Graduate Academic Catalog (June 1970 - June 1971)

University of Nebraska at Omaha

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<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 8</td>
<td>Last day for submitting admissions credentials for first summer session</td>
</tr>
<tr>
<td>June 5-6</td>
<td>Registration</td>
</tr>
<tr>
<td>June 8-July 10</td>
<td>First Session</td>
</tr>
<tr>
<td>June 8-July 30</td>
<td>Evening Session</td>
</tr>
<tr>
<td>June 12</td>
<td>Last day for submitting admissions credentials for second summer session</td>
</tr>
<tr>
<td>June 19</td>
<td>Theses due in Graduate Office</td>
</tr>
<tr>
<td>July 4</td>
<td>Holiday</td>
</tr>
<tr>
<td>July 13-Aug 14</td>
<td>Second Session</td>
</tr>
<tr>
<td>July 17</td>
<td>Last day for filing application for degree to be conferred August 31, 1970</td>
</tr>
</tbody>
</table>
### OFFICIAL CALENDAR

#### SUMMER 1970

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1</td>
<td>Last day for submitting admission credentials for admission to Graduate College.</td>
</tr>
<tr>
<td>June 6-7</td>
<td>Registration.</td>
</tr>
<tr>
<td>June 9-July 11</td>
<td>First session.</td>
</tr>
<tr>
<td>June 10-July 31</td>
<td>Evening session.</td>
</tr>
<tr>
<td>June 21</td>
<td>Theses due in Graduate College.</td>
</tr>
<tr>
<td>July 4</td>
<td>Holiday</td>
</tr>
<tr>
<td>July 11</td>
<td>Last day for submitting applications for admission to second summer session.</td>
</tr>
<tr>
<td>July 14-Aug. 15</td>
<td>Second session.</td>
</tr>
<tr>
<td>July 18</td>
<td>Last day for filing applications for degrees to be conferred August 31, 1970.</td>
</tr>
</tbody>
</table>

#### FIRST SEMESTER 1970-71

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>August 14</td>
<td>Last day for submitting admission credentials for admission to first semester.</td>
</tr>
<tr>
<td>September 8-11</td>
<td>Registration and changes.</td>
</tr>
<tr>
<td>September 14</td>
<td>Official beginning of first semester at 7:30 a.m. Day and evening classes begin.</td>
</tr>
<tr>
<td>September 14</td>
<td>Late registration begins.</td>
</tr>
<tr>
<td>September 18</td>
<td>Last day for registering for a day class, or adding a day class to a schedule, up to 4 p.m. (or changing a day class from &quot;audit&quot; to &quot;credit&quot; or &quot;credit&quot; to &quot;audit&quot;).</td>
</tr>
<tr>
<td>September 19</td>
<td>Last day for registering for an evening class, or adding an evening class to a schedule (or changing an evening class from &quot;audit&quot; to &quot;credit&quot; or &quot;credit&quot; to &quot;audit&quot;).</td>
</tr>
<tr>
<td>October 3</td>
<td>Parents Day</td>
</tr>
<tr>
<td>October 8</td>
<td>Founders Day.</td>
</tr>
<tr>
<td>October 16</td>
<td>Homecoming. (Day classes dismissed after 12:30 p.m.)</td>
</tr>
<tr>
<td>October 17</td>
<td>Homecoming Football Game.</td>
</tr>
<tr>
<td>October 18</td>
<td>Six-week reports on first-semester Freshmen due in Academic Dean's Offices by 4:00 p.m.</td>
</tr>
<tr>
<td>October 31</td>
<td>Band Day</td>
</tr>
<tr>
<td>November 6</td>
<td>Last day for filing applications for degrees to be conferred August 31, 1970.</td>
</tr>
<tr>
<td>November 7</td>
<td>Theses due in Graduate Office.</td>
</tr>
<tr>
<td>November 24</td>
<td>Thanksgiving recess begins at 9:40 a.m.</td>
</tr>
<tr>
<td>November 30</td>
<td>Classes resume at 7:30 a.m.</td>
</tr>
</tbody>
</table>

#### SECOND SEMESTER 1970-71

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1</td>
<td>Last day for submitting credentials for admission to second semester.</td>
</tr>
<tr>
<td>January 4, 1970</td>
<td>Classes resume at 7:30 a.m.</td>
</tr>
<tr>
<td>January 18</td>
<td>&quot;Dead&quot; Day. No day classes nor student activities. (Evening classes meet as usual.)</td>
</tr>
<tr>
<td>January 19-26</td>
<td>Final Examinations.</td>
</tr>
<tr>
<td>January 23</td>
<td>All grades due in Registrar's Office by 3:30 p.m.</td>
</tr>
<tr>
<td>January 30</td>
<td>Mid-year Commencement (Saturday).</td>
</tr>
<tr>
<td>January 27-29</td>
<td>Registration and changes.</td>
</tr>
<tr>
<td>February 1</td>
<td>Official beginning of second semester at 7:30 a.m. Day and evening classes begin.</td>
</tr>
<tr>
<td>February 1</td>
<td>Late registration begins.</td>
</tr>
<tr>
<td>February 5</td>
<td>Last day for registering for a day class or adding a day class to a schedule, up to 4 p.m. (or changing a day class from &quot;audit&quot; to &quot;credit&quot; or &quot;credit&quot; to &quot;audit&quot;).</td>
</tr>
<tr>
<td>February 6</td>
<td>Last day for registering for an evening class, or adding an evening class to a schedule (or changing an evening class from &quot;audit&quot; to &quot;credit&quot; or &quot;credit&quot; to &quot;audit&quot;).</td>
</tr>
<tr>
<td>March 20</td>
<td>Theses due in Graduate Office.</td>
</tr>
<tr>
<td>March 26</td>
<td>Last day a class may be dropped in order to receive a &quot;W&quot;; last day for changing a class from &quot;credit&quot; to &quot;audit&quot;; last day for making up an &quot;incomplete&quot; incurred in the fall semester.</td>
</tr>
<tr>
<td>April 3</td>
<td>Spring Vacation begins at noon.</td>
</tr>
<tr>
<td>April 12</td>
<td>Classes resume at 7:30 a.m.</td>
</tr>
<tr>
<td>April 13</td>
<td>Last day for filing applications for degrees to be conferred in June 1970.</td>
</tr>
<tr>
<td>May 14</td>
<td>Ma-ic-Day—student holiday.</td>
</tr>
<tr>
<td>May 14</td>
<td>Last day for submitting credentials for admission to Graduate College for summer session.</td>
</tr>
<tr>
<td>May 24</td>
<td>&quot;Dead&quot; Day. No day classes nor student activities. (Evening classes meet as usual.)</td>
</tr>
<tr>
<td>May 25-June 2</td>
<td>Final Examinations.</td>
</tr>
<tr>
<td>May 28</td>
<td>Alumni Achievement Day.</td>
</tr>
<tr>
<td>May 31</td>
<td>Legal Holiday (University Closed).</td>
</tr>
<tr>
<td>June 3</td>
<td>All grades due in Registrar's Office by 3:30 p.m.</td>
</tr>
<tr>
<td>June 5</td>
<td>Sixty-second Commencement. Saturday.</td>
</tr>
</tbody>
</table>
GRADUATE RECORD EXAMINATION

<table>
<thead>
<tr>
<th>Registration Deadlines</th>
<th>Testing Dates</th>
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</thead>
<tbody>
<tr>
<td>September 25, 1969</td>
<td>October 25, 1969</td>
</tr>
<tr>
<td>November 13, 1969</td>
<td>December 13, 1969</td>
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<tr>
<td>December 17, 1969</td>
<td>January 17, 1970</td>
</tr>
<tr>
<td>March 25, 1970</td>
<td>April 25, 1970</td>
</tr>
<tr>
<td>June 11, 1970</td>
<td>July 11, 1970</td>
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</tbody>
</table>

ADMISSION TEST FOR GRADUATE STUDY IN BUSINESS

Registration deadlines and testing dates from Dr. Gale Oleson.

GRADUATE students must have Graduate Record Examination or the Admission Test for Graduate Study in Business scores on file in the Graduate College office prior to their second period of enrollment. Testing at UNO is under the supervision of Dr. Gale Oleson, Director, Academic Testing Bureau, Administration Building 213.
### GRADUATE FACULTY

**1970-71**

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Degree and University</th>
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</thead>
<tbody>
<tr>
<td>ROBERT L. ACKERMAN</td>
<td>Education</td>
<td>Ed.D., University of Nebraska</td>
</tr>
<tr>
<td>PAUL B. ACKERSON</td>
<td>Secondary Education</td>
<td>Ed.D., Oklahoma State University</td>
</tr>
<tr>
<td>FREDERICK W. ADRIAN</td>
<td>History</td>
<td>Ph.D., Ohio State University</td>
</tr>
<tr>
<td>AARON ARNFIELD</td>
<td>Special Education</td>
<td>Ed.D., Colorado State College</td>
</tr>
<tr>
<td>CLIFFORD ANDERBERG</td>
<td>Philosophy</td>
<td>Ph.D., University of Wisconsin</td>
</tr>
<tr>
<td>BRUCE P. BAKER II</td>
<td>English</td>
<td>Ph.D., Texas Christian University</td>
</tr>
<tr>
<td>GEORGE BARGER</td>
<td>Sociology</td>
<td>Ph.D., University of Missouri</td>
</tr>
<tr>
<td>NICHOLAS BARISS</td>
<td>Geography</td>
<td>Ph.D., Clark University</td>
</tr>
<tr>
<td>PAUL L. BECK</td>
<td>History</td>
<td>Ph.D., University of Nebraska</td>
</tr>
<tr>
<td>ROBERT W. BENECKE</td>
<td>Accounting and Finance</td>
<td>D.B.A., University of Colorado</td>
</tr>
<tr>
<td>JOSEPH V. BENAK</td>
<td>Civil Engineering</td>
<td>Ph.D., University of Illinois</td>
</tr>
<tr>
<td>HOLLIE B. BETHEL</td>
<td>Elementary Education</td>
<td>Ph.D., University of Colorado</td>
</tr>
<tr>
<td>JOHN V. BLACKWELL</td>
<td>Art</td>
<td>Ph.D., University of Iowa</td>
</tr>
<tr>
<td>RICHARD BLAKE</td>
<td>Counseling and Guidance</td>
<td>Ph.D., University of Missouri</td>
</tr>
<tr>
<td>M. JEAN BRESSLER</td>
<td>Secondary Education</td>
<td>Ph.D., University of Nebraska</td>
</tr>
<tr>
<td>BARBARA BRILHART</td>
<td>Secondary Education</td>
<td>Ph.D., Pennsylvania State University</td>
</tr>
<tr>
<td>JOHN K. BRILHART</td>
<td>Speech</td>
<td>Ph.D., Pennsylvania State University</td>
</tr>
<tr>
<td>MERLE E. BROOKS</td>
<td>Biology</td>
<td>Ph.D., University of Colorado</td>
</tr>
<tr>
<td>WILLIAM M. BROWN</td>
<td>Marketing</td>
<td>Ph.D., University of Pittsburgh</td>
</tr>
<tr>
<td>BARBARA E. BUDHULLER</td>
<td>Mathematics</td>
<td>Ph.D., University of Arizona</td>
</tr>
<tr>
<td>CHARLES M. BULL</td>
<td>Marketing</td>
<td>Ph.D., University of Nebraska</td>
</tr>
<tr>
<td>DALE M. BUNSEN</td>
<td>Secondary Education</td>
<td>Ed.D., University of Nebraska</td>
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<tr>
<td>KENNETH BURKHOLDER</td>
<td>Educational Administration</td>
<td>Ph.D., University of Washington</td>
</tr>
<tr>
<td>KARL H. D. BUSCH</td>
<td>Biology</td>
<td>Ph.D., Ohio State University</td>
</tr>
</tbody>
</table>

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### UNIVERSITY OF NEBRASKA AT OMAHA

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<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Degree and University</th>
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</thead>
<tbody>
<tr>
<td>H. CARL CAMP</td>
<td>Political Science</td>
<td>Ph.D., Washington University</td>
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<tr>
<td>CARRIGAN, JO ANN</td>
<td>History</td>
<td>Ph.D., Louisiana State University</td>
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<tr>
<td>ELTON S. CARTER</td>
<td>Speech</td>
<td>Ph.D., Northwestern University</td>
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<tr>
<td>FERRY P. CHANG</td>
<td>Economics</td>
<td>Ed.D., University of Missouri</td>
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<tr>
<td>EDWIN L. CLARK</td>
<td>Reading</td>
<td>Ph.D., State University of Iowa</td>
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<tr>
<td>HARRY J. CROCKETT, JR.</td>
<td>Sociology</td>
<td>Ph.D., University of Michigan</td>
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<tr>
<td>DONALD CUSHENBERY</td>
<td>Reading</td>
<td>Ed.D., University of Missouri</td>
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<tr>
<td>HARL DALSTROM</td>
<td>History</td>
<td>Ph.D., University of Nebraska</td>
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<tr>
<td>JOE DAVIS</td>
<td>Counseling and Guidance</td>
<td>Ed.D., University of South Dakota</td>
</tr>
<tr>
<td>JOSEPH G. DUNN</td>
<td>Education</td>
<td>Ed.D., University of Missouri</td>
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<tr>
<td>LAWRENCE E. EHlers</td>
<td>Engineering</td>
<td>Ph.D., Oklahoma State University</td>
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<tr>
<td>KENNETH ELLER</td>
<td>Foreign Language</td>
<td>M.A., University of Kansas</td>
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<tr>
<td>EUGENE FREUND</td>
<td>Foundations of Education</td>
<td>Ph.D., Wayne State University</td>
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<tr>
<td>CRAIG FULLERTON</td>
<td>Special Education</td>
<td>Ph.D., State University of Iowa</td>
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<tr>
<td>DALE GAEDERT</td>
<td>History</td>
<td>Ph.D., Ohio State University</td>
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<tr>
<td>RICHARD GIBSON</td>
<td>Civil Engineering</td>
<td>M.S., University of Illinois</td>
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<tr>
<td>G. WAYNE GLIDDEN</td>
<td>Secondary Education</td>
<td>Ed.D., University of Nebraska</td>
</tr>
<tr>
<td>FRANK H. GORMAN</td>
<td>Educational Administration</td>
<td>Ph.D., University of Missouri</td>
</tr>
<tr>
<td>DONALD J. GRANDGENETT</td>
<td>Elementary Education</td>
<td>Ed.D., Arizona State University</td>
</tr>
<tr>
<td>RAYMOND A. GENTHER</td>
<td>Physics</td>
<td>Ph.D., Illinois Institute of Technology</td>
</tr>
<tr>
<td>ERT J. GUM</td>
<td>History</td>
<td>Ph.D., Louisiana State University</td>
</tr>
<tr>
<td>PAUL HAEDEER</td>
<td>Mathematics</td>
<td>Ph.D., Iowa State University</td>
</tr>
<tr>
<td>ROBERT D. HARPER</td>
<td>English</td>
<td>Ph.D., University of Chicago</td>
</tr>
</tbody>
</table>

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*Special Notes:* 
- Assistant Professor
- Associate Professor
- Professor
- Dean, College of Liberal Arts and Sciences
GEORGE T. HARRIS........................... Finance
Ph.D., State University of Iowa, 1953; The Frederick W. Kayser Professor of Finance

GEORGE HEATHER............................. Business Administration
Ph.D., State University of Iowa, 1946; Professor; Dean of the College of Business Administration

WAYNE M. HIGLEY............................. Accounting & Statistics
Ph.D., University of Illinois, 1962; C.P.A.; Professor

*JACK A. HILL................................. Management
Ph.D., University of Texas, 1964; Professor

*PETER W. HILL............................... Art
M.F.A., Cranbrook Academy of Art, 1958; Associate Professor

ROGER HOBURG............................... Chemistry
Ph.D., University of Nebraska, 1967; Assistant Professor

WILLIAM C. HOCKETT........................ Accounting
M.B.A., University of Denver, 1949; C.P.A.; Professor

LETA F. HOLLEY.............................. Secretarial Science
Ed.D., University of Colorado, 1960; Professor and Head of Department

JAMES Q. HOSSACK........................... Engineering
M.S.C.E., University of Nebraska, 1959; Registered Professional Engineer; Associate Professor

HELEN HOWELL............................... Elementary Education
Ed.D., University of Colorado, 1960; Assistant Professor

FRANCIS M. HURST.......................... Psychology
Ed.D., Indiana University, 1954; Professor

CHARLES O. INGHAM.......................... Biology
Ph.D., University of Utah, 1953; Associate Professor

W. F. JARMIN................................. Counseling and Guidance
Ph.D., University of Missouri, 1969; Assistant Professor

D. F. KELLAMS............................... Educational Administration
Ed.D., University of Kansas, 1954; Associate Professor and Head, Department of Educational Administration and Supervision

PAUL C. KENNEDY............................ Educational Administration and Educational Foundations
Ed.D., University of Kansas, 1955; Professor and Dean, College of Education

C. ROBERT KEPPEL........................... Chemistry
Ph.D., Massachusetts Institute of Technology, 1939; Associate Professor

RANDALL T. KLEEME........................ Economics
Ph.D., Iowa State College, 1947; Graduate Lecturer

EDWARD LA CROSSE........................... Special Education
Ed.D., Teachers College, Columbia University, 1964; Graduate Lecturer

W. C. B. LAMBERT........................... Political Science
Ph.D., Washington University, 1956; Professor

RICHARD L. LANE............................ English
Ph.D., University of Arkansas, 1939; Associate Professor

WILLIAM B. LE MAR........................ Engineering
M.E., Yale University, 1947; Registered Professional Engineer; Associate Professor

WALTER W. LINSTROMBERG.................. Chemistry
Ph.D., University of Missouri, 1958; Professor

WILFRED LOGAN.............................. Sociology
Ph.D., University of Michigan, 1939; Graduate Lecturer

JOHN W. LUCAS.............................. Business Administration
M.B.A., Ohio State University, 1936; LL.D., University of Omaha, 1958; Professor; Dean Emeritus, College of Business Administration

S. R. LUNT................................. Biology
Ph.D., University of Utah, 1964; Associate Professor

THOMAS MAJESEK............................ Art
M.F.A., University of Iowa, 1963; Assistant Professor

JOHN P. MALONEY........................... Mathematics
Ph.D., Georgetown University, 1965; Associate Professor

DONALD MANSON............................. Speech
Ph.D., Pennsylvania State University, 1966; Associate Professor

D. N. MARQUARDT............................ Chemistry
Ph.D., State University of Iowa, 1949; Professor and Head of Department

ANSON D. MARSTON.......................... Engineering
M.S.C.E., University of Wisconsin, 1936; E.E., Iowa State University, 1951; Registered Professional Engineer; Professor and Head, College of Engineering and Technology

KATHLEEN MCKENNEY....................... Special Education
Professional Diploma, Columbia University, 1967; Assistant Professor

JOHN G. MCMILLAN.......................... Physical Science
M.A., University of Nebraska, 1942; Professor and Head of Department

G. D. MENARD............................... Political Science
Ph.D., University of Nebraska, 1964; Associate Professor

JOYCE MINTEER............................. Business Administration
Ed.D., University of Indiana, 1957; Professor

WOODROW L. MOST............................ Foreign Languages
Ph.D., Laval University, 1953; Professor and Head of Department

KIRK E. NAYLOR............................. Education
Ed.D., University of Kansas, 1952; Professor and President

G. A. NEWKIRK............................... English
Ph.D., University of Denver, 1957; Associate Professor

*JOHN M. NEWTON............................ Psychology
Ph.D., Ohio State University, 1958; Professor and Head of Department

JOHN R. NYE................................. Sociology
Ph.D., Iowa State University, 1958; Assistant Professor

B. GALE OLESON............................. Counseling and Guidance
Ph.D., University of Wyoming, 1953; Professor; Director Academic Testing and Counseling

ROBERT C. O'REILLY......................... Educational Administration
Ed.D., University of Kansas, 1962; Professor and Associate Dean, Graduate College; University Grants Coordinator

