

An abstract graphic design featuring overlapping geometric shapes in maroon, green, and white. The design includes a large white circle on the right, a tall thin white triangle on the left, and various rectangular and curved forms in maroon and green. The overall composition is layered and modern.

GRADUATE
BULLETIN

1983

1984

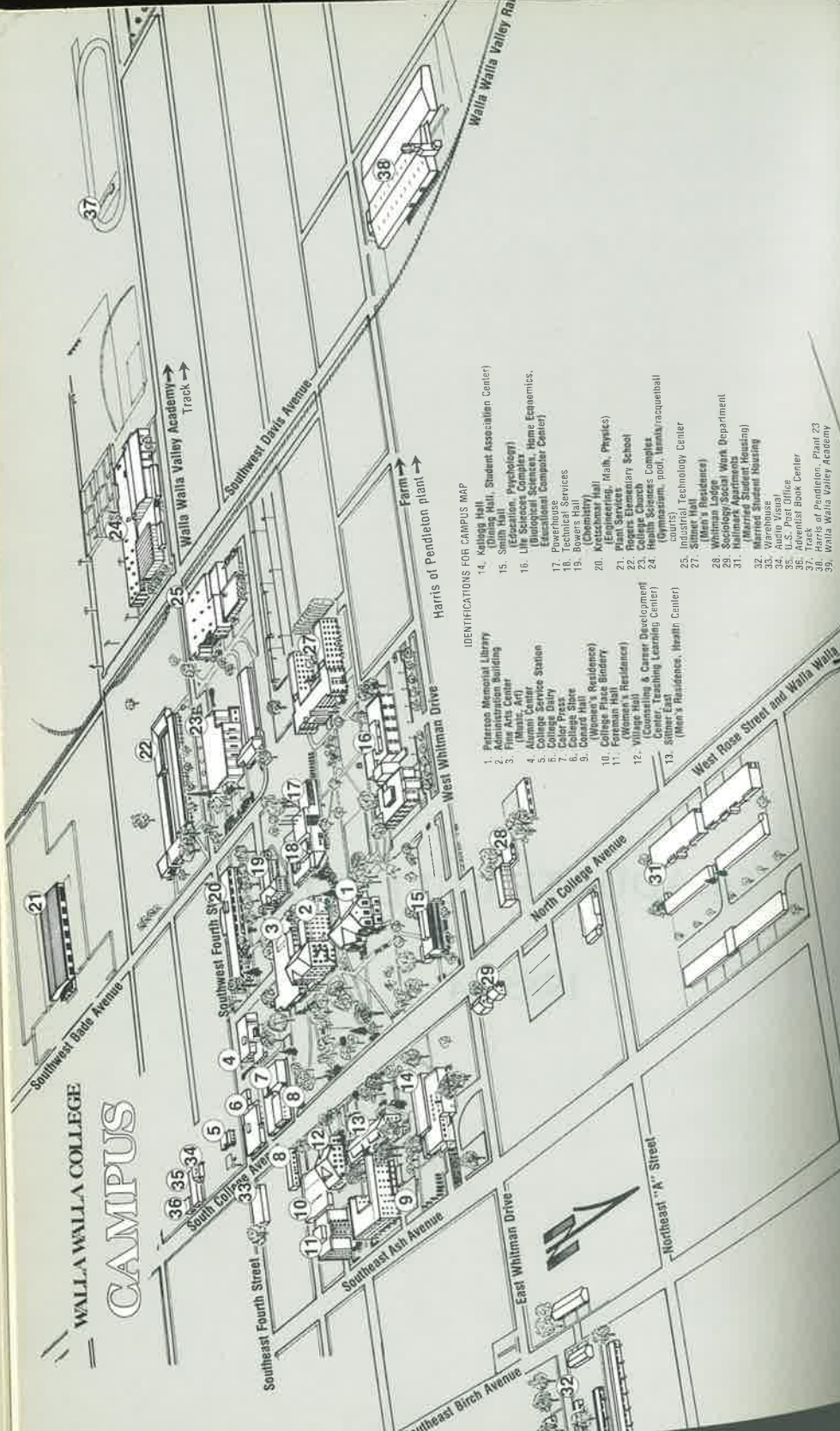
WALLA
WALLA
COLLEGE



GRADUATE BULLETIN

1983-84

WALLA WALLA COLLEGE CAMPUS



IDENTIFICATIONS FOR CAMPUS MAP

1. Pierson Memorial Library
2. Administration Building
3. Fine Arts Center
4. Alumni Center
5. College Service Station
6. College Dairy
7. Color Printer
8. Coard Hall
9. Women's Residence
10. College Photo Studio
11. Women's Residence
12. Winona Hall
13. Winona Hall (Counseling & Career Development Center)
14. Kelleys Hall (Student Association Center)
15. South Hall (Education, Psychology)
16. Life Sciences Complex (Biology, Botany, Home Economics, Diagnostic Computer Center)
17. Powerhouse
18. Technical Services
19. Bowers Hall
20. McCasbar Hall (Engineering, Math, Physics)
21. Plant Services
22. Rogers Court School
23. Health Sciences Complex (Gymnasium, pool, lamakracquelball courts)
24. Slater Hall
25. Slater Hall (Men's Residence)
26. Whitman Lodge
27. Whitman Lodge (Supply Room)
28. Whitman Apartments (Married Student Housing)
29. Married Student Housing
30. Married Student Housing
31. Married Student Housing
32. Married Student Housing
33. Married Student Housing
34. Married Student Housing
35. U.S. Post Office
36. Adventist Book Center
37. Harris of Pendleton, Plant 23
38. Harris of Pendleton, Plant 23
39. Walla Walla Valley Academy

Walla Walla College is accredited by

The Northwest Association of Schools and Colleges
Seventh-day Adventist Board of Regents
The Washington State Board of Education

Walla Walla College offers programs accredited by

Engineering Accreditation Commission of the Accreditation Board for
Engineering and Technology, Inc.
Council on Social Work Education
National Association of Schools of Music
Department of Baccalaureate and Higher Degree Programs of the
National League for Nursing

is a member of

American Association of Collegiate Registrars and Admissions Officers
American Society for Engineering Education
Council of Member Agencies, Department of Baccalaureate and Higher
Degree Programs of the National League for Nursing
American Association of Colleges for Teacher Education
National Association of Independent Colleges and Universities
National Association of Summer Sessions
American Council on Education National Commission on Accreditation

is approved by

American Dietetic Association
State Approving Agency for the training of veterans under the U.S.
Code, Title 38, Chapters 31, 32, 34 and 35
The Attorney General of the United States for nonimmigrant students
Washington State for training in Vocational Rehabilitation

Equal Opportunity Commitment

Walla Walla College maintains a policy of equal educational opportunity for all applicants without regard to sex, race, color, handicap, national and/or ethnic origin, and in administration of its educational and admissions policies, financial affairs, employment programs, student life and services, or any other college-administered program.

Information contained in this publication is hereby certified as true and correct in **content and** policy as of the date of publication, in compliance with the **Veterans Administration** DVB Circular 20-76-84 and Public Law 94-502.

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 Chairman, Ed./Psychology Dept.
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 Conard Hall
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- STUDENT AFFAIRS** Edward Boyatt, Vice President
 Automobile Registration Student Affairs
 Off-Campus Housing (509) 527-2511
 Student Life
 Student Handbooks
- COLLEGE ADDRESS** Walla Walla College
 College Place, WA 99324
- GENERAL TELEPHONE NUMBER** (509) 527-2615
 Portland Campus (503) 239-6115
 Marine Station, Rosario Beach (206) 293-2326

Administrative offices are closed from Friday noon until Monday morning and on legal holidays. The administrative officers are available on Sundays by appointment.

