Enrollment. "An unclassified student is not eligible to enroll in 600- or 700-numbered courses, except with permission of the instructor and concurrence of the Dean of the Graduate Division. All credit earned by an unclassified graduate student is subject to evaluation as to its acceptance for graduate credit in a master's degree curriculum."

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE IN PHYSICS

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes the following courses in physics: Physics 602A, 604A, 797 (3 units), and 799A. The remaining nine units must be approved by the student's departmental graduate committee. Students must demonstrate a reading knowledge of scientific French, German, or Russian. The student is required to pass a final oral examination on his thesis.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE IN PHYSICS

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes the following courses in physics: Physics 602A, 604A, 606, 608, 610A, 797 (3 units), and 799A. The student is required to pass a final oral examination on his thesis.
MASTER OF SCIENCE DEGREE IN RADIOLOGICAL PHYSICS

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the Graduate Division with classified graduate standing, as described in Part Three of this bulletin under Admission to the Graduate Division. In addition, the undergraduate preparation in biology, chemistry, mathematics, and physics must have substantially satisfied the undergraduate requirements for a baccalaureate degree in the life sciences or the physical sciences so that satisfactory progress can be made toward the master's degree. If the student's undergraduate preparation is deficient, he will be required to take courses for the removal of the deficiency. These courses, taken by the student as an unclassified graduate, are in addition to the minimum of 30 units for the master's degree.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

IN RADIOLOGICAL PHYSICS

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes the following courses:

- Biology 462, Principles of Human Physiology .......................................................... Units
- Biology 570, Radiation Biology .................................................................................. 3
- Biology 570L, Radiation Biology Laboratory .............................................................. 2

- Physics 655, Radiation Physics .................................................................................... 3
- Physics 657, Radiological Physics ................................................................................ 1
- Physics 659, Health Physics ......................................................................................... 3
- Physics 797, Research .................................................................................................. 3
- Physics 799A, Thesis ..................................................................................................... 3

- Approved 600- and 700-numbered courses .................................................................. 3

Total units ....................................................................................................................... 24

The remaining six units of the minimum 30 units required for the degree must be selected from upper division or 600- or 700-numbered courses approved by the departmental graduate committee. Of the 30 units, nine units must be selected from outside the Department of Physics. The student is required to pass a final oral examination on the thesis.

ASSISTANTSHIPS

Graduate teaching assistantships in physics are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

FACULTY

Chairman, Department of Physics: J. D. Templin
Graduate Adviser: J. G. Teasdale
Credential Adviser: E. E. Smith, Jr.
Professors: Garrison, Morris, Nichols, Pscherchio, Rehtusz, Roeder, Skolll, Smith, Snodgrass, Teasdale, Templin, Wolf, Wolter
Associate Professors: Cottrell, Lilly
Assistant Professors: Burnett, Solomon

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PHYSICS

UPPER DIVISION COURSES

510. (190.) Introductory Quantum Mechanics (3)
520. (156.) Digital Computers (3)
532. (180.) Solid State Physics (3)
653. Advanced Optics Laboratory (2) I, II
Six hours of laboratory.
Prerequisite: Registration requires prior approval of instructor.
Experimental projects involving lasers, nonlinear, optical phenomena, Fourier optics,
spectroscopy, optical scattering and other areas of current optical interest.

654. Gravitation (3) I
Prerequisite: Graduate standing. Mathematics 149 or 520, 531 or 340B and Physics 570.
Differential geometry, metric geodesics, Equivalence Principle, collapsed objects,
black holes, gravitational waves, evolution of the universe.

655. (220) Radiation Physics (3) I
Two lectures and three hours of laboratory.
Prerequisite: Physics 561.
Topics and problems including sources of nuclear, X-ray and accelerator radiation; its
interaction with matter; shielding and detection.

657. (221) Radiological Physics (1) II
Three hours of laboratory.
Prerequisite: Physics 655.
Topics and experimental problems in the use of ionizing radiation in diagnosis and
therapy.

659. (222) Health Physics (3) II
One lecture and six hours of laboratory.
Prerequisite: Physics 561.
Principles of radiation protection, radiation safety criteria and the assumptions
inherent in radiation protection guides.

660. Physics of Nuclear Medicine (1) II
Three hours of laboratory.
Prerequisite: Physics 561.
Topics and experimental problems in the diagnostic use of radioactive isotopes in
nucleonics.

661. Advanced Nuclear Physics Laboratory (3)
One lecture and six hours of laboratory.
Prerequisite: Physics 561.
Experimental work involving subcritical reactor assembly, neutron generator, whole-
body counter, etc.

664. Nuclear Physics (3)
Prerequisite: Physics 408, 510, and 564.
Theory of nuclear forces, nuclear reactions, interaction of radiation with matter,
radioactivity, nuclear structure and high energy physics.

797. (297) Research (1-3) Cr/NC
Prerequisite: Consent of department chairman.
Research in one of the fields of physics. Maximum credit six units applicable on a
master's degree.

798. (298) Special Study (1-3) Cr/NC
Individual study. Maximum credit six units.
Prerequisite: Consent of staff; to be arranged with department chairman and
instructor.

299A. (299) Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to
candidacy.
Preparation of a project or thesis in physics for the master's degree.

299B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 299A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in course
299A in which the student expects to use the facilities and resources of the university;
also student must be registered in the course when the completed thesis is granted final
approval.

POLITICAL SCIENCE

GENERAL INFORMATION

The Department of Political Science, in the School of Arts and Letters, offers graduate
study leading to the Master of Arts degree in Political Science. For graduate study in
connection with the Master of Arts degree in Social Science, refer to this bulletin under
Social Science. Research facilities provided by the Department of Political Science
Social Science. Research facilities provided by the Department of Political Science.
Center, the International Relations Center, and the Social Science Research Laboratory. The
Department of Political Science is an associate member of the Inter-University
Consortium for Political Research.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University
with classified graduate standing, as described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Political Science must have completed
30 units of social science, including at least 12 upper division units in political science, as
approved by the department and must have earned a grade point average of 2.75 for all work
in political science courses in political science as well as a 3.00 grade point average for all work taken in
political science.

ADVANCEMENT TO CANDIDACY

All students must satisfy the general requirements for advancement to candidacy as
stated in Part Three of this bulletin. In addition, students must have received credit for a
three-unit course in statistics.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic
requirements for the master's degree as described in Part Three of this bulletin, the student
must complete a graduate program which includes a minimum of 24 units in political
science from courses listed below as acceptable on master's degree programs.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate nonteaching assistantships in political
science are available to a limited number of qualified students. Application blanks and
further information may be obtained from the Chairman of the Department of Political
Science.

FACULTY

Chairman: Department of Political Science: L. M. Terrell
Graduate Adviser: D. H. Johns
Professors: Andrain, Crain, Feierabend, Generales, Gripp, Janssen, Johns, Kahng, Joy,
Koerner, Little, Terrell
Associate Professors: Anderson, Conniff, Curren, Funston, Hobs, Lewin, Little, Terrell
Assistant Professors: Fairlie, Jones, Keiser, Lovema, Soule

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN POLITICAL SCIENCE

UPPER DIVISION COURSES

501A-501B. (111A-111B) Theory of the State (3-3)
504. (1068) Socialist Political Thought (3)
505. (105) American Political Thought (3)
GRADUATE COURSES

601. (200) Seminar in the Scope and Method of Political Science (3)
The discipline of political science and systematic training in its methodology. Required of all applicants for advanced degrees in political science.

605. (200) Seminar in Political Theory (3)
Maximum credit six units applicable on a master's degree.

620. (215) Seminar in American National Government (3)
Maximum credit six units applicable on a master's degree.

622. (255) Seminar in Metropolitan Government and Politics (3)
Prerequisite: Political Science 321 or 522 or 523. Government and politics in the world's major metropolitan areas. Maximum credit six units applicable on a master's degree.

623. (250) Seminar in Local Government (3)
Selected problems of state and local government and intergovernmental relations. Maximum credit six units applicable on a master's degree.

625. (227) Seminar in Political Participation (3)
Prerequisite: Six upper division units in political science, three units of which must be from Political Science courses 320 through 344, 520 through 543S. American political culture and subculture groupings as related to various dimensions of political behavior.

630. (220) Seminar in Politics (3)
Prerequisite: Six upper division units in political science, three units of which must come from Political Science courses 320 through 344, 520 through 543S. Process by which individuals and groups make demands upon political decision makers; emphasis on the styles, structures, channels and consequences of interest articulation. Maximum credit six units applicable on a master's degree.

638. (225) Seminar in the Legislative Process (3)
Prerequisite: Six upper division units in political science. Legislative institutions and processes. Emphasis on U.S., state and local legislatures.

639. (226) Seminar in Political Psychology (3)
(Same course as Psychology 746.)
Prerequisites: Six units selected from Psychology 340, 410, 412; Political Science 325, 326, 513A-513B, 555.
Psychological factors of the individual's political behavior; psychological theory as it applies to political variables such as: ideology, conflict, consensus and participation.

646. (230) Seminar in Public Law (3)
Maximum credit six units applicable on a master's degree.

655. (280) Seminar in General Comparative Political Systems (3)
Prerequisite: Political Science 555 or 561, and three additional upper division units in political science.
The field of comparative politics, including historical developments, major theoretical approaches, substantive concerns, uses and limitations of the comparative method, methodological innovations in study of foreign political systems.

656. (281) Seminar in Western Political Systems (3)
Prerequisite: Six upper division units in political science.
Comparative study of European and other modern political systems. Conditions responsible for the attainment and maintenance of democratic government. The relationship between social modernity and the functioning of Western democratic political institutions.

658. (284) Seminar in Communist Political Systems (3)
Prerequisite: Six upper division units in political science. The differences and similarities among Communist nations in Europe and Asia, with particular reference to instruments of power and ideology. A comparison of Communist ruling techniques and processes.

661. (282) Seminar in the Political Systems of the Developing Nations (3)
Prerequisite: Six upper division units in political science.
Theoretical analysis of political development, modernization and industrialization in the emerging nations. Search for valid generalizations about the non-Western political process. Political trends and developments in the developing nations.

667. (283) Seminar in Latin American Political Systems (3)
Prerequisite: Political Science 555 or 561, and three additional upper division units in political science.
political developments in selected Latin American nations, with emphasis on the Mexican political system.

675. (270) Seminar in International Relations (3)
Maximum credit six units applicable on a master's degree.

676. (272) Seminar in International Organization (3)
Prerequisite: Political Science 576.
Analysis of selected problems of international organization with special reference to those of the United Nations. Oral and written reports.

685. (275) Seminar in Theories of International Relations (3)
Prerequisite: Political Science 375A or 375B.
Theoretical concepts used in the study of international political systems. Maximum credit six units applicable on a master's degree.

700. (290) Bibliography (1)
Exercises in the use of basic reference books, journals and specialized bibliographies, preparatory to the writing of a master's project or thesis.
795. (291.) Problem Analysis (3)
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.
797. (297.) Research in Political Science (3) Cr/NC
Prerequisite: Consent of the department chairman. Research in political theory, political parties, comparative government, international
relations, public law or American government.
798. (298.) Special Study (1-3) Cr/NC
Prerequisite: Consent of staff, to be arranged with department chairman and instructor.
Individual study. Maximum credit six units.
799A. (299.) Thesis (3) Cr/NC
Prerequisite: An officially appointed thesis committee and advancement to
 candidacy. Preparation of a project or thesis for the master's degree.
799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course
799A in which the student expects to use the facilities and resources of the university;
also student must be registered in the course when the completed thesis is granted final
approval.

PSYCHOLOGY
GENERAL INFORMATION
The Department of Psychology, in the College of Sciences, offers graduate study
leading to the Master of Arts degree in Psychology and the Master of Science degree in
Psychology. The Master of Arts program is a general psychology program emphasizing
graduate preparation in one or more areas of psychology. The master of science
degree programs offer a choice of study in three concentrations: clinical psychology,
industrial and organizational psychology, and general psychology for the community
college teaching credential. The master of science programs are intended to serve a dual
purpose of preparation of the student for employment upon completion of the master's
degree, as well as preparation for doctoral work in specified areas. The doctorate in
psychology is not offered at San Diego State University.

Research in Political Science (3) Cr/NC
The purpose of this course is to review methods for preparing a thesis. Consideration
of problems in completing a project for the master's degree.

ADMISSION TO GRADUATE STUDY
In seeking admission to the graduate program in psychology, the student should write
directly to the Graduate Studies Coordinator, Department of Psychology, requesting
application materials. Detailed instructions concerning application procedures will be
sent to the applicant along with all necessary forms.

STUDENTS WILL BE ADMITTED TO GRADUATE PROGRAMS IN PSYCHOLOGY
ONLY IN THE FALL SEMESTER AND APPLICATIONS MUST BE RECEIVED BY THE
DEPARTMENT OF PSYCHOLOGY NOT LATER THAN FEBRUARY 1.