RICHARD A. OVERFIELD..................... History
Ph.D., University of Maryland, 1968; Assistant Professor

RUSSELL PALMER............................ Philosophy and Religion
Ph.D., University of Iowa, 1953; Assistant Professor Philosophy and Religion

*D. T. PEDRINI.............................. Psychology
Ph.D., University of Texas, 1958; Professor

JAMES B. PETERSON......................... Music
Ph.D., State University of Iowa, 1953; Professor and Head of Department

*WILLIAM R. PETROWSKI.................... History
Ph.D., University of Wisconsin, 1956; Assistant Professor

DONALD J. PFLASTERER..................... Education
M.Ed., University of Nebraska, 1952; Associate Professor; Dean of Student Personnel

LEONARD PRESTWICH....................... Marketing
Ph.D., Ohio State University, 1957; Professor
THE GRADUATE COLLEGE

PAUL PRIOR
Ph.D., University of Iowa, 1954; Professor and Head of Department

PAUL PRIOR
Biology

GEORGE R. RACHFORD
Ph.D., Indiana University, 1958; Professor; Vice President, Campus Development

M. N. REDDY
Engineering

HAROLD J. RETALICK
Ph.D., Clark University, 1930; Professor

EDITH RASMUSSEN
Ph.D., Cornell University, 1941; Associate Professor

*ROY M. ROBINS
Ph.D., University of Wisconsin, 1929; Professor

WILLIS P. ROGERS
J.D., University of Utah, 1951; Ph.D., Ohio State University, 1959; C.L.U.; C.P.C.U.; Professor

GUENTHER ROSE
Ph.D., University of California at Los Angeles, 1964; Graduate Lecturer

EDWARD SADLER
Ed.D., University of Nebraska at Lincoln, 1969; Assistant Professor

*EDWARD SADLER
Secondary Education

*CORNELL SCHILZ
Ph.D., Clark University, 1943; Professor and Head of Department

DAVID C. SCOTT
Ph.D., State University of Iowa, 1948; Professor and Head of Department

JAMES SELEE
Ed.D., University of Colorado, 1964; Associate Professor

*KEITH P. SMITH
Ph.D., Iowa State University, 1966; Associate Professor

JACQUELINE ST. JOHN
Ph.D., University of Oklahoma, 1969; Instructor

PAUL J. STAGEMAN
Ph.D., University of Nebraska, 1963; Professor

ELROY J. STEELE
Ed.D., State University of Iowa, 1987; Professor and Head of Department

JUSTIN D. STOLEN
Ph.D., University of Illinois, 1969; Assistant Professor in Economics

DALE STOVER
Ph.D., McGill University, 1967; Assistant Professor

RICHARD STRANGES
Ph.D., Ohio State University, 1969; Assistant Professor

*A. STANLEY TRICKETT
Hist. B.A., Victoria University of Manchester, England, 1933; Professor and Head of Department

KEITH TURNER
Ph.D., University of Nebraska, 1968; Associate Professor

WILLIAM T. UTLEY
M.A., University of Arkansas, 1956; Professor; Dean, College of Continuing Studies and Director of Summer Sessions

PHILIP H. VOGT
M.S., Washington University, 1935; Professor

PHILLIP E. VOGEL
Ph.D., University of Nebraska, 1968; Professor

BLAINE WARD
Ph.D., University of South Dakota, 1969; Assistant Professor

LAURENCE W. WARD
B.S., University of Missouri, 1980; Professor

EDWARD T. WORTON
Ph.D., University of Nebraska, 1969; Associate Professor

* WOLFGANG WOLFENBERGER
Ph.D., Claremont Graduate School, 1969; Assistant Professor

RAYMOND A. ZIEBARTH
Ph.D., University of Minnesota, 1966; Professor and Head of Department

* Member, Graduate Faculty, University of Nebraska System

ACCREDITED STANDING

The University of Nebraska at Omaha is accredited by the North Central Association of Colleges and Secondary Schools, the National Council for Accreditation of Teacher Education, and is a member of the National Commission of Accrediting (not an accrediting agency), the American Association of Colleges for Teacher Education, the Association of Urban Universities, the Association of American Colleges, the National University Extension Association, the American Association of University Women, the Council of Graduate Schools in the United States, the Midwest Conference on Graduate Study and Research, the Association of Universities, Evening Colleges, the Adult Education Association of the United States, American Association of Colleges and Secondary Schools of Business, Association of Governing Boards, the approved list of the International Reading Association, and the American Council on Education. It's courses are accepted, for purposes of teacher certification, by the Nebraska State Department of Public Instruction.

Course credits from the University are accepted by other colleges and universities which are members of the North Central Association and by other regional accrediting agencies.

UNIVERSITY REGULATIONS

The University and its various colleges, divisions, and departments reserve the right to change the regulations controlling admission to, instruction in, and graduation from the University or its various divisions. Such regulations are operative whenever the University authorities deem necessary and apply not only to prospective students but also to those currently enrolled in the University.

The University also reserves the right to withdraw courses, to reassign instructors, and to change tuition and fees at any time.

In the Graduate College, requirements may be made retroactive only for those students who do not maintain a continuity of enrollment. "Continuity" means that the student is enrolled in both semesters of every academic year or in at least one session every summer until all requirements for the degree have been satisfied.
The first Master's degree was awarded by a special vote of the Board of Regents of the "old" University of Omaha in June, 1931. Graduate work leading to the Master of Arts degree was authorized by the newly organized Municipal University, September, 1931, to be supervised by a Committee on Graduate Studies. In 1942, the Graduate Division was established. The degree of Master of Science in Education was approved in 1948. In 1954, the Committee on Graduate Studies became the Graduate Council and the Chairman became the Director of the Division. In 1960, the Board of Regents authorized a year of graduate study in Education beyond the Master's degree. In 1966, the Graduate Faculty replaced the Graduate Council.

Recognizing the growing importance of graduate education, the Board of Regents, in October, 1962, established the College of Graduate Studies as the sixth college of the University of Omaha. In 1966, the name was changed to The Graduate College.

The Graduate College at the University of Nebraska at Omaha was established to provide an opportunity for advanced study and independent investigation in a limited number of fields of learning for qualified students:

1. To work toward a Master of Arts, Master of Science, Master of Business Administration, or Education Specialist degree.
2. To earn graduate credit for the issuance or renewal of certificates for teachers and administrators.
3. To provide for professional advancement and scholarly objectives.
4. To enable the student to attain these objectives, the Graduate College provides workshops, institutes, seminars, research and special problems courses, and the supervision of theses or special projects.

Thus the Graduate College promotes the spirit of free investigation in the various fields of knowledge, and at the same time serves to unite the various branches of the University in the common task of advancing human knowledge and providing for society intelligent, capable leadership.

**ADMINISTRATION**

The Graduate Faculty prescribes the qualifications of all professors who offer graduate work and approves all courses which may be taken for graduate credit. The Dean of the College serves as Chairman of the Graduate Faculty.

"To be elected to the Graduate Faculty requires recommendation by the Department Head, the cognizant Dean and the Academic Standards and Curriculum Committee, and approval by the Dean of the Graduate College."

1. He has an earned doctorate or the equivalent; or, if a doctorate is not usual in the field in which he teaches, a terminal degree and special competence in the field being taught.
2. He has demonstrated ability in scholarly research or creative work.
3. He has one year of teaching experience at the college level (other than graduate assistantships or part-time instructing) or equivalent experience, plus research publication or creative production with evidence of peer acceptance, or

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**University of Nebraska at Omaha**

He has two years of teaching experience at the college or university level (other than graduate assistantships or part-time instruction) or equivalent experience.

4. He holds a full-time appointment in the University System with faculty rank of assistant professor or higher, or is qualified as a graduate lecturer.

Graduate faculty members have the responsibility within their departments to design and revise courses for which graduate credit is offered. They counsel graduate students in major and minor fields and serve on graduate students' committees.

Approval to teach for persons not members of the UNO Graduate Faculty may be secured by recommendation from the department head for approval on behalf of the faculty by the graduate dean.

**GRADUATE COMMITTEES**

Each department (or area) offering a graduate degree has a Graduate Program Committee of at least three members. This committee and its chairman are chosen annually by the graduate faculty members of the department. In its department the Graduate Program Committee has the responsibility for the planning of the graduate program, the general supervising of the candidates for graduate degrees and the examining of students by means of the qualifying examination and the final comprehensive examination when these examinations are not given by a student's thesis or field project supervisory committee.

Each new graduate student, in conference with the chairman of the Graduate Program Committee of his major department, shall select his major adviser. For the student who has a supervisory or advisory committee, the composition of the committee shall be recommended to the Graduate Dean by the chairman of the student's Graduate Program Committee after consultation with the student and his major adviser. At the master's level, committees of three members are usually sufficient. The chairman should be a member of the Graduate Faculty and, whenever feasible, the student's adviser and thesis director. The representative from a department other than the major must be a member of the Graduate Faculty. In addition to at least three voting members, faculty members in the university system may be appointed to serve ex officio (without vote) as consultants (or to gain experiences as special representatives of the Graduate Dean). The Graduate Program Committees at UN-O represent both the Graduate Faculty and the student's field of study. The word program denotes all kinds of academic requirements which must be satisfied by the graduate student in order to qualify for a particular degree (or-in the case of a non-degree student—the requirements of graduate-level certification or recognized stages of professional development). Every degree candidate's plan of study must be designed to satisfy the requirements of a program which has been approved by the Graduate Faculty. Both major and minor requirements, together with quality-of-work standards, are included under programs; also included are transfer credits and those electives which are not major or minor courses.

Faculty members involved in graduate education, and in research (or any kind of further faculty development involving graduate students), should have ample opportunity to participate in decisions affecting these responsibilities. Provisions for appropriate participation by graduate students is equally important.
PURPOSE

The Graduate College provides the opportunity, the faculty and the resources to meet the various needs of graduate students for more advanced and more specialized education than the undergraduate work upon which all graduate programs are founded.

GRADUATE ASSISTANTSHIPS

Available for qualified students who are enrolled in a graduate degree program are graduate assistantships in teaching, research or laboratory supervision. The assistant's assignment is designed to provide unexcelled opportunities for supervised educational experiences at the graduate level in conjunction with the degree program. The stipends range upwards from $2400. Approximately twenty hours of work per week is required. The enrollment of students with assistantships will be limited to no more than twelve credit hours per semester unless the student has demonstrated extraordinary efficiency and the adviser recommends the abnormally high work load to the Graduate Dean for his approval.

Graduate assistants or interns who must earn money for self-support may be required to reduce correspondingly the number of hours for which they may register. Such adjustments shall be subject to the approval of the Dean of the Graduate College. (See p. 21)

Applications and their supporting credentials must be received on or before March 1. Address requests for information and application forms to the Dean of the Graduate College.

SCHOLARSHIPS

Phi Delta Gamma, a national sorority for women, offers an annual scholarship of $200 to a woman graduate student who has completed approximately half her graduate work with an excellent record. For applications and details concerning this scholarship, contact the Dean of the Graduate College. Applications should be in the Graduate Office by March 1 of each year to be considered for the following academic year.

Loans are also available to qualified graduate students.

ORGANIZATIONS

Phi Delta Gamma is a national sorority for women in all fields. Membership is by invitation.

Phi Delta Kappa is a national fraternity for men who are graduate students in Education. Membership is by invitation.

Beta Gamma Sigma is a national honorary society for students in Business Administration. Membership is by invitation.

Psi Chi is a national honorary association for graduate students in Psychology. Membership is by invitation.

Omicron Delta Epsilon is a national honorary association for graduate students in Economics. Membership is by invitation.

PROCEDURES AND REGULATIONS

Admission and Transcripts

The student admitted to graduate study is advised to familiarize himself with the academic regulations of the University and the Graduate College, and the student is expected to assume full responsibility for knowing the particular requirements of his own academic program. The student is responsible for complying with all regulations of the University, the Graduate College, and the departments of instruction, and for meeting all requirements for his degree. The student should consult with his adviser whenever he has any question concerning the requirements for his degree.

New students should correspond with, or go directly to, the Director of Admissions in order to apply for admission. Each new student will be required to file with the Director of Admissions:

1. An application for graduate study at the University of Nebraska at Omaha.
2. Present two (2) official transcripts of all undergraduate (and graduate, if any) college work previously taken. (Graduates of the University of Nebraska at Omaha need not submit transcripts.)
3. Pay a transcript evaluation fee of $5 at the Cashier's Office and have the receipt validated by the Director of Admissions. When applying by mail, enclose a check payable to the University for the transcript evaluation fee.
4. Scores of the Graduate Record Examination or Admission Test for Graduate Study in Business should be filed in the Graduate Office. Applications for admission, together with transcripts, must be filed not only by those students desiring to work for a degree, but also by students desiring graduate credit for a renewal of a teacher's certificate or for graduate credit to be transferred to some other school. (See Calendar for dates.)

Foreign students must provide letters of recommendation, statements of financial independence, and evidence of ability to speak and write the English language. The bachelor's degree must have been received from an institution accredited by the proper accrediting agencies.

Admission to the Graduate College does not admit the student to candidacy for any graduate degree. (See "Admission to Candidacy for Graduate Degrees."

CREDIT and AUDIT

A student may change from "credit" to "audit" in a particular class during the first 8 weeks of a semester; or if the class is for a period shorter or longer than a semester, he may change from "credit" to "audit" during the first half of such a period.

CLASSIFICATION OF ADMISSION

Unconditional

Unconditional admission to graduate study may be granted to a student who has a Bachelor's degree from a regionally accredited institution, who has earned at least a B average in the undergraduate work in his proposed graduate major and minor, and who presents at least 18 semester hours of undergraduate work that meet specific requirements of the departments in his graduate major and minor. A student from an institution which is not regionally accredited will be admitted on the same basis as he would be admitted by the state university or reporting institution in that state. In such cases, further work may be required, or suitable examination, or in some cases the completion of a Bachelor's degree in an accredited institution. In addition to the specified transcript record, appropriate scores of the Graduate Record Examination must be supplied to the Graduate Dean.
Provisional

Provisional admission may be granted to a student who has a Bachelor's degree from a regionally accredited institution but who has not completed all of the undergraduate prerequisite course requirements for admission to the Graduate College. This provisional status will continue until such time as the student has completed all of the undergraduate prerequisites for graduate study.

Provisional admission may occasionally be granted to a student who has less than a B average in the undergraduate work in his proposed graduate major and minor, (but in no case less than a C average) upon recommendation of the department head of the major department (and minor if one is involved) and written approval by the Graduate Dean. This admission may be made for reasons of maturity, experience, or other extenuating circumstances under which the student may be deemed capable of high quality graduate study. This provisional admission will not be removed until the student has successfully demonstrated to the satisfaction of the Department and the Dean his ability to pursue graduate study.

A student may not apply for admission to candidacy for any degree until he has met the requirements of unconditional admission.

Non Degree

Some students who do not anticipate pursuing a degree program may be admitted to graduate study. Credentials for admission include a completed history and two undergraduate transcripts. Credit hours accumulated in this category could be counted toward a degree only if (a) the transition from non degree status is accomplished no later than the first opportunity to file candidacy for degree, and (b) the petition for change is accompanied by a departmental recommendation that the specified credit hours count toward the degree. For students desiring to change prior to completion of 9 credit hours, the Request to Change Graduate Degree Program form should be used; for those having completed 9 hours the Application for Admission to Candidacy form should be used.

A student who is within three semester hours of having completed all requirements for the Bachelor's degree at the University of Nebraska at Omaha may be provisionally admitted to the Graduate College.

Admission to Teacher Education Programs

Students who plan to work for the Master's degree with a major in one of the fields of education must hold a valid teaching certificate or be eligible for such a certificate at the undergraduate level before entering the program.

EXAMINATIONS FOR GRADUATE STUDENTS

Graduate students are required to take either the Graduate Record Examination (GRE) (or ATGSB) during their first semester of enrollment in the Graduate College, unless they have taken it previously and have made the scores available to the Dean of the College. Neither examination is used to exclude admission at the Master's level. These examinations, which require no special preparation or review, give valuable evidence of a student's qualifications for graduate work and are helpful in planning courses of graduate study. A nominal fee is charged for the examination. A student who has not taken the examination prior to his application for admission to the Graduate College but who is judged from other evidence to be capable of graduate study, is assigned provisional status. A final determination of classification will be made after the examination scores have been studied.

Applicants for admission to the Master of Business Administration program are required to take the Admission Test for Graduate Study in Business in lieu of the Graduate Record Examination.

GRADUATE RECORD EXAMINATION

<table>
<thead>
<tr>
<th>Registration Dates</th>
<th>Testing Dates</th>
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<tbody>
<tr>
<td>October 9, 1970</td>
<td>October 24, 1970</td>
</tr>
<tr>
<td>November 27, 1970</td>
<td>December 12, 1970</td>
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<tr>
<td>January 1, 1971</td>
<td>January 16, 1971</td>
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<td>April 24, 1971</td>
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<tr>
<td>June 4, 1971</td>
<td>June 19, 1971</td>
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</tbody>
</table>

Testing at UNO is under the supervision of Dr. Gale Oleson, Director, Academic Testing Bureau, Administration Building 213.

FOREIGN LANGUAGE REQUIREMENT

The major department may require a candidate for the Master's degree to demonstrate by examination a satisfactory reading knowledge of one modern foreign language. Specific instructions regarding the language requirement may be obtained from the student's advisor.

REGISTRATION PROCEDURE

The student is to follow the usual procedure in registering for courses by filling out the proper class cards and other registration blanks and by paying fees at the Business Office. At each registration period the student must secure the signature of his major adviser (and of the Dean of the Graduate College if he is registering for more than twelve hours with an assistantship or more than fifteen hours without an assistantship). Students must have been formally admitted to the Graduate College prior to their first registration.

Graduate students who are not working toward a degree are classified as non-degree students. This classification includes:
1. graduate students taking courses for teacher certification
2. graduate students taking courses for professional growth
3. graduate students taking courses for cultural advancement
4. graduate students taking courses for transfer to another institution.

CERTIFICATION OR PROFESSIONAL GROWTH

Students who wish to take courses for graduate credit to be used for teacher certification or professional growth must meet the same admission requirements as other graduate students. They must also make application for admission to the Graduate College. (See "Admission to Graduate College.")

ADMINISTRATIVE CERTIFICATE

Students who are preparing to meet the requirements for an Administrative or Supervisory Certificate must submit to the Office of the Dean of the College at the time of application, the names of two persons who can vouch for their personal and professional qualifications as a prospective school administrator.
ADMISSION INTO CANDIDACY FOR GRADUATE DEGREE

Admission to the Graduate College does not admit the student to candidacy for any degree.

It is the student's responsibility to make application for candidacy for the degree as soon as he can qualify for admission to candidacy. The qualifications are: (1) the scores on the Graduate Record Examination (or the Admission Test for Graduate Study in Business, if applicable) must be on file in the Graduate Office; (2) nine hours of graduate credit must have been completed at this University; and (3) a grade average of "B", with no grade lower than "C".

As a rule, no degree can be awarded in the same semester as candidacy for the degree is approved.

Application forms should be filled out by the student—in consultation with his major and minor advisers—as soon as the student can qualify for admission to candidacy. Both the major and minor programs should be carefully and completely planned at this time and the application should be signed by both the major and minor adviser. At least 16-semester hours of graduate credit are required for the degree is approved, and the programs of study should be filed in the graduate office and copies should be provided for the major adviser, the minor adviser, and the student.

Programs of study should be planned with acceptable alternatives included. Once approved, any modification of a program of study is permissible only upon recommendation of the major adviser. If the minor is concerned, the minor adviser if the minor is concerned, and the approval of the Dean of the Graduate College. One course may be substituted in an advanced program, in case of exceptional hardship, by action of the Dean of the Graduate College upon recommendation of the major and minor advisers.

APPLICATION FOR THE DEGREE

The candidate for the degree must file an application for degree in the Registrar's Office in the semester or session in which the degree is to be granted. The graduation fees must be paid at the same time as the application is made. (See Calendar for date.)

