



# Walla Walla College 1976-1977 Bulletin

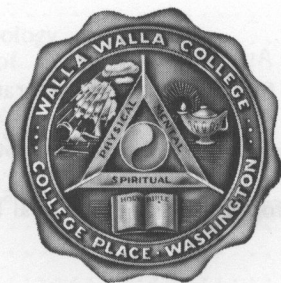




# WALLA WALLA COLLEGE

## BULLETIN

1976-77





## **Walla Walla College is accredited by**

The Northwest Association of Secondary and Higher Schools  
Association of Seventh-day Adventist Colleges and Secondary Schools  
The Washington State Board of Education  
Engineers' Council for Professional Development, Inc.  
National Association of Schools of Music  
Department of Baccalaureate and Higher Degree Programs of the National League for Nursing

## **is a member of**

Association of American Colleges  
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 Summer Sessions  
American Council on Education National Commission on Accreditation

## **is approved by**

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

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## DEGREES OFFERED

### BACCALAUREATE DEGREES

#### Majors and/or Minors:

- |                                 |   |
|---------------------------------|---|
| **Agriculture                   | Industrial Education and Technology     |
| Art                             | *Automotive                             |
| *Fine Art                       | *Biomedical Electronics                 |
| *Commercial Art                 | *Electronics                            |
| Biblical Languages              | *General Industrial                     |
| Biology                         | *Graphics                               |
| Biophysics                      | *Maintenance                            |
| Business Administration         | Journalism                              |
| *Accounting                     | **Library Science                       |
| *Economics                      | Mathematics                             |
| *Health Facility Administration | Medical Technology                      |
| *Information Science            | Medical Technology & Clinical Chemistry |
| *Management                     | Music                                   |
| *Marketing                      | *Applied                                |
| Business Education              | *Education                              |
| Chemistry                       | *Performance                            |
| Communication Media             | *Theory                                 |
| **Computer Science              | Nursing                                 |
| **Economics                     | Office Administration                   |
| Elementary Education            | Physical Education                      |
| Engineering                     | *Recreation and Outdoor Education       |
| *Civil                          | Physics                                 |
| *Electrical                     | **Political Science                     |
| *Mechanical                     | Psychology                              |
| English                         | Religion                                |
| Foods and Nutrition             | Social Work                             |
| French                          | Sociology                               |
| German                          | Spanish                                 |
| Health                          | Speech Communication                    |
| History                         | Speech Pathology & Audiology            |
| Home Economics                  | Theology                                |
| *areas of concentration         |   |
| **minor available only          |   |

### ASSOCIATE DEGREES

#### Areas of Specialization:

- |                                   |                        |
|-----------------------------------|------------------------|
| Business                          | Dietetic Technician    |
| Early Childhood Education         | Office Administration  |
| Industrial Education & Technology | Medical Secretary      |
| †Automotive                       | †Office Secretary      |
| †Electronics                      | Secretarial Accounting |
| †Graphics                         |                        |
| †Maintenance                      |                        |

†nondegree, two-year certificate program also available

### MASTER'S DEGREES

- Biology
- Education

## FOR INFORMATION —

Concerning application blanks, bulletins, academic and general information, student handbooks, viewbooks, etc., write to:

Mr. J. D. Victor Fitch, *Director*  
Admissions and Records  
509/527-2611

Concerning financial arrangements and work opportunities, write to:

Mr. Art Christensen, *Director*  
Student Accounts and Labor  
509/527-2817

Concerning financial aid, write to:

Mr. Richard Beck, *Director*  
Financial Aid  
509/527-2314

Concerning room reservations and dormitory information, write to:

Mr. M. E. Loewen, *Dean of Men*  
Sittner Hall  
509/527-2953  
or

Mrs. Betty Howard, *Dean of Women*  
Conard Hall  
509/527-2661

Concerning matters of student affairs—off-campus housing, automobile registration, policies, etc., write to:

Mr. Donald D. Lake  
*Vice President for Student Affairs*  
509/527-2511

WALLA WALLA COLLEGE  
College Place, WA 99324



# DEGREES OFFERED

## BACCALAUREATE DEGREES

<p style="text-align: center;"><b>JUNE 1976</b></p> <p>S M T W T F S</p> <p>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</p>	<p style="text-align: center;"><b>JULY 1976</b></p> <p>S M T W T F S</p> <p>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 style="text-align: center;"><b>AUGUST 1976</b></p> <p>S M T W T F S</p> <p>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 31</p>
<p style="text-align: center;"><b>SEPTEMBER 1976</b></p> <p>S M T W T F S</p> <p>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 style="text-align: center;"><b>OCTOBER 1976</b></p> <p>S M T W T F S</p> <p>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><sup>24</sup>/<sub>31</sub> 25 26 27 28 29 30</p>	<p style="text-align: center;"><b>NOVEMBER 1976</b></p> <p>S M T W T F S</p> <p>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</p>
<p style="text-align: center;"><b>DECEMBER 1976</b></p> <p>S M T W T F S</p> <p>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 31</p>	<p style="text-align: center;"><b>JANUARY 1977</b></p> <p>S M T W T F S</p> <p>1</p> <p>2 3 4 5 6 7 8</p> <p>9 10 11 12 13 14 15</p> <p>16 17 18 19 20 21 22</p> <p><sup>23</sup>/<sub>30</sub> <sup>24</sup>/<sub>31</sub> 25 26 27 28 29</p>	<p style="text-align: center;"><b>FEBRUARY 1977</b></p> <p>S M T W T F S</p> <p>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</p>
<p style="text-align: center;"><b>MARCH 1977</b></p> <p>S M T W T F S</p> <p>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>	<p style="text-align: center;"><b>APRIL 1977</b></p> <p>S M T W T F S</p> <p>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 25 26 27 28 29 30</p>	<p style="text-align: center;"><b>MAY 1977</b></p> <p>S M T W T F S</p> <p>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 31</p>
<p style="text-align: center;"><b>JUNE 1977</b></p> <p>S M T W T F S</p> <p>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 style="text-align: center;"><b>JULY 1977</b></p> <p>S M T W T F S</p> <p>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><sup>24</sup>/<sub>31</sub> 25 26 27 28 29 30</p>	<p style="text-align: center;"><b>AUGUST 1977</b></p> <p>S M T W T F S</p> <p>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>

## MASTER DEGREES

Degree  
Listings

## WALLA WALLA COLLEGE BULLETIN

### ACADEMIC CALENDAR, 1976-77

#### AUTUMN QUARTER:

September 22-23 . . . . . Freshman Orientation and Freshman Registration  
 September 24 . . . . . Registration  
 September 27, Monday, 7:30 a.m. . . . . Instruction Begins  
 November 24, 12:30 p.m. - November 28, 10:00 p.m. Thanksgiving Recess  
 December 6-8 . . . . . Registration for Winter Quarter  
 December 16, 1:30 p.m. . . . . Quarter Ends  
 December 16-January 3, 10:00 p.m. . . . . Christmas Recess

#### WINTER QUARTER:

January 3 . . . . . Registration for New Students  
 January 4, Tuesday, 7:30 a.m. . . . . Instruction Begins  
 February 28-March 2 . . . . . Registration for Spring Quarter  
 March 17, 1:30 p.m. . . . . Quarter Ends  
 March 17-22, 10:00 p.m. . . . . Spring Recess

#### SPRING QUARTER:

March 22 . . . . . Registration for New Students  
 March 23, Wednesday, 7:30 a.m. . . . . Instruction Begins  
 June 5 . . . . . Commencement

#### SUMMER QUARTER, 1977:

June 13 . . . . . Summer Session Registration  
 June 14, Tuesday, 7:30 a.m. . . . . Instruction Begins  
 August 7 . . . . . Commencement



## BOARD OF TRUSTEES

M. C Torkelsen, *Chairman*  
*Secretary*

F. M. Beavon  
F. W. Bieber  
M. J. Blair  
Ruth Carroll  
J. E. Chase  
R. D. Fearing  
Nathan Forde  
H. J. Harris  
Duane Huey

D. M. MacIvor  
Millie Oberg  
Dorothy Patchett  
L. L. Reile  
R. C. Remboldt  
Ronald Russell  
Ronald Sackett  
G. L. Starr  
T. W. Walters

## ADMINISTRATION

*, President*

N. Clifford Sorensen, Ed.D., *Vice President for Academic Affairs*

Vernon H. Siver, B.A., *Vice President for Financial Affairs*

Donald D. Lake, M.A., *Vice President for Student Affairs*

Donald O. Eichner, Ph.D., *Vice President for Development and Public Relations*

Gordon S. Balharrie, B.Div., *Dean, School of Theology*

Charles V. Bell, Ph.D., *Dean, School of Engineering*

J. D. V. Fitch, M.Ed., *Director of Admissions and Records*

Lois Hellie, B.A., *Chief Accountant*

Betty Ann Howard, M.A., *Dean of Women*

Wynelle J. Huff, M.S., *Dean, School of Nursing*

Robert H. Koorennny, M.A., *Director of Development*

Maynard E. Loewen, B.A., *Dean of Men*

Elwood L. Mabley, M.S.L.S., *Director of the Libraries*

*, Chaplain*

Orpha Osborne, B.A., *Associate Director of Records*

Donald W. Rigby, Ph.D., *Dean of Graduate School*

Larry M. Lewis, Ph.D., *Director of Summer Session*

## ASSOCIATES IN ADMINISTRATION

Kathryn Andrews, B.A., *Assistant Director of Records*  
Richard A. Beck, B.A., *Director of Financial Aid*  
Gwendolyn Burt, B.A., *Assistant Dean of Women*  
Arthur Christensen, B.A., *Director of Student Accounts and Labor*  
Shirley Cody, M.L.S., *Assistant Librarian and Assistant Director of Records*  
Lyle W. Cornforth, Ed.D., *Director of Counseling and Guidance*  
Charles E. Davis, B.S., *Director of Purchasing*  
Scott R. Duncan, B.S., *Director of Audiovisual Services*  
Melvin W. Gilliland, M.A., *Associate Librarian*  
Shirley Graves, M.S.L.S., *Assistant Librarian*  
Carolyn Hazelton, M.L.S., *Assistant Librarian*  
Alice Hoffman, *Associate Dean of Women*  
Ilo Hutton, *Assistant Dean of Women*  
Betty Duncan, B.A., *Freshman Advisement Coordinator*  
Esther Losey, B.S., *Associate Director of Health Service*  
J. D. Losey, M.D., *College Physician*  
Walter Meske, M.A., *Assistant Dean of Men*  
Annabelle Owens, *Associate Dean of Women*  
Sandra Peña, B.S., *Assistant Director of Food Service*  
Elwyn Platner, B.A., *Director of Public Information*  
Taylor Ruhl, M.S.L.S., *Assistant Librarian*  
Clyde J. Sample, B.S., *Director of Food Service*  
Helen Spechko, R.N., *Director of Health Service*  
Fay VanDyke, M.A., *Assistant Dean of Women*  
Joyce Wickward, *Assistant Accountant*  
Eugene S. Winter, Ph.D., *Assistant Director of Development*

## MARINE STATION STAFF

Oran E. McNiel, D.E., *Director*  
Lawrence R. McCloskey, Ph.D., *Associate Director*  
Ross O. Barnes, Ph.D., *Research Associate*

## AUXILIARY ENTERPRISES, Managers

Vernon H. Siver, B.A., *General Manager*  
Michael Bogdanovich, *College Place Bindery*  
Lester Border, *Plant Services*  
Monte O. Cheney, B.A., *Grounds*  
William E. Koenig, M.S., *College Dairy and Farm*  
Chester Lindt, M.A., *Custodial Department*  
Edward S. Taylor, *College Laundry and Dry Cleaners*  
John D. Wohlers, B.A., *Color Press*  
Mrs. John D. Wohlers, *College Store*

## INSTRUCTIONAL FACULTY\*

- Rosalee Abrams, *Instructor in Nursing* (1972)  
B.S. 1972, Walla Walla College
- Terry L. Anderson, *Assistant Professor of Physics* (1972)  
B.S. 1969; M.A. 1969, Pacific Union College  
M.S. 1971; Ph.D. 1976, University of Nebraska
- Wanda Anderson, *Instructor in Nursing* (1968)  
B.S. 1960, Walla Walla College
- Gordon S. Balharrie, *Professor of Theology* (1954)  
B.A. 1945, Columbia Union College  
M.A. 1949; B.Div. 1960, Andrews University
- Joseph N. Barnes, *Professor of Theology* (1961)  
B.A. 1947, Union College  
M.A. 1955; Ph.D. 1965, New York University
- 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
- Frederick R. Bennett, *Associate Professor of Engineering* (1961)  
B.S. 1955, Walla Walla College  
M.S. 1966, Washington State University
- June Bishop, *Assistant Professor of Home Economics* (1972)  
B.S. 1950; M.S. 1971, Loma Linda University
- Roland D. Blaich, *Associate Professor of History* (1968)  
B.A. 1966; M.A. 1967, California State College at Los Angeles  
Ph.D., 1975; Washington State University
- Chester D. Blake, *Assistant Professor of Industrial Education and Technology* (1966)  
B. S. 1963, Walla Walla College  
M.S. 1968, San Jose State College
- \*\*John C. Brunt, *Assistant Professor of Theology* (1971)  
B.A. 1964, Loma Linda University  
M.A. 1966; B.Div. 1967, Andrews University
- Ruth E. Burgeson, *Associate Professor of English* (1957)  
B.A. 1951; M.A. 1957, Pacific Union College
- \*\*Ernest J. Bursey, *Assistant Professor of Theology* (1973)  
B.A. 1964, Pacific Union College  
M.Div. 1970, Andrews University

\*Dates in parentheses indicate the beginning year of employment at Walla Walla College.

\*\*On leave

- Sandra L. Camp, *Associate Professor of Music* (1972)  
B.Mus.Ed. 1957; M.A. 1966, Andrews University  
D.M.E. 1976, Indiana University
- Lewis H. Canaday, *Professor of Industrial Education and Technology* (1953)  
B.S. 1953; M.A. 1959, Walla Walla College  
Ed.M. 1961, Oregon State University
- Florence Carrigan, *Assistant Professor of Nursing* (1968)  
B.S. 1953, Columbia Union College  
M.Ed. 1968, Columbia University Teachers College
- George L. Caviness, *Professor of Modern Languages* (1971)  
B.A. 1937, Pacific Union College  
M.A. 1939, University of California at Berkeley  
Ph.D. 1947, Ohio State University
- James R. Chambers, *Professor of Chemistry* (1960)  
B.A. 1939, Columbia Union College  
M.S. 1949, Case Western Reserve University  
Ph.D. 1958, Texas A and M University
- Janice P. Chance, *Associate Professor of Nursing* (1959)  
B.S. 1959, Walla Walla College  
M.S. 1967, Loma Linda University
- Clarence E. Chinn, *Professor of Chemistry* (1967)  
B.A. 1951, Walla Walla College  
M.S. 1953; Ph.D. 1956, Oregon State University  
Ph.D. 1969, University of Tennessee
- Dale L. Clayton, *Associate Professor of Biology* (1969)  
B.A. 1962, Andrews University  
M.A. 1964, Loma Linda University  
Ph.D. 1968, Michigan State University
- \*Jon A. Cole, *Professor of Engineering* (1964)  
B.S.C.E. 1961, Illinois Institute of Technology  
M.S. 1964; Ph.D. 1970, University of Wisconsin
- Edward F. Cross, *Professor of Engineering* (1947)  
M.E. 1929, Stevens Institute of Technology  
M.A. 1938, Columbia University  
Doctor of Engineering, *honoris causa*, 1974, Walla Walla College
- Reinhard Czeratzki, *Associate Professor of Modern Languages* (1967)  
B.A. 1964, Atlantic Union College  
M.A. 1967, Middlebury College
- Jack Dassenko, *Instructor in Agriculture* (1970)  
B.S. 1950, Andrews University  
M.S. 1951, University of Minnesota
- Donald Dawes, *Assistant Professor of Industrial Education and Technology* (1976)  
B.S. 1961, Walla Walla College  
M.Ed., 1966, Oregon State University

\*On leave



- C. Loren Dickinson, *Professor of Communications* (1962)  
 B.A. 1957, Union College  
 M.A. 1960, University of Nebraska  
 Ph.D. 1968, University of Denver
- Leal G. Dickson, *Associate Professor of Biology* (1971)  
 B.A. 1962, Columbia Union College  
 M.S. 1969; Ph.D. 1971, University of Maryland
- Edna M. Downing, *Assistant Professor of Nursing* (1970)  
 B.S. 1965, Loma Linda University  
 M.S. 1970, University of California at San Francisco
- Jon Dybdahl, *Assistant Professor of Theology* (1976)  
 B.A. 1965, Pacific Union College  
 M.A. 1966; B.D. 1967, Andrews University
- Donald O. Eichner, *Associate Professor of Political Science* (1963)  
 B.A. 1951, Walla Walla College  
 M.A. 1958, Andrews University  
 Ph.D. 1969, The American University
- Richard K. Emerson, *Assistant Professor of English* (1970)  
 B.A. 1970, Columbia Union College  
 M.A. 1971, Andrews University
- Judith Ann Farnsworth, *Assistant Professor of Nursing* (1971)  
 B.S. 1969, Walla Walla College  
 M.S. 1972, University of California at San Francisco
- Gerald I. Ferguson, *Associate Professor of Music* (1972)  
 B.A. 1948, Walla Walla College  
 M.A. 1951, Teachers College, Columbia University
- Garth E. Fisher, *Assistant Professor of Industrial Education and Technology* (1975)  
 B.Sc. 1966, Andrews University
- Lanny H. Fisk, *Assistant Professor of Biology* (1974)  
 B.A. 1971, Andrews University
- Ray W. Fowler, *Professor of Business* (1970)  
 B.A. 1929, Union College  
 M.A. 1941, University of Idaho  
 Ph.D. 1951, University of Nebraska
- L. Donovan French, *Associate Professor of English* (1966)  
 B.A. 1964, Walla Walla College  
 M.A. 1969, Washington State University
- Joseph G. Galusha, *Assistant Professor of Biology* (1975)  
 B.S. 1968, Walla Walla College  
 M.A. 1971, Andrews University  
 D.Phil. 1975, Oxford University
- Robert W. Gardner, *Assistant Professor of Sociology and Social Work* (1971)  
 B.A. 1969, Pacific Union College  
 M.A. 1971, Loma Linda University

- Melvin W. Gilliland, *Assistant Professor of Library Science* (1966)  
 B.A. 1949, Union College  
 M.A. 1965, University of Denver
- Lorne E. Glaim, *Professor of History* (1971)  
 B.A. 1964, Walla Walla College  
 M.A. 1966; Ph.D. 1973, Washington 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
- Shirley A. Graves, *Assistant Professor of Library Science* (1969)  
 B.A. 1960, Loma Linda University  
 M.A. 1964, University of Redlands  
 M.S.L.S. 1969, University of Southern California
- \*Edna Holst Grove, *Associate Professor of Education and Psychology* (1974)  
 B.S. 1963, Walla Walla College  
 M.Ed. 1964, Eastern Washington State College
- J. Paul Grove, *Professor of Theology* (1958)  
 B.A. 1944, Columbia Union College  
 M.A. 1956; B.Div. 1961, Andrews University
- Kenneth L. Gruesbeck, *Instructor in Industrial Education and Technology* (1964)  
 B.A. 1952, Columbia Union College
- Gary M. Hamburg, *Assistant Professor of Physical Education* (1972)  
 B.A. 1971, Loma Linda University  
 M.A. 1974, California State University at Fresno
- Gordon B. Hare, *Professor of Mathematics* (1957)  
 B.A. 1951, Columbia Union College  
 M.S. 1954; Ph.D. 1964, University of Colorado
- Carolyn Hazelton, *Assistant Professor of Library Science* (1972)  
 B.S. 1965, Walla Walla College  
 M.L.S. 1971, University of Washington
- Rodney Heisler, *Associate Professor of Engineering* (1970)  
 B.S.E. 1965, Walla Walla College  
 M.S.E.E. 1967; Ph.D. 1970, Washington State University
- Robert A. Henderson, *Professor of History* (1967)  
 B.A. 1962, Walla Walla College  
 Ph.D. 1967, Washington State University
- Solange Henderson, *Instructor in Spanish* (1973)  
 B.A. 1971, Walla Walla College
- Dale B. Hepker, *Associate Professor of English* (1973)  
 B.A. 1953, Union College  
 M.A. 1963, University of Nebraska

\*On leave

- Wilma M. Hepker, *Associate Professor of Sociology and Social Work* (1973)  
 B.A. 1953, Union College  
 M.A. 1966, University of Nebraska
- Roy A. Hingley, *Assistant Professor of Education and Psychology* (1970)  
 B.Th. 1962, Canadian Union College  
 B.Div. 1965; M.A. 1965, Andrews University  
 M.A. 1968, Arizona State University  
 Ph.D. 1974, Arizona State University
- Sherrick S. Hiscock, II, *Assistant Professor of Music* (1973)  
 B.Mus.Ed. 1963, Florida State University  
 M.Mus. 1970, University of Miami
- \*Wynelle Huff, *Associate Professor of Nursing* (1971)  
 B.S. 1962, Union College  
 M.S. 1964, University of California at San Francisco
- Robert J. Hunter, *Associate Professor of Music* (1966)  
 A.B. 1959, Pacific Union College  
 M.A. 1962, Andrews University  
 Ed.D. 1973, University of the Pacific
- Gordon O. Johnson, *Assistant Professor of Physics* (1974)  
 B.S. 1966, Walla Walla College  
 M.S. 1967; Ph.D. 1972, California Institute of Technology
- Paul W. Joice, *Professor of Business* (1971)  
 B.S. 1949, Union College  
 M.B.A. 1953, University of Denver  
 Ed.D. 1962, University of Nebraska
- Lenoa Jones, *Assistant Professor of Nursing* (1972)  
 B.S. 1972, Walla Walla College  
 M.S. 1973, University of Washington
- Robert G. W. Kappel, *Associate Professor of Business* (1973)  
 B.A. 1957, University of Washington  
 M.B.A. 1971, University of Nebraska
- Richard D. Kegley, *Assistant Professor of Business* (1974)  
 B.S. 1968, Walla Walla College  
 M.S. 1970, University of Idaho  
 M.A. 1974, Washington State University
- Miriam Anne Kelly, *Instructor in Nursing* (1973)  
 B.S. 1968, University of Oregon
- Lucile Harper Knapp, *Associate Professor of Theology* (1961)  
 B.A. 1947, Walla Walla College  
 M.A. 1949, Andrews University
- 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
- H. Lloyd Leno, *Associate Professor of Music* (1960)  
 B.A. 1948, Walla Walla College  
 M.A. 1954, Columbia Teachers College  
 A.Mus.D. 1970, University of Arizona

- Jeanne Lewis, *Instructor in Education and Home Economics* (1973)  
 B.A. 1965, Andrews University  
 M.A. 1974, Montana State University
- Larry M. Lewis, *Professor of Theology* (1967)  
 B.A. 1956, Walla Walla College  
 M.A. 1958, B.Div. 1965, Andrews University  
 Ph.D. 1974, University of Boston
- E. Harold Lickey, *Professor of Music* (1965)  
 B.A. 1950, Union College  
 M.Mus. 1958, Texas Christian University  
 D.Mus. 1970, Indiana University
- Anne Lindt, *Assistant Professor of Nursing* (1973)  
 B.S. 1954; M.S. 1966, Loma Linda University
- Elwin L. Liske, *Associate Professor of Industrial Education and Technology* (1963)  
 B.S. 1963, Walla Walla College  
 M.A. 1967, San Jose State College
- Lee Loewen, *Assistant Professor of Office Administration* (1974)  
 B.S. 1947, Union College  
 M.Ed. 1968, Walla Walla College
- Annette Lofftus, *Assistant Professor of Nursing* (1969)  
 B.S. 1955, Walla Walla College  
 M.S. 1972, University of Oregon
- Elwood L. Mabley, *Associate Professor of Library Science* (1968)  
 B.A. 1948, Walla Walla College  
 M.S.L.S. 1959, University of Southern California
- Virginia Mabley, *Assistant Professor of Office Administration* (1971)  
 B.A. 1948; M.Ed. 1973, Walla Walla College
- Kenneth R. MacKintosh, *Professor of Art* (1961)  
 B.F.A. 1959; M.F.A. 1961, Otis Art Institute of Los Angeles County
- \*Glenn W. Masden, *Professor of Engineering* (1957)  
 B.S.E.E. 1955; M.S.E.E. 1958, University of Colorado
- D. Malcolm Maxwell, *Professor of Theology* (1965)  
 B.A. 1956, Pacific Union College  
 M.A. 1958, Andrews University  
 Ph.D. 1968, Drew University
- Roger W. May, *Assistant Professor of Mathematics* (1975)  
 B.S. 1970, Andrews University  
 M.S. 1972; Ph.D. 1975, Florida State University
- Lawrence R. McCloskey, *Associate Professor of Biology* (1971)  
 B.A. 1961, Atlantic Union College  
 M.A. 1965; Ph.D. 1967, Duke University
- Oran E. McNiel, *Associate Professor of Engineering* (1964)  
 B.S. 1961, Walla Walla College  
 M.S.E.E. 1969; Degree of Engineer 1971, Stanford University

\*On leave

- Jacob G. Mehling, *Professor of Business* (1947)  
B.B.A. 1934, Walla Walla College  
M.A. 1947, University of Washington
- Bonnie Meyer, *Assistant Professor of Nursing* (1972)  
B.S. 1969; M.S. 1972, Loma Linda University
- Verlene Meyer, *Instructor in Nursing* (1973)  
B.S. 1971, Walla Walla College
- \*Ronald Mitchell, *Instructor of Nursing* (1973)  
B.S. 1972, Walla Walla College
- Nathan Moore, *Professor of English* (1967)  
B.A. 1963, Rockford College  
M.A. 1965, Carleton University  
Ph.D. 1972, University of British Columbia
- William J. Napier, *Professor of Health,  
Physical Education and Recreation* (1975)  
B.A. 1949, Union College  
M.S. 1954, University of Colorado  
Ph.D. 1971, University of Southern California
- Wanda J. Newcomb, *Instructor in Nursing* (1974)  
B.S. 1971, Loma Linda University
- Robert L. Noel, *Professor of Engineering* (1963)  
B.S. 1950; M.S. 1951, University of Wisconsin
- 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
- Carolyn Olson, *Assistant Professor of Nursing* (1970)  
B.S. 1961, Loma Linda University  
M.S. 1972, University of Oregon
- Alfred E. Perry, *Professor of Industrial Education and Technology  
and Associate Professor of Biology* (1969)  
B.A. 1953; M.A. 1958, Walla Walla College  
Ph.D. 1965, Oklahoma State University
- Hollibert E. Phillips, *Professor of Education and Psychology* (1970)  
B.A. 1960, University of London  
M.A. 1964, Andrews University  
Ed.D. 1970, Boston University
- Jean M. Prest, *Assistant Professor of Education and Psychology* (1973)  
B.S. 1968, Atlantic Union College  
M.Ed. 1974, Walla Walla College
- \*Ed E. Quiring, *Associate Professor of Office Administration* (1966)  
B.A. 1964, Walla Walla College  
M.Ed. 1968, Oregon State University

