FOR INFORMATION

ADMISSIONS AND FINANCIAL AID. . . Sergio Hernandez, Director
Application Blanks
Financial Aid
Loans and Grants
or
or
or
509/527-2314
509/527-2822
509/527-2822
509/527-2811
509/527-2811
509/527-2811
RECRODS
Orpha Osborne, Director
Academic Information
Bulletins
509/527-2811
509/527-2811
or
or
Transfer Information
General Information
Transcripts
Transfer Student Information
FINANCES
Kathleen (Casie) Ragenovich, Director
General Financial Information
Work Opportunities
Student Accounts/Employment
or
GRADUATE ASSISTANTS
Row Campbell,
Chair, Biology Department
509/527-2603
Harold Osha,
Chair, Ed./Psychology Dept.
509/527-2811
or
or
or
or
RESIDENCE HALL LIVING
Lynne Profuska, Dean of Men
Sitter Hall
509/527-2811
or
or
or
Bo Hutton, Dean of Women
Foreman-Conard
509/527-2320
or
or
Residence Hall Dean
Portland Campus
503/239-628
STUDENT AFFAIRS
Walt Moske, Vice President
Automobile Registration
Student Services
509/527-2511
Student Life
or
or
or
COLLEGE ADDRESS
Walla Walla College
College Place, WA 99324
1033 S.E. Market
Portland, OR 97216
PORTLAND CAMPUS
GEO GENERAL TELEPHONE NUMBER
Toll Free (Washington state)
509/527-2615
1-800-372-9964
Toll Free (Continental U.S.A.)
1-800-341-8800
Portland Campus
503/239-816
Marine Station, Rosario Beach
206/293-2326
Administrative offices are closed from Friday noon until Monday morning and on legal holidays. The administrative offices are available on Sundays by appointment.
FOR INFORMATION

ADMISSIONS AND FINANCIAL AID
Sergio Hernandez, Director
Application Blanks
509/527-2327
Financial Aid
509/527-2314
Loans and Grants
RECORDS
Orpha Osborne, Director
Academic Information
509/527-2811
Bulleted
or
General Information
Transfer
509/527-2822
Transfer Student Information
FINANCES
Kathleen (Cassie) Rajnovich, Director
General Financial Information
509/527-2605
Work Opportunities
GRADUATE ASSISTANTSHIPS
Row Campus
Row Graduate Assis.
509/527-2513
Harold Ochs
Chair, Ed./Psychology Dept.
509/527-2311

RESIDENCE HALL LIVING
Lynn Profuska, Dean of Men
Smiter Hall
509/527-2351
or
Bo Hutton, Dean of Women
1056, Residence Hall
509/527-2347

STUDENT AFFAIRS
Walt Moske, Vice President
Automobile Registration
509/527-2511
Off-Campus Housing
Student Services
COLLEGE ADDRESS
Walla Walla College
Portland Campus
College Place, WA 99324
1005 S.E. Market
Portland, OR 97216
GENERAL TELEPHONE NUMBERS
Toll Free (Washington state)
Toll Free (Continental U.S.A.)
Portland Campus
Marine Station, Rosario Beach
Administrative offices are closed from Friday noon until Monday morning and on legal holidays. The administrative offices are available on Sundays by appointment.
# WALLA WALLA COLLEGE
## ACADEMIC CALENDAR 1986-87

<table>
<thead>
<tr>
<th>AUTUMN QUARTER</th>
<th>OCTOBER - 1986</th>
<th>NOVEMBER - 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 29</td>
<td>M</td>
<td>Registration</td>
</tr>
<tr>
<td>30 T</td>
<td>Instruction Begins</td>
<td></td>
</tr>
<tr>
<td>October 6</td>
<td>M</td>
<td><em>Graduate Record Examinations</em></td>
</tr>
<tr>
<td>8 W</td>
<td>Last Day to Register</td>
<td></td>
</tr>
<tr>
<td>15 W</td>
<td>Last Day for Regional Students to Add a Class or Change to Audit</td>
<td></td>
</tr>
<tr>
<td>November 25</td>
<td>T</td>
<td>Last Day to Withdraw from Classes</td>
</tr>
<tr>
<td>26 W</td>
<td>Thanksgiving Vacation Begins (noon)</td>
<td></td>
</tr>
<tr>
<td>30 S</td>
<td>Thanksgiving Vacation Ends (10:00 p.m.)</td>
<td></td>
</tr>
<tr>
<td>December 15</td>
<td>M</td>
<td><em>Graduate Record Examinations</em></td>
</tr>
<tr>
<td>14, 16, 17</td>
<td>SMTW</td>
<td>Final Exams</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WINTER QUARTER</th>
<th>JANUARY - 1987</th>
<th>FEBRUARY - 1987</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 5</td>
<td>M</td>
<td>Registration</td>
</tr>
<tr>
<td>3 T</td>
<td>Instruction Begins</td>
<td></td>
</tr>
<tr>
<td>14 W</td>
<td>Last Day to Register</td>
<td></td>
</tr>
<tr>
<td>24 W</td>
<td>Last Day for Registered Students to Add a Class or Change to Audit</td>
<td></td>
</tr>
<tr>
<td>February 4</td>
<td>W</td>
<td>Snow Panic</td>
</tr>
<tr>
<td>9 M</td>
<td><em>Graduate Record Examinations</em></td>
<td></td>
</tr>
<tr>
<td>24 T</td>
<td>Last Day to Withdraw from Classes</td>
<td></td>
</tr>
<tr>
<td>Mar. 15, 16, 17, 18</td>
<td>SMTW</td>
<td>Final Exams</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1</td>
<td>2, 3 MTW</td>
<td>7 S</td>
<td></td>
</tr>
<tr>
<td>12 T</td>
<td>Last Day to Withdraw from Classes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 6</td>
<td>W</td>
<td>Campus Day</td>
<td></td>
</tr>
<tr>
<td>April 1</td>
<td>1 W</td>
<td>Last Day to Register</td>
<td></td>
</tr>
<tr>
<td>5 S</td>
<td>Last Day to File Master's Degree Order Form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 M</td>
<td><em>Graduate Record Examinations</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 W</td>
<td>Last Day for Registered Students to Add a Class or Change to Audit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 29</td>
<td>S</td>
<td>G.R.E. — Full Testing</td>
<td></td>
</tr>
<tr>
<td>August 9</td>
<td>5 a</td>
<td>Commencement (10:00 a.m.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUMMER QUARTER</th>
<th>JUNE - 1987</th>
<th>JULY - 1987</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 8</td>
<td>M</td>
<td><em>Graduate Record Examinations</em></td>
</tr>
<tr>
<td>14 S</td>
<td>Registration</td>
<td></td>
</tr>
<tr>
<td>14 S</td>
<td>Last Day to File Master's Degree Order Form</td>
<td></td>
</tr>
<tr>
<td>July 29</td>
<td>S</td>
<td>G.R.E. — Full Testing</td>
</tr>
<tr>
<td>August 9</td>
<td>5 a</td>
<td>Commencement (10:00 a.m.)</td>
</tr>
</tbody>
</table>

*Registration with the Counseling and Guidance Center for Graduate Record Examinations must be made at least eight weeks prior to test date.*
<table>
<thead>
<tr>
<th>SEPTEMBER - 1986</th>
<th>OCTOBER - 1986</th>
<th>NOVEMBER - 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>S</strong></td>
<td><strong>M</strong></td>
<td><strong>T</strong></td>
</tr>
</tbody>
</table>

WALLA WALLA COLLEGE
ACADEMIC CALENDAR 1986-87

AUTUMN QUARTER
September 29 M Registration
30 T Instruction Begins
October 6 M *Graduate Record Examinations
8 W Last Day to Register
15 W Last Day for Registrations to Add a Class or Change to Audit
November 25 T Last Day to Withdraw from Classes
26 W Thanksgiving Vacation Begins (non)-
30 S Thanksgiving Vacation Ends (10:00 p.m.)
December 15 M *Graduate Record Examinations
16, 17, 18 SMTW Final Exams

WINTER QUARTER
January 3 M Registration
6 T Instruction Begins
14 W Last Day to Register
21 W Last Day for Registered Students to Add a Class or Change to Audit
February 4 W Snow Panic
9 M *Graduate Record Examinations
24 T Last Day to Withdraw from Classes
Mar. 15, 16, 17, 18 SMTW Final Exams

SPRING QUARTER
March 24 T Registration
25 W Instruction Begins
April 1 W Last Day to Register
5 S Last Day to File Master's Degree Order
Fees
6 M *Graduate Record Examinations
8 W Last Day for Registered Students to Add a Class or Change to Audit
May 6 W Campus Day
12 T Last Day to Withdraw from Classes
June 1, 2, 3 SMTW Final Exams
7 S Commencement (10:00 a.m.)

SUMMER QUARTER
June 8 M *Graduate Record Examinations
10 S Registrations
14 S Last Day to File Master's Degree Order
July 20 S G.R.E. — Full Testing
24 F Last Day to Complete Final Master's Exam
August 9 Sa Commencement (9:00 p.m.)

*Registration with the Counseling and Guidance Center for Graduate Record Examinations must be made at least eight weeks prior to test date.
WALLA WALLA COLLEGE
BOARD OF TRUSTEES
Richard Fearing, Chair
Jack Bergman, Secretary

ADMINISTRATION
Jack Bergman, Ph.D., President
Alden Thompson, Ph.D., Provost and Dean for Academic Administration
Paul Torpel, B.A., Vice President for College Advancement
Walt Meske, M.A., Vice President for Student Services
Manfred Simock, M.A., Vice President for Financial Administration

ADMINISTRATIVE STAFF

ACADEMIC ADMINISTRATION
Assistant Dean, School of Nursing, Carol Brown, Ph.D.
Chair, Department of Art, Thomas J. Emmerson, M.F.A.
Chair, Department of Biology, Ronald L. Carter, Ph.D.
Chair, Department of Business, Robert C. Schwab, Ph.D.
Chair, Department of Chemistry, Robert Wade, D.Phil.
Chair, Department of Communications, Loren Dickinson, Ph.D.
Chair, Department of Computer Science, C. Michael Bell, M.S.E.E.
Chair, Department of Education and Psychology, Harold T. Ochs, Ed.D.
Chair, Department of English, Beverly G. Beem, Ph.D.
Chair, Department of Health, Physical Education and Recreation, Gary M. Humphreys, Ph.D.
Chair, Department of History, Roland Büsch, Ph.D.
Chair, Department of Home Economics, Merleone L. Olmsted, M.A.
Chair, Department of Industrial Technology, Chester D. Blake, Ed.D.
Chair, Department of Library Science, Edward L. Mainley, M.S.L.S.
Chair, Department of Mathematics, Melvin S. Lang, Ph.D.
Chair, Department of Modern Languages, Reinhard Czarnecki, M.A.
Chair, Department of Music, Dan M. Shults, M.Mus.
Chair, Department of Office Administration, Lee Lossen, M.Ed.
Chair, Department of Physics, Gordon O. Johnson, Ph.D.
Chair, Department of Sociology/Social Work, Wilma M. Hepker, Ph.D.
Dean, School of Graduate Studies, Hollibert E. Phillips, Ed.D.
Dean, School of Engineering, John F. Bregter, Ph.D.
Dean, School of Nursing, Frances L. Fickes, D.N.Sc.
Dean, School of Theology, John C. Brunt, Ph.D.

MARINE STATION
Joseph G. Galusha, D.Phil., Director

COMMITTEE ASSIGNMENTS

FACULTY GRANTS (VIII-61) (Four-Year Terms)
Lawrence McCloskey, chair, P
Manfred Simock, ex officio
Carlton Coon, F, 1986-87
Dale Hecker, F, 1987-88
Steven Lee, F, 1986-89

GRADUATE COUNCIL (VIII-241) (Two-Year Terms)
Hollibert Phillips, ex officio chair
Ron Carter, ex officio
Alden Thompson, ex officio
Harold Ochs, ex officio
Orpha Osborne, ex officio
Lee Lossen, F, 1986-87
Larry Yamasaki, P, 1987-88
Lawrence McCloskey, P, 1987-88
Beverly Beem, P, 1987-88
Rudolph Recker, P, 1987-88

STUDENT FINANCIAL AID (VIII-88) (Two-Year Terms)
Sergio Hernandez, ex officio chair
Ilo Hutton, ex officio
Lynda Prohaska, ex officio
Orpha Osborne, ex officio
Cassie Ragonovich, ex officio
P, 1986-87

SUMMER SESSION (VIII-88) (Two-Year Terms)
Melvyn Lang, ex officio chair
Ronald Carter, ex officio
Harold Ochs, ex officio
John Bregter, N, 1986-87

TEACHER EDUCATION COUNCIL (VIII-257) (Three-Year Terms)
Harold Ochs, ex officio chair
Alden Thompson, ex officio
Chester Blake, F, 1986-87
Dale Johnson, P, 1986-87
Lee Lossen, F, 1986-87
Gary Humphreys, F, 1987-88
Carolyn Shults, F, 1987-88
P, 1988-89

One community representative
One graduate student

Walla Walla College Faculty Handbook page twelve.
WALLA WALLA COLLEGE

BOARD OF TRUSTEES

Richard Fearing, Chair
Jack Bergman, Secretary

ADMINISTRATION

Jack Bergman, Ph.D., President
Alden Thompson, Ph.D., Provost and Dean for Academic Administration
Paul Torpel, B.A., Vice President for College Advancement
Walt Meske, M.A., Vice President for Student Services
Manfred Simcock, M.A., Vice President for Financial Administration

ADMINISTRATIVE STAFF

ACADEMIC ADMINISTRATION

Assistant Dean, School of Nursing, Carol Brown, Ph.D.
Chair, Department of Art, Thomas J. Emmerson, M.F.A.
Chair, Department of Biology, Ronald L. Carter, Ph.D.
Chair, Department of Business, Robert C. Schwab, Ph.D.
Chair, Department of Chemistry, Robert Wade, D.Phil.
Chair, Department of Communications, Loren Dickinson, Ph.D.
Chair, Department of Computer Science, C. Michael Bell, M.S.E.E.
Chair, Department of Education and Psychology, Harold T. Ochs, Ed.D.
Chair, Department of English, Beverly G. Beem, Ph.D.
Chair, Department of Health, Physical Education and Recreation, Gary M. Hammar, Ph.D.
Chair, Department of History, Rolf Bäcker, Ph.D.
Chair, Department of Home Economics, Merlole L. Olmsted, M.A.
Chair, Department of Industrial Technology, Chester D. Blake, Ed.D.
Chair, Department of Library Science, Edward L. Malley, M.S.L.S.
Chair, Department of Mathematics, Melvin S. Lang, Ph.D.
Chair, Department of Modern Languages, Reinhard Czerwinski, M.A.
Chair, Department of Music, Dan M. Shultz, M.Mus.
Chair, Department of Office Administration, Lee Leeson, M.Ed.
Chair, Department of Physics, Gordon O. Johnson, Ph.D.
Chair, Department of Sociology/Social Work, William M. Hepler, Ph.D.
Dean, School of Graduate Studies, Hobart E. Phillips, Ed.D.
Dean, School of Engineering, John F. Bregar, Ph.D.
Dean, School of Nursing, Frances L. Fickens, D.N.Sc.
Dean, School of Theology, John C. Brun, Ph.D.

MARINE STATION

Joseph G. Galusha, D.Phil., Director

COMMITTEE ASSIGNMENTS

FACULTY GRANTS (VIII-61) (Four-Year Terms)
Lawrence McCloskey, chair, P
Manfred Simcock, ex officio
Carole Cline, P, 1986-87
Dale Harker, P, 1987-88
Steven Lee, P, 1988-89

GRADUATE COUNCIL (VIII-241) (Two-Year Terms)
Hollibert Phillips, ex officio chair
Ron Carter, ex officio
Alden Thompson, ex officio
Harold Ochs, ex officio
Orpha Osborne, ex officio
Lee Leeson, P, 1986-87
Larry Veverka, P, 1986-87
Lawrence McCloskey, P, 1987-88
Beverly Beem, P, 1987-88
Rodney Heiber, P, 1987-88

STUDENT FINANCIAL AID (VIII-89) (Two-Year Terms)
Sergio Hernandez, ex officio chair
Ilo Hutton, ex officio
Lynne Probanks, ex officio
Orpha Osborne, ex officio
Carri Ragowitch, ex officio

SUMMER SESSION (VIII-81) (Two-Year Terms)
Melvin Lang, ex officio chair
Ronald Carter, ex officio
Harold Ochs, ex officio
John Bregar, P, 1986-87

TEACHER EDUCATION COUNCIL (VIII-251) (Three-Year Terms)
Harold Ochs, ex officio chair
Alden Thompson, ex officio
Chester Blake, P, 1985-87
Dale Johnson, P, 1986-87
Lee Leeson, P, 1986-87
Gary Hammar, P, 1987-88
Carolyn Shultz, P, 1987-88

One community representative
One graduate student

Walla Walla College Faculty Handbook page number.
THE FACULTY

BIOLOGY

Ron Carter, Chair and Associate Professor of Biology (1986)
B.A., 1983, Columbia Union College
Ph.D., 1985, Iowa State University

Susan C. Dixon, Assistant Professor of Biology (1990)
Doctoral Candidate, 1994, Oregon State University

Joseph G. Guadalupe, Professor of Biology (1975)
B.A., 1966, Walla Walla College
M.A., 1971, Andrews University
Ph.D., 1975, Oxford University

Albert E. Grable, Associate Professor of Biology (1970)
B.S., 1958, Iowa State University
M.S., 1962, Ph.D., 1964, University of Minnesota

Lawrence R. McChesney, Professor of Biology (1970)
B.A. 1961, Atlantic Union College

Donald W. Rigby, Professor of Biology (1960)
B.A., 1953, Iowa State University
M.A., 1955, Walla Walla College
Ph.D., 1965, Iowa State University

EDUCATION AND PSYCHOLOGY

Harold T. Orhs, Chair and Professor of Education and Psychology (1990)
B.A., 1953, Walla Walla College
M.Ed., 1957, Eastern Washington State College
Ed. D., 1972, University of Idaho

R. Gary Brendel, Associate Professor of Education and Psychology (1986)
B.A., 1966, Union College
M.A., 1969, University of Denver
Ph.D., 1969, University of Denver

Dale A. Johnson, Professor of Education and Psychology (1986)
B.A., 1964, Union College
M.A., 1967, University of Nebraska
Ph.D., 1979, University of California, Riverside

Haribert E. Phillips, Professor of Education and Psychology (1989)
B.A., 1949, 1950, University of London
M.A., 1968, University of Washington

Gail S. Rittenbach, Assistant Professor of Education (1996)
B.A., 1971, Pacific Union College
M.Ed., 1982, University of Washington

SPECIALIZATION AREAS (Secondary), CHAIRS

Beverly G. Beane, Professor of English (1970)
B.A., 1963, Union College
M.A., 1968, Adrian College
Ph.D., 1974, University of Nebraska

Roland D. Blatch, Professor of History (1950)
B.A., 1960, M.A., 1961, California State College at Los Angeles
Ph.D., 1965, Washington State University

Chester D. Blais, Professor of Industrial Technology (1990)
B.S., 1963, Walla Walla College
M.A., 1968, Sam Houston State College
Ed.D., 1969, Washington State University

Roland L. Carter, Associate Professor of Biology (1986)
B.A., 1961, Columbia Union College
Ph.D., 1974, Union College

Reinhard Czernecki, Associate Professor of Modern Languages (1967)
B.A., 1964, Atlantic Union College
M.A., 1965, Malden College

Loen Dickinson, Professor of Communications (1962)
B.A., 1937, Union College
M.A., 1950, University of Nebraska
Ph.D., 1965, University of Denver

Thomas J. Emmerson, Associate Professor of Arts (1970)
B.A., 1952, Walla Walla College
BSA, 1956, M.P.A. 1970, Los Angeles County College

Gary M. Hambourg, Associate Professor of Health, Physical and Recreational Education (1972)
B.A., 1973, Iowa State University

Wilm H. Hecker, Professor of Sociology and Social Work (1973)
B.A., 1973, Union College
Ph.D., 1976, University of Nebraska

Gordon O. Johnson, Professor of Physics (1972)
B.S., 1969, Walla Walla College
M.S., 1973, Ph.D., 1977, California Institute of Technology

Mehdia S. Lang, Professor of Mathematics (1983)
B.S., 1977, Valley City State Teachers College
M.A., 1979, Colorado State College
Ph.D., 1982, University of Northern Colorado

Liz Lower, Assistant Professor of Office Administration (1976)
B.S., 1957, Union College
M.Ed., 1968, Walla Walla College

Elwood L. Mabey, Associate Professor of Library Science and Director of Libraries (1960)
B.A., 1960, Walla Walla College
M.L.S., 1966, University of Southern California

Merlone L. McMinn, Assistant Professor of Home Economics (1991)
B.A., 1986, Walla Walla College
M.A., 1992, Iowa State University
THE FACULTY

BIOLOGY

Ron Carter, Chair and Associate Professor of Biology (1988)
B.A. 1973, Columbia Union College
Ph.D. 1976, Iowa State University