THESIS

Except in one English program, all candidates for the Master of Arts degree are required to prepare a thesis under the direction of the major adviser supported by a committee. The thesis provides an opportunity for the student to obtain first-hand experience in research methods under competent direction. Up to six hours of credit is allowed for the thesis, and the candidate must include the thesis as a course in his schedule during at least one semester in residence. The thesis should be initiated at least eight months before the commencement in which the student plans to receive his degree.

Three typewritten copies of the thesis (two copies for the University Library and the student's personal copy), plus an additional copy if required by the department, must be approved by the major adviser and submitted to the Graduate Office in final form no later than the second week in November in the fall semester, the third week in March in the spring semester, or the second week of the summer session. The first copy must be a typewritten copy on permanent bond paper of 20-pound weight; the other two copies should be on paper of 20-pound weight. Either pica or elite type may be used in typing. Full instructions for the preparation of theses should be obtained from the Graduate Office when the student registers for thesis.

Thesis Manual: The responsibility for placing the thesis in final form rests with the student and his major adviser. All theses must be written in accordance with a standard thesis manual. The Graduate Faculty has approved an official manual for each department and the student will be advised by his major adviser of the standard form to be used.

The cost of binding three copies (see Fees) must be paid by the candidate at the time the thesis is submitted in final form to the Graduate Office. If the department conducting the thesis requires an additional copy, it is to be bound at department expense. The fees are payable in the Cashier's Office.

ORAL EXAMINATION ON THESIS

After the thesis has been delivered to the Graduate Office in final form, a committee will read the thesis and conduct the oral examination over the thesis and thesis field. This committee shall consist of members from the major department, and at least one graduate faculty member from another department of the University. If the thesis examination is to be combined with the oral comprehensive (noted above), one-half the time may be devoted to the thesis and one-half to the graduate courses taken by the candidate.

Final comprehensive oral examinations must be taken at least 30 days before the convocation at which it is expected that the degree will be conferred.

Oral examinations may not be scheduled during the period between the close of the first term of the summer session and the beginning of the subsequent fall semester.

FINAL COMPREHENSIVE EXAMINATION

A final comprehensive examination is required of all candidates for the Master's degree near the conclusion of their graduate study. *For those who as candidates for the 36-hour Master of Sciences degree, the examination is a written one. For the degree of Master of Arts, the final comprehensive examination may be either written or oral. If written, it must be arranged at the convenience of the major adviser. If the comprehensive is to be oral, it should be arranged at the time of the oral examination over the thesis, at which time one-half of the examination may be devoted to the courses taken by the candidate and one-half to the thesis. For the degree of Master of Business Administration, the final comprehensive examination will be administered on dates corresponding to those for the M.S. degree.

If the course work has been of very high quality the minor adviser may suggest to the student's committee that the candidate be excused from the comprehensive examination covering the minor field. This does not prejudice the privilege of the minor professor giving a comprehensive, if he so desires. The minor comprehensive is given at a date arranged at the convenience of both the student and the minor adviser but falling within the limits established for all comprehensive examinations.

Students should register in the major department for the comprehensive examination at the time of their final enrollment. (Note: Students who plan degree program completion in August should register for the comprehensive in the preceding June.)

* No comprehensive examination is required on any alternate program in English. See p. 27.
TIME LIMIT FOR ALL MASTER'S DEGREES

In evaluating credits earned toward an advanced degree, credits dating back five years or more are subject to reduction in value as determined by the Graduate Faculty. Once a student has been admitted to the Graduate College, he is expected to complete the requirements for the degree within a period of five years. Time spent in the military service of the United States may be excepted in the application of this rule.

QUALITY OF WORK

A "B" average must be maintained in all work taken as part of the requirements for the degree. A final grade of "C" in each of two courses in either the major or minor area will require action on the part of the Graduate Dean before the student is allowed to count further work toward the degree. A grade of "C" in each of three courses will result in automatic dismissal from the degree program.

A grade of "D" or below in either the major or minor area is considered a failing grade and the student receiving such a grade will automatically be dropped from the degree program. The student thus dropped may take course work as a non-degree student but may not be a candidate for a degree unless reinstated by the Academic Standards and Curriculum Committee when recommended by the Graduate Dean.

A course in which a student has received a "failing" grade may not be repeated; another course may not be substituted for it in computing grade point average.

INC.—A student may be reported "incomplete" if some minor portion of the work remains unfinished, provided the student's standing in the course is not below "D." An "incomplete" must be made up during the first eight weeks of the following semester. After this time an "incomplete" is computed as a failure, unless the Dean of the Graduate College has approved an extension of time.

CLASS ATTENDANCE

Students are expected to attend all meetings of classes for which they are registered. In case of an unavoidable absence it is the student's responsibility to contact his instructor promptly and arrange to make up any work missed.

STUDY LOAD

An average study load for a full-time student is 12 hours of course work. The maximum load for anyone working full time on another job is six hours of course work.

COURSES FOR GRADUATE CREDIT

Courses which are available for graduate credit are those which have been especially approved by the Graduate Faculty with syllabi on file in the Graduate Office.

Courses numbered 500 and above are open only to graduate students. A limited number of upper-division courses are available for graduate credit but the graduate student is expected to do a higher level of work than the undergraduate students.

RESIDENCE REQUIREMENTS

A minimum of 30 semester credit hours in residence (36 in case of the Master of Science in Education and the Master of Business Administration degrees), is required for granting of the Master's degree, except as provision is made for the transfer of credit. No credit will be allowed for correspondence work.

TRANSFER OF CREDIT

Students who have completed graduate courses at other approved graduate schools (excluding extension schools) may petition to transfer as much as six hours of credit, provided the courses considered are pertinent to the student's graduate program. Courses for which transfer is requested must not have been used to satisfy the requirements for any previously awarded degree. Grades in courses for transfer of credit must be the equivalent of "B" or higher. No transfer of credit can be made until the student has been admitted to candidacy for the degree. All work accepted for transfer of credit must have been taken within the five-year period allowed for the Master's degree.

A student who has been approved as a candidate for the Master's degree may, with the prior recommendation of the major adviser and the approval of the Graduate Dean, earn transfer credit in other graduate schools to the limit of six semester hours in the Master of Arts and Master of Business Administration program and nine semester hours in the Master of Science in Education program. The total hours of transfer credit may not exceed the amount stated.

In the Educational Specialist degree, six semester hours of work beyond the Master's level may count as transfer credit, upon recommendation by the major adviser and with the approval of the Graduate Dean.

Students who wish to take graduate courses at the University of Nebraska at Lincoln or at the Medical Center for transfer to UNO should secure the Intercampus Graduate Student Exchange form from the Graduate College office. Transfer of graduate credit from all schools in the University system will be accepted to the extent approved by the student's committee with at least one-half of the minimum degree requirements to be taken at the UNL or UNO campus, whichever is to grant the degree.

WITHDRAWAL FROM A COURSE OR FROM THE UNIVERSITY

A student who wishes to drop all classes and withdraw from the University proceeds as follows:

1. Obtain withdrawal slip from the Registrar's Office or his adviser. Confer with his adviser and obtain his signature on the withdrawal card.
2. Confer with his Academic Dean and obtain his signature on the withdrawal card.
3. Report to the Office of the Dean of Student Personnel and turn in his activity and library cards.

Refunds will be based on the official schedule.

Drop.—When a student finds it necessary to drop a course, he should notify the Registrar and see his adviser immediately. If a student withdraws, his record will be marked "W" indicating that he withdrew.

A student may not drop a course with any grade other than "F" after the eighth week of the semester.
REQUIRED PROCEDURE FOR GRADUATE STUDENTS

1. File two official transcripts of undergraduate credits (and graduate, if any) and an application for admission form with the Director of Admissions. You will be notified by mail of your admission to the college.

2. Arrange your class schedule with your adviser and have him sign your registration slip.

3. Arrange to take the Graduate Record Examination or the Admission Test for Graduate Study in Business in Room 213, Administration Building. If you have previously taken the examination, have the score sent to the Graduate Office.

4. Apply for admission to candidacy for the degree in accord with the procedure described above.

5. In the semester or session in which the degree is to be conferred, the candidate must file his intention of taking the degree in the Office of the Registrar. (See Calendar for exact date.)

6. Arrange with your adviser at least three weeks in advance of administration for the Comprehensive Examination. This applies to all degree candidates whose work requires written comprehensives.

7. The thesis for the Master of Arts degree must be submitted in final form to the Graduate Office not later than the second week in November in the fall semester, the fourth week in March in the spring semester, or the second week of the first Summer Session. Thesis examinations may not be scheduled during the second Summer Session.

8. Master of Arts candidates must arrange for the Oral Examination to be given at least 30 days before the date of commencement. In the Summer Session, oral examinations must be completed before the close of the first term.

9. Order the cap and gown from the Book Store.

10. Attend Commencement unless excused by petition to the Graduate Dean at least two weeks in advance.

TUITION AND FEES

Student fees are payable in full at the time of registration. Registration is not complete until cleared by the cashier. The University reserves the right to change the amount of tuition and fees at any time, or to assess breakage, deposit, lost property, or service fees not specifically listed in this schedule.

Students in need of loans, deferred payments, or other financial assistance must consult the Student Aid Officer in room Adm. 240, at least two weeks prior to the start of classes.

INSTRUCTION

Tuition, per semester credit hour:
- Undergraduate, Graduate or Audit
  - Resident of Nebraska: $38.00
  - Nonresident: $28.00

Applied Music: Voice and all instruments except pipe organ
(Fees may be waived by the Head of the Music Department)
- One semester credit hour—additional fee: $40.00
- Two semester credit hours (same instrument) add $1 fee: $60.00
- Non-credit: 10 lessons: $50.00
- 8 lessons: $35.00
- Public Health Nursing—additional fee: $30.00
- TV of the arts (per 3 hr. course—includes materials): $60.00

Confessions and Non-credit courses:
- Fees are determined for each offering on an individual basis.

GENERAL FEES

- Full-time students (12 credit hours or more) per sem.: $30.00
- Part-time students (less than 12 hours) per sem.: $15.00
- Summer Sessions (per session): $15.00

Fees are assessed to every student each semester, except that summer session students who complete registration for both sessions at the initial registration period will be assessed the fee only once. Included in this fee are charges for registration, health service, library, and student center as well as materials and supplies furnished by the University for instruction.

The full-time fee of $30.00 also entitles the student to a regular student activities card covering athletics, publications and general student activities. Part-time students may obtain a regular student activities card by paying an additional $3.00 per semester.

GRADUATION FEES

- Graduate College: $15.00
- Baccalaureate Degree: $12.00
- Associate Degree: $7.00
- Degree in absentia—additional: $5.00

OTHER FEES, CHARGES AND DEPOSITS

- Matriculation and change of college: $10.00
- Payable upon initial enrollment and upon each subsequent change of college.
- Late Registration (Day or Evening Classes): $3.00
- Deferred Payment (if approved by Student Aid Officer): $5.00
- Change of Schedule—per change: $5.00
- Change of Academic Record—per change: $5.00
- Removal of incomplete, grade change, etc.: $5.00
- Transcript Evaluation (transfer students and Graduate College): $5.00
- Transcript of Academic Record—per copy: $1.00
- Teacher Placement Registration: $6.00
- Thesis Binding (additional copy—$5.00): $15.00
- Bank Check (insufficient or non-fund check) minimum: $2.50
- Insufficient fund or non-fund checks are considered to be deferred payments.
- Replacement of Student Activity Card (with approval): $1.00
- A.F.R.O.T.C. Activity Fee—per semester: $2.00
- A.F.R.O.T.C. Uniform Deposit (refundable): $10.00
- Key Deposit (if authorized) (refundable): $5.00
- Tests and Examinations:
  - Guidance and Placement—scheduled times: $5.00
  - Special, proficiency, advanced standing, or out of schedule: $5.00
  - C.C.T. tests for credit in the College of Continuing Studies: $20.00
  - $2.00 of this amount may be applied toward tuition if test score is satisfactory—per test
  - Vocational Testing and Counseling:
    - Fees for these services depend upon tests administered and extent of counseling; inquire in room Adm. 213 for charges.

REFUND SCHEDULE

Refunds are computed from the date application is received by the Registrar, NOT from date of withdrawal from classes. Refund should be obtained from the Registrar and given to students are void and not redeemable, unless presented to the Cashier (room Adm. 150) within 30 days after date of issue.

A student must file notice of withdrawal from class, accompanied by written approval of the adviser and the Dean of Student Personnel, with the Registrar immediately upon dropping any course.
Students paying tuition and fees on a deferred payment basis or under any other loan, granted by the University, who withdraw before the account is paid in full are not relieved from payment of the balance due. Refunds will first be applied to unpaid balances, and any remaining balance must be paid in cash.

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<th>REGULAR SEMESTER</th>
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<tr>
<td>Withdrawal before classes start</td>
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<td>Withdrawal during 1st or 2nd week</td>
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<td>Withdrawal during 3rd or 4th week</td>
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<tr>
<td>Withdrawal during 4th to 8th week</td>
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<td>Withdrawal after 8th week</td>
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<thead>
<tr>
<th>SUMMER SESSIONS (3 WEEK SESSION)</th>
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<tr>
<td>Withdrawal before classes start</td>
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<tr>
<td>Withdrawal during 1st week</td>
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<tr>
<td>Withdrawal during 2nd week</td>
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<tr>
<td>Withdrawal during remainder of the 1st week</td>
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<td>Withdrawal after 2nd week</td>
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<tr>
<th>CREDIT COURSES (8 WEEK SESSION)</th>
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<tr>
<td>Withdrawal before classes start</td>
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<tr>
<td>Withdrawal during 1st week</td>
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<td>Withdrawal during 2nd week</td>
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<td>Withdrawal during 3rd week</td>
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<td>Withdrawal after 3rd week</td>
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<tr>
<th>NON-CREDIT AND SPECIAL COURSES (10 weeks or more)</th>
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<tr>
<td>Withdrawal before classes start</td>
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<td>Withdrawal during 1st week</td>
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<td>Withdrawal during 2nd week</td>
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<td>Withdrawal after 2nd week</td>
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<td>(Less than 10 weeks)</td>
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<td>Withdrawal before classes start</td>
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<td>Withdrawal during 1st week</td>
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<td>Withdrawal during 2nd week</td>
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<td>Withdrawal after 2nd week</td>
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<tr>
<th>RESIDENT STUDENTS</th>
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| A student's right to classification as a resident for purposes of registration in a state educational institution must be determined under the provisions of Nebraska Revised Statutes of 1943, Sec. 85-502 (R.S. Supp., 1966). (See General Catalog.) Any student who has been classified as a nonresident who believes he can qualify as a resident should contact the Registrar's Office.

DEGREE PROGRAMS AND PROGRAMS OF INSTRUCTION

The Master's degree or the Specialist in Education degree is conferred by the Board of Regents upon recommendation of the Graduate Faculty, and with the final approval of the faculty of the University of Nebraska at Omaha.

The following departments offer work toward both the Master of Arts and Master of Science Degrees: biology, counseling and guidance, economics, educational administration and supervision, elementary education, geography, mathematics, psychology, secondary education, sociology, and special education. Some departments offer a single degree, the Master of Arts: English, history, and speech; engineering students may receive the Master of Science. The Master of Business Administration (MBA) was awarded to first graduates in January, 1963.

The Specialist in Education degree is a two-year program of graduate study. The program was offered for the first time in the 1964-65 school year.

THE MASTER OF ARTS DEGREE

WITH MAJORS IN BIOLOGY, COUNSELING AND GUIDANCE, ECONOMICS, EDUCATIONAL ADMINISTRATION AND SUPERVISION, ELEMENTARY EDUCATION, ENGLISH, GEOGRAPHY, HISTORY, MATHEMATICS, PSYCHOLOGY, SECONDARY EDUCATION, SOCIOLOGY, SPECIAL EDUCATION, SPEECH.

The program for the Master of Arts degree will usually be arranged to conform to either of the following general patterns (English excepted):

1. A major of 24 semester hours in the major field of study.
2. A thesis not to exceed six semester hours in independent study under the direction of the major adviser.

OR:
1. A major of 15 semester hours in the major field of study.
2. A minor of nine semester hours in a related field of interest.
3. A thesis not to exceed six semester hours in independent study under the direction of the major adviser.

Note: Sociology students—see Master of Science degree for specific examination requirements.

WITH A MAJOR IN BIOLOGY

To enter the program for the Master of Arts degree in biology the student must present approximately 24 semester hours credit in the biological sciences plus adequate preparation in the supporting sciences of inorganic and organic chemistry, general physics, and mathematics. Students with inadequate backgrounds may be admitted provisionally.

To complete the degree, the student must present 30 hours of graduate work in biology to include credit in thesis (a maximum of 6 hours) and at least 24 hours of appropriate courses to be determined by the student and his faculty committee. Present research interests of faculty members include anatomy, animal behavior, animal physiology, aquatic biology, ecology, embryology, entomology, histology, invertebrate zoology, ornithology, plant physiology, and plant taxonomy.
WITH A MAJOR IN ENGLISH

To be admitted to graduate study in English, a student should have completed at least eighteen credit hours in undergraduate English courses above the freshman level with an average grade of "B" or above.

All candidates for Master's degrees in English are required to take English 501 (Introduction to Literary Research), to pass a proficiency examination in French or German, and to follow one of the following plans of study:

I. A total of 24 credit hours in course work, including at least nine hours in seminar courses, and a thesis on an approved topic accepted after oral defense before a faculty committee.

II. A total of 36 credit hours in course work, including at least twelve hours in seminar courses, and a written comprehensive examination prepared and judged by a faculty committee.

The following English seminars in major periods vary in emphasis and may be repeated for an additional three hours of credit:

- English 506, 508, 509, 510, 512, 515, 520, and 525.

WITH A MAJOR IN GEOGRAPHY

An applicant for admission to the Master of Arts degree program in geography must present a prerequisite of fifteen undergraduate semester hours of geography including physical, economic, political, and cartography.

**Degree Requirements:** The degree requires a minimum of thirty semester hours in geography courses numbered 400 and 500, including thesis. Permission of the department head is required for a student to take more than two 400 level courses to apply toward an M.A. degree. A thesis involving field work in an area of study under the direction of a major adviser is required.

Basic courses required for an M.A. degree include Urban Geography, Cultural Geography, Political Geography Seminar, Geomorphology or Physiology of North America and Field Geography.

WITH A MAJOR IN PSYCHOLOGY

**Admission Requirements:** A minimum of fifteen undergraduate semester hours of psychology courses beyond the introductory course including the psychology of learning, basic statistics, and an upper level laboratory course in experimental psychology.

**Degree Requirements:** To complete the M.A. degree in psychology, the student must present thirty hours of graduate course work in psychology, or twenty-four hours in psychology plus nine hours in a related minor field. Up to six hours of thesis credit are to be included in this total. Psychology 301 (History of Psychology) and either Psychology 415 (Multiple Regression and Factor Analysis) or Psychology 416 (Analysis of Variance), are required of all graduate students in this program, and one of these required courses must be taken during the first nine hours of graduate work. The remainder of the student's course work is elective, but must be planned in conference with his academic adviser, in order to meet the individual needs and interests of the student. The student must emphasize one of the following areas: educational, general-experimental, industrial, quantitative, personality, or child psychology.

In order to ensure a breadth of knowledge in psychology, however, the student will be required to take approximately one-third of his course work in each of the following areas: experimental-learning, personality-social, and quantitative methods. This requirement may be modified in view of a student's prior graduate or undergraduate courses. Final determination of a student's plan of study always resides with his adviser and the department.

WITH A MAJOR IN SPEECH PATHOLOGY

The Master of Arts degree with a major in speech pathology involves these requirements:

1. Pass an examination to determine adequate personal voice and speech proficiencies and adequate hearing acuity for speech. (Administered by the Speech and Hearing Clinic of the University.)

2. Have successfully completed a minimum of twenty-six semester hours of work preparatory to admittance to the major. These hours are to include the following courses or their equivalents: SPED 306, Introduction to Special Education; SPED 341, Speech Development and Correction; SPED 437, Basic Audiology; SPED 438, Auditory and Speech Mechanisms; SPED 439, Psychology of Speech; SPED 443, Speech Pathology II: Rhythm and Symbolization; SPED 445, Phonetics of American Speech; SPED 450, Speech Correction in the Elementary and Secondary Schools.