CONTENTS

Campus Map	2
Accreditation	3
Information.....	4
Calendar, 1983-84.....	6
Board of Trustees.....	8
Administration.....	8
Committee Assignments, Graduate Council.....	9
Faculty	10
Specialization Areas, Chairmen.....	11
General Information.....	13
Financial Information.....	15
Graduate Program	19
Admission to Graduate Study.....	19
General Degree Requirements.....	21
Residence and Time Requirements.....	21
Course Requirements and Scholarship	21
Second Master's Degree	21
Course Load	21
Transfer of Graduate Credit.....	22
Bulletin, Candidacy Based on	22
Program of Study	22
Advancement to Degree Candidacy.....	22
Thesis Requirement	23
Final Examinations.....	23
Conferment of Degree	24
Departments of Instruction.....	25
Biological Sciences.....	25
Education and Psychology	30
Supporting Courses	46

<p align="center">JUNE - 1983</p> <p>S M T W T F S</p> <p align="center">1 2 3 4</p> <p>5 6 7 8 9 10 11</p> <p>12 13 14 15 16 17 18</p> <p>19 20 21 22 23 24 25</p> <p>26 27 28 29 30</p>	<p align="center">JULY - 1983</p> <p>S M T W T F S</p> <p align="center">1 2</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>²⁴/₃₁ 25 26 27 28 29 30</p>	<p align="center">AUGUST - 1983</p> <p>S M T W T F S</p> <p align="center">1 2 3 4 5 6</p> <p>7 8 9 10 11 12 13</p> <p>14 15 16 17 18 19 20</p> <p>21 22 23 24 25 26 27</p> <p>28 29 30 31</p>
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<p align="center">MARCH - 1984</p> <p>S M T W T F S</p> <p align="center">1 2 3</p> <p>4 5 6 7 8 9 10</p> <p>11 12 13 14 15 16 17</p> <p>18 19 20 21 22 23 24</p> <p>25 26 27 28 29 30 31</p>	<p align="center">APRIL - 1984</p> <p>S M T W T F S</p> <p align="center">1 2 3 4 5 6 7</p> <p>8 9 10 11 12 13 14</p> <p>15 16 17 18 19 20 21</p> <p>22 23 24 25 26 27 28</p> <p>29 30</p>	<p align="center">MAY - 1984</p> <p>S M T W T F S</p> <p align="center">1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28 29 30 31</p>
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WALLA WALLA COLLEGE ACADEMIC CALENDAR 1983-84

AUTUMN QUARTER

September 27	T	Registration
28	W	Instruction Begins
October 12	W	Last Day to Add Classes
17	M	*Graduate Record Examinations
November 23	W	Last Day to Drop Classes
24	W	Thanksgiving Vacation Begins (noon)
27	S	Thanksgiving Vacation Ends (10:00 p.m.)
December 12	M	*Graduate Record Examination
11, 12, 13, 14	SMTW	Final Examinations

WINTER QUARTER

January 3	T	Registration
4	W	Instruction Begins
18	W	Last Day to Add Classes
February 1	W	ASWWC Snow Frolic
6	M	*Graduate Record Examinations
13	M	Last Day to File Master's Degree Order Form
22	W	Last Day to Drop Classes
Mar. 11, 12, 13, 14	SMTW	Final Examinations

SPRING QUARTER

March 20	T	Registration
21	W	Instruction Begins
April 4	W	Last Day to Drop Classes
30	M	*Graduate Record Examinations
May 2	W	Spring Campus Day
9	W	Last Day to Drop Classes
20	S	Last Day to Complete Final Master's Exam
27, 28, 29, 30	SMTW	Final Examinations
June 3	S	Commencement (10:00 a.m.)

SUMMER QUARTER

June 10	S	Registration
11	M	Instruction Begins
11	M	*Graduate Record Examinations
15	F	Last Day to File Master's Degree Order Form
July 27	F	Last Day to Complete Final Master's Exam
August 4	Sa	Commencement

*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 OFFICERS

Richard Fearing, *Chairman*
N. Clifford Sorensen, *Secretary*

ADMINISTRATION

N. Clifford Sorensen, Ed.D., *President*
Richard A. Beck, B.A., *Vice President for Development*
Edward Boyatt, Ed.D., *Vice President for Student Affairs*
Rodney Heisler, Ph.D., *Vice President for Academic Affairs*
Manford Simcock, M.A., *Vice President for Financial Affairs*
Verne V. Wehtje, Ph.D., *Vice President for Recruitment and Public Relations*

ADMINISTRATIVE STAFF

Kathryn Andrews, B.A., *Associate Director of Records*
Charles V. Bell, Ph.D., *Dean, School of Engineering*
Jerry Bokoles, M.A., *Director of Counseling Services*
John C. Brunt, Ph.D., *Dean, School of Theology*
Paula Chapman, *Dean of Women*
Winston De Haven, M.A., *Chaplain*
Scott R. Duncan, B.S., *Director of Audiovisual Services*
Dan A. Edge, B.S., *Director of Plant Services*
Marilyn Glaim, M.A., *Director, Teaching Learning Center*
Jim Hall, M.B.A., *Controller*
Sergio Hernandez, M.Ed., *Director of Financial Aid*
Wynelle J. Huff, Ph.D., *Dean, School of Nursing*
Melvin S. Lang, Ph.D., *Director of Summer Session*
J. D. Losey, M.D., *College Physician*
Elwood L. Mabley, M.S.L.S., *Director of the Libraries*
Orpha Osborne, B.A., *Director of Admissions and Records*
Alfred E. Perry, Ph.D., *Director, Grants and Foundations*
Lynn Prohaska, *Dean of Men*
Kathleen (Cassie) Ragenovich, B.S., *Director of Student Accounts and Employment*
Donald W. Rigby, Ph.D., *Dean, Graduate School*
Lloyd Sampsel, B.S., *Director of Educational Computer Services*
Alfred O. Tucker, B.S., *Chief Accountant*

MARINE STATION

Donald W. Rigby, Ph.D., *Director*

COMMITTEE ASSIGNMENTS

ACADEMIC STANDARDS, Lorne Glaim, *Chairman*

Rodney Heisler, <i>Ex Officio</i>	Robert Gardner
<i>Chairman</i>	Merlene Olmsted
Orpha Osborne, <i>ex officio</i>	Donald Rigby
John Brunt	

FACULTY GRANTS, Lawrence McCloskey, *Chairman*

Richard Beck, <i>ex officio</i>	Carlos Schwantes
Alfred Perry, <i>ex officio</i>	Thomas Thompson
Richard Emmerson	Robert Wade

FACULTY SENATE, N. C. Sorensen, *Ex Officio Chairman*

Rodney Heisler, <i>ex officio</i>	All Academic Department
Elwood Mabley, <i>ex officio</i>	Chairmen and School Deans
Orpha Osborne, <i>ex officio</i>	Three students selected
Manford Simcock, <i>ex officio</i>	by ASWWC
Sam Myers	

GRADUATE COUNCIL, D. W. Rigby, *Ex Officio Chairman*

Joseph Galusha	Carolyn Stevens
Rodney Heisler, <i>ex officio</i>	Dale Wagner, <i>ex officio</i>
Orpha Osborne, <i>ex officio</i>	

LIBRARY, _____, *Chairman*

Eldwood Mabley, <i>ex officio</i>	Lee Johnston
Charles Amlaner	Two students selected
Robert Henderson	by ASWWC

STUDENT FINANCIAL AID, Sergio Hernandez, *Ex Officio Chairman*

Paula Chapman, <i>ex officio</i>	Ernest Bursey
Lynn Prohaska, <i>ex officio</i>	Two students selected
Orpha Osborne, <i>ex officio</i>	by ASWWC
Cassie Ragenovich, <i>ex officio</i>	

TEACHER EDUCATION COUNCIL, Dale Wagner, *Ex Officio Chairman*

Rodney Heisler, <i>ex officio</i>	Harold Ochs
Chester Blake	One graduate student
Lee Loewen	

THE FACULTY

BIOLOGY

Joseph P. Galusha, *Chairman and Professor of Biology* (1975)

B.S. 1968, Walla Walla College

M.A. 1971, Andrews University

D.Phil. 1975, Oxford University

Charles J. Amlaner, *Assistant Professor of Biology* (1979)

B.S., 1974; M.A., 1976, Andrews University

D.Phil., 1983, Oxford University

Jack Dassenko, *Assistant Professor of Agriculture* (1970)

B.S. 1950, Andrews University

M.S. 1951, University of Minnesota

Susan C. Dixon, *Assistant Professor of Biology* (1980)

B.S. 1974; M.S. 1976, Walla Walla College

Doctoral Candidate 1984, Oregon State University

Albert E. Grable, *Associate Professor of Biology* (1963)

B.S. 1959, Loma Linda University

M.S. 1962; Ph.D. 1964, University of Minnesota

Lawrence R. McCloskey, *Professor of Biology* (1971)

B.A. 1961, Atlantic Union College

M.A. 1965; Ph.D. 1967, Duke University

Donald W. Rigby, *Professor of Biology* (1958)