Susan C. Dixon, Assistant Professor of Biology (1986)
B.S. 1979, M.S. 1979, Walla Walla College
Doctor Candidate 1984, Oregon State University

Joseph G. Gaubatz, Professor of Biology (1975)
B.A. 1966, Walla Walla College
M.A. 1971, Andrews University
D.Phil. 1975, Oxford University

Albert E. Grable, Associate Professor of Biology (1963)
B.S. 1958, Louisana State University
M.S. 1962, Ph.D. 1964, University of Minnesota

Lawrence R. McChesney, Professor of Biology (1977)
B.A. 1961, Atlantic Union College
M.A. 1963, Ph.D. 1967, Duke University

Donald W. Rigby, Professor of Biology (1976)
B.A. 1956, Louisana State University
M.A. 1956, Walla Walla College
Ph.D. 1967, Louisana State University

EDUCATION AND PSYCHOLOGY

Harold T. Orhs, Chair and Professor of Education and Psychology (1968)
B.A. 1950, Walla Walla College
M.Ed. 1957, Eastern Washington State College
Ed. D. 1972, University of Idaho

R. Gary Brendel, Associate Professor of Education and Psychology (1988)
B.A. 1966, Union College
M.A. 1968, University of Denver
Ph.D. 1985, University of Denver

Dale A. Johnson, Professor of Education and Psychology (1986)
B.A. 1967, Union College
M.A. 1967, University of Colorado, Denver
Ph.D. 1983, University of Colorado

Hollibert E. Phillips, Professor of Education and Psychology (1988)
B.A. 1960, 1965, University of Oregon
M.A. 1960, 1965, University of Washington
Ed.D. 1970, Boise State University

Gail S. Rittenbach, Assistant Professor of Education (1984)
B.A. 1971, Pacific Union College
M.Ed. 1980, University of Washington

Dale O. Wagner, Professor of Education and Psychology (1988)
B.A. 1957, Walla Walla College
Ed.M. 1962, Eastern Washington State College
Ed.D. 1973, University of Idaho

Verle Y. Ward, Instructor in Education (1987)
B.A. 1975, Union College
M.A. 1977, Abilene Christian University

SPECIALIZATION AREAS (Secondary), CHAIRS

Bevery G. Beene, Professor of English (1976)
B.A. 1963, Union College
M.A. 1968, Airline University
Ph.D. 1974, University of Nebraska

Roland D. Blaisch, Professor of History (1968)
B.A. 1960, M.A. 1961, California State College at Los Angeles
Ph.D. 1979, Washington State University

Chenier D. Blakes, Professor of Industrial Technology (1966)
B.S. 1943, Walla Walla College
M.A. 1946, Sam Houston State College

Ronald L. Carter, Associate Professor of Biology (1984)
B.A. 1966, Columbia Union College
Ph.D. 1978, Loma Linda University

Reinhhard Czernik, Associate Professor of Modern Languages (1977)
B.A. 1964, Atlantic Union College
MA. 1963, Midmouth College

Loren Dickson, Professor of Communications (1982)
B.A. 1957, Union College
M.A. 1960, University of Nebraska
Ph.D. 1963, University of Denver

Thomas J. Emmerson, Associate Professor of Arts (1978)
B.A. 1972, Walla Walla College
R.E.A. 1979, M.P.A. 1979, San Francisco Institute of Los Angeles County

Gary M. Hamburgh, Associate Professor of Health, Physical and Recreation Education (1970)
B.A. 1970, Louisana State University
Ph.D. 1973, California State University, Fresno

Wilm M. Hecker, Professor of Sociology and Social Work (1975)
B.A. 1957, Union College
MA. 1990, Ph.D. 1970, University of Nebraska

Gordon O. Johnson, Professor of Physics (1974)
B.A. 1967, Union College
B.S. 1969, Walla Walla College
MA. 1973, Ph.D. 1977, California Institute of Technology

Marvia S. Lang, Professor of Mathematics (1974)
B.A. 1977, Valley City State Teachers College
M.A. 1978, Colorado State College
Ph.D. 1972, University of Northern Colorado

Liz Lawless, Assistant Professor of Office Administration (1976)
B.S. 1975, Union College
M.Ed. 1969, Walla Walla College

Ewald L. Mabey, Associate Professor of Library Science and Director of Libraries (1968)
B.A. 1960, Walla Walla College

Marlene L. Olwins, Assistant Professor of Home Economics (1971)
B.A. 1968, Walla Walla College
M.A. 1972, Louisana State University
Robert Charles Schmah, Associate Professor of Business (1987)  
B.A. in Bus. Adm., 1975, Atlantic Union College  
M.B.A., 1976, Andrews University  
Ph.D., 1985, University of Oregon  
Dan M. Shults, Professor of Music (1970)  
B.S., 1962, Atlantic Union College  
M.Mus., 1967, Andrews University  
Robert Alan Wade, Associate Professor of Chemistry (1979)  
B.A., 1970, Beloit College  
D.Phil., 1979, Oxford University

GENERAL INFORMATION

Walla Walla College is a Christian institution of higher learning operated by the Seventh-day Adventist Church. It is committed to equal opportunity for all students and extends the rights, privileges, programs and activities generally accorded or made available to all members of the college community. Walla Walla College does not discriminate on the basis of handicap, sex, race, color, national and/or ethnic origin in administration of its admissions, educational, financial, employment and student life programs and policies, or any other college-administered programs.

The College is located in the City of College Place in the historic, fertile Walla Walla Valley of southeastern Washington. The old Oregon Trail near the campus lends to the site of the old mission which was directed by Marcus Whitman from 1836 to 1847, and which has been reconstructed by the federal government at the Whitman Mission. The scenic Blue Mountains to the east are but a few minutes’ drive from the campus and offer unusual opportunities for recreation and relaxation.

The principal objectives of the College are the fostering of an intelligent understanding of the devotion to Christian ideals, loyalty to God and service to humanity, and the offering of an educational experience encouraging the formation of character marked by a full, harmonious development of the intellectual, physical and spiritual powers.

The Seventh-day Sabbath is observed at Walla Walla College from sunset Friday to sunset Saturday. No instructional activities are conducted during these hours.

ACCREDITATION

The College is accredited by the Northwest Association of Schools and Colleges, the Seventh-day Adventist Board of Regents, the Accreditation Board for Engineering and Technology, Inc., the Council on Social Work Education, the National Association of Schools of Music and the Department of Baccalaureate and Higher Degree Programs of the National League for Nursing and is a member of the American Association of Collegiate Registrars and Admissions Officers, the American Society for Engineering Education, the Council of Member Agencies, Department of Baccalaureate and Higher Degree Programs of the National League for Nursing, the
Robert Charles Schubah, Associate Professor of Business (1965)
B.A. in Bus. Mktg., 1957, Atlanta Union College
M.B.A. 1959, Andrews University
Ph.D. 1960, University of Oregon
Dan R. Shelton, Professor of Music (1975)
B.S., 1961, Atlantic Union College
M.Mus., 1967, Andrews University
Robert Alan Wede, Associate Professor of Chemistry (1970)
B.A. 1970, Kansas City College
D.Phil. 1973, Oxford University

GENERAL INFORMATION

Walla Walla College is a Christian institution of higher learning operated by the Seventh-day Adventist Church. It is committed to equal opportunity for all students and extends the rights, privileges, programs and activities generally accorded or made available to all members of the college community. Walla Walla College does not discriminate on the basis of handicap, sex, race, color, national and/ or ethnic origin in administration of its admissions, educational, financial, employment and student life programs and policies, or any other college administered program.

The College is located in the City of College Place in the historic, fertile Walla Walla Valley of southeastern Washington. The old Oregon Trail near the campus leads to the site of the old mission which was directed by Marcus Whitman from 1836 to 1847, and which has been reconstructed by the federal government at the Whitman Mission. The scenic Blue Mountains to the east are but a few minutes' drive from the campus and offer unusual opportunities for recreation and relaxation.

The principal objectives of the College are the fostering of an intelligent understanding of the devotion to Christian ideals, loyalty to God and service to humanity, and the offering of an educational experience encouraging the formation of character marked by a full, harmonious development of the intellectual, physical and spiritual powers.

The Seventh-day Sabbath is observed at Walla Walla College from sunset Friday to sunset Saturday. No instructional activities are conducted during these hours.

ACCREDITATION

The College is accredited by the Northwest Association of Schools and Colleges, the Seventh-day Adventist Board of Regents, the Accreditation Board for Engineering and Technology, Inc., the Council on Social Work Education, the National Association of Schools of Music and the Department of Baccalaureate and Higher Degree Programs of the National League for Nursing and is a member of the American Association of Collegiate Registrars and Admissions Officers, the American Society for Engineering Education, the Council of Member Agencies, Department of Baccalaureate and Higher Degree Programs of the National League for Nursing, the
American Association of Colleges for Teacher Education, the National Association of Independent Colleges and Universities, the National Association of Student Nurses, and the American Council on Education National Commission on Accreditation.

DEGREES OFFERED
The College offers courses of study leading to the Master of Arts (M.A.), Master of Education (M.Ed.) and Master of Science (M.S.) degrees. The M.A. and M.S. degrees are thesis programs and the M.Ed. is a non-thesis program.

ADMINISTRATION
The master's degree programs are directed and supervised by the Graduate Council, which is the legislative body responsible for the formulation of all graduate academic policies and curricula.

GRADING SYSTEM
The following system of grades and grade-point values is used in graduate studies:

A - 4 grade points per quarter hour
B - 3
C - 2
D - 1
F - 0

Other symbols are:
Au - Audit
I - Incomplete
IP - In Progress
S - Satisfactory (C or better)
W - Withdrawal

The I (incomplete) is only given for special circumstances and must be made up within the following quarter. Permission for an incomplete is granted by the instructor. Students with incompletes should consult their instructors about their course loads for the following quarter. Individuals who leave college prior to removal of the incomplete will have the I show on their transcripts until the work is finished.

The IP (in progress) is given by the instructor for independent work such as Fieldwork, Research and Thesis which extend and continue naturally past the regular quarter term. The IP designation is changed by the instructor to a letter grade upon completion of the specific independent experience or research.

The W (withdrawal) is given by the instructor when a student officially drops a course at least three weeks prior to the end of the quarter.

An Au (Audit) is assigned for class attendance and participation generally excluding tests and outside of class assignments. Arrangements for an audit may be made with the instructor.

Grades of all courses on the graduate program, excluding deficiencies, will be computed in the grade-point average. Deficiencies may not be made up by audit, and a grade of S will not be acceptable except for courses that have a mandatory S/NC grading.

UNIFORM COURSE NUMBERS
Certain course numbers are reserved for classes that are of such a general nature as to be found in many departments. The prefix assigned to the number designates the discipline. The following are courses that carry uniform numbers through this bulletin:

405 TOPICS
Each academic department may offer topics courses in specialized or experimental areas on either the lower division or advanced level. These courses are conducted through regular class activities and are approved by the Curriculum Committee as a one-time offering. See the Class Schedule for all approved Topics courses. One to four terms per quarter except lecture-oriented courses taken at the Marine Station.

419 SUPPLEMENTAL STUDIES
Through a directed study the student may supplement previous course work where it is judged that portions of a required course on the major or minor have been omitted. Or, where the student has special needs for concentration on a program that has undergone a major curriculum change. A study proposal is to be confined in consultation with the instructor of the course being supplemented and approved by the department of the Graduate Council. May not be submitted for existing course.

474 WORKSHOPS
1-4; 6

490 DIRECTED FIELD WORK/PRAC/TICUM/EXPERIENCE
2-16

497 ADVANCED STUDY
1-3; 3

499 DIRECTED RESEARCH/PROJECT
1-3; 6

495 COLOQUIUM
0

496; 497; 499 SEMINAR
1-4; 4

GRADUATE FACILITIES
Life Sciences Complex
The facilities of the department of Biology in the Life Sciences Complex include staff and graduate student offices, classrooms and teaching laboratories, controlled environment rooms and chambers, radiotopope laboratory, animal and greenhouse complexes, photographic darkrooms, museum and a shop.

Marine Station
Additional Department of Biology facilities occupy 40 acres of beach and timberland at Rosario Beach adjoining Deception Pass State Park, Anacortes, Washington. The physical plant includes two laboratory buildings a cafeteria, an assembly hall, shops and 29 cabins for student and staff housing.
American Association of Colleges for Teacher Education, the National Association of Independent Colleges and Universities, the National Association of State Board of Education, and the American Association of Independent Colleges, invites application for the position of **Graduate Coordinator of Chemistry**. The Coordinator will be responsible for the administration of the Chemistry program, including the development of new courses, the assessment of student learning, and the coordination of faculty and student interactions. The Coordinator will also be responsible for the maintenance of the Chemistry lab, including the procurement of supplies and equipment.

**DEGREES OFFERED**

The College offers degrees in the following areas: Bachelor of Arts (B.A.), Bachelor of Science (B.S.), Master of Arts (M.A.), and Master of Science (M.S.). The M.A. and M.S. degrees are thesis programs and the M.Ed. is a non-thesis program.

**ADMINISTRATION**

The master's degree programs are directed and supervised by the GraduateCouncil, which is the legislative body responsible for the formulation of all graduate academic policies and curricula.

**GRADING SYSTEM**

The following system of grades is used in graduate studies:

- A — 4.0
- B — 3.0
- C — 2.0
- D — 1.0
- F — 0.0

Other symbols are:

- AU — Audit
- I — Incomplete
- IP — In Progress
- S — Satisfactory (C or better)
- W — Withdrawal

The I (incomplete) is given for special circumstances and must be made up before the following quarter. Permission for an Incomplete is granted by the instructor. Students with incompletes should complete their work in the following quarter. Individuals who leave college prior to removal of the incomplete will have the I show on their transcripts until the work is finished.

The IP (in progress) is given by the instructor for independent work such as Fieldwork, Research and Thesis which extend and continue naturally past the regular quarter term. The IP designation is changed by the instructor to a letter grade upon completion of the specific independent experience or research.

The W (withdrawal) is given by the instructor when a student officially drops a course at least three weeks prior to the end of the quarter.

An AU (Audit) is assigned for class attendance and participation generally excluding tests and outside of class assignments. Arrangements for an AU may be made with the instructor.

Grades of all courses on the graduate program, excluding deficiencies, will be reported in the grade-point average. Deficiencies may not be made up by audit, and a grade of S will not be the acceptable except for courses that have a mandatory S/NC grading system.
Smith Hall
The Department of Education and Psychology is housed in a modern, air-conditioned, three-story building. Facilities include offices for staff and graduate assistants, laboratories for testing and psychology, observation rooms and a curriculum library.

Peterson Memorial Library
The library is a vital part of the educational program at Walla Walla College. Reading room accommodations, an open-shelf system, seminar and conference rooms, a periodical room and a viewing facility contribute to the study and enjoyment of learning materials. Microform readers make accessible microform of scholarly material. The curriculum library, located in Smith Hall, contains a large selection of textbooks, children's literature books, a collection of mounted pictures, filmstrips, and phonorecords. The library on the Portland campus serves specifically the students of nursing and allied health in clinical practice. The combined libraries contain approximately 145,000 volumes. There are about 925 currently on general reserve periodicals. Periodical indexes and other bibliographical aids are also available. Resources in other libraries are available to graduate students and faculty members through the library's membership in the Pacific Northwest Bibliographic Center, which serves as a clearinghouse for interlibrary loans.

FINANCIAL INFORMATION

Board Actions
Actions voted by the College Board, Faculty, or Finance Committee at any time shall have equal force or, if necessary, supersede statements published in this bulletin.

Payments Required to Register
An advance payment of $2,815 plus any balance due from a previous quarter shall be paid at the time of registration. Part-time students shall pay the full tuition charge in advance if less than $2,815.

Tuition
- 12 quarter hours — $71 per quarter hour
- The tuition includes all laboratory fees.

General Fee
A general fee of $22 per quarter is charged students registered for six or more quarter hours which provides student association membership and ID card.

Special Fees
- Application Fee, new students (nonrefundable): $200
- Audit Class — One-half Regular Tuition
- Change of Program — class added or dropped, each class: 2.50
- Classes with numerous or extended field trips: Special Fee
- Degree, Master's: 25.00
- Diploma: 15.00
- In absentia charge: 15.00
- M.A. and M.S. thesis binding (two copies): 35.00
- Academic Regalia — gown, hood: Actual cost
- I.D. Card Replacement: 3.00
- Late Registration (plus $2 per day from published registration date):
  - First copy: Free
  - Additional copies, each: 2.00

Refunds
A student withdrawing from classes during the quarter will receive the following tuition refunds (general fee not refundable):
- Tuition: 100% through the fourth day of classes after regularly scheduled registration on the Walla Walla College Campus
- 75% second week
- 50% third and fourth weeks
- No tuition is refunded after the fourth week
- Students dropping all classes during this period will be charged a processing fee of $30 or 5% of tuition, whichever is less.

Room and Board
- Room: 90% during first week of quarter
- 80% during second week of quarter
- 70% during third week of quarter
- 60% during fourth week of quarter
- 50% during fifth week of quarter
- 40% during sixth week of quarter
- 30% during seventh week of quarter
- 20% during eighth week of quarter

The beginning of the quarter will be considered to be the first day of class instruction. When a student withdraws during a quarter, no refund will be made until 30 days after the close of the month in which he/she withdrew. STUDENTS WHO LEAVE THE COLLEGE WITHOUT COMPLETING WITHDRAWAL PROCEDURES WILL BE CHARGED UNTIL PROPER ARRANGEMENTS ARE MADE. (Also see Room Reservations.)

Past Due Accounts
A finance charge computed at a periodic rate of one percent per month is assessed against a past due account. This is an annual percentage rate of 12 percent.

Statements
Statements will be issued each month giving an account for the previous month. Tuition, room, and, minimum board charges for dorm students will be charged in advance at the beginning of each quarter. Food service charges above the minimum are billed at the close of each month. Village students may obtain their statements from the cashier in the accounting office.

It is expected that statements will be paid within ten days from time of mailing. The College operates on a cash basis and is dependent upon prompt payment of accounts.

Remittances
Checks, drafts and money orders should be made payable to Walla Walla College and should be sent to Walla Walla College Accounting Office, College Place, Washington 99324.

Insurance—Medical, Accident and Hospitalization
Student medical, accident and hospital insurance may be purchased at registration by students enrolled for six or more quarter hours. Students not wanting coverage are required to sign a waiver disclaiming participation. Dependency coverage is available for married students. The premium is charged on the student's first statement of account after his initial enrollment. No changes or refunds are allowed once
Smith Hall
The Department of Education and Psychology is housed in a modern, air-conditioned, three-story building. Facilities include offices for staff and graduate assistants, laboratories for testing and psychology, observation rooms and a curriculum library.

Peterson Memorial Library
The library is a vital part of the educational program at Walla Walla College. Reading room accommodations, an open-shelf system, seminar and conference rooms, a periodical room and a listening/viewing facility contribute to the study and enjoyment of learning materials. Microcomputers make accessible microform of scholarly material. The curricular library, located in Smith Hall, contains a large selection of textbooks, children’s literature books, a collection of mounted pictures, films/trips, tapes and phonorecords. The library on the Portland campus serves specifically the students of nursing assigned there to obtain their clinical practice. The combined libraries contain approximately 145,000 volumes. There are about 925 currently received periodicals. Periodicals indexes and other bibliographical aids are also available. Resources in other libraries are available to graduate students and faculty members through the library’s membership in the Pacific Northwest Bibliographic Center, which serves as a clearinghouse for interlibrary loans.

FINANCIAL INFORMATION

Board Actions
Actions voted by the College Board, Faculty, or Finance Committee at any time shall have equal force and, if necessary, supersede statements published in this bulletin.

Payments Required to Register
An advance payment of $2,015 plus any balance due from a previous quarter shall be paid at the time of registration. Part-time students shall pay the full tuition charge in advance if less than $2,015.

Tuition
1 - 12 quarter hours — $171 per quarter hour
The tuition includes all laboratory fees.

General Fee
A general fee of $22 per quarter is charged students registered for six or more quarter hours which provides student association membership and ID card.