3. For those students who wish to work toward special state certification in the schools, advisor consultation should be sought early since additional coursework is required (this does not apply to those already holding state certificates in elementary or secondary teaching or a special services certificate in another field.)

4. Twenty-four semester hours of course work and practicum. These hours may be taken from the following:

**I. Required Courses**

- FED 501 Introduction to Research
- FED 507 Statistical Methods
- SPED 553 Advanced Problems
- SPED 579 Seminar in Special Education
- SPED 449 Advanced Measurement of Hearing
- SPED 446 Speech Evaluation

**Elective Courses**

Students may choose any of the courses in the area numbered 500 or above.

**5. Thesis:**

Students must present a thesis representing six semester hours of work and which is deemed satisfactory to the members of his committee.

WITH A MAJOR IN ECONOMICS

An applicant for admission to the program for the Master of Arts in Economics must have the equivalent of fifteen undergraduate semester hours in Economics.

**Degree Requirements:** The course program must include a balanced coverage of the major areas in economics. At least fifteen hours of the required 30 hours, including thesis, must be course numbers numbered at the 500 level or above. Students must also satisfactorily complete Economics 520, 522, and 545.
THE MASTER OF SCIENCE DEGREE

The Master of Science degree is typically a 36 hour, non-thesis program, with majors in a number of areas of education and special education, psychology, applied sociology, geography, mathematics, engineering, and economics.

WITH A MAJOR IN BIOLOGY

To enter the program for the Master of Science degree in biology the student must present a minimum of 24 semester hours credit in the biological sciences plus adequate preparation in the supporting sciences of inorganic and organic chemistry, general physics, and mathematics. Students with inadequate backgrounds may be admitted provisionally.

To complete the degree, the student must present 36 hours of graduate work in biology to include at least one research course and other appropriate courses to be determined by the student and his faculty committee.

WITH A MAJOR IN GEOGRAPHY

An applicant for admission to the Master of Science degree program in geography must present as a prerequisite a minimum of 15 undergraduate semester hours in geography including physical, economic, political, and cartography.

Degree Requirements: The degree requires a minimum of 36 semester hours in geography courses numbered 400 and 500. No thesis is required for the M.S. degree. Permission of the department head is required for a student to take more than two 400 level courses to apply toward an M.S. degree.

Basic courses required for an M.S. degree include Urban Geography, Cultural Geography, Political Geography Seminar, Geomorphology or Physiography of North America, and Field Geography.

WITH A MAJOR IN SPEECH

An applicant for admission to the Master of Arts degree program in speech must present a minimum of 15 undergraduate semester hours beyond the introductory course, including advanced work in the area in which he intends to concentrate his graduate program.

All candidates are required to complete Speech 501, "Introduction to Research in Speech." Students majoring in Theatre must also complete Speech 520, "Dramatic Theory and Criticism"; all others must complete Speech 550, "Theories of Communication." At least 15 hours of the required 30 hours, including thesis, must be courses at 500-level or above. Every candidate must complete a thesis on an approved problem or production.

WITH A MAJOR IN APPLIED SOCIOLOGY

The applicant for admission to the graduate program in sociology must present a minimum of 15 undergraduate semester hours in sociology and a course in statistics.

The student will be expected to complete Sociology 501 and a minimum of 27 additional semester hours. In addition, the student must complete satisfactorily six semester hour equivalents in a supervised work practicum related to his academic area of concentration and write an acceptable report on the experience. Students whose career objectives are in the social welfare professions are advised to apply for admission to the Graduate School of Social Work at the University of Nebraska at Lincoln.

The Master of Arts degree is preferable as preparation for college level teaching and continued scholarly work, the Master of Science as preparation for field or action application of sociology. Both degrees require the student to demonstrate proficiency in the subject by means of the qualifying and comprehensive examinations.

Examinations

Both the M.A. and M.S. degree programs in sociology require the student to demonstrate proficiency in the subject by means of the following qualifying and comprehensive examinations.

A. Qualifying examinations
Qualifying examinations on sociological concepts and statistics must be taken by all full-time graduate students during their first year of graduate work. Part-time students must complete these examinations before they complete more than 15 hours of course work. These qualifying examinations will be given three times annually, during the months of October, January and May. Nine hours of course work and successful completion of the qualifying examinations are prerequisite for application for candidacy for the degree.

B. Comprehensive examinations
Comprehensive examinations must be taken by all graduate students. There will be four examinations covering the following areas:

Social Organization and Processes
Methods of Social Research
Sociological Theory
Social Psychology

Students must pass the two qualifying examinations before attempting the comprehensive examinations. These examinations will be given twice annually, during the months of January and May. Each examination will be given on a separate day.

Students will take a minimum of two comprehensive examinations during the examination period.

C. General policies

Students should be fully prepared before attempting either the qualifying or comprehensive examinations. Permission to take any examination again after an initial failure may be granted by the departmental faculty on written petition by the student.
WITH A MAJOR IN ECONOMICS

An applicant for admission to the program for the Master of Science in economics must have the equivalent of 15 undergraduate semester hours in economics.

Degree Requirements: The course program must include a balanced coverage of the major areas in economics. At least 18 hours of the required 36 hours must be approved at the 500-level or above. In lieu of a thesis, economics 598 and 599 are included in the 36 hours total required. Students must also satisfactorily complete Economics 521, 523, and 545. It is expected that the candidate for the Master of Science degree in economics will concentrate required research on matters of concern in the Omaha metropolitan region. This is also a degree where teachers K-12 grades may concentrate on research concerning economic education in the schools.

As part of the required 36 hours, graduate course work in related fields may be taken, up to a total of not more than 12 semester hours.

WITH A MAJOR IN MATHEMATICS

The course requirements may be met by completing 24 semester hours of mathematics from courses numbered above 400 with 12 of the 24 semester hours selected from courses numbered above 500; an additional 12 semester hours must be selected either from mathematics courses numbered above 400 or from graduate courses in cognate fields.

The final comprehensive examination shall be passed covering the general areas of: algebra; analysis; foundations; geometry or topology; and applications.

WITH A MAJOR IN EDUCATIONAL PSYCHOLOGY OR INDUSTRIAL PSYCHOLOGY

Admission Requirements: A minimum of 15 undergraduate semester hours of psychology courses beyond the introductory course including the psychology of learning, basic statistics, and an upper level laboratory course in experimental psychology.

Degree Requirements: The overall graduate work course requirement for both M.S. programs includes either 38 hours in psychology, or 24 hours in psychology plus 12 hours graduate work in a related minor field. Psychology 501 (History of Psychology), and either Psychology 415 (Multiple Regression and Factor Analysis) or Psychology 416 (Analysis of Variance) are required of all students. At least one of these required courses must be taken during the first 9 hours of graduate work. Additional required courses may be designated by the department. These will ordinarily include up to 3 hours of Psychology 595 (Practicum in Psychology) and in addition, in the Educational Psychology program, Psychology 553 and 554 (Individual Tests). A six-hour written comprehensive examination is required of all students and will be identical with the comprehensive examination taken by students in the M.A. program who elect to specialize in one of these two areas of psychology.

WITH A MAJOR IN AN AREA OF EDUCATION

Students may major in the following fields: elementary education, counseling and guidance, educational administration and supervision, secondary education, special education (includes reading, speech path-ology, education for the deaf or mentally retarded), and college business management. Minor fields include: foundations of education (for those majoring in academic fields), elementary education, reading, secondary education and others. Students pursuing a Master of Science degree with a major in education shall be expected to take selected courses in areas outside the field of education as indicated in the following program outlines. The suggested programs apply only to the M.S. in Education. Programs for the M.A. degree with a major in education will be determined by the major adviser, upon request.

MAJOR IN ELEMENTARY EDUCATION

I. Selected Cognate Courses ........................................................................... 6-9 hours
II. Required Courses ................................................................. 21 hours
  FED 501, Introduction to Research
  FED 502, History and Philosophy of Education
  EED 515, Diagnostic and Remedial Instruction
  EED 546, Innovations and Trends in Elementary Education
  EED 543, Introduction to Curriculum Planning—Elementary
  EED 544, Seminar in Elementary Education
  EDAD 555, Administration and Supervision in Elementary Schools
III. Selected Courses .............................................................................. 6-9 hours
  To be determined by student and his adviser

MAJOR IN SECONDARY EDUCATION

I. Selected Cognate Courses ........................................................................... 6-9 hours
II. Required Courses ................................................................. 9 hours
  Fed. 501, Introduction to Research
  FED 502, History and Philosophy of Education
  Fed. 505, Educational Seminar
III. Selected Courses .............................................................................. 9-12 hours
  To be determined by student and his adviser

MAJOR IN READING

The Master of Science degree with a major in reading conforms to standards of the International Reading Association for the professional training of Reading Specialists. Applicants for admission must be eligible for teacher certification at the undergraduate level. The following program of studies will prepare the student as a teacher of reading at either the elementary or secondary level.

I. Core Professional Courses .................................................... 12-15 hours
  Including work in graduate reading courses (SPED 511, 512, 513, 514, and 515 or their equivalent).
II. Related Professional Courses ............................................... 12 hours
  Including Introduction to Research and selected work in such areas as foundation and general education, elementary education, secondary education, special education, and psychology.
III. Related Cognate Courses ..................................................... 0-12 hours
  Including selected work in such areas as guidance and counseling and/or the various subject areas mentioned under sections I and II.

**MAJOR IN ELEMENTARY EDUCATIONAL ADMINISTRATION AND SUPERVISION**

I. Selected Cognate Courses ................................................................. 6 hours
II. Required Courses ................................................................. 24 hours
  FED 501, Introduction to Research
  FED 502, History and Philosophy of Education
  or
  FED 505, Seminar in Education
  546, Innovations and Trends in Elementary Education

†Only students with teaching experience will receive institutional endorsement to serve as school administrators.
II. Selected Cognate Courses

These are most often selected from offerings of the Psychology and Sociology Department.

III. Counseling and Guidance Courses

COUN 459, Principles of Guidance and Counseling
COUN 439, Introduction to Counseling Theories
COUN 352, Occupational Educational Information
COUN 438, Appraisal Techniques in Counseling and Guidance
COUN 534, Counseling Practices
COUN 535, Counseling Practicum

Selected additional courses in the department.

MAJOR IN SCHOOL COUNSELING—ELEMENTARY LEVEL

I. Foundation Courses

FED 501, Introduction to Research
FED 502, History and Philosophy of Education

II. Selected Cognate Courses

These are most often selected from offerings of the Psychology, Sociology, Elementary Education and Special Education departments.

III. Counseling and Guidance Courses

COUN 452, Guidance in the Elementary School
COUN 530, Introduction to Counseling Theories
COUN 527, Group Techniques in Guidance
COUN 531, Child Assessment in Elementary School Guidance
COUN 532, Counseling Elementary School Children

Selected additional courses in the department.

MAJOR IN COLLEGE STUDENT PERSONNEL SERVICES

I. Foundation Courses

FED 501, Introduction to Research
FED 502, History and Philosophy of Education

II. Selected Cognate Courses

These courses are selected in accordance with the student's particular area of interest. Most often these courses are taken in the departments of Sociology and Psychology.

III. Counseling and Guidance Courses

COUN 508, Foundations of Counseling
COUN 530, Introduction to Counseling Theories
COUN 527, Group Techniques in Guidance
COUN 531, Child Assessment in Elementary School Guidance
COUN 532, Counseling Elementary School Children

Selected additional courses in the department.

MAJOR IN TEACHING THE DEAF

I. Required Courses

PSYCH 551, Advanced Educational Psychology
(Or Sped 556 Teaching the Exceptional Child)

II. Counseling and Guidance Courses

COUN 452, Guidance in the Elementary School
COUN 530, Introduction to Counseling Theories
COUN 527, Group Techniques in Guidance
COUN 531, Child Assessment in Elementary School Guidance
COUN 532, Counseling Elementary School Children

Selected additional courses in the department.

MAJOR IN TEACHING THE MENTALLY RETARDED

I. Required Courses

SPED 451, Speech Development and Correction
SPED 452, Learning Disabilities
SPED 453, Curriculum for the Mentally Retarded
SPED 446, Methods and Materials for Teaching the Retarded
COUN 301, Group Evaluation Techniques for Teachers
FED 331, Introduction to Research
SPED 566, Teaching the Exceptional Child (or Psych. 456, Psychology of Exceptional Children)
SPED 568, Vocational Training of the Mentally Retarded
SPED 569, Observation and Student Teaching of the Mentally Retarded (150 clock hours minimum practicum) (or Spec. 460, Educational Development of Children and Youth, or Spec. 500, Visually Handicapped)
SPED 570, Seminar in Special Education

MAJOR IN SPEECH PATHOLOGY

The Master of Science degree with a major in speech pathology involves these requirements:

1. Pass an examination to determine adequate personal voice and speech proficiencies and adequate hearing acuity for speech. (Administered by the Speech and Hearing Clinic of the University.)

2. Have successfully completed a minimum of twenty-six semester hours of work preparatory to admittance to the major. These hours are to include the following courses or their equivalents: SPED 306, Introduction to Special Education; SPED 341, Speech Development and Correction; SPED 437, Basic Audiology; SPED 438, Auditory and Speech Mechanisms; SPED 442, Psychology of Speech; SPED 443, Speech Pathology I: Voice and Articulation; SPED 444, Speech Pathology II: Rhythm and Symbolization; SPED 445, Phonetics of American Speech; SPED 450, Speech Correction in the Elementary and Secondary Schools.

3. For those students who wish to work toward special state certification in the schools, advisor consultation should be sought early since additional coursework is required (this does not apply to those already holding state certificates in elementary or secondary teaching or a special services certificate in another field.)

4. Thirty-six hours of course work and practicum. These hours may be taken from the following:

**I. Required Courses**

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<tr>
<th>Course</th>
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<tr>
<td>SPED 501, Introduction to Research</td>
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<td>SPED 541, Disorders of Articulation</td>
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<td>SPED 554, Disorders of Voice</td>
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<td>SPED 555, Disorders of Rate and Rhythm</td>
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<td>SPED 556, Disorders of Symbolization</td>
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<td>SPED 450, Advanced Measurement of Hearing</td>
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<td>SPED 451, Speech Evolution</td>
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<td>SPED 553, Advanced Problems</td>
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<td>SPED 576, Seminar in Special Education</td>
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<td>SPED 447, Neurophysiology</td>
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**II. Elective Courses**

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<td>SPED 555, Alaryngeal Speech Rehabilitation</td>
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<td>SPED 556, Speech Problems of Cerebral Palsied Children</td>
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<tr>
<td>SPED 446, Learning Disabilities</td>
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<td>SPED 433, Speech Reading and Auditory Training</td>
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<td>SPED 421, Teaching of Speech to the Deaf I</td>
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<td>SPED 422, Teaching of Speech to the Deaf II</td>
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<tr>
<td>SPED 423, Teaching of Language to the Deaf I</td>
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<tr>
<td>SPED 424, Teaching of Language to the Deaf II</td>
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<tr>
<td>SPED 460, Introduction to the Mentally Subnormal Child</td>
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**II. Elective Courses in Related Areas**

Depending upon the student's preparatory work, courses may be taken in fields such as psychology, sociology, speech, English, and other related areas.

*Student is responsible for prerequisites in any elective areas.*
plus a thesis of six hours credit in lieu of a corresponding number of hours of elective work. It will be noted that as many as six hours of credit may be transferred from other accredited graduate schools, provided the transferred credits can be fitted into the degree program.

Prerequisite: Bachelor's degree from an accredited institution which must include six hours in accounting. Students with inadequate preparation in accounting must remove this deficiency before being a degree candidate.

I. Academic Electives (Not to exceed 21 hours)
(From graduate level courses in education, political science, psychology, English, history, sociology, economics or business administration)

II. Required Courses 16 hours
FED 481, Principles of Adult Education
EDAD 300, Research Project (Subject to be associated with college business management and report worthy of publication)
FED 402, History and Philosophy of Education
FED 405, Education Seminar
EDAD 476, College Business Management

PROGRAM FOR SCHOOL PSYCHOLOGISTS

Students holding Master's degrees may be admitted to do additional work leading to recommendation for certification as a school psychologist if they show promise of ability to succeed beyond the Master's level. Application for such admission must be filed with the Director of Admissions, accompanied by credentials and an application fee. Credentials must include two official transcripts for all previous college work, scores for the Graduate Record Examination Aptitude Test and Psychology Test, and a vita including names of individuals willing to write reference letters. Before a final decision is made concerning admission, the applicant must be interviewed by the Chairman and one or more members of the Psychology Department.

If the applicant has not completed a Master's program equivalent to that required for the Master of Science in Educational Psychology, he may be required either to take additional graduate courses or to complete successfully a six-hour qualifying examination in general and educational psychology.

A total of 30 semester hours of work beyond the Master's is required for the recommendation. No more than three hours of practicum credit should be taken during any one semester. For certification of school psychologists, many states require teaching certification or two years of professional work experience in the schools.

Filing of an acceptable plan of study with the graduate office will be required on admission to the program. Students will arrange their programs according to the subject matter areas below. Since individual students may have widely variant backgrounds, considerable flexibility is allowed in choice of specific courses. However, final decision on the appropriateness of a program rests with the Psychology Department.

I. Psychological Foundations Required: 2 or 3 courses
Those courses are to be a continuation of fundamental psychology courses in learning, experimental psychology, etc., taken during work toward the Master's degree.

II. Psychological Methods and Techniques
Required Courses (other courses may be substituted for any of the courses below which may have been completed prior to entrance into the School Psychology program)
PSYCH 533, Individual Tests: Children & Adolescents
PSYCH 534, Individual Tests: Adolescents & Adults
PSYCH 545, Practicum in Psychology
and either/or
PSYCH 555, Introduction to Therapeutic Techniques with Children
PSYCH 557, Behavior Modification
III. Educational Foundations 

Required: 2 or 3 courses

These courses will be selected from departments of education, psychology, business administration and/or elementary education. Approval for inclusion in the program must be obtained from the Psychology Department prior to registration.

SPECIALIST IN EDUCATION DEGREE

The Specialist in Education degree (Ed.S.) is an advanced degree, involving a minimum of one year of study beyond the Master’s degree. It is designed to prepare more competent educators. Each applicant will be considered in terms of his educational and professional background and experience. The Ed.S. is designed to prepare more competent educators. Some students, however, may wish to continue at another institution in a doctoral program. The receiving institution will determine the applicability of course work taken toward partial fulfillment of a doctoral program.

Admission and Degree Requirements

Applicants for admission to study in the Ed.S. program should be made to the Director of Admissions, University of Nebraska at Omaha (see Admissions). In general, the applicant:

1. Must hold a Master’s degree from an accredited institution offering graduate work.
2. Must have had successful relevant work experience and provide letters of recommendation from principals, superintendents or other supervisors with whom he has worked.
3. Must be approved for admission to the program by the department head and the Graduate Dean.
4. Must submit the results of the Graduate Record Examination with the application for admission.

Before the applicant is accepted as a candidate in the degree program, he must be recommended by a graduate faculty advisory committee which will base its recommendations on:

1. A personal interview.
2. An evaluation of the applicant’s general educational and professional qualifications to undertake the proposed program.
3. The results of the Graduate Record Examination.
4. A review of the applicant’s proposed plan of study including courses, practicums and seminars, and work completed.
5. Prerequisite or deficiency courses which must be completed, if necessary, before the student may be accepted into the program.

The candidate will be notified in writing concerning his admission to the program.

Candidacy for Degree

Permission to enter the program does not automatically designate the applicant as a candidate for the Ed.S. degree. Before filing an application for candidacy, the student must complete twelve semester hours of course work, including work in statistics and research methods. For those students with statistics and research methods in their Master’s program, substitutes may be made.

After a review of his early course work the candidate’s committee will make the decision concerning the applicant’s candidacy for the degree. The applicant will be notified in writing by the Graduate Office of the decision of the Graduate Faculty. A permanent plan of study will be filed by the committee with the Graduate Office at the time of admission to candidacy.