B.A. 1950, Loma Linda University

M.A. 1956, Walla Walla College

Ph.D. 1967, Loma Linda University

EDUCATION AND PSYCHOLOGY

Dale O. Wagner, *Chairman and Professor of Education and Psychology*

(1966)

B.A. 1952, Walla Walla College

Ed.M. 1958, Eastern Washington State College

Ed.D. 1973, University of Idaho

R. Gary Brendel, *Assistant Professor of Education and Psychology* (1980)

B.A. 1966, Union College

M.A. 1969, University of Denver

Gloria Hicinbothom, *Assistant Professor of Education* (1976)

B.S. 1966; M.Ed. 1971, Walla Walla College

Dale A. Johnson, *Associate Professor of Education and Psychology* (1976)

B.A. 1964, Union College

M.A. 1967, University of Nebraska

Ph.D. 1978, University of California, Riverside

Wynn A. Knowling, *Associate Professor of Education* (1980)

B.S. 1956, Union College

M.A. 1970; Ph.D. 1970; Ed.S 1972, University of Iowa

Harold T. Ochs, *Professor of Education and Psychology* (1969)

B.A. 1950, Walla Walla College

M.Ed. 1957, Eastern Washington State College

Ed.D. 1972, University of Idaho

Hollibert E. Phillips, *Professor of Education and Psychology* (1970)

B.A. Hons. 1960, University of London

M.A. 1964, Andrews University

Ed.D. 1970, Boston University

Vernon W. Shafer, *Lecturer in Psychology* (1973)

B.Th. 1949, Walla Walla College
M.S. 1953, University of Southern California
Ph.D. 1958, Ohio State University

David A. Thomas, *Assistant Professor of Education* (1983)

B.A. 1968, Wayne State University
M.Ed. 1977, Walla Walla College
Ed.D. 1983, Montana State University

Verlie, Y. Ward, *Instructor in Education* (1983)

B.S. 1971, Union College
M.A. 1977, Andrews University

SPECIALIZATION AREAS (Secondary), CHAIRMEN

Claude C. Barnett, *Professor of Physics* (1957)

B.S. 1952, Walla Walla College
M.S. 1956, State College of Washington
Ph.D. 1960, Washington State University

Charles V. Bell, *Professor of Engineering* (1972)

B.S. 1956, Mississippi State University
M.S. 1957; Ph.D. 1960, Stanford University

Chester D. Blake, *Professor of Industrial Technology* (1966)

B.S. 1963, Walla Walla College
M.A. 1968, San Jose State College
Ed.D. 1980, Washington State University

Reinhard Czeratzki, *Associate Professor of Modern Languages* (1967)

B.A. 1964, Atlantic Union College
M.A. 1967, Middlebury College

Loren Dickinson, *Professor of Communications* (1962)

B.A. 1957, Union College
M.A. 1960, University of Nebraska
Ph.D. 1968, University of Denver

Lorne Glaim, *Professor of History* (1971)

B.A. 1964, Walla Walla College
M.A. 1966; Ph.D. 1973, Washington State University

Gary M. Hamburgh, *Associate Professor of Health, Physical and Recreational Education* (1972)

B.A. 1971 Loma Linda University
M.A. 1974 California State University at Fresno

Wilma M. Hepker, *Professor of Sociology and Social Work* (1973)

B.A. 1953, Union College
M.A. 1966; Ph.D. 1976, University of Nebraska

Melvin S. Lang, *Professor of Mathematics* (1967)

B.S. 1957, Valley City State Teachers College
M.A. 1958, Colorado State College
Ph.D. 1972, University of Northern Colorado

Lee Loewen, *Assistant Professor of Office Administration* (1974)

B.S. 1947, Union College
M.Ed. 1968, Walla Walla College

Elwood L. Mabley, *Associate Professor of Library Science and Director of Libraries* (1968)

B.A. 1948, Walla Walla College
M.S.L.S. 1959, University of Southern California

Ron Manuel, *Assistant Professor of Business* (1983)

B.S. 1974, Columbia Union College
M.B.A., 1981, University of Maryland

Robert C. Rittenhouse, *Professor of Chemistry* (1976)

B.S. 1971, Atlantic Union College

Ph.D. 1975, Worcester Polytechnic Institute

Gary A. Wiss, *Professor of English* (1966)

B.A. 1966, Walla Walla College

M.A. 1969; D.A. 1976, University of Oregon

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 and 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 Washington State Board of Education, 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 Na-

tional League for Nursing, the American Association of Colleges for Teacher Education, the National Association of Independent Colleges and Universities, the National Association of Summer Sessions, 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 nonthesis 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:

- I — Incomplete
- IP — In Progress
- W — Withdrawal
- Au — Audit

The I (incomplete) is only given for special circumstances and must be made up the following quarter. Permission for an incomplete is granted by the instructor. Students with incompletes should calculate those hours into 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 four weeks prior to the last class period of a given course.

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. However, deficiencies may not be

made up by audit or S/NC (Satisfactory/No credit) unless the courses have mandatory S/NC grading.

GRADUATE FACILITIES

Life Sciences Complex

The Department of Biology facilities in the Life Sciences Complex, completed in 1967, include staff and graduate student offices, classrooms and teaching laboratories, controlled environment rooms and chambers, radioisotope laboratory, animal and greenhouse complexes, photographic darkroom, 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.

Smith Hall

The Department of Education 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. The building was completed in 1944 and remodeled in 1964. 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. Microreaders make accessible microforms 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, 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 130,000 volumes. An average of 4,000 volumes is accessioned annually. There are about 925 currently received 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 \$1,400 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 \$1,400.

Tuition

1 - 12 quarter hours — \$142 per quarter hour

The tuition includes all laboratory fees.

General Fee

A general fee of \$18 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)	\$15.00
Audit Credit	Regular Tuition
Change of Program (class added or dropped), each	2.00
Classes with numerous or extended field trips	Special Fee
Degree, Master's	
Diploma	7.50
M.A. and M.S. thesis binding (two copies)	24.00
In absentia	17.50
Academic Regalia (gown, hood)	Actual cost
I.D. Card Replacement	3.00
Late Registration	20.00
	(plus \$2/day from published registration date)
Transcript	
First copy (requests only in writing)	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

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 \$50 or 5% of tuition, whichever is less.

Room Rent: 80% during first two weeks of quarter

50% between third through fifth weeks

30% between sixth through eighth weeks

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 withdrew. STUDENTS WHO LEAVE SCHOOL WITHOUT COMPLETING WITHDRAWAL PROCEDURES WILL BE CHARGED UNTIL PROPER ARRANGEMENTS ARE MADE.

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 and room rent for the quarter will be charged in advance at the beginning of each quarter. Actual food service charges 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, et cetera. Requests for transcripts must be in writing.

Loans, Assistantships

The following loan funds are recommended and applications may be obtained from the Student Finance 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% do not have to be repaid until 6 months after students 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 students must have financial need as evidenced by submission of a WWC application for financial aid and Financial Aid Form (FAF) by April. Priority in awarding this aid is given to students with the greatest financial needs. Repayments begin after the applicant's student status terminates. Applications and FAF are available through the college Financial Aid office.

Graduate Assistantships

A limited number of graduate assistantships are 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*.

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 must file completed graduate application forms and two official transcripts of all work taken on the collegiate level with the Associate 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): Advanced* and *Aptitude* tests or alternatively the *Undergraduate Assessment Program (UAP): Field* and *Aptitude* tests. The test scores are used in part to determine eligibility for admission to the Graduate School.

Applicants in biology must provide transcripts of test scores for the *GRE: Advanced Test in Biology* and the *Aptitude Test* or the *UAP: Field Test in Biology* and the *Aptitude Test*.

Applicants in education must provide transcripts of test scores for the *GRE: Advanced Test in Education* and the *Aptitude Test* or the *UAP: Field Test in Education* and the *Aptitude Test in Education*. Students who intend to pursue a counseling specialization, or whose undergraduate major was psychology, may elect to substitute the *Advanced Test in Psychology* for the *Advanced Test in Education*.

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

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: performance on the **Graduate Record Examinations**, strong professional recommendations, 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 provisional and standard certification, special credentials or additional course work. 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. Graduate courses for certification and the library science curriculum may be taken without prior permission.

However, credit taken under any circumstances will not apply to a graduate program without completed graduate application forms and registration approval.