Special Fees

<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Fee, new students (nonrefundable)</td>
<td>$2000</td>
</tr>
<tr>
<td>Audit Class</td>
<td>One-half Regular Tuition</td>
</tr>
<tr>
<td>Change of Program (class added or dropped), each</td>
<td>$2.50</td>
</tr>
<tr>
<td>Classes with numerous or extended field trips</td>
<td>Special Fee</td>
</tr>
<tr>
<td>Degree, Master’s</td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>25.00</td>
</tr>
<tr>
<td>In absentia charge</td>
<td>15.00</td>
</tr>
<tr>
<td>M.A. and M.S. thesis binding (two copies)</td>
<td>35.00</td>
</tr>
<tr>
<td>Academic Regalia (gown, hood)</td>
<td></td>
</tr>
<tr>
<td>I.D. Card Replacement</td>
<td>3.00</td>
</tr>
<tr>
<td>Late Registration</td>
<td>20.00</td>
</tr>
<tr>
<td>(plus $2 per day from published registration date)</td>
<td></td>
</tr>
</tbody>
</table>

Grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Outstanding</td>
</tr>
<tr>
<td>B</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>C</td>
<td>Minimal acceptable</td>
</tr>
<tr>
<td>D</td>
<td>Minimal acceptable</td>
</tr>
<tr>
<td>F</td>
<td>Fail</td>
</tr>
</tbody>
</table>

Transcript (must be requested in writing)

First copy Free
Additional copies, each 2.00

Refunds
A student withdrawing from classes during the quarter will receive the following tuition refunds (general fee not refundable):

<table>
<thead>
<tr>
<th>Duration</th>
<th>Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% through the fourth day of classes after regularly scheduled registration on the Walla Walla College Campus</td>
<td>75% second week</td>
</tr>
<tr>
<td>50% third and fourth weeks</td>
<td>50% third and fourth weeks</td>
</tr>
<tr>
<td>No tuition is refunded after the fourth week</td>
<td>50% third and fourth weeks</td>
</tr>
</tbody>
</table>

*Students dropping all classes during this period will be charged a processing fee of $30 or 5% of tuition, whichever is less.

Room Rent:

<table>
<thead>
<tr>
<th>Duration</th>
<th>Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% during first week of quarter</td>
<td>75% during second week of quarter</td>
</tr>
<tr>
<td>75% during third week of quarter</td>
<td>75% during fourth week of quarter</td>
</tr>
<tr>
<td>50% during fifth week of quarter</td>
<td>25% during sixth week of quarter</td>
</tr>
<tr>
<td>25% during seventh week of quarter</td>
<td>20% during eighth week of quarter</td>
</tr>
</tbody>
</table>

The beginning of the quarter will be considered to be the first day of class instruction. When a student withdraws during a quarter, no refund will be made until 30 days after the close of the month in which he/she withdrew. STUDENTS WHO LEAVE THE COLLEGE WITHOUT COMPLETING WITHDRAWAL PROCEDURES WILL BE CHARGED UNTIL PROPER ARRANGEMENTS ARE MADE. (See Room Reservations.)

Past Due Accounts
A finance charge computed at a periodic rate of one percent per month is assessed against a past due account. This is an annual percentage rate of 12 percent.

Statements
Statements will be issued each month giving an account for the previous month. Tuition, room rent, and minimum board charges for dorm students will be charged in advance at the beginning of each quarter. Food service charges above the minimum are billed at the close of each month. Village students may obtain their statements from the cashier in the accounting office.

It is expected that statements will be paid within ten days from time of mailing. The College operates on a cash basis and is dependent upon prompt payment of accounts.

Remittances
Checks, drafts and money orders should be made payable to Walla Walla College and should be sent to Walla Walla College Accounting Office, College Place, Washington 99324.

Insurance—Medical, Accident and Hospitalization
Student medical, accident and hospital insurance may be purchased at registration by students enrolling for six or more quarter hours. Students not wanting coverage are required to sign a waiver declining participation. Dependency coverage is available for married students. The premium is charged on the student’s first statement of account after his initial enrollment. No changes or refunds are allowed once
the information has been sent to the insurance company (two weeks after the first day of classes). Information describing cost, coverage and claim procedures will be supplied each student at registration. Inquiries should be directed to the Student Health Center.

**Student Health Center**
Clinical facilities are available for students requiring medical attention. Prescriptions and other medicines are available at special prices. In case of serious illness or surgery, the Walla Walla General Hospital provides complete service to students. Financial arrangements must be made directly with the hospital.

**Release of Transcripts or Degrees**
By action of the board of trustees of the College, a degree or transcript of credit, official or unofficial, may not be released until the student’s account is paid in full.

To expedite the release of transcripts, diplomas and other legal documents, the student should send a money order or certified check to cover the balance of his account when requesting transcripts, etc., via mail. Requests for transcripts must be in writing.

**Loans, Assistantships**
The following loan funds are recommended and applications may be obtained from the Financial Aid Office.

**The Guaranteed Student Loan Program (GSLP)**. This allows a student to borrow directly from commercial lenders and credit unions. These loans are available to students who are citizens or nationals of the United States, or those in the country for other than a temporary purpose. These loans, which have an annual interest rate of 9 percent, do not have to be repaid until six months after student status has terminated. For graduate students, the annual loan limit is $5,000; the aggregate limit is $25,000, including undergraduate loans.

**National Direct Student Loan**. The National Direct Student Loan is made available through the United States Department of Education and Walla Walla College. To qualify, the student must have financial need as evidenced by submission of a WWC application for financial aid and Financial Aid Form (FAF) by April 1. Priority in awarding this aid is given to students with the greatest financial need. Repayment begins after the applicant’s student status terminates. Applications and FAF are available through the college’s Financial Aid Office.

**Graduate Assistantships**
A limited number of graduate assistantships is available to provide students with an opportunity for professional experiences in their chosen fields of specialization or in activities that may be valuable in preparing them more fully for their future occupational roles.

Assistantships are open to both men and women with evidence of sufficient maturity and potential to benefit from the program. Applications will be considered from prospective graduate students, postgraduates and those already admitted as regular graduate students. The stipends are awarded for periods up to 12 months, plus full remission of tuition and fees for approved courses during the period of the assistantship.

The Dean’s Award Endowment
Prior to each spring and summer graduation, master’s candidates with exceptionally good academic and professional records are considered by the faculties of Biology and Education and Psychology for the Dean’s Award. This award, made at graduation from an endowment fund established in 1948 and designated the Dean’s Award, consists of (1) a certificate of distinction and (2) a cash amount of one hundred dollars ($100). Normally, only one award may be made per graduation.
the information has been sent to the insurance company (two weeks after the first day of classes). Information describing cost, coverage and claim procedures will be supplied each student at registration. Inquiries should be directed to the Student Health Center.

Student Health Center
Clinical facilities are available for students requiring medical attention. Prescriptions and other medicines are available at special prices. In case of serious illness or surgery, the Walla Walla General Hospital provides complete service to students. Financial arrangements must be made directly with the hospital.

Release of Transcripts or Degrees
By action of the board of trustees of the College, a degree or transcript of credit, official or unofficial, may not be released until the student's account is paid in full.
To expedite the release of transcripts, diplomas and other legal documents, the student should send a money order or certified check to cover the balance of his account when requesting transcripts, etc. Requests for transcripts must be in writing.

Loans, Assistantships
The following loan funds are recommended and applications may be obtained from the Financial Aid Office.

The Guaranteed Student Loan Program (GSLP).
This allows a student to borrow directly from commercial lenders and credit unions. These loans are available to students who are citizens or nationals of the United States, or those in the country for other than a temporary purpose. These loans, which have an annual interest rate of 9 percent, do not have to be repaid until six months after student status has terminated. For graduate students, the annual loan limit is $5,000; the aggregate limit is $25,000, including undergraduate loans.

National Direct Student Loan.
The National Direct Student Loan is made available through the United States Department of Education and Walla Walla College. To qualify, the student must have financial need as evidenced by submission of a WWC application for financial aid and Financial Aid Form (FAF) by April 1. Priority in awarding this aid is given to students with the greatest financial need. Repayments begin after the applicant's status terminates. Applications and FAF are available through the college Financial Aid office.

Graduate Assistantships
A limited number of graduate assistantships is available to provide students with an opportunity for professional experiences in their chosen fields of specialization or in activities that may be valuable in preparing them more fully for their future occupational roles.

Assistantships are open to both men and women with evidence of sufficient maturity and potential to benefit from the program. Applications will be considered from prospective graduate students, postgraduates and those already admitted as regular graduate students. The stipends are awarded for periods up to 12 months, plus full remission of tuition and fees for approved courses during the period of the assistantship.

Duties of an assistant may include participation in research, instructional, and guidance services, and professional activities. Application forms for graduate assistantships may be obtained by writing directly to the chairman of the Department of Biology or to the chairman of the Department of Education and Psychology. Applications for biology assistantships must be submitted before April 15, while the deadline for applications for education and psychology assistantships is February 1.

The Dean's Award Endowment
Prior to each spring and summer graduation, master's candidates with exceptionally good academic and professional records are considered by the faculties of Biology and Education and Psychology for the Dean's Award. This award, made at graduation from an endowment fund established in 1948 and designated the Dean's Award, consists of: (1) a certificate of distinction and (2) a cash amount of one hundred dollars ($100). Normally, only one award may be made per graduation.
MASTER'S DEGREE PROGRAM

The program provides an atmosphere which stimulates intellectual curiosity and independent thinking. It strives to develop an appreciation of the value of research and to acquaint the student with research techniques. It endeavors to strengthen the professional competence of the individual in an area of specialization.

ADMISSION TO GRADUATE STUDY

Applicants for admission to graduate study shall have been graduated from a recognized four-year college or university and should have completed a basic background of undergraduate work in the proposed field of graduate study. Applicants without such a background should expect to make up deficiencies.

The applicant shall file completed graduate application forms and two official transcripts of all work taken on the collegiate level with the Director of Records of the College at least three months prior to the quarter in which graduate study is to commence. Failure to do so may result in delay in admission and registration. All forms and transcripts submitted for admission become the property of the College and are not returned. Admission forms are available from the admissions office.
GRADUATE PROGRAM

Master's degree programs are offered in the Department of Biology and in the Department of Education and Psychology. Graduate study is planned in reference to the student's experience, future objectives, personal qualifications and previous academic preparation. The importance of careful planning and close cooperation between the student and his assigned adviser is emphasized.

OBJECTIVES OF THE GRADUATE PROGRAM

The program provides an atmosphere which stimulates intellectual curiosity and independent thinking. It strives to develop an appreciation of the value of research and an acquaintance with basic research techniques. It endeavors to strengthen the professional competence of the individual in an area of specialization.

ADMISSION TO GRADUATE STUDY

Applicants for admission to graduate study shall have been graduated from a recognized four-year college or university and should have completed a basic background of undergraduate work in the proposed field of graduate study. Applicants without such a background should expect to make up deficiencies.

The applicant shall file completed graduate application forms and two official transcripts of all work taken on the collegiate level with the Director of Records of the College at least three months prior to the quarter in which graduate study is to commence. Failure to do so may result in delay in admission and registration. All forms and transcripts submitted for admission become the property of the College and are not returned. Admission forms are available from the admissions Office.
Eligibility for admission as a graduate student is determined by the Graduate Council of the College upon the recommendations of the Biology or Education and Psychology departments.

Admission Requirements for the Master's Degree Program
In addition to an acceptable baccalaureate degree, applicants for admission to a graduate degree program must have the following:

1. Satisfactory scores on the Graduate Record Examination (GRE), both subject and general.

Applicants in biology must provide transcripts of scores for both the subject and general tests in biology, while applicants in education must provide transcripts of scores for both the subject and general tests in education.

Students who intend to pursue a counseling specialization, or whose graduate major was psychology, may elect to substitute the subject test in psychology for the subject in education.

The test scores are used in part to determine eligibility for admission to the School of Graduate Studies.

2. A minimum cumulative grade-point average of 2.75 on either the last 96 credits toward the baccalaureate degree or on the undergraduate program.

An applicant whose undergraduate grade-point average is below 2.75 may be admitted if there is other evidence of ability to pursue the graduate degree. Such evidence may include one or more of the following: acceptable performance on the Graduate Record Examination, strong professional recommendations, acceptable postgraduate work at a recognized institution, experience in areas related to the desired graduate specialization, or other criteria established by the departments concerned.

A student who meets the requirements for admission to the master's degree program but who registers only as a postgraduate has no assurance that credit earned will later apply toward the master's degree.

Admission Requirements for the Nondegree Program
Graduates of an accredited college or university with a cumulative undergraduate GPA of 2.00 may be admitted as postgraduate students to take courses toward certification. These credits may not apply to a master's degree.

Graduate Credit for Seniors
Seniors who wish to take graduate numbered (500) courses must submit for evaluation an approved senior outline and transcript to the Graduate Council. Approval to register for a course is given only after determination of eligibility for admission to the Graduate School.

GENERAL DEGREE REQUIREMENTS
Responsibilities of the Student
The graduate student is responsible for a knowledge of all regulations and procedures as published in this bulletin. The student must assume the initiative in such matters as arranging for required tests and examinations, securing approval of his program of study, and following all procedures in their proper sequence. Failure to do so may result in unnecessary delay or interruption of graduate study.

Residence and Time Requirements
A minimum of 45 quarter hours is required, at least 33 of which must be earned while in residence.

Credit older than six calendar years usually is not used to satisfy degree requirements. However, a student may submit a request to the Graduate Council for validation of an outdated course if its content is comparable to a current course and if the student is knowledgeable in it. These judgments shall be made by persons with expertise in the respective disciplines.

Course Requirements and Scholarship
The completion of a minimum of 45 quarter hours of approved graduate courses with a cumulative grade-point average of at least 3.00 is required. Grades of all courses on the graduate program excluding deficiencies will be computed in the grade-point average.

Courses numbered 500 or above are primarily for graduate students. A minimum of 24 quarter hours must be earned in courses numbered 500 or above for the Master of Arts and Science degrees. A minimum of 30 quarter hours is required in courses numbered 400 or above for the Master of Education degree. Courses numbered 400 to 499 are open to both undergraduate and graduate students. Usually, not more than six quarter hours of topics (400) or workshop (470) courses will be included in a program. Courses numbered 350-399 may be included in the graduate program on approval of the Graduate Council.

Departmental Requirements
Candidates for a master's degree must also satisfy additional departmental requirements as listed in this bulletin under the section Departmental Requirements.

Second Master's Degree
The second master's degree requires a minimum of 30 additional quarter hours approved by the Graduate Council. All M.A. and M.S. degree programs must include a thesis.

Course Load
The normal load is 12 hours per quarter. Any course load above this amount must be approved by the Graduate Council.

Changes in Registration
Students withdrawing from college or individual courses must file an official drop voucher with the Records Office. Withdrawal slips must be signed by the adviser and the instructor involved. The final date for dropping a class is indicated in the academic calendar. Students doing passing work prior to withdrawal will receive a W (withdrawal). Students withdrawing from all classes during the quarter will receive Ws.

Transfer of Graduate Credit
A maximum of 12 quarter hours of graduate work taken at other recognized institutions may be approved for transfer toward the master's degree. A GPA of 3.00 must be maintained on all course work taken in residence. The transfer credit may be by extension if acceptable toward the master's degree at the school offering the extension work. It is the responsibility of the student to provide such documentation. Correspondence credit or credit by examination is not accepted.

22
Eligibility for admission as a graduate student is determined by the Graduate Council of the College upon the recommendations of the Biology or Education and Psychology departments.

Admission Requirements for the Master's Degree Program
In addition to an acceptable baccalaureate degree, applicants for admission to a graduate degree program must have the following:

1. Satisfactory scores on the Graduate Record Examination (GRE), both subject and general.
   Applicants in biology must provide transcripts of scores for both the subject and general tests in biology, while applicants in education must provide transcripts of scores for both the subject and general tests in education.
   Students who intend to pursue a counseling specialization, or whose undergraduate major was psychology, may elect to substitute the subject test in psychology for the subject in education.
   The test scores are used in part to determine eligibility for admission to the School of Graduate Studies.

2. A minimum cumulative grade-point average of 2.75 on either the last 96 credits toward the baccalaureate degree or on total undergraduate program.
   An applicant whose undergraduate grade-point average is below 2.75 may be admitted if there is other evidence of ability to pursue the graduate degree. Such evidence may include one or more of the following: acceptable performance on the Graduate Record Examination, strong professional recommendations, acceptable postgraduate work at a recognized institution, experience in areas related to the desired graduate specialization, or other criteria established by the departments concerned.
   A student who meets the requirements for admission to the master's degree program but who registers only as a postgraduate has no assurance that credit earned will later apply toward the master's degree.

Admission Requirements for the Nondegree Program
Graduates of an accredited college or university with a cumulative undergraduate GPA of 2.00 may be admitted as postgraduate students to take courses toward certification. These credits may not apply to a master's degree.

Graduate Credit for Seniors
Seniors who wish to take graduate numbered (500) courses must submit for evaluation an approved senior outline and transcript to the Graduate Council. Approval to register for a course is given only after determination of eligibility for admission to the Graduate School.

GENERAL DEGREE REQUIREMENTS
Responsibilities of the Student
The graduate student is responsible for a knowledge of all regulations and procedures as published in this bulletin. The student must assume the initiative in such matters as arranging for required tests and examinations, securing approval of his program of study, and following all procedures in their proper sequence. Failure to do so may result in unnecessary delay or interruption of graduate study.

Residence and Time Requirements
A minimum of 45 quarter hours is required, at least 33 of which must be earned while in residence.
Credit older than six calendar years usually is not used to satisfy degree requirements. However, a student may submit a request to Graduate Council for validation of an outdated course if its content is comparable to a current course and if the student is knowledgeable in it. These judgments shall be made by persons with expertise in the respective disciplines.

Course Requirements and Scholarship
The completion of a minimum of 45 quarter hours of approved graduate courses with a cumulative grade-point average of at least 3.00 is required. Grades of all courses on the graduate program excluding deficiencies will be computed in the grade-point average.
Courses numbered 500 or above are primarily for graduate students. A minimum of 24 quarter hours must be earned in courses numbered 500 or above for the Master of Arts and Science degrees. A minimum of 30 quarter hours is required in courses numbered 400 or above for the Master of Education degree. Courses numbered 400 to 499 are open to both undergraduate and graduate students. Usually, not more than six quarter hours of topics (400) or workshop (470) courses will be included in a program. Courses numbered 350-399 may be included in the graduate program on approval of the Graduate Council.

Departmental Requirements
Candidates for a master's degree must also satisfy additional departmental requirements as listed in this bulletin under the section Departments of Instruction.

Second Master's Degree
The second master's degree requires a minimum of 30 additional quarter hours approved by the Graduate Council. All M.A. and M.S. degree programs must include a thesis.

Course Load
The normal load is 12 hours per quarter. Any course load above this amount must be approved by the Graduate Council.

Changes in Registration
Students withdrawing from college or individual courses must file an official drop voucher with the Records Office. Withdrawal slips must be signed by the adviser and the instructor involved. The final date for dropping a class is indicated in the academic calendar. Students doing passing work prior to withdrawal will receive a W (withdrawal). Students withdrawing from all classes during the quarter will receive Ws.

Transfer of Graduate Credit
A maximum of 12 quarter hours of graduate work taken at other recognized institutions may be approved for transfer toward the master's degree. A GPA of 3.00 must be maintained on all course work taken in residence. The transfer credit may be by extension if acceptable toward the master's degree at the school offering the extension work. It is the responsibility of the student to provide such documentation. Correspondence credit or credit by examination is not accepted.
PROGRAM OF STUDY

Prior to registering for the first quarter of study, all students admitted for a master’s degree program must consult with the chair of their department for assistance in selecting courses. An advisor and/or advisory committee will subsequently be appointed to guide the student in planning a program of study to complete the degree. All course selection and program changes must be made in consultation with the advisor, and with approval of the Graduate Council.

Toward the end of the quarter in which the student is about to complete his first nine-to-thirty quarter hours of approved graduate study (exclusive of deficiencies), application must be made for advancement to degree candidacy. Since a minimum of thirty quarter hours should be earned after advancement to candidacy has been granted, any delay in filing this application may result in a loss of earned credit.

ADVANCEMENT TO DEGREE CANDIDACY

Admission to graduate study merely constitutes permission to register for coursework. It does not imply candidacy.

A student may be advanced to master’s degree candidacy by fulfilling the following conditions:

1. Arrange for the removal of any undergraduate deficiencies.
2. Complete nine to thirty quarter hours of approved graduate study with a minimum grade-point average of 3.00. Advancement to candidacy will not be granted if this minimum is not attained.
3. Submit the “Application for Degree Candidacy and Proposed Program of Courses” form to the department chairman outlining a study program including courses completed and those yet to be completed in fulfillment of the requirements for the master’s degree. This program must be considered for approval by the staff of the department concerned upon completion of nine to thirty quarter hours.
4. Secure approval of the proposed program by the Graduate Council. Approval of the program and advancement to master’s degree candidacy will be officially acknowledged by a letter from the chairman of the Graduate Council.

Advancement to master’s degree candidacy indicates that the Graduate Council and the department concerned consider the candidate to complete the master’s degree. The degree is granted only after successful completion of the approved program of studies within the regulations of the College.

Changes in Program

Changes in the proposed program may not be made without the prior approval of the department chair, director of records and chair of the Graduate Council. More than two changes must be approved by the Graduate Council.

THESIS REQUIREMENT

A thesis demonstrating ability to conduct research in a systematic and scholarly manner must be presented by candidates for the Master of Arts and Master of Science degrees. The thesis is planned with and approved by the student’s advisory committee. Completion of the thesis must be in accordance with the requirements of each department.

Approved copies of the completed thesis are kept on permanent file in the college library and in the respective departments.

EXAMINATIONS

Master’s degree candidates must pass a written and/or oral examination administered by an examining committee. The nature of further examination, if required, is to be determined by the examining committee. A representative of the Graduate Council, who is not a member of the candidate’s advisory committee, attends each oral examination.