Immediately after acceptance for candidacy, the student will file with his committee a tentative proposal for his field project. This field project will be an independent study of a specified problem. The subject of the study must be approved by the student’s faculty committee and the Graduate Dean during the same term the candidate has been approved for candidacy for the degree. Failure to regularly report progress on the field project to the major advisor may result in loss of the topic. In some departments, this may be a research project.

Residency is a period of time when students may devote their full energy to study, develop associations with other students, and enjoy extended contact with senior faculty members. Typical patterns in which students may be approved residency would include a credit hour load of no less than 12 hours during a Summer, or no less than 9 hours during a Fall or Spring session. Students who hope to satisfy residency through an Ed.S. internship should consult their supervisory committee.

Regular attendance assures a desirable rate of progress and also assures that quality in a program which comes by way of acquaintance and interaction.

All work for the Ed.S. degree, including the field project report, must be completed within a period of six years from the time of first admission to the program. Upon completion of the field project, which will be done under the direction of the faculty committee, the student will submit three typewritten copies to the Graduate Office. This project must generally conform to the style prescribed by the Graduate College.

The final oral examination for the student shall center on the field project. The examining group shall be the Committee and the Graduate Dean or his representative.

SPECIALIST IN EDUCATION DEGREE

A MAJOR IN EDUCATIONAL ADMINISTRATION AND SUPERVISION

66 Hours Minimum

This outlined program includes the work which might typically constitute the fifth and sixth years of collegiate work. The total course work for both M.S. and Ed.S. would accumulate to no less than 66 graduate hours. The program reflects the philosophy which supports graduate education at the University that each student should be able to design a considerable portion of his program to best harmonize his needs and ambitions. Each program will be designed with the aid of the student’s advisor and must be approved by the candidate’s committee.

The program has been designed to include the flexibility needed by two groups of students: (1) those preparing to become school principals; (2) those preparing to become school superintendents. The capstone of the Ed.S. program are the administration seminars (Edad 660 and 661) and the field project (Edad 661).

I. Core Professional Courses

42-46 hours

Including work in school finance, school business management, supervision, school law, research, statistics, educational psychology, administration seminars, and field work.

II. Related Professional Courses

12-18 hours

Including selected work in such areas as curriculum, guidance, reading, foundations, and special education.

III. Cognate Courses

9-15 hours

Including selected work in such areas as economics, English, psychology, business administration, and sociology. In some cases, candidates may select cognate courses from other graduate level offerings which rest upon adequate undergraduate preparation.
COURSE DESCRIPTIONS

Key to Symbols:
I—offered in the first semester of each year
II—offered in the second semester of each year
S—offered in the summer session

Courses numbered 500 or above are open to graduate students only. Some courses numbered 400 are open to both seniors and graduates; the same is true of a selected few 300 numbered courses. It is expected that graduate students enrolled in those courses numbered 200-499 will do work of a higher level than undergraduates. Typically, such differentiation might include depth studies, field studies, individualized research, and special interest projects.

ART

341 Advanced Sculpture: Advanced work in area of student's choice, with facilities for oxy-acetylene and arc welding, and general metal working.
PREREQ: Art 331 & permission
3 hours

441 Advanced Painting: Practical instruction in oil painting and related media. Course gives the student the time and environment to work and develop individually. A strong emphasis is placed on a complete knowledge of contemporary art.
PREREQ: Art 351 & permission
3 hours

446 Medieval Art History: A study of painting, sculpture, and architecture of the Western World from 300 A.D. to about 1500 A.D.
PREREQ: Art 378 & permission
3 hours

541 Advanced Printmaking: Intaglio process stressing technical proficiency in the various media.
PREREQ: Art 351 & permission
3 hours

541 Advanced Ceramics: Advanced problems in the techniques of ceramic media.
PREREQ: Art 361 & permission
3 hours

531 Graduate Sculpture: Advanced problems in a particular sculpture media.
PREREQ: Art 421 & permission
3 hours

541 Graduate Painting: More complex problems in the oil medium and related material.
PREREQ: Permission & 12 credit hours in painting
3 hours

541 Graduate Printmaking: Advanced problems in the printmaking area with particular attention to the intaglio technique.
PREREQ: Art 431 & permission
3 hours

542 Advanced Research Project in Art History: Special problems in Art History on an individually arranged basis.
PREREQ: Permission & 16 hours in Art History
3 hours

BIOLOGY

331 Ecology
The study of the behavior of whole organisms and groups of organisms in relation to their living and non-living environment.
PREREQ: Biology 145, 178; Junior-Senior
(I) 4 hours

341 Morphology of Lower Plants
A lecture and laboratory course which covers the ecology, morphology, and evolutionary trends of algae, fungi, and bryophytes.
PREREQ: Biology 145; Junior-Senior
(I) 4 hours

351 Flora of the Great Plains
The identification, classification, and recognition of common vascular plants, including weeds, ornamentals, and indigenous plants, found in the Great Plains.
PREREQ: Biology 145, Jr.-Sr.
(I.5) 3 hours

354 Morphology of Higher Plants
A lecture and laboratory course covering the living and fossil vascular plants with emphasis on morphology, ecology, and evolutionary trends.
PREREQ: Biology 145; Junior-Senior
(II) 4 hours

433 Plant Anatomy
A study of cells, tissues, and organs of vascular plants with particular emphasis on internal structure of seed plants.
PREREQ: Biology 145, Junior-Senior
(II) 3 hours

443 Fauna of the Great Plains
A survey of the common animal groups found in the Great Plains, including their evolution, ecology, distribution and specific adaptations to the environment of the temperate North American grassland.
PREREQ: Biology 145, 178; Junior-Senior
(III) 3 hours

434 Histology
The microscopic anatomy of tissues and organs, their adaptations, and functional significance.
PREREQ: Biology 175, and a course in vertebrate anatomy, Junior-Senior
(II) 4 hours

435 Embryology
An intensive study of the embryology and development of the vertebrate animal, particularly the human, from the time of gastrulation onward. This course is designed to study the developing embryo and fetus.
PREREQ: Biology 175 and a course in vertebrate anatomy; Junior-Senior
(II) 4 hours

436 Cellular Biology
This course is a comprehensive study of the structure and function of plant and animal cells.
PREREQ: Biology 145, 175 and 214; organic chemistry and physics, Junior-Senior
(II) 4 hours

437 Limnology
A study of the physical, chemical, and biotic relationships that serve to establish and maintain plant and animal communities in a fresh water environment.
PREREQ: Biol. 145, 175, and organic chemistry. Junior-Senior
(III) 4 hours

438 Organic Evolution
A study of organic evolution in terms of evidence which support the theory and the mechanisms involved in the process.
PREREQ: Biology 214, Junior-Senior
(II) 3 hours

439 Animal Behavior (same as Psychology 427)
A study of the behavior of diverse animals will be studied—primarily to develop an understanding of the relationships between nervous integration and the behaviors manifested by the organism, as well as the evolutionary and adaptive significance of behavior as a functional unit.
PREREQ: Biology 173 or Psychology 101; permission, Junior-Senior
(I) 3 hours

440 Bryology
A course in microscopic analysis of algae in general and mosses in particular.
PREREQ: 3 hours

441 Plant Physiology
A study of plant processes and functions with particular emphasis on photosynthesis, respiration, mineral nutrition, and morphogenesis.
PREREQ: One year of botany; chemistry 214 or 102; and physics, Junior-Senior
(II) 4 hours

442 Taxonomy of Vascular Plants
The identification, nomenclature, and classification of vascular plants with emphasis on gymnosperms and angiosperms.
PREREQ: Biology 145, Junior-Senior
(II) 4 hours

443 General Bacteriology
The nature of microorganisms, their life processes, and their ecological and epidemiological significance.
PREREQ: Biology 145; Chemistry 214 or 162. Junior-Senior
(II) 3 hours

444 Endocrinology
A survey of endocrine physiology stressing the regulatory and integrative roles of hormones, the control of hormone secretion, and mechanisms of hormone action.
PREREQ: Organic Chemistry, Vertebrate Anatomy, Physiology, or permission of the instructor, Junior-Senior
(II) 3 hours

445 Animal Physiology
This course is a comprehensive study of the functional relations of the animal body systems.
PREREQ: Biology 175, vertebrate anatomy, organic chemistry, and physics. Junior-Senior
(II) 4 hours
### BUSINESS ADMINISTRATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>500</td>
<td>Quantitative Analysis</td>
<td>3</td>
</tr>
<tr>
<td>501</td>
<td>Business and Society</td>
<td>3</td>
</tr>
<tr>
<td>502</td>
<td>Behavioral Sciences in Business</td>
<td>3</td>
</tr>
<tr>
<td>503</td>
<td>Accounting for Management Control</td>
<td>3</td>
</tr>
<tr>
<td>504</td>
<td>Contemporary Accounting</td>
<td>3</td>
</tr>
<tr>
<td>510</td>
<td>Seminar in Accounting</td>
<td>3</td>
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### CHEMISTRY

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>341</td>
<td>Physical Chemistry: An introduction to thermodynamics and atomic and molecular structure and the application of these concepts to thermodynamics and atomic and molecular structure, including equilibrium, solutions, electrochemistry, kinetics, solids, and chemical bonding. (Lect-3, Lab-4)</td>
<td>3</td>
</tr>
<tr>
<td>342</td>
<td>Instrumental and Advanced Quantitative Analysis: Instrumental, physical, chemical, and special methods applied to quantitative analysis. (Lect-2, Lab-8)</td>
<td>3</td>
</tr>
<tr>
<td>350</td>
<td>Advanced Inorganic Chemistry: Theoretical perspectives and the application of these concepts to classical and recent problems in inorganic chemistry. (Lect-3)</td>
<td>3</td>
</tr>
<tr>
<td>351</td>
<td>Advanced Inorganic Chemistry: Theoretical perspectives and the application of these concepts to classical and recent problems in inorganic chemistry. (Lect-3)</td>
<td>3</td>
</tr>
<tr>
<td>352</td>
<td>Advanced Inorganic Chemistry Preparations: Laboratory preparation of representative types of inorganic compounds by various standard and special experimental techniques. (Lab-4)</td>
<td>3</td>
</tr>
</tbody>
</table>
423 Advanced Organic Chemistry: An advanced lecture course in modern theories and special topics. (Lab-3)

424 Identification of Organic Compounds: A laboratory course in the systematic identification of organic compounds by classification reactions, spectral analysis, and the preparation of derivatives. (Lect-1, Lab 2)


426 Problems in Chemistry: Individual student research.

426 Research in Chemistry: Provides the student with an opportunity for experience in the solving of an actual research problem in the field of chemistry.

ECONOMICS

411 Government and Labor: Provides a background of knowledge and understanding of the development of public policy, the regulation of labor by government and the relationship of the various levels of government to labor.

412 Urban Geography (see Geography 412)

418 Collective Bargaining: A study of the issues, structures and procedures involved in collective bargaining, and the settlement of disputes, as center around the labor-management contract.

421 Advanced Firm & Industry Theory: The effects of changes in conditions of supply and demand under alternative market structures affecting firm and industry are examined, General equilibrium and welfare economics are interwoven.

422 Advanced Macroeconomic Theory: A study of the level of income, production, employment, and growth. Classical and Keynesian systems are contrasted with recent theoretical paths being explored.

425 History of Economic Thought: From Mercantilism to the modern period. Focus is on the interactions of institutional milieu, thought and economic doctrine.

430 Econometrics: The study and application of modern statistical and mathematical procedures to theoretical economic models.

436 Comparative Economic Philosophy: The mainstrokes of both political and economic thought are examined in order to understand both the political basis of comparative economic systems as well as to judge the political consequences of changing economic policy.

437 Contemporary Economic Philosophy: A continuation of Economics 436 with emphasis upon contemporary political thought.

438 Geography of Manufacturing (see Geography 438)

440 Theory and Policy: The role of money in the stabilization at high levels, production, employment, income and prices. Emphasis is on contemporary problems.

441 State and Local Finance: Economic and administrative problems of state and local taxation, with particular attention to Nebraska and Omaha, are studied.

444 Economic Development: Problems relating to early stages of economic development; investment priorities, mobilizing savings, balance of payments and policies and programs are studied.

450 Managerial Economics: Managerial economics is applied in decision making, with special emphasis on the application of the microtheory. It aims to bridge the gap between theory and managerial practice, stressing on the measurement of the critical concepts, collection and analysis of information and comparison of alternative approaches.

455 Economic Education: A study and examination of economic principles and how they can be related to the teacher's classroom presentation. The course is designed to furnish the public school teacher with sufficient background and understanding to aid in the recognition of economic issues and the teaching of economic concepts and principles.

457 Economic Education Institute: Provides a background of knowledge and understanding to aid in the recognition of economic issues and the teaching of economic concepts and principles.

460 Economic Security: The course involves the analysis and discussion of problems and programs of economic security. Particular attention will be given to programs aimed at reducing urban poverty.

516 Seminar in Labor Economics: A study and investigation of current developments and issues involving labor institutions, labor relations, wage theories and employment policies. Local and regional studies will be stressed.

520 Seminar in Micro Theory: This seminar develops modern micro-economic theory with emphasis on utility functions and demand, production functions and cost, price, and income-price policy of the firm and market equilibrium. Emphasizes methodological and technical as well as specific content.

521 Micro-economic Theory: Microeconomic theory for graduate students of Business. Economic analysis of the business firm and its environments, with emphasis on market structures, production possibilities, and cost factors. Recent developments in the theory of the firm and operations research will be investigated.

542 Seminar in Macroeconomic Theory: A study of the standard national income accounting and the more recent development of the flow-of-funds analysis. A study of the development and establishment of the Keynesian economics, its relationship to the classical pro-theory and the many refinements of the Keynesian model. To learn some extensions of the Keynesian theory, especially in connection with inflation, investment, and economic growth. A development of understanding of recent work in fiscal and monetary theory.

543 Macro-economic Theory: A study of modern income theory and policy. The development of modern aggregate theory is reviewed. Recent fiscal and monetary policies regarding employment, inflation, investment, and economic growth are examined. Problems of applying policy in a dynamic economic environment are emphasized.

545 Econometrics: The study and application of statistical and mathematical techniques in economic research.

544 Seminar in American Economic History: These seminars lay stress on individual research on significant problems as indicated by the titles. An intensive bibliography and demonstration of the methods of historical research will be incorporated in each seminar.

546 Economic Development: Problems relating to early stages of economic development; investment priorities, mobilizing savings, balance of payments and policies and programs are studied.
### EDUCAIION

#### FOUNDATIONS OF EDUCATION (EED)

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>418</td>
<td>Mental Health</td>
<td>A general survey of principles of mental health; a study of social and emotional adjustments.</td>
<td>(S) 3 hours</td>
</tr>
<tr>
<td>424</td>
<td>Organization and Administration of Recreation</td>
<td>Designed to provide a background of information on community recreation with special attention to organization, promotion, and development</td>
<td>3 hours</td>
</tr>
<tr>
<td>481</td>
<td>Principles of Adult Education</td>
<td>This course is an introduction to the study of adult education as a major discipline in contemporary America. The course surveys major forms and problems of adult education and the foremost agencies providing programs.</td>
<td>(LS) 3 hours</td>
</tr>
<tr>
<td>482</td>
<td>Adult Group Leadership</td>
<td>A study of adult groups in modern society and the characteristics of effective leadership in all types of groups.</td>
<td>(LS) 3 hours</td>
</tr>
<tr>
<td>483</td>
<td>Principles of Instructional Material</td>
<td>A basic course in the production of inexpensive audio-visual materials for the classroom. Graphic, photographic and auditory materials are considered, including such instructional material as slides, filmstrips, dramatization and exhibits.</td>
<td>(LS) 3 hours</td>
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#### ADMINISTRATION OF THE INSTRUCTIONAL MATERIALS CENTER

<table>
<thead>
<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>489</td>
<td>Administration of the Instructional Materials Center</td>
<td>This course is designed for students who wish to prepare themselves for the administration of an educational media program within an elementary and/or secondary school.</td>
<td>(LS) 3 hours</td>
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#### GROWTH AND LEARNING PROBLEMS OF DISADVANTAGED

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<tbody>
<tr>
<td>500</td>
<td>Special Studies</td>
<td>A series of intensive courses especially for teachers in-service—scheduled as regular seminars, workshops, according to purpose.</td>
<td>(LS) 3 hours</td>
</tr>
<tr>
<td>501</td>
<td>Introduction to Research</td>
<td>To acquaint the beginning graduate student with the nature and significance of research; to enable the student to read, evaluate, and apply research results and techniques; to give some understanding of the meaning and spirit of research; to give some experience in studying and preparing research reports.</td>
<td>(LS) 3 hours</td>
</tr>
<tr>
<td>502</td>
<td>History and Philosophy of Education</td>
<td>A survey of the rise of educational practice as it has been interrelated with changes in social and educational philosophy, research, and economic, industrial and cultural conditions, especially in the United States.</td>
<td>(LS) 3 hours</td>
</tr>
<tr>
<td>503</td>
<td>Communication for Teachers of the Disadvantaged</td>
<td>An intensive interdisciplinary course dealing with the nature of the disadvantaged pupil, communication skills for teachers, and group interaction for the instructional team working with low-income pupils.</td>
<td>(LS) 3 hours</td>
</tr>
<tr>
<td>504</td>
<td>Comparative Education</td>
<td>To acquaint students with education philosophies and programs in selected countries; to identify changes in programs of countries; to compare programs in education of other countries with the situation in the United States.</td>
<td>(LS) 3 hours</td>
</tr>
<tr>
<td>505</td>
<td>Seminar in Education</td>
<td>Research of problems in education which are of current significance for the study of educational practice, for the study of selected contemporary issues which have an influence upon society.</td>
<td>(LS) 3 hours</td>
</tr>
<tr>
<td>506</td>
<td>Educational Policies</td>
<td>To provide an opportunity for teachers to develop an understanding of current educational policies and the selected contemporary areas which have an influence upon society.</td>
<td>(LS) 3 hours</td>
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#### STATISTICAL METHODS

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>507</td>
<td>Statistical Methods</td>
<td>This course was designed for first year graduate students in education who have not had a previous course in statistics whose background is such that a refresher course is desired.</td>
<td>(LS) 3 hours</td>
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</table>

#### TOPICS IN AUDIO-VISUAL EDUCATION

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<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>508</td>
<td>Topics in Audio-Visual Education</td>
<td>A study of selected topics involving principles, problems, trends and materials in audio-visual education.</td>
<td>(LS) 3 hours</td>
</tr>
<tr>
<td>509</td>
<td>The Urban School</td>
<td>An analysis of the societal and institutional processes and problems which have an influence upon the education of children in urban settings. A study of the urban school.</td>
<td>3 hours</td>
</tr>
<tr>
<td>510</td>
<td>Research Project</td>
<td>Individual or group study and analysis of specific problems in schools.</td>
<td>3 hours</td>
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</tbody>
</table>

#### PROBLEMS AND ISSUES IN PHYSICAL EDUCATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>520</td>
<td>Problems and Issues in Physical Education</td>
<td>An examination of current problems and issues in college, secondary, and elementary physical education. Special emphasis is given to problems that relate to the general aims and purposes of physical education.</td>
<td>3 hours</td>
</tr>
<tr>
<td>521</td>
<td>Psychology of Exercise</td>
<td>The response of human systems to exercise and physical conditioning programs. Includes a study of the physiological basis of muscular strength, power, endurance, and cardiovascular stress; the effects of nutrition and exercise on physical performance; and physiological principles of conditioning and fitness programs.</td>
<td>3 hours</td>
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</tbody>
</table>

#### SUPERVISION OF PHYSICAL EDUCATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>522</td>
<td>Supervision of Physical Education</td>
<td>Concepts, principles, organization, and techniques of supervision for use by supervisors and teachers in the construction and supervision of programs in physical education.</td>
<td>3 hours</td>
</tr>
</tbody>
</table>
**Curriculum in Physical Education**
A study of the foundations for curriculum development and related educational problems. Special consideration is given to curriculum change, the basic patterns, and programs in physical education.