To be considered for admission to the graduate programs in psychology, all students
must satisfy the prerequisites outlined below. Applicants must submit a complete
application, including application fee, registration in the department, and a completed
application form. The student should take this test as well as the GRE Aptitude Test In
sufficient time so that the results will be available by a March 1 deadline. It should be requested
by the student that the score report for these tests be forwarded directly to the
Graduate Division Office and the Department of Psychology.

Requirements for Admission

1. An undergraduate major in psychology consisting of at least 24 upper division
units with a grade point average of at least 3.0. The major must include work in
general psychology, physiological psychology, statistical methods, psychological
testing, abnormal psychology, and at least two laboratory courses in psychology.

2. A grade point average of not less than 3.0 in the last 60 units (90 quarter units) of
the undergraduate program.

3. A total scale score of 950 or above on the GRE Aptitude Test.

4. A score above the 50th percentile rank on the GRE Advanced Test in Psychology.

Satisfactory performance in the GRE Aptitude Test, the GRE Advanced Test in Psychology, and the following courses are required:

- Psychology 210, 260, 270, 350, 405, 410 and one course from 411, 412, 413, 414,
415, 416, 417, or 418.
- Psychology 210, 260, 270, 350, 405, 410 and one course from 411, 412, 413, 414,
415, 416, 417, or 418.

5. A total scale score of 950 or above on the GRE Aptitude Test.

6. A score above the 50th percentile rank on the GRE Advanced Test in Psychology.
Meeting all of the indicated criteria does not guarantee admission to the program, as admission is also dependent on the facilities and resources available in the department.

ADVANCEMENT TO CANDIDACY

The student must satisfy the general requirements for advancement to candidacy as stated in Part Three of this bulletin. Having obtained three grades of C or lower in graduate courses automatically precludes advancement to candidacy.

GENERAL REQUIREMENTS FOR ALL MASTER'S DEGREE PROGRAMS

In addition to meeting the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units (36 units for the clinical concentration) approved by the departmental graduate coordinator. Students who are not accepted into the graduate program are not permitted to enroll in any 600-numbered (or higher) courses in psychology.

Psychology 670, 798 (Colloquium), and 799A (Thesis) and an oral examination on the thesis, are required in all master's degree programs in the Department of Psychology. A maximum of two units credit in 798 (Colloquium) can apply toward completion of the program. There is no foreign language requirement for any advanced degree in psychology at San Diego State University, but students who aspire to a doctorate in this field should be advised that some doctoral programs require a reading knowledge in one or two languages.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

Within the 30-unit general requirement set forth above, the master of arts program requires completion of at least 30 units of graduate courses in psychology including Psychology 605, 670, 798 and 799A. Psychology 680 is required for this program if similar content has not been completed as an undergraduate.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

Within the 30-unit (36 units for clinical psychology) general requirement set forth above, the master of science degree may be obtained with the following three concentrations:

1. **Clinical Psychology:** At least 36 units of graduate courses in psychology, including Psychology 650, 651 or 652, 654, 655 or 656, 670, 796, 798 (Colloquium), and 799A. Psychology 653 is also required for this program if similar content has not been completed as an undergraduate. Registration for six units of Psychology 796 (Clinical Practicum) is contingent upon prior cooperative arrangement by the Student and the Department of Psychology Practicum Committee.

2. **Industrial and Organizational Psychology:** At least 30 units of graduate courses in psychology, including Psychology 621, 622, 670, 675, 797, 798 (Colloquium), and 799A. Psychology 620 is required for this program if similar content has not been completed as an undergraduate.

3. **General Psychology for the Community College Teaching Credential:** At least 27 units of graduate courses in psychology, including Psychology 650, 670, 675, 798 (Colloquium), and 799A. Psychology 653 and 680 are required for this program if similar content has not been completed as an undergraduate. Education 680 is also required and may be included among the 30 units required for the master's degree. The sole requirement for obtaining the Community College Instructor Credential is the completion of a master's degree in a subject matter area usually taught in a community college. Upon completion of the master's degree, the candidate should then apply directly to the Office of the Chancellor, California Community Colleges. Under current interpretation of the Education Code, no additional courses in education are required; however, it is strongly suggested that graduate students enroll in professional courses in teacher education in order to enhance employment possibilities. Most community colleges require some professional preparation and/or experience. The following courses are suggested to enhance employment in the community colleges: Education 630 and 700.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in psychology are available to a limited number of qualified students. Application forms and further information may be obtained from the Chairman, Graduate Assistantships Committee, Department of Psychology.

AREA REQUIREMENT COURSES

The courses listed below constitute core courses required for the various graduate programs as listed in the Specific Requirements.

- 607: (222) Seminar in Theoretical Psychology (3)
- 620: Industrial-Organizational Psychology (3)
- 621: (219) Seminar in Personnel Psychology (3)
- 622: (220) Seminar in Organizational Psychology (3)
- 650: (233) Counseling and Psychotherapy Laboratory (4)
- 651: (211) Seminar in Behavior Disorders of Childhood and Adolescence (3)
- 652: (212) Seminar in Behavior Disorders of Adults (3)
- 653: Advanced Clinical Psychology (3)
- 654: (204) Psychological Assessment I (4)
- 655: (205) Psychological Assessment II (4)
- 656: (234) Behavior Therapy Laboratory (4)
- 670: (223) Experimental Design (3)
- 675: (225) Principles of Test Construction (3)
- 680: (277) Seminar in the History of Psychology (3)
- 796: (296) Clinical Practicum (3 or 6) Cr/NC
- 797: (297) Research (1-3) Cr/NC
- 798: (298) Special Study (1-3) Cr/NC
- 799A: (299) Thesis (3) Cr/NC

ADDITIONAL COURSES

The following courses are not part of area requirements and are offered as electives to complete the master of arts and master of science programs. The student is advised to consult the current class schedule since some of the courses may not be offered every semester.

- 607: (278) Applied Community Psychology (3)
- 609: (295) Field Work in Community Psychology (3)
- 700: (200) Seminar (3)
- 710: (224) Advanced Experimental Design (3)
- 711: (275) Advanced Principles of Learning (3)
- 718: Research in Operant Behavior (3)
- 745: (221) Seminar in Problems in Social Psychology (3)
- 746: (226) Seminar in Political Psychology (3)
- 757: (201) Selected Topics in Clinical Psychology (3)
- 760: (230) Seminar in Physiological Correlates of Behavior (3)
- 761: (231) Seminar in Ethology and Comparative Psychology (3)
- 764: Psychopharmacology and Behavioral Disorders (3)
- 770: (270) Statistical Theory (3)
- 771: Correlational Analysis (3)

FACULTY

Chairman, Department of Psychology: R. Penn
Graduate Adviser: W. A. Hüniichs
Professors: Al, Dicken, Feierabend, Gallo, Graf, Grossberg, Hart, Harrison, Hill, McDonald, O'Day, Parker, Penn, Radlow, Sattler, Schütte, Segal, Shepsh, Stevens, White, Wohler, Zuchow, Zuckow, Zuckow
Associate Professors: Bryson, Dafina, Franzini, Graham, Hornebeck, Lynn, Mollenauer, Perrott, Piotrowski, Podus, Rand, Smith, Yarema
Assistant Professors: Eisen, Kaplan, R., Litwonik, McCord, Price, Spinetta
GRADUATE COURSES

605. (222.) Seminar in Theoretical Psychology (3)
Prerequisites: Psychology 480 or 680, and consent of graduate adviser.
Basic nature of theories, their relationships to data, and the characteristics of various types of constructs used in psychological theories.

607. (278.) Applied Community Psychology (3)
Prerequisite: Consent of graduate adviser.
Systematic integration of principles of psychotherapy, behavior modification, child development, gerontology, social psychology, vocational testing, and psychological methodology into community psychology.

609. (295.) Field Work in Community Psychology (3)
Prerequisites: Psychology 607 and consent of graduate adviser.
Supervised practice in the application of psychological principles and methods of investigation to problems of psychological services to the community, including supervision of undergraduate students and contact with community organizations.

620. Industrial-Organizational Psychology (3)
Prerequisite: Consent of graduate adviser.
Theoretical issues, methodologies, and research findings relevant to the application of psychology to the world of work and to an understanding of behavior in organizations. Not open to students with credit or concurrent registration in Psychology 320 and 321.

621. (219.) Seminar in Personnel Psychology (3)
Prerequisites: Psychology 320 or 620, and consent of graduate adviser.
Problems and procedures in selection, classification, and performance appraisal focusing on testing in industry, the interview, and other selection and assessment devices. Criterion development and measurement methods.

622. (220.) Seminar in Organizational Psychology (3)
Prerequisites: Psychology 321 or 620, and consent of graduate adviser.
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.

650. (233.) Counseling and Psychotherapy Laboratory (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 451 or 653, and consent of graduate adviser.
Supervised practice in the application of psychotherapeutic and counseling techniques from selected cognitive, dynamic, interpersonal, and behavioral approaches.

651. (211.) Seminar in Behavior Disorders of Childhood and Adolescence (3)
Prerequisites: Psychology 330, 350 and consent of graduate adviser.
Contemporary approaches to emotional and behavioral problems of childhood and youth. Considers developmental, cognitive and social variables as well as theory and treatment.

652. (212.) Seminar in Behavior Disorders of Adults (3)
Prerequisites: Psychology 350 and consent of graduate adviser.
Contemporary approaches to emotional and behavioral problems of adulthood. Considers developmental, cognitive and social variables as well as theory and treatment.

653. Advanced Clinical Psychology (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 350, 405 and consent of graduate adviser.
Clinical assessment, theory and practice of behavior change, and professional ethics. Not open to students with credit or concurrent registration in Psychology 451.

654. (204.) Psychological Assessment I (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 350, 405, and consent of graduate adviser.
Theory and practice in assessment of intelligence and special abilities.

655. (205.) Psychological Assessment II (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 654 and consent of graduate adviser.
Theory and practice in assessment of special abilities, personality and behavior disorders.

656. (234.) Behavior Therapy Laboratory (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 451 or 653, 482 or 471, and consent of graduate adviser.
Supervised practice in the application of behavior therapy (individual treatment) and behavior modification (group method).

670. (223.) Experimental Design (3)
Prerequisites: Psychology 410 and consent of graduate adviser.
Principles and methods of planning and carrying out systematic investigations to answer questions concerning human behavior with stress on the interpretation 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.

675. (225.) Principles of Test Construction (3)
Prerequisites: Psychology 405, 470 and consent of graduate adviser.
Detailed consideration of adequate sampling techniques, item construction, item analysis, determination and enhancement of reliability and validity of tests.

680. (277.) Seminar in the History of Psychology (3)
Prerequisites: Psychology 410 and consent of graduate adviser.
The history of modern psychology. Not open to students with credit or concurrent registration in Psychology 480.

700. (200.) Seminar (3)
Prerequisite: Consent of graduate adviser.
An intensive study in advanced psychology, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

710. (224.) Advanced Experimental Design (3)
One lecture and six hours of laboratory.
Prerequisites: Psychology 670 and consent of graduate adviser.
Methods, techniques, and apparatus applicable to questions of various types. Special attention is given to sources of error, limitations on interpretations, and psychophysical independence in preparation for original independent investigations.

711. (225.) Advanced Principles of Learning (3)
Prerequisite: Consent of graduate adviser.
The empirical data, basic principles and theoretical positions of major learning theorists. Not open to students with credit or concurrent registration in Psychology 487.

718. Research in Operant Behavior (3)
Prerequisites: Psychology 410 or 470 or 487 or 711 and consent of graduate adviser.
Selected research topics in the experimental analysis of behavior. Maximum credit six units.

745. (221.) Seminar in Problems in Social Psychology (3)
Prerequisites: Psychology 340 or 412, and consent of graduate adviser.
The 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.

746. (226.) Seminar in Political Psychology (3)
Prerequisites: Political Science 639.
Same course as Political Science 639.
Prerequisites: Psychology 340 or 410, and consent of graduate adviser.
Psychological factors of the individual's political behavior; psychological theories as applied to political variables such as ideology, conflict, consensus, and participation.

757. (201.) Selected Topics in Clinical Psychology (3)
Prerequisites: Psychology 451 or 653 and consent of graduate adviser.
Advanced study of such clinical topics as community mental health, forensic psychology, ethics, and autonomic training. Topics will vary on a semester basis.

760. (230.) Seminar in Physiological Correlates of Behavior (3)
Prerequisites: Psychology 260 or six units of biology; and consent of graduate adviser.
An exploration of current research and theory in physiological psychology with an emphasis on behavioral correlates and psychophysiology.
761. (231) Seminar in Ethology and Comparative Psychology (3)  
(Same course as Biology 610.)  
Prerequisites: Psychology 414 or 417 or Biology 520, or Zoology 570, and consent of graduate adviser.  
Current problems in ethology and comparative animal behavior. Maximum credit six units applicable on a master's degree.

764. Psychopharmacology and Behavioral Disorders (3)  
Prerequisites: Psychology 260 and consent of graduate adviser.  
Drugs as cause and cure of behavioral problems. A review of drugs commonly used to change behavior in primary schools, psychiatric centers, in-home programs and mental hospitals.