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 in 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 Master of Science degrees. A minimum of 30 quarter hours is required in courses numbered 400 or above for the Master of Education degree. Courses number 400 to 499 are open to both undergraduate and graduate students. Usually, not more than 6 quarter hours of topics (400) or workshop (474) 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 with approval of the Graduate Council.

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.

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 chairman of their department for assistance in selecting courses. An adviser 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 adviser, and with approval of the Graduate Council.

Toward the end of the quarter in which the student is about to complete his first 9-15 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 course work. 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 9 to 15 quarter hours of approved graduate study with a minimum grade-point average of 3.00. If grade points earned on this credit do not average 3.00, advancement to candidacy will not be approved.
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 9 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 chairman, director of admissions and records and chairman of 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 examination 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 chairman.
2. The examinations are coordinated by the chairman 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, while written examinations 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.

CONFERMENT 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 Graduate School. 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 course work 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 basic 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.

BIOLOGICAL SCIENCES

- BIOL 401 PLANT PHYSIOLOGY** 4
A study of the principles of plant physiology. One laboratory per week. Prerequisites: BIOL 360; BIOL 392.
- BIOL 403 ORNITHOLOGY** 4
Systematic study of native birds of North America, with emphasis on identification, migration, geographical distribution, habits and life histories. Two laboratories per week.
- BIOL 405 GENERAL ENTOMOLOGY** 4
Study of insect morphology, physiology, ecology and classification. One laboratory per week.
- BIOL 412 PLANT ANATOMY** 4
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** 4
Systematic study of amphibians and reptiles with emphasis on natural history and ecology. Two laboratories per week.
- BIOL 426 SYSTEMATIC BOTANY** 4 or 5
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** 4
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 PALEOBIOLOGY** 4
Study of earth history as exhibited by the fossils with particular emphasis on paleobiological relationships. Two laboratories per week. Prerequisite: permission of instructor.
- BIOL 444 MAMMALOLOGY** 4
Systematic study of mammals with emphasis on natural history and ecology. Two laboratories per week.
- BIOL 446 GENERAL ECOLOGY** 4
Study of the relationship of plants and animals, both as individuals and assemblages, to their physical and biological environment. Field studies designed to examine ecological principles are part of the laboratory work. Two laboratories per week. Biostatistics, genetics and a minimum of one field natural history course recommended.
- BIOL 447 PARASITOLOGY** 5
Systematic study of the morphology, life cycle and host-parasite relationships of protozoan, helminth and arthropod parasites. Two laboratories per week. Prerequisite or corequisite: CHEM 321, 322, 323.
- BIOL 449 VERTEBRATE HISTOLOGY** 4
Study of the microscopic anatomy of vertebrate cells, tissues and organs, including reference to their functions. Two laboratories per week.
- BIOL 451 INVERTEBRATE ZOOLOGY** 5
Study of the biology of the invertebrates with emphasis on their ecology, morphology and physiology. Two laboratories per week.
- BIOL 458 PSYCHOBIOLOGY** 4
Readings in, and discussion of, current concepts of the biological bases of behavior in animals and man. Material is of a comparative nature with emphasis on human behavior. One laboratory per week. Prerequisites: BIOL 101, 102, 103 or BIOL 201, 202 and PSYC 130 or permission of instructor. Recommended: BIOL 374.

- BIOL 465 BACTERIOLOGY** 5
Principles of morphology and function of bacteria. Laboratory work, including unknowns, points out techniques employed in their study. Two laboratories per week. Prerequisite or corequisite: CHEM 321, 322, 323.
- BIOL 477 INDEPENDENT STUDY IN BIOLOGICAL SCIENCE** 1-6
Directed study in an approved area. The student will be required to read widely on an assigned subject, follow regular research methods and present a paper showing competence in and extent of his study. Permission from the chairman of the department required. One to three hours per quarter; maximum, six.
- BIOL 483 PHILOSOPHY OF ORIGINS AND SPECIATION** 3
Comparison 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** 1-6
Study of the techniques used in the collection and preservation of biological specimens for museum purposes. Emphasizes the recording and preservation of ecological data obtained with the collections of specimens. Topics vary depending on the instructor; credit will be given at the rate of one quarter hour for each week spent working in the field.
- BIOL 495 COLLOQUIUM** 0
A lecture series designed to expose students to modern scientific research and researchers. Each lecture is normally given by a visiting scientist. Six quarters required of all junior, senior and graduate biology majors.
- BIOL 501 RESEARCH IN BIOLOGY** 2-4; 8
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 503 GENETICS AND SPECIATION** 3
A study of the nature and function of the genetic material as it relates to population and species variability and change. Prerequisite: BIOL 261.
- BIOL 510 GRADUATE SEMINAR** 1; 6
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 511 BIOSYSTEMATICS** 4
A study of the process of speciation and its relationship to currently used taxonomic methods and rules of nomenclature.
- BIOL 518 SYSTEMATIC ENTOMOLOGY** 4
A study of the principles of classification of insects. Laboratory work emphasizes recognition of orders and families with special problems on the specific level. Recommended prerequisite: BIOL 405. Two laboratories per week.
- BIOL 521 PRINCIPLES OF ECONOMIC ENTOMOLOGY** 3
An evaluation of the various methods of controlling economically important species. Prerequisite: BIOL 405.
- BIOL 522 CELLULAR BIOLOGY** 5
Current knowledge and research in the areas of cell physiology, biochemical genetics, bacteriological genetics and radiation biology will be considered. Two laboratories per week. Prerequisite: BIOL 392.

BIOLOGICAL SCIENCES

READING COURSES

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

BIOL 535 READINGS IN PHYSIOLOGY 2; 4
Analysis of classical and current literature in the field by means of reports and conferences with a staff member. Areas of concentration may include animal, plant, cellular or immunological aspects of physiology.

BIOL 536 READINGS IN NATURAL HISTORY 2; 4
Analysis of classical and current literature in the field by means of reports and conferences with a staff member. Areas of concentration may include mammalogy, entomology, ornithology, invertebrate zoology, ichthyology, botany or biosystematics.

BIOL 537 READINGS IN ECOLOGY 2; 4
Analysis of classical and current literature in the field by means of reports and conferences with a staff member. Areas of concentration may include ecology, symbiosis or plant ecology.

BIOL 538 READINGS IN GENETICS 2; 4
Analysis of classical and current literature in the field by means of reports and conferences with a staff member. Areas of concentration may include classical genetics, molecular biology, speciation or evolution.

BIOL 539 READINGS IN ETHOLOGY 2; 4
Analysis of classical and current literature in the field by means of reports and conferences with a staff member. Areas of concentration may include animal behavior, sociobiology or psychobiology.

BIOL 545 THESIS 8
Preparation and defense of the master's thesis based upon an original biological research project. The research topic is selected upon consultation with the student's major professor and graduate committee.

BIOLOGY COURSES: Marine Station

BIOL 101, 102, 103 or equivalent is prerequisite for all courses listed below.

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

BIOL 462 ICHTHYOLOGY 5
Systematic study of the fishes found in Puget Sound, with a survey of the fishes of other waters.

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

BIOL 467 INTRODUCTION TO OCEANOGRAPHY 5
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.

BIOL 468 COMPARATIVE PHYSIOLOGY 5
Comparative study of the physiology and life processes of animals with emphasis on invertebrates. Prerequisite: BIOL 392.

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

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

BIOL 508 PHYSIOLOGY OF THE ALGAE

5

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, synchronization and growth will be emphasized.

BIOL 514 SYMBIOSIS

5

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. Prerequisite: Course work in one group of animals *or* plants *or* microbes *or* parasitology. Chemistry courses through organic are highly recommended.

BIOL 516 BEHAVIOR OF MARINE ORGANISMS

5

A study of inter- and intraspecific behaviors of marine animals and their behavioral responses to the physical environment. The course involves laboratory experiences, field observations and a research project. Prerequisites: BIOL 374 or BIOL 458 or PSYC 130 and background in organismal biology and permission of the instructor.

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; and counseling.

In addition to the general objectives of the graduate program, the following are specific objectives of the department:

1. To assist the student in developing a philosophy of education consistent with Christian principles.
2. To develop an understanding of the relationship between theoretical concepts and educational processes.