**Analysis of Research and Literature in Human Movement**
Survey of research and literature in human movement for the purpose of orienting the student to possible areas of research and development. The student will be expected to develop an understanding and appreciation of career opportunities in the field.

**Practicum Internship**
An integration of community and school experiences with special reference to the disadvantaged pupil. Each semester focuses upon a curriculum area of the junior high and elementary schools—language arts, social studies, evaluation procedures, classroom control and curriculum are the focal areas.

**Thesis**
Independent research project written under the supervision of an advisor.

**Literature for Children and Youth**
Selection, evaluation and guidance in various types of literature for the elementary and junior high school levels.

**Current Trends in Early Childhood Education**
A survey of the problems involved in setting up and implementing a program for the child from birth to eight years of age. Recent trends will be investigated as they apply to the above activity.

**Special Studies**
A series of intensive courses especially for teachers in service—scheduled as regular seminars, or workshops, according to purpose.

**Research Project**
Individual or group study and analysis of specific problems in schools.

**Diagnostic and Remedial Instruction**
A study of methods of diagnosing children’s difficulties in all subject areas of the educational program of the elementary school and remedial techniques for overcoming such problems.

**Improvement of Instruction in Elementary Science**
This course is designed for graduate students in education who wish to become better informed about the recently developed programs for elementary science; the methods, materials, philosophy, and emphasis in instruction, which are characteristic of these programs.

**Improvement of Instruction in Elementary Mathematics**
An examination of the principles, content, methods, and materials of modern mathematics programs for the elementary school. The needs and backgrounds of the students enrolled during the semester are given special consideration.

**Innovations and Trends in Elementary Education**
Designed as an advanced study for the purpose of exploring current trends and developments within the various subject matter areas of the elementary school.

**Introduction to Curriculum Planning—Elementary**
A study of the history, philosophy, and current developments in the elementary curriculum with an emphasis on appropriate content and methods of curriculum reorganization.

**Seminar in Elementary Education**
A study of educational problems as they relate to the elementary school, to be taken in the last nine hours in the program for the Master of Science degree.

**Seminar in Supervision of Student Teachers—Elementary**
Designed for experienced teachers who are or may be serving as cooperating teachers, and who desire to study student teaching, its aims, procedures, objectives, trends and developments.

**Prerequisites:** Teacher Corps

**ELECTIVE (EED)**

**Project**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Co-operating Teachers Seminar—Secondary**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Improvement of Instruction of Secondary School Speech**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Improvement of Instruction of Secondary School Foreign Language**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Improvement of Instruction of Secondary School English**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Improvement of Instruction of Secondary School Mathematics**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Improvement of Instruction of Secondary School Science**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Improvement of Instruction of Secondary School Science**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Science Education Seminar**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Improvement of Instruction of Science, Earth Science Curriculum Project**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.

**Improvement of Instruction of Physical Science, Earth Science Curriculum Project**
A study of principles and procedures in student teaching programs. Intended for certified teachers who are, or wish to be, working with student teachers in secondary schools.
676 Problems of Vocational Business Education (8) 3 hours
Designed for teachers of business education to develop a better understanding of the purposes, philosophy, current practices and trends in business education.

677 Vocational Curriculum Construction 3 hours
A course designed for teachers, supervisors, coordinators, and administrators of vocational education. The course covers principles, needs, factors, and trends that should be considered in developing a vocational education curriculum.

601 Thesis (I,II,III) 3 hours
Required of all students taking Master of Arts degree, see major advisor for information.

602 Thesis (I,II,III) 3 hours
Required of all students taking Master of Arts degree, see major advisor for information.

COUNSELING AND GUIDANCE (COUN)

490 Principles of Guidance (I,II,III) 3 hours
Basic principles underlying guidance and counseling practices in the United States. This course is a prerequisite for all other courses in the Guidance and Counseling Department. It is the recommended course for students in other departments who wish to have some understanding of professional guidance and counseling.

491 Group Evaluation Techniques (I,II) 3 hours
A survey course dealing with types of measurement and evaluation in the instructional programs of elementary and secondary schools. Utilization of standardized group tests, construction of classroom tests, use of the cumulative record, and basic sociometric and projective techniques are included in this course.

PREREQUISITE: Senior standing.

492 Guidance in the Elementary School (I,II,III) 3 hours
A study of the principles, practices and dimensions of elementary school guidance.

500 Special Studies in Counseling and Guidance 3 hours
Intensive courses scheduled as regular seminars, or workshops, according to purpose.

PREREQUISITE: Permission of Department.

510 Research Project in Counseling and Guidance 3 hours
Individual or group study and analysis of specific problems in counseling and guidance.

PREREQUISITE: Departmental permission.

520 Introduction to Counseling Theories (I,II,III) 3 hours
Study of contemporary theories of counseling, the counseling process and methods.

PREREQUISITE: Coun. 400 or Departmental permission.

521 Organization and Administration of Guidance Services (I,II,III) 3 hours
Study of organizational patterns and administrative practices in guidance and counseling programs.

PREREQUISITE: Coun. 490.

522 Occupational and Educational Information (I,II,III) 3 hours
The nature and use of occupational and educational information. The process of vocational choice.

PREREQUISITE: Coun. 490.

523 Appraisal Techniques in Counseling and Guidance (I,II,III) 3 hours
Utilization of standardized and nonstandardized appraisal techniques in counseling and guidance.

PREREQUISITE: Coun. 490.

524 Counseling Practices (I,II,III) 3 hours
An analysis of the theories and practices of counseling.

PREREQUISITE: Coun. 520, 523 and Departmental permission.

525 Counseling Practicum (I,II,III) 2-3 hours
Counseling in an approved program under the supervision of a qualified counselor and a guidance professor of the University.

PREREQUISITE: Coun. 524 and permission.
EDUCATIONAL ADMINISTRATION AND SUPERVISION (EDAD)

550 Special Studies in Educational Administration and Supervision (I, II, III) 3 hours
A series of intensive courses especially designed for educational administrators and supervisors—scheduled as regular seminars or workshops, according to purpose.

510 Research Project in Educational Administration (I, II, III) 3 hours
Individual or group study and analysis of specific problems in educational administration and supervision.

523 Data Processing in Educational Administration 3 hours
A study of the role of electronic data processing and systems procedures in educational administration.

5653 School Plant Planning and Operation 3 hours
Includes steps in planning the modern school building; site selection, building and design; school furniture and equipment; maintenance and operation; rehabilitation; scheduling of work; and custodial care.

564 School Law 3 hours
Considers legal principles and practices which are applicable to public education for public school teachers and administrators.
PREREQ: FED 501 and EDAD 562.

5660 School Business Management 3 hours
An analysis of the functions of business management: budgetary procedures; financial accounting, auditing and reporting; management of funds, purchasing procedures and inventory; administration and protection of property; and administration of transportation.
PREREQ: FED 501 and EDAD 562.

5566 Administration and Supervision in Elementary Schools 3 hours
The nature, principles and functions of modern administrative and supervisory practices as they relate to the elementary school.
PREREQ: FED 501.

5567 Administration and Supervision in Secondary Schools 3 hours
The nature, principles and functions of modern administrative and supervisory practices as they relate to the secondary school.
PREREQ: FED 501 and EDAD 562.

5680 School Finance 3 hours
A study of the sources of school financing: local, state and national. In addition, this course will study state and national laws and the criteria for selection and utilization of teaching materials; special emphasis on current problems in school finance.
PREREQ: FED 501 and EDAD 562.

5690 Administration and Staff Personnel 3 hours
This course deals with personnel policies, problems, and issues in the following areas: teacher recruitment, orientation, evaluation, promotion, tenure, retirement, professional organizations, and legal status. Emphasis will be placed upon the techniques of democratic administration.
PREREQ: FED 501 and EDAD 562.

5700 Practicum in Educational Administration and Supervision 3 hours
Designed to provide guided study and practice in elementary, secondary or general administration and supervision as the interests and needs of the student require.
PREREQ: FED 501 and approval.

5710 Advanced Practicum in Educational Administration and Supervision 3 hours
Continuation of Education 570. Advanced study and practice under guidance in elementary, secondary or general administration and supervision as the needs of the student require.
PREREQ: EDAD 570.

575 Administration of Higher Education 3 hours
A study of the major functions of higher education, with emphasis on the principles involved in organizing and directing the academic programs, the policies of the student body, the faculty and staff, personnel policies, financing the program, operating the buildings and grounds and conducting the public relations program.

SPECIAL EDUCATION

420 History: Education and Guidance of the Deaf 1 (I) 2 hours
Study of historical trends in deaf education culminating in current problems, practices and attitudes; the survey of teaching and guidance opportunities, problems and techniques.

421 Teaching of Speech to the Deaf I 1 (I) 2 hours
Methods and teaching techniques in teaching speech to the deaf child; special emphasis on practical, visual and auditory techniques.

422 Teaching of Speech to the Deaf II 2 hours
Continuation of Special Education 421: focus on various types of speech learning problems found in a population of deaf children.

423 Teaching of Language to the Deaf I 1 (I) 3 hours
Philosophy of development of functional language for the deaf child; methods and materials for developing English language skills and comprehension.

424 Teaching of Language to the Deaf II 2 (II) 3 hours
Continuation of Special Education 423 with further consideration of criteria for selection and utilization of teaching materials; special emphasis on hearing problems.

425 Observations and Student Teaching 1 (II) 3 hours
Arrangements with schools and classes for the deaf for qualified students to complete student teaching during the school year; co-curricular and class experiences encouraged.

432 Speech Reading and Auditory Training 1 (II) 2 hours
History of development of speech (lip) reading; methods and practice in teaching speech reading for various ages and degrees of hearing impairment.

433 Teaching School Subjects to the Deaf I 1 (I) 2 hours
Philosophy underlying formal education of the deaf; methods and special adaptations used in presenting school subjects, preparing lesson plans for deaf classes.

434 Teaching School Subjects to the Deaf II 1 (II) 2 hours
Consideration of problems in deaf education; approaches to the presentation of school subjects considered in detail.

457 Basic Audiology 1 (II) 2 hours
Brief history of hearing evaluation techniques; methods and practice in high and audiological assessment; types of hearing losses; audiological training techniques.

438 Auditory and Speech Mechanisms 1 (I) 2 hours
Basic structure and function of organs of hearing and speech; theories of cortical involvement; central and peripheral nervous systems.
440 Learning Disabilities
Study of developmental patterns in speech and language; causal factors of delayed speech and language development; evaluative techniques for identification of problem; therapy techniques for habilitation and/or rehabilitation of children with deviant language development. 3 hours

441 Speech Development and Correction (I,II,III) 3 hours
Development of voice and speech proficiencies; common problems of articulation, voice, rhythm and symbolization found in the classroom; demonstration of individual and group correction procedures and materials.

442 Psychology of Speech
Psychological processes basic to speech; theories of language learning; semantics; psychology of hearing and deafness; interrelationships between speech and personality. 3 hours

443 Speech Pathology I: Voice and Articulation
Types and causes of voice and articulation disorders; classroom demonstrations; special emphasis on rehabilitation procedures and methods associated with individual involvement. 3 hours

444 Speech Pathology II: Rhythm and Symbolization
Types and causes of rhythm and language symbolization disorders; classroom demonstrations; special emphasis on rehabilitation procedures and methods associated with stuttering, aphasia and delayed language development. 3 hours

445 Phonetics of American Speech
Introduction to International Phonetic Alphabet; analysis of phonetic and phonemic elements in major American English dialects; practice in transcription of standard and defective speech. 3 hours

446 Speech Evaluation: Methods and Practicum (I,II) 3 hours
Tests and procedures for evaluating individuals with speech disorders; psychological, differential diagnosis and report writing; observation during evaluation periods in speech and hearing centers. PREREQ: 6 hours Speech Path.

447 Neurophysiology of the Speech Handicapped (I) 3 hours
Basic structure and function of the organs of hearing and speech; theories of cortical involvement; central and peripheral nervous systems as they affect communication; individual projects.

448 Measurement of Hearing (I) 3 hours
Brief history of hearing evaluation techniques; methods and practice in basic audiological assessments; types of hearing losses; auditory training techniques; individual reports. PREREQ: Grad.

449 Advanced Measurement of Hearing (I,II) 3 hours
Hearing evaluation problems associated with pre-school children, recruitment, functional hearing losses, etc.; education and rehabilitation programs associated with electronically-assisted hearing. PREREQ: Grad.

450 Speech Correction in Elementary and Secondary Schools (I,II) 3 hours
Speech correction programs as related to goals of public education for school age children; role and responsibilities of the speech clinician; current practices in evaluation, case load selection and scheduling; special emphasis on methods and materials appropriate to a variety of facilities. PREREQ: Grad. and 6 hours Speech Pathology.

451 Basic Practicum in Speech Correction (I,II) 1-2 hours
Minimum of 45-60 clock hours per credit hour; supervised observation and practice in speech and hearing centers; diagnostic interviews, therapy plans, lesson plans, weekly practicum summaries. PREREQ: Grad. and permission.

452 Advanced Practicum in Speech Correction (I,II) 1-2 hours
Continuation of Special Education 451; student is expected to participate more actively in corrective and diagnostic programs, and initiate and follow through correction programs with selected individual and/or groups. PREREQ: Grad. and permission.
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREREQ: One course reading remediation program.</td>
<td>3 hours</td>
<td><strong>Disorders of Articulation</strong> (I) R-L 2 hours Types and causes of articulation disorders; rationale for case selection; S-R-L syndrome; emphasis on rehabilitation procedures associated with individual involvements; practice. (Lee, 2, Lab. 3)</td>
</tr>
<tr>
<td><strong>Disorders of Voice</strong> (I) 2 hours Types and causes of voice disorders; rationale for case selection; cleft palate; special emphasis on rehabilitation procedures associated with individual involvements; practice. (Lee, 2, Lab. 3)</td>
<td>2 hours</td>
<td><strong>Disorders of Rate and Rhythm</strong> (II) 2 hours Types and causes of rate, rhythm and stress pattern disorders; rationale for case selection; survey of stuttering theories and therapies; special emphasis on rehabilitation procedures associated with individual involvements; practice. (Lee, 2, Lab. 3)</td>
</tr>
<tr>
<td><strong>Disorders of Symbolization</strong> (II) 2 hours Types and causes of language symbolization disorders; rationale for case selection; childhood aphasia and autism; special emphasis on rehabilitation procedures associated with individual involvements; practice. (Lee, 2, Lab. 3)</td>
<td>2 hours</td>
<td><strong>Advanced Problems in Speech Pathology</strong> (III) 3 hours Students are expected to investigate three different areas of current concern in Speech Pathology: initial surveys, annotated bibliography, presentation of observations and conclusions, seminar discussion of findings. Instructor will base his lectures on topics chosen by students for study; clinical demonstrations of selected voice, speech, and language problems. <strong>PREREQ:</strong> Graduate standing with six semester hours in Speech Pathology or Correction.</td>
</tr>
<tr>
<td><strong>Alaryngeal Speech Rehabilitation</strong> 2 or 3 hours Problems of voice and speech rehabilitations for the individual with a functional larynx; social, emotional, and medical considerations as well as clinical procedures for esophageal, pharyngal, and bicalp speech; implications for use of artificial larynx; current research pertinent to this area. <strong>PREREQ:</strong> 6 hours of speech pathology including voice problems.</td>
<td>2 or 3 hours</td>
<td><strong>Speech Problems of Cerebral Palsied Children</strong> 2 or 3 hours Identification of types of Cerebral Palsy by location of lesion, motor symptomology, and additional handicaps; role of the speech clinician on the team; types of speech therapy, with special emphasis on the Bobath approach; current research and controversial issues will be discussed. <strong>PREREQ:</strong> 6 hours of speech pathology.</td>
</tr>
<tr>
<td><strong>Vocational Training of the Mentally Retarded</strong> (II) 3 hours Consideration of the following aspects of treatment of the mentally retarded: vocational training and evaluation, on the job training; vocational placement, working with related disciplines, follow-up services. <strong>PREREQ:</strong> Permission of department only.</td>
<td>3 hours</td>
<td><strong>Observation and Student Teaching of the Mentally Retarded</strong> 1, 2, 3 hours Minimum total of 180 clock hours of supervised practice teaching is required. Students teachers are placed in two separate classrooms on different levels for the edurally retarded wherever possible. Weekly seminar required of all students concurrent with practice teaching experiences. <strong>PREREQ:</strong> Permission of department only.</td>
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<tr>
<td>Course Number</td>
<td>Title</td>
<td>Description</td>
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<tr>
<td>472</td>
<td>Matrix Methods of Structural Analysis</td>
<td>Matrix methods and computer applications for analysis of structures, including beams, frames, trusses, space frames using mechanical strain gages, electric strain gages, lacquer, photo-elasticity and membrane analogy.</td>
</tr>
<tr>
<td>481</td>
<td>Plastic Design</td>
<td>Plastic design problems, analysis of beams and frames, deflection and secondary design problems, repeated loading, plastic theory and utilization.</td>
</tr>
<tr>
<td>482</td>
<td>Limit Design</td>
<td>Criteria for the plastic collapse of structures, limit design applied to continuous sections, rigid frames, and component parts, introduction to dynamic testing of structures.</td>
</tr>
<tr>
<td>490</td>
<td>Operations Research I</td>
<td>Introduction to Operations Research. Discrete and continuous probability models, decision theory, linear programming, and the transportation problem. Network analysis, PERT, dynamic programming and queuing theory for finite populations. Cost optimum solutions using manual and computer approaches.</td>
</tr>
<tr>
<td>491</td>
<td>Advanced Dynamics</td>
<td>Motion of a variable mass, angular impulse and momentum. General equations of motion. Gyroscopic motion. Theory of vibrations. Lagrange's equation and Hamilton's principle. Central force problems.</td>
</tr>
<tr>
<td>494</td>
<td>Operations Research II</td>
<td>Queuing theory for infinite populations, optimum-cost queuing solutions. Application of queuing theory and control, application of computer simulation of stochastic systems, integer programming, and an introduction to non-linear programming.</td>
</tr>
<tr>
<td>495</td>
<td>Structural Design for Dynamic Load</td>
<td>Behavior of structural materials and systems under dynamic loads. Analysis and design for dynamic loads. Computational techniques.</td>
</tr>
<tr>
<td>501</td>
<td>Special Engineering Problems</td>
<td>Theoretical and practical aspects of soil mechanics and geotechnical engineering. Applications to civil engineering problems, fluid flow, heat transmission, electromagnetic theory, acoustics and chemical engineering. Differential equations and similarity.</td>
</tr>
<tr>
<td>502</td>
<td>Thin Shell Structures</td>
<td>General theory of thin shells: analysis and design of hyperbolic paraboloids, folded plates, cylindrical shells, shell walls, and domes.</td>
</tr>
<tr>
<td>503</td>
<td>Foundation Engineering</td>
<td>Evaluation of subsoil conditions as they affect the behavior, proportions, and selection of foundation elements; characteristic of foundation soils; bearing capacity and settlement analysis; seepage problems; stability of slopes and earth-retaining structures.</td>
</tr>
<tr>
<td>504</td>
<td>Experimental Stress Analysis</td>
<td>Investigation of the basic theories and techniques associated with the analysis of stress using mechanical strain gages, electric strain gages, lacquer, photo-elasticity and membrane analogy.</td>
</tr>
<tr>
<td>510</td>
<td>Applied Elasticity</td>
<td>Stress, strains, Hook's law and displacements, formulation of problems in elasticity, various methods of solution of two and three dimensional problems, comparison with approximate solutions.</td>
</tr>
<tr>
<td>512</td>
<td>Theory of Plates and Shells</td>
<td>Plates: Governing equations for the bending and stretching of thin plates, including shell deformations: solution of rectangular and circular plates and plates of various shapes with different boundary conditions. Means of classical, energy and numerical methods. Large deflection theory of plates. Shells: Membrane theory of barrel shells, translation shells of double curvature. Theory of shells, cylindrical shells, general theory of thin shells, analysis of thin folded plates.</td>
</tr>
<tr>
<td>513</td>
<td>Theory of Elastic Stability</td>
<td>Beam, columns, elastic buckling of bars and frames, inelastic buckling of bars, torsional buckling, lateral buckling of beams, buckling of rings, curved bars and arches.</td>
</tr>
<tr>
<td>514</td>
<td>Bridge Design</td>
<td>The theory and design of slab, box girder, prestressed, composite, and orthotropic suspension bridges.</td>
</tr>
<tr>
<td>515</td>
<td>Advanced Hydraulics</td>
<td>Advanced study of hydraulics including hydrodynamics, similitude, urban hydrology, geohydrology, hydraulic transients, and loose boundary hydraulics.</td>
</tr>
<tr>
<td>516</td>
<td>Advanced Structural Engineering</td>
<td>Contemporary developments in the analysis and design of space-frame, space-enclosing, and space-enclosing structures, including appropriate mathematical and mechanical methods of analysis.</td>
</tr>
<tr>
<td>517</td>
<td>Advanced Sanitary Engineering</td>
<td>Advanced study of biological and chemical processes in sanitary engineering: activated sludge and trickling filter processes: anaerobic digestion; biological and chemical processes; fluid flow, heat transmission, electromagnetic theory, acoustics and chemical engineering. Differential equations and similarity.</td>
</tr>
<tr>
<td>518</td>
<td>Similitude</td>
<td>The principles and applications of dimensional methods, similarity and model testing, development and dissimilar models. Applications to structures, fluid flow, heat transmission, electromagnetic theory, acoustics and chemical engineering. Differential equations and similarity.</td>
</tr>
<tr>
<td>519</td>
<td>Engineering Vibrations</td>
<td>The theories and applications of linear and non-linear systems with one degree of freedom: Systems with Non-Linear and Variable Spring Characteristics: Systems with Several Degrees of Freedom; Vibrations of Elastic Bodies.</td>
</tr>
<tr>
<td>520</td>
<td>Civil Engineering Special Projects</td>
<td>The principles and applications of dimensional methods, similarity and model testing, development and dissimilar models. Applications to structures, fluid flow, heat transmission, electromagnetic theory, acoustics and chemical engineering. Differential equations and similarity.</td>
</tr>
<tr>
<td>521</td>
<td>Graduate Research (Thesis)</td>
<td>The principles and applications of dimensional methods, similarity and model testing, development and dissimilar models. Applications to structures, fluid flow, heat transmission, electromagnetic theory, acoustics and chemical engineering. Differential equations and similarity.</td>
</tr>
</tbody>
</table>
**ENGLISH**