\*On leave



- Sharon Rawson, *Instructor in Nursing* (1970)  
B.S. 1956, Walla Walla College
- 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
- Donnie Thompson Rigby, *Associate Professor of Communications* (1958)  
B.A. 1952, Loma Linda University  
M.A. 1965, Redlands University
- William B. Rippon, *Professor of Chemistry* (1976)  
B.Sc. 1965, University of Sydney  
Ph.D. 1969, Newcastle University
- E. Joyce Riter, *Associate Professor of Nursing* (1961)  
B.S. 1960, Walla Walla College  
M.N. 1964, University of Washington
- Taylor D. Ruhl, *Assistant Professor of Library Science* (1974)  
B.Mus.Ed. 1971; M.Mus. 1972, Pacific Union College  
M.S.L.S. 1974, University of Southern California
- E. Gary Schneider, *Associate Professor of Health Education* (1971)  
B.A. 1959; M.A. 1960, Andrews University  
M.P.H. 1971, Loma Linda University
- F. Ruth Schneider, *Instructor in Nursing* (1973)  
B.S. 1973, Walla Walla College
- Carlos A. Schwantes, *Assistant Professor of History* (1969)  
B.A. 1967, Andrews University  
M.A. 1968, University of Michigan
- David L. Schwantes, *Instructor in Journalism* (1974)  
B.A. 1973, Walla Walla College
- Mary Schwantes, *Assistant Professor of Home Economics* (1969)  
B.S. 1968; M.S. 1972, Eastern Michigan 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
- Kenneth G. Smith, *Associate Professor of Speech Pathology and Audiology* (1973)  
A.B. 1958, Atlantic Union College  
A.M. 1960, Andrews University  
Ph.D. 1973, Michigan State University
- Ward A. Soper, *Associate Professor of Mathematics* (1965)  
B.A. 1961, Andrews University  
M.A. 1962, University of Michigan
- N. Clifford Sorensen, *Professor of Education and Psychology* (1972)  
B.S. 1958; M.A. 1963, Walla Walla College  
Ed.D. 1973, University of Southern California

- Glenn E. Spring, *Associate Professor of Music* (1965)  
 B.A. 1962, Loma Linda University  
 M.Mus. 1964, Texas Christian University  
 D.M.A. 1972, University of Washington
- Carolyn Stevens, *Assistant Professor of English* (1970)  
 B.A. 1965, Pacific Union College  
 M.A. 1966, Loma Linda University
- Robert D. Sutton, *Assistant Professor of Engineering* (1974)  
 B.S. 1961; M.S. 1964; Ph.D. 1971, University of California at Berkeley
- Alden L. Thompson, *Associate Professor of Theology* (1970)  
 B.A. 1965, Walla Walla College  
 M.A. 1966; B.Div. 1967, Andrews University  
 Ph.D. 1975, University of Edinburgh
- \*Thomas M. Thompson, *Assistant Professor of Mathematics* (1971)  
 B.A. 1968, Walla Walla College  
 M.A. 1971, University of Washington
- \*Laura Tomanka, *Instructor in Nursing* (1973)  
 B.S. 1972, Walla Walla College
- Calvin L. Trautwein, *Professor of Industrial Education and Technology* (1951)  
 B.A. 1945, Loma Linda University  
 B.S. 1950, Pacific Union College  
 Ed.M. 1955, Oregon State College  
 Ed.D. 1962, Colorado State College
- Fred Troutman, *Assistant Professor of Nursing* (1972)  
 B.S. 1966, Walla Walla College  
 M.S. 1974, Loma Linda University
- Robert R. Tupper, *Assistant Professor of Music* (1972)  
 B.Mus. 1969, Walla Walla College  
 M.Mus. 1970, University of Oklahoma
- Jeanine Turner, *Instructor in Physical Education and Recreation* (1975)  
 B.S. 1969, Loma Linda University  
 M.A. 1976, San Diego State University
- Dale O. Wagner, *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
- Betty Wallace, *Assistant Professor of Nursing* (1970)  
 B.S. 1967, Walla Walla College  
 M.S. 1970, University of Michigan
- John L. Waterbrook, *Associate Professor of Physical Education* (1965)  
 B.S. 1966, Walla Walla College  
 M.S. 1969, University of Oregon  
 Ed.D. 1974, University of Northern Colorado

\*On leave

Verne V. Wehtje, *Professor of English* (1976)

B.A. 1956, Walla Walla College

M.A. 1962, University of Washington

Ph.D. 1967, University of Nebraska

Melvin K. West, *Professor of Music* (1959)

A.B. 1952, Andrews University

M.Mus. 1955, Redlands University

Mus.A.D. 1959, Boston University

Lois A. Whitchurch, *Assistant Professor of Nursing* (1967)

B.S. 1965, Walla Walla College

M.S. 1967, Loma Linda University

Ronaele R. Whittington, *Associate Professor of Sociology and Social Work* (1975)

Ed.B. 1963, Northeastern Illinois Teachers College

M.A. 1965, University of Chicago

D.S.W. 1976, University of Southern California

Gerald A. Winslow, *Assistant Professor of Theology* (1968)

B.A. 1967, Walla Walla College

M.A. 1968, Andrews University

Engene S. Winter, *Professor of Physical Education* (1946)

B.A. 1941, Walla Walla College

M.S. 1948, State College of Washington

Ph.D. 1963, University of Oregon

Gary Alan Wiss, *Associate Professor of English* (1966)

B.A. 1966, Walla Walla College

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

Clarence A. Wood, *Assistant Professor of Speech Pathology and Audiology* (1966)

B.A. 1961, Loma Linda University

M.A. 1963, University of Denver

Evelynne F. Wright, *Professor of Home Economics* (1945)

B.A. 1941, Pacific Union College

M.S. 1953, Oregon State College

#### EMERITI

Herbert J. Alcock, M.A., *Professor of Religion*

Irene T. Black, B.A., *Registrar*

George W. Bowers, Ph.D., LL.D., *Professor of Chemistry*

Darrell J. Cowin, *Assistant Professor of Industrial Education and Technology*

Fredrick R. Hanson, M.A., *Professor of Nursing*

Carl T. Jones, *Professor of Chemistry*

Frank E. Meckling, Ph.D., *Professor of History*

Hans L. Rasmussen, Ed.D., *Academic Dean*

Lilah Godfrey Schlotthauer, M.S., *Associate Professor of Mathematics*

Cecil W. Shankel, M.A., *Professor of Chemistry*

Agnes L. Sorenson, M.A., *Professor of Modern Languages*

Henrique G. Stoehr, Dr. U.P., *Professor of Modern Languages*

Genevieve Stabler Weaver, B.A., *Associate Professor of Secretarial Science*

## PRESIDENTS OF WALLA WALLA COLLEGE

Edward A. Sutherland	1892-1897
Emmett J. Hibbard	1897-1898
Walter R. Sutherland	1898-1900
Edwin L. Stewart	1900-1902
Charles C. Lewis	1902-1904
Joseph L. Kay	1904-1905
Marion E. Cady	1905-1911
Ernest C. Kellogg	1911-1917
Walter I. Smith	1917-1930
John E. Weaver	1930-1933
William M. Landeen	1933-1938
George W. Bowers	1938-1955
Percy W. Christian	1955-1964
William H. Shephard	1964-1968
Robert L. Reynolds	1968-1976

## FACULTY COMMITTEES

### ACADEMIC STANDARDS, N. C. Sorensen, *Chairman*

G. S. Balharrie  
J. D. V. Fitch  
R. Heisler  
R. A. Henderson

K. R. MacKintosh  
W. J. Napier  
Orpha Osborne

### ADMINISTRATIVE COUNCIL, , *Chairman*

G. S. Balharrie  
C. V. Bell  
D. O. Eichner  
J. D. V. Fitch  
Betty Howard  
Wynelle Huff  
R. J. Hunter

D. D. Lake  
M. E. Loewen  
D. M. Maxwell  
H. E. Phillips  
V. H. Siver  
N. C. Sorensen  
*Chaplain*

### ADMISSIONS, J. D. V. Fitch, *Chairman*

R. A. Beck  
J. R. Chambers  
R. A. Hingley  
Betty Howard  
D. D. Lake

M. E. Loewen  
A. E. Perry  
Flo Schneider  
N. C. Sorensen

### CURRICULUM, N. C. Sorensen, *Chairman*

C. C. Barnett  
J. A. Cole  
R. K. Emmerson  
J. D. V. Fitch

L. M. Lewis  
Orpha Osborne  
D. W. Rigby

### FACULTY GRANTS, J. D. V. Fitch, *Chairman*

T. L. Anderson  
L. R. McCloskey  
C. A. Schwantes

V. H. Siver  
N. C. Sorensen



**FACULTY HANDBOOK REVISION, Nathan Moore, *Chairman***

Fred Bennett	W. A. Soper
Sandra Camp	G. E. Spring
L. H. Canaday	

**FACULTY SENATE, , *Chairman***

N. C. Sorensen	Orpha Osborne
Reinhard Czeratzki	E. G. Schneider
J. D. V. Fitch	V. H. Siver
R. W. Gardner	All department chairmen
Elwood Mabley	or their designates
O. E. McNiel	

**FINANCIAL AID, R. A. Beck, *Chairman***

D. D. Lake	Orpha Osborne
J. D. V. Fitch	N. C. Sorensen
Walter Meske	

**GOVERNMENT, D. D. Lake, *Chairman***

J. D. V. Fitch	Al Liske
Wilma Hepker	M. E. Loewen
Betty Howard	G. A. Winslow

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

D. L. Clayton	E. L. Liske
L. G. Dickson	Orpha Osborne
J. D. V. Fitch	N. C. Sorensen
G. B. Hare	D. O. Wagner

**HEALTH AND SAFETY, C. E. Davis, *Chairman***

Michael Bogdanovich	Helen Spechko
P. Coleman	*Jeff Alvic
Betty Howard	*Tim Boose
M. E. Loewen	*Glen Lyon
J. D. Losey	*Lorraine Malott
C. J. Sample	*Lorene Thompson
E. G. Schneider	

**LIBRARY, N. C. Sorensen, *Chairman***

R. K. Emmerson	D. L. Schwantes
R. G. W. Kappel	G. A. Winslow
Lee Loewen	*Mike Blankenship
E. L. Mabley	*Arlene Moore
L. R. McCloskey	

\*Student members

## LYCEUM SOCIAL ACTIVITIES, D. O. Eichner, *Chairman*

G. S. Balharrie  
L. D. French  
Lee Loewen  
M. K. West

\*ASWWC Social Vice President  
\*Dan Cary  
\*Jim Ivy  
\*Vicki Miller

## MASTER PLANNING, , *Chairman*

C. C. Barnett  
E. F. Cross  
R. H. Kooreenny  
Oran McNeil  
D. W. Rigby  
V. H. Siver

N. C. Sorensen  
A. L. Thompson  
M. K. West  
\*Eric Olson

## MENTAL HEALTH, D. D. Lake, *Chairman*

L. W. Cornforth  
Betty Howard  
M. E. Loewen  
J. D. Losey  
G. F. Miller  
E. G. Schneider  
Helen Spechko

Betty Wallace  
\*Victor Ferrera  
\*Reg Maas  
\*Mike Leno  
\*Lanny Pierce  
\*Ken Sunken

## PREPROFESSIONAL EVALUATION, N. C. Sorensen, *Chairman*

T. L. Anderson  
G. S. Balharrie  
G. B. Hare  
Betty Howard

W. B. Rippon  
D. D. Lake  
M. E. Loewen  
D. W. Rigby

## PREVIEW, D. O. Eichner, *Chairman*

G. S. Balharrie  
R. S. Duncan  
R. W. Gardner

\*Kerry Reuer  
\*Mark Robison

## RANK AND TENURE, , *Chairman*

C. D. Blake  
Ruth Burgeson  
C. L. Dickinson  
G. B. Hare

R. A. Henderson  
Wilma Hepker  
N. C. Sorensen

\*Student members

## RELIGIOUS INTERESTS, G. F. Miller, *Chairman*

G. S. Balharrie  
R. C. Gage  
Betty Howard  
D. D. Lake

M. E. Loewen  
\*Roy Castelbuono  
\*Paulette Thomas  
MV Leader

\*Spiritual Vice Presidents of EMS, AGA, CS, AD, ASWWC  
Faculty Advisers for SS, MV, EMS, CS, AD, ASWWC  
Religious Activities  
Senior Sabbath School Superintendent  
A church member representing the community

## STUDENT AFFAIRS, D. D. Lake, *Chairman*

R. A. Beck  
C. V. Bell  
J. D. V. Fitch  
Gary Hamburg  
Betty Howard  
M. E. Loewen  
Jean Prest

C. A. Schwantes  
R. D. Sutton  
\*Sheryl Comstock  
\*Roxanne Gulck  
\*Sandra Quishenberry  
\*Gaelyn Ramsey  
\*Ron Wilkinson

## STUDENT FINANCE, V. H. Siver, *Chairman*

R. A. Beck  
R. A. Hingley  
Betty Howard  
W. E. Koenig

M. E. Lowen  
\*Brad Davis  
\*Bill Marshall

## STUDENT INVOLVEMENT, M. S. Lang, *Chairman*

L. G. Dickson  
Donnie Rigby  
Betty Wallace

\*Dan Dimke  
\*Bev Rippey  
\*Julie Jones

## TEACHER EDUCATION COUNCIL,

, *Chairman*

C. C. Barnett  
C. D. Blake  
Carolyn Hazelton  
Lee Loewen  
Richard Neher  
H. T. Ochs

E. G. Schneider  
Mary Schwantes  
N. C. Sorensen  
Verne Wehtje  
\*David Thomas

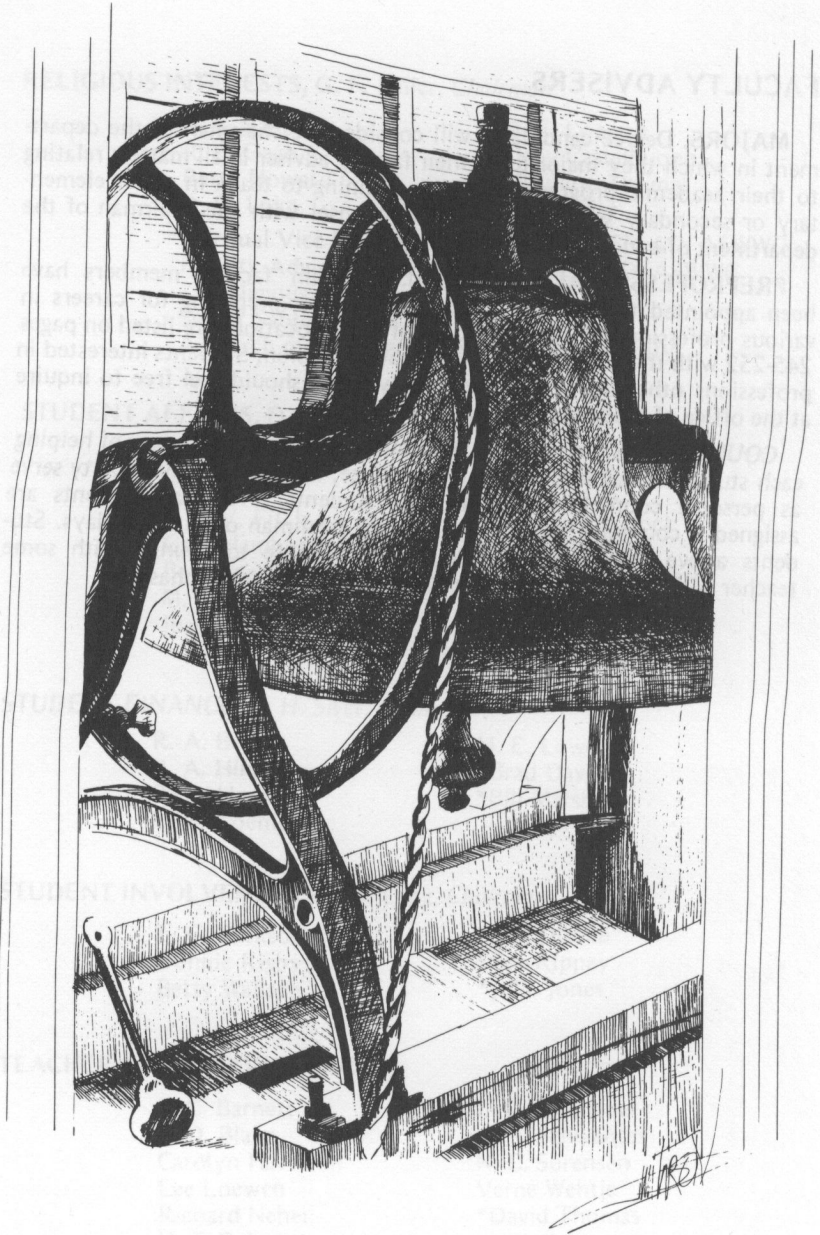
\*Student members

## FACULTY ADVISERS

**MAJORS.** Degree candidates will consider the chairman of the department in which they major to be their faculty adviser in all matters relating to their academic program. Students planning to teach in either elementary or secondary schools should also counsel with the chairman of the department of education and psychology.

**PREPROFESSIONAL PROGRAMS.** Certain faculty members have been appointed to serve as advisers to students preparing for careers in various professional vocations. Some of these vocations are listed on pages 245-252 with the faculty adviser for that profession. Students interested in professions other than those specifically listed should feel free to inquire at the office of academic affairs.

**COUNSELORS.** As part of the college counseling program of helping each student to achieve his goals in college, members of the faculty serve as personal counselors to individual students. Freshman students are assigned a counselor upon arrival during freshman orientation days. Students above the freshman level usually choose to counsel with some teacher within the department of their major field of emphasis.



THE WALLA WALLA COLLEGE BELL



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## COLLEGE AIMS

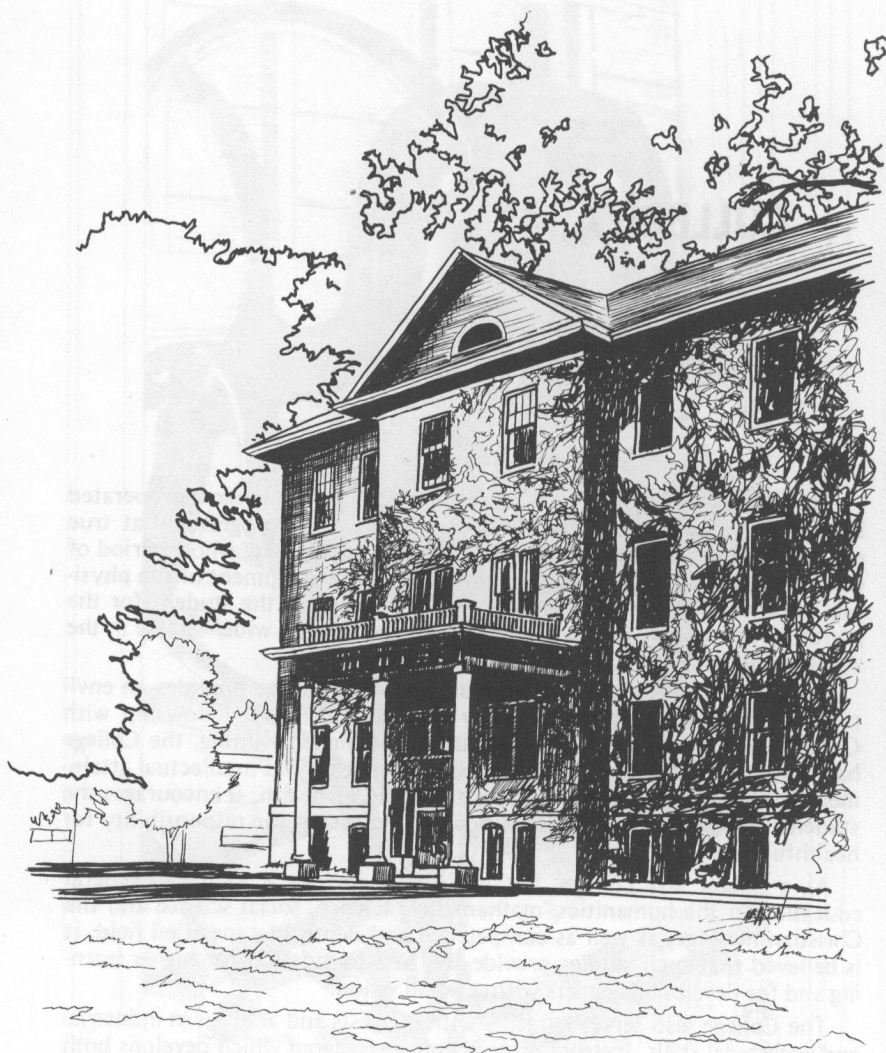
Walla Walla College is a Christian institution of higher learning operated by the Seventh-day Adventist Church. The College recognizes that true education "has to do with the whole being, and with the whole period of existence possible to man. It is the harmonious development of the physical, the mental, and the spiritual powers. It prepares the student for the joy of service in this world, and for the higher joy of wider service in the world to come." Mrs. E. G. White, *Education*, p. 13.

To achieve this broad aim of education, the College provides an environment in which the student may develop a personal fellowship with Christ. In common with other institutions of higher learning, the College has for its objective the greatest possible scholastic and intellectual attainment for each student. Recognizing the value of health, it encourages the students to respect their physical powers and accept the responsibility for healthful living.

As a liberal arts college, the institution stresses a thorough general education in the humanities, mathematics, science, social science and the Christian heritage, as well as competence and depth in a specified field. It is believed that such studies provide the best foundation for higher learning and for developing leaders with a world vision.

The College also serves students with interests and abilities in industrial and vocational skills. Instruction is, therefore, offered which develops both understanding and proficiency in a number of technical and industrial areas. The institution believes in the value and dignity of practical work.

While serving primarily the Seventh-day Adventist youth of the Pacific Northwest, the College accepts students from other states and countries who are qualified to do college work and who are willing to abide by the Christian principles enjoined on the campus.



ADMINISTRATION BUILDING

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## **GENERAL INFORMATION**

Walla Walla 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 directly to the site of the old mission which was conducted by Marcus Whitman from 1836 to 1847. It has recently been reconstructed by the federal government as the Whitman Mission National Historic Site. 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 College, in successful operation since December 7, 1892, was established in harmony with a resolution unanimously adopted at the General Conference of Seventh-day Adventists held in Battle Creek, Michigan, in 1891.

### **CAMPUS AND BUILDINGS**

The college buildings are situated on a 55-acre campus dotted with maple and sycamore trees. Other buildings belonging to the College are located on adjoining lots of land, totaling 22 additional acres.

**ADMINISTRATION BUILDING.** The Administration Building is a three-story structure located in the center of the campus. This building houses the administrative offices and a number of classrooms, laboratories and teacher offices.

**BOWERS HALL.** The department of chemistry is housed in Bowers Hall, a two-story brick building. The accommodations include two classrooms, five laboratories, two research laboratories, a library-seminar room, three offices, a stockroom and a photographic darkroom.

**COLLEGE CHURCH.** The College Church is a large, new, brick structure done in modern architecture. It seats 2,500 worshipers and 150 choir members. The Casavant-Freres organ is a three-manual, five-division instrument with almost 5,000 pipes. In addition to the church itself, there are a youth chapel and several large rooms for youth and children's Sabbath Schools.

**COLUMBIA AUDITORIUM.** Columbia Auditorium, a reinforced concrete gymnasium-auditorium with a seating capacity of over 2,000 persons, serves the college and College Place community as an auditorium-gymnasium. The large floor provides space for physical education activities, games and roller skating, while retaining the galleries for use of spectators.

**CONARD HALL.** Conard Hall offers comfortable accommodations for 400 women, together with such features as a large worship room done in church style, a recreation room and attractive parlors.

**FINE ARTS CENTER.** A new two-story reinforced concrete structure with brick and marblecrete exterior, completed in 1966, houses the departments of art and music. The building occupies the site of the old Johnson Memorial Conservatory. An auditorium seating 300 persons is a central feature of the building around which departmental offices, teaching studios, choral and instrumental rehearsal rooms, practice rooms, etc., are grouped. There are two classrooms, a reception room and foyers. A central feature of the main foyer is a large seven-piece mural depicting creation week, appropriately entitled, "In the beginning God."

The building is furnished with a three-manual, 36-rank Casavant organ with exposed pipework, a nine-foot Steinway concert grand piano, listening facilities and recording equipment, many pianos and other instruments.

The south front wing houses the department of art, where classroom and work area provide space and facilities for drawing, painting, design, printmaking and sculpture. A display area for art is provided by the Clyde and Mary Harris Art Gallery which was completed in January, 1974.

**FOREMAN HALL.** Completed in October, 1970, Foreman Hall houses 206 upper-division women students. Using a modular design, the building is unique in providing elevator service, individual floor parlors and carpeting throughout the building.

**GYMNASIUM.** A new recreational-teaching facility built in connection with the Tausick Memorial Pool. The building accommodates three basketball courts, ten badminton, six volleyball and three tennis areas, in addition to two handball courts, plus gymnastics and storage areas. It was built jointly through the efforts of the alumni and the College. The building was completed in February 1971.

**INDUSTRIAL EDUCATION AND TECHNOLOGY BUILDING.** The department of industrial education and technology is housed in a one-story frame building in excellent condition containing 17,000 square feet of floor space. There are six offices, two classrooms and six shop-laboratories. Here the students receive both the theoretical instruction as well as the necessary practicum for the programs in automotive, depictics, electronics, graphics, industrial crafts, maintenance, metals and woods.

**KELLOGG HALL.** Kellogg Hall, a brick and steel structure, completed in 1958, contains the college food service. The building also houses the Student Association's offices, lounge, *Mountain Ash* office and the *Collegian* office.

**KRETSCHMAR HALL.** This building, completed in 1963, is a reinforced concrete and masonry structure of 30,000 square feet, housing the departments of engineering, physics and mathematics. In addition to classrooms, laboratories and staff offices, the building contains a departmental library, computer room, radioactive isotope storage vault and a science demonstration lecture hall seating 150 persons.

**LIFE SCIENCES COMPLEX.** Departments housed in the Life Sciences Complex completed in 1967 are biology, home economics and nursing.

Facilities for biology include staff and graduate student offices, classrooms and teaching laboratories. In addition, specialized facilities are research laboratories, controlled environmental rooms and chambers, radio-isotope laboratory, animal and greenhouse complexes, photographic darkroom, museum and a shop.

The department of home economics is housed in the east wing of the Life Sciences Complex. The accommodations include offices and classrooms, a dining room, lounge and laboratories for food preparation, advanced nutrition, experimental foods, animal studies, clothing construction, weaving and home furnishings.

Also, in the Life Sciences Complex are offices and classrooms serving the school of nursing.

**MARINE STATION.** This facility occupies 40 acres of beach and timberland at Rosario Beach adjoining Deception Pass State Park, Anacortes, Washington. The physical plant includes five laboratory buildings, a kitchen and assembly hall, shop and 29 cabins for student and staff housing.