770. (270) Statistical Theory (3)  
Prerequisites: Psychology 270, 405 and consent of graduate adviser.  
Study of quantitative methods in psychology with emphasis on normal inference and nonparametric statistics. Not open to students with credit or concurrent enrollment in Psychology 471.

771. Correlational Analysis (3)  
Prerequisites: Psychology 270 and consent of graduate adviser.  
Study of correlational methods in psychology with emphasis on multiple regression and factor analysis; experience in use of computer techniques in multivariate correlational analysis. Not open to students with credit or concurrent registration in Psychology 471.

796. (296) Clinical Practicum (3 or 6) Cr/NC  
Prerequisites: Psychology 451 or 653 and 650 and 654 and consent of the Department of Psychology Practicum Committee.  
The student must arrange his practicum setting in cooperation with the chairman of the Psychology Department Practicum Committee and with the express approval of that committee during the semester prior to enrolling for credit in this course. Maximum credit six units.

797. (297) Research (1-3) Cr/NC  
Prerequisite: Consent of graduate adviser.  
Research in one of the fields of psychology. Maximum credit six units applicable on a master's degree.

798. (298) Special Study (1-3) Cr/NC  
Prerequisite: Consent of graduate adviser.  
Individual projects involving library or laboratory research in any area of psychological investigation or interest. Maximum credit six units applicable on a master's degree.

799A. (299) Thesis (3) Cr/NC  
Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
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.

799B. Thesis Extension (0) Cr/NC  
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.  
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the courses when the completed thesis is granted final approval.

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PUBLIC ADMINISTRATION AND URBAN STUDIES

GENERAL INFORMATION

Public Administration and Urban Studies, in the College of Professional Studies, offers graduate study leading to the Master of Public Administration degree, the Master of Science in Criminal Justice Administration degree, and the Master of City Planning degree. Research facilities provided include the Institute of Public and Urban Affairs and the Public Administration Center. The San Diego metropolitan community affords significant internship opportunities for the graduate student in federal, state, and local government agencies.

Public Administration and Urban Studies is a member of the National Association of Schools of Public Affairs and Administration. Also, it is a participant in the NASPAA Urban Administration Fellows Program.

MASTEr OF PUBLIC ADMINISTRATION DEGREE

This degree permits the selection, under advisement, of a program of course and seminar work which may be oriented toward a generalist approach or toward an emphasis on a specialized behavior and development, public policy, fiscal policy and administration, recreation administration, or urban 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 in economics, sociology, psychology, business administration, and other related areas.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. The student must also satisfy the following requirements: (1) a 3.0 grade point average in the undergraduate major and a 2.75 overall average; (2) an acceptable score on the Graduate Record Examination, Aptitude Test; (3) two letters of reference from individuals with classified graduate standing, as described in Part Three of this bulletin. The student must also satisfy the following requirements: (4) satisfactory completion of Public Administration 301, 330, 341, and one other course in a related field, or equivalent courses.

ADVANCEMENT TO CANDIDACY

All students must meet the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF PUBLIC ADMINISTRATION DEGREE

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin. The student must also complete as a part of his program: (1) at least 24 units of coursework in the area of study; (2) a minimum of six additional units of upper division or graduate courses in public administration or related fields selected under advisement. Public Administration 799A, administration or related fields selected under advisement. The student must include in the program a comprehensive examination in lieu of the thesis. The internship in Public Administration, unless this requirement is waived by the graduate adviser, is an administrative nature. Placements typically will 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 department.
**MASTER OF CITY PLANNING DEGREE**

**ADMISSION TO GRADUATE STUDY**

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. The student must also satisfy the following requirements: (1) possess a bachelor's or higher degree in sociology, geography, political science, economics, architecture, or landscape architecture, or any fields related to planning (students with degrees other than those listed may be allowed to enter the program under appropriate conditions); (2) have had a minimum of six units in political science, six units in sociology, six units in economics, and three units in geography, or the equivalent of these courses. In the event that deficiencies occur in a student's background and training, the graduate committee will examine the student's past record and recommend a program to make up the deficiencies.

Students seeking admission to the graduate program in urban planning which leads to the Master of City Planning degree should address their inquiries to the director of the program. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program it is not sufficient merely to file the general university admission forms. Students are admitted to the program only in the fall semester of each year and applications must be received no later than March 31.

**ADVANCEMENT TO CANDIDACY**

To be eligible for advancement to candidacy and admission to the second year of the program for this degree, the student must, in addition to holding classified graduate standing, have completed at least 24 units of the course work listed on the official program with an overall grade point average of 3.0 or higher, and otherwise comply with the regulations of the Graduate Division as described in Part Three of this bulletin.

**SPECIFIC REQUIREMENTS FOR THE MASTER OF CITY PLANNING DEGREE**

In addition to meeting the requirements for classified graduate standing for the purpose of pursuing the Master of City Planning degree, the student must complete an approved program of studies consisting of at least 56 units of approved upper division and 600- and 700-numbered courses, to include:

1. City Planning 700, Urban Design and Land Use Planning Studio (6)
2. City Planning 610, Seminar in Urban Planning (3)
3. City Planning 620, Seminar in Urban Planning Methodologies (3)
4. City Planning 630, Seminar in Urban Planning Implementation (3)
5. City Planning 640, Seminar in Urban Planning Theory (3)
6. Public Administration 512, The Metropolitan Area (3)
7. Nine units of 600- and 700-numbered courses in planning administration, history, readings and research.
8. City Planning 796, Internship in Urban Planning (3-6)
9. Electives to complete the program will be selected with the assistance of the adviser from appropriate courses in anthropology, art, economics, geography, political science, social work, sociology, and other disciplines deemed appropriate. At least 30 units must be completed in residence at San Diego State University, and at least 24 units of program courses shall be enrolled in and completed after advancement to candidacy.

Not more than a total of nine units in courses 797 and 798 will be accepted for credit toward the degree.

The student is required to pass a final comprehensive examination.

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**MASTER OF SCIENCE IN CRIMINAL JUSTICE ADMINISTRATION DEGREE**

**ADMISSION TO GRADUATE STUDY**

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. Students seeking admission to the graduate program in criminal justice administration which leads to the Master of Science in Criminal Justice Administration degree should address their inquiries to the director of the program. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program it is not sufficient merely to file the general university admission forms.

**ADVANCEMENT TO CANDIDACY**

All students must meet the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

**SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE IN CRIMINAL JUSTICE ADMINISTRATION**

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin and must have made up any deficiencies in his undergraduate program. The student must also complete as part of his graduate program the following: (1) at least 18 units of 600- and 700-numbered courses, including Public Administration 600 and 792 or 797, and Criminal Justice Administration 601 and 630; (2) a minimum of 12 units of upper division or graduate courses in elective courses selected with the approval of the graduate adviser. Public Administration 799A. Thesis, must be included in the program unless Plan B with a comprehensive examination in lieu of the thesis is selected by the student with the approval of the graduate adviser. If Plan B is selected, the student must select areas of concentration with the approval of the director of the criminal justice administration program. Public Administration 301 and Criminal Justice Administration 301 are required in addition to the minimum 30 units unless completed as an undergraduate.

**ASSISTANTSHIPS**

Graduate teaching assistantships and graduate nonteaching assistantships in public administration are available to a limited number of qualified students. Application blanks and further information may be obtained from the director of programs in public administration and urban studies.

**FACULTY**

Director, Public Administration and Urban Studies: J. D. Kitchen
Coordinator, City Planning Program: J. A. Clapp
Coordinator, Criminal Justice Administration Program: R. L. Boostrom
Graduate Advisers:
Master of Science in Criminal Justice Administration: R. L. Boostrom, G. T. Gitchoff
Master of City Planning: J. A. Clapp
Professors: Bigger, Gilbreath, Kitchen, Kochanski, Marini
Associate Professors: Clapp, Gazell, Gitchoff, Hamilton
Assistant Professors: Boostrom, Thompson, Walshok
Lecturers: Corso, Frankum

**COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PUBLIC ADMINISTRATION AND URBAN STUDIES**

**UPPER DIVISION COURSES**

**Criminal Justice Administration**
- 502: (177) Juvenile Deviance and the Administrative Process (3)
- 530: (116) Contemporary Correctional Administration (3)
- 531: (186) Probation and Parole (3)
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Public Administration

530. (114.) Negotiation and Bargaining in the Public Service (3)
531. (115.) Governmental Employer-Employee Relations (3)
540. (156.) Public Administrative Systems Analysis (3)
550. (162.) Fiscal and Budgetary Policy (3)
580. (149.) Comparative Public Administration (3)

Urban Studies

510. (154.) Intergovernmental Relations in the United States (3)
512. (148.) The Metropolitan Area (3)
520. (150.) Decision Making in the Urban Community (3)

GRADUATE COURSES IN PUBLIC ADMINISTRATION AND URBAN STUDIES

600. (201.) Scope of Public Administration (3)
Prerequisite: Six upper division units in public administration. The development of public administration as an academic discipline; a systematic evaluation of the rise and operations of large-scale public bureaucracies.

605. (205A.) Empirical Approaches to Public Administration: Qualitative Analysis (3)
Prerequisite: Public Administration 600. Examination of basic research approaches, i.e., legal, historical, and small-group, etc.

606. (205B.) Empirical Approaches to Public Administration: Quantitative Analysis (3)
Prerequisite: Public Administration 600. Study of techniques for the gathering of data on public administration with reference to survey research and methodology examination of various data analysis methods.

620. (250.) Management of Urban Governments (3)
Selected problems in the management of urban governments. Maximum credit six units applicable on a master's degree.

621. (255.) The Metropolitan Area (3)
Prerequisite: Public Administration 110, 512 or 520. Selected problems in the government and administration of the world's major metropolitan areas.

630. (241.) Seminar in Public Personnel Administration (3)
Prerequisite: Public Administration 600. Analysis of selected problems in personnel administration; special emphasis on organizational development and consultation skills as emerging personnel functions. Maximum credit six units applicable on a master's degree.

640. (240.) Seminar in Public Administration (3)
Maximum credit six units applicable on a master's degree.

642. (243.) Seminar in Theory of Administrative Organization (3)
Prerequisite: Public Administration 600. Organization and management: the executive role, decision making; bureaucracy; authority and power; communication and control and organizational system; tactics and strategies in effective management.

650. (230.) Seminar in Public Financial Management (3)
Prerequisite: Public Administration 550. Problems in the administration and budgeting of public revenues.

660. (260.) Administration and Public Policy Development (3)
Prerequisite: Twelve upper division units in social science. Social, political and administrative problems involved in governmental program development and change.

662. (243.) Science, Technology and Public Policy (3)
Prerequisite: Public Administration 600, or equivalent seminar in another department. The influence of science and technology on governmental policy making; scientists as administrators and advisers; governmental policy making for science and technology; government as a sponsor of research and development.

680. (249.) Seminar in Comparative Administration (3)
Prerequisite: Public Administration 301. Selected problems in administration, organization, and processes of foreign and international governments. Maximum credit six units applicable on a master's degree.

791. (245.) Readings in Public Administration (3)
Prerequisite: Credit or concurrent registration in Public Administration 600. Selected readings in the literature of public administration.

792. (291.) Problem Analysis (3)

796. (296.) Internship in Public Administration (1-6)
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 consent of instructor.

797. (297.) Research in Public Administration (3) Cr/NC
Prerequisite: Consent of Director, Public Administration and Urban Studies. Research in one of the areas of public administration.

798. (298.) Special Study (1-3) Cr/NC
Individual study. Maximum credit six units.

799A. (299.) Thesis (3) Cr/NC
Prerequisite: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. (299B.) Thesis Extension (0-3) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

GRADUATE COURSES IN CITY PLANNING

610. (CP266A.) Seminar in Urban Planning (3)
Prerequisite: Public Administration 320. An introductory seminar to the Master of City Planning Program. Focusing on the planner's perspective of urban problems and goal formulation.

620. (CP266B.) Seminar in Urban Planning Methodologies (3)
Prerequisite: City Planning 610. Procedures and analytical techniques in urban planning.

630. (CP266C.) Seminar in Urban Planning Implementation (3)
Prerequisite: City Planning 620. Analysis of the content and function of zoning, subdivision regulations, codes, capital budgets, urban renewal, model cities, and other implementation methods and programs.

640. (CP266D.) Seminar in Urban Planning Theory (3)
Prerequisite: City Planning 630. Alternative approaches and organization of the planning function. Emphasis on conceptual foundations; relationship to governmental structure, decision making, and ideological and ethical orientations.
Seminar in Urban Theory (3)  
Prerequisite: Public Administration 320.  
Study of the various empirically and normatively based theories of the city and urbanization process, with emphasis on communication and transaction and institutional approaches.

Seminar in Planning Administration (3)  
The administration of the planning function in urban government. Relationships between the planner and public and private agencies, governmental departments and elected officials. Case studies and problems.