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. Precandidacy Level

- A. Read all introductory information in this bulletin and follow explicitly the directions given therein.
- B. Take the *Graduate Record Examinations: Aptitude Tests and Advanced Test in Education* if these have not been taken previously.
- C. Apply to the Office of Admissions and Records for admission to graduate study.
- D. Upon acceptance to graduate study, consult with the chairman 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. Orientation to graduate study in the fall or summer of the first year of graduate residency.
 2. Arrangements for the removal of all prerequisite deficiencies.
 3. Registration plans for the first 9-15 quarter hours of course work, including Methods of Research.
- F. Consult with the credential officer if certification is being contemplated.
- G. Taking no more than 12 hours per quarter, complete your first 9-15 quarter hours exclusive of deficiencies and including Methods of Research. Toward the end of the quarter or summer session in which you expect to meet this requirement, prepare with your 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. In the quarter or summer session immediately *before* the one in which you plan to complete the program, do each of the following:
 - 1. Register for Graduate Seminar.
 - 2. File order form for master's degree with Records Office. (See Academic Calendar for last filing date.)
- C. 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 chairman 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 as a teacher, principal or educational staff associate (counselor). However, 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 considered 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. A plan for the removal of all prerequisite deficiencies must be submitted prior to advancement to degree candidacy and program approval. It is normally expected that the first of the following prerequisites will precede the second one:

- 1. 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.
- 2. Not less than nine months of verified, satisfactory educational work experience. Up to 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.

To be acceptable, the work experience must come from full-time involvement with the professional or paraprofessional academic processes which usually take place in schools or other educational service

EDUCATION AND PSYCHOLOGY

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.

Two-thirds of the minimum 45 quarter hours must be from courses numbered 400 and above. Graduate credit is not granted for courses below the 350 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:

10 quarter hours in basic courses required of all candidates.

EDUC 561 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

11 quarter hours in professional education courses as defined under General Prerequisites No. 1. These 11 quarter hours are additional to those earned to satisfy the basic requirements above. However, they may be an exclusive part of, and not necessarily additional to, professional education courses which may be specified for a chosen area of specialization.

A no-credit orientation to graduate study is required of all candidates either in the fall or summer of the first year of residency, whichever comes first.

Upon completion of 9 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 excepting 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:

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> School Administration Counseling and Guidance School Counseling Special Education Counseling Elementary Instruction Special Education Junior High Instruction | <p>Secondary Instruction in:</p> <ul style="list-style-type: none"> 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

EDUCATION AND PSYCHOLOGY

EDUC 539 Supervision
EDUC 550 School Law
EDUC 556 Curriculum Planning
PSYC 444 Social Psychology

11 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 220	Educational Psychology	4
PSYC 350	Elementary Statistics	4
PSYC 430	Psychological Testing	3
PSYC 452	Psychology of Childhood and Adolescence	4

Basic Requirements:

EDUC 561	Methods of Research	3
EDUC 522	Philosophy of Education	3
EDUC 500	Graduate Seminar	1
EDUC 521	Psychology of Learning	3

Counseling Core:

PSYC 410	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 515	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: 11 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.

15 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.

9 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.

Elementary Instruction — Special Education

This emphasis is designed to meet the special education endorsement for certification in the State of Washington.

Specialization Prerequisites: A major in elementary education or an equivalent concentration of 45 quarter hours, and PSYC 431 Psychology of Exceptional Children.

Area Requirements:

SPED 533	Assessment of Exceptional Students	4
SPED 537	Instruction of Exceptional Children	4
SPED 538	Counseling Exceptional Students	3
SPED 578	Field Work and Teaching in Special Education	8
PETH 324	Adaptive Physical Education and Recreation (For endorsement, not for graduate credit)	3
PSYC 410	Behavior Modification	3
		25

10 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.

Junior High Instruction

Specialization Prerequisites: Majors and/or minors in two content areas chosen for this specialization, or two equivalent subject-matter concentra-

EDUCATION AND PSYCHOLOGY

tions 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: 11 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.

15 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.

9 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.

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 6 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)

11 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, educators and others 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 with respect to specialization prerequisites 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 and program approval.

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 and 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 (toward the end of the program)
- EDUC 522 Philosophy of Education (before advancement to candidacy)
- EDUC 561 Methods of Research (before advancement to candidacy)
- EDUC 590 Thesis

A no-credit orientation to graduate study is required of all candidates either in the fall or summer of the first year of residency, whichever comes first.

Upon completion of 9 to 15 quarter hours, a planned program of study must be submitted for consideration by the staff of the department. Recom-

EDUCATION AND PSYCHOLOGY

mendations 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.

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

Although EDUC 560 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. 12 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. 6 quarter hours in philosophy and 3 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.

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

Counseling 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.

15 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 counseling, psychology and guidance activities or theory. Must include courses in counseling techniques, measurement theory and assessment skills.

6 quarter hours in PSYC 565 Practicum in Counseling.

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

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

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 Education 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.

Requirements for Continuing Certificate—Fifth Year

To be recommended for the Washington continuing certificate, the candidate must fulfill the following requirements:

1. Hold a valid Washington provisional initial certificate.
2. Complete three years of successful teaching.
3. Complete an approved competency based program of 45 quarter hours beyond the provisional initial certificate.

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

The fifth-year program must be planned by authorized personnel in the Education Department. By careful programming, some students are able to complete the requirements for the master's degree in education at the same time they are fulfilling the requirements for the continuing certificate.

COURSES IN EDUCATION

- EDUC 266 ELEMENTARY TUTORING** 1; 3
Supervised teaching experience on a one-to-one or small-group basis providing opportunity to develop and demonstrate teaching competence and selection of appropriate teaching strategies in an elementary school classroom. (S or NC only)
- EDUC 267 SECONDARY TUTORING** 1; 3
Supervised teaching experience on a one-to-one or small group basis providing opportunity to develop and demonstrate teaching competence and selection of appropriate teaching strategies in a secondary school classroom. (S or NC only)
- EDUC 361 LANGUAGE ARTS IN THE ELEMENTARY SCHOOL** 3
A study of issues currently important in language arts education, with emphasis on research and its practical implications for teaching, functions and programs of the language arts in the elementary school curriculum.
- EDUC 362 READING IN THE ELEMENTARY SCHOOL** 4
A basic course stressing current theory, effective instructional procedures, learning resources and tutoring experience for teachers of reading in the primary and intermediate grades of the elementary school.
- EDUC 373 MATHEMATICS IN THE ELEMENTARY SCHOOL** 3
Survey of the content, media and processes used in teaching mathematics in the elementary school; emphasis on newer approaches.
- LIBR 374 LIBRARY MATERIALS FOR CHILDREN** 3
See the Library Science section of the undergraduate bulletin.
- ENGL 374 LITERATURE IN THE ELEMENTARY SCHOOL** 3
See the English section of the undergraduate bulletin.

EDUCATION AND PSYCHOLOGY

ENGL 375 LITERATURE IN THE SECONDARY SCHOOL	3
See the English section of the undergraduate bulletin.	
EDUC 375 CLASSROOM MANAGEMENT	3
Introduction to varied structuring of the learning environment and the special considerations required in small schools and multigrade classrooms. Explores the human relations within the teaching profession.	
EDUC 390 EDUCATIONAL EVALUATION	3
Introduction to principles and techniques of evaluating classroom activities in elementary and secondary schools	
EDUC 404 HISTORY OF EDUCATION	2
Survey of the history of education.	
EDUC 426 PRINCIPLES AND PROCEDURES OF GUIDANCE	3
Introduction to the philosophy, functions, organization and evaluation of guidance programs.	
EDUC 428 EXCEPTIONAL STUDENTS IN THE CLASSROOM	3
Survey of current special education laws; materials and techniques for teaching exceptional children within the educational mainstream. Prerequisite: PSYC 220 or permission of instructor.	
INDS 428 HANDWORK ACTIVITIES IN THE ELEMENTARY SCHOOL	3
See the Industrial Technology section of the undergraduate bulletin.	
SOCI 444 SOCIOLOGY OF EDUCATION	3
See the Sociology and Social Work section of the undergraduate bulletin.	
EDUC 450 SOCIAL STUDIES, RELIGION, SCIENCE AND HEALTH IN THE ELEMENTARY SCHOOL	4
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	6
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	2
Survey of the methods of instruction through the use of audiovisual aids.	
EDUC 462 INSTRUCTIONAL AIDS—PRODUCTION	2
Experiences in the production of instructional aids.	
HLED 472 METHODS OF SCHOOL HEALTH INSTRUCTION	3
See the Health, Physical Education and Recreation section of the undergraduate bulletin.	
PETH 472 METHODS OF TEACHING SECONDARY PHYSICAL EDUCATION	3
See the Health, Physical Education and Recreation section of the undergraduate bulletin.	
PETH 473 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL	3
See the Health, Physical Education and Recreation section of the undergraduate bulletin.	
474 WORKSHOP	1-3; 6
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	3
Introduction to diagnosis, vocabulary, comprehension skills, rate variation, management and study skills in junior high and secondary reading.	