433 Sixteenth Century Literature
Poetry and prose of the English Renaissance, from its continental origins to the end of the Elizabethan Age. 3 hours

434 Chaucer
A study of the language and writing of Chaucer, with emphasis on The Canterbury Tales. PREREQ: Eng 231 3 hours

440 Eighteenth Century Literature
Readings in the major authors of the Age of Pope and the Age of Johnson. PREREQ: Eng 231 or 232 3 hours

448 Seventeenth Century Literature
A study of the English poetry and prose of the seventeenth century to the Restoration with emphasis on Milton. 3 hours

450 English Drama before 1642
A study of the development of the English drama, exclusive of Shakespeare, from the beginnings to 1642. PREREQ: Eng 231 3 hours

458 Structural Linguistics
An analysis of the English language as it is spoken, with the end view of gaining better understanding of the language and how to make it work most effectively. PREREQ: Graduate or permission 3 hours

459 History of the English Language
A study of the internal and external forces which have influenced the development of the English language. PREREQ: Eng 353 or permission 3 hours

472 Medieval English Literature
A survey of the principal writings in English, excluding those of Chaucer, from 1100 to 1500. PREREQ: Eng 231 3 hours

481 Literature of the Romantic Period
Poetry and prose (excluding the novel) of England from 1798 to 1850. PREREQ: Eng 231 3 hours

482 Literature of the Victorian Period
Poetry and prose (excluding the novel) of England from 1830 to 1900. 3 hours

497 The American Novel
The major American novelists from Hawthorne to the present. 3 hours

498 The American Drama
A general view of the history of the drama and theatre in the United States, especially as related to the main currents of American thought. The following are all seminar courses:

501 Introduction to Literary Research
A survey of the techniques of literary research, history and interpretation, with a primary emphasis on methods of scholarship currently useful to the study of English and American literature. 3 hours

504 Literary Criticism
Literary criticism from the beginnings to the present, with emphasis on the criticism of ancient Greece and Rome, nineteenth century England and twentieth century America. 3 hours

506 Seminar in American Literature
An analytical study of the major literary movements in nineteenth and twentieth century America as they are expressed in poetry, fiction, drama and criticism. 3 hours

509 Seminar: The Restoration and Early 18th Century
A detailed study of selected authors and works of the Augustan Age of English literature (1660-1720). 3 hours

510 Seminar in Victorian Literature
An intensive study of selected nineteenth century English authors and their works. 3 hours

512 Seminar in Shakespeare
Critical analysis of ten tragedies or ten comedies of Shakespeare. 3 hours

**FOREIGN LANGUAGES**

**FRENCH**

346 Eighteenth Century French Literature
PREREQ: French 212 Study of the Enlightenment, emphasizing the works of Montesquieu, Voltaire, Rousseau and Diderot. (II) 3 hours

351-352 Nineteenth Century French Literature
PREREQ: French 212 for either 351 or 352
351: 1789 to 1848, Lamartine to Michelet, Stendhal, Mirabeau, Balzac, Hugo. 352: 1850 to 1885, Realism Naturalism Paracene, Symbolism. (I, II) 3 hours

421 Sixteenth Century French Literature
PREREQ: Any 200 course in French literature Literature of the Renaissance, Rabelais, Ronsard, Montaigne. (II) 3 hours

431 Seventeenth Century French Literature
PREREQ: Any 200 course in French literature. The classical School Descartes, Pascal, Corneille, Molière, Racine, LaFontaine. (II) 3 hours

452 Twentieth Century French Literature
PREREQ: For either 451 or 452, any French 200 course in literature or permission of instructor. 451: Main currents of twentieth century literature from the beginning to 1939. 452: Continuation to current literary production. (II) 3 hours

460 Pro-Seminar
PREREQ: Permission of instructor. A detailed study of narrower phases of French literature, language or culture. (II) 3 hours

**GERMAN**

431 German Literature of the 19th Century
PREREQ: German 315
The dramatic, epic and lyric works of nineteenth century German literature. (I) 3 hours

432 German Literature of the 20th Century
PREREQ: German 315
The principal dramatic, epic and lyric works of the twentieth century German literature. (II) 3 hours

439 German Novel
PREREQ: Permission of instructor
Survey of the German novel from its beginning to the twentieth century. (II) 3 hours

440 German Novelle
PREREQ: German 315 or permission
Survey of the German short story, its historical origin, characteristics. (II) 3 hours

444 German Drama
PREREQ: German 315 or permission
Study of several of the better-known dramatic, history of drama development in Germany. (II) 3 hours

450 German Literature of the Eighteenth Century
PREREQ: Permission of Instructor
A study of representative authors of the Enlightenment, Storm and Stress, and German Classicism: Lessing, Herder, Schiller, and Goethe. (I) 3 hours
460 Pre-Seminar in German Literature ............................... (II) 1-3 hours
PREREQ: Permission of instructor
A detailed study of narrower phases of German literature, language or culture.

SPANISH

355 Modern Drama of Spain ........................................... (I) 3 hours
PREREQ: Span. 318 or permission
Ideologies, techniques, trends, and influences of the major Spanish dramatists of the nineteenth and twentieth centuries.

356 Spanish Novel of Spain ........................................... (II) 3 hours
PREREQ: Span. 318 or permission
Analytical study of the representative Spanish novelists of the nineteenth and twentieth centuries from P.A. de Alarcón to cel.

419 Theater of the Golden Age ...................................... (I) 3 hours
PREREQ: 317 or permission of instructor
Foremost Spanish dramatists and plays of the sixteenth and seventeenth centuries, with emphasis on Lope de Vega, Tirso de Molina, and Calderón de la Barca.

411 Novel of the Golden Age ....................................... (II) 3 hours
PREREQ: 317 or permission of instructor
Study of the prose masterpieces of the sixteenth and seventeenth centuries, including such works as Lázaro de Tormes, La Celestina, and Don Quijote.

416 Spanish American Literature of the 20th Century ........... (I) 3 hours
PREREQ: Span. 322 or permission
Critical and analytical study of the foremost Spanish American dramatists, poets, and essayists from Modernism to the present.

420 Spanish American Novel .......................................... (I) 3 hours
PREREQ: Span. 322 or permission
Study of representative novels and novelists of the nineteenth and twentieth centuries, with emphasis on contemporary authors.

421 Generation of 1928 .................................................. (II) 3 hours
PREREQ: Span. 318 or permission
Examination of the ideology, philosophy, and literary techniques of Unamuno, Martinez Ruiz, Valle-Inclán, Baraja and Antonio Machado.

435 Spanish American Short Story ................................ (II) 3 hours
PREREQ: Span. 321 and 322 or permission of instructor
Representative stories of the nineteenth and twentieth centuries, from Romanticism to current production.

450 Pro-Seminar ......................................................... (I) 3 hours
PREREQ: Permission of instructor
A detailed study of narrower phases of Spanish or Spanish American literature, language or culture.

GEOGRAPHY

412 Urban Geography .................................................. 3 hours
A course in the study of urban centers and the underlying forces of urbanization, with special reference to the history of urbanization, site and situation, external relations, internal function, and form, and comparative urban studies.

423 Great Plains and Nebraska ..................................... 3 hours
A systematic geographical study of the natural and cultural elements with special emphasis on the regional character of this region.

432 Climates of the World ........................................... 3 hours
PREREQ: Geog. 254
A survey of the study of the continents in terms of climate controls and generalized climatic sub-regions.

443 Geography of Manufacturing .................................. 3 hours
PREREQ: Geog. 231 or Econ 201 and 202
A course which discusses methods of measurement and classification, as well as the function of manufacturing in major world manufacturing regions in the U.S. and local community patterns.

460 Independent Regional Research (may be repeated to maximum of 3 hours, permission of department head) 1 hour
581 Urban Seminar in Metropolitan Planning and Development (II) 3 hours
An overview of the present status of planning in metropolitan areas with special emphasis on structure of planning departments, comprehensive plans, and problems of annexation.
PREREQ: Geog. 412 or recommendation from Political Science, Sociology, or Economics Department.

583-584 Interdisciplinary Seminar on the Urban Community 3 hours per sem to 6
An interdisciplinary course on the metropolitan community in which each departmental and college offerings concerned with urban problems are put in broad interrelated focus.
PREREQ: Undergraduate major in one of the social sciences plus 6 hours of graduate work in one of the social sciences. (Also listed under Economics, Political Science, and Sociology.)

585-586 Urban Economics* Each 3 hours
An examination of the theoretical basis for the analysis of urban economic problems with emphasis upon the policy alternatives applicable toward their possible solution. Separate credit may be received for each course.
PREREQ: At least 6 hours of upper division course work on economics or permission.

591-592 General Seminar Each 1 hour
Review of current research by geographers including national and international associations and initial thesis proposal.

598-599 Urban-Regional Research* Each 3 hours
Used in candidates for the Master of Science Degree in economics in lieu of a Master's thesis. A study consisting of urban economic problems, employing research techniques. Students do independent research, consult with adviser, and submitting completed report to a departmental committee.
PREREQ: Graduate enrollment in the Master of Science in economics program and acceptance by a graduate adviser.

601-602 Thesis Each 3 hours
Independent research project written under the supervision of an advisor.

HISTORY

401 History of Science to 1700 (I) 3 hours
PREREQ: His 151-152 or a major in a department of science, mathematics, or general science.
A survey of the development of scientific ideas and techniques from antiquity to the beginning of modern science.

402 History of Science since 1700 (II) 3 hours
PREREQ: His 151-152 or a major in a department of science, mathematics, or general science.
A survey of the historical and intellectual development of modern science and its relation to society, technology, and social thought.

411 Representative Americans, 1600-1828 (I) 3 hours
PREREQ: Hist. 111 and 112
A biographical approach to American history prior to 1828.

412 Representative Americans, 1828 to Present (II) 3 hours
PREREQ: Hist. 411 or permission of instructor
A biographical approach to American history since 1828.

413 The Revolutionary Era, 1754-1776 (I) 3 hours
PREREQ: Hist. 111 and 112
An analysis of the forces which led to the American Revolution and an examination of some of the problems which arose as a result of the separation from England.

414 Early Federal Period, 1789-1815 (II) 3 hours
PREREQ: Hist. 111 and 112
A study of the growth and development of the American nation during the formative years under the Constitution.

415 The Jacksonian Era (I) 3 hours
PREREQ: Hist. 111 and 112
An interpretive study of the middle period of American history.
* Cross listed in economics.

416 The Emergence of Modern America: 1777-1901 (II) 3 hours
PREREQ: Hist. 111-112 or permission of instructor
A study of a transitional period in American history, this course considers the importance of industrialization, urbanization, immigration, and the emergence of the United States as a significant world power.

427 Twentieth Century America to 1932 (I) 3 hours
PREREQ: Hist. 111 and 112
A study of the history of the United States from the end of the nineteenth century to the election of Franklin D. Roosevelt to the presidency in 1932.

428 Twentieth Century America, 1933 to Present (II) 3 hours
PREREQ: Hist. 111 and 112
A study of the history of the United States from the election of Franklin D. Roosevelt to the presidency to the present.

429 Ideas in Twentieth Century America (I) 3 hours
PREREQ: Hist. 111 and 112
An analysis of some of the more important ideas which have had influence in recent America.

433 American Constitutional History to 1860 (I) 3 hours
PREREQ: Hist. 111 and 112
A history of constitutional theory and practice in the continental North American colonies of England and in the United States prior to 1860.

434 American Constitutional History since 1860 (II) 3 hours
PREREQ: Hist. 423 or permission of instructor.
A history of constitutional theory and practice in the United States from 1860 to the present.

442 History of American Science (I) 3 hours
A study of the origins, development, and nature of American science and its relations with technology, social thought, and government.

443 American Urban History to 1790 (I) 3 hours
PREREQ: Hist. 111 or permission of instructor.
A study of the history of the American urban environment from the emergence of metropolitan America and problems of the contemporary super-city.

451 Intellectual History of Modern Europe: Seventeenth and Eighteenth Centuries (I) 3 hours
PREREQ: Hist. 111 and 112
A historical survey of urban development in the United States from the colonial period through the 1860's; urban society, problems, institutions; role of cities in national history; American ambivalence toward cities.

453 Intellectual History of Modern Europe: The Revolutionary Age to the Present (II) 3 hours
PREREQ: Hist. 111 and 112
A study of the history of Modern Europe from the French Revolution to the present.

454 Age of the Absolutism (I) 3 hours
PREREQ: Hist. 111 and 112
A study of European society during the critical years following the Renaissance.

455 The Age of Absolutism (II) 3 hours
PREREQ: Hist. 111 and 112
An analysis of the forces which led to the American Revolution and an examination of some of the problems which arose as a result of the separation from England.

456 Early Federal Period, 1789-1815 (III) 3 hours
PREREQ: Hist. 111 and 112
A study of the growth and development of the American nation during the formative years under the Constitution.
455 Age of the Enlightenment (I) 3 hours
PREREQ: Hist. 151 and 152
A study of the politics, economics, and culture of eighteenth century Europe and of the cause of the French Revolution.

456 The French Revolution and Napoleonic Era: 1789-1815 (I) 3 hours
PREREQ: Hist. 151 and 152
A study of the development of France and the Napoleonic Empire in Italy and the Mediterranean Sea as an integral part of the Age of Revolution in Europe and of the cause of the French Revolution.

457 Nineteenth Century Europe: 1815-1870 (I) 3 hours
PREREQ: Hist. 151 and 152
An advanced study of what has happened in Europe since 1815 with a view to exploring the consequences of such events.

458 Nineteenth Century Europe: 1870-1914 (I) 3 hours
PREREQ: Hist. 151 and 152
An advanced study of the political and cultural development of the nation from the annexations of 1870 to 1890.

461 Tudor and Stuart England (II) 3 hours
PREREQ: Hist. 201 or 202 or Hist. 151 or 152
A study of England under the Tudors, when the English people rose magnificently and experienced a Golden Age, and the Stuarts then cast off the last remnants of feudal traditions and transformed the institutions, foreshadowing those of our world of today.

462 England in the Eighteenth and Nineteenth Centuries (II) 3 hours
PREREQ: Hist. 201 and 202 or Hist. 151 and 152
A survey of the history of England under the Tudors, when the English people rose magnificently and experienced a Golden Age, and the Stuarts then cast off the last remnants of feudal traditions and transformed the institutions, foreshadowing those of our world of today.

463 English Constitutional History to 1485 (I) 3 hours
PREREQ: Hist. 201 and 202 or with permission of instructor Hist. 151 and 152.
A study of the development of the legal and governmental institutions of the English-speaking people to 1485, including England's central and local governments.

464 English Constitutional History since 1485 (II) 3 hours
PREREQ: Hist. 201 or permission of instructor.
A study of the legal and governmental institutions of the English-speaking people since 1485, including British central and local governments and the governments of the member states of the Commonwealth and of the more important colonies.

477 Europe in Crisis: 1890-1932 (I) 3 hours
PREREQ: Hist. 151-152 and junior standing.
A study of the conditions and forces immediately precedent to World War I, the war itself, the peace following the war, and the rise of the modern dictatorships.

478 Europe in the Global Age: 1933 to the Present (I) 3 hours
PREREQ: Hist. 151-152 and at least junior standing.
A study of the increasing tensions between the fascist and communist dictatorships and the Western democracies, World War II, the resultant dissolution of power and the emergence of the "Balance of Terror".

501 Advanced Research Project in History (I, II, S) 1-5 hours
PREREQ: Acceptance as a graduate major or minor in history and permission of the department head and the instructor. Special problems in advanced work in history, arranged individually with graduate students.

502 Historical Research (I) 3 hours
PREREQ: Acceptance as a graduate major or minor in history and permission of the department head and the instructor. The critical method in collecting and organizing historical materials; the processes of verification, evaluation, and organization of facts; the editing, publication, and printing of original written materials.

506 Great American Historians (II) 3 hours
PREREQ: Acceptance as a graduate major or minor in history or permission of the department head and the instructor (not open for credit to students who have taken Hist. 498, or equivalent).
A survey of the history of American historical writing from colonial times to the present. Reports on selected readings.

MATHEMATICS

The 300 level courses listed are open for graduate credit to students who do not seek an advanced degree in mathematics.

COMPUTER SCIENCES

507 Numerical Methods (I) 3 hours
PREREQ: Acceptance as a graduate major or minor in history and permission of the department head and the instructor. The critical method in collecting and organizing historical materials; the processes of verification, evaluation, and organization of facts; the editing, publication, and printing of original written materials.

522 Introduction to the Theory of Information Storage and Retrieval (II) 3 hours
PREREQ: Math 191, 211 and CS 250.
Introduction to information retrieval, applications.

532 Linear Programming (I) 3 hours
PREREQ: CS 322 or equivalent.
An introduction to linear programming and applications.

533 Introduction to System Programming (II) 3 hours
PREREQ: CS 322 or equivalent.
Input-output and storage systems, structures and transformations of data, assembly and executive systems.

540 Great American Historians (II) 3 hours
PREREQ: Acceptance as a graduate major or minor in history or permission of the department head and the instructor. The critical method in collecting and organizing historical materials; the processes of verification, evaluation, and organization of facts; the editing, publication, and printing of original written materials.