History of Urban Planning (3)  
History of urban development and of the field of urban planning.

Readings in Urban Planning (3)  
Selected topics in urban planning. Maximum credit six units applicable on a master's degree.

Research in Urban Planning (3) Cr/NC  
Prerequisite: Consent of Director of City Planning Program. Research in one of the areas of urban planning. Maximum credit six units applicable on a master's degree.

Urban Design and Land Use Planning Studio (6) Cr/NC  
Two lectures and eight hours of laboratory. Laboratory course concerned with graphic expression, principles of land use planning, land development, and urban design. Project integrating principles.

Internship in Urban Planning (3-6)  
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.

Special Study (1-3) Cr/NC  
Prerequisite: Consent of staff; to be arranged with Coordinator and instructor. Individual study. Maximum credit six units.

GRADUATE COURSES IN CRIMINAL JUSTICE ADMINISTRATION

Seminar in the Administration of Criminal Justice (3)  
Prerequisite: Criminal Justice Administration 301 or 310. Administrative problems of criminal justice systems.

Seminar in Correctional Administration (3)  
Prerequisite: Criminal Justice Administration 530. Selected problems in the administration of correctional problems and institutions. Maximum credit six units applicable on a master's degree.

Seminar in Correctional Group Method (3)  
Prerequisite: Sociology 513 or 514 or Criminal Justice Administration 321 or 531. An exploration of current research and use of group methods in the correctional segment of the criminal justice system.

Seminar in the History of Correctional Reform (3)  
Prerequisite: Criminal Justice Administration 321 or 513 or Sociology 513 or 514. The historical development of concepts and practices in the field of corrections with emphasis upon developments in the United States.

Readings in Criminal Justice Administration (3)  
Prerequisite: Six graduate units in criminal justice administration. Selected readings in the literature of criminal justice administration.

Problem Analysis (3)  
Analytical treatment of selected problems in criminal justice administration. Review of methods for investigation and reporting of data. Consideration of problems in preparation of projects or theses.

Internship in Criminal Justice Administration (1-6)  
Prerequisite: Consent of instructor. Students are assigned to various government agencies and work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences.

Research in Criminal Justice Administration (3) Cr/NC  
Prerequisite: Consent of Coordinator of Criminal Justice Administration. Research in one of the areas of criminal justice administration.

Special Study (1-3) Cr/NC  
Prerequisite: Consent of staff; to be arranged with Coordinator and instructor. Individual study. Maximum credit six units.

Thesis (3) Cr/NC  
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

Thesis Extension (0) Cr/NC  
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.
The Department of Germanic and Slavic Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Russian. The Master of Arts degree provides advanced training for (a) students who plan to terminate their graduate studies at the master's level, and (b) those who plan to proceed to a doctoral degree in Russian or in Slavic linguistics. There is a full range of graduate courses in Russian literature and in Slavic linguistics, and the student may concentrate in the area of preference. Library resources, both books and periodicals, provide excellent research bases in both areas.

**ADMISSION TO GRADUATE STUDY**

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. An undergraduate major in Russian, including 24 upper division units, must have been completed, at least six units of which must have been in a survey course in Russian literature.

**ADVANCEMENT TO CANDIDACY**

In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, students may be required to pass a qualifying examination in Russian given by the Department of Germanic and Slavic Languages and Literatures.

**SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of at least 24 units in Russian, including at least 18 units in 600- and 700-numbered courses, including Russian 799A. Thesis. If Plan B is followed, the student must pass a comprehensive examination in lieu of Russian 799A.

**ASSISTANTSHIPS**

Graduate teaching assistantships in Russian are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

**FACULTY**

Chairman, Department of Germanic and Slavic Languages and Literatures: L. A. Kozlik
Graduate Adviser: Vytas Dukas
Credential Adviser: Vytas Dukas
Professors: Dukas, Fetzer, Kozlik

**COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN RUSSIAN**

**UPPER DIVISION COURSES**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>545</td>
<td>Old Russian Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>555A-555B</td>
<td>The Russian Short Story, Drama, and Poetry of the Nineteenth Century</td>
<td>(3-3)</td>
</tr>
<tr>
<td>561A-561B</td>
<td>The Russian Novel of the Nineteenth Century</td>
<td>(3-3)</td>
</tr>
<tr>
<td>563</td>
<td>Russian Literature of the Twentieth Century</td>
<td>(3)</td>
</tr>
<tr>
<td>570</td>
<td>Slavic Linguistics</td>
<td>(3)</td>
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<tr>
<td>580</td>
<td>Russian Syntax and Stylistics</td>
<td>(3)</td>
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<tr>
<td>581</td>
<td>Russian Phonetics and Morphology</td>
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**GRADUATE COURSES**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<td>Research and Criticism</td>
<td>(3)</td>
</tr>
<tr>
<td>610</td>
<td>History of the Russian Language</td>
<td>(3)</td>
</tr>
<tr>
<td>650A-650B</td>
<td>Old Church Slavic</td>
<td>(3-3)</td>
</tr>
<tr>
<td>680</td>
<td>Seminar in Slavic Linguistics</td>
<td>(3)</td>
</tr>
<tr>
<td>690</td>
<td>Russian Poetry from Pushkin to the Present</td>
<td>(3)</td>
</tr>
<tr>
<td>750</td>
<td>Nineteenth Century Russian Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>760</td>
<td>Seminar: A Major Author or Movement</td>
<td>(3)</td>
</tr>
<tr>
<td>798</td>
<td>Special Study</td>
<td>(1-3)</td>
</tr>
<tr>
<td>799A</td>
<td>Thesis</td>
<td>(3)</td>
</tr>
<tr>
<td>799B</td>
<td>Thesis Extension</td>
<td>(0)</td>
</tr>
</tbody>
</table>
SOCIAL SCIENCE

GENERAL INFORMATION

The Master of Arts degree in Social Science is offered in the Departments of Anthropology, Economics, Geography, Political Science, and Sociology, in the College of Arts and Letters. (The Master of Arts degrees in Anthropology, Economics, Geography, History, Political Science, and Sociology are described in the appropriate sections of this bulletin.)

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, students are expected to have completed at least 30 upper division units in at least three of the social sciences, of which at least 15 upper division units must be in the field in which they plan to concentrate, and at least six units in each of two other social science fields. A course in statistics, either upper or lower division, is required. In addition, the following courses or equivalents are required in the concentrations specified:

Anthropology: Have a minimum of 3.0 grade point average in anthropology courses taken for the baccalaureate degree; Anthropology 497, Investigation and Report; and at least 15 upper division units including courses in archaeology, ethnology, physical anthropology, and social anthropology.

Economics: Economics 320 and 321 or 324 and 325.

Geography: Geography 101 and 102, and 15 units of upper division courses in geography, including three units from each of the following blocks of courses: Systematic-Physical Geography; Theoretical Geography; Regional Geography; Systematic-Cultural Geography; Geographical Techniques and Methods.

Political Science: The required upper division units must be distributed among at least three of the six subfields listed in the General Catalog.

Sociology: Sociology 101, 110 and 401.

ADVANCEMENT TO CANDIDACY

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

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE IN SOCIAL SCIENCE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree as described in Part Three of this bulletin, the student must complete the following:

1. A minimum of 30 units from courses listed in this bulletin as acceptable on master's degree programs by the Departments of Anthropology, Economics, Geography, History, Political Science, and Sociology, including at least 15 units of 600- and 700-numbered courses in the social sciences.

2. A concentration in one of the areas of Social Science, except History, as determined by the graduate adviser. A concentration is defined to include at least 15 units in one area on the master's degree program including at least nine units of 600- and 700-numbered courses in the area of concentration.

3. Six units in each of two additional fields of social science, for a total of 12 units, including at least three units of 600- and 700-numbered courses in each.

4. Course 799A. Thesis, is required in concentrations in Anthropology, Political Science, and Sociology. Plan B, requiring a written comprehensive examination in lieu of thesis, is available in the Economics and Geography concentrations. In addition, the following courses are required in the concentrations specified.

Geography: Geography 600, Geographic Research and Techniques of Presentation (3).

Political Science: Political Science 601, The Scope and Method of Political Science (3).

FACULTY

Coordinator of Graduate Programs: M. J. Moore
Graduate Advisers:
Anthropology: M. J. Moore
Economics: J. Hambleton
Geography: C. Yahr
Political Science: H. Janssen
Sociology: D. Kirby and J. Werner

Faculty members in the Departments of Anthropology, Economics, Geography, Political Science, and Sociology are listed in the appropriate sections of this bulletin.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN SOCIAL SCIENCE

Refer to course listings in the sections of this bulletin under the Departments of Anthropology, Economics, Geography, History, Political Science, and Sociology. In addition, other courses may be accepted on master's degree programs provided that such courses are approved by the graduate adviser in the field of concentration and by the Academic Requirements Committee of the Social Science Graduate Advisers.
SOCIAL WORK

GENERAL INFORMATION

The School of Social Work offers a two-year graduate curriculum leading to the Master of Social Work degree under approval granted by the Board of Trustees of the California State University and Colleges in May, 1963. The curriculum was developed in close cooperation with the Council on Social Work Education and was fully accredited by its Accreditation Commission in June, 1966.

The School also offers a program of professional education leading to the Master of Science in Social Work degree. Students who have completed the undergraduate social welfare major at San Diego State University, or its equivalent, can be considered for admission to this program. Approval for this new degree program was granted in February, 1970.

The objectives of the School of Social Work at San Diego State University are to equip students with the essential knowledge, philosophy, and basic skills for their responsible practice in the profession of social work. In order to achieve these objectives, the School will assist students to develop a philosophy which recognizes individual human welfare as the purpose and goal of social policy; to acquire attitudes which will permit the development and maintenance of professional relationships and professional standards; to develop the discipline and self-awareness essential to the professional social worker; to attain a level of competence necessary for professional practice; to acquire knowledge in methods of research in social work; and to accept responsibility for the continued development of their competence in the practice of social work.

To meet these objectives, the graduate curriculum in the School of Social Work offers a program of classroom and field instruction which includes course content in the five major areas listed below. In addition, students may select emphasis in the areas of health, mental health, or aging.

1. Social Welfare Policy and Services. Social welfare policy and services; their development, organization, and operation; the purpose and status of current programs; the influence of social, economic, and political factors; the role of the social worker in evaluation and improvement of existing programs with reference to the philosophy of social work; and the assessment of unmet needs and their resolution.

2. Human Behavior and the Social Environment. Normal growth and development of the individual from childhood through old age within the social contexts of the family, group relationships, occupational settings, and community structure; the nature and causes of impaired social and emotional functioning; the nature and changing character of social and cultural structures with attention to the interaction between the individual and his social environment and the reciprocal effects of the interaction.

3. Social Work Practice. Objectives, general theory, basic principles and values and ethics of the profession in social work practice; the first-year sequence is the same for all students and covers the fundamentals of practice; in the second year, there may be a concentration on intervention with individuals, families, and groups, or intervention with organizations and communities; appropriate attention to the enabling methods of research and administration.

4. Field Instruction. Practice carried on in field settings under educational direction, the objectives of which include a beginning mastery of professional social work practice; the disciplined use of "self" to provide professional service; the integrated use of knowledge, values, and skills in achieving social work goals; broadening and deepening knowledge of the function and application of social work practice in a variety of fields and circumstances; and an understanding of and an involvement with the problems of concern to social work.

5. Research. Research methodology; its processes and decision-making; developing a research proposal, data collection and analysis and writing a report based on individual or group project; course objectives include a beginning mastery of research on social work issues or social problems and familiarity with systematic approaches to the study and analysis of practice.

APPLICATION FOR ADMISSION

In seeking tentative admission to the program leading to the Master of Social Work degree or the Master of Science in Social Work degree, the student should write directly to the School of Social Work Admissions Committee requesting appropriate application materials. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms.

Students are admitted only in the fall semester of each year and applications must be received by the Dean of the School of Social Work Admissions Committee not later than January 15.

The applicant also must file an application for admission to San Diego State University with the Office of Admissions.

ADMISSION TO GRADUATE STUDY

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, a student seeking admission to the School of Social Work must:

1. Have earned a 2.0 grade point average on the undergraduate work taken for the baccalaureate degree. Desirable undergraduate preparation should include work in the behavioral and sociocultural studies and in statistics.

2. Submit a written personal history in the manner prescribed by the School of Social Work.

3. Be considered by references to be capable of graduate study and of developing professional responsibility. Such references may be secured from the student or otherwise obtained by the faculty.

4. Possess a personality judged suitable for the profession.

5. Arrange for an interview when so requested by the School.

MASTER OF SOCIAL WORK DEGREE

ADVANCEMENT TO CANDIDACY

Students who have been admitted to the School of Social Work during the fall semester will meet with their advisers during the second half of the spring semester following to discuss the advisability of undertaking the second year of the professional degree program.