**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, the 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 4,500 volumes is accessioned annually. There are about 900 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.

**PORTLAND ADVENTIST HOSPITAL.** In addition to the College Place campus, Walla Walla College also utilizes the large plant of Portland Adventist Hospital, located at Portland, Oregon, where the students in nursing obtain their clinical practice.

On the Portland Campus is a residence hall for unmarried students located across the street from the Portland Adventist Hospital. The nurses' home has a large parlor, sitting room, a modern kitchen and laundry facilities to provide for comfortable living in homelike surroundings. The nurses' home also contains classrooms and a library.

**SITTNER HALL.** Erected in 1947 and expanded in 1960, Sittner Hall accommodates approximately 500 resident men. There are lounges, a recreation room and new health club facilities.

**SMITH HALL.** The department of education and psychology is housed in a three-story building which was completed in 1965. It contains classrooms, laboratory, curriculum library, a lecture hall, an audio-visual and instructional materials center and offices for the department.

**STUDENT HEALTH CENTER.** A student health center with a full-time registered nurse as director is maintained on the campus. Clinical and hospital facilities, consultation rooms, treatment rooms and other necessary facilities are available for student use. Several physicians maintain regular office hours in the student health service.

**TAUSICK MEMORIAL POOL.** A new standard-sized swimming pool with a diving ell, completed in 1965, is in daily operation and serves as an instructional and recreational center for the college students.

**WHITMAN LODGE.** A men's residence hall adjoining the college campus which accommodates 45 junior and senior men.

HOUSING FOR STUDENTS

**APARTMENTS.** The College owns 50 units of one- and two-bedroom apartments which are available for married students. These apartments rent for reasonable amounts. There are also apartments in the community, furnished and unfurnished, in which married students may live. For information, write to the director of purchasing.

**RESIDENCE HALLS.** All unmarried students taking one class or more are required to live in one of the college residence halls and to board in the college cafeteria, unless they live with their parents.

Under special circumstances, students may make application to the Student Affairs Committee for permission to live off the campus in an officially approved home. Such applications are filed with the office of student affairs and will be processed only at the beginning of a quarter. Failure to secure official approval to reside in the community or to withdraw from a college residence hall will invalidate the registration of the student. Students who have received approval for off-campus living may be called into the college residence halls at any time.

STUDENT ORGANIZATIONS AND ADVISERS

ASSOCIATED STUDENTS

The Associated Students is an organization whose membership consists of all faculty members and regularly enrolled students. The association has for its object the promotion of Walla Walla College ideals and activities. The two official publications of the associated students are *The Collegian*, the weekly newspaper of the College, and the *Mountain Ash*, the yearbook.

ASWWC Center .....	D. O. Wagner
ASWWC Graduate Manager .....	D. D. Lake
ASWWC Nominating Committee .....	D. D. Lake
ASWWC Religious Activities Committee .....	G. F. Miller
ASWWC Social Activities Committee .....	Donnie Rigby
<i>The Collegian</i> .....	Dave Schwantes
<i>The Mountain Ash</i> .....	L. H. Canaday
Missionary Volunteers .....	G. F. Miller
Sabbath School .....	M. S. Lang
Student Missionary .....	Betty Ann Howard
Temperance .....	E. G. Schneider

CAMPUS CLUBS AND ADVISERS

Canadian Students; Canadian Club .....	J. D. V. Fitch
Dormitory women; Aleph Gimel Ain (AGA) .....	Betty Ann Howard
Dormitory men; Residence Hall Advisory Council .....	M. E. Loewen
Foreign Students; Cosmopolitan Club .....	Roy Hingley

Single village women; Chiquita Sola (CS) .....	Jeanne Lewis
Single village men; Aurora Duxes (AD) .....	R. K. Czeratzki
Married Students; Epsilon Mu Sigma (EMS) .....	G. B. Hare

## DEPARTMENTAL CLUBS

Amateur Radio Club  
 Beta Mu (Home Economics)  
 Biology Club  
 Business Administration Club  
 Chemistry Club  
 Delta Rho Theta (Speech)  
 Education Club  
 Engineering Club  
 Grammateis Club (Office Administration)  
 Gymkhana Club (Physical Education)  
 History Club  
 Industrial Education and Technology Club  
 Mathematics Club  
 Music Guild  
 Pegasus Club (English)  
 Psychology  
 Society of Physics Students  
 Sociology Club  
 Theology Club

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## GENERAL REGULATIONS

In all matters pertaining to personal conduct, students are expected to act as responsible citizens and members of a Christian community conducted in accord with the ideals of the Seventh-day Adventist church. The College welcomes to its school family any individual, regardless of religious persuasion, race, color or sex, who wishes to obtain a quality education in an environment which is maintained in accord with these ideals. Those who do not, out of personal conviction, seek this type of educational environment are urged not to apply for admission. Any student whose activities interfere with the preservation of the College's unique character may be required to withdraw.

On registration each student is required to pledge willful support of all regulations set forth in this bulletin, the *Student Handbook*, or as officially announced during the school year. Applicants who are unfamiliar with the College should carefully read the *Student Handbook* before coming to the campus for registration.

## RELIGIOUS ACTIVITIES

**ASSEMBLY.** Assemblies, held twice weekly, are regarded as a vital part of the total education program at Walla Walla College, and all undergraduate students are required to attend.

**SABBATH OBSERVANCE.** The seventh-day Sabbath is observed at Walla Walla College from sunset Friday to sunset Saturday, and all students are expected to conduct themselves in harmony with the sacred nature of the day. This includes attendance at the Friday evening devotional service, as well as Sabbath School and church service on Sabbath morning.

Walla Walla College sponsors several organizations and activities which aid in training the students for Christian service.

**CHURCH AND SABBATH SCHOOL.** The Walla Walla College Church, with a membership of approximately 1,490, provides opportunities for group worship and offers training in missionary endeavor and church organization.

The Sabbath School provides leadership training and teaching experiences for college students who wish to develop their abilities in religious education.

**MISSIONARY VOLUNTEER SOCIETY.** The Missionary Volunteer Society is a student-operated organization that promotes religious understanding and activity. Besides providing Friday evening programs, typical activities include: providing tutors for labor camps, arranging a variety of Sabbath afternoon service projects, conducting weekend lecture series and sponsoring student missionaries.

**PRAYER BANDS.** The prayer bands under student leadership encourage the prayer life of the students. These groups meet regularly and foster the spiritual life of the individuals who participate.



# ACADEMIC INFORMATION

## ADMISSION PROCEDURE

Formal application for admission to the College is required on a form supplied through the admissions and records office. A recent photograph and a \$10 fee must be included. The chief factors considered by the Admissions Committee are good character, scholastic achievement, financial support and good health. After the applicant's record of previous work and recommendations have been received by the College and approved by the Admissions Committee, prompt notification of acceptance is sent.

Applications should be made as early as possible prior to the quarter in which study is to commence. All records become the property of the College.

Transcripts, applications and other credentials submitted for admission will be destroyed after two years if the applicants do not enroll in the college.

**LETTER OF ACCEPTANCE.** Under no condition should an applicant consider himself accepted until he has received an official letter of acceptance. Applicants ought not to plan on residence or work on the campus until they have been formally accepted.

**ROOM DEPOSIT.** As soon after acceptance as possible, applicants should send a room deposit of \$50 to the accounting office. This will guarantee a room for the year. This fee is refundable any time until September 1 of each year. See section on Financial Information.

**OFFICIAL TRANSCRIPT.** While a student may receive acceptance on the basis of an unofficial or incomplete transcript, no one will be permitted to complete registration unless there is an official transcript in the records office.

**COLLEGE ENTRANCE EXAMINATION.** All entering freshmen and transfer students with fewer than 30 quarter credits must submit scores from either the Washington Pre-College Test (WPCT), the College Entrance Examination Board Admission Testing Program (ATP), the American College Test (ACT) or their equivalents. Students without these test scores must take the WPCT which is administered on the Walla Walla College campus each quarter prior to registration.

## MEDICAL EXAMINATION

The health services of the College are in charge of a registered nurse who functions under the direction of the college physician. In order to give efficient service and aid in cases of illness and accident, it is required that all new students present a certificate of a recent physical examination. Approved forms are available in the admissions office.

## ADMISSION TO THE COLLEGE

Applicants for admission to the College should have graduated from a recognized four-year secondary school. All students with normal high school backgrounds must present the following units for admission:

	Units
English	3
History	1
Science	1
Mathematics	1-3*

Number of units required for the following majors:

**\*One Unit: Algebra or Geometry**

- Art
- Biblical Languages
- Business Education
- Communication Media
- English
- French
- German
- Health
- History
- Home Economics (algebra recommended)
- Industrial Education and Technology
- Journalism
- Music
- Office Administration
- Physical Education
- Psychology
- Religion
- Social Work
- Spanish

Speech Communication  
 Speech Pathology and Audiology  
 Theology  
 Associate Degree Programs (except Business and  
 Dietetic Technician)  
 Certificate Program in Office Administration

**\*Two Units:** Algebra I and one other mathematics to be chosen from Geometry, Algebra II, Plane Geometry, Solid Geometry, Trigonometry or their equivalent.

Biology  
 Business Administration  
 Chemistry  
 Elementary Education  
 Foods and Nutrition  
 Mathematics (must be geometry)  
 Medical Technology (must be geometry)  
 Nursing  
 Sociology  
 Associate Degree Programs (Business and Dietetic Technician)

**\*Three Units:** Algebra, Plane Geometry, Solid Geometry, Trigonometry or their equivalent.

Biophysics  
 Engineering  
 Physics

In addition to the above requirements for admission, the following units are highly recommended for entrance to the college curriculum:

	Units
Foreign Language	2
Social Studies	2
Science	1 additional

**ENTRANCE REQUIREMENTS FOR THE CURRICULUMS.** Certain major areas of study require specific subjects prior to admission into that curriculum.

Applicants who are deficient in subjects required for entrance to their chosen curriculum will be:

1. Required to present secondary credit to cover the deficiency; *or*
2. Successfully complete a waiver examination by the end of the first year of registration in that curriculum; *or*
3. Take additional college course work in areas approved by the major adviser.

**ADMISSION BY EXAMINATION.** Mature persons who have not completed secondary school or who are unable to furnish transcript of credits may be admitted to freshman standing through examination as required or administered by the Admissions Committee. Students so admitted are not granted regular admission until they demonstrate ability to maintain a satisfactory scholarship record.

**NONMATRICULATED ADMISSION.** Mature individuals ineligible for regular admission, or who are not working toward a degree, may be admitted as nonmatriculated students. Such students may register for any course for which they have sufficient background. Nonmatriculated students are not eligible for a degree; however, by completing requirements for regular admission they may become degree candidates.

**FRESHMAN ORIENTATION.** During the first week of the autumn quarter all entering freshmen are required to attend the orientation program. Counseling and instruction concerning study skills, registration and college regulations are given. Several tests designed to guide students in planning individual programs are also administered.

## TRANSFER STUDENTS

**ACCREDITED.** Applicants who have attended other institutions of higher education may be admitted to advanced standing by submitting complete official transcripts of all credits embodying a statement of honorable dismissal. Failure to indicate that work has been taken at other institutions at the time of application invalidates any admission.

**NONACCREDITED.** Students transferring from nonaccredited institutions are given conditional status with tentative credit for previous work as evaluated by the associate director of records. If the student maintains a C average or above on a full course load for one year, he may be given regular status with such credits for advanced standing as the transcript evaluation warrants. Failure to meet this standard will delay or prohibit graduation.

**SENIOR.** A transfer student with senior standing must be in residence three consecutive quarters and must complete a minimum of 36 credits including nine credits of upper-division work in the major and three upper-division credits in the minor.

**COMMUNITY COLLEGE.** A maximum of 96 quarter credits may be transferred from a community or two-year college. This transferable credit will be evaluated and may be accepted any time during the student's academic program. (See concurrent registration, p. 44)

## CREDIT BY EXAMINATION

Walla Walla College offers credit by examination for academy and high school seniors who have achieved outstanding success in their academic work and adults who, on the basis of many forms of work experience and life preparation, have the knowledge and competence which may be accepted as formal academic credit toward a college degree.

Three types of credit by examination are available to students and prospective students of Walla Walla College.

**CHALLENGE EXAMINATIONS.** Permission to challenge a course must be received from the department in which the course is offered. Request forms are available in the academic affairs office. Challenge examinations are available for most classes offered within the college program and may be taken only by students who are enrolled at Walla Walla College. Challenge examinations are permitted any time prior to the final quarter of college study. Courses in which a student has received an F are not open to challenge examinations. Grades are issued as on normal test scores and all grades are recorded on the permanent record of the student.

**ADVANCED PLACEMENT.** Secondary school students who have had special preparation via advanced placement courses in English should plan to take the College Entrance Examination Board (CEEB) advanced placement examination in English. This test is administered by CEEB in May of each year and is graded on a five-point scale: 1 - no recommendation; 2 - possibly qualified; 3 - qualified; 4 - well qualified; 5 - extremely well qualified. Walla Walla College grants credit to students receiving a three or better on this test and accordingly waives further freshman College Writing requirements.

**COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP).** The college-level general examinations are designed to measure knowledge acquired through nontraditional methods of study as well as a formal college curriculum. They are not based on the course or courses of any particular institution, but attempt to measure the basic core elements that are common at many different colleges and universities.

Walla Walla College is a limited test center for the college-level examinations and administers these tests on the third week of each month. Candidates for the CLEP examinations should consult the Counseling and Guidance Center.

**NOTE:** Only students in their first year of residence (freshmen and sophomore) may apply to take the CLEP general examinations. It is, therefore, to the student's advantage to take the examinations **before** college registration.



**General Examinations.** The general examinations are composed of five separate multiple-choice tests, varying from 60 to 75 minutes in length, in English Composition, Humanities, Mathematics, Natural Sciences and Social Sciences-History.

A score of the *50th PERCENTILE OR ABOVE* is required to earn credit to be applied as follows:

English Composition . . . . .	*9 quarter credits
Mathematics. . . . .	*9 quarter credits
Humanities. . . . .	*9 quarter credits
Natural Science. . . . .	*9 quarter credits
Social Science-History . . . . .	*9 quarter credits
Total Possible	45 quarter credits

The maximum amount of credit on the general examinations which may be applied to the 192 quarter credits required for the completion of the bachelor's degree is 45 quarter credits, whether it is recorded at Walla Walla College or elsewhere.

\*Elective credit only; will not satisfy a basic requirement.

**Subject Examinations.** A number of subject-matter examinations are also offered by CLEP. Students obtaining the percentile established by the department will receive credit toward that basic requirement.

**English 101-102-103 College Writing:**

Students taking the CLEP examination must take the one entitled, "Freshman English," not the one entitled, "English Composition." Those who earn a 50th percentile and satisfactorily complete the departmental essay examination will receive credit for 101, the first quarter of College Writing. Those earning a 70th percentile and satisfactorily complete the departmental essay examination will receive credit for 101 and 102. All students must take 103 which covers research methodology.

**Biology 101, 102, 103 General Biology:**

Students obtaining the 70th percentile in the "Biology" examination will receive 12 credit hours to fulfill the basic science requirement.

**Mathematics 117 Precalculus:**

Students obtaining the 50th percentile in the "College Algebra-Trigonometry" test will receive 5 credit hours which will partially fulfill the basic science requirement.

**Mathematics 121 Fundamentals of Mathematics I:**

Students obtaining the 50th percentile in the "College Algebra" test will receive 4 credit hours which will partially fulfill the basic science requirement.

**Mathematics 181, 281 Calculus I, II:**

Students obtaining the 55th percentile in the "Calculus with Analytic Geometry" examination will receive 8 credit hours which will partially fulfill the basic science requirement.

### **History 101, 102, 103 History of Western Civilization**

Students obtaining the 60th percentile in the "Western Civilization" subject examination will receive 9 credit hours to fulfill the basic history requirement.

### **History 201, 202, 203 History of the United States:**

Students obtaining the 60th percentile in the "American History" examination will receive 9 credit hours to fulfill the basic history requirement.

At the present time no other subject-matter examinations are available for credit except as an academic department may authorize a test to be used in lieu of a departmental challenge examination.

Departments may choose to add subject-matter examinations from time to time. Check with the Director of Admissions and Records to see if the area in which you are interested has been added.

**Restrictions:** The following restrictions apply to the use of all CLEP examinations:

1. Only regularly admitted and currently registered students will be awarded credit.
2. Students shall NOT be permitted to repeat any examination for credit.
3. No credit is to be awarded for any examination if there is evidence that the student has already earned credit in a course essentially duplicating the content of the examination in question.
4. All credit secured by examination shall be counted as extension courses and shall be included in the 96-quarter credit maximum that can be transferred from a community or two-year college.
5. Examination performance will be graded as pass-fail only and, therefore, cannot enter into the computation of the grade-point average.
6. Credits may not be earned by examination to make up failures.
7. Transfer credit: credit received by examination may be transferred from other educational institutions provided it has been granted within the Walla Walla College credit-by-examination policy, i.e., any CLEP credit must have received at least a 50th percentile rating to be transferred.

**Financial Considerations:** CLEP fees are as follows:

One Test	\$20
Two Tests	\$30
Three through Five Tests	\$40
Six Tests	\$60
Seven Tests	\$70
Eight or Nine Tests	\$80

For further information, write to: Director, Admissions and Records, Walla Walla College, College Place, WA 99324.

## CLASSIFICATION OF STUDENTS

**FRESHMAN.** Applicants for admission to the College who fulfill the entrance requirements for their chosen course of study are listed as freshmen.

**SOPHOMORE.** Students who have met the entrance requirements of their chosen course of study and who have a minimum of 36 credits with a grade-point average of at least 2.00 are listed as sophomores.

**JUNIOR.** Students who have a minimum of 84 credits with a grade-point average of at least 2.00, who can complete degree requirements by the end of the following school year, are listed as juniors.

**SENIOR.** Students with a minimum of 136 credits with a grade-point average of at least 2.00 and who can complete all degree requirements during the current school year are eligible for senior class membership.

**GRADUATE.** The College offers courses leading to the Master of Arts degree in education, the Master of Education degree, and the Master of Science degree in biology. For further information concerning graduate courses and degree requirements, see the Graduate Bulletin.

**AUDITOR.** A student may audit certain courses with permission of the instructor involved. No credit is allowed for an audited course. Students wishing to audit courses must register in the usual manner and are charged full tuition.

## REGISTRATION

The regular academic year is divided into three periods or quarters. The summer session is regarded as the fourth quarter.

All students are required to register on designated days at the beginning of the academic year and prior to the beginning of each quarter. Registration is not official until all procedures required by the College have been completed and all fees have been paid. Faculty advisers are available to assist students with registration and in the planning of academic programs.

**CHANGES IN REGISTRATION.** Changes in registration may be made during the first week of instruction without charge. No changes involving other courses are permitted after this time without the permission of the instructor involved. A charge of \$1 for each course changed is made after the first week of instruction. Courses may not be added after the second week of any quarter.

## CONCURRENT REGISTRATION

Students registered at Walla Walla College are not permitted to enroll for courses in neighboring colleges without permission. Concurrent enrollment must have the approval of the vice president for academic affairs.

WITHDRAWALS

**INDIVIDUAL COURSES.** Students withdrawing from individual courses must submit a Change of Registration voucher, signed by the instructor involved and the student's major professor, to the records office. The final date for dropping a course is the Wednesday prior to test week.

**ALL COURSES.** Students withdrawing from all classes must submit an official Class Drop Voucher to the records office. It must be signed by:

- 1. Major Professor
- 2. Student Finance Officer
- 3. Vice President for Student Affairs
- 4. Director of Admissions and Records

Students withdrawing from all classes during the quarter will receive NC (no credit).

**LATE REGISTRATION.** Students who register after the designated registration periods are charged a late registration fee of \$15. Students may not register after the second week of a quarter without permission of the director of admissions and records and the instructors involved. Late registrants may expect a reduction in course load.

STUDY LOAD

The normal load is 16 credits per quarter. Sophomores, juniors and seniors may request to register for 18 credits if their grade-point average for the previous quarter was 3.00 (B). In general, the full study load for graduate students is 12 quarter credits. Undergraduate students on scholastic probation ordinarily should carry a reduced course load.

Students in college residence halls are charged for and should register for a minimum of 12 credits per quarter, except seniors in their final quarter who need less than 12 credits to graduate.

The following study loads will satisfy the authorities indicated:

- 1. Immigration Authorities..... 12 quarter credits
- 2. Social Security ..... 12 quarter credits
- 3. Veterans..... 12 quarter credits

## EXPLANATION OF CREDITS

A credit normally represents one class meeting a week or three hours of laboratory work a week for the duration of the quarter. Thus, a three-credit class would meet three times each week. For each "quarter credit" of school work earned, a student is expected to spend two clock hours a week in outside preparation or three hours a week in supervised study or laboratory work.

## COURSE NUMBERING

The course numbering sequence is designed to reflect in varying degrees a progression in course content, level of approach and breadth of coverage. The course description further delineates specific course content progression. This information provided by the course number and description should serve as a general guide to the student in selecting courses compatible with his own background and ability.

**HYPHENATED NUMBERS.** Course numbers connected with hyphens indicate courses which carry credit only when completed in their entirety. Uncompleted hyphenated courses do not carry credit toward completion of any course or degree unless by permission of the chairman of the department and the Academic Standards Committee.

**LOWER DIVISION.** Course numbers 1 to 99 designate non-transferable courses carrying college credit but not applying toward a degree or teacher certification.

Course numbers 100 to 299 designate college courses which assume a limited background.

**UPPER DIVISION.** Course numbers 300 to 499 designate courses which require one or more college prerequisites, presume a broad background, or necessitate an advanced level of study.

**ADMISSION TO UPPER DIVISION.** In view of the course gradation reflected in the numbering system, a student should plan to take courses numbered 300 or 400 only after he has earned 84 credits and completed basic degree requirements. However, a sophomore who has completed 48 credits may register for upper-division courses with the permission of his department chairman and the instructor of the course.

Seniors who wish to take graduate (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, credits taken under any circumstances will not apply to a graduate program without completed graduate application forms and registration approval.



**GRADUATE.** Course numbers 500 to 599 designate fifth-year college courses.

For admission to the graduate program, students should consult the Graduate Bulletin.

**GRADING SYSTEM**

The quality of student effort is measured by a system of grades and by computed grade-point averages. The grade-point average is computed by totaling the grade points for all courses and dividing by the total credits for which grades are received. **Only the best grade of a repeated course will be calculated in the grade-point average.** The symbols S, I and NC are disregarded in computing the grade-point average. A report of grades earned is made to students at the end of each quarter. With the student's written permission a copy of his/her quarterly scholarship record will be sent to the parents or guardian.

The following system of grades and point values is used:

A – Excellent . . . . .	4 grade points per credit
B – Above Average . . . . .	3
C – Average . . . . .	2
D – Below Average . . . . .	1
F – Failure . . . . .	0
X – Unofficial Withdrawal . . . . .	0
I – Incomplete. . . . .	0

Given in case of incomplete work due to justifiable causes and must be made up three weeks before the close of the following quarter unless an official extension has been granted. If the incomplete is not made up within the approved time, the Incomplete remains on the record. A student with an Incomplete should adjust his course load the following quarter so that the work may be completed without jeopardizing scholarship in other classes.

**S – Satisfactory**

Optional mark for work equal to a grade of C or better. Also applicable to satisfactory or passing work in courses for which a conventional letter grade is not available (no grade points per credit).

**NC – No Credit**

Indicates that credit was not earned for one of the following reasons:

- a. The student opted for an S/NC mark but performance was below level of a C grade (see Optional S/NC Grading Policy following).
- b. The course was evaluated with a mandatory S/NC mark but performance did not meet the minimum standards for a satisfactory grade.

- c. The course was dropped after the midterm date. Courses dropped prior to midterm will not appear on the student's record.
- d. The course was taken on an audit basis only and no credit was sought.
- e. The student withdraws from all classes.

**OPTIONAL SATISFACTORY/NO CREDIT (S/NC) GRADING POLICY.** The purpose of this option is twofold (1) to encourage students to explore areas outside of their own areas without fear of lowering their grade-point averages; (2) to reduce the anxiety and pressures stemming from letter-grade competition in courses which are not particularly important for the individual.

In any course not used to satisfy major, minor, cognate, or teaching credential requirements, other than those specified as mandatory S/NC courses, a student may submit a written request to the records office for the grade to be recorded as S for satisfactory or NC for no credit. **The request for an optional S/NC evaluation may be made any time up to the Wednesday prior to test week of each quarter.** Printed forms are available in the records office for this purpose. This form also warns the student that he/she is responsible for any future complications that might arise due to his misuse of the S/NC option.

Teachers will report a letter grade to the records office for every student according to the conventional five-letter system. For students requesting an S/NC mark, the records office will record an S for any grade of C or above and NC for any grade less than C. Teacher signatures will not be required. However, with some programs, departments may want to give consideration to the advisability of having advisers approve the student options.

Students auditing a course or withdrawing after the midterm date will receive an automatic NC. Courses dropped prior to midterm will not appear on the student's record.

Credit hours with an S-mark may count toward graduation requirements but will not be included in the computation of a student's grade-point average.

A student may elect to take as many courses as desired on an S/NC basis. However, the maximum number of hours with an S-mark which may be applied toward graduation requirements is 20 hours for the baccalaureate degree and 10 hours for an associate degree. These maximums are in addition to any mandatory S/NC courses that the student may be required to take for graduation or teacher certification.

A student wishing to transfer in S/NC type grades from another institution may do so with the following provisions:

- a. If such credits are approved for major, minor, or other specific requirements, they will be regarded as mandatory S/NC credits.
- b. The maximum number of acceptable S/NC transfer credits permitted beyond the mandatory category will be 20 hours for the baccalaureate degree and 10 hours for an associate degree.

Once a student has requested an S/NC option, an S-symbol may be changed to a conventional letter grade only if changes in the student's program make the credits essential for major, minor, or teaching credential purposes. Such changes will be made only in the year of graduation.

When an incomplete has been granted for any course which qualifies for the S/NC option, the student may request the option during the quarter in which the work is made up.

## GRADING REGULATIONS

**ERRORS AND CORRECTIONS.** Grade cards are issued at the close of each quarter. Upon the receipt of a grade card, the student should carefully check it for correctness as to the courses recorded, credits and grades. Any corrections needed must be taken care of within one week.

**SCHOLASTIC PROBATION.** A student who fails to make satisfactory progress toward graduation will be placed on scholastic probation. A quarter of cumulative grade-point average below 2.00 (C) is considered unsatisfactory and will bring the student's record under review by the vice president for academic affairs. Students whose cumulative grade-point average falls below C (2.00) are automatically placed on scholastic probation, and they remain so classified until the overall grade-point average is again 2.00 or better.

**HONOR ROLL.** Students with a grade-point average of 3.50 or above, who are registered for at least 15 credits, are listed on the official honor roll issued each quarter.

**GRADUATION WITH HONORS.** Candidates for the baccalaureate degree with a minimum grade-point average of 3.50 may be awarded the degree with honors, *cum laude*.