EDUCATION AND PSYCHOLOGY

- 477 INDEPENDENT STUDY IN EDUCATION** 1-3; 6
Directed study in an approved area. Permission from the chairman of the department and supervising instructor is required. One to three quarter hours any quarter; maximum, six quarter hours.
- EDUC 478 ELEMENTARY MICROTEACHING** 3
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 supplemented by evaluation of supervisors, practicing teachers and peers, along with video recordings. Prerequisite: Admission into Phase II and two methods courses.
- EDUC 479 SECONDARY MICROTEACHING** 3
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 one night each week and each student 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 492 EDUCATION OF THE GIFTED** 3
Introduction to the design of learning opportunities for gifted children in the light of their psychological characteristics.
- EDUC 493 SYSTEMS OF THOUGHT** 3
Intensive study of various aspects of philosophical thinking and their bearing upon education. Emphasizes current writing in education.
- EDUC 495 ELEMENTARY SCHOOL GUIDANCE** 3
Study of the rationale for elementary school guidance with emphasis upon current research and issues. Focuses on the tools and techniques of both classroom and out-of-class guidance functions and services.
- ### GRADUATE COURSES
- EDUC 500 GRADUATE SEMINAR** 1; 3
Discussion periods in which faculty and students explore significant issues through the examination and analysis of research and appropriate literature in the area of education. One quarter hour; maximum, three.
- EDUC 504 ELEMENTARY SCHOOL CURRICULUM** 3
A study of the elementary school curriculum, including objectives, essentials of a good program, varying curriculum patterns and appraisal of current practices.
- EDUC 508 SECONDARY SCHOOL CURRICULUM** 3
Overview of the secondary school curriculum, with emphasis on the various subject fields; organization of the school for curriculum development; educational objectives; the courses of study; evaluation of the secondary school curriculum.
- EDUC 522 PHILOSOPHY OF EDUCATION** 3
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** 3
Intended to help a student become conversant with significant problems, issues, trends and proposals affecting the theory and practice of education today.
- EDUC 526 SCHOOL FINANCE** 3
A course designed for administrators, emphasizing origins and disbursement of school funds.
- EDUC 527 SCHOOL PLANT PLANNING AND CONSTRUCTION** 3
A survey of how to plan and build schools, including the involvement of the lay citizen. Selection of site, trends in design, function of buildings and plant, costs and obligations will be studied.
- EDUC 535 CORRECTIVE READING** 3
Analysis, correction and prevention of reading problems are studied along with re-

EDUCATION AND PSYCHOLOGY

finement of group and informal testing. Supervised practicum with pupils having mild disabilities in reading. Prerequisite: EDUC 362; corequisite: EDUC 366.

EDUC 539 SUPERVISION 3
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 3
Organization, supervision and administration of elementary schools.

EDUC 550 SCHOOL LAW 3
This course is designed to acquaint the student with the legal basis for public and parochial school operation in the United States.

EDUC 551 ADMINISTRATION OF THE SECONDARY SCHOOL 3
Problems and procedures in the organization and administration of secondary schools.

EDUC 556 CURRICULUM PLANNING 3
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 revision.

EDUC 558 SCHOOL ACTIVITIES 3
Designed to acquaint the student with a range of the school activities program; to define the purpose of such 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 5
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 assist in his successful induction into school leadership. By permission of the department chairman.

EDUC 561 METHODS OF RESEARCH 3
Procedures in the selection and evaluation of research projects and techniques in the analysis of research data.

EDUC 567 COMPARATIVE EDUCATION 3
A comparison of systems and philosophies of education in various parts of the world; emphasis on the role of cultural impacts.

EDUC 575 READINGS IN EDUCATION 2-4
Advanced study confined to topic areas where the student can demonstrate a considerable degree of expertise due to previous formal studies and/or experience. To be done 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 2, 4, 6; 6
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, six.

EDUC 590 THESIS 4, 8; 8

COURSES IN SPECIAL EDUCATION

SPED 530 ISSUES AND TRENDS IN SPECIAL EDUCATION 3
A study of current literature and legislation pertaining to special education and models for the delivery of these services.

SPED 533 ASSESSMENT OF EXCEPTIONAL STUDENTS 4
Examination and administration of assessment measures for exceptional students. Prerequisite: PSYC 431.

EDUCATION AND PSYCHOLOGY

- SPED 537 INSTRUCTION OF EXCEPTIONAL CHILDREN** 4
Development and implementation of individualized instructional programs.
- SPED 538 COUNSELING EXCEPTIONAL STUDENTS** 3
Discussion and practice of counseling techniques with parents and students regarding academic, behavioral and vocational concerns.
- SPED 578 FIELD WORK AND TEACHING IN SPECIAL EDUCATION** 8

COURSES IN PSYCHOLOGY

- PSYC 130** is prerequisite to all other courses in psychology.
- PSYC 350 ELEMENTARY STATISTICS** 4
Introduction to fundamental procedures for summarizing and interpreting quantitative data from tests and research in the social sciences.
- PSYC 360 SMALL GROUP PROCEDURES** 3
Study of small group process by the use of simulations, confrontation techniques and role playing. Especially useful for teachers, ministers, nurses and social workers.
- PSYC 375 EXPERIMENTAL PROBLEMS** 3
Advanced study of experimental design with application to an individual research project. Prerequisite: PSYC 350 or equivalent.
- 400 TOPICS IN PSYCHOLOGY** 1-3
The study of advanced topics through class activities. One to three hours per quarter.
- PSYC 405 PSYCHOLOGY OF ORGANIZATIONAL CHANGE** 3
Exploration of the characteristics of social organizations, their structure and systems of communication with particular emphasis on the problems of bringing about change within social organizations (i.e., churches, communities, schools, businesses, etc.).
- PSYC 410 BEHAVIOR MODIFICATION** 3
Study of the principles and processes of learning with special emphasis on the shaping and changing of human behavior.
- PSYC 415 DYNAMICS OF BEHAVIOR** 3
Introduction to the dynamic mechanisms of human adjustment and behavior.
- PSYC 420 INTRODUCTION TO CLINICAL PSYCHOLOGY** 3
Introduction to the application of psychological theories and techniques as used in the clinical setting. Surveys various approaches to treatment of emotional problems in clinical practice, hospital and community settings.
- PSYC 425 PSYCHOLOGY AND RELIGION** 3
Examination of psychological concepts and human behavior from a biblical and theological perspective.
- PSYC 430 PSYCHOLOGICAL TESTING** 3
Study of the principles of test selection, administration and interpretation; consideration of the contributions and limitation of the major types of standardized tests and inventories used in the behavioral sciences.
- PSYC 431 PSYCHOLOGY OF EXCEPTIONAL CHILDREN** 3
Study of the characteristics and problems of exceptional children; consideration of essential educational adaptation.
- PSYC 442 MOTIVATION** 3
Study of basic drives and causes of behavior in organisms with emphasis upon human behavior.
- PSYC 444 SOCIAL PSYCHOLOGY** 3
Study of the dynamics of social interaction and interpersonal behavior with application to contemporary society.
- PSYC 445 SOCIAL PSYCHOLOGY LABORATORY** 1
Corequisite: PSYC 444.

EDUCATION AND PSYCHOLOGY

- PSYC 446 PSYCHOLOGY OF PERSONALITY** 3
Study of theories concerning personality development, assessment and adjustment.
- PSYC 449 MENTAL HEALTH** 3
Study of physiological and psychological factors related to emotional maturity; individual mental health, classroom climate, patterns of acceptance and rejection.
- PSYC 452 PSYCHOLOGY OF CHILDHOOD AND ADOLESCENCE** 4
Analysis of psychological development from infancy through adolescence.
- PSYC 460 CHILDHOOD LEARNING DISORDERS** 3
Introduction to play therapy and psychoeducational programs with emphasis on perceptual, sensory and motor areas. Designed for teachers and counselors of young children in both early childhood and elementary school levels. Prerequisite: PSYC 452.
- PSYC 464 COUNSELING RELATIONSHIPS** 3
Introduction to psychological theory and skills essential for developing effective and helping relationships with individuals and groups.
- PSYC 489 VOCATIONAL DEVELOPMENT THEORY** 3
Study of theories of vocational choice and methods of studying occupations and occupational information as they relate to educational and vocational guidance.
- PSYC 490 ABNORMAL PSYCHOLOGY** 3
Study of behavioral disturbances, therapeutic measures and theories.
- PSYC 495 ANALYSIS OF PSYCHOLOGICAL EXPERIMENTS** 2
Experience in the analysis of psychological research.