To be eligible for advancement to candidacy and for admission to the second year of the program for this degree, the student must, in addition to holding classification, have:

1. Earned a 3.0 (B) grade point average on all courses required in the first year of his program.

2. Be recommended by the faculty of the School of Social Work.

3. Be approved for advancement by the Graduate Division.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SOCIAL WORK DEGREE

1. Fifty-six units of graduate work within the curriculum of the School of Social Work are required for the degree. Of these units:

   a. At least 24 must be completed in residence at San Diego State University.

   b. All transfer credits accepted for the degree must have been earned in a school of social work accredited by, or in the process of being accredited by, the Council on Social Work Education. Normally, a student who wishes to transfer credit earned in such a school of social work must have completed the requirements of that school for the first full academic year of graduate study.

   c. Of the 56 units required for the MSW degree, three units, with permission of the Dean of the School of Social Work, may be in courses in other schools or departments on the campus.

2. Credits earned more than five years prior to the date of admission to the School of Social Work at San Diego State University are not acceptable and all work for the degree must be completed within seven years of the date on which all requirements degree must be completed. In special circumstances, students may be permitted to validate credits earned outside these time limits by satisfactorily passing comprehensive examinations on the outdated course or courses.
3. A maximum of nine units of combined credit in courses 797A-797B and 798 may be included on a student's official program for the Master of Social Work degree.

4. All candidates for the degree must pass satisfactorily a comprehensive examination in lieu of a thesis under the provisions of Plan B as described elsewhere in this bulletin.

5. For regulations concerning grade point averages, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled "Basic Requirements for the Master's Degree," in Part Three of this bulletin. In addition, the student must have earned a 3.0 (B) grade point average in both academic courses and field instruction in his program. Grade point average in academic courses is independent of grade point average in field instruction.

6. Second year electives must include at least six units of two-semester Type A courses and one Type B course during the duration of the degree program.

### COURSE REQUIREMENTS

The program of study normally required for all beginning first-year graduate students in the Master of Social Work degree program is as follows:

#### Sequence | Semester | Total Units
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Social Welfare Policy and Services</td>
<td>SW 600A (3)</td>
<td>6</td>
</tr>
<tr>
<td>Human Behavior and Social Environment</td>
<td>SW 620A (3)</td>
<td>6</td>
</tr>
<tr>
<td>Social Work Practice</td>
<td>SW 630A (3)</td>
<td>6</td>
</tr>
<tr>
<td>Field Instruction</td>
<td>SW 650A (4)</td>
<td>12</td>
</tr>
<tr>
<td>Research</td>
<td>SW 690A (2)</td>
<td>2</td>
</tr>
<tr>
<td>Electives*</td>
<td>2-3 Units</td>
<td>6-12</td>
</tr>
</tbody>
</table>

| Total Units | (15) | (15) | (13-16) | (11-14) | (56-58) |

*To be chosen on individual student basis from electives but must include a course from Type B grouping during the duration of the degree program.

### MASTER OF SCIENCE DEGREE IN SOCIAL WORK

#### ADVANCEMENT TO CANDIDACY

Students who have been admitted to the School of Social Work and have enrolled in the Master of Science program for the fall semester will meet with their advisers during the balance of the calendar year professional degree program. The program of study normally required for all beginning first-year graduate students in the Master of Social Work degree program is as follows:

#### Sequence | Semester | Summer (12 weeks) | Total Units
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<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Social Work Practice</td>
<td>SW 730A (3) or 734A (3)</td>
<td>SW 730B or 734B (3)</td>
<td>(6)</td>
</tr>
<tr>
<td>Social Work Field Instruction</td>
<td>SW 756A (3)</td>
<td>SW 758B (3)</td>
<td>(12)</td>
</tr>
<tr>
<td>Electives</td>
<td>SW 797A (3)</td>
<td>1-3 units</td>
<td>3-5</td>
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<tr>
<td>Total Units</td>
<td>(15)</td>
<td>(15-18)</td>
<td>(30-34)</td>
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</tbody>
</table>

*To be chosen on individual student basis, but must include a Type B course during the duration of the degree program.

## ADDITIONAL INFORMATION

### WITHDRAWALS

Students in the School of Social Work are governed by the general regulations of San Diego State University and the Graduate Division. For regulations governing withdrawals and requirements to be met by students who withdraw from courses, see the sections entitled "Regulations of the Graduate Division," in Part Three of this bulletin. Any student who withholds enrollment for one semester or more must have approval from the Dean of the School of Social Work to continue the study program.
CONDITIONAL ADMISSION

Students who do not fully meet all requirements for admission to the School of Social Work, under special circumstances, be admitted to the School of Social Work in conditionally classified graduate standing. At the end of the first semester's work, the faculty of the School of Social Work shall recommend to the Dean of the Graduate Division that the student:
1. Be disqualified from further participation in the curriculum, or
2. Be continued in conditionally classified standing for a second semester, or
3. Be admitted to full participation in the curriculum with classified graduate standing.

FINANCIAL ASSISTANCE

Students in the School of Social Work are eligible for consideration for waivers of nonresident tuition fees and the other forms of financial assistance as described in Part Three of this bulletin. The School of Social Work has some scholarships, fellowships and other financial stipends available to students admitted to the School who need such help to finance their period of study. The requirements for these various stipends vary and can best be dealt with by direct correspondence with the Dean of the School of Social Work.

Students who need assistance in financing their professional education may request such help at the time of application. Such requests will be considered on an individual basis. An applicant must be accepted for admission to the School of Social Work before he will be recommended for an award.

FIELD INSTRUCTION DURING PERIODS OF UNIVERSITY HOLIDAYS

Because of the nature of field instruction and the student's responsibility to the agency to which he is assigned, and the clientele it serves, field instruction may continue on the regular work schedule of the agency under certain circumstances.

FACULTY

Acting Dean, School of Social Work: J. B. Kelley
Acting Associate Dean, School of Social Work: J. Maxwell
Professors: Griffin, Haworth, Horowitz, Ishikawa, Kahn, Kelley, Kukkonen, Lee, Maxwell, Morgan, Ontell, Pilcher, Reichert, Stanford, Stumpel, Tebor
Associate Professors: Anderson, Baily, Clary, Guidry, Herman, Pepper, Rubin, Sardinas, Valle
Assistant Professors: Ajemian, Raymer, Siman, Sucato, Watson
Appointments Under Grants from Outside Funds
Lecturers: Hudson, Kenney, Lockery, Shenk

REQUIRED COURSES IN M.S.W. OR M.S.S.W. PROGRAMS


Electives:
- Type A—Social Work Roles
- Type B—Substantive Content Areas

GRADUATE COURSES

Prerequisite for enrollment in all graduate courses: admission to the School of Social Work.

600A. (200) Social Welfare Policy and Services I (3)
Social welfare as a societal institution; philosophical, historical and comparative analysis of the welfare functions, issues and problems, with special focus on personal and social deprivation.

600B. (201) Social Welfare Policy and Services II (3)
- Prerequisite: Social Work 600A.
- Conceptional analysis of social welfare programs related to income maintenance and other social service areas, including social insurance, child welfare and community development.

620A. (202) Human Behavior and Social Environment I (3)
- Prerequisite: Social Work 600A.
- Theoretical perspectives on man in the changing world.

620B. (203) Human Behavior and Social Environment II (3)
- Prerequisite: Social Work 600B.
- Examination of deviant behavior from a relativistic framework of a medical model and a career process model.Selected social problem areas are used as illustrations.

630A. (230) Social Work Practice I (3)
- Prerequisite: Concurrent registration in Social Work 620A.
- Principles of social work practice with individuals, families, groups and communities.

630B. (231) Social Work Practice II (3)
- Prerequisite: Social Work 630A and concurrent registration in Social Work 650A.
- Principles of social work practice with individuals, families, groups and communities with emphasis on refinement of skills of social study and social problem analysis.

650A. (250) Field Instruction I (4)
- Prerequisite: Concurrent registration in Social Work 630A.
- Field instruction in a public or voluntary social work setting. Experiences are drawn upon in relation to classroom learning to emphasize application of social work objectives, principles and skills to services to individuals, families, groups and communities.

650B. (251) Field Instruction II (4)
- Prerequisite: Social Work 650A completed in the preceding semester and concurrent registration in Social Work 630B.
- Continuation of field instruction initiated in Social Work 650A. Opportunities are provided for the application of social study and social problem analysis to experience with international and small group processes.

690A-690B. (290A-290B) Social Work Research Methods and Analysis (2-2)
- Prerequisite: Social Work 650A.
- Analysis of existing or projected social welfare programs or service. Selected topics such as alcoholism, drug abuse, human sexuality, legislative processes and violence against children and implications to social work. Topics announced in class schedule. Maximum credit nine units applicable on a master's degree.

700A. (202) Social Welfare Policy and Services III (3)
- Prerequisite: Social Work 600B.
- Problems and issues in emerging social welfare programs, including analysis of the structure of social services and of social work as a profession.

700B. (203) Social Welfare Policy and Services IV (3)
- Prerequisite: Social Work 600B.
- Analysis of existing or projected social welfare programs or service.

710. (291) Seminar on Selected Topics (3)
- Prerequisite: Social Work 600B.
- Selected topics such as alcoholism, drug abuse, human sexuality, legislative processes and violence against children and implications to social work. Topics announced in class schedule. Maximum credit nine units applicable on a master's degree.

720. (222) Human Behavior and Social Environment III (3)
- Prerequisite: Social Work 620B.
- Theories of natural and induced change in individual behavior which have utility for social work practice.

735A. (233) Social Work Practice III (3)
- Prerequisite: Social Work 630B and concurrent registration in Social Work 750A.
- Social work intervention with individuals, families and groups toward personal, social, organizational and institutional change and problem solving. Emphasis on social, ethnic and economic interaction contexts.
730B. (233) Social Work Practice IV (3)
Prerequisites: Social Work 730A, consent of instructor and concurrent requirement in field.

733A. (234) Social Work Practice With Organizations and Communities (3)
Prerequisites: Completion of first year courses and concurrent practicum. Examines community problems, power and strategies in social planning and development under auspices of interorganizational systems, bureaucracies and informal associations. Applications of concepts and principles of planning social change in situational analysis, community organization, program development and evaluation.

734B. (235) Social Planning in Social Work (3)
Prerequisites: Social Work 734A, consent of instructor and concurrent requirement in field.

750A. (252) Field Instruction III: Individuals, Families and Groups (4-5)
Prerequisites: Social Work 650B and concurrent registration in Social Work 730A. Field instruction in a social work setting providing a concentration on social work practice aimed at achieving change in or on behalf of individuals, families and groups. Practice under educational direction at an advanced level.

750B. (253) Field Instruction IV: Individuals, Families and Groups (4-5)
Prerequisites: Social Work 730A completed in the preceding semester and concurrent registration in Social Work 730B. Continuation of Field Instruction III at an advanced level. Emphasis is placed on the use of diverse problem-solving strategies and resources in social work.

754A. (255) Field Instruction V: Organizations and Communities (4-5)
Prerequisites: Social Work 650B and concurrent registration in Social Work 734A. Field instruction in a social work setting providing a concentration on social work practice aimed at achieving change in social policies, organizations and communities. Practice under educational direction at an advanced level.

754B. (256) Field Instruction VI: Organizations and Communities (4-5)
Prerequisites: Social Work 734A completed in the preceding semester and concurrent registration in Social Work 734B. Continuation of Field Instruction V at an advanced level. Emphasis is placed on the use of diverse social work strategies and resources in social planning or community development.

755. (270) Seminar: Social Work Analysis (1-4)
Discussion of student experience in field instruction and its broader implications. Maximum credit four units applicable on a master's degree.

765A. (236) Social Work Practice VII (4)
Prerequisite: Concurrent registration in Social Work 730A or 734A. Laboratory field instruction enabling the student to integrate social work theory, knowledge and concepts in developing preventive skills with individuals, families, organizations and communities. Enrollment limited to students admitted to the M.S.S.W. program.

765B. (237) Social Work Practice VIII (4)
Prerequisites: Social Work 756A and concurrent registration in Social Work 730B or 734B. Continuation of Social Work Practice VII with emphasis on refinements of skills in interpersonal work with individuals, families, groups, organizations and communities.

768. (238-S) Social Work Practice IX (6-8)
Emphasis on the further development of skills with individuals, families, groups, organizations and communities. Enrollment limited to students admitted to M.S.S.W. program.

769. Social Work and Racial-Ethnic Groups (3)
Prerequisite: Completion of first year courses.
Nature of institutional racism and its effect on social provision and social policy. Examines overt and covert forms of racism in but not limited to areas such as housing, schools, corrections, organized labor, job training for the poor, and social statistical reporting for implications to social work practice.

770. Social Work and Aging (3)
Prerequisite: Completion of first year courses.
Exploration of social services and implications for social service delivery systems and practice.

771. Social Work and Mental Health (3)
Prerequisites: Completion of first year courses and concurrent practicum in aging.
Examines selected health-related topics: social and emotional aspects of health and disability; continuity of health care; relationship of social work to other health professions.