## REPEAT COURSES

Students may repeat a course in which credit has been granted and grades have been received. This repeat work must be taken in a regularly offered class. Challenge examinations, independent or directed study arrangements are not allowed for repeat course work. Repeat credits for which an F has been received must be completed in residence unless permission to do otherwise is granted by the Academic Standards Committee.

## CLASS REGULATIONS

Students are not officially registered for a course until the instructor has been informed by the records office. The student is responsible for punctual and regular attendance at all classes for which he is registered. It will be recognized that missing instruction for any reason may jeopardize the class standing and course grade. Students will not be permitted to register for two classes which meet concurrently.

## CORRESPONDENCE WORK

The College will accept a maximum of 24 quarter credits of approved courses by correspondence toward a degree. Correspondence work will not meet upper-division requirements, nor can a student who has failed a course make this up by correspondence study. Students must obtain approval from their major department chairman in order to carry correspondence work while in college. Correspondence work may not apply on a major unless approved by the department chairman concerned. Correspondence deadline for June graduates is May 15; for August graduates, July 15.

Under certain conditions, students whose scholarship has fallen too low for continuation in the degree program may be readmitted after having completed and having earned satisfactory grades in approved correspondence courses.

The Home Study Institute, Washington, D.C., is a member of the Seventh-day Adventist school system in the United States, and while we recommend this correspondence school, students may take correspondence from any accredited correspondence school. Further information may be obtained from the records office.

## EXTENSION COURSES

Extension courses are accepted provided the institution offering the courses accepts similar credits toward a degree on its own campus.

## **ASSOCIATE DEGREE, VOCATIONAL AND TECHNICAL PROGRAMS**

In addition to the regular bachelor's degree program, an associate degree program is offered in the following areas: business; dietetic technician; early childhood education; industrial education and technology—automotive, electronics, graphics, maintenance; office administration—medical secretary, office secretary, secretarial accounting.

Associate degree transfer students must be in residence two quarters and must complete a minimum of 24 credits.

Two-year certificate programs not leading to a degree are also offered in some of the areas mentioned above.

Further information may be obtained from the director of admissions and records.

## **FINAL EXAMINATIONS**

All students are expected to take final examinations as scheduled. Special administrations are arranged by petition to the office of the vice president for academic affairs three weeks prior to the close of the quarter. If approved, a special fee of \$5 for each examination is assessed.

## **TRANSCRIPTS**

One transcript of a student's record is supplied without charge. A fee of \$1 per transcript is charged thereafter. Credits are not accepted or recorded after a student has ceased residence in the College.

## **GRADUATE DEGREES**

The College offers courses of study leading toward the Master of Arts, Master of Education, and Master of Science degrees. Master's degree programs are offered in the department of biology and in the department of education and psychology. Students desiring information concerning graduate degree requirements should consult the Graduate Bulletin.





BOWERS HALL — Chemistry

# DEGREE REQUIREMENTS

The College offers courses of study leading to the following degrees:

- Associate of Science (A.S.)
- Bachelor of Arts (B.A.)
- Bachelor of Science (B.S.)
- Bachelor of Music (B.Mus.)
- Bachelor of Science in Business Administration (B.S.B.A.)
- Bachelor of Science in Engineering (B.S.E.)
- Master of Arts (M.A.)
- Master of Education (M.Ed.)
- Master of Science (M.S.)

Candidates for degrees are expected to be fully informed concerning degree requirements and are responsible for their fulfillment. A student shall have the option of meeting degree requirements as published in the bulletin at the time of initial registration or any bulletin published while in regular attendance. Those not in regular attendance for one full school year must meet the requirements of the current bulletin upon resuming attendance. Students taking double majors must meet all the degree requirements for both majors, including the basic requirements.

## GRADUATE DEGREES

The College offers courses of study leading toward the Master of Arts, Master of Education and Master of Science degrees. Master's degree programs are offered in the department of biology and in the department of education and psychology. Students desiring information concerning graduate degree requirements should consult the Graduate Bulletin.

## MAJOR PROGRAMS

The table below lists by department the degrees and curriculums offered:

DEPARTMENT	DEGREE	CURRICULUM
Art	Bachelor of Arts	Art commercial art fine art
	Bachelor of Science	Biology Biophysics *Agriculture
	Master of Science	Biology
Business	Bachelor of Science in Business Administration	Business accounting economics health facility administration information science management marketing
	Bachelor of Arts	Business Administration *Economics
	Associate of Science	Business
	Bachelor of Arts Bachelor of Science	Chemistry Chemistry Clinical Chemistry <i>and</i> Medical Technology
Communications	Bachelor of Arts	Speech Communication Communication Media Journalism
	Bachelor of Science	Speech Pathology and Audiology
Computer Science		*Computer Science
Education and Psychology	Bachelor of Science	Elementary Education Psychology
	Associate of Science	Early Childhood Education
	Master of Arts	Education
	Master of Education	

\*Minor only available

DEPARTMENT	DEGREE	CURRICULUM
Engineering	Bachelor of Science in Engineering	Engineering civil electrical mechanical
English	Bachelor of Arts	English
Health, Physical Education and Recreation	Bachelor of Science	Health Physical Education recreation and out- door education
History and Political Science	Bachelor of Arts	History *Political Science
Home Economics	Bachelor of Arts	Home Economics
	Bachelor of Science	Foods and Nutrition
	Associate of Science	Dietetic Technician Early Childhood Education
Industrial Education and Technology	Bachelor of Science	Industrial Education and Technology industrial arts teacher education general industrial education industrial technology automotive biomedical electronics electronics (broadcast or industrial) graphics maintenance
	Associate of Science	Industrial Education and Technology automotive electronics graphics maintenance
	Certificate	Aviation Automotive Electronics Graphics Maintenance

\*Minor only available

DEPARTMENT	DEGREE	CURRICULUM
<b>Library Science</b>		*Library Science
<b>Mathematics</b>	Bachelor of Arts	Mathematics
	Bachelor of Science	Mathematics
<b>Modern Languages</b>	Bachelor of Arts	French German Spanish
<b>Music</b>	Bachelor of Music	Music Education Performance piano organ voice
	Bachelor of Arts	Music Theory Applied Music
<b>Nursing</b>	Bachelor of Science	Nursing
<b>Office Administration</b>	Bachelor of Science	Office Administration Business Education
	Associate of Science	Office Administration medical secretary office secretary secretarial accounting
	Certificate	Office Secretary
<b>Physics</b>	Bachelor of Arts	Physics
	Bachelor of Science	Physics Biophysics
<b>Sociology</b>	Bachelor of Arts	Sociology
	Bachelor of Science	Social Work
<b>Theology</b>	Bachelor of Arts	Theology Religion Biblical Languages
<b>Preprofessional</b>	Bachelor of Science	Medical Technology

\*Minor only available



## GENERAL DEGREE REQUIREMENTS

All candidates for baccalaureate degrees must complete a minimum of 192 credits including 60 credits in courses numbered 300 or above, and have a cumulative grade-point average of 2.00 (C) or above.

**MAJOR AND MINOR STUDY.** A minimum of 45 credits in a major and 27 credits in a minor or completion of the prescribed requirements of certain curriculums is required. **A student may not apply the same courses toward the requirements of both his major and minor.** The following degrees and majors do not require a minor: the Bachelor of Music, Bachelor of Science in Business Administration, the Bachelor of Science in Engineering; the Bachelor of Science with majors in biophysics, business education, nursing and the biomedical electronics technology concentration in industrial education.

The major should be chosen no later than the end of the sophomore year. The selection of a minor and appropriate electives should be made in counsel with the major professor or faculty adviser.

A grade lower than C (2.00) in a course may not apply on a major or minor except in engineering (see the section "Engineering"). At least 21 credits in the major and 3 credits in the minor must be in courses numbered 300 or above. The maximum allowed on a major for the Bachelor of Arts degree is 60 credits unless the excess is beyond the 192 credits required for the degree, except for the music major which is 66 quarter credits.

**COMPREHENSIVE EXAMINATION.** Satisfactory completion of the Undergraduate Record Examinations—aptitude, areas and field test—is required before a degree may be conferred. Departments will provide comparable examinations when a field test is not available. Students who do not satisfactorily complete the examination in the major field may not attempt another examination until one quarter has elapsed. Industrial education and technology majors will submit an appropriate project and/or report approved by the department chairman.

**\*RESIDENCE.** Transfer students must be in residence three consecutive quarters and complete a minimum of 36 credits, including 9 upper-division credits in the major and 3 upper-division in the minor.

Other degree candidates must be in residence the last three quarters preceding their graduation.

**CANDIDACY FOR DEGREE.** Degree candidates must file a copy of the proposed schedule of courses for the senior year and a formal application for a degree with the associate director of records not later than one week after the beginning of the first quarter of the senior year. Appropriate forms may be obtained from the records office. Students are not considered candidates for degrees or eligible for senior class membership until officially notified by the associate director of records.

\*Associate degree requirements, see p. 51.

Candidates for degrees must be members of the senior class. The fee is fixed by the class and approved by the president of the College.

Seniors must have all transcripts for correspondence work on file in the records office by May 15 in order to graduate with the June class. Summer seniors must have all transcripts for correspondence work by July 15 in order to graduate with the August class.

## MUSIC CREDIT ALLOWED ON DEGREES

Students who are not majoring or minoring in music may use 9 credits of applied music, including 3 credits in ensemble, in meeting bachelor degree requirements. A maximum of 8 additional credits in applied music (including music ensembles) may also be counted, but 1 credit of music classwork must be completed for each additional credit of applied music.

## GRADUATION

Degrees are formally conferred in June and August of each year. Students completing all degree requirements may receive their degrees at the close of the quarter of completion of their studies, and are eligible to participate in the June graduation exercises. All degrees received at times other than at the June and August presentations are granted *in absentia* and a special fee is required.

The college president must approve all degrees granted *in absentia*.

## SECOND BACHELOR'S DEGREE

Two baccalaureate degrees may be conferred concurrently or sequentially if the candidate has met all requirements, has completed a total of 237 credits, and has spent a minimum of three quarters (36 credits) in residence.

BACHELOR OF ARTS DEGREE: BASIC REQUIREMENTS

Candidates for the Bachelor of Arts degree must meet certain general education requirements which are to provide a basic understanding of those areas of knowledge common to the liberal arts. The pattern of courses required depends upon the secondary school background and the major chosen. The areas and the specific requirements are as follows:

HUMANITIES Credits

English 101-102-103 or 104-105. 9

Fine Arts, Literature, Speech. Students must complete a 12  
sequence in two of the following areas, as indicated:

Fine Arts: (6)

- 201, 202, 203 Introduction to Music
- 207, 208, 209 Arts and Ideas (see Nondepartmental)
- 231, 232, 233 Survey of Art

Literature: (6)

- 224, 225, 226 American Literature
- 244, 245, 246 English Literature
- 251, 252, 253 World Literature

\*Speech: (4)

101-102 Fundamentals of Speech Communication

\*If the speech sequence is selected, the remaining two credits needed to make a total of 12 credits for the fine arts-literature-speech block, may be taken from:

- Fine arts listed above
- Literature listed above
- Any other speech course
- Art 222, Introduction to Art

Language. The number of credits required depends upon the amount of language completed in secondary school and the major chosen.

Majors in the following must complete 9-21 credits: 9-21

- |                     |                       |
|---------------------|-----------------------|
| Chemistry           | Music                 |
| Communication Media | Physics               |
| English             | Religion              |
| History             | Sociology             |
| Journalism          | Speech Communication  |
| Language            | Theology (Greek - 24) |
| Mathematics         |                       |

Students who have completed two years of one language in the secondary school will complete nine credits of the same language in college. Those who have had no language in the secondary school will complete both the first and second year of the same language in college. Music majors must complete French or German. Majors in chemistry should choose French or German. Majors in theology or biblical

languages must choose Greek for their language requirement. Majors in religion may choose Greek or a modern language. Students choosing Greek to fulfill the language requirement will have 24 credits.

Majors in the following must complete 0-12 credits:

0-12

Art

Business Administration

Home Economics

No language is required of students who have had two units of one language in secondary school. Those who have had no language previously must complete 12 credits.

## NATURAL SCIENCE AND MATHEMATICS

12

Completion of a basic course in one of the following areas: astronomy, biological science, chemistry, physics or mathematics.

## SOCIAL SCIENCE

**Education, Psychology.** Philosophy of Christian Education (2 credits) and General Psychology (4 credits) are required.

6

**History.** Completion of either History 101, 102, 103 or 201, 202, 203.

9

**Religion.** Students who submit two or more units of secondary Bible will complete 18 credits in college. Students who have completed less than two units of secondary Bible and those transferring from non-Seventh-day Adventist colleges will take 2 credits each quarter in college. It is recommended that students with fewer than two units of religion complete 101, 102, 103—Bible Survey.

18-24

To satisfy the 18-24 basic religion requirements, at least 9 credits must be selected from the courses listed under Biblical Studies. The remaining credits may be selected from courses listed under Biblical Studies, Christian Philosophy or Archaeology and Religious History. See Theology.

## PHYSICAL EDUCATION

**Physical Education.** Physical education is required of all students under 30 years of age. The courses needed to fulfill this requirement are listed as **SERVICE COURSES** in the department of health, physical education and recreation. Veterans who have completed basic training are exempt from physical education upon presentation of their discharge papers to the associate director of records.

3

BACHELOR OF ARTS DEGREE: BASIC REQUIREMENTS

Candidates for the Bachelor of Arts degree must meet certain general education requirements which are to provide a basic understanding of those areas of knowledge common to the liberal arts. The pattern of courses required depends upon the secondary school background and the major chosen. The areas and the specific requirements are as follows:

HUMANITIES Credits

English 101-102-103 or 104-105. 9

Fine Arts, Literature, Speech. Students must complete a sequence in two of the following areas, as indicated: 12

Fine Arts: (6)

- 201, 202, 203 Introduction to Music
- 207, 208, 209 Arts and Ideas (see Nondepartmental)
- 231, 232, 233 Survey of Art

Literature: (6)

- 224, 225, 226 American Literature
- 244, 245, 246 English Literature
- 251, 252, 253 World Literature

\*Speech: (4)

101-102 Fundamentals of Speech Communication

\*If the speech sequence is selected, the remaining two credits needed to make a total of 12 credits for the fine arts-literature-speech block, may be taken from:

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- Any other speech course
- Art 222, Introduction to Art

Language. The number of credits required depends upon the amount of language completed in secondary school and the major chosen.

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- |                     |                       |
|---------------------|-----------------------|
| Chemistry           | Music                 |
| Communication Media | Physics               |
| English             | Religion              |
| History             | Sociology             |
| Journalism          | Speech Communication  |
| Language            | Theology (Greek - 24) |
| Mathematics         |                       |

Students who have completed two years of one language in the secondary school will complete nine credits of the same language in college. Those who have had no language in the secondary school will complete both the first and second year of the same language in college. Music majors must complete French or German. Majors in chemistry should choose French or German. Majors in theology or biblical



Candidates for degrees must be members of the senior class. The fee is fixed by the class and approved by the president of the College.

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Students who are not majoring or minoring in music may use 9 credits of applied music, including 3 credits in ensemble, in meeting bachelor degree requirements. A maximum of 8 additional credits in applied music (including music ensembles) may also be counted, but 1 credit of music classwork must be completed for each additional credit of applied music.

## GRADUATION

Degrees are formally conferred in June and August of each year. Students completing all degree requirements may receive their degrees at the close of the quarter of completion of their studies, and are eligible to participate in the June graduation exercises. All degrees received at times other than at the June and August presentations are granted *in absentia* and a special fee is required.

The college president must approve all degrees granted *in absentia*.

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Two baccalaureate degrees may be conferred concurrently or sequentially if the candidate has met all requirements, has completed a total of 237 credits, and has spent a minimum of three quarters (36 credits) in residence.

BACHELOR OF ARTS DEGREE: BASIC REQUIREMENTS

Candidates for the Bachelor of Arts degree must meet certain general education requirements which are to provide a basic understanding of those areas of knowledge common to the liberal arts. The pattern of courses required depends upon the secondary school background and the major chosen. The areas and the specific requirements are as follows:

HUMANITIES Credits

English 101-102-103 or 104-105. 9

Fine Arts, Literature, Speech. Students must complete a sequence in two of the following areas, as indicated: 12

Fine Arts: (6)

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- 231, 232, 233 Survey of Art

Literature: (6)

- 224, 225, 226 American Literature
- 244, 245, 246 English Literature
- 251, 252, 253 World Literature

\*Speech: (4)

101-102 Fundamentals of Speech Communication

\*If the speech sequence is selected, the remaining two credits needed to make a total of 12 credits for the fine arts-literature-speech block, may be taken from:

- Fine arts listed above
- Literature listed above
- Any other speech course
- Art 222, Introduction to Art

Language. The number of credits required depends upon the amount of language completed in secondary school and the major chosen.

Majors in the following must complete 9-21 credits: 9-21

- |                     |                       |
|---------------------|-----------------------|
| Chemistry           | Music                 |
| Communication Media | Physics               |
| English             | Religion              |
| History             | Sociology             |
| Journalism          | Speech Communication  |
| Language            | Theology (Greek - 24) |
| Mathematics         |                       |

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languages must choose Greek for their language requirement. Majors in religion may choose Greek or a modern language. Students choosing Greek to fulfill the language requirement will have 24 credits.

Majors in the following must complete 0-12 credits:

0-12

Art  
Business Administration  
Home Economics

No language is required of students who have had two units of one language in secondary school. Those who have had no language previously must complete 12 credits.

## NATURAL SCIENCE AND MATHEMATICS

12

Completion of a basic course in one of the following areas: astronomy, biological science, chemistry, physics or mathematics.

## SOCIAL SCIENCE

**Education, Psychology.** Philosophy of Christian Education (2 credits) and General Psychology (4 credits) are required.

6

**History.** Completion of either History 101, 102, 103 or 201, 202, 203.

9

**Religion.** Students who submit two or more units of secondary Bible will complete 18 credits in college. Students who have completed less than two units of secondary Bible and those transferring from non-Seventh-day Adventist colleges will take 2 credits each quarter in college. It is recommended that students with fewer than two units of religion complete 101, 102, 103—Bible Survey.

18-24

To satisfy the 18-24 basic religion requirements, at least 9 credits must be selected from the courses listed under Biblical Studies. The remaining credits may be selected from courses listed under Biblical Studies, Christian Philosophy or Archaeology and Religious History. See Theology.

## PHYSICAL EDUCATION

**Physical Education.** Physical education is required of all students under 30 years of age. The courses needed to fulfill this requirement are listed as **SERVICE COURSES** in the department of health, physical education and recreation. Veterans who have completed basic training are exempt from physical education upon presentation of their discharge papers to the associate director of records.

3

**BACHELOR OF SCIENCE DEGREE:  
BASIC REQUIREMENTS**

Candidates for the Bachelor of Science degree are required to complete certain general education requirements and usually a greater concentration of courses in their major and cognate areas. The general education requirements are as follows:

HUMANITIES	Credits
English 101-102-103 or 104-105.	9
Fine Arts, Literature, Speech. Students must complete a sequence in two of the following areas, as indicated:	12
Fine Arts: (6)	
201, 202, 203 Introduction to Music	
207, 208, 209 Arts and Ideas (see Nondepartmental)	
231, 232, 233 Survey of Art	
Literature: (6)	
224, 225, 226 American Literature	
244, 245, 246 English Literature	
251, 252, 253 World Literature	
*Speech: (4)	
101-102 Fundamentals of Speech Communication	
*If the speech sequence is selected, the remaining two credits needed to make a total of 12 credits for the fine arts-literature-speech block, may be taken from:	
Fine arts listed above	
Literature listed above	
Any other speech course	
Art 222, Introduction to Art	

**NATURAL SCIENCE AND MATHEMATICS**

Completion of a basic course in one of the following areas: astronomy, biological science, chemistry, physics or mathematics. 12

**SOCIAL SCIENCE**

**Education, Psychology.** Philosophy of Christian Education (2 credits) and General Psychology (4 credits) are required. 6

**History.** Completion of either History 101, 102, 103 or 201, 202, 203 is required. 9

**Religion.** Students who submit two or more units of secondary Bible will complete 18 credits in college. Students who have completed less than two units of secondary Bible and those transferring from non-Seventh-day Adventist colleges will take 2 credits each quarter in college. It is recommended that students with fewer than two units of religion complete 101, 102, 103—Bible Survey. 18-24

To satisfy the 18-24 basic religion requirements, at least 9 credits must be selected from the courses listed under Biblical Studies. The remaining credits may be selected from courses listed under Biblical Studies, Christian Philosophy or Archaeology and Religious History. See Theology.

## **PHYSICAL EDUCATION**

**Physical Education.** Physical education is required of all students under 30 years of age. The courses needed to fulfill this requirement are listed as **SERVICE COURSES** in the department of health, physical education and recreation. Veterans who have completed basic training are exempt from physical education upon presentation of their discharge papers to the associate director of records.

3

## **BACHELOR OF MUSIC DEGREE**

Students wishing to receive the Bachelor of Music degree must follow the curriculum as outlined under the department of music.

## **BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION DEGREE**

Students wishing to receive the Bachelor of Science in Business Administration degree must follow the curriculum as outlined under the department of business.

## **BACHELOR OF SCIENCE IN ENGINEERING DEGREE**

Students wishing to receive the Bachelor of Science in Engineering degree must follow the curriculum outlined under the school of engineering.



# DEPARTMENTS OF INSTRUCTION

## GENERAL INFORMATION

This section contains a list of all courses offered by the College. The departments are arranged in alphabetical order.

Courses numbered 100-199 are normally taken by freshmen; those from 200-299 are normally taken by sophomores; those from 300-499 by juniors and seniors; and those 500 and above by graduate students.

The description of courses in each department includes the number of the course used in the college records, the title of the course, the number of credits given, and a brief description of the course content.

The credit indicated in connection with each course is the "quarter credit," and one credit represents one recitation period per week for one quarter. The number of credits listed is for each quarter.

Two or three numbers connected with hyphens indicate courses which must be completed in their entirety. Only upon permission of the chairman of the department and the Academic Standards Committee may credit be obtained for a single quarter of study in a hyphenated course.

The College will make every effort to consistently offer all courses at appropriate intervals. It does reserve the right, however, to alter the sequences or drop courses if unforeseen circumstances in class enrollments, teacher staffing, etc., so dictate. The CLASS SCHEDULE should be consulted for personal planning of courseloads and schedules.

The College reserves the right to withdraw temporarily any course which does not have an adequate enrollment. A course may not be offered for fewer than six students except in the case of seniors or graduate students.

## TOPICS COURSES AND INDEPENDENT STUDY

### 200 or 400 TOPICS

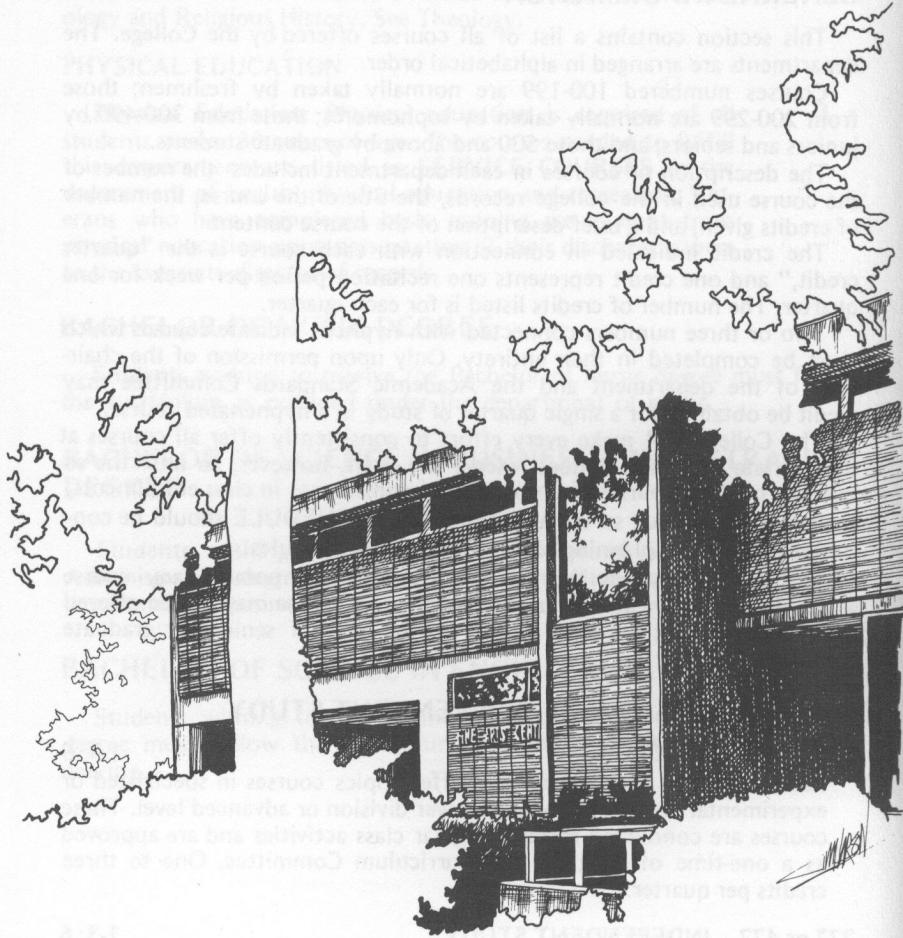
1-3; 6

Each academic department may offer topics courses in specialized or experimental areas on either the lower division or advanced level. These courses are conducted through regular class activities and are approved as a one-time offering by the Curriculum Committee. One to three credits per quarter.

### 277 or 477 INDEPENDENT STUDY

1-3; 6

Each academic department may offer directed, independent 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 and/or project showing competence in the study. All independent study must be approved by the department chairman or dean of the school offering the independent study, who in turn will assign an adviser for the completion of this study. Open only to majors and minors within the department offering the independent study. One to three credits per quarter; maximum, six credits.



FINE ARTS CENTER — Art, Music

ART

K. MacKintosh, Chairman; C. McCulley.

The aim of the department is to cultivate an awareness, appreciation and understanding of the various forms of visual experience. Through instruction and practice, the student will develop his creative abilities for practical usage by following the concentration in Fine Art or Commercial Art. Commercial Art is designed to develop skills in working with the printed word and visual communication; fine art will prepare the student as an artist or as a teacher.

BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

Major: Art

Core Requirements:

*Design	161-162-163	9
*Drawing	181-182-183	6
Introduction to Painting	191, 192, 193	6
*Survey of Art	231, 232, 233	6
Introduction to Printmaking	281, 282, 283	6
History of Modern Art	401	3
		<hr/> 36

Concentration: Fine Art

Sculpture	261 or 262 or 263	2
Fine Arts Design	301, 302, 303	9
Commercial Art	204, 205, 206	} †13
Advanced Drawing	307-308, 309	
Printmaking	311, 312, 313	
Painting	331, 332, 333	
Advanced Sculpture	361-362-363	
Filmmaking	371-372-373	<hr/> 24
†9 credits must be upper division		

Required Cognates:

Arts and Ideas	Nondept. 207, 208, 209	6
Contemporary Philosophy	Theo. 423	2
Biblical Archaeology	Theo. 445	2

Concentration: Commercial Art

Commercial Art	204, 205, 206	6
Advertising Design	314, 315, 316	9
Advanced Drawing	307-308	} 9
Printmaking	311, 312, 313	
Filmmaking	371-372-373	
		<hr/> 24

\* See Minor Requirements on the following page.