Examination Regulations

1. It is the candidate’s responsibility to schedule written and/or oral examinations with the department chair.
2. The examinations are coordinated by the chair of the department and/or the candidate’s advisory committee. Success or failure of the examinations is determined by the examination committee.
3. Questions in the examination will be based upon the candidate’s areas of study and/or thesis.
4. The time allowed for the oral examination is ordinarily not more than two hours. Written examinations may take considerably longer.
5. Any candidate who fails either written or oral examinations may be granted only one opportunity by the examination committee to resit the respective examination after a lapse of at least one quarter.
6. Final examinations should be completed at least two weeks before commencement.

CONFESSION OF DEGREE

The candidate must file in duplicate the order form for the master’s degree and academic regalia with the Office of the Dean of the School of Graduate Studies. Consult the academic calendar for the last day to file the order form prior to the beginning of the final quarter.

Students are required to participate in the graduation exercise. In special cases permission to receive the master’s degree in absentia may be granted by the president of the College.
Bulletin

The student’s degree candidacy must be based on the graduate bulletin in effect at the time the proposed program for graduate study is approved by the Graduate Council.

PROGRAM OF STUDY

Prior to registering for the first quarter of study, all students admitted for a master’s degree program must consult with the chair of their department for assistance in selecting courses. An advisor and/or advisory committee will subsequently be appointed to guide the student in planning a program of study to complete the degree. All course selection and program changes must be made in conference with the advisor, and with approval of the Graduate Council.

Toward the end of the quarter in which the student is about to complete his first nine to fifteen quarter hours of approved graduate study (exclusive of deficiencies), application must be made for advancement to degree candidacy. Since a minimum of 30 quarter hours should be earned after advancement to candidacy has been granted, any delay in filing this application may result in a loss of earned credit.

ADVANCEMENT TO DEGREE CANDIDACY

Admission to graduate study merely constitutes permission to register for coursework. It does not imply candidacy.

A student may be advanced to master’s degree candidacy by fulfilling the following conditions:

1. Arrange for the removal of any undergraduate deficiencies.
2. Complete nine to 15 quarter hours of approved graduate study with a minimum grade-point average of 3.00. Advancement to candidacy will not be granted if this minimum is not attained.
3. Submit the “Application for Degree Candidacy and Proposed Program of Courses” form to the department chairman outlining a study program including courses completed and those yet to be completed in fulfillment of the requirements for the master’s degree. This program must be considered for approval by the staff of the department concerned upon completion of nine to 15 quarter hours.
4. Secure approval of the proposed program by the Graduate Council. Approval of the program and advancement to master’s degree candidacy will be officially acknowledged by a letter from the chairman of the Graduate Council.

Advancement to master’s degree candidacy indicates that the Graduate Council and the department concerned encourage the candidate to complete the master’s degree. The degree is granted only after successful completion of the approved program of studies within the regulations of the College.

Changes in Program

Changes in the proposed program may not be made without the prior approval of the department chair, director of records, and chair of the Graduate Council. More than two changes must be approved by the Graduate Council.

THESIS REQUIREMENT

A thesis demonstrating ability to conduct research in a systematic and scholarly manner must be presented by candidates for the Master of Arts and Master of Science degrees. The thesis is planned with and approved by the student’s advisory committee. Completion of the thesis must be in accordance with the requirements of each department.

Approved copies of the completed thesis are kept on permanent file in the college library and in the respective departments.

EXAMINATIONS

Master’s degree candidates must pass a written and/or oral examination administered by an examining committee. The nature of further examination, if required, is to be determined by the examining committee. A representative of the Graduate Council, who is not a member of the candidate’s advisory committee, attends each oral examination.

Examination Regulations

1. It is the candidate’s responsibility to schedule written and/or oral examinations with the department chair.
2. The examinations are coordinated by the chair of the department and/or the candidate’s advisory committee. Success or failure of the examinations is determined by the examination committee.
3. Questions in the examination will be based upon the candidate’s areas of study and/or thesis.
4. The time allowed for the oral examination is ordinarily not more than two hours. Written examinations may take considerably longer.
5. Any candidate who fails either written or oral examinations may be granted only one opportunity by the examination committee to retake the respective examination after a lapse of at least one quarter.
6. Final examinations should be completed at least two weeks before commencement.

CONFERENCE OF DEGREE

The candidate must file in duplicate the order form for the master’s degree and academic regalia with the Office of the Dean of the School of Graduate Studies. Consult the academic calendar for the last day to file the order form prior to the beginning of the final quarter. Students are required to participate in the graduation exercises. In special cases permission to receive the master’s degree in absentia may be granted by the president of the College.
DEPARTMENTS
OF INSTRUCTION

BIOLOGICAL SCIENCES

The Department of Biology offers a Master of Science degree in biology. Courses are offered in zoology and botany on the main campus and at the Marine Station near Anacortes, Washington. The program of coursework and research developed for each graduate student takes into account the future goals, present interests and academic background of the student. In addition to a core course in biology (zoology and botany), specific background courses, or their equivalents, should include genetics, development, physiology and ecology. An adequate preparation in chemistry (inorganic and organic), physics (general physics) and mathematics (algebra, trigonometry, some calculus) will complete the necessary foundation upon which an individualized graduate program may be built. There is sufficient flexibility to allow a student to propose a program of a more interdisciplinary nature if desired. Because of the spectrum of biological and interdisciplinary opportunities presented at the Marine Station, all graduate students are expected to attend one summer term.

The specific objectives of the Department of Biology applicable to the graduate program are:

1. To increase the competence of secondary schoolteachers, especially those in the Seventh-day Adventist educational system.

2. To prepare students for positions in institutions of higher education by giving them a firm foundation for work toward the doctorate.

3. To provide a preparation for research careers.
DEPARTMENTS OF INSTRUCTION

BIOLOGICAL SCIENCES

The Department of Biology offers a Master of Science degree in biology. Courses are offered in zoology and botany on the main campus and at the Marine Station near Anacortes, Washington. The program of coursework and research developed for each graduate student takes into account the future goals, present interests and academic background of the student. In addition to a two-course core in biology (zoology and botany), specific background courses, or their equivalents, should be included: genetics, development, physiology and ecology. An adequate preparation in chemistry (inorganic and organic), physics (general physics) and mathematics (algebra, trigonometry, some calculus) will complete the necessary foundation upon which an individualized graduate program may be built. There is sufficient flexibility to allow a student to propose a program or a more interdisciplinary nature if desired. Because of the spectrum of biological and interdisciplinary opportunities presented at the Marine Station, all graduate students are expected to attend one summer term.

The specific objectives of the Department of Biology applicable to the graduate program are:

1. To increase the competence of secondary schoolteachers, especially those in the Seventh-day Adventist educational system.

2. To prepare students for positions in institutions of higher education by giving them a firm foundation for work toward the doctorate.

3. To provide a preparation for research careers.
BIOLOGICAL SCIENCES

BIOL 401 PLANT PHYSIOLOGY
A study of the principles of plant physiology. One laboratory per week. Prerequisites: BIOL 361; BIOL 372.

BIOL 403 ÖNTOLOGY
Systematic study of native fish of North America, with emphasis on identification, migration, and geographical distribution. Two laboratories per week.

BIOL 405 GENERAL ENTOMOLOGY
Study of insect morphology, physiology, ecology, and classification. One laboratory per week.

BIOL 421 PLANT ANATOMY
Study of the microscopic anatomy of plant tissues with emphasis on their origin and development. Emphasizes the vascular plants. Recommended: BIOL 360. One laboratory per week.

BIOL 424 HERPETOLOGY
Systematic study of amphibians and reptiles with emphasis on natural history and ecology. Two laboratories per week.

BIOL 426 SYSTEMATIC BOTANY
Study of the principles of plant classification, together with a systematic survey of vascular plants, with emphasis on natural history and ecology. Two laboratories per week. One weekend field trip required. (College Place campus = 4 quarter hours; Marine Station = 5 quarter hours.)

BIOL 429 LIMNOLOGY
Study of the factors responsible for the presence and distribution of animals and plants in fresh water. Field work includes trips to a number of lakes and streams for collection of living specimens as well as habitat analysis. Two laboratories per week.

BIOL 432 INTRODUCTION TO PALEONTOLOGY
Study of earth history as exhibited by the fossils with particular emphasis on paleontological relationships. Two laboratories per week. Pre-requisite: permission of instructor.

BIOL 441 MAMMALOGY
Systematic study of mammals with emphasis on natural history and ecology. Two laboratories per week.

BIOL 446 GENERAL ECOLOGY
Study of the relationship of plants and animals, both individually and as communities, to the physical and biological environment. Field study designed to examine ecological principles in one or more natural habitats. One laboratory per week. Two laboratories per week. Pre-requisites: chemistry, genetics, and a minimum of one field natural history course recommended.

BIOL 447 PARASITOLOGY
Systematic study of the morphology, life cycle and host-parasite relationships of protozoans, helminths and arthropod parasites. Two laboratories per week. Pre-requisites: chemistry (CHEM 321, 322, 323).

BIOL 449 Vertebrate Histology
Study of the microscopic anatomy of vertebrate cells, tissue and organs, including reference to their functions. Two laboratories per week.

BIOL 451 INVERTEBRATE ZOOLOGY
Study of invertebrate biology with emphasis on their morphology, physiology, and ecology. Two laboratories per week.

BIOL 455 RESEARCH METHODS V
Methods of writing and orally presenting a scientific paper. Students present the results of their senior thesis in a seminar and write a written manuscript of their senior thesis (see BIOL 370, BIOL 371, BIOL 372, BIOL 374).

BIOL 458 PHYSIOLOGY
An introduction to physiology, and discussion of current concepts of the biological bases of behavior in animals and men. Material is of a comparative nature with emphasis on human behavior. One laboratory per week. Pre-requisites: BIOL 31, BIOL 38, BIOL 39, or BIOL 370, 371 and PSYC 150 or permission of instructor. Recommended: BIOL 370.
Biol 465 Bacteriology
Principles of morphology and function of bacteria. Laboratory work, including unknowns, plate and streak techniques, comprises this study. Two laboratories per week. Prerequisite or corequisite: Chem 321, 322, 323.

Biol 483 Philosophy of Origins and Speciation
Comparative study of the various theories on the origin and history of living organisms in light of present scientific knowledge in biochemistry, paleontology, morphology, geology, genetics, and other related areas. For majors and minors only. Recommended for senior year.

Biol 490 Techniques in Field Biology
Study of the techniques used in the collection and preservation of biological specimens for museum purposes. Emphasizes the recording and preservation of geological data obtained with the collection of specimens. Topics vary depending on the instructor. Credits will be given at the rate of one quarter hour for each week spent working in the field.

Biol 495 Colloquium
A lecture series designed to expose students to modern scientific research and research efforts. Each lecture is normally given by a visiting lecturer. Six quarters required of all junior, senior, and graduate biology majors. Graded S or NC.

Biol 501 Research in Biology
Individual work in a topic of original research carried out under the direction of one of the instructors. Two to four hours per quarter; maximum, eight.

Biol 583 Genetics and Speciation
A study of the nature and function of the genetic material as it relates to population and species variability and change. Prerequisite: Biol 260.

Biol 590 Graduate Seminar
Presentation of topics and discussion of current research in specific areas of biology. One credit each quarter, minimum of five, and maximum of six quarters. Spring quarter normally involves a Research Plan and Progress Report for first-year graduate students. See Biology Department for alternate options.

Biol 591 Biosystematics
A study of the principles of species and its relationship to currently used taxonomic methods and rules of nomenclature.

Biol 598 Systematic Entomology
A study of the principles of classification of insects. Laboratory work emphasizes recognition of orders, families, and genera with special problems on the specific level. Recommended prerequisite: Biol 405. Two laboratories per week.

Biol 521 Principles of Economic Entomology
An evaluation of the various methods of controlling economically important species. Prerequisite: Biol 403.

Biol 522 Cellular Biology
Current knowledge and research in the areas of cell physiology, biochemistry, genetics, bacteriological genetics, and radiation biology will be considered. Two laboratories per week. Prerequisite: Biol 322.
READING COURSES
A maximum of six quarter hours may be selected from Reading Courses.

BIOL 540 READINGS IN BIOLOGY
Analysis of classical and current literature in specific areas of biology. Areas of concentration may include disciplines such as biochemistry, development, ecology, ethology, genetics, history, philosophy of biology, or physiology. Requires reports and conferences with a faculty member. A maximum of four quarter hours in any one area.

BIOL 440 MARINE BIOLOGY
Introduction to the physical aspects of marine environments studied by the experimental and conceptual methods of physics with application to marine life.

BIOL 450 MARINE HYPOTHESIS
Introduction to the physical aspects of marine environments studied by the experimental and conceptual methods of physics with application to marine life.

BIOL 455 MARINE INVERTEBRATES
A study of the biology of selected groups of marine invertebrates.

BIOL 550 PHYSIOLOGY OF THE PLANT
A comparative study of the physiology of representative members of the major algal growth. Emphasis will be on the structure and growth of single-celled forms and their metabolic processes, including photosynthesis, respiration, and growth.

BIOL 555 SYMBIOSIS
A study of sharply defined interactions between organisms. Selected examples of the interactions of animals, plants, and animals will be used to illustrate varying degrees of competition. Prerequisites: Course work in one group of animals or plants or microbiology or environmental microbiology. Emphasis will be on the structure and growth of single-celled forms and their metabolic processes, including photosynthesis, respiration, and growth.

BIOL 560 BEHAVIOR OF MARINE ORGANISMS
A study of the inter- and intraspecific behaviors of marine animals and their behavioral responses to the physical environments. The course includes laboratory experiences, field observations and a research project. Prerequisites: BIO 375 or BIO 450 or PSY 108 and background in organizational biology and training in the instruction.

*Qualifies as a marine-oriented course.
READING COURSES

A minimum of six quarter hours may be selected from Reading Courses.

BIOI 540 READINGS IN BIOLOGY
Analysis of classical and current literature in specific areas of biology. Areas of concentration may include disciplines such as heritability, development, ecology, ethology, genetics, nutrition, history, philosophy of biology, or physiology. Requires reports and conferences with a study mentor. A maximum of four quarter hours in any one area.

BIOLOGY COURSES: Marine Station

BIOI 301, 302, 303 or equivalent is prerequisite for all courses listed below.

BIOI 460 MARINE ECOLOGY*
Study of interspecific, intraspecific and community relationships demonstrated by marine organisms. 5

BIOI 462 ICITHOLOGY*
Systematic study of the fishes found in Puget Sound, with a survey of the fishes of other waters. 5

BIOI 463 MARINE BOTANY*
Systematic study of plants found in Puget Sound, with a survey of marine plants from other areas. 5

BIOI 467 INTRODUCTION TO OCEANOGRAPHY*
A physical, chemical and geological study of the oceans and ocean basins as a habitat for life, emphasizing the mutual interaction between the oceanic biosphere and its environment. 5

BIOI 468 COMPARATIVE PHYSIOLOGY
Comparative study of the physiology and life processes of animals with emphasis on invertebrates. Prerequisites: BIOI 312. 5

BIOI 470 MARINE BIOPHYSICS
Introduction to the physical aspects of marine organisms studied by the experimental and conceptual methods of physics with application to marine life. 5

BIOI 475 MARINE INVERTEBRATES*
A study of the biology of selected groups of marine invertebrates. 5

BIOI 558 PHYSIOLOGY OF THE ALGAE
A comparative study of the physiology of representative members of the major algal groups. Collection and growth of pure cultures of single-celled forms and related metabolic processes, nutritional factors, light requirements, synchronizations and growth will be emphasized. 5

BIOI 554 SYMBIOSIS
A study of sharply defined associations between organisms. Selected examples of the viruses, bacteria, plants and animals are used to illustrate varying degrees of relationships. Prerequisites: Course work in one group of animals or plants or microbiology or parasitology. Chemistry courses through organic are highly recommended. 5

BIOI 556 BEHAVIOR OF MARINE ORGANISMS
A study of inter- and intraspecific behavior of marine animals and their behavioral responses to the physical environments. The course includes laboratory experiments, field observations and a research project. Prerequisites: BIOI 356 or BIOI 458 or PSYC 105. 5

*Qualifies as a marine-oriented course.
EDUCATION AND PSYCHOLOGY

The Department of Education and Psychology offers two master’s degree programs—
the Master of Education, a nonthesis program; and the Master of Arts, a thesis program. These programs permit professional enrichment through liberal course selec-
tion in the areas of school administration; elementary, junior high, or secondary
instruction; counseling; and special education.

The Graduate Program of the Department of Education and Psychology support
the general objectives of the School of Graduate Studies by:

1. Teaching research skills and techniques
2. Focusing on research in emerging policy, practice, and professional
   life.
3. Addressing contemporary issues, needs, and trends in Education and
   Psychology.
4. Providing supervised practicums and field experiences in the area of
   specialization.

In addition to these objectives, the Graduate Programs seek to assist the student in
the development of a philosophy of Christian service and education which is sup-
portive of his professional development and practice.

PROGRAM SEQUENCE

The graduate student must assume personal responsibility for initiating all procedures
in consultation with an assigned adviser in the Education and Psychology Depart-
ment. Those working toward a master of arts degree must also follow the thesis re-
quirements as outlined in Departmental Requirements for Proposals and Theses.

I. Preactency Level

A. Read all introductory information in this bulletin and follow explicitly
   the directions given therein.
B. Take the Graduate Record Examinations, subject and general tests in
   Education, if these have not been taken previously.
C. Apply through the Offices of Admissions and Records for admission
to graduate study.
D. Upon acceptance to graduate study, consult the chair of the department
   of Education and Psychology for the assignment of a program adviser.
E. In consultation with the assigned adviser, plan the precanclancy phase
   of the program to include each of the following:
   1. Arrangements for the removal of all precanclancy deficiencies.
   2. Regulation plans for the first 15 quarter hours of course work,
      including Methods of Research or Philosophy of Education.
   3. Obtain written credit, if certification is being contemplated.
   4. Taking no more than 12 hours per quarter, complete your first 9-15
      quarter hours exclusive of deficiencies and including Methods of
      Research or Philosophy of Education. Toward the end of the quarter
      or summer session in which you expect to meet this requirement, prepare
      with adviser an Application for Degree Candidacy and Program Ap-
      proval.

II. Candidacy Level

A. Complete all courses and deficiencies as specified in the approved pro-
   gram of studies. A minimum of 30 approval quarter hours should be
   earned after advancement to candidacy has been granted by the Graduate
   Council.

B. At the beginning of the quarter or summer session in which you plan
to graduate, do each of the following:
1. Submit evidence of experience and certification qualifications.
2. Arrange with the chair of Education and Psychology, Depart-
   ment for the selection of an examination committee and for
   an examination date.

MASTER OF EDUCATION (M.Ed.)

The master of education degree is a nonthesis program with a variety of specialized
options designed to enhance the professional competencies of practitioners in
education.

By careful planning, a qualified candidate may coordinate many of the requirements
for the degree with preparation for state certification. Since completion of minimum
degree requirements does not necessarily satisfy certification requirements, students
pursuing a certificate must consult with the credential adviser early in their pro-
gram sequence.

General Prerequisites (applicable to all M.Ed. programs)

In addition to admission requirements for the master’s degree as described elsewhere
in this bulletin, certain background experiences are prerequisite for all candidates.
Deficiencies may be removed after admission to graduate study, but the credit earned
thereby will not apply to the minimum degree requirements. Candidates must have
the following:

1. Thirty quarter hours in professional education. Courses from any depart-
   ment will satisfy the intent of this requirement if the emphasis is on
   instructional-learning principles, pupil characteristics, teaching
   methodology, curriculum materials or the role of various school personnel.
2. A minimum of nine months of full-time, verified and satisfactory educa-
   tional work experience. A maximum of 30 quarter hours for the master’s
degree may be earned prior to the experience, but a minimum of 15 quarter
   hours must be earned thereafter.

The work experience must fall within the range of professional or paraprofessional activities provided by schools or other educational serv-
ices agencies. Activities such as classroom teaching, school administration,
library work, counseling or work as a dormitory dean will be considered
according to its pertinence to the candidate’s chosen area of specialization.

Verification of the experience must be by letter from an administrator under
whom the experience was gained. The letter should attest to the time spent,
the nature of the activities, and the quality of performance. It is the respon-
sibility of the candidate to obtain this verification.
EDUCATION AND PSYCHOLOGY

The Department of Education and Psychology offers two master's degree programs—the Master of Education, a nonthesis program, and the Master of Arts, a thesis program. These programs permit professional enrichment through liberal course selection in the areas of school administration, elementary, junior high, or secondary instruction; counseling, and special education.

The Graduate Programs of the Department of Education and Psychology support the general objectives of the School of Graduate Studies by:

1. Teaching research skills and techniques
2. Focusing on research in emerging policy, practice, and professional life
3. Addressing contemporary issues, needs, and trends in Education and Psychology
4. Providing supervised practicums and field experiences in the area of specialization.

In addition to these objectives, the Graduate Programs seek to assist the student in the development of a philosophy of Christian service and education which is supportive of his professional development and practice.