773. Social Work and Mental Health (3)
Prerequisites: Completion of first year courses.
An examination of selected areas of mental health science that critically examines social work responsibilities and roles in addressing a continuum of mental health needs in a changing society.
780. (291.) Social Work and Selected Populations-at-Risk (3)
Social work practice with selected populations-at-risk such as one-parent families, children in institutions, ethnic minority immigrants, Native-Americans in the urban scene, and foreign-born brides of U.S. servicemen. Topics to be announced in class schedule. Maximum credit six units applicable on a master’s degree.

781. (291.) Seminar on Selected Populations-at-Risk (3)
Knowledge about and analysis of selected populations-at-risk, social work responsibilities in emerging service demands by diverse and needful, high risk segments of the population in a complex society, and implications for social work practice. Population-at-risk for study to be announced in class schedule. Maximum credit six units applicable on a master’s degree.

797A-797B. (297A-297B) Research (3-3) Cr/NC
Prerequisite: Social Work 690A-690B.
Research in the field of social work and completion of a research project. Individual or group project.

798. (298) Special Study (1-3) Cr/NC
Prerequisite: Consent of staff; to be arranged with Dean and instructor. Individual study. Maximum credit six units.

SOCIOLOGY
GENERAL INFORMATION
The Department of Sociology, in the College of Arts and Letters, offers graduate work leading to the Master of Arts degree in Sociology. For graduate work in connection with the Master of Arts degree in Social Science, refer to the section of this bulletin under Social Science. Research facilities provided by the Department of Sociology include a well-equipped Social Research Center for use by the faculty and graduate students.

ADMISSION TO GRADUATE STUDY
All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Sociology must have completed 18 upper division units in sociology, of which 15 units must include Sociology 401, Classical Sociological Theory, or Sociology 403, Contemporary Sociological Theory; Sociology 404, Social Psychology; Sociology 440, Social Psychology: Sociological Approaches; and one course from each of the following fields: social disorganization, social institutions or social organization, and urban sociology-demography.

ADVANCEMENT TO CANDIDACY
All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. Students majoring in sociology must take the four 600-level core courses (Sociology 601, 602, 603, and 604) and must complete each course with a minimum "B" grade by the end of the first year in the master's program. A student may seek exemption from a maximum of two course areas by passing an exam in the respective areas.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree, as described in Part Three of this bulletin, the student must include in his graduate program a minimum of 24 units from courses in sociology listed below as acceptable on master’s degree programs, of which at least 18 units must be in 600- and 700-numbered courses, including 799A, Thesis. A comprehensive examination in theory and methodology and completion of one of the following are required.

In Plan A all students will be expected to include Sociology 799A, Thesis, as three of the 18 units of 600- and 700-numbered courses required.

In Plan B an alternative is offered to the thesis. This alternative consists of (a) Sociology 797, or 798 for 6 units, culminating in two papers or reports acceptable to the student's committee; or (b) one additional comprehensive examination in an area selected by the student with the approval of his committee, plus Sociology 797, or 798 for 3 units, culminating in a paper or report acceptable to the student's committee; or (c) two additional comprehensive examinations in areas selected by the student with the approval of his committee.

ASSISTANTSHIPS
Graduate teaching assistantships and graduate nonteaching assistantships in sociology are available to a limited number of qualified students. Application blanks and further information may be obtained from the chairman of the department.

FACULTY
Chairman, Department of Sociology: T. L. Gillette
Graduate Adviser: M. I. Daniels
Professors: Daniels, Delora, J.R., El-Assal, Gillette, Johnson, Milne, Mouratides, Somerville, Sorensen, Wendling, Winslow
Associate Professors: Buck, Chandler, Cottrell, Delora, J.S., Emerick, Kennedy, Scheck, Schulze, Werner
Assistant Professors: Halpern, Hohm, Ima, Kirkpatrick, Kolodij, Preston, Stephenson
## Courses Acceptable on Master's Degree Programs in Sociology

### Upper Division Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>506</td>
<td>Modernization of Traditional Societies</td>
<td>3</td>
</tr>
<tr>
<td>510</td>
<td>Sociology of Deviance</td>
<td>3</td>
</tr>
<tr>
<td>511</td>
<td>Current Topics in Sociology</td>
<td>3</td>
</tr>
<tr>
<td>512</td>
<td>Sociology of Conflict</td>
<td>3</td>
</tr>
<tr>
<td>513</td>
<td>Criminology and Penology</td>
<td>3</td>
</tr>
<tr>
<td>514</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>519</td>
<td>Topics in Comparative Societies</td>
<td>3</td>
</tr>
<tr>
<td>520</td>
<td>Industrial Sociology</td>
<td>3</td>
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<tr>
<td>521</td>
<td>Sociology of Occupations and Professions</td>
<td>3</td>
</tr>
<tr>
<td>522</td>
<td>The Sociology of Mental Illness</td>
<td>3</td>
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<tr>
<td>525</td>
<td>Minority Group Relations</td>
<td>3</td>
</tr>
<tr>
<td>526</td>
<td>Medical Sociology</td>
<td>3</td>
</tr>
<tr>
<td>527</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>528</td>
<td>Sociology of Death</td>
<td>3</td>
</tr>
<tr>
<td>531</td>
<td>Sex Roles in Contemporary Societies</td>
<td>3</td>
</tr>
<tr>
<td>534</td>
<td>Sexuality in Modern Society</td>
<td>3</td>
</tr>
<tr>
<td>535</td>
<td>The American Family and Its Alternatives</td>
<td>3</td>
</tr>
<tr>
<td>536</td>
<td>The Family in Cross-Cultural Perspective</td>
<td>3</td>
</tr>
<tr>
<td>537</td>
<td>3</td>
<td>Political Sociology</td>
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<td>538</td>
<td>Sociology of Religion</td>
<td>3</td>
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<tr>
<td>539</td>
<td>Sociology of Education</td>
<td>3</td>
</tr>
<tr>
<td>541</td>
<td>Advanced Social Psychology: Sociological Approaches</td>
<td>3</td>
</tr>
<tr>
<td>545</td>
<td>Sociology of Mass Communication</td>
<td>3</td>
</tr>
<tr>
<td>546</td>
<td>Collective Behavior</td>
<td>3</td>
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<tr>
<td>547</td>
<td>Sociology of Social Movements</td>
<td>3</td>
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<tr>
<td>548</td>
<td>Small Groups</td>
<td>3</td>
</tr>
<tr>
<td>550</td>
<td>Population Problems</td>
<td>3</td>
</tr>
<tr>
<td>557</td>
<td>Urban Sociology</td>
<td>3</td>
</tr>
<tr>
<td>563</td>
<td>The Logic of Sociological Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>597</td>
<td>Investigation and Report</td>
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### Graduate Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>601</td>
<td>Advanced Social Theory: Core Course</td>
<td>3</td>
</tr>
<tr>
<td>Prerequisites: Unclassified graduate standing, Sociology 401</td>
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<tr>
<td>Systematic treatment of the original European and American classic sociological writing and an overview of the major developments in contemporary social theory.</td>
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<tr>
<td>602</td>
<td>Advanced Research Methods: Core Course</td>
<td>3</td>
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<tr>
<td>Prerequisites: Unclassified graduate standing, Sociology 464</td>
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<td></td>
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<tr>
<td>Problems and techniques in social research with stress on philosophy of science, theory building, research design, measurement, and data analysis including fundamental critiques and alternatives.</td>
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<tr>
<td>603</td>
<td>Advanced Social Psychology (Sociological Approaches): Core Course</td>
<td>3</td>
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<tr>
<td>Prerequisite: Unclassified graduate standing, Sociology 440</td>
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<tr>
<td>Investigation and analysis of original works in classical social psychological theory focusing on implications for research on topics such as socialization, motivation, perception, role, self, interaction and symbolic processes.</td>
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<tr>
<td>604</td>
<td>Social Organization: Core Course</td>
<td>3</td>
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<tr>
<td>Prerequisites: Unclassified graduate standing, Sociology 422</td>
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<tr>
<td>Concepts, theories and findings concerning structure and change in society, institutions, formal organizations, the community and small groups. Special attention given key concepts of culture, stratification, division of labor, power, bureaucracy, role relationships and interaction.</td>
<td></td>
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</tbody>
</table>
760. (260.) Seminar in Research Methods (3)
Prerequisites: Sociology 401 and 464.
Analysis of methods used in current sociological research, including evaluation of
reported findings. Discussion of research designs appropriate to particular types of
projects. Evaluation of research in progress by members of the seminar. May be repeated
with new content. Maximum credit six units applicable on a master's degree.

765. (265.) Directed Readings in Research Methods (3)
Prerequisite: Sociology 464.
Selected readings providing comprehensive coverage of sociological research
methods.

770. (270.) Seminar in Population and Demography (3)
Prerequisites: Sociology 464 and 550.
Demographic theories, fertility, mortality, migration, construction and application of
demographic indices, demographic prediction, world population trends, special topics.
See class schedule for specific content. Maximum credit six units applicable on a
master's degree.

775. (275.) Directed Readings in Population and Demography (3)
Prerequisites: Sociology 464 and 550.
Selected readings providing comprehensive coverage of the fields of population and
demography.

797. (297.) Research (3) Cr/NC
Prerequisite: Sociology 464.
Independent investigation of special topics.

798. (298.) Special Study (1-3) Cr/NC
Prerequisite: Consent of staff; to be arranged with department chairman and
instructor.
Individual study. Maximum credit six units.

799A. (299A) Thesis (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to
candidacy.
Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course
799A in which the student expects to use the facilities and resources of the university;
also student must be registered in the course when the completed thesis is granted final
approval.

SPANISH

GENERAL INFORMATION

The Department of Spanish and Portuguese Languages and Literatures, in the College
of Arts and Letters, offers graduate study leading to the Master of Arts degree in Spanish.
The staff in charge of the graduate program in Spanish is composed of professors
whose native tongue is Spanish, or who have studied and traveled extensively in Spain or
in Spanish America, enabling them to represent authoritatively the Spanish language and
culture. Library facilities include rich resources in Spanish literature and linguistics,
including books, periodicals and newspapers. A foreign language laboratory with
modern equipment is available to both graduate and undergraduate students.

ADMISSION TO GRADUATE STUDY

All students must satisfy the general requirements for admission to the University
with classified graduate standing, as described in Part Three of this bulletin. An
undergraduate major in Spanish, including 24 upper division units, must have been
completed, at least six units of which must have been in a survey course in Spanish
literature.

ADVANCEMENT TO CANDIDACY

In addition to meeting the requirements for advancement to candidacy as described
in Part Three of this bulletin, students may be required to pass a qualifying examination
in Spanish given by the Department of Spanish and Portuguese Languages and
Literatures.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic
requirements for the master's degree as described in Part Three of this bulletin, the
student must complete a graduate program of at least 30 units which includes a major
consisting of at least 24 units in Spanish, of which at least 18 units must be in 600-and
700-numbered courses, including Spanish 601 and either Spanish 799A in Plan A
programs, or Spanish 794 in Plan B programs.

Students who plan to earn a teaching credential as well as the master's degree in
Spanish will normally follow Plan B, which includes the passing of a comprehensive
examination in lieu of the thesis.

ASSISTANTSHIPS

Graduate teaching assistantships in Spanish are available to a limited number of
qualified students. Application blanks and additional information may be secured from
the chairman of the department.

FACULTY

Chairman, Department of Spanish and Portuguese Languages and Literatures: G. L. Head
Graduate Adviser: M. E. O'Brien
Credential Adviser: C. B. Christensen
Professors: Baker, Caso, Head, Lemus, Walsh
Associate Professors: Barrera, Christensen, Jiménez-Vera, Santaló, Segade, Talamanes,
Weeter
Assistant Professors: O'Brien, Windsor, Young

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS
IN SPANISH

UPPER DIVISION COURSES

Spanish
304A-304B. (104A-104B) Spanish-American Literature (3-3)
510A-510B. (105A-105B) Modern Spanish Drama (3-3)
515A-515B. (106A-106B) Mexican Literature (3-3)
520. (107.) Caribbean Area Countries Literature (3)
522. (108.) Andean Countries Literature (3)
GRADUATE COURSES

All graduate courses in the Department of Spanish and Portuguese Languages and Literatures have a prerequisite of 12 upper division units in Spanish, or consent of instructor.

601. (290.0) Research and Criticism (3)
Purpose and methods of research in the fields of language and literature, including bibliography, literary terms and textual criticism.

610. (207.0) History of the Spanish Language (3)
Prerequisite: Credit or concurrent enrollment in Spanish 548 or 549.
The development of the Spanish language in Spain and Spanish America, with particular attention to the phonology, morphology and syntax of medieval Spanish.

620. (202.0) Cervantes (3)
The principal prose works of Cervantes: The Novelas ejemplares and Don Quixote.

630. (203.0) Lope de Vega and Calderon (3)
The works of Lope de Vega and Calderon.

640. (204.0) The Spanish-American Novel (3)
The Spanish-American novel to 1935.