## ART

### Required Cognates:

Arts and Ideas	Nondept. 207, 208, 209	6
Principles of Photography	IE&T 161	2
Applied Photography	IE&T 362	3

### ART—MINOR REQUIREMENTS:

To meet the minor requirements, the student will choose at least 33 credits from the core requirements as listed on the previous page; asterisked (\*) courses are required. At least 3 credits must be upper division.

#### 161-162-163 DESIGN 3-3-3

An intensified study of the basic elements of design aiming to develop cognizance of visual organization.

#### 181-182-183 DRAWING 2-2-2

An experience in the use of line with representational and nonfigurative approaches through application to still life and portraiture.

#### 191, 192, 193 INTRODUCTION TO PAINTING 2, 2, 2

A first course in painting through various uses of acrylics.

#### 204, 205, 206 COMMERCIAL ART 2, 2, 2

An introduction to the various processes and media of commercial art, with emphasis on layout, new directions and craftsmanship.

#### 222 INTRODUCTION TO ART 3

The class is designed for the liberal arts students who wish to better understand and appreciate the visual arts of painting, sculpture, printmaking and the minor arts.

#### 231, 232, 233 SURVEY OF ART 2, 2, 2

The study of the great periods in history of art, their causes and developments; the relation between art and society and the implication of aesthetic understanding in each period.

#### 261, 262, 263 SCULPTURE 2, 2, 2

The study and application of three-dimensional forms in space using varied media such as plaster, plasticene and paper.

#### 281, 282, 283 INTRODUCTION TO PRINTMAKING 2, 2, 2

A beginning course in the art of printmaking, relief method of printmaking—linoleum cut, woodcut and wood engraving.

#### 301, 302, 303 FINE ARTS DESIGN 3, 3, 3

Application of the basic principles and elements of design to be used in the fine arts field. Prerequisite: 161-162-163.

**305 ART IN THE ELEMENTARY SCHOOL 3**

Principles of design and exploration of materials appropriate for primary and intermediate grade children. Methods for the intelligent use of art materials for the child of elementary school age.

**307-308, 309 ADVANCED DRAWING 2-2, 2**

A utilization of the basic principles of drawing with various experimental approaches. Prerequisite: 181-182-183.

**310 ART OF THE RENAISSANCE 3**

The study of the art of Italy from the fourteenth century through the sixteenth century and its influence on the art of Northern Europe. Prerequisite: 231, 232, 233.

**311, 312, 313 PRINTMAKING 2, 2, 2**

An advanced course in the various processes of intaglio printing, dry-point, engraving, etching and lithography. Open to majors and minors only. Prerequisites: 161-162-163 and 281, 282, 283.

**314, 315, 316 ADVERTISING DESIGN 3, 3, 3**

Application of the basic principles and elements of design to be used in the commercial field of art. Prerequisite: 161-162-163.

**331, 332, 333 PAINTING 2, 2, 2**

To develop the aesthetic enjoyment and understanding in the application of paint, whether the media be oil, casein or tempera. Prerequisites: 181-182-183 or equivalent.

**361-362-363 ADVANCED SCULPTURE 2-2-2**

Application of basic three-dimensional design principles, using metal, fiber glass, emphasizing experimentation in direction, media and techniques. Prerequisite: 261, 262, 263.

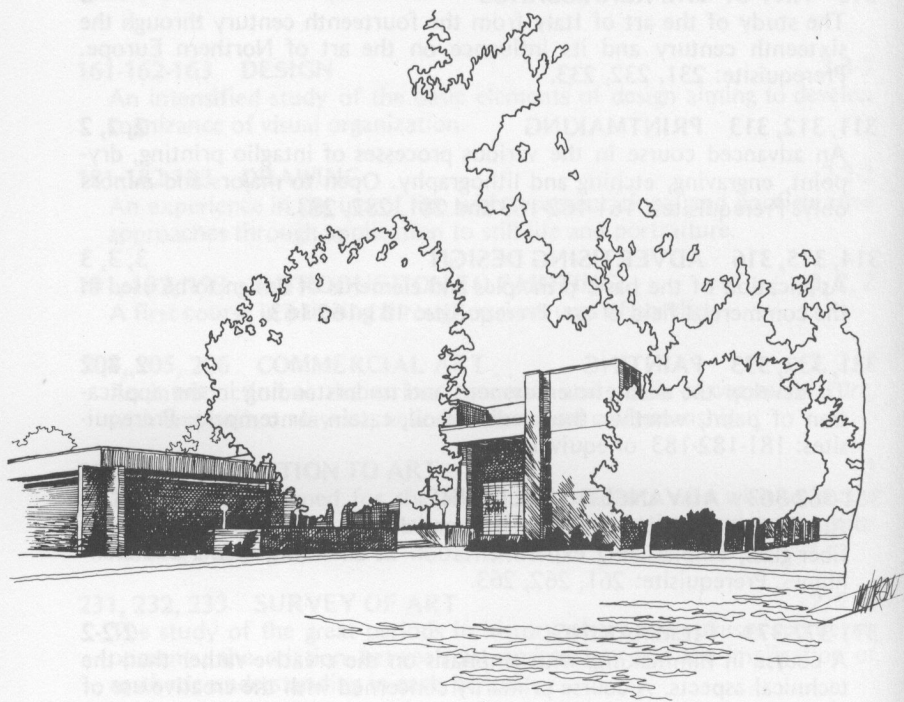
**371-372-373 FILMMAKING 2-2-2**

A course in filmmaking, with emphasis on the creative rather than the technical aspects. A course primarily concerned with the creative use of the movie camera as it relates to composition, thematic organization and experimental directions.

**401 HISTORY OF MODERN ART 3**

The origins and development of the modern period in the fine arts and their relationship to contemporary society. Prerequisite: 231, 232, 233.





LIFE SCIENCES COMPLEX — Biology, Home Economics, Nursing

## BIOLOGICAL SCIENCES

D. Rigby, Chairman; D. Clayton, J. Dassenko, L. Dickson, L. Fisk, J. Galusha, A. Grable, L. McCloskey.

The objectives of the department are to develop an understanding of the principles of biology which will better acquaint students with the world in which they live; to create an atmosphere which is conducive to individual investigation; to prepare department majors for graduate and professional education, teaching and certain careers in the biological sciences.

The department offers a Bachelor of Science degree with a major in biology, and jointly with the department of physics, a Bachelor of Science degree with a major in biophysics. Minors are offered in Biology and Applied Biology—Agriculture. Graduate work leading to the Master of Science degree is also offered. For further information, see the Graduate Bulletin.

Exceptional opportunities for study in the biological sciences are possible during the summer at the Marine Station at Rosario Beach adjoining Deception Pass State Park, Anacortes, Washington. For further information, see the bulletin of the Marine Station.

The Field School of Biology travels to various parts of North America and offers courses in botany and zoology.

### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

#### Major: Biology

General Biology	101, 102, 103	12
Genetics	261	4
Developmental Biology	266	4
Biostatistics	350	4
Research Methods I, II, III	351, 352, 453	4
Cell Physiology	392	4
General Ecology	446	4
Philosophy of Origins and Speciation	483	3
Colloquium	495	0
Required each quarter of juniors and seniors while in residence.		
Electives, upper-division in biology		17
One course in zoology and one in botany required		<hr/> 56

#### Required Cognates:

Fundamentals of Mathematics I, II	Math. 121, 122	8
Analytical Geometry & Calculus I	Math. 181	4
General Chemistry	Chem. 161-162-163	12
Organic Chemistry	Chem. 321-322-323	12
General Physics	Phys. 211, 212, 213	9
General Physics Laboratory	Phys. 214, 215, 216	3

One summer term at the Marine Station

## BIOLOGICAL SCIENCES

Candidates for this degree who plan on graduate work in biology should counsel with a departmental adviser concerning the need of a foreign language.

### Major: Biophysics

The requirements for the curriculum of biophysics are listed in the department of physics.

### BIOLOGY—MINOR REQUIREMENTS:

A minimum of 27 credits including 8 upper-division credits. Course 101, 102, 103 is required. Four credits must be in botany.

### APPLIED BIOLOGY - AGRICULTURE—MINOR REQUIREMENTS:

This minor is designed to provide the student with a practical knowledge of a science relating to the basic needs of mankind.

The student should prepare to have at least 30 credits of the following courses:

Fruit Growing	262	2
Home Gardening	263	3
Horticulture	266	3
Introduction to Soils	361	3
Farm Management	362	3
Animal Husbandry	363	2
Electives		14
(to be chosen in consultation with agriculture adviser)		
Floriculture and Landscaping	267	30
Crop Production	364	
Genetics	Bio. 261	
Developmental Biology	Bio. 266	
Survey of Plant Kingdom	Bio. 360	
Cell Physiology	Bio. 392	
Animal Physiology	Bio. 393	
Plant Physiology	Bio. 401	
General Entomology	Bio. 405	
Plant Anatomy	Bio. 412	
Systematic Botany	Bio. 426	
General Ecology	Bio. 446	
Parasitology	Bio. 447	

### Required Cognates:

General Biology	Bio. 101, 102, 103	12
Introductory Chemistry	Chem. 101-102-103	9

### BIOLOGY COURSES: College Place campus

#### 101, 102, 103 GENERAL BIOLOGY 4, 4, 4

A study of the basic principles of biology. Topics such as anatomy, physiology, cytology, genetics, taxonomy, ecology and embryology are considered with reference to both plants and animals. One laboratory per week.

## BIOLOGICAL SCIENCES

- 202 ANATOMY** 5  
A study of gross human anatomy with reference to cellular, genetic and developmental relationships. One laboratory per week.
- 203 PHYSIOLOGY** 5  
A system level study of the function of the human body with reference to basic cellular and genetic phenomena. One laboratory per week. Will not apply on biology major.
- 222 MICROBIOLOGY** 5  
The nature of bacteria and disease-producing organisms with their habits and methods of reproduction and the relation of these organisms to disease in the human body are studied. One laboratory per week. Will not apply on biology major.
- 261 GENETICS** 4  
A study of the principles of inheritance in plants and animals. One laboratory per week. Prerequisites: 101, 102, 103.
- 266 DEVELOPMENTAL BIOLOGY** 4  
Principles of development of plants and animals. Emphasis is placed on problems of growth, differentiation and morphogenesis. Laboratory work consists of both descriptive and experimental analysis of development. Two laboratories per week. Prerequisite: 101, 102, 103.
- Biology 101, 102, 103 is a prerequisite for all upper-division courses.**
- 350 BIostatISTICS** 4  
Practice and theory of statistical methods in quantitative biology.
- 351 RESEARCH METHODS I** 1  
Discussion of the methods of science, the types of biological literature, sources of biological information and methods of information retrieval. First quarter of a three-quarter sequence required of all majors.
- 352 RESEARCH METHODS II** 1  
Methods of selection of a research problem, experimental design and the forms for presentation of data in the scientific paper are discussed. Second quarter of a three-quarter sequence required of all majors.
- 360 SURVEY OF THE PLANT KINGDOM** 4  
A study of the life histories, internal anatomy and physiology of the various members of the plant kingdom. One laboratory per week.
- 389 NATURAL HISTORY OF VERTEBRATES** 4  
A study of vertebrates with emphasis on natural history, ecology and taxonomy. One laboratory per week.

## BIOLOGICAL SCIENCES

### 392 CELL PHYSIOLOGY 4

An investigation of the chemical and physical phenomena of plant and animal cells. This course will seek to integrate function with the various cellular organelles. One laboratory per week. Physics and organic chemistry strongly recommended.

### 393 ANIMAL PHYSIOLOGY 4

The study of animal physiology with emphasis on vertebrate organ systems. This course is based on concepts developed in 392. One laboratory per week. Prerequisite: 392. Physics and organic chemistry strongly recommended.

### 401 PLANT PHYSIOLOGY 4

A course designed to cover the principles of physiology of plants in general. One laboratory per week. Prerequisite: 360, 392.

### 403 ORNITHOLOGY 4

A systematic study of native birds of North America, with emphasis on identification, migration, geographical distribution, habits and life histories. Two laboratories per week.

### 405 GENERAL ENTOMOLOGY 4

A study of insect morphology, physiology, ecology and classification. One laboratory per week.

### 407 PHILOSOPHY OF SCIENCE 3

A study of the scientific method as it relates to primary origins and present-day distributions of living things. Evidences from archeology, the physical and biological sciences are examined. Will not apply on biology major.

### 412 PLANT ANATOMY 4

A study of the microscopic anatomy of plant tissues with emphasis on their origin and development. Primary attention will be devoted to the vascular plants. Recommended prerequisite: 360. One laboratory per week.

### 424 HERPETOLOGY 4

A systematic study of amphibians and reptiles with emphasis on natural history and ecology. Two laboratories per week.

### 426 SYSTEMATIC BOTANY

4 or 5

A 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. (College Place campus - 4 credits; Marine Station - 5 credits.)



- 429 LIMNOLOGY** 4  
A study of the factors responsible for the presence and distribution of animals and plants in fresh waters. 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.
- 432 INTRODUCTION TO PALEOBIOLOGY** 4  
Study of earth history as exhibited by the fossils with particular emphasis on paleobiological relationships. Two laboratories per week.
- 444 MAMMALOGY** 4  
A systematic study of mammals with emphasis on natural history and ecology. Two laboratories per week.
- 446 GENERAL ECOLOGY** 4  
A course designed to cover the basic principles of plant and animal ecology. Field trips to nearby areas illustrating these principles are part of the laboratory work. Two laboratories per week.
- 447 PARASITOLOGY** 5  
A systematic study of the morphology, life cycle and host-parasite relationships of protozoan, helminth and arthropod parasites. Two laboratories per week.
- 449 VERTEBRATE HISTOLOGY** 4  
The microscopic anatomy of vertebrate cells, tissues and organs including reference to their functions. Two laboratories per week.
- 451 INVERTEBRATE ZOOLOGY** 5  
A study of the biology of the invertebrates with emphasis on their ecology, morphology and physiology. Two laboratories per week.
- 453 RESEARCH METHODS III** 2  
Methods of writing the scientific paper, oral presentation of the paper and a discussion of the organization of the biological sciences for the communication of results of scientific research are included. Third quarter of a three-quarter sequence required of all majors.
- 464 ANIMAL BEHAVIOR** 4 or 5  
A comparative study of the behavior of animals with emphasis on an experimental analysis of behavior. A research project will be required. Two laboratories per week. (College Place campus - 4 credits; Marine Station - 5 credits.)
- 465 BACTERIOLOGY** 5  
A presentation of the basic principles necessary for an understanding of morphology and function of bacteria. Laboratory work, including unknowns, points out techniques employed in their study. Two laboratories per week.

## BIOLOGICAL SCIENCES

### 472 METHODS OF TEACHING BIOLOGY 3

This course deals with the basic principles of teaching biology in the secondary school. Observation, demonstration and class presentation are required of the students as a part of this course. Not applicable to a major or minor.

### 483 PHILOSOPHY OF ORIGINS AND SPECIATION 3

The various theories on the origin and history of living organisms will be compared in light of present scientific knowledge in the areas of biochemistry, paleontology, morphology, geology, genetics and other related areas. For majors and minors only.

### 490 TECHNIQUES IN FIELD BIOLOGY 1-6

A study of the techniques used in the collection and preservation of biological specimens for museum purposes. Emphasis is placed on the recording and preservation of ecological data obtained with the collections of specimens. The topic for a given year will depend on the instructor offering the course and credit will be given on the rate of one hour credit for each week spent working in the field.

### 495 COLLOQUIUM 0

A departmental seminar offered each quarter in which current areas of research are presented by the staff and visiting lecturers. Required of all juniors, seniors and graduate students. No credit.

### 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 credits per quarter; maximum, eight credits.

### 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: 261.

### 510 GRADUATE SEMINAR 1; 5

*Presentation of topics and discussion of current research in specific areas of biology.* One credit any quarter; three credits required; maximum, five credits.

### 511 BIOSYSTEMATICS 4

A study of the process of speciation and its relationship to currently used taxonomic methods and rules of nomenclature.

### 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: 405. Two laboratories per week.

**521 PRINCIPLES OF ECONOMIC ENTOMOLOGY** 3  
An evaluation of the various methods of controlling economically important species. Prerequisite: 405.

**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: 392, 393.

**Reading Courses**—A maximum of six credits may be selected from Reading Courses.

**525 READINGS IN PHYSIOLOGY** 2; 4  
Analysis of classical and current literature in the field by means of reports and conferences with staff. Two credits; maximum, four credits.

**526 READINGS IN INVERTEBRATE ZOOLOGY** 2; 4  
Analysis of classical and current literature in the field by means of reports and conferences with staff. Two credits; maximum, four credits.

**527 READINGS IN ENTOMOLOGY** 2; 4  
Analysis of classical and current literature in the field by means of reports and conferences with staff. Two credits; maximum, four credits.

**528 READINGS IN ECOLOGY** 2; 4  
Analysis of classical and current literature in the field by means of reports and conferences with staff. Two credits; maximum, four credits.

**529 READINGS IN SYMBIOSIS** 2; 4  
Analysis of classical and current literature in the field by means of reports and conferences with staff. Two credits; maximum, four credits.

**530 READINGS IN BIOSYSTEMATICS** 2; 4  
Analysis of classical and current literature in the field by means of reports and conferences with staff. Two credits; maximum, four credits.

**545 THESIS** 8  
Preparation of the master's dissertation after successfully carrying out original study with a suitable topic to be selected after consultation with the major professor.

## BIOLOGICAL SCIENCES

### BIOLOGY COURSES: Marine Station

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

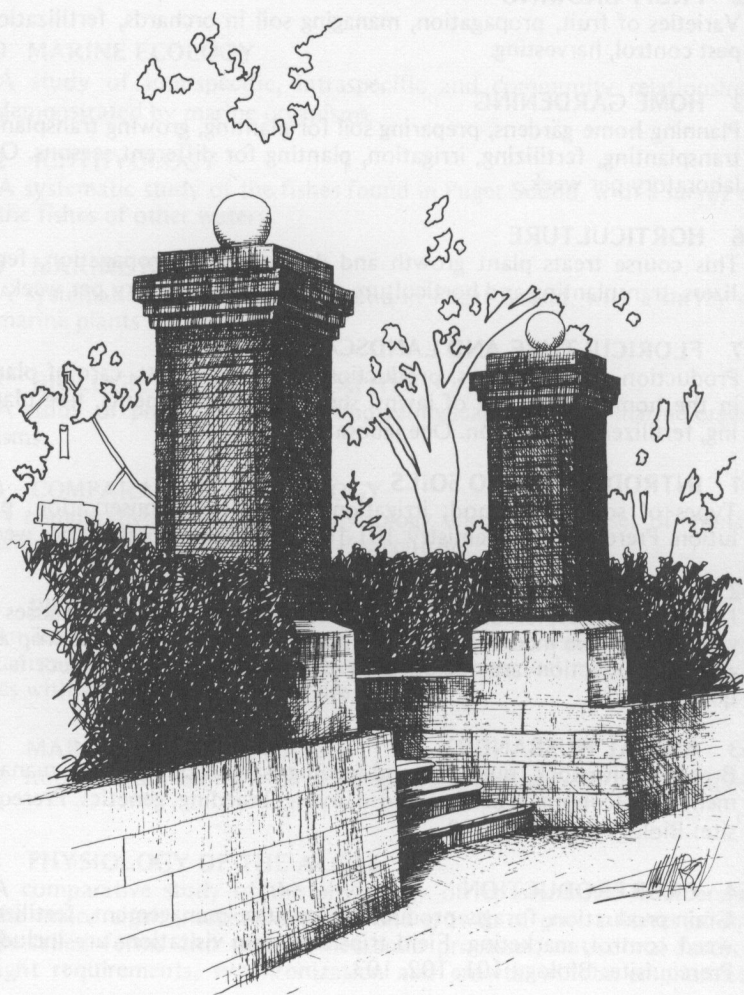
- 460 MARINE ECOLOGY** 5  
A study of interspecific, intraspecific and community relationships demonstrated by marine organisms.
- 462 ICHTHYOLOGY** 5  
A systematic study of the fishes found in Puget Sound, with a survey of the fishes of other waters.
- 463 MARINE BOTANY** 5  
A systematic study of plants found in Puget Sound, with a survey of marine plants from other areas.
- 467 BIOLOGICAL OCEANOGRAPHY** 5  
A study of physical, chemical and geological effects on marine organisms.
- 468 COMPARATIVE PHYSIOLOGY** 5  
A comparative study of the physiology and life processes of animals with emphasis on invertebrates. Prerequisite: 392.
- 470 BIOPHYSICS** 5  
An introductory course emphasizing the physical aspects of living organisms studied by the experimental and conceptual methods of physics with application to marine life.
- 474 MARINE INVERTEBRATES** 5  
A study of the biology of selected groups of marine invertebrates.
- 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.
- 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: Coursework in one group of animals or plants or microbes or parasitology. Chemistry courses through organic are highly recommended. Two laboratories per week.

## AGRICULTURE

- 262 FRUIT GROWING** 2  
Varieties of fruit, propagation, managing soil in orchards, fertilization, pest control, harvesting.
- 263 HOME GARDENING** 3  
Planning home gardens, preparing soil for planting, growing transplants, transplanting, fertilizing, irrigation, planting for different seasons. One laboratory per week.
- 266 HORTICULTURE** 3  
This course treats plant growth and development, propagation, fertilizers, transplanting and horticulture crops. One laboratory per week.
- 267 FLORICULTURE AND LANDSCAPING** 3  
Production of cut flowers, production of potted plants, care of plants in the home, laying out of lawns, shrubbery arrangements, tree planting, fertilizers, cultivation. One laboratory per week.
- 361 INTRODUCTION TO SOILS** 3  
Types of soil, plant food; irrigation, soil testing; conservation; pollution. Prerequisite: Chemistry 101-102-103. One laboratory per week.
- 362 FARM MANAGEMENT** 3  
Labor efficiency, credit, marketing, farm account records, causes of variation in farm income, measuring profits in farming, rates of crop and animal production are included in this course. Special project is required.
- 363 ANIMAL HUSBANDRY** 2  
Breeds of livestock, nutrition and feeding, sanitation, judging, management and economics of beef and dairying, breeding, genetics. Prerequisite: Biology 101, 102, 103.
- 364 CROP PRODUCTION** 3  
Grain production, forage production, pasture management, fertilizers, weed control, marketing. Field trips and farm visitations are included. Prerequisite: Biology 101, 102, 103.

*All courses under agriculture offered alternate years.*





GATEWAY TO SERVICE

## BUSINESS

P. Joice, Chairman; R. Fowler, R. Kappel, R. Kegley, J. Mehling.

The courses and programs offered by the department are designed to prepare students for business-related careers with the church, government and industry.

The objectives of this department are:

1. To provide the student with the basic business skills required for initial job placement.
2. To give the student a broad background of knowledge of the free enterprise system developed through the several disciplines of business.
3. To assist the student in developing a sound Christian philosophy toward our modern political economy and changing business world.
4. To encourage Seventh-day Adventist students to prepare for positions of business leadership and service within organizations sponsored by this denomination.

The department offers a Bachelor of Science in Business Administration degree (BSBA) with opportunity to concentrate in the areas of accounting, economics, health facility administration, information science, management and marketing. A Bachelor of Arts degree with a major in business administration is also available to the student who wishes a broader liberal arts preparation than that provided by the BSBA. An Associate of Science degree is also available for those students who, for a variety of reasons, may find it impossible to complete a four-year program without an interruption. Such a program provides an opportunity for students to gain the basic knowledge and skills required for initial job placement. Minors are also available in either business or economics.

Pre-law students are encouraged to complete the Bachelor of Arts degree program. This provides for broad preparation in the liberal arts. Students may obtain majors in the humanities or business. Additional information and some suggested course electives are listed on page 59.

Students who plan to teach business subjects at the high-school level should consult with the department chairman or follow the Business Education program listed in the department of office administration. Students may emphasize either business or office occupation skills.

In cooperation with the department of education and psychology, a graduate program is offered leading to the Master of Education degree. For further information, see the Graduate Bulletin.

## BUSINESS

### BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION DEGREE—REQUIREMENTS:

The Bachelor of Science in Business Administration (BSBA) consists of four elements: the business core, the concentration, the required cognates and the general education requirements.

#### Core Requirements:

Principles of Accounting	111, 112, 113 or 115, 116	10
Data Processing	153	4
Principles of Management	163	4
Principles of Economics	221, 222, 223	9
Managerial Cost Accounting	311	5
Business Finance	331	4
Business Law	341, 342, 343	9
Marketing	371	4
Business Statistics	444	4
Seminar	449	2
		<u>55</u>

#### Required Cognates:

Beginning Typewriting	Of. Adm. 123 or equivalent	0-2
Business Machines	Of. Adm. 262	2
Business Communications	Of. Adm. 352	3
or		
Advanced Writing	Eng. 280	
or		3
Technical Writing	Eng. 381	
Survey of Mathematics	Math. 111, 112, 113	12
or		
Fundamentals of Mathematics I, II and Analytic		
Geometry and Calculus I	Math. 121, 122, 181	4
Fundamentals of Speech Communication	Comm. 101-102	

#### General Education Requirements:

The same as listed for other Bachelor of Science degree programs, except no minor is required.