541 Great American Historians (II) 3 hours
PREREQ: Acceptance as a graduate major or minor in history or permission of the department head and the instructor. The critical method in collecting and organizing historical materials; the processes of verification, evaluation, and organization of facts; the editing, publication, and printing of original written materials.
353 Probability and Statistics I
354 Probability and Statistics II
PREREQ: Math 196 and junior standing

360 Introduction to Topology
PREREQ: Math 196 and junior standing

411 Abstract Algebra

423 Mathematical Analysis

424 Mathematical Analysis
PREREQ: Math 311 or equivalent

427 Complex Variables
PREREQ: Math 423 or Advanced Calculus

432 Theory of Ordinary Differential Equations

433 Operational Mathematics

441 Introduction to the Foundations of Mathematics

456 Topology of Euclidean Space, Continuity, Differentiation, Integration, Sequences and Series

457 Tensor Analysis

461 Advanced Topics in Algebra I

482 Theory of Functions of Real Variables

483 Partial Differential Equations

484 Functional Analysis

530 Theory of Analytic Functions

536 Theory of Functions of a Complex Variable

543 Theory of Functions of a Complex Variable

550 Differential Equations

561 Introductory Topology

563 Topological Spaces, Weak Topologies, Compact Sets, Completely Continuous Operators, and Applications

565 Differential Manifolds, Integral Calculus on Manifolds, Lie Groups, Differential Forms, and Applications

581 Advanced Calculus

590 Graduation Seminar

603 Thesis

PHYSICS

301 Elements of Electronics

302 Optics

375 Electricity and Magnetism

376 Two-Semester Continuation Course Giving More Complete and Advanced Treatment of Electrical and Magnetic Principles from Standpoint of Both A.C. and D.C. Phenomena

385 Heat and Thermodynamics

412 Modern Physics

446 Nuclear Physics

490 Modern Developments in Physics

495 Modern Developments in Physics

496 Problems in Physics

497 Individual Laboratory and/or Library Work in Some Field of Energy

POLITICAL SCIENCE

499 The Presidency

546 Problems in Politics

552 Problems in Politics
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>404</td>
<td>The Legislative Process</td>
<td>(II,S) 3 hours</td>
<td>A comprehensive study of the legislative process of the Congress and state legislatures. The major emphasis is on legislative institutions, processes and behavior. PREREQ: 110, 111</td>
</tr>
<tr>
<td>405</td>
<td>The Judicial Process</td>
<td>(I,S) 3 hours</td>
<td>This is a course in the administration of justice. It examines the Federal and State courts with respect to their powers, judicial selection, the bar, and the reform movements in the most basic of all of man's objectives, the pursuit of justice.</td>
</tr>
<tr>
<td>413</td>
<td>Comparative Governments: Emerging Areas</td>
<td>(II,S) 3 hours</td>
<td>An examination and comparative analysis of the problems, structure, and functions of government in the emerging states with special attention given to the political environment of these states within which the institutions of government operate. Since certain areas will be covered on a semester basis, the course may be repeated for credit when the area of study changes.</td>
</tr>
<tr>
<td>419</td>
<td>Constitutional Law I</td>
<td>(I,S) 3 hours</td>
<td>The first semester of a two semester course in American Constitutional Law. It seeks to familiarize the student with the background of the American Constitutional system, the nature of the judicial process and the role of the United States Supreme Court in the development of the processes and powers of the American Federal System. PREREQ: 110, 111</td>
</tr>
<tr>
<td>423</td>
<td>National Security Policy</td>
<td>(II,S) 3 hours</td>
<td>The processes and the machinery of formulating national security policy and the influences involved. Special emphasis is given to demonstrating the interrelationships among political, military, technological, domestic and international factors.</td>
</tr>
<tr>
<td>426</td>
<td>International Law of Peace</td>
<td>(I,S) 3 hours</td>
<td>A basic course in the broad curriculum of international politics. It seeks to introduce the student to the continuing morality and law which is accepted by the international community and according to which it seeks to function in its relations as sovereign states. The aspects of the Law of War are excluded from this treatment.</td>
</tr>
<tr>
<td>431</td>
<td>Political Theory I</td>
<td>(I,S) 3 hours</td>
<td>Reviews and analyzes the leading political theories of Western Man from the Hebrews and Greeks to the mid-17th Century.</td>
</tr>
<tr>
<td>432</td>
<td>Political Theory II</td>
<td>(II,S) 3 hours</td>
<td>Continues the review and analysis of the leading political theories of Western Man begun in Pol.Sci. 431, bringing the study down to the present day.</td>
</tr>
<tr>
<td>433</td>
<td>American Political Thought</td>
<td>(II,S) 3 hours</td>
<td>An over-view and analysis of the dominant political thoughts and ideas that have been present in American thinking from the days of the Puritans to today, and the individuals who held them.</td>
</tr>
<tr>
<td>440</td>
<td>Public Budgeting</td>
<td>(II) 3 hours</td>
<td>A study of the processes and procedures involved in making budgets for governmental institutions. PREREQ: 317</td>
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<tr>
<td>441</td>
<td>Public Personnel Management</td>
<td>(II,S) 3 hours</td>
<td>A study of the personnel process in American governmental administration. The processes and problems of recruiting, structuring, and operating public bureaucracies are examined as well as problems in personnel leadership, neutrality, accountability and performance. PREREQ: 317</td>
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**PSYCHOLOGY**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>401</td>
<td>Experimental Psychology of Learning</td>
<td>3-4 hours</td>
<td>A comprehensive coverage of the experimental literature on human and animal learning. An optional laboratory is designed to acquaint the student with practical research methods. PREREQ: Psych 102</td>
</tr>
<tr>
<td>403</td>
<td>Motivation</td>
<td>(I) 3 hours</td>
<td>An exploration of the motivation of organisms including methods, concepts, issues, and theories deriving from historical and contemporary research. PREREQ: Psych 213 and 401</td>
</tr>
<tr>
<td>406</td>
<td>Computer Concepts in Psychology and the Behavioral Sciences</td>
<td>3 hours</td>
<td>An introductory course emphasizing the applications of computers in the areas of psychology, sociology, and education. Includes a functional description of computers and a discussion of programming languages as well as specific uses. PREREQ: An Introductory statistics course.</td>
</tr>
<tr>
<td>407</td>
<td>Cognitive Theories I</td>
<td>3 hours</td>
<td>An exploration of historical and contemporary research and theory concerned with higher cognitive processes including concept formation, problem solving, creativity, memory, and symbolic behavior. PREREQ: Psychology 401</td>
</tr>
<tr>
<td>414</td>
<td>Non-parametric Statistics</td>
<td>(I) 2 hours</td>
<td>A study of distribution-free statistics with particular emphasis on application of distribution-free tests to research problems in the social behavior sciences. PREREQ: Basic Statistics</td>
</tr>
<tr>
<td>415</td>
<td>Multiple Regression and Factor Analysis</td>
<td>(I) 3 hours</td>
<td>Advanced problems and techniques of correlation and regression are discussed, including: general linear correlation methods and problems, multiple correlation, multiple regression, and factor analysis. PREREQ: Basic Statistics</td>
</tr>
<tr>
<td>416</td>
<td>Analysis of Variance</td>
<td>(I) 2 hours</td>
<td>Consideration is given in this course to descriptive and inferential procedures for use in analyzing individual difference expressions of variance. One-way and multivariate designs are discussed along with the models, purposes, assumptions and techniques appropriate to each. PREREQ: Basic Statistics</td>
</tr>
<tr>
<td>421</td>
<td>Experimental Psychology of Sensation and Perception</td>
<td>(I,II) 3-4 hours</td>
<td>Advanced laboratory techniques and methods in the field of sensation, perception, and learning are presented, and the student is given an opportunity to conduct supervised research on several laboratory projects. PREREQ: Basic Statistics or permission of instructor</td>
</tr>
</tbody>
</table>
43 Physiological Psychology (3 hours)
The relation of the structures and functions of the nervous and other organ systems of an organism to its behavior. Research will be emphasized throughout the course with permission of instructor.

42 Animal Behavior (Biology 427) (3 hours)
Behavior of diverse animals will be studied—primarily to develop an understanding of the relationship between nervous integration and the behavior manifested by the organism, as well as the evolution and adaptive significance of behavior as a functional unit. PREREQ: Biology 140 or Psychology 101 or permission

43 Psychological and Educational Testing (I,II,III) (3 hours)
The purpose of the course is to acquaint students in Education and Psychology with the different kinds of standardized tests available to them for the evaluation of students' programs and for guidance. Emphasis will be placed on achievement tests, and construction of teacher-made tests.
PREREQ: Psych 102 or 301

43 Individual Differences (II) (3 hours)
A critical study of experimental and statistical investigations of the influence of age, ancestry, sex, physical traits, and environment in causation of individual differences in mental traits.
PREREQ: 9 hours of psychology, including Psych 101 and Basic Statistics

43 Psychoanalytic Theories of Personality (LS) (3 hours)
An integrative course designed to acquaint the student with the Freudian and psychoanalytic viewpoints. Research in anxiety, defense mechanisms, sleep, and dreams is emphasized.
PREREQ: Basic Statistics and Psych 343

44 Abnormal Psychology (II) (3 hours)
The purpose is to become familiar with theories (psychological, psychiatric, psychoanalytic) of normality and abnormality, of the dynamics, therapy, and prognosis of individuals and groups in the syndrome, and those of psychoses and the influence of age, ancestry, sex, physical traits, and environment on causation of individual differences in mental traits.
PREREQ: Psych 101 and Basic Statistics or Psych 345

44 Personality Theories (LS) (3 hours)
This course is designed to familiarize the student with personality theories, which are much more inclusive than learning or perception, and to transcend isolated facts and approach integrated viewpoints. A research approach is emphasized.
PREREQ: Psych 102 and senior standing

45 Advanced Counseling Theory (I,II,III) (3 hours)
A Jungian approach emphasizing the relation between diagnosis and treatment. Emphasis is on psychological, literature, philosophy, and psychology. Readings are emphasized.
PREREQ: Psych 343 or Ed 520 or Psych 445

45 Introduction to General and Experimental Linguistics (Speech 452) (3 hours)
A broad survey of generative syntax, phonology, and pragmatics and of related materials in linguistic and paralinguistic perception, memory, and communication. No previous linguistic training is required. Designed primarily for students wishing to apply linguistic methods and thought to the behavioral and communication sciences. Laboratory to be arranged.
PREREQ: Senior or graduate standing in Psych or Speech or permission. Recommended: Psych 421 or Speech 301

45 Retardation (II) (3 hours)
This course considers significantly sub-average intellectual functioning originating during the developmental period and associated with impairment in adaptive behavior. Research is emphasized.
PREREQ: Psych 421; or basic statistics and Psych 343 or 445

45 Developmental Psychology (I,II,III) (3 hours)
A systematic review of the research literature related to the biological, social, and cognitive development of children from conception to adolescence.
PREREQ: Basic Statistics

45 Psychological Aspects of Industrial Training and Education (I) (3 hours)
A study and application of the theory, techniques, and procedures involved in preparing individuals for their jobs through training and education. PREREQ: Psych 101 and permission of instructor

46 Psychological Aspects of Industrial Training and Education (II) (3 hours)
A study and application of the theory, techniques, and procedures involved in preparing individuals for their jobs through training and education. PREREQ: Psych 101 and permission of instructor

46 Research Problems in Psychological Psychology (I,II,III) (3 hours)
A faculty supervised research project, involving empirical or library work and oral or written reports. PREREQ: 15 hours of psychology

46 Research Problems in Psychological Psychology (I,II,III) (3 hours)
A study through reading and discussion of the significant individual contributors and contributions to the growth of psychology. PREREQ: Permission of instructor

46 Personality Theories (II) (3 hours)
A study through reading and discussion of the most recent developments, covering all specialties. PREREQ: Permission of instructor

46 Learning Theory (II) (3 hours)
This course presents, at an advanced level, the work of the theorists who have most directly influenced the contemporary psychology of learning. PREREQ: Psych 401 or permission of instructor

46 Introduction to Counseling Theories (3 hours)
Study of contemporary theories of counseling, the counseling process and methods. PREREQ: Education 409 or Department permission

46 Tests and Measurements (II) (3 hours)
A study of the theoretical and practical problems related to the development and use of psychological tests. Covers such topics as: measurement, test development, standardization, reliability, validity, and interpretation. PREREQ: Basic Statistics

46 Experimental Social Psychology (I,II,III) (4 hours)
A study through lecturers and laboratory work of group processes emphasizing information theory, game theory, and graph theory. PREREQ: Psych 421

46 Seminar in Communication Theory (Speech 350) (3 hours)
Analysis of current approaches to the study of communication with emphasis on theoretical models and their application to various professional interests. PREREQ: Basic statistics or permission of instructor

46 Advanced Educational Psychology (I,II,III) (3 hours)
A study of the principles of learning and testing and their applications to problems of contemporary education, particularly those problems existing in the classroom. PREREQ: Psych 351
553 Individual Tests: Children and Adolescents (I) 4 hours
Administration, scoring, standardization, and interpretation of and re-
search with the Revised Stanford-Binet (L-M), Wechsler Social Maturity
Scale, Wechsler Intelligence Scale for Children, Goodenough-Harris, and
House-Tree-Person Technique.
PREREQ: Basic Statistics and Psych 431 or Psych 532 or permission of
instructor

554 Individual Tests: Adolescents and Adults (I) 4 hours
Administration, scoring, and interpretation of research with the
Wechsler Adult Intelligence Scale, Wide Range Achievement
Test, Bender Visual-Motor Gestalt Test, Children's Apperception
Test, Sentence Completion, and Thematic Apperception Technique.
PREREQ: Psych 551

555 Introduction to Therapeutic Techniques with Children (I) 3 hours
These are traced
The purpose of this course is to become familiar with the
behavioral psychology of the child and the child’s development.
PREREQ: Permission of instructor

557 Behavior Modification (II. I) 3 hours
A course in the techniques, rationale, and research literature of
behavioral psychology of the child and the child’s development.
PREREQ: Psych 102 and 313, or permission of instructor.

561 Seminar in Industrial Psychology (II. I) 3 hours
Intensive study of current problems and research in psychology in
industry with particular emphasis on the application of research findings.
PREREQ: Graduate standing and Basic Statistics

563 Personnel Selection and Assessment (II. I) 3 hours
A practical course designed to familiarize the student with the
procedures used in personnel selection, and to develop
PREREQ: Basic Statistics, Psych 532 and permission of instructor.

569 Topical Seminar in Psychology (II. I) 3 hours
A discussion of specific advanced topics which will be announced
whenever the course is offered.
PREREQ: Permission of instructor

575 Practicum in Psychology (II. I) 1-1.5 hours
Faculty-supervised experience in a real life educational agency, clinic
or institutional setting designed to bridge the gap between the classroom
and the practical use of knowledge already acquired in dealing
with practical problems.
PREREQ: Permission of instructor

601-602 Thesis (II. I) 1-3 hours
Each I-3 hours
Independent research project written under supervision of a faculty
committe.

SOCIOLGY

401 Social Control of Behavior (I) 3 hours
The social processes by which the behavior of the person's behavior is adapted to the
SOCIOLOGY

402 Collective and Exchange Behavior (I) 3 hours
The study of the processes of growth and change within social
SOCIOLOGY

403 Advanced General Sociology (I, II. I) 3 hours
A survey of the principles of sociology including interaction, groups,
and the social processes of growth and change. This course is also given
to sociological techniques, major specialties, and classes of data. (Not open to anyone who has recent credit in Sociology 101. Does not carry
graduate credit in sociology.)
PREREQ: Graduate standing or permission
472 Contemporary Sociological Theory (II) 3 hours
A thorough and detailed presentation of a major theoretical integration of contemporary sociological research and theory with shorter descriptive presentations of alternative positions indicating similarities and differences. Principles of theory construction and a review of major sociological concepts and writers.
PREREQ: 12 hours sociology and senior standing

475 Social Change (II) 3 hours
A discussion of the theories and the basic models of social change illustrated by a number of examples from contemporary and historical data. Emphasis is placed upon understanding causes and effects of social processes current in American society and the response of the individual to these.
PREREQ: Soc. 101 or 403 and 6 hours sociology or history

485 Sociology of Religion (I) 3 hours
Analysis of religious behaviors and beliefs from the sociological and psychoanalytical perspective, and utilizing both theoretical and empirical materials. The class is designed as an introductory approach to the sociology of religion, and the first in a two-semester sequence, undergraduate and graduate.
PREREQ: Sec. 101 or 403 or permission of instructor

491 Internship in Local Government (Same as Political Science 451) (I.I.I.S) 3-6 hours
Internship in Local Government offices: Participation in the policy-making and administrative processes of Local Government; discussions and reports.
PREREQ: Pol. Sci. 110, 111, 201, 317 or their equivalents, and senior standing. (Also listed under Economics, Geography, and History.)

499 Independent Study 1-3 hours
Guided reading in special topics under the supervision of a faculty member.
PREREQ: Senior standing and permission of the instructor

500 Problems in Sociology, Seminar 3 hours
This seminar, required of departmental graduate students, gives a basic orientation to the profession, its leading figures, publications, organizations, and university departments. It emphasizes critical discussion of issues in the discipline and selected substantive problems of sociology.

503 Seminar in Social Psychology 4 hours
Assigned reading, discussion, and individual work leading to the writing and presentation of a paper applicable to a general topic in social psychology selected by the instructor.

504 Seminar in Foundations of Sociology 3-6 hours
Sociological theory and method applied to a practical problem of relevance to general social issues.

511 Problems of the Disadvantaged 3 hours
A seminar dealing with the special problems existing in disadvantaged communities. The effects upon individuals of such settings. The subculture of poverty.

550 Topical Research Seminar 3-6 hours
A research project carried out under the supervision of an instructor particularly qualified in the area of concern. Students participate in the background work, question formulating, selection of (or construction of) test instruments, data gathering by methods such as interviewing and participant observation, and analysis.

555 Seminar in the Sociology of Religion 3-6 hours
A seminar dealing with religion as a social and cultural phenomenon. The study theme will vary from time to time in keeping with the special interests of the instructor.

560 Seminar in Social Organization 3-6 hours
Assigned reading, discussion, and individual work leading to the writing and presentation of a paper applicable to a general topic in social organization selected by the instructor.

570 Seminar in Sociological Theory 3-6 hours
Assigned reading, discussion, and individual work leading to the writing and presentation of a paper applicable to a general topic in sociological theory selected by the instructor.

571 Population Seminar (Same as Geography 571) 3 hours
The significance of differences from place to place in the number, kind, and quality of human inhabitants and changes through time.
PREREQ: Permission
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<td>425</td>
<td>Costume History and Design</td>
<td>3</td>
<td>Prep: Junior, Senior, or Graduate standing and Speech 227 or permission of instructor.</td>
</tr>
<tr>
<td>435</td>
<td>Broadcasting and the Public</td>
<td>3</td>
<td>Prep: Speech 230 or permission of the instructor.</td>
</tr>
<tr>
<td>450</td>
<td>Introduction to General Semantics</td>
<td>3</td>
<td>Prep: Speech 101 and 3 hours</td>
</tr>
<tr>
<td>451</td>
<td>Persuasion</td>
<td>3</td>
<td>Prep: Speech 210 and 3 hours</td>
</tr>
<tr>
<td>452</td>
<td>Introduction to General and Experimental Linguistics</td>
<td>3</td>
<td>Prep: Senior or graduate standing in psychology or speech or permission.</td>
</tr>
<tr>
<td>461</td>
<td>History and Problems in Speech Education</td>
<td>3</td>
<td>Prep: Speech 171.</td>
</tr>
<tr>
<td>462</td>
<td>Directing Forensics</td>
<td>2</td>
<td>Prep: Graduate standing and Speech 112 or permission.</td>
</tr>
<tr>
<td>471</td>
<td>Advanced Oral Interpretation</td>
<td>3</td>
<td>Prep: Speech 171.</td>
</tr>
<tr>
<td>501</td>
<td>Seminar in Communication Theory</td>
<td>3</td>
<td>Prep: Basic statistics; or permission of the instructor.</td>
</tr>
<tr>
<td>520</td>
<td>Dramatic Theory and Criticism</td>
<td>3</td>
<td>Prep: Speech 220 or permission of instructor.</td>
</tr>
<tr>
<td>521</td>
<td>Contemporary Theatre Aesthetics</td>
<td>3</td>
<td>Prep: Graduate standing and Speech 220, Speech 420, and English 252 or permission.</td>
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