PROGRAM SEQUENCE

The graduate student must assume personal responsibility for initiating all procedures in consultation with an assigned adviser in the Education and Psychology Department. Those working toward a master of arts degree must also follow the thesis requirements as outlined in Departmental Requirements for Proposals and Theses.

I. Pre candidacy Level

A. Read all introductory information in this bulletin and follow explicitly the directions given therein.
B. Take the Graduate Record Examinations, subject and general tests in Education, if these have not been taken previously.
C. Apply through the Office of Admissions and Records for admission to graduate study.
D. Upon acceptance to graduate study, consult the chair of the department of Education and Psychology for the assignment of a program adviser.
E. In consultation with the assigned adviser, plan the precandidacy phase of the program to include each of the following:
   1. Arrangements for the removal of all prerequisite deficiencies.
   2. Registration for the first 6-12 quarter hours of course work, including methods of Research or Philosophy of Education.
   3. Obtain written, credential office of certification if certification is being contemplated.
   4. Securing no more than 12 hours per quarter, complete your first 9-15 quarter hours exclusive of deficiencies and including Methods of Research or Philosophy of Education. Toward the end of the quarter or summer session in which you expect to meet this requirement, prepare with adviser an Application for Degree Candidacy and Program Approval.

II. Candidacy Level

A. Complete all courses and deficiencies as specified in the approved program of studies. A minimum of 30 approved quarter hours should be earned after advancement to candidacy has been granted by the Graduate Council.

B. At the beginning of the quarter or summer session in which you plan to graduate, do each of the following:
   1. Submit evidence of experience and certification qualifications.
   2. Arrange with the chair of Education and Psychology Department for the selection of an examination committee and for an examination date.

MASTER OF EDUCATION (M.Ed.)

The master of education degree is a nonthesis program with a variety of specialized options designed to enhance the professional competencies of practitioners in education.

By careful planning, a qualified candidate may coordinate many of the requirements for the degree with preparation for state certification. Since completion of minimum degree requirements does not necessarily satisfy certification requirements, students pursuing a certificate must consult with the credential adviser early in their program sequence.

General Prerequisites (applicable to all M.Ed. programs)

In addition to admission requirements for the master's degree as described elsewhere in this bulletin, certain background experiences are prerequisite for all candidates. Deficiencies may be removed after admission to graduate study, but the credit earned thereby will not apply to the minimum degree requirements. Candidates must have the following:

1. Thirty quarter hours in professional education. Courses from any department will satisfy the intent of this requirement if the emphasis is on instructional-learning principles, pupil characteristics, teaching methodology, curriculum materials or the role of various school personnel.
2. A minimum of nine months of full-time, verified and satisfactory educational work experience. A minimum of 30 quarter hours for the master's degree may be earned prior to the experience, but a minimum of 15 quarter hours must be earned thereafter.

The work experience must fall within the range of professional or paraprofessional activities provided by schools or other educational service agencies. Activities such as classroom teaching, school administration, library work, counseling or work as a dormitory dean will be considered according to its pertinence to the candidate's chosen area of specialization.

Verification of the experience must be by letter from an administrator under whom the experience was gained. The letter should attest to the time spent, the nature of the activities, and the quality of performance. It is the responsibility of the candidate to obtain this verification.
Other specific prerequisites should also be noted for each area of specialization.

**Basic Requirements** (applicable to all M.Ed. programs)

Unless otherwise indicated, a minimum M.Ed. program comprises 45 quarter hours. Some programs may include more than this minimum because of the nature of the degree or to provide for the particular needs and interests of the student.

At least 30 quarter hours must be from courses numbered 400 and above. Graduate credit is not granted for courses below the 300 level unless such courses have been specifically approved by the Graduate Council.

All courses included in the degree program must be approved by an assigned adviser in the Education and Psychology Department.

Each program must contain at least 21 quarter hours in basic and professional education courses distributed as follows:

- Ten quarter hours in basic courses required of all candidates.
  - EDUC 560 Methods of Research (before advancement to candidacy)
  - EDUC 522 Philosophy of Education (before advancement to candidacy)
  - EDUC 500 Graduate Seminar (toward the end of the program)
  - PSYC 521 Psychology of Learning
  - or EDUC 525 Education in the Twentieth Century

Eleven quarter hours in professional education courses as defined under General Prerequisites No. 1. These II quarter hours are additional to those earned to satisfy the basic requirements above. However, they may be an inclusive part of, and not necessarily additional to, professional education courses which may be specified for a chosen area of specialization.

Upon completion of nine to 15 quarter hours, a planned program of study must be submitted for consideration by the staff of the department. Recommendations will then be made to the Graduate Council concerning advancement to degree candidacy.

All candidates who do not already qualify for a certificate must complete the academic requirements for state certification as a teacher, principal or educational staff associate before the degree is granted. It is not necessary to be in possession of the certificate before graduation, but eligibility must be established in all respects except that of citizenship. Preparation for the certificate will normally be according to Washington state requirements for either the provisional (initial) or standard (continuing) level. Candidates from out-of-state may produce evidence of qualifying in the state, province or country of their intended future educational employment if a specific certification program exists therein. Otherwise, they must meet the Washington state requirements.

---

**Areas of Specialization**

Programs of specialization are sufficiently flexible to meet individual needs while at the same time providing a basic core of substantive fifth-year experience applicable to various state certificates.

Specializations may be planned in the following approved areas:

- **School Administration**
  - Counseling and Guidance
  - School Counseling
  - Special Education Counseling
  - Elementary Instruction
  - Special Education
  - Junior High Instruction

- **Secondary Instruction in:**
  - Biology, Biophysics, Business, Chemistry, English, History, Industrial Arts, Language Arts, Mathematics, Physical Education, Physics, Social Sciences

A candidate wishing to pursue a specialization in an area other than any listed above may submit for consideration by the department staff and the Graduate Council an individualized self-planned proposal itemizing at least 24 quarter hours in the chosen specialization area. Additional supporting credit as needed to complete the degree will be selected in harmony with all other specified degree requirements. It is essential that this type of program be planned in consultation with an assigned adviser in the Department of Education and Psychology.

**School Administration**

Specialization Prerequisites: Three years of satisfactory certificated classroom teaching. Must have acquired all qualifications for a state-approved teaching certificate.

- **Area Requirements:** 24 quarter hours in courses related to school administration, supervision, curriculum and counseling. Must include the following courses unless they were a part of the undergraduate sequence:
  - EDUC 504 Elementary Curriculum or EDUC 508 Secondary Curriculum
  - EDUC 526 School Finance
  - EDUC 544 Administration of the Elementary School or EDUC 551 Administration of the Secondary School
  - EDUC 539 Supervision
  - EDUC 550 School Law
  - EDUC 556 Curriculum Planning
  - PSYC 544 Social Psychology

Eleven additional quarter hours in supporting courses from education and psychology, and/or from other departments, as needed to complete the minimum of 45 quarter hours.

EDUC 560 Administrative Practicum does not apply toward the minimum of 45 quarter hours.
Areas of Specialization

Programs of specialization are sufficiently flexible to meet individual needs while at the same time providing a basic core of substantive fifth-year experience applicable to various state certificates.

Specializations may be planned in the following approved areas:

<table>
<thead>
<tr>
<th>School Administration</th>
<th>Secondary Instruction in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling and Guidance</td>
<td>Biology, Biophysics, Business, Chemistry, English, History, Industrial Arts, Language Arts, Mathematics, Physical Education, Physics, Social Sciences</td>
</tr>
<tr>
<td>School Counseling</td>
<td>Elementary Instruction</td>
</tr>
<tr>
<td>Special Education Counseling</td>
<td>Junior High Instruction</td>
</tr>
<tr>
<td>Elementary Instruction</td>
<td>Special Education</td>
</tr>
<tr>
<td>Special Education</td>
<td></td>
</tr>
</tbody>
</table>

A candidate wishing to pursue a specialization in an area other than any listed above may submit for consideration by the department staff and the Graduate Council an individualized self-planned proposal itemizing at least 24-quarter hours in the chosen specialization area. Additional supporting credit as needed to complete the degree will be selected in harmony with all other specified degree requirements. It is essential that this type of program be planned in consultation with an assigned adviser in the Department of Education and Psychology.

School Administration

Specialization Prerequisites: Three years of satisfactory certificated classroom teaching. Must have acquired all qualifications for a state-approved teaching certificate.

Area Requirements: 24 quarter hours in courses related to school administration, supervision, curriculum and counseling. Must include the following courses unless they were a part of the undergraduate sequence:

| EDUC 504 Elementary Curriculum |
| EDUC 508 Secondary Curriculum |
| EDUC 526 School Finance |
| EDUC 544 Administration of the Elementary School |
| EDUC 551 Administration of the Secondary School |
| EDUC 559 Supervision |
| EDUC 550 School Law |
| EDUC 555 Curriculum Planning |
| PSYC 444 Social Psychology |

Eleven additional quarter hours in supporting courses from education and psychology, and/or from other departments, as needed to complete the minimum of 45 quarter hours.

EDUC 560 Administrative Practicum does not apply toward the minimum of 45 quarter hours.
Counseling and Guidance (50 quarter hours minimum)

Specialization Prerequisites:
EDUC 210 Foundations of Education 3
PSYC 215 Psychology of Childhood and Adolescence 4
PSYC 220 Educational Psychology 4
PSYC 350 Elementary Statistics 4
PSYC 430 Psychological Testing 3

Basic Requirements:
EDUC 361 Methods of Research 3
EDUC 532 Philosophy of Education 3
EDUC 500 Graduate Seminar 1
EDUC 521 Psychology of Learning 3

Counseling Core:
PSYC 440 Behavior Modification 3
EDUC 426 Principles and Procedures of Guidance 3
PSYC 431 Psychology of Exceptional Children 3
PSYC 499 Vocational Development Theory 3
PSYC 513 Counseling Theories and Techniques 3
PSYC 518 Group Counseling 2

Special Education Counseling Emphasis:
PSYC 533 Assessment and Instruction of Exceptional Students 4
EDUC 537 Instruction of Exceptional Students 4
PSYC 538 Counseling Exceptional Students and Parents 3
PSYC 563 Field Experience 3
PSYC 565 Practicum 6

School Counseling Emphasis:
PSYC 534 Assessment of the Individual 2
PSYC 563 Field Experience 3
PSYC 565 Practicum 6

Additional supporting courses from education and psychology, and/or from other departments, as needed to complete a minimum of 50 quarter hours specified for the counseling specialization.

The degree in counseling requires completion of the Educational Staff Associates certification program as approved by the state of Washington.

Elementary Instruction

Specialization Prerequisites: A major in elementary education or an equivalent concentration of 45 quarter hours.

Area Requirements: II quarter hours in professional education courses as defined under General Prerequisites No. 1. EDUC 390 Educational Evaluation or its equivalent must be included if it was not a part of the undergraduate sequence.

Fifteen quarter hours in academic content courses from departments other than education and psychology. These courses must be in subject-matter areas relevant to the content of the elementary curriculum.

Nine additional quarter hours to complete the minimum of 45 quarter hours.

Special Education

This course of study is designed to meet the requirements for a special education endorsement for certification in the state of Washington.

Specialization Prerequisites: Washington State teacher certification or an equivalent concentration of professional education courses.

Area Requirements:
PSYC 431 Psychology of Exceptional Students 3
SPED 530 Issues and Trends in Special Education 3
SPED 533 Assessment of Exceptional Students 4
SPED 537 Instruction of Exceptional Students 4
SPED 538 Counseling Exceptional Students and Their Parents 3
SPED 578 Field Work — Teaching in Special Education (required for endorsement, not graduate credit) 25

Ten additional quarter hours approved by the adviser in the Department of Education and Psychology to complete the minimum of 45 quarter hours.

Junior High Instruction

Specialization Prerequisites: Majors and/or minors in two content areas chosen for this specialization, or two equivalent subject-matter concentrations with a minimum of 27 quarter hours in each. The two content areas must be in academic subjects commonly taught at junior high level.

Area Requirements: II quarter hours in professional education courses as defined under General Prerequisites No. 1. Insofar as possible, these courses should be related to junior high curriculum and instruction.

Fifteen quarter hours in academic content courses from two departments other than education and psychology. These courses must be in the same general areas as the two prerequisite content areas specified above.
**Counseling and Guidance (50 quarter hours minimum)**

**Specialization Prerequisites:**
- EDUC 220 Foundations of Education 3
- PSYC 215 Psychology of Childhood and Adolescence 4
- PSYC 220 Educational Psychology 4
- PSYC 350 Elementary Statistics 4
- PSYC 430 Psychological Testing 3

**Basic Requirements:**
- EDUC 561 Methods of Research 3
- EDUC 562 Philosophy of Education 3
- EDUC 500 Graduate Seminar 1
- EDUC 521 Psychology of Learning 3

**Counseling Core:**
- PSYC 440 Behavior Modification 3
- EDUC 426 Principles and Procedures of Guidance 3
- PSYC 431 Psychology of Exceptional Children 3
- PSYC 489 Vocational Development Theory 3
- PSYC 513 Counseling Theories and Techniques 3
- PSYC 516 Group Counseling 2

**Special Education Counseling Emphasis:**
- PSYC 533 Assessment and Instruction of Exceptional Students 4
- EDUC 537 Instruction of Exceptional Students 4
- PSYC 538 Counseling Exceptional Students and Parents 3
- PSYC 563 Field Experience 3
- PSYC 565 Practicum 6

**School Counseling Emphasis:**
- PSYC 534 Assessment of the Individual 2
- PSYC 563 Field Experience 3
- PSYC 565 Practicum 6

Additional supporting courses from education and psychology, and/or from other departments, as needed to complete a minimum of 50 quarter hours specified for the counseling specialization.

The degree in counseling requires completion of the Educational Staff Associates certification program as approved by the state of Washington.

**Elementary Instruction**

**Specialization Prerequisites:** A major in elementary education or an equivalent concentration of 45 quarter hours.
Nine additional quarter hours to complete the minimum of 45 quarter hours.

Secondary Instruction

Specialization Prerequisites: A major in the area of content specialization or an equivalent concentration of 45 quarter hours.

Area Requirements: 24 quarter hours in academic content courses related to an approved area of specialization. All courses for the 24 quarter hours specialization must be chosen in consultation with and approved by an adviser in the department(s) concerned.

In specialization where only one content area is emphasized (e.g., English), up to six of the 24 quarter hours may be selected from not more than two supporting departments other than the major area of emphasis. In interdisciplinary areas (*), courses must be distributed among areas listed in parentheses according to the needs and interests of the candidates.

The approved areas of specialization are:

Biology
* Biophysics (biology, chemistry, engineering, mathematics, physics)
Chemistry
Business Teacher Education
English
History
Industrial Arts
* Language Arts (English, communications, journalism, library science)
Mathematics
Physical Education
Physics
* Social Science (history, political science, sociology)

Eleven quarter hours in professional education courses as defined under General Prerequisites No. 1. Insofar as possible, these courses should be related to secondary curriculum and instruction. All professional education courses must be approved by an assigned adviser in the Education and Psychology Department.

MASTER OF ARTS — IN EDUCATION (M.A.)

In the master of arts program, candidates with appropriate backgrounds may specialize within an approved general area of education according to their interests. The inclusion of a thesis requirement provides an opportunity for the development of scholarly investigative and reporting skills. It particularly serves those wishing to contribute to knowledge through research, or those aspiring toward a higher degree beyond the master’s.

Qualified candidates seeking denominational or state certification as a teacher, principal or counselor may coordinate many of the requirements of the degree with preparation for the certificate. However, completion of minimum M.A. requirements will rarely satisfy certification requirements in their entirety. Students pursuing a certificate of any kind should consult with the credential adviser early in their program sequence.

Prerequisites

In addition to admission requirements for the master’s degree program, as described elsewhere in this bulletin, an M.A. candidate must meet the prerequisites listed under the chosen area of specialization. Unless specifically noted, there are no requirements with respect to work experience or certification either prior to or during the degree program.

Deficiencies may be removed after admission to graduate study, but the credit earned thereby will not apply to the minimum degree requirements. A plan for the removal of all deficiencies must be submitted prior to advancement to degree candidacy.

Basic Requirements (applicable to all M.A. programs)

Unless otherwise indicated, a minimum M.A. program comprises 45 quarter hours of credit. Some programs may include more than this minimum because of the nature of the specialization or to provide for the particular needs and interests of the student.

A minimum of 24 quarter hours for the M.A. degree must be from courses numbered 500 or above.

All courses included in the degree program must be approved by an assigned adviser in the Education and Psychology Department.

The following courses are required of all candidates:

EDUC 500 Graduate Seminar
EDUC 522 Philosophy of Education (before advancement to candidacy)
EDUC 561 Methods of Research (before advancement to candidacy)
EDUC 509 Thesis

Upon completion of nine to 15 quarter hours, a planned program of study must be submitted for consideration by the staff of the department. Recommendations will then be made to the Graduate Council concerning advancement to degree candidacy.

Areas of Specialization

The program of study for the area of specialization is planned in consultation with the departmental adviser to meet the individual needs and interests of each student. A minimum of 18 quarter hours is required in the chosen area. For many candidates, additional specialization credit beyond the minimum of 18 quarter hours may be desirable or necessary, especially if certification is also being sought.
Nine additional quarter hours to complete the minimum of 45 quarter hours.

Secondary Instruction

Specialization Prerequisites: A major in the area of content specialization or an equivalent concentration of 45 quarter hours.

Area Requirements: 24 quarter hours in academic content courses related to an approved area of specialization. All courses for the 24 quarter hours specialization must be chosen in consultation with and approved by an adviser in the department(s) concerned.

In specialization where only one content area is emphasized (e.g., English), up to six of the 24 quarter hours may be selected from not more than two supporting departments other than the major area of emphasis. In interdisciplinary areas*, courses must be distributed among areas listed in parentheses according to the needs and interests of the candidates.

The approved areas of specialization are:

- Biology
  - Biophysics (biology, chemistry, engineering, mathematics, physics)
- Chemistry
- Business Teacher Education
- English
- History
- Industrial Arts
- Language Arts (English, communications, journalism, library science)
- Mathematics
- Physical Education
- Physics
- Social Science (history, political science, sociology)

Eleven quarter hours in professional education courses as defined under General Prerequisites No. 1. Wherever possible, these courses should be related to secondary curricula and instruction. All professional education courses must be approved by an assigned adviser in the Education and Psychology Department.

MASTER OF ARTS — IN EDUCATION (M.A.)

In the master of arts program, candidates with appropriate backgrounds may specialize within an approved general area of education according to their interests. The inclusion of a thesis requirement provides an opportunity for the development of scholarly investigative and reporting skills. It particularly serves those wishing to contribute to knowledge through research, or those aspiring toward a higher degree beyond the master's.

Qualified candidates seeking denominational or state certification as a teacher, principal or counselor may coordinate many of the requirements of the degree with preparation for the certificate. However, completion of minimum M.A. requirements will rarely satisfy certification requirements in their entirety. Students pursuing a certificate of any kind should consult with the credential adviser early in their program sequence.

Prerequisites

In addition to admission requirements for the master's degree program, as described elsewhere in this bulletin, an M.A. candidate must meet the prerequisites listed under the chosen area of specialization. Unless specifically noted, there are no requirements with respect to work experience or certification either prior to or during the degree program.

Deficiencies may be removed after admission to graduate study, but the credit earned thereby will not apply to the minimum degree requirements. A plan for the removal of all deficiencies must be submitted prior to advancement to degree candidacy.

Basic Requirements (applicable to all M.A. programs)

Unless otherwise indicated, a minimum M.A. program comprises 45 quarter hours of credit. Some programs may include more than this minimum because of the nature of the specialization or to provide for the particular needs and interests of the student. A minimum of 24 quarter hours for the M.A. degree must be from courses numbered 500 or above.

All courses included in the degree program must be approved by an assigned adviser in the Education and Psychology Department.

The following courses are required of all candidates:

- EDUC 500 Graduate Seminar
- EDUC 522 Philosophy of Education (before advancement to candidacy)
- EDUC 561 Methods of Research (before advancement to candidacy)
- EDUC 509 Thesis

Upon completion of nine to 15 quarter hours, a planned program of study must be submitted for consideration by the staff of the department. Recommendations will then be made to the Graduate Council concerning advancement to degree candidacy.

Areas of Specialization

The program of study for the area of specialization is planned in consultation with the departmental adviser to meet the individual needs and interests of each student. A minimum of 18 quarter hours is required in the chosen area. For many candidates, additional specialization credit beyond the minimum of 18 quarter hours may be desirable or necessary, especially if certification is also being sought.
Specializations may be planned in the following approved areas:

School Administration

Specialization Prerequisites: Three years of satisfactory, certificated classroom teaching.

Area Requirements: 18 quarter hours in courses related to school administration and supervision.

Twelve additional quarter hours to complete the minimum of 45 quarter hours.

Although EDUC 550 Administrative Practicum is required for candidates working toward a Washington state principal's credential, it does not apply toward the minimum of 45 quarter hours.

Curriculum and Instruction

Specialization Prerequisites: 30 quarter hours in professional education. Any course, from any department, will satisfy the intent of this requirement if its emphasis is specifically directed toward instructional-learning principles, pupil characteristics, teaching methodology, curriculum materials, or the role and function of various school personnel.