#### Concentration: Accounting

Intermediate Accounting	211, 212, 213	9
Electives in accounting and business		<u>32</u>
A minimum of 12 credits must be chosen from:		
Federal Income Tax	315	
Advanced Accounting	411	
CPA Review	412	
Accounting Theory	413	
Fund Accounting	414	
Auditing Procedures	419	

## BUSINESS

### Concentration: Economics

Price Theory	321	4
Aggregate Economic Analysis	322	4
Electives in business and economics		33
A minimum of 12 credits must be chosen from:		
Economic History of the U.S.	323	
Money and Banking	421	
Comparative Economic Systems	422	
Economics of Foreign Trade	423	
Development of Economic Thought	427	
Business Cycles	429	
Public Finance	435	

### Concentration: Health Facility Administration

Introduction to Health Care Organizations	262	2
Fund Accounting	414	4
Health Care Organization and Management	461	2
Anatomy	Bio. 202	5
Physiology	Bio. 203	5
Sociology of Health and Illness	Soc. 447	3
Social Concepts of Gerontology	Soc. 453	3
Electives in business or approved disciplines		17
A minimum of 12 credits must be chosen from:		
Personnel Management	261	
Job Analysis	361	
Supervision	362	
Credit Administration	432	
Human Relations in Management	463	
Public Relations	471	
Purchasing	472	
Introduction to Health	H&PE 101	
Survey of Renal and Metabolic		
Health Physiology	H&PE 461	
Cardiovascular Diseases	H&PE 462	

### Concentration: Information Science

Programming for Business I	251	4
Programming for Business II	252	4
Computerized Information Systems	451	3
Computer Science II (Fortran)	Engr. 220	2
Computer Science III	Engr. 346	3
Digital Logic Circuits	Engr. 355	3
Linear Algebra and Its Applications	Math. 293	3
Electives in business or approved disciplines		19
A minimum of 12 credits must be chosen from:		
Intermediate Accounting	211, 212, 213	
Fund Accounting	414	
Analytic Geometry & Calculus II	Math. 281	
Introduction to Experimentation	Phys. 115, 116	
Simulation and Modeling	Phys. 371	

## BUSINESS

### Concentration: Management

Personnel Management	261	4
Human Relations in Management	463	4
Business Policies	466	4
Electives in business		29
A minimum of 12 credits must be chosen from:		
Introduction to Health Care Organizations	262	
Job Analysis	361	
Supervision	362	
Credit Administration	432	
Health Care Organization and Management	461	
Denominational Policy	467	
Public Relations	471	
Purchasing	472	

### Concentration: Marketing

Principles of Advertising	372	4
Selling and Sales Management	373	4
Electives in business		33
A minimum of 12 credits must be chosen from:		
Principles of Insurance	344	
Real Estate	346	
Credit Administration	432	
Public Relations	471	
Purchasing	472	
Retail Store Operation and Management	473	
Advertising Copywriting	Jour. 431	

## BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

### Major: Business Administration

Principles of Accounting	111, 112, 113 or 115, 116	10
Principles of Economics	221, 222, 223	9
Business Law	341, 342, 343	9
Seminar	449	2
Business Electives (10 upper-division)		25
(as approved by department chairman)		55

## BUSINESS—MINOR REQUIREMENTS:

Principles of Accounting	111, 112, 113 or 115, 116	10
Principles of Economics	221, 222, 223	9
Business Electives* (4 upper-division)		11
(as approved by department chairman)		30

## ECONOMICS—MINOR REQUIREMENTS:

Principles of Economics	221, 222, 223	9
Price Theory	321	4
Aggregate Economic Analysis	322	4
Electives (4 upper-division)		13
(as approved by department chairman)		30



**ASSOCIATE OF SCIENCE DEGREE—REQUIREMENTS:****General Requirements:**

College Writing	Eng. 101-102-103	9
Religion		8
Physical Education (service courses)		2
Personal Finance	Bus. 131	2
Electives (from published bachelor's degree general requirements)		<u>11</u>
		32

**Area of Specialization: Business**

Principles of Accounting	111, 112, 113 or 115, 116	10
Data Processing	153	4
Principles of Management	163	4
Principles of Economics	221, 222, 223	9
Business Law	341, 342, 343	9
Electives in business		<u>8</u>
		44

**Required Cognates:**

General Psychology	Psych. 121, 122	4
Beginning Typewriting or equivalent	Of.Adm. 123	2
Business Machines	Of.Adm. 262	2
Mathematics		8
Fundamentals of Speech Communication	Comm. 101-102	<u>4</u>
		20

**ACCOUNTING****111, 112, 113 or 115, 116 PRINCIPLES OF ACCOUNTING 4, 3, 3 or 5, 5**

A study of accounting concepts and procedures required in the accumulation and presentation of data needed by management for decision making. Must be taken in sequence. May be taken in a two- or three-quarter sequence; see the Class Schedule.

**211, 212, 213 INTERMEDIATE ACCOUNTING 3, 3, 3**

A study of the construction, analysis, and interpretation of financial statements and reports prepared from accounting records. Basic accounting procedures employed in balance sheet evaluation and determination of profit. Prerequisite: 113 or 116.

## BUSINESS

### **311 MANAGERIAL COST ACCOUNTING** 5

Standards and budgets for control; volume-profit relationships; discretionary and committed costs; application of overhead and analysis of variances; accounting systems for accumulating costs; responsibility centers; long-range planning; cost analysis for problem solving; capital budgeting; quantitative techniques applied to cost accounting. Prerequisite: 113 or 116.

### **315 FEDERAL INCOME TAX** 5

A study of tax regulations and accounting records necessary to facilitate proper tax accounting and reporting for individuals, partnerships and corporations.

### **411 ADVANCED ACCOUNTING** 4

Special accounting problems relating to partnership accounting, preparation of financial statements for consolidations and combinations involving branch offices and subsidiaries; accounting for trusts and estates. Prerequisite: 213.

### **412 CPA REVIEW** 4

A comprehensive review of problems covering accounting principles, procedures and presentations as found in the practice section of the CPA examination. Prerequisites: 311; 315 and 411.

### **413 ACCOUNTING THEORY** 4

Advanced study of assets, equities and income measurement by a review of the current literature and materials from the theory portion of the CPA examination. Prerequisite: 213; 411 and 412 recommended.

### **414 FUND ACCOUNTING** 4

A study of the application of fund accounting principles to various governmental entities, school, hospital and church accounting systems. Prerequisite: 113 or 116. Offered alternate years.

### **419 AUDITING PROCEDURES** 5

Public accounting practice including such topics as ethics, auditing standards and techniques, internal control, advisory services, computer system techniques, audit working papers and legal liability. Prerequisite: Eight hours of accounting beyond 213. Offered alternate years.

## ECONOMICS

### **221, 222, 223 PRINCIPLES OF ECONOMICS** 3, 3, 3

A study of the organization, operation and control of the American economy and of the principles and analytical concepts pertaining thereto. Must be taken in sequence.

**321 PRICE THEORY 4**

A study of the structure of markets, the determination of prices, the relations of price and cost, income and its functional distribution in a capitalistic economy. Prerequisite: 223. Offered alternate years.

**322 AGGREGATE ECONOMIC ANALYSIS 4**

Analysis of the determinants of the aggregate level of employment output, and income of an economy. Prerequisite: 223. Offered alternate years.

**323 ECONOMIC HISTORY OF THE UNITED STATES 4**

A comprehensive study of the economic development of the United States from the colonial period to the present. Recommended prerequisite: 223. Offered alternate years.

**421 MONEY AND BANKING 4**

A study of the functional activities of the institutions which comprise our financial system; emphasizing the nature and functions of money, credit and banking. Prerequisite: 223. Offered alternate years.

**422 COMPARATIVE ECONOMIC SYSTEMS 4**

A study of the theoretical basis of capitalism; socialism and communism followed by a comparison of the modern systems in their response to basic economic problems. Prerequisite: 223. Offered alternate years.

**423 ECONOMICS OF FOREIGN TRADE 4**

Examines the role of trade in world development and stability. Develops the principles of trade and foreign exchange; considers the effects of tariffs and other trade policies; describes international organizations dealing with trade and exports. Prerequisite: 223. Offered alternate years.

**427 DEVELOPMENT OF ECONOMIC THOUGHT 4**

A study of the history of economic doctrine, tracing the origins of contemporary economic theory. Prerequisites: 321 and 322. Offered alternate years.

**429 BUSINESS CYCLES 4**

A study of the business cycle including analysis of cycle theories, appraisal of proposals for controlling cycles, and forecasting techniques. Prerequisites: 321 and 322. Offered alternate years.

**FINANCE**

**131 PERSONAL FINANCE 2**

A course designed to provide an individual with the techniques to manage his personal finances more efficiently.

## BUSINESS

### 331 BUSINESS FINANCE 4

A study of the fundamental principles of financial policy in the organization and management of corporate enterprises. Prerequisites: 113 or 116 and 223.

### 431 INVESTMENTS 4

A study of the principles of making sound investments in the securities markets, managing investment portfolios, evaluating securities, the function of the speculation, the hedging operation and the evaluation of market risks. Offered alternate years.

### 432 CREDIT ADMINISTRATION 4

A study of loan and collection problems from the viewpoint of the credit administrator. Offered alternate years.

### 435 PUBLIC FINANCE 4

Governmental expenditures, taxation, public data and public financial administration; public policies on expenditures, taxation and debt management and their relation to business fluctuations. Prerequisites: 113 and 223. Offered alternate years.

## GENERAL BUSINESS

### 341, 342, 343 BUSINESS LAW

3, 3, 3

Fundamentals of law which affect business transactions. Emphasis on contracts, agencies, negotiable instruments, landlord and tenant relationship, personal property and corporations.

### 344 PRINCIPLES OF INSURANCE

4

A study of insurance contracts, underwriting organizations and insurance representation and procedures. Offered alternate years.

### 346 REAL ESTATE

4

A survey course in the basic principles and problems of real estate management and appraisal.

### 444 BUSINESS STATISTICS

4

Methods of collecting, analyzing and presenting statistical data; probability and sampling distributions, techniques of sampling, Bayesian and classical decision theory, hypothesis testing, correlation and regression, index numbers and time series analysis. Prerequisites: 12 hours of mathematics and 40 hours of business.

- 449 SEMINAR** 2  
A course in orientation, research, problems and trends in business and economics. Students will do independent study and research. A formal paper is required. Open only to students majoring in the department. To be taken during senior year.

## INFORMATION SCIENCE

- 153 DATA PROCESSING** 4  
The essential characteristics, applications and design of a data processing system. A review of punched card data processing system, computer hardware development, computer arithmetic, ethical and legal considerations relating to the data bank. Prerequisite: Beginning typewriting or equivalent.

- 251 PROGRAMMING FOR BUSINESS I** 4  
Principles of analyzing and solving practical business programming problems applicable to any computer or language; emphasis on standard flow charts peculiar to the problems commonly encountered in business situations; functional use of one programming language; experience in the use of a computer. Prerequisite: 153 or Engineering 218.

- 252 PROGRAMMING FOR BUSINESS II** 4  
Programming of business problems in a language or languages not covered in Programming for Business I; emphasis on program writing, documentation, testing and debugging. Prerequisite: 153 or Engineering 218.

- 451 COMPUTERIZED INFORMATION SYSTEMS** 3  
A study of information processing concepts; management considerations of the information system; data base concepts; systems analysis, design, evaluation, and implementation; programming applications to a variety of business-oriented problems. Prerequisites: 251 or 252 and Engineering 220.

- Off. Adm. 240 IBM KEY PUNCH** 1  
See Department of Office Administration.

- Engr. 218 COMPUTER SCIENCE I** 2  
See School of Engineering.

- Engr. 220 COMPUTER SCIENCE II** 2  
See School of Engineering.

- Engr. 346 COMPUTER SCIENCE III** 1  
See School of Engineering.



## BUSINESS

### MANAGEMENT

#### 163 PRINCIPLES OF MANAGEMENT 4

A study of the functions of management in terms of administrative organization, planning and control. The course deals with the setting of business objectives and policies, how executives make decisions and the problems that arise in the delegating of authority and responsibility.

#### 261 PERSONNEL MANAGEMENT 4

A study of the problems of employee procurement, training, motivation, job evaluation, wage administration, employee benefits and negotiating with labor unions. Recommended prerequisite: 163.

#### 262 INTRODUCTION TO HEALTH CARE ORGANIZATIONS 2

Introduction to the history, concepts and activities of health care systems. The course will focus on the basic elements, the changing nature of the system and issues confronting the future health care system. Prerequisite: sophomore standing.

#### 361 JOB ANALYSIS 2

Techniques and practice in analyzing requirements of various types of work positions and writing descriptions needed by the personnel department. Recommended prerequisite: 163. Offered alternate years.

#### 362 SUPERVISION 2

The theory and practice of work-group supervision with emphasis on small-group dynamics and the supervisor's leadership role. Appraisal interviewing, on-the-job training, individual counseling, employee development, conference leadership and employee-management relations. Recommended prerequisite: 163. Offered alternate years.

#### 461 HEALTH CARE ORGANIZATION AND MANAGEMENT 2

Analysis of health care organization with emphasis on organizational functions, structure, financial planning and controls. Prerequisites: 113 or 116, 163 and 262.

#### 463 HUMAN RELATIONS IN MANAGEMENT 4

A survey of the human relations problems found in various types of organizations. Recommended prerequisite: 163. Offered alternate years.

#### 466 BUSINESS POLICIES 4

An integration of various subject areas in terms of policy-level decision making. The duties and responsibilities of top management in establishing policies, objectives and future plans for business organizations. Prerequisites: 163 and 40 hours of business core requirements. Offered alternate years.

**467 DENOMINATIONAL POLICY 2**

A survey of the various types of policies of the Seventh-day Adventist Church organization as found in the Working Policies of the General Conference. Permission of the instructor required. Offered alternate years.

**MARKETING****371 MARKETING 4**

A study of the nature and operation of the market structure. Methods of marketing agricultural products, raw materials, and manufactured goods. Attention is given to marketing functions, institutions and costs. Prerequisites: 113, 223.

**372 PRINCIPLES OF ADVERTISING 4**

The principles, functions, forms and techniques of advertising. Advertising media, personnel and institutions. Persuasive mass communications in marketing and including problem analysis and solution planning, budgeting, research, the use of media and creative techniques. Prerequisite: 371. Offered alternate years.

**373 SELLING AND SALES MANAGEMENT 4**

Basic principles in selling, selling techniques and sales management. Development of sales manuals and effective sales presentation methods, controlling the sales force. Offered alternate years.

**471 PUBLIC RELATIONS 4**

The broad field of public relations as a promotional activity of the firm; analysis of the techniques used to create and maintain goodwill. Offered alternate years.

**472 PURCHASING 4**

All phases of governmental, industrial and institutional purchasing including organization procedures, price policies, value analysis, legal aspects and newer approaches to purchasing systems using data processing and PERT control. Offered alternate years.

**473 RETAIL STORE OPERATION AND MANAGEMENT 4**

A study of the various types of retail institutions and their role in the distribution system. Problems of planning and control as they apply to the retail store. Special attention given to Adventist Book Center operation and school bookstores. Prerequisite: 371. Offered alternate years.

**Comm. 431 ADVERTISING COPYWRITING 3**

See Department of Communications

## BUSINESS

### BUSINESS TEACHER EDUCATION

Admission to these courses may be granted by the department chairman to those students who have demonstrated by course completion or successful teaching experience they can profit from these advanced courses. It is assumed that such students have completed all undergraduate degree requirements or have been admitted to graduate study. These courses will be offered only during the *summer quarter*.

Students pursuing the Master of Education degree should select one or more courses to satisfy elective requirements from approved business courses or the following graduate courses as listed under the department of education and psychology:

526 — School Finance

527 — School Planning and Construction

539 — Supervision

550 — School Law

or

551 — Administration of the Secondary School

#### 490 SEMINAR IN BUSINESS EDUCATION

2

An in-depth study of a specific topic pertinent to business education. Topics will be different each time the course is offered. Topics may include such subjects as: consumer economic education, school and community relations, tests and measurements in business education, or audio-visual aids for use in business education.

#### 491 WORKSHOP IN BUSINESS TEACHER EDUCATION

2

A study of a major program or area of business education in terms of plans, procedures, materials, research and individual projects. Techniques and methods are studied and practiced which are designed to improve instructional competency.

#### 492 BUSINESS EDUCATION CURRICULUM OF THE SECONDARY SCHOOL

2

Planning and procedures in curriculum development and revision. Analysis of various types of instructional aids, courses of study and text materials.

#### 494 PRINCIPLES, PROBLEMS AND TRENDS IN BUSINESS EDUCATION

2

A study of the problems, trends and recent developments in business education.

## CHEMISTRY

Chairman; J. Chambers, C. Chinn.

### BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

#### Major: Chemistry

General Chemistry	161-162-163	12
Elementary Quantitative Analysis	244, 245-246	10
Organic Chemistry	321-322-323	12
Physical Chemistry	351, 352, 353	12
Electives		<u>2</u>
		48

#### Required Cognates:

Analytic Geometry and Calculus I, II	Math. 181, 281	8
General Physics	Phys. 211, 212, 213	} 12
General Physics Laboratory	Phys. 214, 215, 216	
or		
Principles of Physics	Phys. 251, 252, 253	
Principles of Physics Laboratory	Phys. 254, 255, 256	

Any minor may be chosen for the Bachelor of Arts degree.

### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

#### Major: Chemistry

General Chemistry	161-162-163	12
Elementary Quantitative Analysis	244, 245-246	10
Organic Chemistry	321-322-323	12
Physical Chemistry	351, 352, 353	12
Independent Study in Chemistry	477	1-3
Electives		<u>16</u>
		63-65

#### Required Cognates:

Computer Science I	Engr. 218	2
Analytic Geometry and Calculus I, II, III, IV	Math. 181, 281, 282, 283	16
General Physics	Phys. 211, 212, 213	} 12
General Physics Laboratory	Phys. 214, 215, 216	
or		
Principles of Physics	Phys. 251, 252, 253	
Principles of Physics Laboratory	Phys. 254, 255, 256	

Minors in both mathematics and physics are recommended for the Bachelor of Science degree.

## CHEMISTRY

### Major: Clinical Chemistry and Medical Technology (double major)

General Chemistry	161-162-163	12
Elementary Quantitative Analysis	244, 245-246	10
Organic Chemistry	321-322-323	12
Physical Chemistry	351, 352, 353	12
General Biology	Bio. 101, 102, 103	12
Microbiology	Bio. 222	5
or		
Bacteriology	Bio. 465	8-10
Anatomy, Physiology	Bio. 202, 203	
or		
Cell Physiology and	Bio. 392	
Animal Physiology	Bio. 393	
Fundamentals of Mathematics, I, II	Math. 121, 122	8
Analytic Geometry and Calculus I, II	Math. 181, 281	8
General Physics	Phys. 211, 212, 213	9
General Physics Laboratory	Phys. 214, 215, 216	3
Clinical Courses (12 months at an approved hospital)		48
		147-149

Candidates for this degree must meet all basic graduation requirements with the exception of language.

### CHEMISTRY—MINOR REQUIREMENTS:

A minimum of 27 credits including three upper-division credits.

#### 101-102-103 INTRODUCTORY CHEMISTRY I 3-3-3

An introductory course in chemistry covering the fields of inorganic, organic and biochemistry. Completion of this course plus 271-Introductory Chemistry II will meet basic science requirement but does not apply on a major or minor. Must be taken in sequence. Two lectures, one laboratory per week. AWS

#### 161-162-163 GENERAL CHEMISTRY 4-4-4

The structure and states of matter; atomic and molecular theory, including valency, and periodicity and bonding; solutions and equilibria, stoichiometry, kinetics and thermodynamics, and the descriptive chemistry of metals and non-metals. Must be taken in sequence. Prerequisite or corequisite: Mathematics 121, 122 or equivalent. Three lectures and one laboratory per week. AWS

#### 244, 245-246 ELEMENTARY QUANTITATIVE ANALYSIS 4, 3-3

Fundamental principles and laboratory practices in both gravimetric and volumetric analysis are presented in 244. The remaining time is spent on ionic equilibrium and simple instrumental methods of analysis. Prerequisite: 163; 244 is prerequisite for 245-246; Mathematics 121. Three lectures, one laboratory per week autumn; two lectures, one laboratory per week winter and spring. AWS



**271 INTRODUCTORY CHEMISTRY II 3**

This course is a continuation of 101-102-103, emphasizing organic and biochemistry. Will not apply on major or minor. Three lectures per week. W

**321-322-323 ORGANIC CHEMISTRY 4-4-4**

A study of the preparation, reaction and constitution of the aliphatic and aromatic compounds of carbon. Prerequisite: 161-162-163. Three lectures and one laboratory per week. AWS

**351, 352, 353 PHYSICAL CHEMISTRY 4, 4, 4**

An introductory course in thermodynamics, kinetics, quantum chemistry, spectroscopy, structure, electrochemistry and radiochemistry. Laboratory includes experiments on the various physical properties of matter, including electronics and computer techniques. Prerequisites: 244, 245-246, Physics 211, 212, 213; 214, 215, 216 or 251, 252, 253; 254, 255, 256 and Mathematics 121, 122, 181, 281, or permission from the instructor. Three lectures, one laboratory per week. AWS

**406, 407 BIOCHEMISTRY 4, 3**

A study of the chemistry of foods, digestion and body metabolism. Prerequisite: 321-322-323. The spring quarter, 406, consists of three lectures and one laboratory per week; it is prerequisite to the autumn course, 407, which is three lectures per week and no laboratory. Four credits, spring; three credits, autumn.

**427, 428 ADVANCED ORGANIC CHEMISTRY 2, 2**

A study of the current theories in the field of aliphatic and aromatic chemistry. Prerequisite: 321-322-323. AW

**442, 443 ADVANCED INORGANIC CHEMISTRY 2, 2**

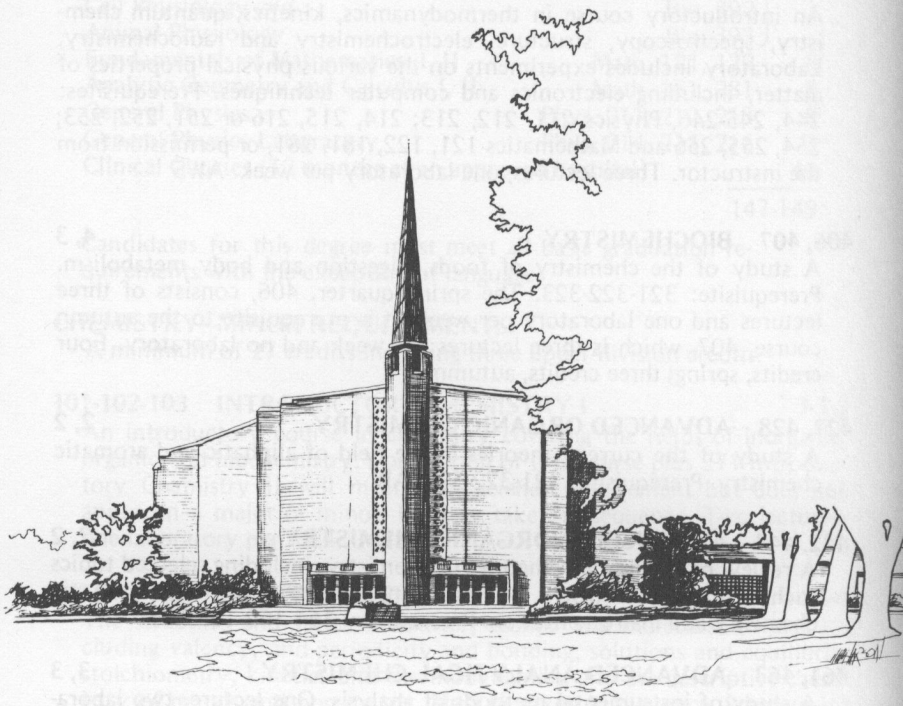
A review of the modern theories of chemistry, including selected topics such as nuclear chemistry, coordination chemistry, synthetic inorganic chemistry and instrumentation. Prerequisite: 161-162-163. WS

**461, 463 ADVANCED ANALYTICAL CHEMISTRY 3, 3**

A study of instrumental methods of analysis. One lecture, two laboratory periods per week. Prerequisite: 246. AS

**471 METHODS OF TEACHING CHEMISTRY 3**

Methods, materials and techniques of teaching chemistry on the secondary-school level. Observation, demonstration and class presentation are required of the students as part of this course. Will *not* apply on a major or minor. W



WALLA WALLA COLLEGE CHURCH

COMMUNICATIONS

L. Dickinson, Chairman; Donnie Rigby, D. Schwantes, K. Smith, C. Wood.

The programs of the department are directed toward the objectives of preparing students to become articulate Christian communicators, and to provide basic preparation for those interested in communications-related professions. Toward those ends the department offers four majors and minors in general speech communication and journalism.

The first major is speech communication. It emphasizes public, small group and interpersonal communication. It is designed for the student intending to teach oral communication, or is used as an adjunct to other preparations in which interpersonal and public speech communication skills are particularly important.

The second major, communication media, is offered through the co-operation of a number of departments whose courses include mass communication areas. It trains, primarily, those interested in broadcasting, audiovisual production and promotional work. The communication media major also provides a preprofessional foundation which enables students to take advanced work in a communications area including public relations.

The third major is speech pathology and audiology. It trains students toward the goal of becoming speech and hearing therapists. The curriculum is considered primarily preprofessional in that it provides the undergraduate foundation on which graduate work may be taken to more fully qualify the student to meet certification requirements held in most states and at the national professional level.

The fourth major is journalism. It aims to train students both for newspaper and magazine journalism and to provide understanding of the place of mass communication in today's world. The student must realize that if he would succeed in any branch of journalism there is no substitute for a foundation of literary and social studies. Against this background, professional courses provide the training necessary in competent writing and professional journalism.

BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

Major: Speech Communication			
Fundamentals of Speech Communication	101-102	4	
Voice and Articulation	107	2	
Survey of Speech Pathology and Audiology	210	3	
Oral Interpretation	211	2	
Speech and Hearing Science	291	3	
Advanced Public Address	323	}	
or			
Persuasive Speaking	443		3
or			
Rhetoric and Public Address	453		
Electives (18 must be upper division) may include:			31
Mass Communication Media	Jour. 326		
Introduction to English Linguistics	Eng. 425		48

## COMMUNICATIONS

### BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

#### Major: Communication Media

Fundamentals of Speech Communication	101-102	4
Introduction to Graphic Arts	IE&T. 144	2
Printing Layout and Design	IE&T. 298	3
Principles of Photography	IE&T. 161	2
Newswriting	Jour. 164, 165	8
Design	Art 161-162-163	6-9
or		
Commercial Art	Art 204, 205, 206	
Broadcast Techniques and Announcing	231	3
or		
Survey of Broadcasting	352	
Mass Communication Media	Jour. 326	3
Introduction to General Semantics	401	2
Persuasive Speaking	443	3
Seminar in Communication Media	497	2
Electives (11 must be upper division)	13-16	
chosen from:	55	

Broadcast Techniques and Announcing	231	
Survey of Broadcasting	352	
Communication Theory	275	
Advanced Writing	Eng. 280	
or		
Creative Writing	Eng. 385, 386	
or		
Magazine Article Writing	Jour. 341, 342	
Applied Photography	IE&T. 362	
Public Relations	Jour. 363	
or		
Public Relations	Bus. 471	
Instructional Aids—Production	Ed. 462	
Filmmaking	Art 371-372-373	
Social Psychology	Psych. 444	
or		
General Sociology	Soc. 204	
Principles of Advertising	Bus. 372	

### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

#### Major: Speech Pathology and Audiology

Fundamentals of Speech Communication	101-102	4
Voice and Articulation	107	2
Survey of Speech Pathology and Audiology	210	3
Phonetics	274	3
Speech and Hearing Science	291	3
Oral Language Development and Disorders	299	3
Basic Audiology	384	3
Nonorganic Voice and Articulation Problems	385	4
Organic Speech Pathologies	386	4
Stuttering: Theories and Therapies	387	3
Speech Reading and Auditory Training	388	3

## COMMUNICATIONS

Directed Clinical Observation	390	2
Beginning Clinical Practicum	393	2
Introduction to General Semantics	401	2
Advanced Clinical Practicum	410	3
Advanced Audiology	441	3
Diagnosis in Speech Pathology	461	3
		<u>50</u>

### Required Cognates:

General Biology	Bio. 101, 102, 103	12
Anatomy	Bio. 202	5
Physiology	Bio. 203	5
General Sociology	Soc. 204, 205	6
Elementary Statistics	Psych. 350	4
Psychological Testing	Psych. 430	3
Child Psychology	Psych. 435	3
Psychology of Personality	Psych. 446	3

### SPEECH COMMUNICATION—MINOR REQUIREMENTS:

A minimum of 27 credits including 101-102 and 9 upper-division credits. Approval of the department chairman required.