GRADUATE COURSES

- PSYC 501 STATISTICS IN RESEARCH** 3
An introduction to sampling theory, probability and statistical inference as applied to research analysis and hypothesis testing. Includes simple multivariate techniques and selected distribution-free tests of significance. Prerequisite: PSYC 350 or equivalent.
- PSYC 515 COUNSELING THEORIES AND TECHNIQUES** 3
A study and application of the theories and techniques for counseling. Professional relationships and ethics are considered.
- PSYC 518 GROUP COUNSELING** 2
Theories and techniques of counseling in group situations. Prerequisite: PSYC 515.
- PSYC 521 PSYCHOLOGY OF LEARNING** 3
The physiological and psychological bases for functional learning are discussed, and the experimental evidence supporting psychological hypotheses is reviewed.
- PSYC 532 INDIVIDUAL TESTING—Intelligence** 4
Supervised experience in the administration, interpretation and writing of psychological reports. Several intelligence instruments will be reviewed. Major emphasis, however, will center on Binet and Wechsler Intelligence Scales. Prerequisite: PSYC 430 and permission of the instructor.
- PSYC 534 ASSESSMENT OF THE INDIVIDUAL** 2
Methods applicable to comprehensive assessment for describing behavior. Experience in the collection and analysis of data will be provided. Prerequisite: PSYC 532.
- PSYC 563 FIELD EXPERIENCE** 3
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** 2; 6
Professional experience in the counseling function. Prerequisites: PSYC 515; PSYC 534 and permission of the instructor.

SUPPORTING COURSES

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

See the undergraduate bulletin for course descriptions and prerequisites.

ART

ART 364, 365, 366 SCULPTURE	2, 2, 2
ART 400 TOPICS IN ART	1-3
The study of advanced topics through class activities. One to three hours per quarter.	
ART 477 INDEPENDENT STUDY IN ART	1-3; 6
One to three hours any quarter; maximum, six.	

BIOLOGICAL SCIENCES (See pages 25-29)

BUSINESS

400 TOPICS IN BUSINESS	1-3
The study of advanced topics through class activities. One to three hours per quarter.	
ACCT 421 ADVANCED ACCOUNTING	4
ACCT 423 CPA REVIEW	4
ACCT 425 ACCOUNTING THEORY	4
ACCT 427 FUND ACCOUNTING	4
ACCT 430 AUDITING CONCEPTS	3
ACCT 431 AUDITING PRACTICES	3
BUED 474 WORKSHOP IN BUSINESS EDUCATION	2
BUED 477 INDEPENDENT STUDY IN BUSINESS	1-3; 6
Permission from the chairman of the department required. One to three hours per quarter; maximum, six.	
BUED 491 PRINCIPLES OF BUSINESS EDUCATION	2
BUED 496 SEMINAR IN BUSINESS EDUCATION	2
ECON 441 MONEY AND BANKING	4
ECON 443 COMPARATIVE ECONOMICS SYSTEMS	4
ECON 445 ECONOMICS OF FOREIGN TRADE	4
ECON 455 PUBLIC FINANCE	4
FINA 451 INVESTMENTS	4
FINA 453 CREDIT ADMINISTRATION	4
MGMT 379 COMPENSATION MANAGEMENT	3
MGMT 475 HEALTH CARE ORGANIZATION AND MANAGEMENT	2
MGMT 476 HUMAN RELATIONS IN MANAGEMENT	3
MGMT 479 BUSINESS POLICIES	3
MKTG 481 PUBLIC RELATIONS	4

SUPPORTING COURSES

MKTG 483 PURCHASING	4
MKTG 485 RETAIL STORE OPERATION AND MANAGEMENT	4
CHEMISTRY	
CHEM 351, 352, 353 PHYSICAL CHEMISTRY	4, 4, 4
CHEM 400 TOPICS IN CHEMISTRY	1-3
CHEM 427, 428 ADVANCED ORGANIC CHEMISTRY	2, 2
CHEM 431 BIOCHEMISTRY	4
CHEM 461 OPTICAL INSTRUMENT METHODS	3
CHEM 462 NON-OPTICAL INSTRUMENT METHODS	3
CHEM 477 INDEPENDENT STUDY IN CHEMISTRY	1-3; 6
COMMUNICATIONS	
SPCH 400 TOPICS IN COMMUNICATION	1-3
SPCH 401 INTRODUCTION TO GENERAL SEMANTICS	2
SPCH 443 PERSUASIVE SPEAKING	3
SPCH 453 RHETORIC AND PUBLIC ADDRESS	3
SPCH 472 METHODS OF TEACHING SPEECH COMMUNICATION	3
SPCH 477 INDEPENDENT STUDY IN SPEECH	1-3; 6
SPEECH PATHOLOGY AND AUDIOLOGY	
SPPA 372 AUDIOMETRY	3
SPPA 385 LANGUAGE DISORDERS	3
SPPA 461 DIAGNOSIS IN SPEECH-LANGUAGE PATHOLOGY	3
SPPA 473 CLEFT PALATE	3
SPPA 475 VOICE DISORDERS	3
JOURNALISM	
JOUR 400 TOPICS IN JOURNALISM	1-3
JOUR 412 SCRIPT WRITING	3
JOUR 477 INDEPENDENT STUDY IN JOURNALISM	1-3; 6
ENGLISH	
ENGL 354 ROMANTIC ENGLISH LITERATURE	4
ENGL 355 VICTORIAN LITERATURE	4
ENGL 356 TWENTIETH-CENTURY ENGLISH LITERATURE	4
ENGL 364 ROMANTIC AMERICAN LITERATURE	4
ENGL 365 AMERICAN REALISM AND NATURALISM	4
ENGL 366 TWENTIETH-CENTURY AMERICAN LITERATURE	4
ENGL 374 LITERATURE IN THE ELEMENTARY SCHOOL	3
ENGL 375 LITERATURE IN THE SECONDARY SCHOOL	3
ENGL 384 ADVANCED ENGLISH GRAMMARS	4
ENGL 394 DIRECTED READING	1-3
ENGL 444 MAJOR AUTHOR	3

SUPPORTING COURSES

ENGL 445 SHAKESPEARE	3
ENGL 454 LITERATURE OF THE BIBLE	4
ENGL 455 CLASSICAL BACKGROUNDS	3
ENGL 464 DEVELOPMENT OF ENGLISH DRAMA	3
ENGL 465 DEVELOPMENT OF THE ENGLISH NOVEL	3
ENGL 466 PHILOSOPHICAL AND CRITICAL PROSE	3
ENGL 472 METHODS OF TEACHING HIGH SCHOOL ENGLISH	4
ENGL 477 INDEPENDENT STUDY IN ENGLISH	1-3; 6
ENGL 484 HISTORY OF THE ENGLISH LANGUAGE	3
ENGL 496 SEMINAR	2
ENGL 501 INDEPENDENT STUDY	1
ENGL 506 LITERARY CRITICISM	3
HEALTH, PHYSICAL AND RECREATIONAL EDUCATION	
HLED 370 FIELD TRAINING	3
HLED 384 SCHOOL HEALTH PROGRAMS	3
HLED 472 METHODS OF SCHOOL HEALTH INSTRUCTION	3
PETH 363, 364, 365 ANALYSIS OF TEAM ACTIVITIES	2, 2, 2
PETH 400 TOPICS IN PHYSICAL EDUCATION	1-6
PETH 426 PHYSIOLOGY OF EXERCISE	4
PETH 472 METHODS OF TEACHING SECONDARY PHYSICAL EDUCATION	3
PETH 473 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL	3
PETH 477 INDEPENDENT STUDY IN HEALTH AND PHYSICAL EDUCATION	1-3; 6
PETH 484 ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION AND RECREATION	3
PETH 494 HISTORY OF HEALTH, PHYSICAL EDUCATION AND RECREATION	3
PETH 496, 497 SEMINAR	2, 1
HISTORY	
HIST 400 TOPICS IN HISTORY	1-6
HIST 477 INDEPENDENT STUDY IN HISTORY	1-3; 6
HIST 496, 497 SEMINAR	0, 3
EUROPEAN HISTORY	
HIST 374, 375 HISTORY OF ENGLAND	4, 4
HIST 435 HISTORY OF MODERN GERMANY	4
HIST 463 THE MIDDLE AGES	4
HIST 465 RENAISSANCE AND REFORMATION	4
HIST 467 ENLIGHTENMENT AND REVOLUTION	4
HIST 468 THE MODERN TRANSITION, 1815-1919	4
HIST 469 CONTEMPORARY EUROPE, 1918 TO THE PRESENT	4