Not less than nine months of verified, satisfactory educational work experience. Up to 30 quarter hours for the M.A. degree may be earned prior to the experience, but a minimum of 15 quarter hours must be earned thereafter.

Verification of the experience must be by letter from an administrator under whom the experience was gained. The letter should attest to the time spent, the nature of the activities and the quality of performance. It is the responsibility of the candidate to obtain this verification.

Area Requirements: 18 quarter hours in professional education courses as defined under specialization prerequisites, above. Insofar as possible, emphasis should be directed toward one of the following: preschool, elementary, junior high, secondary or higher education. Twelve quarter hours in supporting academic content courses from departments other than education and psychology. These courses must be in subject-matter clearly related to the area of emphasis chosen for specialization. The junior high, secondary and higher education levels, supporting courses must be from not more than two content areas.

Educational Foundations

Specialization Prerequisites: A minor in psychology or sociology, or an equivalent concentration of 28 quarter hours in one of these areas. Six quarter hours in philosophy and three quarter hours in educational psychology. These quarter hours may be an inclusive part of, and not necessarily additional to, the minor prerequisite stated above.

Area Requirements: 18 quarter hours in not more than two of the following areas: historical, philosophical, sociological and psychological foundations of education.
Specializations may be planned in the following approved areas:

School Administration

Specialization Prerequisites: Three years of satisfactory, certificated classroom teaching.

Area Requirements: 18 quarter hours in courses related to school administration and supervision.

Twelve additional quarter hours to complete the minimum of 45 quarter hours.

Although EDUC 590 Administrative Practicum is required for candidates working toward a Washington state principal’s credential, it does not apply toward the minimum of 45 quarter hours.

Curriculum and Instruction

Specialization Prerequisites: 30 quarter hours in professional education. Any course from any department, will satisfy the intent of this requirement if its emphasis is specifically directed toward instructional-learning principles, pupil characteristics, teaching methodology, curriculum materials, or the role and function of various school personnel.

Not less than nine months of verified, satisfactory educational work experience. Up to 30 quarter hours for the M.A. degree may be earned prior to the experience, but a minimum of 15 quarter hours must be earned thereafter.

Verification of the experience must be by letter from an administrator under whom the experience was gained. The letter should attest to the time spent, the nature of the activities and the quality of performance. It is the responsibility of the candidate to obtain this verification.

Area Requirements: 18 quarter hours in professional education courses as defined under specialization prerequisites, above. Insofar as possible, emphasis should be directed toward one of the following: preschool, elementary, junior high, secondary or higher education. Twelve quarter hours in supporting academic content courses from departments other than education and psychology. These courses must be in subject-matter clearly related to the area of emphasis chosen for specialization. On the junior high, secondary and higher education levels, supporting courses must be from not more than two content areas.

Educational Foundations

Specialization Prerequisites: A minor in psychology or sociology, or an equivalent concentration of 28 quarter hours in one of these areas. Six quarter hours in philosophy and three quarter hours in educational psychology. These quarter hours may be an inclusive part of, and not necessarily additional to, the minor prerequisite stated above.

Area Requirements: 18 quarter hours in not more than two of the following areas: historical, philosophical, sociological and psychological foundations of education.

Candidates specializing in psychological foundations should choose courses related to learning, development, measurement and statistics. Twelve quarter hours to complete the minimum of 45 quarter hours.

Counselling and Guidance (50 quarter hours minimum)

Specialization Prerequisites: A minor in psychology or an equivalent 28 quarter hours including elementary statistics and a course in child and adolescent development. Fifteen quarter hours in professional education, as defined under the Specialization Prerequisites for Curriculum and Instruction. These quarter hours may be an inclusive part of, and not necessarily additional to, the minor prerequisite stated above.

Area Requirements: 18 quarter hours in courses related to counselling, psychology and guidance activities or theory. Must include courses in counselling techniques, measurement theory and assessment skills.

Six quarter hours in PSYC 565 Practicum in Counseling.

Eleven quarter hours to complete the minimum of 50 quarter hours specified for the counseling specialization.

Religious Education (45 quarter hours minimum)

Basic/Core Requirements: The basic requirements listed on page 39 of this bulletin, which are applicable to all M.A. programs, will apply. These requirements include both the number of hours which must be taken as well as the specific courses which are required. A total of 12 hours of education courses, in addition to the thesis, will be required.

Prerequisites: A major or minor in Theology or Religion, or 30 approved hours of religion courses with a minimum of nine at the upper division level. Students with deficiencies in this area may, with advisement, take undergraduate religion courses on the WWU campus to fulfill the prerequisite.

Specialization Area Requirements: A minimum of 20 quarter hours of credit in the area of religious studies must be taken. These hours must include at least two classes in the area of Biblical studies, three in the area of theology and ethics and one in the area of religious education methods. An eight hour thesis will be required.

Individualized Option

A candidate wishing to pursue a specialization in an area other than any listed above may submit for consideration by the departmental staff and the Graduate Council an individualized self-planned proposal totaling at least 18 quarter hours in a chosen specialization area with appropriate prerequisites. Additional supporting credits, as needed to complete the degree, will be selected in harmony with all other specified degree requirements. It is essential that this type of program be planned in consulta-

with an assigned adviser in the Department of Education and Psychology.

TEACHING CERTIFICATION

Walla Walla College is a state-approved teacher education institution. As such, it is authorized to recommend graduates to the Washington State Department of Educa-

tion for the initial and continuing certificates.

The course offerings also provide for teaching certificates currently available from the General Conference Department of Education. Information concerning specific certificates is available in the regular bulletin and/or from the certification consultant.
EDUC 501 ADMINISTRATION OF THE SECONDARY SCHOOL
Problems and procedures in the organization and administration of secondary schools.

EDUC 556 CURRICULUM PLANNING
The relation of curricular materials to educational outcomes in terms of personal and social values. A brief review of curriculum investigations and their significance in the selection and evaluation of school materials and activities. Current practices in curriculum revisions.

EDUC 558 SCHOOL ACTIVITIES
Designed to acquaint the student with a range of school activities programs to define the nature of school activities to provide him with the valid basis for evaluating existing or proposed activities, and to provide opportunity for intensive study of one activity.

EDUC 560 ADMINISTRATIVE PRACTICUM
Professional laboratory experience for candidates for an administrative credential. The course is designed to involve each candidate in a variety of practical administrative experiences and to utilize in his successful induction into school leadership. By permission of the department chairman.

EDUC 561 METHODS OF RESEARCH
Procedures in the selection and evaluation of research projects and techniques in the analysis of research data.

EDUC 567 COMPARATIVE EDUCATION
A comparison of systems and philosophies of education in various parts of the world; emphasis on the role of cultural forces.

EDUC 578 READINGS IN EDUCATION
Advanced study confined to topical areas where the student can demonstrate a considerable degree of expertise due to previous formal studies and/or experience. To be chosen under the guidance and direction of a faculty member. The student will engage in an analysis of current literature, written and/or oral reports will be required. By permission of the department chairman.

EDUC 581 PROFESSIONAL PROJECT
Selected areas of advanced study involving reading and research. Formal report required. Prerequisite: consent of department chairman and graduate standing. Two, four or six hours any quarter; maximum, 12.

EDUC 590 THESIS
4, 8, 8

GRADUATE COURSES — Special Education

SPED 550 ISSUES AND TRENDS IN SPECIAL EDUCATION
A study of current literature and legislation pertaining to special education and models for the delivery of these services.

SPED 553 ASSESSMENT OF EXCEPTIONAL STUDENTS
Examination and administration of assessment measures for exceptional students. Prerequisite: PSYC 431.

SPED 557 INSTRUCTION OF EXCEPTIONAL STUDENTS
Development and implementation of individualized instructional programs.

SPED 558 COUNSELING EXCEPTIONAL STUDENTS AND THEIR PARENTS
Discussion and practice of counseling techniques with parents and students regarding academic, behavioral and vocational concerns.

SPED 590 FIELD WORK AND TEACHING IN SPECIAL EDUCATION
8
Basic Requirements for Continuing Certificate

To be recommended for the Washington continuing certificate, the candidate must fulfill the following requirements:
1. Hold a valid Washington initial certificate.
2. Complete three years of successful certificated teaching (K-12).
3. Complete an approved program of 45 quarter hours beyond the initial certificate.

Of the 45 quarter hours, 23 must be in residence; 15 may be earned prior to the first year of teaching; at least 30 quarter hours must be earned after the first year of teaching.

Planned program must be approved by a certification counselor in the Education Department. It is sometimes possible, with careful planning, for a student to complete the requirements for the master's degree in education and the requirements for the continuing certificate in roughly the same period.

GRADUATE COURSES — Education

EDUC 500 GRADUATE SEMINAR
Discussion periods in which faculty and students explore significant issues through the integration and analysis of research and appropriate literature in the area of education. One-quarter hour: minimum, three.

EDUC 504 ELEMENTARY SCHOOL CURRICULUM
A study of the elementary school curriculum, including objectives, essentials of a good program, varying curricula patterns and appraisal of current practices.

EDUC 518 SECONDARY SCHOOL CURRICULUM
Overview of the secondary school curriculum, with emphasis on the various subject fields; organization of the school for curriculum development; educational objectives; the course of study; evaluation of the secondary school curriculum.

EDUC 522 PHILOSOPHY OF EDUCATION
A study of the basic philosophies and development of educational thinking resulting in the formulation of aims and objectives of education for today's schools.

EDUC 525 EDUCATION IN THE TWENTIETH CENTURY
Intended to help the student become conscious with significant problems, issues, trends and proposals affecting the theory and practice of education today.

EDUC 526 SCHOOL FINANCE
A course designed for administrators, emphasizing origins and distortion of school funds.

EDUC 527 SCHOOL PLANNING AND CONSTRUCTION
A survey of how to plan and build schools, including the involvement of the lay citizen. Selection of site, types of design, function of buildings and plant, code and cost limitations will be studied.

EDUC 528 CORRECTIVE READING
Analysis, correction and prevention of reading problems are studied along with refinement of group and informal testing. Supervision practices with pupils having reading disabilities in reading. Prerequisite: EDUC 362.

EDUC 530 SUPERVISION
For principals, classroom teachers or those planning to be supervisors. Identifies duties of both teacher and supervisors, and suggests methods for the improvement of teachers in service through a comprehensive supervision program.

EDUC 544 ADMINISTRATION OF THE ELEMENTARY SCHOOL
Organization, supervision and administration of elementary schools.

EDUC 598 SCHOOL LAW
This course is designed to acquaint the student with the legal basis for public and parochial school operations in the United States.
SUPPORTING COURSES

GRADED COURSES — Psychology/Counseling

PSYC 501 STATISTICS IN RESEARCH
An introduction to sampling theory, probability and statistical inference as applied to research analysis and hypothesis testing. Includes simple multivariate techniques and a limited discussion in terms of significance. Prerequisite: PSYC 350 or equivalent.

PSYC 512 COUNSELING THEORIES AND TECHNIQUES
A study and application of the theories and techniques for counseling. Professional relationships and ethics are considered.

PSYC 518 GROUP COUNSELING
Theories and techniques of counseling in group situations. Prerequisite: PSYC 503.

PSYC 521 PSYCHOLOGY OF LEARNING
The physiological and psychological basis for mental learning are discussed, and the experimental evidence supporting psychological hypotheses is reviewed.

PSYC 532 INDIVIDUAL TESTING — Intelligence
Supervised experience in the administration, interpretation, and writing of psychological reports. Verbal and performance scales of the Stanford-Binet, Wechsler Intelligence Scales, and equivalent subtests will be given. Emphasis will be on their and韦斯勒 Intelligence Scales. Prerequisite: PSYC 320 and permission of the instructor.

PSYC 534 ASSESSMENT OF THE INDIVIDUAL
Methods applicable to comprehensive assessment for describing behavior. Experience in the collection and analysis of data will be provided. Prerequisite: PSYC 332.

PSYC 563 FIELD EXPERIENCE
Designed to provide a broad spectrum of experience in actual field settings under supervised direction. Permission of the instructor required.

PSYC 565 PRACTICUM IN COUNSELING
Professional experience in the counseling function. Prerequisites: PSYC 555, PSYC 554 and permission of the instructor.

GRADUATE COURSES — Religion

REL 500 1 ADVANCED NEW TESTAMENT EXEGESIS
Study of one of the following portions of the New Testament: 1. Historical and literary context. 2. Historical and literary context. 3. Critical evaluation of the text. 4. The political setting of the text. 5. The social setting of the text. 6. The religious setting of the text. Prerequisite: PSYC 350 or equivalent.

REL 502 OLD TESTAMENT THEMES
Study of the Old Testament. Themes include the nature of the text, biblical criticism, historical criticism, and the nature of the text. Prerequisite: PSYC 350 or equivalent.

REL 504 OLD TESTAMENT EXEGESIS
Study of the Old Testament. Exegesis is explained in depth study of the Old Testament. Prerequisite: PSYC 350 or equivalent.

REL 603 OLD TESTAMENT IN SOCIAL AND CULTURAL PERSPECTIVE
Study of nature interpretations of the Old Testament from sociological and anthropological perspectives. This is a discussion of how western culture has affected the study of the Old Testament.

REL 604 STUDIES IN ADVENTIST HISTORY
Study of selected topics in Adventist history and theology. Key topics are as follows: Theological and ecclesiastical development, the history of Adventist institutes, and the theory of practice of missions and evangelism.

REL 511 READINGS IN SPIRITUAL CLASSICS
A study of literature which has contributed to the understanding of Christian life and experience. Among authors are Augustine, Teresa of Avila, John Wesley, Charles Wesley, and George Fox.

REL 525 PRACTICUM IN RELIGIOUS EDUCATION
Supervised practice in Religious education. Will take place in school or institutional church setting. Prerequisite of School of Theology required.

REL 530 FOUNDATIONS OF RELIGIOUS EDUCATION
A survey of the scriptural, historical, philosophical, and psychological bases of religious education.

REL 521 SELECTED THEMES IN THE HISTORY OF CHRISTIAN ETHICS
Themes will include war and violence, sexual ethics, economics, and the mission of Christians to secular government.

REL 541 STUDIES IN CHRISTIAN SYSTEMATIC THEOLOGY
Expansion of selected issues, such as scripture, Christology, creation, eschatology, Sabbath, salvation, with emphasis on applications for the doctrine of the church.

SUPPORTING COURSES — Education

EDUC 501 LANGUAGE ARTS IN THE ELEMENTARY SCHOOL
A study of various current issues in language arts education, with emphasis on research and its practical implications for teaching. Units and programs of the language arts in the elementary school curriculum.

EDUC 521 READING IN THE ELEMENTARY SCHOOL
A basic understanding of current theory, effective instructional procedures, learning resources, and the experience for teachers of reading in the primary and intermediate grades of the elementary school.

EDUC 375 MATHEMATICS IN THE ELEMENTARY SCHOOL
Survey of the content, media, and processes used in teaching mathematics in the elementary school; emphasis on newer approaches.

LIBR 504 LIBRARY MATERIALS FOR CHILDREN
See the Library Science section of the undergraduate bulletin.

ENGL 375 LITERATURE IN THE ELEMENTARY SCHOOL
See the English section of the undergraduate bulletin.

ENGL 375 LITERATURE IN THE SECONDARY SCHOOL
See the English section of the undergraduate bulletin.

EDUC 373 CLASSROOM MANAGEMENT
Introduction to various strategies of the teaching environment and the special considerations required in small schools and multigrade classrooms. Explores the human relations within the teaching profession.

EDUC 390 EDUCATIONAL EVALUATION
Introduction to principles and techniques of evaluating classroom elementary and secondary schools.

HLED 502 METHODS OF SCHOOL HEALTH INSTRUCTION
See the Health, Physical Education and Recreation section of the undergraduate bulletin.

PETH 395 METHODS OF TEACHING SECONDARY PHYSICAL EDUCATION
See the Physical Education and Recreation section of the undergraduate bulletin.

EDUC 404 HISTORY OF EDUCATION
Survey of the history of education.

EDUC 426 PRINCIPLES AND PROCEDURES OF GUIDANCE
Introduction to the philosophy, functions, organization, and evaluation of the school guidance program.

INDS 428 HANDWORK ACTIVITIES
Study of handwork activities as applied to the elementary grades and recreational activities; emphasis on methods of application, materials and processes.

SOC 444 SOCIOLOGY OF EDUCATION
See the Sociology and Social Work section of the undergraduate bulletin.

EDUC 450 SOCIAL STUDIES, RELIGION, SCIENCE AND HEALTH IN THE ELEMENTARY SCHOOL
Examination of current materials and methodology used in the elementary curriculum in the areas of social studies, religion, science and health. Classroom observation and teaching will be required.

EDUC 452 DIRECTED TEACHING — In-Service
Directed laboratory experience for a teacher desiring to improve his professional skills. Includes team teaching in methods of analysis of teaching and practice in methods of self-analysis. Participation only by permission of the Student Teaching Committee after completion of the required courses in professional education.

44
GRADUATE COURSES — Psychology/Counseling

PSYC 561 STATISTICS IN RESEARCH
An introduction to sampling theory, probability and statistical inference as applied throughout analysis and hypothesis testing. Includes descriptive and inferential techniques and a classical hypothesis testing.
Prerequisite: PSYC 350 or equivalent.

PSYC 562 COUNSELING THEORIES AND TECHNIQUES
A study of the theories and techniques of counseling. Professional relationships and ethics are considered.

PSYC 563 GROUP COUNSELING
Theories and techniques of counseling in group situations. Prerequisite: PSYC 562.

PSYC 564 PSYCHOLOGY OF LEARNING
The physiological and psychological bases for instructional learning are discussed, and the experimental evidence supporting psychological hypotheses is reviewed.

PSYC 565 INSTRUCTIONAL TESTING — Intelligence
Supervised experience in the administration, interpretation, and writing of psychological tests. Preparatory materials: tests of intelligence. Prerequisite: PSYC 565 and permission of the instructor.

PSYC 566 ASSESSMENT OF THE INDIVIDUAL
Methods applicable to comprehensive assessment for describing behavior. Experience in the collection and analysis of data will be provided. Prerequisite: PSYC 562.

PSYC 567 FIELD EXPERIENCE
Designed to provide a broad spectrum of experience in actual field settings under supervised direction. Permission of the instructor required.

PSYC 568 PRACTICUM IN COUNSELING
Professional experience in the counseling function. Prerequisites: PSYC 565, PSYC 566, and permission of the instructor.

GRADUATE COURSES — Religion

REL 509I ADVANCED NEW TESTAMENT EXEGESIS

REL 510 NEW TESTAMENT THEMES

REL 511 OLD TESTAMENT EXEGESIS

REL 512 THE OLD TESTAMENT IN SOCIAL AND CULTURAL PERSPECTIVE
Study of various interpretations of the Old Testament from sociological and anthropological perspectives. Included in the discussion is the influence of western culture on the study of the Old Testament.

REL 513 STUDIES IN ADVENTIST HISTORY
Study of selected aspects of Adventist history and theology. Key aspects are as follows: Theological and ecclesiastical development, the history of Adventist districts, and the history and practice of missions and evangelism.

REL 514 READINGS IN SPIRITUAL CLASSICS
A series of scriptures known for their contributions to the understanding of Christian life and per- sonality. Among the authors are Augustine, Teresa of Avila, John of the Cross, John Wesley, and George Fox.

REL 515 PRACTICUM IN RELIGIOUS EDUCATION
Supervised practicum in Religious education. Will take place in school or institutional church settings. Permission of School of Theology required.

REL 516 FOUNDATIONS OF RELIGIOUS EDUCATION
A survey of the scriptural, historical, philosophical, and psychological bases of religious education.

SUPPORTING COURSES

RELT 521 SELECTED THEMES IN THE HISTORY OF CHRISTIAN ETHICS
Themes will include war and violence, sexual ethics, economics, and the relation of Christ- ians to secular government.

RELT 541 STUDIES IN CHRISTIAN SYSTEMATIC THEOLOGY
Examination of selected issues, such as election, Christology, creation, eschatology, Sab- bath, salvation, with emphasis on implications for the doctrine of the church.

SUPPORTING COURSES — Education

EDUC 501 LANGUAGE ARTS IN THE ELEMENTARY SCHOOL
A study of topics currently important in language arts education, with emphasis on research and its practical implications for teaching, methods and programs of the language arts in the elementary school curriculum.

EDUC 502 READING IN THE ELEMENTARY SCHOOL
A basic introductory survey of reading, including instructional procedures, learning resources, and the experience for teachers of reading in the primary and intermediate grades of the elementary school.

EDUC 527 MATHEMATICS IN THE ELEMENTARY SCHOOL
Survey of the course, media and procedures used in teaching mathematics in the elementary school, emphasis on newer approaches.

LJBR 274 LIBRARY MATERIALS FOR CHILDREN
See the Library Science section of the undergraduate bulletin.

ENGL 374 LITERATURE IN THE ELEMENTARY SCHOOL
See the English section of the undergraduate bulletin.