## COMMUNICATIONS

### BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

#### Major: Journalism

Newswriting	164, 165	8
Advanced Reporting and News Editing	264	4
Electives in Journalism		24
Three courses must be chosen from the following:		
Principles of Advertising	Bus. 372	}
Public Relations	Bus. 471	
Broadcast Techniques and Announcing	Comm. 231	
or		
Survey of Broadcasting	Comm. 352	}
Communication Theory	Comm. 275	
Introduction to General Semantics	Comm. 401	
Elementary Statistics	Psych. 350	
Advanced Writing	Eng. 280	}
Literary Analysis and Research	Eng. 286	
(recommended only if literature is chosen as one of the two liberal arts areas)		
Technical Writing	Eng. 381	
or		}
Creative Writing	Eng. 386	
Principles of Photography	IE&T 161	

#### Electives

To be chosen in counsel with adviser from two of the following areas, with approximately equal hours in each.

- Art (not applied)
- Business
- History
- Literature
- Mathematics
- Music (not applied)
- Psychology
- Science
- Sociology
- Theology

\*21 credits must be upper division

#### Required Cognates:

Introduction to Graphic Arts	IE&T 144	2
Printing Layout and Design	IE&T 298	3
Demonstrate proficiency in typing		
Working knowledge of photography		

### JOURNALISM—MINOR REQUIREMENTS:

A minimum of 27 credits, including 3 upper-division, chosen in counsel with journalism adviser.

## SPEECH COMMUNICATION

### 101-102 FUNDAMENTALS OF SPEECH COMMUNICATION 2-2

An introduction to the procedure of public speaking with emphasis on the acquirement of ease before an audience, a conversational attitude and reasonable facility in pronunciation, articulation and voice production.

- 107 VOICE AND ARTICULATION** 2  
To aid in understanding and improving the speaking voice, with emphasis on the function of the speech mechanism. Instruction and practice to improve the quality and effectiveness and to develop clear and correct pronunciation, enunciation and articulation.
- 207 SMALL GROUP COMMUNICATION** 2  
A study of the nature of group and interpersonal processes; includes leadership and participation in group discussion.
- 211 ORAL INTERPRETATION** 2  
A course in reading from the printed page with fluency and effectiveness, including reading from the Scriptures. A study of the various types of interpretative literature with a view toward its understanding for the purpose of public presentation.
- 231 BROADCAST TECHNIQUES AND ANNOUNCING** 3  
Instruction covering studio and control room operation including microphone techniques. Emphasis on voice, articulation and interpretation of copy. Includes preparation for the FCC Radio Telephone Third Class Operator's Permit (for U.S. citizens). On-the-air experience on KGTS-FM.
- 252 PLAY PRODUCTION** 1-3  
A course concerned with the analysis, rehearsal and performance of a play chosen by the instructor. May be taken only by permission of the instructor. One to three credits.
- 275 COMMUNICATION THEORY** 2  
An examination of contemporary thought on the nature and process of communication.
- 323 ADVANCED PUBLIC ADDRESS** 3  
A course stressing the practical application of speech to the student's major field of interest. It includes the study of speeches for social and business occasions with practice in the classroom. Prerequisite: 101-102.
- 341 LOGIC** 2  
The study of evidence and reasoning toward the goal of critical thinking. Application of logic to analysis of contemporary issues and cogent thinking; includes theory and practice.
- 342 DEBATE** 2  
The structure and presentation of evidence and forms of logic in debating the national collegiate debate topic. Prerequisite: 341.

## COMMUNICATIONS

- 352 SURVEY OF BROADCASTING** 3  
Study of organization and operation of stations, networks and world systems of broadcasting as well as study of legal and regulatory control of radio-television.
- 363 HISTORY OF DRAMATIC ARTS** 3  
The study of the history and development of the theater from the Greek to the 20th century.
- 365 PLAY DIRECTION** 3  
Fundamentals of play direction. Producing and directing a one-act play or one act from a longer play for public performance.
- 381, 382 PULPIT ADDRESS** 3, 3  
Preparation and delivery of sermons and other types of public speeches. Adequate opportunity for practice is provided by the laboratory facilities of the department and through numerous speaking appointments.
- 401 INTRODUCTION TO GENERAL SEMANTICS** 2  
A course stressing the use of language to influence human behavior; language in problem solving and as a means of resolving conflicts. Prerequisites; 101-102 or equivalent or permission of instructor.
- 443 PERSUASIVE SPEAKING** 3  
The study of motivation and human behavior as applied by the public speaker in the process of persuasion. The analysis of persuasive speeches for emotional, ethical and logical proof. Practice in composing and delivering speeches to stimulate and convince. Prerequisite: 101-102.
- 453 RHETORIC AND PUBLIC ADDRESS** 3  
Study of the principles of rhetoric proposed by Aristotle, Quintillian, Cicero and others. The relationship of the principles of rhetoric to modern speechmaking. Prerequisite: 101-102.
- 472 METHODS OF TEACHING SPEECH COMMUNICATION** 3  
The basic principles and practices of teaching speech on the junior high and secondary levels. Special attention will be given to the contemporary methods of presentation in classroom and therapy situation. Observations, demonstration and class participation are required.
- 497 SEMINAR IN COMMUNICATION MEDIA** 2  
Studies of selected topics and review of current literature in communication media. Individual research projects included.

## **SPEECH PATHOLOGY AND AUDIOLOGY**

- 210 SURVEY OF SPEECH PATHOLOGY AND AUDIOLOGY** 3  
A survey of communication disorders common to the elementary school setting; major emphasis will be given to the etiologies, symptomatologies, and the recognition of speech, language, voice and hearing disorders.
- 274 PHONETICS** 3  
The theory, history, development and application of the international phonetic alphabet, its application to speech correction and to adequate pronunciation.
- 291 SPEECH AND HEARING SCIENCE** 3  
A comprehensive study of the anatomy, physiology and neuroanatomy of the speech and hearing mechanisms. Prerequisite: Biology 202, 203.
- 299 ORAL LANGUAGE DEVELOPMENT AND DISORDERS** 3  
Intensive study of normal and delayed language development as affected by pre-speech activities and conditions, early speech development and learning theory. Knowledge of phonetic alphabet recommended.
- 384 BASIC AUDIOLOGY** 3  
A study of the history of audiology, rehabilitation of the acoustically handicapped, and basic clinical techniques used in air, bone and impedance audiometry. Prerequisite: 210.
- 385 NONORGANIC VOICE AND ARTICULATION PROBLEMS** 4  
A study of functional etiologies, symptomatologies and treatment of defective articulation and functional voice problems; emphasis will be placed on the treatment of articulation disorders to help the student develop a large repertoire of therapeutic techniques. Prerequisite: 210.
- 386 ORGANIC SPEECH PATHOLOGIES** 4  
A study of the etiologies, symptomatologies and treatment of organic disorders including cleft palate, cerebral palsy, aphasia, organic voice, dysarthria, oral-facial anomalies and mental retardation. Prerequisite: 385.
- 387 STUTTERING: THEORIES AND THERAPIES** 3  
A study of the theories of stuttering and an evaluation of therapeutic techniques employed. Case histories are studied in detail. Prerequisite: 385, 386.
- 388 SPEECH READING AND AUDITORY TRAINING** 3  
Basic principles of establishing communication by observation of visible aspects of speech; methods of teaching lip reading to the acoustically handicapped; recognition and discrimination of speech sounds and speech skills.

## COMMUNICATIONS

### **390 DIRECTED CLINICAL OBSERVATION** 2

A course designed to provide the student opportunity to observe and evaluate speech, voice, language and hearing therapy in progress in various therapy environments.

### **393 BEGINNING CLINICAL PRACTICUM** 2

A clinical experience for the beginning student clinician who will evaluate and treat primarily articulation disorders in the speech and hearing clinic. Prerequisite: 386, 387.

### **410 ADVANCED CLINICAL PRACTICUM** 1-3; 6

A course designed to give the more advanced student clinician experience in the diagnosis, treatment and staffing of multiple-handicapped speech, voice, language and/or hearing disorders. Prerequisite: 393, or permission from the instructor. One to three credits any quarter; maximum, six credits.

### **441 ADVANCED AUDIOLOGY** 3

Psychophysical methods of auditory testing; specialized audiometric techniques; theory and practice determining types of hearing abilities; the interpretation of test results; hearing aid evaluation; follow-up procedures for the acoustically handicapped. Prerequisite: 384.

### **461 DIAGNOSIS IN SPEECH PATHOLOGY** 3

Diagnosis and appraisal procedures of communicative disorders. Includes the use of speech and language tests, associated behavior and instrumentation techniques. Prerequisite: 393.

### **473 CLEFT PALATE SPEECH** 3

A study of the etiology of cleft palate and the techniques employed during therapy. Case histories are studied in detail. Prerequisite: 386.

### **475 VOICE DISORDERS** 3

Study of the etiological, diagnostic and therapeutic approaches to functional and organic disorders of voice; consideration of the acoustic characteristics of aberrant voice and mechanical faults of voice production. Prerequisite: 385.

## JOURNALISM

### **164, 165 NEWS WRITING** 4, 4

A practical course in gathering news and writing news stories. Short field trips are made to enrich the student's understanding of public affairs and print and broadcast media.



## COMMUNICATIONS

### 257 PHOTOJOURNALISM 2

A practical course in the taking and use of photographs for publication. Attention is given to composition, cropping, caption writing and picture-page layout. Prerequisite: Industrial Education and Technology 161 or equivalent. Students are expected to have their own cameras.

### 264 ADVANCED REPORTING AND NEWS EDITING 4

A course in reporting public affairs, selecting, preparing and displaying news. Three class periods per week, with three-hour laboratory in which students will edit copy, do sample makeup and headlines. Prerequisite: 164, 165.

### 326 MASS COMMUNICATION MEDIA 3

A consideration of print and broadcast media, with emphasis on ethics, controls and effects.

### 341, 342 MAGAZINE ARTICLE WRITING 3, 3

Fact writing with analysis of magazine markets, fundamentals of gathering materials for articles and preparation of manuscripts for publication.

### 352, 353 MAGAZINE EDITING 3, 3

A course in the practical aspects of editing magazines, including working out a successful editorial formula, selecting articles and illustrations and planning make-up. Each student will do a term project consisting of planning a new magazine, with prospectus and dummy copy. Prerequisite: 341, 342.

### 363 PUBLIC RELATIONS 3

A course in the principles, practices and problems of effective public relations. Emphasis will be given to techniques of press relations, radio and television as they are used in successful public relations programs for organizations or institutions such as schools, hospitals and churches.

### 382 EDITORIAL WRITING 2

The writing of editorials, interpretive articles and critical reviews, with a study of these types as found in today's newspaper.

### 385 RELIGIOUS WRITING 4

A course intended to help students who want to write about religion, directly or indirectly. Underscoring a conviction that good religious writing is needed now more than ever, it treats both the problems and methods of the craft. Students will do several types of writing; publication will be encouraged.

## COMMUNICATIONS

### 412 SCRIPT WRITING 3

A course in the writing of broadcast narratives. Students will prepare scripts for commercial, educational and religious markets. Emphasis is placed on the visualization of completed scripts. Prerequisite: English 101-102-103 or 104-105; recommended prerequisite: English 385 or 386.

### 426 SCHOOL PUBLICATIONS 2

A course designed for prospective English teachers who will work with school publications staffs. A study of editorial and business aspects in such publications, with an examination of several school papers and yearbooks.

### 431 ADVERTISING COPYWRITING 3

A practical study of the writing of creative communication designed to sell products, services and ideas offered by advertisers. Students will write advertisements for both print and broadcast media.

### 490 PRACTICUM IN JOURNALISM 1-4

Practical experience in news and public relations functions with participating institutions. The student works under the cooperative direction of professionals and the communications department.

COMPUTER SCIENCE

C. C. Barnett, chairman (Physics); C. V. Bell (Engineering), G. B. Hare (Mathematics), P. W. Joice (Business)

The interdisciplinary program in computer science is coordinated by the Computer Science Committee (membership as listed above). The program is designed to provide the student with a basic competency in computer science as a basis for further study and/or to complement an area of study leading to a computer-science-related career.

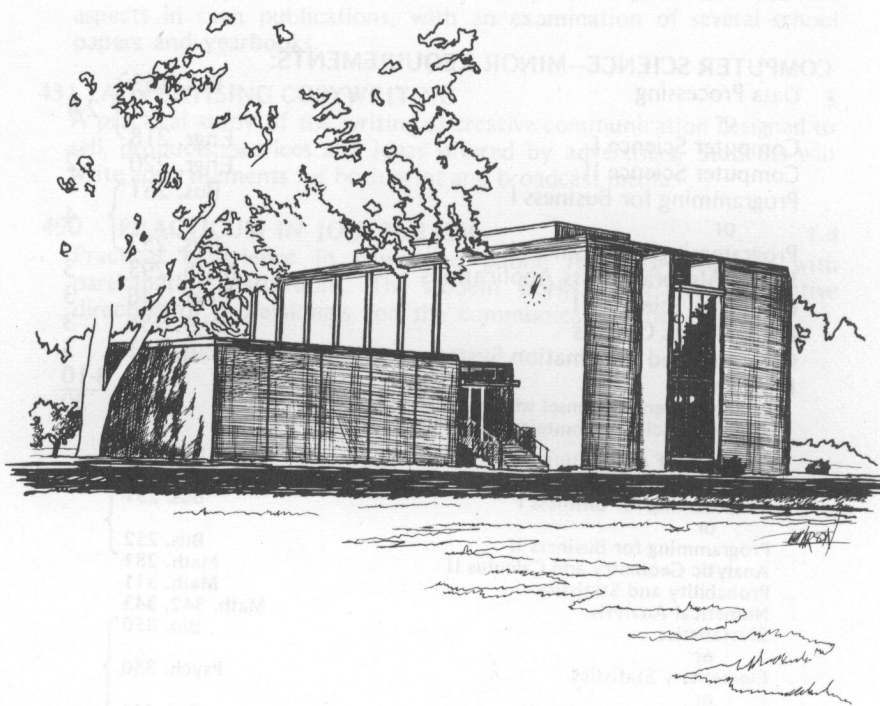
COMPUTER SCIENCE—MINOR REQUIREMENTS:

Data Processing	Bus. 153	} 2-4
or		
Computer Science I	Engr. 218	} 2
Computer Science II	Engr. 220	
Programming for Business I	Bus. 251	} 4
or		
Programming for Business II	Bus. 252	} 3
Linear Algebra and Its Applications	Math. 293	
Computer Science III	Engr. 346	} 3
Digital Logic Circuits	Engr. 355	
Computerized Information Systems	Bus. 451	} 8-10
Electives		
(To be chosen in counsel with a member of the Computer Science Committee)		30
Principles of Accounting	Bus. 111	} 3
Introduction to Experimentation	Phys. 115, 116	
Programming for Business I	Bus. 251	} 3
or		
Programming for Business II	Bus. 252	} 3
Analytic Geometry and Calculus II	Math. 281	
Probability and Statistics	Math. 311	} 3
Numerical Analysis	Math. 342, 343	
Biostatistics	Bio. 350	} 3
or		
Elementary Statistics	Psych. 350	} 3
or		
Business Statistics	Bus. 444	} 3
Feedback and Control Systems	Engr. 332	
Simulation and Modeling	Phys. 371	} 3
Signals and Systems	Engr. 431	
Applied Digital and Analog Systems	IE&T. 469	} 3
Independent Study (maximum: 2 credits)	477	
(must be in a computer science topic approved by the Computer Science Committee)		

Required Cognate:

Analytic Geometry and Calculus I	Math. 181	4
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All course descriptions are listed within the specified department.



SMITH HALL — Education, Psychology, Child Development Center

## EDUCATION AND PSYCHOLOGY

Chairman; Edna Grove, R. Hingley, Jeanne Lewis, N. Maberly, H. Ochs, H. Phillips, Jean Prest, V. Shafer, D. Wagner.

The department offers programs leading to a Bachelor of Science degree with a major in elementary education or psychology and an Associate of Science degree in Early Childhood Education. Minors are available in either education or psychology, and preparation is provided for state and denominational certification in elementary and/or secondary teaching. With careful planning, a bachelor's degree and the first teaching certificate may be earned in four years of study.

For work leading to a master's degree in education, see the Graduate Bulletin.

### CERTIFICATION

The Walla Walla College Department of Education and Psychology is authorized by the Washington State Board of Education to recommend the following elementary and secondary teaching certificates:

- Provisional
- Standard
- Principal's

Those who intend to enter the teaching profession and to qualify for teaching certification in the state of their anticipated future employment should initiate the following steps early in their academic program (preferably not later than the sophomore year):

- a. Consult with his chairman or designated adviser regarding specific requirements for the major he has chosen to pursue. Special attention should be given requirements within his major, minor or certification which present difficulties when pursued out of sequence.
- b. Schedule regular consultation with the department of education and psychology. This will facilitate the proper scheduling of professional education experiences.

The department of education and psychology publishes *Guidelines for Certification* which sets forth the current requirements for obtaining certification from the following agency and states: Seventh-day Adventist denomination, Alaska, California, Idaho, Montana, Oregon and Washington.

The elementary education major (48 hours) will normally qualify students for certification in the above-mentioned states. Specific differences may be accommodated with careful planning on the part of the student and his adviser.

Courses applying toward satisfying specific certification requirements require a grade of C or above.

Majors, minors and areas of concentration approved for provisional elementary certification appear below. For details regarding specific requirements, consult with the department chairman.



## EDUCATION AND PSYCHOLOGY

### Majors:

Art	Mathematics
Biology	Modern Language (only one)
Business Education	Music
English	Physical Education
History	Speech Pathology
Home Economics	

### Minors:

Art	Library Science
Biology	Mathematics
Business or Economics	Modern Language (only one)
Chemistry	*Music
Communications	Office Administration
*English	Physical Education
Health	Physics
History	Political Science
Home Economics	Psychology
*Industrial Education and Technology	Religion
Journalism	Sociology

\*Teaching minor only (see appropriate department).

### Areas of Concentration:

Biology	Mathematics
English	Music
Home Economics	Physical Education
Industrial Education and Technology	Science

Secondary certification will normally require a subject matter major plus the following education and psychology courses:

#### One course selected from:

Foundations of Education	Educ. 210
History of Education	Educ. 404
Systems of Thought	Educ. 493
Sociology of Education	Soc. 431

#### All of the following courses:

Educational Evaluation	Educ. 390
Directed Teaching—Secondary	Educ. 460
Microteaching Laboratory (Secondary)	Educ. 465
Educational Psychology	Psych. 220
Adolescent Psychology	Psych. 440
Methods Course—as offered in either the major or minor area of study.	

## EDUCATION AND PSYCHOLOGY

### SECONDARY METHODS COURSES

Secondary methods courses are listed under respective departments. Consult the appropriate department for further details.

### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

#### Major: Elementary Education

In addition to the basic requirements for a Bachelor of Science degree as described on pages 61 and 62, a minimum of 48 credits from the department of education and psychology is required. The student must seek program approval from his departmental adviser. Courses are to be selected in appropriate sequence.

Introduction to Teaching	105	2
Foundations of Education	210	3
Educational Psychology	Psych. 220	3
Educational Psychology Laboratory	Psych. 221	1
School Exploratory Experience	347	1
Language Arts in the Elementary School	361	3
Reading in the Elementary School	362	3
Social Studies and Religion in Elementary School	365	4
Tutoring	366	1
Mathematics in the Elementary School	373	3
Science and Health in the Elementary School	369	3
Classroom Management	375	2
Child Psychology	Psych. 435	3
Microteaching Laboratory—Elementary	464	2
Directed Teaching—Elementary	450	14
		<hr/> 48

#### Required Academic Support Areas:

Twenty-seven credits are to be taken in content courses; not more than three credit hours of the academic support areas may be taken in psychology. The student will select with his departmental adviser a sequence of course offerings which support areas of known need. This program is to be formalized when the student has completed approximately 80 credit hours and will become a part of the requirements for graduation. The courses in the academic support areas must meet the same grade requirement as those courses for the major (a "C" grade or better).

In addition to the requirements of the major and academic support areas as listed above, the elementary education major is required to pursue one of the following three options:

1. a second major (highly recommended)
2. an approved concentration with a minimum of 45 credits
3. a minor as offered by other departments of the college

Elementary education majors must take proficiency examinations as required by the college. For specific details, the student should consult with his adviser.

## EDUCATION AND PSYCHOLOGY

### EDUCATION—MINOR REQUIREMENTS:

A minimum of 30 credits in professional education. Approval of the plan of study by the department of education and psychology is required. Usually included are those courses required for a provisional teaching certificate. However, completion of the minor does not necessarily satisfy certification requirements for all students.

### EARLY CHILDHOOD EDUCATION

The Associate of Science degree (offered cooperatively between the departments of education and psychology and home economics) with a concentration in early childhood education requires the completion of 96 credits. The degree is designed to be completed in two years.

The purpose of the degree is to prepare the student for employment in nursery schools, day care centers, Head Start programs, parent cooperatives and in other early childhood education programs.

### ASSOCIATE OF SCIENCE DEGREE—REQUIREMENTS:

#### Concentration: Early Childhood Education

##### General Requirements:

College Writing	Eng. 101-102-103	9
Religion		8
Philosophy of Christian Education	Ed. 110	2
Fundamentals of Speech	Comm. 101-102	4
Physical Education (service courses)		2
Electives (from published bachelor's degree general requirements)		5
		<hr/> 30

##### Area Requirements:

General Psychology	Psych. 121, 122	4
Human Nutrition	HEc. 220	3
Laboratory Experiences in Preschool Education	Ed. 251	12
Early Childhood Education	Ed. 295	3
Parent Education for Preschool Teachers	Ed. 351	3
Child Development	HEc. 382	3
Psychology of Exceptional Children	Psych. 431	3
Child Psychology	Psych. 435	3
Childhood Learning Disorders	Psych. 437	3
Electives from Home Economics and/or Education and Psychology		3
Electives (as approved by adviser)		10
		<hr/> 50

##### Required Cognates:

Contemporary Health Issues	H&PE 110	2
General Sociology	Soc. 204, 205	6
Survey of Speech Pathology and Audiology	Comm. 210	3
or		
Oral Language Development and Disorders	Comm. 299	2
Social Psychology of Family Life	Soc. 311	
Library Materials for Children	Lib. 365	3
or		
Literature for Children and Adolescents	Eng. 412	

## EDUCATION

- 105 INTRODUCTION TO TEACHING** 2  
Orientation to the role of the school, an analysis of professional preparation for teaching, and opportunity for self-evaluation as potential teacher is provided.
- 110 PHILOSOPHY OF CHRISTIAN EDUCATION** 2  
A study of the ideals and principles of Christian education, especially as interpreted by the Seventh-day Adventist church.
- 210 FOUNDATIONS OF EDUCATION** 3  
A study of social and philosophical foundations underlying the current organization and objectives of American education.
- 251 LABORATORY EXPERIENCES IN PRESCHOOL EDUCATION** 2, 4; 12  
Observation and participation in various early childhood education centers. The first two quarters will be spent in the Walla Walla College Child Development Center. Two of the remaining four quarters scheduled in other early childhood education centers in the community. Open only to majors. Two or four credits each quarter; maximum 12 credits.
- 295 EARLY CHILDHOOD EDUCATION** 3  
An introduction to the principles of early childhood education focusing on procedures, media, curriculum design and materials. Laboratory experiences are provided in the Child Development Center.
- 305 Art ART IN THE ELEMENTARY SCHOOL** 3  
See Department of Art.
- 312 Music ELEMENTARY SCHOOL MUSIC LITERATURE** 2  
See Department of Music.
- 347 SCHOOL EXPLORATORY EXPERIENCE** 1  
Opportunity to participate in professionally structured experiences prepared for elementary or secondary school faculties prior to the opening activities in the organizational period of the school year. Time involved: two to three weeks. (With permission, this may be applied toward the fourteen-hour directed teaching requirement.)
- 351 PARENT EDUCATION FOR PRESCHOOL TEACHERS** 3  
Identifies the teacher's role in parent education, develops skills in how to establish rapport with parents, and includes working with parents in small groups.

## EDUCATION AND PSYCHOLOGY

### 358 H&PE PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL

3

See Department of Health, Physical Education and Recreation.

### 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.

### 362 READING IN THE ELEMENTARY SCHOOL

3

A basic course stressing current theory, effective instructional procedures, and learning resources for teachers of reading in the primary and intermediate grades of the elementary school. Corequisite: 366.

### 365 SOCIAL STUDIES AND RELIGION IN THE ELEMENTARY SCHOOL

4

Examination and application of current media and practices used in teaching social sciences and religion in the elementary school. Actual classroom observation and teaching will be required.

### 365 LS LIBRARY MATERIALS FOR CHILDREN

3

See Library Science.

### 366 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. By permission of the instructor. Corequisite: 362. One to three credits; maximum, three credits.

### 369 SCIENCE AND HEALTH IN THE ELEMENTARY SCHOOL

3

Procedures of teaching science and health in the elementary school with attention to recent media and trends. Classroom experience provided.

### 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.

### 375 CLASSROOM MANAGEMENT

2

Attention will be given to varied structuring of the learning environment and the special considerations required as small schools and multi-grade classrooms. Explores the human relations within the teaching profession.

### 390 EDUCATIONAL EVALUATION

3

A practical introduction to principles and techniques of evaluating classroom activities in elementary and secondary schools.



- 404 HISTORY OF EDUCATION** 2  
A survey of the history of education.
- 412 Eng. LITERATURE FOR CHILDREN AND ADOLESCENTS** 3  
See Department of English.
- 426 EDUCATIONAL GUIDANCE** 3  
The philosophy, functions, organization, personnel and evaluation of the school guidance program.
- 431 H&PE ELEMENTARY SCHOOL HEALTH INSTRUCTION** 3  
See Department of Health, Physical Education and Recreation.
- 431 Soc. SOCIOLOGY OF EDUCATION** 2  
See Department of Sociology and Social Work.
- 439 IE&T INDUSTRIAL ARTS IN THE ELEMENTARY SCHOOL** 3  
See Department of Industrial Education and Technology.
- 450/460 DIRECTED TEACHING—Elementary/Secondary** 14  
*Elementary:* A practicum providing professional teaching experience for students preparing to teach on the elementary level. By permission of the Student Teaching Committee. Prerequisites: Completion of the approved professional sequence as outlined on page 109.  
*Secondary:* Professional laboratory experience for students preparing to teach at the secondary level. A seminar will be conducted for students teaching in the Walla Walla area. (S/NC only)  
Application for the autumn quarter is to be made during the preceding spring quarter; application for the winter and spring quarters should be made during the first week of the autumn quarter. By permission of the Student Teaching Committee. Prerequisite: 464, 465. May be repeated. Maximum: fourteen credits. Students taking elementary will register for 450; students taking secondary will register for 460.
- 452 DIRECTED TEACHING—In-Service** 6  
Directed laboratory experience for a teacher desiring to improve his professional skills. Training in methods of analysis of teaching and practice in methods of self-analysis will be included. Registration only by permission of the Student Teaching Committee after completion of the required courses in professional education. Maximum: six credits.
- 454 DIRECTED FIELD EXPERIENCE—**  
**Speech Pathology and Audiology** 12  
Professional laboratory experience for the speech pathology and audiology major. A weekly seminar will be conducted for students working in the Walla Walla area. Application for the autumn quarter must be

## EDUCATION AND PSYCHOLOGY

made during the preceding spring quarter; application for the winter and spring quarters must be made during the first week of the autumn quarter. By permission of the Student Teaching Committee. Prerequisite: 465.