SUPPORTING COURSES

AMERICAN HISTORY

HIST 424 THE AMERICAN FRONTIER	4
HIST 445 CIVIL WAR AND RISE OF INDUSTRIAL AMERICA, 1850-1900	4
HIST 446 HISTORY OF THE PACIFIC NORTHWEST	4
HIST 448 TWENTIETH CENTURY AMERICA	4
HIST 457 SOCIAL AND INTELLECTUAL HISTORY OF THE U.S.	4

POLITICAL SCIENCE

PLSC 400 TOPICS IN POLITICAL SCIENCE	1-3
PLSC 424, 425 WESTERN POLITICAL THOUGHT	4, 4
PLSC 426 AMERICAN POLITICAL THOUGHT	4
PLSC 427 AMERICAN DIPLOMATIC HISTORY	4
PLSC 434 INTERNATIONAL RELATIONS	4

HOME ECONOMICS

FDNT 412 FOODS IN CULTURES OF THE WORLD	3
FDNT 422 EXPERIMENTAL COOKERY	3
FDNT 437 COMMUNITY NUTRITION	3
FDNT 441, 442 ADVANCED NUTRITION	2, 2
FDNT 443 DIET IN DISEASE	4
FDNT 447 INSTITUTION FOOD PURCHASING	3
FDNT 448 INSTITUTION FOOD MANAGEMENT	4
HMEC 400 TOPICS IN HOME ECONOMICS	1-3
HMEC 403 ADVANCED WEAVING	3
HMEC 424 INTERIOR DESIGN, HOUSING AND INTERIORS	3
HMEC 461 TAILORING	3
HMEC 472 METHODS OF TEACHING HOME ECONOMICS	3
HMEC 477 INDEPENDENT STUDY IN HOME ECONOMICS	1-3; 6
HMEC 496 SEMINAR	1

INDUSTRIAL TECHNOLOGY

ELCT 351, 352 RADIO COMMUNICATIONS	4, 4
ELCT 361 LINEAR INTEGRATED CIRCUITS	5
ELCT 362 DIGITAL INTEGRATED CIRCUITS	5
ELCT 381, 382, 383 TELEVISION SYSTEMS AND CIRCUIT ANALYSIS	3, 3, 3
GRPH 355 APPLIED PHOTOGRAPHY	3
GRPH 358 PHOTO ASSIGNMENTS	1
INDS 376 TECHNICAL FACILITY PLANNING	3
INDS 381, 382, 383 MACHINE TOOL OPERATION	3, 3, 3
INDS 386 OIL HYDRAULICS	3
INDS 400 TOPICS IN INDUSTRIAL EDUCATION AND TECHNOLOGY	1-3

SUPPORTING COURSES

INDS 428 HANDWORK ACTIVITIES	3
INDS 472 METHODS OF COURSE ORGANIZATION	4
INDS 477 INDEPENDENT STUDY IN INDUSTRIAL EDUCATION AND TECHNOLOGY	1-3; 6
INDS 499 SENIOR PROBLEM	1
PRNT 421, 422 ADVANCED LITHOGRAPHY	3, 3

LIBRARY SCIENCE

LIBR 385 SELECTION AND ACQUISITION OF LIBRARY MATERIALS	3
LIBR 400 TOPICS IN LIBRARY SCIENCE	1-3
LIBR 456 ADMINISTRATION OF SCHOOL LIBRARIES	3
LIBR 472 METHODS OF LIBRARY INSTRUCTION	3
LIBR 477 INDEPENDENT STUDY IN LIBRARY SCIENCE	1-3; 6
LIBR 490 DIRECTED LIBRARY EXPERIENCE	4-6; 6
LIBR 496 SEMINAR IN SCHOOL LIBRARY PROBLEMS	3

MATHEMATICS

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 Permission of the instructor required.	4, 4, 4
MATH 472 METHODS OF TEACHING MATHEMATICS	3
MATH 477 INDEPENDENT STUDY IN MATHEMATICS	1-3; 6

MODERN LANGUAGES

FREN 404 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
GRMN 411 GERMAN DIRECTED READING	1-3; 6
GRMN 421 18TH CENTURY GERMAN LITERATURE	4
GRMN 422 19TH CENTURY GERMAN LITERATURE	4
GRMN 423 20TH CENTURY GERMAN LITERATURE	4
SPAN 414 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
MDLG 400 TOPICS IN MODERN LANGUAGES	1-3
MDLG 472 METHODS OF TEACHING MODERN LANGUAGES	3
MDLG 477 INDEPENDENT STUDY IN MODERN LANGUAGES	1-6

MUSIC

MUCT 425 ORCHESTRATION	3
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SUPPORTING COURSES

MUCT 426 COUNTERPOINT	3
MUCT 434 COMPOSITION II	1-3; 3
MUED 354 VOCAL TECHNIQUES AND METHODS	3
MUED 400 TOPICS IN MUSIC	1-3; 6
MUED 472 ELEMENTARY MUSIC METHODS	3
MUED 473 SECONDARY MUSIC METHODS	3
MUED 477 INDEPENDENT STUDY IN MUSIC	1-3; 6
MUPF 361 BASIC CONDUCTING	2
MUPF 362 INSTRUMENTAL CONDUCTING	2
MUPF 363 CHORAL CONDUCTING	2

OFFICE ADMINISTRATION

OFAD 354 THE DENOMINATIONAL SECRETARY	2
OFAD 400 TOPICS IN OFFICE ADMINISTRATION	1-3
OFAD 454 THE LEGAL SECRETARY	4
OFAD 456 MEDICAL OFFICE PROCEDURES	4
OFAD 457 MEDICAL TERMINOLOGY	3, 5; 5
OFAD 459 THE ADMINISTRATIVE SECRETARY	4
OFAD 466 THE CONTEMPORARY SECRETARY IN BUSINESS	3
OFAD 472 METHODS OF TEACHING BUSINESS EDUCATION SUBJECTS	4
OFAD 477 INDEPENDENT STUDY IN OFFICE ADMINISTRATION	1-3; 6
OFAD 496 OFFICE ADMINISTRATION SEMINAR	1-3; 3

PHYSICS

PHYS 352, 353 RADIOISOTOPE TECHNIQUES	2, 2
PHYS 362, 363 THEORETICAL MECHANICS	3, 3
PHYS 400 TOPICS IN PHYSICS	1-3
PHYS 411, 412, 413 ATOMIC AND NUCLEAR PHYSICS	3, 3, 3
PHYS 414, 415, 416 EXPERIMENTAL PHYSICS	1, 1, 1
PHYS 417, 418, 419 PHYSICS SEMINAR II	1, 1, 1
PHYS 472 METHODS OF TEACHING PHYSICAL SCIENCE	3
PHYS 477 INDEPENDENT STUDY IN PHYSICS	1-3; 6

SOCIOLOGY AND SOCIAL WORK

CORR 385 CRIMINOLOGY	3
CORR 387 JUVENILE DELINQUENCY	3
CORR 485 LAW AND SOCIETY	2
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 373 SOCIAL WORK PRACTICE WITH MARRIAGE AND FAMILY	3
SOWK 375 SOCIAL WORK IN COMMUNITY SERVICES	3
SOWK 464 CHILD WELFARE	3

SUPPORTING COURSES

SOWK 465 POLICY, PLANNING AND ADMINISTRATION	3
SOWK 466 COMPARATIVE THEORIES OF SOCIAL WORK PRACTICE	3
SOWK 477 INDEPENDENT STUDY IN SOCIOLOGY AND SOCIAL WORK	1-3; 6
SOWK 490 FIELD WORK	2-14



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