ENGL 375 LITERATURE IN THE SECONDARY SCHOOL
See the English section of the undergraduate bulletin.

EDUC 375 CLASSROOM MANAGEMENT
Introduction to initial structuring of the learning environment and the special considerations required in small schools and multisite classrooms. Explores the human relations within the teaching profession.

EDUC 390 EDUCATIONAL EVALUATION
Introduction to principles and techniques of evaluating classroom elementary and secondary schools.

HLED 356 METHODS OF SCHOOL HEALTH INSTRUCTION
See the Health, Physical Education and Recreation section of the undergraduate bulletin.

PETH 356 METHODS OF TEACHING SECONDARY PHYSICAL EDUCATION
See the Physical Education and Recreation section of the undergraduate bulletin.

EDUC 401 HISTORY OF EDUCATION
Survey of the history of education.

EDUC 426 PRINCIPLES AND PROCEDURES OF GUIDANCE
Introduction to the philosophy, functions, organization, and evaluation of the school guidance program.

INDS 428 WORKSHOP ACTIVITIES
Study of workshop activities as applied to the elementary grades and recreational activities; emphasis on methods of application, materials and procedures.

SOC 444 SOCIOLOGY OF EDUCATION
See the Sociology and Social Work section of the undergraduate bulletin.

EDUC 450 SOCIAL STUDIES, RELIGION, SCIENCE AND HEALTH IN THE ELEMENTARY SCHOOL
Examination of current materials and methodology used in the elementary curriculum in the areas of social studies, religion, science and health. Classroom observations and teaching will be required.

EDUC 452 PROFESSIONAL TEACHING — In-Service
Directed laboratory experience for a teacher desiring to improve his professional skills. Includes training in methods of analysis of teaching and practice in methods of self-analysis. Registration only by permission of the Student Teaching Committee after completion of the required courses in professional education.
EDUC 461 METHODS OF AUDIOVISUAL EDUCATION
Survey of the methods of instruction through the use of audiovisual aids.

EDUC 462 INSTRUCTIONAL AIDS — PRODUCTION
Experiences in the production of instructional aids.

PETH 473 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL
See the Health, Physical Education and Recreation section of the undergraduate bulletin.

EDUC 474 WORKSHOP
Workshop in selected areas of educational concern. Designed for both experienced teachers and those preparing to enter the teaching profession. One to three quarter hours; maximum, six quarter hours.

EDUC 475 TEACHING READING SKILLS IN CONTENT AREAS
Introduction to diagnosis, vocabulary, comprehension, skills, rate, variation, management and study skills in junior high and secondary teaching.

EDUC 477 INDEPENDENT STUDY IN EDUCATION
Directed study in an approved area. Permission from the chairman of the department and supervising instructor required. One to three quarter hours any quarter; maximum, six quarter hours.

EDUC 478 ELEMENTARY MICROTEACHING
A teaching laboratory to prepare elementary teachers in skills necessary to effective teaching. Students present brief demonstration lessons to a small class of children. Self-evaluation is supervised by evaluation of supervisors, practicing teachers and peers, along with video recordings. Prerequisite: Admission into Phase II and one methods course in the student's major or minor area of study.

EDUC 492 EDUCATION OF THE GIFTED
Introduction to the design of learning opportunities for gifted children in the light of their psychological characteristics.

EDUC 493 SYSTEMS OF THOUGHT
Intensive study of various aspects of philosophical thinking and their bearing upon education. Emphasis on reading and writing.

EDUC 495 ELEMENTARY SCHOOL GUIDANCE
Study of the rationale for elementary school guidance work, empathy, group, current research and issues. Emphasis on the skills and techniques of both classroom and out-of-class guidance functions and services.

SUPPORTING COURSES — Psychology

PSYC 100 is prerequisite to all other courses in psychology.

PSYC 360 ELEMENTARY STATISTICS
Introduction to fundamental procedures for summarizing and interpreting quantitative data from tests and research in the social sciences.

PSYC 360 SMALL GROUP PROCEDURES
Study of small group processes by the use of simulation, configuration techniques and role playing. Especially useful for teachers, ministers, nurses and social workers.

PSYC 385 EXPERIMENTAL PROBLEMS
Advanced study of experimental design with application to an individual research project. Prerequisite: PSYC 350 or equivalent.

PSYC 400 TOPICS IN PSYCHOLOGY
The study of advanced topics through class activities. One to three hours per quarter.
EDUC 461 METHODS OF AUDIOVISUAL EDUCATION
Survey of the methods of instruction through the use of audiovisual aids.

EDUC 462 INSTRUCTIONAL AIDS — PRODUCTION
Experiences in the production of instructional aids.

PETH 470 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL
See the Health, Physical Education and Recreation section of the undergraduate bulletin.

EDUC 471 WORKSHOP
Workshop in selected areas of educational concerns. Designed for both experienced teachers and those preparing to enter the teaching profession. One to three quarter hours; maximum, six quarter hours.

EDUC 475 TEACHING READING SKILLS IN CONTENT AREAS
Introduction to diagnosis, vocabulary, comprehension skills, rate, variation, management and study skills in junior high and secondary reading.

EDUC 477 INDEPENDENT STUDY IN EDUCATION 1-3
Directed study in an approved area. Permission from the chairman of the department and supervising instructor is required. One to three hours any quarter; maximum, six quarter hours.

EDUC 478 ELEMENTARY MICROTEACHING
A teaching laboratory to prepare elementary teachers in skills necessary to effective teaching. Students present brief demonstration lessons in a small class of children. Self-evaluation is supplemented by evaluation of supervision, practicing teachers and peers, along with video recordings. Prerequisite: Admission into Phase II and two methods courses.

EDUC 479 SECONDARY MICROTEACHING
Teaching procedures which are applicable at any level are considered. Laboratory practice in certain teaching skills will be provided following the microteaching model. The class will meet in small groups of up to four students who will participate weekly in an afternoon teaching laboratory. Prerequisite: Admission into Phase II and one methods course in the student’s major or minor area of study.

EDUC 482 EDUCATION OF THE GIFTED
Introduction to the design of learning opportunities for gifted children in the light of their psychological characteristics.

EDUC 483 SYSTEMS OF THOUGHT
Intensive study of various aspects of philosophical thinking and their bearing on education. Emphasis is given to writing in education.

EDUC 485 ELEMENTARY SCHOOL GUIDANCE
Study of the rationale for elementary school guidance work, counseling procedures, current research and issues. Focuses on the tools and techniques of both classroom and out-of-class guidance functions and services.

SUPPORTING COURSES — Psychology
PSYC 100 is prerequisite to all other courses in psychology.

PSYC 300 ELEMENTARY STATISTICS
Introduction to statistical procedures for summarizing and interpreting quantitative data from tests and research in the social sciences.

PSYC 360 SMALL GROUP PROCEDURES
Study of small group process by the use of simulation, confrontation techniques and role playing. Especially useful for teachers, ministers, nurses and social workers.

PSYC 375 EXPERIMENTAL PROBLEMS
Advanced study of experimental designs with application to individual research projects. Prerequisite: PSYC 300 or equivalent.

PSYC 490 TOPICS IN PSYCHOLOGY
The study of advanced topics through class activities. One to three hours per quarter.
SUPPORTING COURSES

PSYC 499 ANALYSIS OF PSYCHOLOGICAL EXPERIMENTS
Experience in the analysis of psychological research.

SUPPORTING COURSES — General
Selected courses are available, with advice, from the following departments: Art, Biology, Business, Chemistry, Communications, English, Health, Industrial Technology, Physical and Recreational Education, History, Home Economics, Library Science, Mathematics, Modern Languages, Music, Office Administration, Physics, Sociology and Social Work.

ART
ART 364, 365, 366 SCULPTURE
ART 490 TOPICS IN ART
The study of advanced topics through class activities. One to three hours per quarter.
ART 479 DIRECTED RESEARCH/PROJECT
One to three hours any quarter; maximum, 6.

BIOLOGICAL SCIENCES (See pages 25-29)

BUSINESS
490 TOPICS IN BUSINESS
The study of advanced topics through class activities. One to three hours per quarter.
ACCT 422 ADVANCED ACCOUNTING
ACCT 423 CPA REVIEW
ACCT 427 FUND ACCOUNTING
ACCT 436 AUDITING CONCEPTS
ACCT 431 AUDITING PRACTICE
BEED 476 WORKSHOP IN BUSINESS EDUCATION
BEED 479 DIRECTED RESEARCH/PROJECT
Permission of chair of department required. One to three hours per quarter; maximum, 6.
BEED 490 PRINCIPLES OF BUSINESS EDUCATION
BEED 496 SEMINAR IN BUSINESS EDUCATION
ECON 448 MONEY AND BANKING
ECON 449 COMPARATIVE ECONOMIC SYSTEMS
ECON 455 PUBLIC FINANCE
FINA 481 INVESTMENTS
FINA 483 CREDIT ADMINISTRATION
MGMT 379 COMPENSATION MANAGEMENT
MGMT 478 HEALTH CARE ORGANIZATION AND MANAGEMENT
MGMT 476 MOTIVATION AND LEADERSHIP
MGMT 479 BUSINESS STRATEGY AND POLICIES
MKTG 481 PUBLIC RELATIONS
MKTG 485 RETAIL STORE OPERATION AND MANAGEMENT

CHEMISTRY
CHEM 301, 302, 303 PHYSICAL CHEMISTRY
CHEM 354, 355, 356 PHYSICAL CHEMISTRY LAB
CHEM 498 TOPICS IN CHEMISTRY
CHEM 477 ORGANIC STRUCTURES AND MECHANISMS
SUPPORTING COURSES

PSYC 405 ANALYSIS OF PSYCHOLOGICAL EXPERIMENTS
Experience in the analysis of psychological research.

SUPPORTING COURSES — General

Selected courses are available, with advisement, from the following departments: Art, Biology, Business, Chemistry, Communications, English, Health, Industrial Technology, Physical and Recreational Education, History, Home Economics, Library Science, Mathematics, Modern Languages, Music, Office Administration, Physics, Sociology and Social Work.

SUPPORTING COURSES
See the undergraduate bulletin for course descriptions and prerequisites.

ART
ART 264, 265, 266 SCULPTURE
ART 400 TOPICS IN ART
The study of advanced topics through class activities. One to three hours per quarter.
ART 479 DIRECTED RESEARCH/PROJECT
One to three hours any quarter; maximum, six.

BIOLOGICAL SCIENCES (See pages 25-29)

BUSINESS
400 TOPICS IN BUSINESS
The study of advanced topics through class activities. One to three hours per quarter.
ACCT 422 ADVANCED ACCOUNTING
ACCT 423 CPA REVIEW
ACCT 427 FUND ACCOUNTING
ACCT 430 AUDITING CONCEPTS
ACCT 431 AUDITING PRACTICES
BEED 474 WORKSHOP IN BUSINESS EDUCATION
BEED 479 DIRECTED RESEARCH/PROJECT
Permission of chair of department required. One to three hours per quarter; maximum, six.
BEED 491 PRINCIPLES OF BUSINESS EDUCATION
BEED 496 SEMINAR IN BUSINESS EDUCATION
ECON 441 MONEY AND BANKING
ECON 443 COMPARATIVE ECONOMIC SYSTEMS
ECON 455 PUBLIC FINANCE
FINA 481 INVESTMENTS
FINA 483 CREDIT ADMINISTRATION
MGMT 470 COMPENSATION MANAGEMENT
MGMT 475 HEALTH CARE ORGANIZATION AND MANAGEMENT
MGMT 476 MOTIVATION AND LEADERSHIP
MGMT 479 BUSINESS STRATEGY AND POLICIES
MKTG 481 PUBLIC RELATIONS
MKTG 485 RETAIL STORE OPERATION AND MANAGEMENT

CHEMISTRY
CHEM 301, 302, 303 PHYSICAL CHEMISTRY
CHEM 354, 355, 356 PHYSICAL CHEMISTRY LAB
CHEM 400 TOPICS IN CHEMISTRY
CHEM 427 ORGANIC STRUCTURES AND MECHANISMS
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 428</td>
<td>ORGANIC SYNTHESIS</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 431</td>
<td>BIOCHEMISTRY</td>
<td>4, 4</td>
</tr>
<tr>
<td>CHEM 461</td>
<td>OPTICAL INSTRUMENTAL METHODS</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 462</td>
<td>NON-OPTICAL INSTRUMENTAL METHODS</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 479</td>
<td>DIRECTED RESEARCH PROJECT</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>COMMUNICATIONS</td>
<td>SPCH 395 METHODS OF TEACHING SPEECH COMMUNICATION</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 396</td>
<td>TOPICS IN COMMUNICATION</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>SPCH 401</td>
<td>INTRODUCTION TO GENERAL SEMANTICS</td>
<td>2</td>
</tr>
<tr>
<td>SPCH 443</td>
<td>PERSUASIVE SPEAKING</td>
<td>4</td>
</tr>
<tr>
<td>SPCH 453</td>
<td>RHETORIC OF WESTERN THOUGHT</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 479</td>
<td>DIRECTED RESEARCH PROJECT</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>SPEECH PATHOLOGY AND AUDIOLOGY</td>
<td>SPPA 372 AUDIOMETRY</td>
<td>3</td>
</tr>
<tr>
<td>SPPA 385</td>
<td>LANGUAGE DISORDERS</td>
<td>3</td>
</tr>
<tr>
<td>SPPA 401</td>
<td>DIAGNOSIS IN SPEECH-LANGUAGE PATHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>SPPA 473</td>
<td>CLEFT PALATE</td>
<td>3</td>
</tr>
<tr>
<td>SPPA 475</td>
<td>VOICE DISORDERS</td>
<td>3</td>
</tr>
<tr>
<td>JOURNALISM</td>
<td>JOUR 400 TOPICS IN JOURNALISM</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>JOUR 402</td>
<td>SCRIPT WRITING</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 479</td>
<td>DIRECTED RESEARCH PROJECT</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>ENGLISH</td>
<td>ENGL 354 ROMANTIC ENGLISH LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 355</td>
<td>VICTORIAN LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 356</td>
<td>TWENTIETH-CENTURY ENGLISH LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 364</td>
<td>ROMANTIC AMERICAN LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 365</td>
<td>AMERICAN REALISM AND NATURALISM</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 366</td>
<td>TWENTIETH-CENTURY AMERICAN LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 374</td>
<td>LITERATURE IN THE ELEMENTARY SCHOOL</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 375</td>
<td>LITERATURE IN THE SECONDARY SCHOOL</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 394</td>
<td>DIRECTED READING</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>ENGL 395</td>
<td>METHODS OF TEACHING HIGH SCHOOL ENGLISH</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 444</td>
<td>MAJOR AUTHOR</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 445</td>
<td>SHAKESPEARE</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 454</td>
<td>LITERATURE OF THE BIBLE</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 455</td>
<td>CLASSICAL BACKGROUNDS</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 464</td>
<td>DEVELOPMENT OF ENGLISH DRAMA</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 466</td>
<td>LITERARY AND CRITICAL THEORY</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 479</td>
<td>DIRECTED RESEARCH PROJECT</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>ENGL 484</td>
<td>HISTORY OF THE ENGLISH LANGUAGE</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 496, 497</td>
<td>SEMINAR</td>
<td>3</td>
</tr>
<tr>
<td>HEALTH, PHYSICAL AND RECREATION</td>
<td>PETH 353, 354, 356 COACHING OF TEAM ACTIVITIES</td>
<td>3, 3, 4</td>
</tr>
<tr>
<td>PETH 395 METHODS OF TEACHING SECONDARY PHYSICAL EDUCATION</td>
<td>3, 3, 4</td>
<td></td>
</tr>
<tr>
<td>PETH 400 TOPICS IN PHYSICAL EDUCATION</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PETH 420 PHYSIOLOGY OF EXERCISE</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PETH 473 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PETH 479 DIRECTED RESEARCH PROJECT</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PETH 484 ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION AND RECREATION</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PETH 494 HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PETH 496 SEMINAR</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HISTORY AND POLITICAL SCIENCE</td>
<td>HIST 400 TOPICS IN HISTORY</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>HIST 479</td>
<td>DIRECTED RESEARCH PROJECT</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>HIST 496, 497</td>
<td>SEMINAR</td>
<td>3</td>
</tr>
<tr>
<td>American History</td>
<td>HIST 434 THE AMERICAN FRONTIER</td>
<td>4</td>
</tr>
<tr>
<td>HIST 445 CIVIL WAR AND RISE OF INDUSTRIAL AMERICA, 1850-1900</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HIST 446 HISTORY OF THE PACIFIC NORTHWEST</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HIST 448 TWENTIETH CENTURY AMERICA</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HIST 457 SOCIAL AND INTELLECTUAL HISTORY OF THE U.S.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>European History</td>
<td>HIST 435 HISTORY OF MODERN GERMANY</td>
<td>4</td>
</tr>
<tr>
<td>HIST 463</td>
<td>THE MIDDLE AGES</td>
<td>4</td>
</tr>
<tr>
<td>HIST 465</td>
<td>RENAISSANCE AND REFORMATION</td>
<td>4</td>
</tr>
<tr>
<td>HIST 477</td>
<td>ENLIGHTENMENT AND REVOLUTION</td>
<td>4</td>
</tr>
<tr>
<td>HIST 488 THE MODERN TRANSITION, 1815-1919</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HIST 499</td>
<td>CONTEMPORARY EUROPE, 1918 TO THE PRESENT</td>
<td>4</td>
</tr>
<tr>
<td>Political Science</td>
<td>PLSC 400 TOPICS IN POLITICAL SCIENCE</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>PLSC 426</td>
<td>AMERICAN POLITICAL THOUGHT</td>
<td>4</td>
</tr>
<tr>
<td>PLSC 477</td>
<td>AMERICAN DIPLOMATIC HISTORY</td>
<td>4</td>
</tr>
<tr>
<td>PLSC 494</td>
<td>INTERNATIONAL RELATIONS</td>
<td>4</td>
</tr>
<tr>
<td>COURSE CODE</td>
<td>COURSE TITLE</td>
<td>CREDITS</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>CHEM 443</td>
<td>ORGANIC SYNTHESIS</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 444</td>
<td>BIOCHEMISTRY</td>
<td>4, 4</td>
</tr>
<tr>
<td>CHEM 461</td>
<td>OPTICAL INSTRUMENTAL METHODS</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 462</td>
<td>NON-OPTICAL INSTRUMENTAL METHODS</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 479</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>3-4, 6</td>
</tr>
<tr>
<td>SPEECH 395</td>
<td>METHODS OF TEACHING SPEECH COMMUNICATION</td>
<td>3</td>
</tr>
<tr>
<td>SPEECH 400</td>
<td>TOPICS IN COMMUNICATION</td>
<td>3-3</td>
</tr>
<tr>
<td>SPEECH 401</td>
<td>INTRODUCTION TO GENERAL SEMANTICS</td>
<td>2</td>
</tr>
<tr>
<td>SPEECH 443</td>
<td>PERSUASIVE SPEAKING</td>
<td>4</td>
</tr>
<tr>
<td>SPEECH 453</td>
<td>RHETORIC OF WESTERN THOUGHT</td>
<td>3</td>
</tr>
<tr>
<td>SPEECH 479</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>3-3, 6</td>
</tr>
<tr>
<td>SPA 172</td>
<td>AUDIOMETRY</td>
<td>3</td>
</tr>
<tr>
<td>SPA 385</td>
<td>LANGUAGE DISORDERS</td>
<td>3</td>
</tr>
<tr>
<td>SPA 401</td>
<td>DIAGNOSIS IN SPEECH-LANGUAGE PATHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>SPA 473</td>
<td>CLEFT PALATE</td>
<td>3</td>
</tr>
<tr>
<td>SPA 475</td>
<td>VOICE DISORDERS</td>
<td>3</td>
</tr>
<tr>
<td>JOURNALISM</td>
<td>TOPICS IN JOURNALISM</td>
<td>1-3</td>
</tr>
<tr>
<td>JOUR 442</td>
<td>SCRIPT WRITING</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 479</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>3-3, 6</td>
</tr>
<tr>
<td>ENGL 354</td>
<td>ROMANTIC ENGLISH LITERATURE</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 355</td>
<td>VICTORIAN LITERATURE</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 356</td>
<td>TWENTIETH-CENTURY ENGLISH LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 364</td>
<td>ROMANTIC AMERICAN LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 365</td>
<td>AMERICAN REALISM AND NATURALISM</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 366</td>
<td>TWENTIETH-CENTURY AMERICAN LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 375</td>
<td>LITERATURE IN THE ELEMENTARY SCHOOL</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 376</td>
<td>LITERATURE IN THE SECONDARY SCHOOL</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 395</td>
<td>METHODS OF TEACHING HIGH SCHOOL ENGLISH</td>
<td>1-2</td>
</tr>
<tr>
<td>ENGL 444</td>
<td>MAJOR AUTHOR</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 445</td>
<td>SHAKESPEARE</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 454</td>
<td>LITERATURE OF THE BIBLE</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 455</td>
<td>CLASSICAL BACKGROUNDS</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 464</td>
<td>DEVELOPMENT OF ENGLISH DRAMA</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 466</td>
<td>LITERARY AND CRITICAL THEORY</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 479</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>3-3, 6</td>
</tr>
<tr>
<td>ENGL 484</td>
<td>HISTORY OF THE ENGLISH LANGUAGE</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 496, 497</td>
<td>SEMINAR</td>
<td>1, 2</td>
</tr>
<tr>
<td>HIST 309</td>
<td>THE AMERICAN FRONTIER</td>
<td>1</td>
</tr>
<tr>
<td>HIST 445</td>
<td>CIVIL WAR AND RISE OF INDUSTRIAL AMERICA, 1850-1900</td>
<td>4</td>
</tr>
<tr>
<td>HIST 446</td>
<td>HISTORY OF THE PACIFIC NORTHWEST</td>
<td>4</td>
</tr>
<tr>
<td>HIST 488</td>
<td>TWENTIETH-CENTURY AMERICA</td>
<td>4</td>
</tr>
<tr>
<td>HIST 487</td>
<td>SOCIAL AND INTELLECTUAL HISTORY OF THE U.S.</td>
<td>4</td>
</tr>
<tr>
<td>HIST 490</td>
<td>HISTORY OF MODERN GERMANY</td>
<td>4</td>
</tr>
<tr>
<td>HIST 493</td>
<td>THE MIDDLE AGES</td>
<td>4</td>
</tr>
<tr>
<td>HIST 495</td>
<td>RENAISSANCE AND REFORMATION</td>
<td>4</td>
</tr>
<tr>
<td>HIST 497</td>
<td>ENLIGHTENMENT AND REVOLUTION</td>
<td>4</td>
</tr>
<tr>
<td>HIST 498</td>
<td>THE MODERN TRANSITION, 1815-1919</td>
<td>4</td>
</tr>
<tr>
<td>HIST 499</td>
<td>CONTEMPORARY EUROPE, 1918 TO THE PRESENT</td>
<td>4</td>
</tr>
<tr>
<td>PLSC 400</td>
<td>TOPICS IN POLITICAL SCIENCE</td>
<td>1-3</td>
</tr>
<tr>
<td>PLSC 426</td>
<td>AMERICAN POLITICAL THOUGHT</td>
<td>4</td>
</tr>
<tr>
<td>PLSC 477</td>
<td>AMERICAN DIPLOMATIC HISTORY</td>
<td>4</td>
</tr>
<tr>
<td>PLSC 454</td>
<td>INTERNATIONAL RELATIONS</td>
<td>4</td>
</tr>
</tbody>
</table>
PLSC 454 WESTERN POLITICAL AND SOCIAL THOUGHT  4
PLSC 455 WESTERN POLITICAL AND SOCIAL THEORY  4