650. (205.0) The Gaucho Epic (3)
The Poesia gauchesca, with particular emphasis on Martín Fierro, Fausto, and Santos Vega.

660. (206.0) Modernism (3)
The Modernista movement in Spanish America, with special attention to representative poets.

670. (207.0) Medieval Spanish Literature (3)
Prerequisite: Spanish 610.
The literature of Spain from the earliest extant works to the Celestina.

680. (208.0) The Modern Spanish Essay (3)
The thinkers, essayists and philosophers of Spain from the generation of 1898 to the present.

690. (209.0) The Spanish-American Essay (3)
Principal Spanish-American essayists of the 19th and 20th centuries.

695. (210.0) Contemporary Spanish-American Prose Fiction (3)
The principal writers of prose fiction in Spanish America from the mid-thirties to today.

720. (220.0) Seminar in Spanish Golden Age Literature (3)
A representative author, a genre or movement of the Spanish Golden Age. Maximum credit six units applicable on a master's degree.
SPEECH COMMUNICATION

GENERAL INFORMATION

The Department of Speech Communication, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Speech Communication. The department offers advanced study in the areas of public address and communication. An emphasis in oral interpretation within the speech communication degree program is also available.

ADMISSION TO GRADUATE STUDY

Students must meet the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin.

ADVANCEMENT TO CANDIDACY

All students must meet the general requirements for advancement to candidacy, as described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Speech Communication are required to have attained classified graduate standing and to have completed Speech Communication 700.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes at least 30 units from courses listed below as acceptable on master's degree programs in speech, of which at least 18 units must be in 600- and 700-numbered courses. Speech Communication 700, 735, 750, 751 or 790, and 799A, Thesis, are required courses for those electing Plan A. If Plan B is followed six additional units in 600- and 700-numbered courses in speech communication must be taken, and a comprehensive examination must be passed in lieu of the thesis.

Emphasis in Oral Interpretation

The requirements for students electing an emphasis in oral interpretation are as follows:

1. A minimum of 30 units, including at least 21 units of 600- and 700-numbered courses.
2. Speech Communication 700 (3), 708 (6), 735 (3), 750 (3), and 798 (3).
3. Nine units to be taken from the courses listed below:
   - English
   - Techniques of Drama (3)
   - Topics in Techniques of Writing (3)
   - Poetry (3)
   - Seminar: A Major Author (3)
   - Seminar: A Cultural Period (3)
   - Seminar: A Literary Problem (3)
   - Drama
   - Play Analysis (3)
   - Playwriting the One-Act Play (3)
   - History of the Theatre (3)
   - Seminar in History of Theatre and Drama (3)

ASSISTANTSHIPS

Graduate teaching assistantships in speech communication are available to a limited number of qualified students. Application blanks and further information may be obtained from the department chairman.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN SPEECH COMMUNICATION

UPPER DIVISION COURSES

508. (108.) Advanced Interpretation (3)
530. (130.) Semantics (3)
535. (135.) Theories of Human Communication (3)
537. (137.) Empirical Study in Speech Communication (3)
540. (140.) Freedom and Responsibilities of Speech (3)
575. (175.) Intercultural Communication (3)
589. (189.) Ethics of Speech Communication (3)
592. (192B.) Persuasion (3)

GRADUATE COURSES

700. (200.) Research and Bibliography (3)
   Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research as it relates to speech communication. Recommended for first semester of graduate work, and prerequisite to advancement to candidacy.

708. (208.) Seminar in Oral Interpretation (3)
   Prerequisite: Speech Communication 508. Aesthetic discipline applied to oral interpretation of various forms of literature. Analysis of thought and emotional content, and aesthetic form. Investigation of advanced problems of delivery. May be repeated with new content. Maximum credit six units.

730. (230.) Seminar in the Analysis of Language (3)
   Prerequisite: Speech Communication 530. Special problems in language theory which may be integrated into the larger bodies of rhetorical and communication theory.

735. (235.) Seminar in Communication Theory (3)
   Prerequisite: Speech Communication 535. Theories of communication: communication models, codes, perception and effects.

750. (250.) Seminar in Rhetorical Theory (3)
   Leading figures in rhetorical theory from Plato to contemporary theorists. Special attention given to the application of theory to public address.

751. (251.) Seminar in Rhetorical Criticism (3)
   Major systems of speech criticism. Special attention to measuring the effectiveness of a given piece of discourse in terms of actuality and potentiality.

762. (262.) Seminar in Argumentation (3)
   Prerequisite: Speech Communication 362. Significant topics in argumentation: the formulation of problems for argument; the brief with patterns of argument, traditional and recent; presumption, analysis; the Brief with patterns of argument, traditional and recent; presumption, probability; laws of evidence; fallacies.

780. (280.) Seminar in Public Address, 1600-1850 (3)
   Examination of the problems confronting American speakers and the solutions they offered. Special emphasis placed on the rhetorical means used to solve major crises in American history.

781. (281.) Seminar in American Public Address, 1850 to Present (3)
   Examination of the problems confronting American speakers and the solutions they offered. Special emphasis placed on the rhetorical means used to solve major crises in American history.

FACULTY

Chairman, Department of Speech Communication: F. C. Sanders
Graduate Adviser: S. W. King
Professors: Adams, Benjamin, Mills, Samovar
Associate Professors: King, Sanders
Assistant Professors: Moore, Weitzel

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**SPEECH PATHOLOGY AND AUDILOGY**

**GENERAL INFORMATION**

The Department of Speech Pathology and Audiology, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Speech Pathology and Audiology, and to the credentials described below. The department offers advanced study in speech and hearing science, speech pathology, audiology, and education of the deaf. The programs utilize the facilities of the Speech and Hearing Clinic in the Clinical Training Center in the Education Building. Observation, diagnostic and therapeutic experience with out-patient children and adults is available. Field experience is offered in the public schools and community agencies. Practicum and observation experiences are possible at San Diego Speech, Hearing and Neurosensory Center, Children's Hospital; United Cerebral Palsy Center; The Home of Guiding Hands; (mental retardation); Anderson and Lafayette Schools (deaf and severely hard of hearing); Head Start (disadvantaged); Rolando School (congenital aphasia); University of California Medical School Hospital; U.S. Naval Hospital; Balboa Park; U.S. Veterans Administration Hospital; Chicano Community Center; San Ysidro Community Health Center; and Edgemoor Geriatrics Hospital.

**ADMISSION TO GRADUATE STANDING**

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Three of this bulletin.

Minimum requirements for admission as a classified graduate student in the Department of Speech Pathology and Audiology include the following: (1) a score of 950 on the GRE; (2) a grade point average of not less than 2.5 in all undergraduate work taken for the baccalaureate degree; (3) a grade point average of not less than 3.0 in courses taken for a speech pathology-audiology-deaf education major of 24 semester units; (4) three letters of recommendation; (5) a personal interview by one or more members of the department or by a member of the profession specified by the department; (6) a handwritten statement from the applicant regarding career goals, awards, volunteer, and other relevant experience.

**ADVANCEMENT TO CANDIDACY**

All students must meet the general requirements for advancement to candidacy which are described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Speech Pathology and Audiology are required to have attained classified graduate standing and to have completed Speech Pathology and Audiology 600.

**SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of 24 units in speech pathology and audiology which must include Speech Pathology and Audiology 600 and 797 or 799A. Fifteen units of the 24 units must be in 600-numbered courses in speech pathology and audiology, including Speech Pathology and Audiology 600, 601, 602, 603, 604, 605, 606, 640, 644, 649, 654, 657, or 658. A student must complete Speech Pathology and Audiology 799A. Thesis. For Plan A if Plan B is elected, the student must complete a research project as approved by the department; complete two units of Speech Pathology and Audiology 797, Research; and pass a comprehensive examination (which may be repeated only once).

**CREDENTIALS**

Restricted Credential: Speech and Hearing Specialist (Phase II)

The Restricted Credential is not available to students who did not complete credential requirements by September 14, 1974, or who were not on a list of candidates in the program (lock list) as of December 1, 1973. The Restricted Credential is a five-year program leading to a credential which authorizes service in all grades in the area specified. It requires the same lower division courses as are required in the preparation for the major in speech pathology and audiology, a bachelor's degree and completion of a specific pattern of courses. The following speech pathology and audiology courses are required: Speech Pathology and Audiology 320, 321, 322, 323, 324, 326, 329, 340, 527.
528, 551; and 15 units chosen with the approval of the adviser from Speech Pathology and Audiology 341, 342, 346, 390, 406, 530, 531, 532, 543, 547, 550, 552, 553, 601, 602, 603, 604, 605, 606, 626, 628, and 654. Two courses may be selected from Speech Pathology and Audiology 356, 357, 640, 644, 645, 646, 649, 656, or 657. Consult the adviser for specific courses required outside of the department. A provisional credential is no longer offered, and there is no postponement of requirements prior to receiving the restricted credential.

**Specialist Credential for the Communicatively Handicapped (Ryan Bill)**

Assembly Bill 122 (Ryan Bill) has changed the credential structure in the State of California. All students who did not complete the credential requirements by September 14, 1974, or who are not on a lock list as of December 1, 1973, must meet the requirements of the new credentials offered by Assembly Bill 122. The Specialist Credential for the Communicatively Handicapped prepares students for an emphasis in one or more of the following areas of handicap:
- Aphasia
- Deaf and Severely Hard of Hearing
- Deaf—Blind
- Severe Oral Language
- Speech and Hearing

The Specialist Credential for the Communicatively Handicapped may be pursued in conjunction with the Multiple Subjects Teaching Credential or with the Single Subject Teaching Credential. Students may choose to pursue a departmental major and pass the National Teachers Examination prior to entering the School of Education curriculum. The credential specifies a sequence of speech pathology and audiology courses plus education courses. The education courses have not been fully specified at this time but will parallel those required by the regular elementary and secondary credentials, with some exceptions. Consult the department adviser.

**Services Credential: Speech and Hearing (Ryan Bill)**

Assembly Bill 3150 provides for a Services Credential for Speech and Hearing. Specific requirements are not known at this time, but it is the intention of the Department of Speech Pathology and Audiology to offer this credential. Contact the department office for more information.

**CERTIFICATES**

**Preparation Leading to the Certificate of Clinical Competence from the American Speech and Hearing Association**

Students may complete the academic and clinical practice requirements leading to the Certificate of Clinical Competence in Speech Pathology (CCC-Sp) or to the Certificate of Clinical Competence in Audiology (CCC-A) given by the American Speech and Hearing Association. The certificate requires 60 units of course work, 30 units of which must be completed at the graduate level; 300 clock hours of supervised clinical experience, 150 hours of which must be completed at the graduate level; a clinical fellowship year; and a national examination. The academic and practica requirements must meet certain specifications. Consult an adviser in the area in which certification is desired for specific information.

**Preparation Leading to the Professional Certificate from the Council on Education of the Deaf**

Students may complete the academic and practica requirements leading to the Professional Certificate given by the Council on Education of the Deaf. The Professional Certificate requires a specific pattern of courses and teaching experiences and evidence of successful classroom teaching following completion of the academic requirements. Consult an adviser in the Program for Education of the Deaf for more information.
604. (204.) Problems in Cleft Palate and Orofacial Anomalies (3)
Prerequisites: Speech Pathology and Audiology 323, 324, and 340. Minimum of 75 hours of supervised clinical practicum. Etiological considerations, evaluation and remediation of individuals with orofacial anomalies and cleft palate. Concurrent registration in Speech Pathology and Audiology 626 is recommended.

605. (205.) Problems of Stuttering (3)
Prerequisite: Speech Pathology and Audiology 322. Differential diagnosis of stuttering, individual and group therapy for children and adults with dysfluency problems. It is recommended the student take one unit of Speech Pathology and Audiology 626 concurrently with this course.

606. (206.) Problems of Voice Pathology (3)
Prerequisites: Speech Pathology and Audiology 323 and 324. Structural, medical and functional voice problems. Differential diagnosis of vocal anomalies, theories and therapy for vocal problems. It is recommended the student take one unit of Speech Pathology and Audiology 626 concurrently with this course.

626. (226.) Advanced Clinical Practice in Speech Pathology (1-2)
Two hours for each unit of credit plus one hour of staffing. Prerequisite: Speech Pathology and Audiology 324. Supervised work with representative advanced speech cases such as stuttering, aphasia, laryngectomies, etc. Maximum credit four units. Maximum credit four units of 626, 645, and/or 646 applicable on a master's degree.

628. (228.) Advanced Diagnostic Methods in Speech Therapy (3)
Prerequisite: Speech Pathology and Audiology 328. Diagnosis of individuals with complicated speech problems as brain injury, congenital aphasia, adult aphasia, cerebral palsy, hearing loss, laryngectomy, mental retardation, stuttering and voice problems.

640. (240.) Medical Audiology (3)
Prerequisites: Speech Pathology and Audiology 345 and 644. Problems of diagnosis, referral and report writing. Testing in a medical setting and medically significant hearing pathologies.