HOME ECONOMICS
FNIT 42 FOOD IN CULTURES OF THE WORLD  3
FNIT 422 EXPERIMENTAL COOKERY  3
FNIT 427 COMMUNITY NUTRITION  3
FNIT 48 ADVANCED NUTRITION  3
FNIT 43 DIET IN DISEASE  4
FNIT 448 INSTITUTIONAL FOOD MANAGEMENT  4
HMIEC 395 METHODS OF TEACHING HOME ECONOMICS  3
HMIEC 490 TOPICS IN HOME ECONOMICS  1-3
HMIEC 493 ADVANCED WEAVING  3
HMIEC 424 HOUSING AND INTERIORS  3
HMIEC 481 TAILORING  3
HMIEC 497 DIRECTED RESEARCH/PROJECT  1-3; 6
HMIEC 496 SEMINAR  1

INDUSTRIAL TECHNOLOGY
ELECT 361 LINEAR INTEGRATED CIRCUITS  5
ELECT 362 DIGITAL INTEGRATED CIRCUITS  5
ELECT 363 RADIO COMMUNICATIONS  4
ELECT 381, 382 TELEVISION SYSTEMS AND CIRCUITS  4, 4
GRAPH 355 ADVANCED PHOTOGRAPHY  3
GRAPH 359 PROJECT ASSIGNMENTS  3
INDS 371 TECHNICAL FACILITY PLANNING  1
INDS 381, 382, 383 MACHINE TOOL OPERATIONS  3, 3, 3
INDS 386 OIL HYDRAULICS  3
INDS 395 METHODS OF TEACHING TECHNOLOGY  4
INDS 400 TOPICS IN INDUSTRIAL EDUCATION AND TECHNOLOGY  1-3
INDS 428 HANDWORK ACTIVITIES  3
INDS 497 DIRECTED RESEARCH/PROJECT  1-3; 6
INDS 499 SENIOR PROBLEM  1
FNIT 421, 422 COLOR SEPARATIONS  3, 3

LIBRARY SCIENCE
LIBR 385 SELECTION AND ACQUISITION OF LIBRARY MATERIALS  3
LIBR 395 METHODS OF LIBRARY INSTRUCTION  3
LIBR 400 TOPICS IN LIBRARY SCIENCE  1-3
LIBR 406 ADMINISTRATION OF SCHOOL LIBRARIES  3
LIBR 479 DIRECTED RESEARCH/PROJECT  1-3; 6
LIBR 490 DIRECTED LIBRARY EXPERIENCE  4-6; 6
LIBR 496 SEMINAR IN SCHOOL LIBRARY PROBLEMS  3

MATHEMATICS
MATH 395 METHODS OF TEACHING MATHEMATICS  3
MATH 400 TOPICS IN MATHEMATICS  1-3
MATH 442 ADVANCED NUMERICAL ANALYSIS  4
MATH 451, 452, 453 ADVANCED CALCULUS  3, 3, 3
MATH 461, 462, 463 MODERN ALGEBRA  4, 4, 4
MATH 479 DIRECTED RESEARCH/PROJECT  1-3; 6

MODERN LANGUAGES
FREN 401 FRENCH DIRECTED READING  1-3; 6
FREN 407 17TH AND 18TH CENTURY FRENCH LITERATURE  4
FREN 408 19TH CENTURY FRENCH LITERATURE  4
FREN 409 20TH CENTURY FRENCH LITERATURE  4
GERM 401 GERMAN DIRECTED READING  1-3; 6
GERM 421 18TH CENTURY GERMAN LITERATURE  4
GERM 422 19TH CENTURY GERMAN LITERATURE  4
GERM 423 20TH CENTURY GERMAN LITERATURE  4
SPAN 401 SPANISH DIRECTED READING  1-3; 6
SPAN 424, 425, 426 CONTEMPORARY SPANISH LITERATURE  2, 2, 2
SPAN 431, 432, 433 SURVEY OF LATIN-AMERICAN LITERATURE  3, 3, 3
MIDLG 395 METHODS OF TEACHING MODERN LANGUAGES  3
MIDLG 400 TOPICS IN MODERN LANGUAGES  1-3
MIDLG 479 DIRECTED RESEARCH/PROJECT  1-3, 6

MUSIC
MUCT 425 ORCHESTRATION  3
MUCT 426 COUNTERPOINT  3
MUCT 434 ADVANCED COMPOSITION  1-3; 6
MUED 251 VOCAL TECHNIQUES AND METHODS  3
MUED 395 ELEMENTARY MUSIC METHODS  3
MUED 496 SECONDARY MUSIC METHODS  3
MUED 400 TOPICS IN MUSIC  1-3, 6
MUED 479 DIRECTED RESEARCH/PROJECT  1-3, 6
MUUP 392 BASIC CONDUCTING  2
MUUP 393 INSTRUMENTAL CONDUCTING TECHNIQUES AND MATERIALS  3
MUUP 394 CHORAL CONDUCTING TECHNIQUES AND MATERIALS  3
<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 454</td>
<td>WESTERN POLITICAL AND SOCIAL THOUGHT</td>
<td>4</td>
</tr>
<tr>
<td>PLSC 455</td>
<td>WESTERN POLITICAL AND SOCIAL THEORY</td>
<td>4</td>
</tr>
<tr>
<td>FINT 422</td>
<td>FOOD IN CULTURES OF THE WORLD</td>
<td>3</td>
</tr>
<tr>
<td>FINT 423</td>
<td>EXPERIMENTAL COOKERY</td>
<td>3</td>
</tr>
<tr>
<td>FINT 437</td>
<td>COMMUNITY NUTRITION</td>
<td>3</td>
</tr>
<tr>
<td>FINT 448</td>
<td>ADVANCED NUTRITION</td>
<td>3</td>
</tr>
<tr>
<td>FINT 449</td>
<td>DIET IN DISEASE</td>
<td>4</td>
</tr>
<tr>
<td>FINT 484</td>
<td>INSTITUTIONAL FOOD MANAGEMENT</td>
<td>4</td>
</tr>
<tr>
<td>HMEC 395</td>
<td>METHODS OF TEACHING HOMECO ECONOMICS</td>
<td>3</td>
</tr>
<tr>
<td>HMEC 400</td>
<td>TOPICS IN HOMECO ECONOMICS</td>
<td>3</td>
</tr>
<tr>
<td>HMEC 403</td>
<td>ADVANCED WEAVING</td>
<td>3</td>
</tr>
<tr>
<td>HMEC 424</td>
<td>HOUSING AND INTERIORS</td>
<td>3</td>
</tr>
<tr>
<td>HMEC 481</td>
<td>TAILORING</td>
<td>3</td>
</tr>
<tr>
<td>HMEC 497</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>HMEC 496</td>
<td>SEMINAR</td>
<td>1</td>
</tr>
<tr>
<td>ELECT 361</td>
<td>LINEAR INTEGRATED CIRCUITS</td>
<td>5</td>
</tr>
<tr>
<td>ELECT 362</td>
<td>DIGITAL INTEGRATED CIRCUITS</td>
<td>5</td>
</tr>
<tr>
<td>ELECT 363</td>
<td>RADIO COMMUNICATIONS</td>
<td>4</td>
</tr>
<tr>
<td>ELECT 381</td>
<td>TELEVISION SYSTEMS AND CIRCUITS</td>
<td>4, 4</td>
</tr>
<tr>
<td>GRPH 355</td>
<td>ADVANCED PHOTOGRAPHY</td>
<td>3</td>
</tr>
<tr>
<td>GRPH 358</td>
<td>PHOTO ASSIGNMENTS</td>
<td>1</td>
</tr>
<tr>
<td>INDS 376</td>
<td>TECHNICAL FACILITY PLANNING</td>
<td>3, 3, 3</td>
</tr>
<tr>
<td>INDS 381-383</td>
<td>MACHINE TOOL OPERATION</td>
<td>3</td>
</tr>
<tr>
<td>INDS 386</td>
<td>OIL HYDRAULICS</td>
<td>3</td>
</tr>
<tr>
<td>INDS 395</td>
<td>METHODS OF TEACHING TECHNOLOGY</td>
<td>4</td>
</tr>
<tr>
<td>INDS 400</td>
<td>TOPICS IN INDUSTRIAL EDUCATION AND TECHNOLOGY</td>
<td>1-3</td>
</tr>
<tr>
<td>INDS 428</td>
<td>HANDWORK ACTIVITIES</td>
<td>3</td>
</tr>
<tr>
<td>INDS 479</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>PRINT 421-422</td>
<td>COLOR SEPARATIONS</td>
<td>3, 3</td>
</tr>
<tr>
<td>LIBR 385</td>
<td>SELECTION AND ACQUISITION OF LIBRARY MATERIALS</td>
<td>3</td>
</tr>
<tr>
<td>LIBR 395</td>
<td>METHODS OF LIBRARY INSTRUCTION</td>
<td>3</td>
</tr>
<tr>
<td>LIBR 400</td>
<td>TOPICS IN LIBRARY SCIENCE</td>
<td>1-3</td>
</tr>
<tr>
<td>LIBR 406</td>
<td>ADMINISTRATION OF SCHOOL LIBRARIES</td>
<td>3</td>
</tr>
<tr>
<td>LIBR 479</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>LIBR 490</td>
<td>DIRECTED LIBRARY EXPERIENCE</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>LIBR 496</td>
<td>SEMINAR IN SCHOOL LIBRARY PROBLEMS</td>
<td>3</td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td>MATH 395 METHODS OF TEACHING MATHEMATICS</td>
<td>3</td>
</tr>
<tr>
<td>MATH 400</td>
<td>TOPICS IN MATHEMATICS</td>
<td>1-3</td>
</tr>
<tr>
<td>MATH 442</td>
<td>ADVANCED NUMERICAL ANALYSIS</td>
<td>4</td>
</tr>
<tr>
<td>MATH 453, 452, 453 ADVANCED CALCULUS</td>
<td>3, 3, 3</td>
<td></td>
</tr>
<tr>
<td>MATH 461, 462, 463 MODERN ALGEBRA</td>
<td>4, 4, 4</td>
<td></td>
</tr>
<tr>
<td>MATH 479</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>MODERN LANGUAGES</td>
<td>1-3, 6</td>
<td></td>
</tr>
<tr>
<td>FREN 401</td>
<td>FRENCH DIRECTED READING</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>FREN 407</td>
<td>17TH AND 18TH CENTURY FRENCH LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>FREN 409</td>
<td>19TH CENTURY FRENCH LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>FREN 410</td>
<td>20TH CENTURY FRENCH LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>GERMAN 410</td>
<td>GERMAN DIRECTED READING</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>GERMAN 411</td>
<td>18TH CENTURY GERMAN LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>GERMAN 412</td>
<td>19TH CENTURY GERMAN LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>GERMAN 413</td>
<td>20TH CENTURY GERMAN LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>SPAN 451</td>
<td>SPANISH DIRECTED READING</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>SPAN 452, 453, 454 CONTEMPORARY SPANISH LITERATURE</td>
<td>2, 2, 2</td>
<td></td>
</tr>
<tr>
<td>SPAN 451, 452, 453 SURVEY OF LATIN-AMERICAN LITERATURE</td>
<td>3, 3, 3</td>
<td></td>
</tr>
<tr>
<td>MBLG 395</td>
<td>METHODS OF TEACHING MODERN LANGUAGES</td>
<td>3</td>
</tr>
<tr>
<td>MBLG 400</td>
<td>TOPICS IN MODERN LANGUAGES</td>
<td>1-3</td>
</tr>
<tr>
<td>MBLG 479</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>MUSIC</td>
<td>MUCT 425 ORCHESTRA</td>
<td>3</td>
</tr>
<tr>
<td>MUCT 426</td>
<td>COUNTERPOINT</td>
<td>3</td>
</tr>
<tr>
<td>MUCT 434</td>
<td>ADVANCED COMPOSITION</td>
<td>1-3, 3</td>
</tr>
<tr>
<td>MÚED 354</td>
<td>VOCAL TECHNIQUES AND METHODS</td>
<td>3</td>
</tr>
<tr>
<td>MÚED 395</td>
<td>ELEMENTARY MUSIC METHODS</td>
<td>3</td>
</tr>
<tr>
<td>MÚED 396</td>
<td>SECONDARY MUSIC METHODS</td>
<td>3</td>
</tr>
<tr>
<td>MÚED 400</td>
<td>TOPICS IN MUSIC</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>MÚED 479</td>
<td>DIRECTED RESEARCH/PROJECT</td>
<td>1-3, 6</td>
</tr>
<tr>
<td>MÚEF 452</td>
<td>BASIC CONDUCTING</td>
<td>2</td>
</tr>
<tr>
<td>MÚEF 452</td>
<td>INSTRUMENTAL CONDUCTING TECHNIQUES AND MATERIALS</td>
<td>3</td>
</tr>
<tr>
<td>MÚEF 463</td>
<td>CHORAL CONDUCTING</td>
<td>3</td>
</tr>
</tbody>
</table>
OFFICE ADMINISTRATION

OPAD 395 METHODS OF TEACHING BUSINESS EDUCATION SUBJECTS 4
OPAD 400 TOPICS IN OFFICE ADMINISTRATION 1, 3
OPAD 454 THE LEGAL SECRETARY 4
OPAD 456 MEDICAL OFFICE PROCEDURES 4
OPAD 457 MEDICAL TERMINOLOGY 3, 5, 5
OPAD 459 THE ADMINISTRATIVE SECRETARY 4
OPAD 466 THE CONTEMPORARY SECRETARY IN BUSINESS 3
OPAD 479 DIRECTED RESEARCH/PROJECT 3, 5, 6
OPAD 496 OFFICE ADMINISTRATION SEMINAR 1, 3

PHYSICS

PHYS 352, 353 RADIATION TECHNIQUES 2, 2
PHYS 362, 363 THEORETICAL MECHANICS 3, 3
PHYS 395 METHODS OF TEACHING PHYSICAL SCIENCE 3
PHYS 400 TOPICS IN PHYSICS 3, 3
PHYS 412, 412, 413 ATOMIC AND NUCLEAR PHYSICS 3, 3
PHYS 414, 415, 416 EXPERIMENTAL PHYSICS 1, 1, 1
PHYS 457, 458, 459 PHYSICS SEMINAR II 1, 1, 1
PHYS 479 DIRECTED RESEARCH/PROJECT 3, 5, 6

SOCIOLOGY AND SOCIAL WORK

CORR 365 LAW, POLICY AND SOCIETY 2
CORR 385 CRIMINOLOGY 3
CORR 387 JUVENILE DELINQUENCY 3
CORR 487 PERSPECTIVES ON THE TREATMENT OF OFFENDERS 3
SOWK 371 SOCIAL WORK PRACTICE WITH INDIVIDUALS 4
SOWK 372 SOCIAL WORK PRACTICE WITH SMALL GROUPS 4
SOWK 375 SOCIAL WORK PRACTICE WITH MARRIAGE AND FAMILY 3
SOWK 376 SOCIAL WORK IN COMMUNITY SERVICES 3
SOWK 464 SOCIAL WORK WITH CHILDREN 3
SOWK 465 POLICY, PLANNING AND ADMINISTRATION 3
SOWK 466 COMPARATIVE THEORIES OF SOCIAL WORK PRACTICE 3
SOWK 479 DIRECTED RESEARCH/PROJECT 3, 5, 6
SOWK 499 FIELD WORK 2, 6
### Office Administration

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFAD 395</td>
<td>Methods of Teaching Business Education Subjects</td>
<td>4</td>
</tr>
<tr>
<td>OFAD 400</td>
<td>Topics in Office Administration</td>
<td>1-3</td>
</tr>
<tr>
<td>OFAD 454</td>
<td>The Legal Secretary</td>
<td>4</td>
</tr>
<tr>
<td>OFAD 456</td>
<td>Medical Office Procedures</td>
<td>4</td>
</tr>
<tr>
<td>OFAD 457</td>
<td>Medical Terminology</td>
<td>3, 5; 5</td>
</tr>
<tr>
<td>OFAD 459</td>
<td>The Administrative Secretary</td>
<td>4</td>
</tr>
<tr>
<td>OFAD 466</td>
<td>The Contemporary Secretary in Business</td>
<td>3</td>
</tr>
<tr>
<td>OFAD 479</td>
<td>Directed Research/Project</td>
<td>3, 3; 6</td>
</tr>
<tr>
<td>OFAD 496</td>
<td>Office Administration Seminar</td>
<td>1-3</td>
</tr>
</tbody>
</table>

### Physics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 352, 353</td>
<td>Radiisotope Techniques</td>
<td>2, 2</td>
</tr>
<tr>
<td>PHYS 362, 363</td>
<td>Theoretical Mechanics</td>
<td>3, 3</td>
</tr>
<tr>
<td>PHYS 395</td>
<td>Methods of Teaching Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 400</td>
<td>Topics in Physics</td>
<td>3, 3</td>
</tr>
<tr>
<td>PHYS 401, 402, 403</td>
<td>Atomic and Nuclear Physics</td>
<td>3, 3, 3</td>
</tr>
<tr>
<td>PHYS 404, 405, 406</td>
<td>Experimental Physics</td>
<td>1, 1, 1</td>
</tr>
<tr>
<td>PHYS 407, 408, 409</td>
<td>Physics Seminar II</td>
<td>1, 1, 1</td>
</tr>
<tr>
<td>PHYS 479</td>
<td>Directed Research/Project</td>
<td>3, 3; 6</td>
</tr>
</tbody>
</table>

### Sociology and Social Work

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORR 345</td>
<td>Law, Policy and Society</td>
<td>2</td>
</tr>
<tr>
<td>CORR 385</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>CORR 387</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>CORR 487</td>
<td>Perspectives on the Treatment of Offenders</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 371</td>
<td>Social Work Practice with Individuals</td>
<td>4</td>
</tr>
<tr>
<td>SOWK 372</td>
<td>Social Work Practice with Small Groups</td>
<td>4</td>
</tr>
<tr>
<td>SOWK 373</td>
<td>Social Work Practice with Marriage and Family</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 375</td>
<td>Social Work in Community Services</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 464</td>
<td>Social Work with Children</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 465</td>
<td>Policy, Planning and Administration</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 466</td>
<td>Comparative Theories of Social Work Practice</td>
<td>3</td>
</tr>
<tr>
<td>SOWK 479</td>
<td>Directed Research/Project</td>
<td>3, 3; 6</td>
</tr>
<tr>
<td>SOWK 490</td>
<td>Field Work</td>
<td>2-4</td>
</tr>
</tbody>
</table>