644. (244.) Audiology (3)
Prerequisite: Speech Pathology and Audiology 341. Psychophysical concepts underlying clinical audiology. Relationship of audiologic test results to the conditions under which they were obtained.

645. (245.) Advanced Clinical Practice in Audiologic Assessment (1-2)
Two hours for each unit of credit. Prerequisite: Speech Pathology and Audiology 644. Advanced casework in hearing evaluation. Maximum credit four units. Maximum credit four units of Speech Pathology and Audiology 626 and 645 applicable on a master's degree.

646. (246.) Advanced Clinical Practice with Hard of Hearing (1-2)
Two hours for each unit of credit. Prerequisite: Speech Pathology and Audiology 551. Supervised practice with problem hearing cases. Maximum credit four units of Speech Pathology and Audiology 626, 645, and 646 applicable on a master's degree.

649. (249.) Seminar in Audiology (3)
Prerequisite: Speech Pathology and Audiology 644. Major research in clinical audiology. Audiologic techniques used in differential diagnosis. Maximum credit six units applicable on a master's degree.

654. (254.) Physiological Phonetics (3)
Prerequisite: Speech Pathology and Audiology 552. Physiology underlying the production of continuous speech, including transitional movements, based on a syllabic concept.

656. (256.) Advanced Field Work with the Deaf (1-3)
Two hours for each unit of credit plus one hour of staffing. Prerequisites: Speech Pathology and Audiology 550, 551, and/or 657 applicable on a master's degree at an advanced level with representative deaf cases.

657. (257.) Differential Diagnosis of the Hearing Impaired (3)
Prerequisite: Speech Pathology and Audiology 106, 550, 551. Diagnosis of multiply-handicapped, hearing-impaired children, including clinical teaching, assessment methods; materials and equipment; prognosis, current philosophies and trends. Maximum credit six units of Speech Pathology and Audiology 656 and 657 applicable on a master's degree.

658. (258.) Seminar in Deaf Education (3)
Prerequisites: Speech Pathology and Audiology 356, 550; Special Education 475. Problems of deafness, evaluation of research, interdisciplinary approach to habilitation.

798. (298) Special Study (1-3) Cr/NC
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.

799A. (299A) Thesis or Project (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.

799B. (299B) Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with a assigned grade of SP. Registration required in any semester or term following assignment of SP in course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.
TELECOMMUNICATIONS AND FILM

GENERAL INFORMATION

The Department of Telecommunications and Film, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Radio and Television. This degree permits advanced study in the areas of telecommunications and film management, research, and public telecommunications. In addition, the department participates in the Master of Science degree in Mass Communications, which is designed to offer systematically training for students: (1) who plan to continue their study in doctoral or other advanced programs in mass communications or in disciplines emphasizing areas of mass communications; (2) who plan a career in secondary or junior college teaching; or (3) who seek a broad background for careers in the mass media, business, or government service (see Mass Communications in this bulletin for specific requirements for this degree).

Both the Master of Arts in Radio and Television and the Master of Science in Mass Communications (with an emphasis in Telecommunications and Film) assume a scholarly interest in theoretical and applied problems relating to media. Postbaccalaureate students interested in learning basic techniques of television and film production should consider pursuing a second bachelor's degree in media production or completing basic production courses elsewhere before applying for graduate study at San Diego State University. Students with an undergraduate major or minor in media may enroll in advanced production courses approved for graduate credit.

Telecommunications and film facilities now in use at San Diego State University include a television production center with two studios, a radio complex with five control rooms, and a film production center. The Department of Telecommunications and Film participates in the operation of KPBS-TV/FM, operates a television production center for the origination and syndication of public television programs, and maintains the San Diego State University closed-circuit instructional television production and origination facility. The entire operation provides telecommunications and film experience for all students in the curriculum and a laboratory for investigating media problems for graduate students.

ADMISSION TO GRADUATE STUDY

Applications for admission to the graduate programs in telecommunications and film will be referred to the graduate adviser of the department who will send to the applicant detailed instructions concerning applications procedures. Applications must be submitted prior to February 1 for the fall semester, and October 1 for the spring semester, in order to be considered by the Graduate Admissions Committee of the Department of Telecommunications and Film.

In addition to meeting the general requirements for admission to the University with classified graduate standing, as outlined in Part Three of this bulletin, a student applying for admission to a graduate program in the Department of Telecommunications and Film must meet the following requirements:

1. Undergraduate major in telecommunications and film (or its equivalent) if advanced study of media development is proposed. Note: Graduate students will not be permitted to enroll in entry-level lower division production courses at San Diego State University. Students with other baccalaureate degrees may pursue a nonproduction course of study leading to the M.A. or M.S. degree, but will be expected to complete one or more media survey courses (such as Telecommunications and Film 315) which will not apply toward the units required for the degree.
2. Undergraduate grade point average not less than 2.75 overall, and 3.0 in the last 60 units attempted.
3. Total score (verbal and quantitative) on the GRE Aptitude Test of 950.

To be considered for admission to a graduate program in the department, a student must submit the following in addition to materials required by the University:

1. Three letters of recommendation.
2. A personal statement in which the student discusses his or her background, interests and abilities as they apply to the desire for an advanced degree, and in particular, a graduate degree in telecommunications and film at San Diego State University.

SPECIFIC REQUIREMENTS FOR ADVANCED DEGREES

Students accepted for graduate study in the Department of Telecommunications and Film will first be given Conditional Graduate Standing (classified in the Graduate Division). Full classified standing will be given only after the student has completed Telecommunications and Film 600 with a grade of B or better, and has filed an official graduate program. In addition to meeting the requirements for classified standing described in Part Three of this bulletin, all students must complete Telecommunications and Film 600 in their first semester in residence.

Further specific information on the master of science degree is listed under the heading "Mass Communications." Candidates for the Master of Arts in Radio and Television must also include the following in their programs:

1. Telecommunications and Film 799A (Thesis or Project).
2. At least 21 units from the courses listed below as acceptable for graduate credit.
3. Up to nine units from other departments can be included in a graduate program.
4. At least 18 units in the program must be graduate-level courses.

ADVANCEMENT TO CANDIDACY

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

ASSISTANTSHIPS

Graduate teaching assistantships in telecommunications and film are available to a limited number of qualified students. Application blanks and further information may be obtained from the department chairman.

FACULTY

Chairman, Department of Telecommunications and Film: W. K. Jameson
Graduate Adviser: D. G. Wylie
Professors: Jameson, Jones, Lee, Madsen, Steen, Wylie
Associate Professors: Anderson, Heighton, Johnson, Martin
Assistant Professors: Medard, Misiorowski

COURSES ACCEPTABLE ON ADVANCED DEGREE PROGRAMS

UPPER DIVISION COURSES

500. (101.) Broadcast Management (3)
505. (105.) Regulation of Broadcasting (3)
510. (170.) Script Writing for Broadcasting and Film (3)
520. (180.) Directing Television and Film Drama (3)
530. (133.) Radio Programming (3)
540. (103.) Broadcast Advertising (3)
541. (104.) Broadcast Commercial Practices (3)
550. (156.) Advanced Lighting and Staging for Television and Film (4)
560A-560B. (168A-168B) Film Production (1-3)
562. (164.) Documentary and Propaganda Film (3)
563. (160.) Film Classics (3)
565. (163.) Animated Film Techniques (3)
567. (165.) Educational Telecommunications (3)
570. (710.) Advanced Programming and Development for Television (4)
580. (183.) Advanced Programming and Development for Television (4)
581. (184.) Advanced Television Directing (4)
590. (108.) International Broadcasting (3)
GRADUATE COURSES

600. (200.) Research and Bibliography (3)
Basic reference works, scholarly and critical journals; bibliographical techniques; exercises and problems in methods and exposition of research as it relates to the various areas of telecommunications and film.

601. (205.) Mass Communications Research (3)
Prerequisite: Telecommunications and Film 600.
Design and execution of a media research project; audience and message analysis; experimental design and survey research methodology.

602. (272.) Seminar in Mass Communication Theory (3)
Prerequisite: Speech Communication 535.
Analysis of theoretical models of mass communication. Application of operational models for the diffusion of information, and the adoption of innovation, to problems in the mass media.

603. (273.) Mass Communications Message Design (3)
Prerequisite: Speech Communication 535.
Selection and organization of message design elements in the mass communications media. Analysis of the effects of various types of mass communications formats, presentations, and systems on individuals and groups.

610. (210.) Seminar in Writing for Broadcast and Film (3)
Prerequisites: Telecommunications and Film 363, 460 and 510.
Dramatic structures as they apply to broadcasting and cinema. Writing a full-length script or scenario.

615. (212.) Criticism of Broadcasting and Cinema (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film.
Standards for objective appraisal of the ethical and artistic aspects of radio, television and film programs.

620. (203.) Seminar in History of Broadcasting (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film.
The development of broadcasting in its social, legislative and economic settings, with emphasis on broadcasting in the U.S.

640. (202.) Seminar in Broadcast Advertising Problems (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film.
Analysis of social, economic and cultural context of advertising in commercial broadcasting; criticism and evaluation of the function of the advertiser; survey of broadcast advertising theory and research.

660. (268.) Directing the Dramatic Film (3)
Prerequisites: Telecommunications and Film 520, 560B, and consent of instructor.
Analysis of technical and stylistic contributions of major directors as seen in their films. Production of a short dramatic film embodying concepts so learned.

670. (270.) Seminar in Educational Telecommunications (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film or educational technology.
Educational uses of electronic media. Use of telecommunications in classrooms and school systems. Relationship of noncommercial radio and television (public broadcasting) to commercial broadcast media and education.

680. (284.) Seminar in Programming and Production (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film.
Theory and analysis of programming and production of broadcasting.

700. (201.) Seminar in Broadcast Management (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film.
The legal and regulatory milieu of broadcasting from the perspective of station management.

705. (207.) Seminar in Broadcast Law and Regulations (3)
Prerequisite: Telecommunications and Film 505.
Analysis of legal concepts and issues as applied to commercial and noncommercial broadcasting; relationship of local, state and federal government to broadcast media.

770. (275.) Teaching Broadcasting and Film (3)
Broadcast and film curriculum development. Methods of teaching both theory and laboratory courses in broadcasting and film. Analysis of organizations for administering broadcast and film curricula in colleges and universities with public TV stations and/or on-campus instructional TV systems.

798. (298.) Special Study (1-3) Cr/NC
Individual study. Maximum credit six units.
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.

799A. (299.) Thesis or Project (3) Cr/NC
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with a assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.
The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became the California State University and Colleges and fourteen of the nineteen campuses received the title University.

The oldest campus—San Jose State University—was founded in 1857 and became the first institution of public higher education in California. The newest campus—California State College, Bakersfield—began instruction in 1970.

Responsibility for The California State University and Colleges is vested in the Board of Trustees, whose members are appointed by the Governor. The Trustees appoint the Chancellor, who is the chief executive officer of the system, and the Presidents, who are the chief executive officers on the respective campuses.

The Trustees, the Chancellor and the Presidents develop systemwide policy, with actual implementation at the campus level taking place through broadly based consultative procedures. The Academic Senate of The California State University and Colleges, made up of elected representatives of the faculty from each campus, recommends academic policy to the Board of Trustees through the Chancellor.

Academic excellence has been achieved by The California State University and Colleges through a distinguished faculty, whose primary responsibility is superior teaching. While each campus in the system has its own unique geographic and curricular character, all campuses, as multipurpose institutions, offer undergraduate and graduate instruction for professional and occupational goals as well as liberal education. All of the campuses require for graduation a basic program of "General Education—Breadth Requirements" regardless of the type of bachelor's degree or major field selected by the student. A limited number of doctoral degrees are offered jointly with the University of California.

Presently, under the system's "New Approaches to Higher Education," the campuses are implementing a wide variety of innovative programs to meet the changing needs of students and society. Among pilot programs under way are instructional television projects, self-paced learning plans, minicourses, and credit-by-examination alternatives. The Consortium of The California State University and Colleges fosters and sponsors local, regional and statewide external degree and certificate programs to meet the needs of individuals who find it difficult or impossible to attend classes on a campus.

Enrollments in fall 1974 totaled approximately 292,000 students, who were taught by a faculty of 16,000. Last year the system awarded over 57 percent of the bachelor's degrees and 36 percent of the master's degrees granted in California. Over 465,000 persons have been graduated from the nineteen campuses since 1960.

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Appointments are for a term of eight years expiring March 1 of the years in parentheses. Names are listed in order of appointment to the Board.

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Bakersfield, California 93309

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(916) 895-5011

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Fullerton, California 92634
L. Donald Shilling, President
(714) 870-2011

California State University, Hayward
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Hayward, California 94542
Ellis E. McCune, President
(415) 881-3000

California State University, Long Beach
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Long Beach, California 90840
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Northridge, California 91324
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3801 West Temple Avenue
Pomona, California 91768
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California State Polytechnic University, San Luis Obispo
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Robert E. Kennedy, President
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125 South Seventh Street
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