### **461 METHODS OF AUDIOVISUAL EDUCATION 2**

A survey of the methods of instruction through the use of audiovisual aids.

### **462 INSTRUCTIONAL AIDS—PRODUCTION 2**

Experiences in the production of instructional aids.

### **464/465 MICROTEACHING—Elementary/Secondary 2/3**

*Elementary:* 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: at least two methods courses.

*Secondary:* 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: one methods course in the student's major or minor area of study.

Students taking elementary will register for 464 (2 credits); students taking secondary will register for 465 (3 credits).

### **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 credits; maximum, six credits.

### **490 TEACHING HIGH SCHOOL READING 3**

Basic principles of reading instruction; methods, materials and organization of the developmental and corrective reading programs in high school.

### **492 EDUCATION OF THE GIFTED 3**

Emphasis is placed upon the design of learning opportunities for gifted children in the light of psychological characteristics of such children.

### **493 SYSTEMS OF THOUGHT 3**

An intensive study of various aspects of philosophical thinking and their bearing upon education. Especially valuable in comprehending much current writing in education. (Ideally should precede or be taken concurrently with 522.)

### **496 ELEMENTARY SCHOOL GUIDANCE 3**

A study of the rationale for elementary school guidance with emphasis upon current research and issues. Attention will be focused upon the

## EDUCATION AND PSYCHOLOGY

tools and techniques of both classroom and out-of-class guidance functions and services.

### **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 credit; maximum, three credits.

### **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.

### **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.

### **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.

### **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.

### **526 SCHOOL FINANCE 3**

A course designed for administrators, emphasizing origins and disbursement of school funds.

### **527 SCHOOL 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. Professional architects and engineers will be guest lecturers.

### **535 CORRECTIVE READING 3**

Analysis, correction, and prevention of reading problems are studied along with refinement of group and informal testing. Supervised practicum with pupils having mild disabilities in reading. Prerequisite: 362; corequisite: 366.

### **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.

## EDUCATION AND PSYCHOLOGY

- 544 ADMINISTRATION OF THE ELEMENTARY SCHOOL 3**  
Organization, supervision and administration of elementary schools.
- 550 SCHOOL LAW 3**  
Utilizing the case study method, this course is designed to acquaint the student with the legal basis for public and parochial school operation in the United States.
- 551 ADMINISTRATION OF THE SECONDARY SCHOOL 3**  
Problems and procedures in the organization and administration of secondary schools.
- 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.
- 558 SCHOOL ACTIVITIES 3**  
Designed to acquaint the student with the range of the school activities program; to define the purpose of such activities; to provide him with a valid basis for evaluating existing or proposed activities; and to provide opportunity for intensive study of one activity.
- 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.
- 561 METHODS OF RESEARCH 3**  
Procedures in the selection and evaluation of research projects and techniques in the analysis of research data.
- 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.
- 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 and requires written and/or oral reports and conferences with the staff. By permission of the department chairman. Maximum, four credits.

**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 credits any quarter; maximum, six credits.

**590 THESIS 8**



## EDUCATION AND PSYCHOLOGY

### PSYCHOLOGY

The psychology curriculum is sufficiently flexible to meet the needs of students preparing for a wide range of careers in the behavioral sciences or in related professions that involve working with people. More emphasis is placed on the applied dynamics of human behavior and relationships than on animal or laboratory psychology.

The major requirements and cognate courses are intended to provide a scientific base on which a balanced program of electives may be built in accordance with the individual needs and interests of each student.

#### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

##### Major: Psychology

General Psychology	121, 122	4
Psychological Experiments	225	2
Systems and Theories in Psychology	230	4
Elementary Statistics	350	4
Experimental Problems	375	3
Psychological Testing	430	3

Electives		<u>30</u>
A program of 30 elective hours must be planned in consultation with, and approved by, a psychology adviser. Courses will be selected from a variety of areas such as developmental, personality, mental health, clinical, etc.		50

A minimum of 15 elective credits must be on the upper-division level.

Up to 9 credits of *approved* electives taken in departments other than Education and Psychology may be applied to the psychology major.

##### Required Cognates:

A minimum of 20 credits in science and/or mathematics from the following:

Fundamentals of Mathematics	Math. 121, 122
General Biology	Bio. 101, 102, 103
Anatomy	Bio. 202
Physiology	Bio. 203
Genetics	Bio. 261
Introductory Chemistry I	Chem. 101-102-103
General Physics	Phys. 211, 212, 213

An entire course sequence must be taken in at least one area. Approved advanced courses in any of these specific topical areas may be substituted in meeting cognate requirements.

#### PSYCHOLOGY—MINOR REQUIREMENTS

The psychology minor serves as a basis for further training for a variety of occupations including careers in school counseling, industrial guidance services and certain types of social work. It can be integrated, by advise-

## EDUCATION AND PSYCHOLOGY

ment, with related areas of sociology and health for candidacy for certification as a school psychologist.

General Psychology	121, 122	4
Psychological Experiments	225	2
Systems and Theories in Psychology	230	4
Electives in Psychology		<u>18</u>
		28

### PSYCHOLOGY—PREPARATION FOR GRADUATE WORK:

Although specific requirements for admission to graduate programs in most universities will be met by the general major, the student should realize that his graduate work may be impeded or prolonged in certain areas of psychology if special preparation is not obtained at the undergraduate level. For this reason, students who plan to continue academic work in psychology beyond the bachelor's degree are urged to consult with their advisers very early in their college careers.

## PSYCHOLOGY

Psychology 121, 122 is prerequisite to all other courses in Psychology.

### 121, 122 GENERAL PSYCHOLOGY 2, 2

An eclectic survey of the major areas of psychology emphasizing the scientific bases of psychological investigation. Designed to acquaint the student with the fundamental vocabulary, methodologies, established facts and sound principles of psychology as a prerequisite to advanced courses. Must be taken in sequence.

### 220 EDUCATIONAL PSYCHOLOGY 3

Application of psychological principles to the art of teaching. Corequisite: 221.

### 221 EDUCATIONAL PSYCHOLOGY LABORATORY 1

Designed to prepare the paraprofessional for classroom activities at either the elementary or secondary level. Corequisite: 220.

### 225 PSYCHOLOGICAL EXPERIMENTS 2

A laboratory course providing undergraduate students with elementary experience in designing and conducting experimental research in the field of psychology.

### 230 SYSTEMS AND THEORIES IN PSYCHOLOGY 4

Acquaints the student with the historical development of the various systems and theories in psychology with emphasis on learning theory.

## EDUCATION AND PSYCHOLOGY

- 350 ELEMENTARY STATISTICS** 4  
Fundamental procedures for summarizing and interpreting quantitative data from tests and research in the social sciences.
- 375 EXPERIMENTAL PROBLEMS** 3  
An advanced course which enables the student to develop skills in experimental design and to apply such skills to an individual research project. Prerequisite: 350 or equivalent.
- 430 PSYCHOLOGICAL TESTING** 3  
Principles of test selection, administration and interpretation are considered together with the contributions and limitation of the major types of standardized tests and inventories used in the behavioral sciences.
- 431 PSYCHOLOGY OF EXCEPTIONAL CHILDREN** 3  
Characteristics and problems of exceptional children with consideration of essential educational adaptation.
- 435 CHILD PSYCHOLOGY** 3  
Principles of growth as related to various phases of human development during the preadolescent years: physical, mental and emotional.
- 436 CHILD PSYCHOLOGY LABORATORY** 1  
Prerequisite or corequisite: 435.
- 437 CHILDHOOD LEARNING DISORDERS** 3  
An introduction to play therapy and psycho-educational 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: 435.
- 440 ADOLESCENT PSYCHOLOGY** 3  
Principles of growth as related to various phases of human development during the adolescent years—physical, mental and emotional.
- 442 MOTIVATION** 3  
A study of basic drives and causes of behavior in organisms with emphasis upon human behavior. This course includes a laboratory.
- 444 SOCIAL PSYCHOLOGY** 3  
The dynamics of social interaction and interpersonal behavior with application to contemporary society.
- 445 SOCIAL PSYCHOLOGY LABORATORY** 1  
Prerequisite: 444.
- 446 PSYCHOLOGY OF PERSONALITY** 3  
Theories concerning personality development, assessment and adjustment will be considered.

- 449 MENTAL HEALTH** 3  
Physiological and psychological factors related to emotional maturity. Individual mental health, classroom climate, patterns of acceptance and rejection.
- 464 COUNSELING RELATIONSHIPS** 3  
A practical introduction to psychological theory and skills essential for developing effective and helping relationships with individuals and groups.
- 474 WORKSHOP IN PSYCHOLOGY** 1-3; 6  
A workshop designed to provide experiences in investigation and evaluation of contemporary problems and practices in psychology. One to three credits; maximum, six credits.
- 489 VOCATIONAL DEVELOPMENT THEORY** 3  
Theories of vocational choice and methods of studying occupations and occupational information are considered as they relate to educational and vocational guidance.
- 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: 350 or equivalent.
- 515 COUNSELING THEORIES AND TECHNIQUES** 3  
A study and application of the theories and techniques for counseling. Professional relationships and ethics are considered.
- 518 GROUP COUNSELING** 2  
Theories and techniques of counseling in group situations. Prerequisite: 515.
- 521 PSYCHOLOGY OF LEARNING** 3  
The physiological and psychological bases for functional learning are discussed, and the experimental evidence supporting psychological hypotheses is reviewed.
- 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: 430 and permission of the instructor.
- 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: 532.

## EDUCATION AND PSYCHOLOGY

- 563 FIELD EXPERIENCE** 3  
Designed to provide a broad spectrum of experience in actual field settings under supervised direction. Permission of the instructor required.
- 564 ABNORMAL PSYCHOLOGY** 3  
A study of behavioral disturbances, therapeutic measures and theories.
- 565 PRACTICUM IN COUNSELING** 5  
Professional experience in the counseling function. Prerequisites: 515, 534 and permission of the instructor.



## ENGINEERING, SCHOOL OF

C. Bell, Dean; F. Bennett, J. Cole, E. Cross, R. Heisler, G. Masden, O. McNiel, R. Noel, R. Sutton.

Professional engineering is defined as the art and science of applying the principles of mathematics, science, economics, ethics and humanistic-social relationships to the problems of research, development, design and construction of devices, machines, structures and systems that will be of use to mankind.

The College offers a curriculum leading to the degree of Bachelor of Science in Engineering, approved by the Engineers' Council for Professional Development. Its aim is to prepare students to enter the practice of professional engineering, and also to provide undergraduate instruction which will serve as an adequate foundation for graduate studies.

The engineering course offerings are drawn from the fields of engineering science, civil engineering, electrical engineering and mechanical engineering. All engineering students will take a group of core courses intended to develop an understanding of basic engineering principles. Thereafter, by choosing appropriate electives in conference with the Dean of the School of Engineering, the student may concentrate his efforts in the areas related to civil, electrical or mechanical engineering. Flexibility in this program may be obtained by limited substitutions, individually chosen in consultation with an adviser and approved by the school to form an integral engineering program. Should the student then wish to follow a specialized career in fields such as architectural engineering, aeronautical engineering, bioengineering, electronics engineering, highway engineering, sanitary engineering or other such, he is prepared so to do through subsequent professional experience or graduate study.

Aside from the entrance requirements stated earlier in this bulletin, it is to be emphasized that entering freshmen should have a strong background in mathematics, physics and/or chemistry, history and English. Entrance deficiencies, if any, must be removed before the beginning of the sophomore year. On the other hand, advanced standing is permitted students who provide a transcript of successful studies at another approved college or university.

North American Seventh-day Adventist colleges and universities are affiliated with Walla Walla College under a program which provides the opportunity for the student to complete the first one or two years of engineering instruction at any participating institution. After the conclusion of these initial studies, the student completes degree requirements at Walla Walla College. Each affiliated campus has an engineering coordinator who has been appointed to provide the necessary guidance to insure a smooth transition from the affiliated campus to Walla Walla College. Details of this program can be obtained from the Dean of the School of Engineering.

## ENGINEERING

Admission to engineering studies will be made only in September, except for certain advanced students. Satisfactory progress is contingent upon attendance for the full year and the maintenance of a C average grade. Since there is no designated major or minor, the grade of D in any subject will be evaluated as follows: a grade of D will be accepted for credit toward the degree provided that there are no more than two such in a given quarter, and further provided that the grade-point average for that quarter is not lower than 2.00. When these conditions are not met, all required courses for which a grade below C was received must be repeated.

In the senior year, the following noncourse requirements must be met: Senior Inspection Trip, Graduate Record Examination. Also, at or near the time of graduation, seniors will sit for the State of Washington Engineer-in-Training examination.

### BACHELOR OF SCIENCE IN ENGINEERING DEGREE:

<b>First Year:</b>		
College Writing	Engl. 101-102-103	9
Precalculus	Math. 117	5
Analytic Geometry & Calculus I, II	Math. 181, 281	8
General Chemistry	Chem. 161-162-163	12
Introduction to Engineering	Engr. 107, 108, 109	6
Computer Science I	Engr. 218	2
*Religion		6
Physical Education (service courses)		3
		<hr/> 51
<b>Second Year:</b>		
Analytic Geometry and Calculus III, IV	Math. 282, 283	8
Linear Algebra and Its Applications	Math. 293	3
Principles of Physics	Phys. 251, 252, 253	9
Principles of Physics Laboratory	Phys. 254, 255, 256	3
Statics	Engr. 211	4
Dynamics	Engr. 212	5
Computer Science II	Engr. 220	2
Circuit Analysis I	Engr. 228	4
*Religion		6
*Humanities-Social Science Electives		9
		<hr/> 53
<b>Concentration: Civil Engineering</b>		
<b>Third Year:</b>		
Mechanics of Materials	Engr. 301	5
Engineering Materials	Engr. 312	5
Surveying	Engr. 316	4

\*Elective sequences in Religion, Mathematics and Humanities-Social Science elective areas to be selected in conference with the Dean of the School of Engineering or assigned adviser. All students will include Education 110, Philosophy of Christian Education. Students following the concentration in civil engineering will include Engineering 352, The Environment and Man.

## ENGINEERING

Fluid Mechanics	Engr. 325	4
Hydrology	Engr. 331	3
Soil Mechanics	Engr. 335	3
Structures I	Engr. 338	4
Engineering Administration	Engr. 343	5
Hydroenvironmental Engineering I	Engr. 353	3
Fluid Mechanics Laboratory	Engr. 368	1
Probability and Statistics	Math. 311	4
Ordinary Differential Equations	Math. 312	4
*Religion		4
*Humanities-Social Science Electives		3
		<hr/> 52

### Fourth Year:

Instrumentation	Engr. 324	3
Engineering Thermodynamics I	Engr. 326	4
Electric Energy Conversion I	Engr. 414	4
Hydroenvironmental Engineering II, III, IV	Engr. 464, 465, 466	11
Structures II, III, IV	Engr. 467, 468, 469	12
Transportation and Systems	Engr. 473	4
Seminar I, II, III	Engr. 491, 492, 493	3
Introduction to Modern Physics	Phys. 311	3
Modern Physics Laboratory	Phys. 314	1
Students may substitute a biology or chemistry elective for Phys. 311, 314 with approval of adviser.		
		2
*Religion		2
*Humanities-Social Science Electives		2
		<hr/> 49

### Concentration: Electrical Engineering

#### Third Year:

Mechanics of Materials	Engr. 301	5
Engineering Materials	Engr. 312	5
Circuit Analysis II	Engr. 322	3
Instrumentation	Engr. 324	3
Feedback and Control Systems	Engr. 332	4
Engineering Administration	Engr. 343	5
Digital Logic Circuits	Engr. 355	3
Engineering Electronics I, II	Engr. 378, 379	10
Probability and Statistics	Math. 311	4
Ordinary Differential Equations	Math. 312	4
*Mathematics Elective		4
*Religion		2
		<hr/> 52

\*Elective sequences in Religion, Mathematics and Humanities-Social Science elective areas to be selected in conference with the Dean of the School of Engineering or assigned adviser. All students will include Education 110, Philosophy of Christian Education. Students following the concentration in civil engineering will include Engineering 352, The Environment and Man.

## ENGINEERING

### Fourth Year:

Fluid Mechanics	Engr. 325	4
Engineering Thermodynamics I	Engr. 326	4
Electric Energy Conversion I, II	Engr. 414, 415	9
Electromagnetic Fields I, II	Engr. 421, 422	8
Circuit Analysis III	Engr. 428	4
Signals and Systems	Engr. 431	4
Seminar I, II, III	Engr. 491, 492, 493	3
Introduction to Modern Physics	Phys. 311	3
Modern Physics Laboratory	Phys. 314	1
*Religion		4
*Humanities-Social Science Electives		5
		<u>49</u>

### Concentration: Mechanical Engineering

#### Third Year:

Mechanics of Materials	Engr. 301	5
Engineering Materials	Engr. 312	5
Circuit Analysis II	Engr. 322	3
Instrumentation	Engr. 324	3
Fluid Mechanics	Engr. 325	4
Engineering Thermodynamics I, II	Engr. 326, 327	8
Feedback and Control Systems	Engr. 332	4
Engineering Administration	Engr. 343	5
Fluid Mechanics Laboratory	Engr. 368	1
Thermodynamics Laboratory	Engr. 369	1
Ordinary Differential Equations	Math. 312	4
*Religion		3
*Humanities-Social Science Electives		5
		<u>51</u>

#### Fourth Year:

Electric Energy Conversion I	Engr. 414	4
Signals and Systems	Engr. 431	4
Mechanical Design	Engr. 432	4
Heat Transfer	Engr. 449	4
Machine Design	Engr. 451, 452-453	12
Vibrations	Engr. 456	4
Seminar I, II, III	Engr. 491, 492, 493	3
Introduction to Modern Physics	Phys. 311	3
Modern Physics Laboratory	Phys. 314	1
Probability and Statistics	Math. 311	4
*Religion		3
*Humanities-Social Science Electives		4
		<u>50</u>

GRAND TOTAL

205

\*Elective sequences in Religion, Mathematics and Humanities-Social Science elective areas to be selected in conference with the Dean of the School of Engineering or assigned adviser. All students will include Education 110, Philosophy of Christian Education. Students following the concentration in civil engineering will include Engineering 352, The Environment and Man.

- \*107, 108, 109 INTRODUCTION TO ENGINEERING** 2, 2, 2  
Engineering communications, with emphasis upon sketching, conventional engineering drafting practices, pictorial representation; principles of descriptive geometry; introduction to the design process and elements of professional engineering. Must be taken in sequence. AWS
- \*211 STATICS** 4  
Two and three dimensional equilibria employing vector algebra; friction; centroids and centers of gravity; moments of inertia. Corequisite: Mathematics 282. A
- \*212 DYNAMICS** 5  
One and two dimensional kinetics and kinematics of rigid bodies by vector calculus; dynamics of rotation, translation and plane motion; relative motion; work and energy; impulse and momentum. Prerequisite: 211. Corequisite: Mathematics 283. W
- \*218 COMPUTER SCIENCE I** 2  
An introduction to problem solving using the computer. Instruction emphasizes use of the BASIC language in a time-sharing interactive environment. Course covers computer characteristics, problem analysis, algorithm development, flow charting, coding, debugging and documentation. Prerequisite: Elementary concepts of algebra. A or W or S
- \*220 COMPUTER SCIENCE II** 2  
A continuation of Computer Science I with emphasis on the FORTRAN language. Input-output and format statements, arrays, functions, subroutines, algorithm development, debugging and documentation. Prerequisite: 218 or equivalent. A or W or S
- \*228 CIRCUIT ANALYSIS I** 4  
Circuit variables and parameters; Kirchoff's laws and circuit solution; sinusoidal steady-state; phasors and impedance; frequency characteristics; Thevenin's theorem and maximum power theorem; transients and complete response. Laboratory covers basic measurements using DC and AC meters, potentiometers, recorders and bridges. Prerequisites: Mathematics 282; Physics 252. S
- \*301 MECHANICS OF MATERIALS** 5  
Stresses, deformations and deflections of posts, shafts, beams, columns; combined stresses; elasticity. Laboratory. Prerequisite: 211. A
- \*312 ENGINEERING MATERIALS** 5  
Study of the science of engineering materials, metallic and nonmetallic; uses, properties and their modification and behavior in service environments. Laboratory. Prerequisite: 301. W

\*Core Requirement



## ENGINEERING

- 316 SURVEYING** 4  
Use of basic surveying instruments; computational methods for traverses, routes and earthwork, mapping. Prerequisites: 109. S
- 322 CIRCUIT ANALYSIS II** 3  
Network equations and theorems; Laplace transforms; impulse functions and convolution theorem; system functions and their frequency behavior. Prerequisite: 228. A
- \*324 INSTRUMENTATION** 3  
Theory and application of modern instrumentation. Validation of experimental data. Laboratory. Prerequisite: 228 or permission of the instructor. A
- \*325 FLUID MECHANICS** 4  
An introduction to fluid statics and the dynamics of fluid motion. Conservation of mass, momentum and energy in flowing systems using the control volume formulations; dimensional analysis and similitude; inviscid and viscous flow in pipes and open channels. Prerequisite: 212. A
- \*326 ENGINEERING THERMODYNAMICS I** 4  
An introduction to the nature of energy and further study of energy conservation in closed and flowing systems; properties and state of gases and vapors; enthalpy, entropy and cycle systems. Prerequisites: 325, Physics 253, Mathematics 283. W
- 327 ENGINEERING THERMODYNAMICS II** 4  
Detailed analysis of power and reversed cycle systems; thermodynamics of nonreacting and reacting mixtures; equilibrium; introduction to compressible fluid flow. Prerequisites: 326, Mathematics 312. S
- 331 HYDROLOGY** 3  
Occurrence, measurement and storage of ground and surface waters; statistical models. Prerequisites: 335, 325, and Mathematics 311. W
- 332 FEEDBACK AND CONTROL SYSTEMS** 4  
An introduction to classical feedback and control analysis and design; signal flow graph; root locus; and classical frequency response techniques. Prerequisite: 322 or permission of instructor. Corequisite: Mathematics 312. W
- 335 SOIL MECHANICS** 3  
Testing, classification and interpretation of soil tests; geology; fundamental principles of stress distribution and deformation characteristics of soils; flow of water through soils. Laboratory work required. Prerequisite: Chemistry 163. Corequisites: 301, 325. A
- 338 STRUCTURES I** 4  
Graphical and algebraic analysis of determinate and indeterminate structures and their elements as applied to timber; basic design concepts

\*Core Requirement

of beams, girders, columns, trusses and connections. Includes computation laboratory. Prerequisites: 301, 312. S

**\*343 ENGINEERING ADMINISTRATION 5**

Business, economic and ethical aspects of engineering practice. Contracts and specifications; professional engineer/public/owner/contractor relationships; elementary principles of engineering design, under individual or team organization. S

**346 COMPUTER SCIENCE III 3**

An introduction to computer architecture, machine and assembly languages; binary arithmetic; instruction execution; symbolic assembly language and the assembly process; simple data structures, arrays, stacks; question input-output programming. Students will program and operate a digital computer. Prerequisite: 220 or equivalent. S

**352 THE ENVIRONMENT AND MAN 3**

Interdisciplinary consideration of current topics involving the interrelations between man and his environment. W

**353 HYDROENVIRONMENTAL ENGINEERING I 3**

Analysis and design of water and wastewater handling and treatment systems. Physical, chemical and biological processes and their integration; water distribution; sewage and stormwater collection; receiving-water investigation. Prerequisites: 331, 352, 368 and Mathematics 312. S

**355 DIGITAL LOGIC CIRCUITS 3**

Introduction to theory and application of digital logic circuits, logic functions. Logic gates; flip-flops; counters; state machines; modern integrated logic families. S

**368 FLUID MECHANICS LABORATORY 1**

Laboratory instruction in fluid mechanics. Incompressible and elementary compressible fluid flow with special application of momentum principles; fluid flow measurements, turbomachinery, and real fluid phenomena in pipeline and open channel flows. Prerequisite: 325. W

**369 THERMODYNAMICS LABORATORY 1**

Laboratory instruction in thermodynamic analysis of heat-power systems with special application to static and dynamic measurements of compressible fluid flow, internal combustion engine systems, steam power plants and reversed cycle systems. Applications of current interest in the energy field. Corequisite: 327. S

**378, 379 ENGINEERING ELECTRONICS I, II 5, 5**

Characteristics and applications of solid-state electronic devices and circuits; terminal characteristics; large signal analysis; biasing; small

## ENGINEERING

signal analysis; low and high frequency models; AC and DC coupling; feedback amplifiers; oscillators. Laboratory work required. Must be taken in sequence. Prerequisite: 322. WS

### **\*414 ELECTRIC ENERGY CONVERSION I** **4**

A study of transformers, three phase systems, characteristics of DC machines, induction motors, synchronous motors, single-phase motors; emphasis on performance, control and applications. Laboratory. Prerequisite: 228. W

### **415 ELECTRIC ENERGY CONVERSION II** **5**

A continuation of 414 with particular emphasis on the development of circuit models which allow analysis of electric energy systems. Transmission lines; load flow analysis; symmetrical components; other selected topics. Laboratory work in electromechanical energy conversion. Prerequisites: 414, 332. S

### **421, 422 ELECTROMAGNETIC FIELDS I, II** **4, 4**

A study, by vector calculus, of static and dynamic electric and magnetic fields. Free space and bounded fields; material properties; energy and potential; Maxwell's equations; plane wave propagation with boundaries; energy propagation along transmission lines and wave-guides; dipole radiation. Must be taken in sequence. Prerequisites: Mathematics 312, Physics 253. AW

### **428 CIRCUIT ANALYSIS III** **4**

Topics in analog and digital systems with applications. Prerequisites: 322, 355, 379. S

### **431 SIGNALS AND SYSTEMS** **4**

Introduction to continuous and discrete signal and system analysis; Fourier series; convolution; Fourier transforms; discrete Fourier transforms; z-transforms. Prerequisites: 322, Mathematics 312. A

### **432 MECHANICAL DESIGN** **4**

Studies in design of mechanical systems and controls, particularly related to buildings and power generation. Prerequisites: 327; 368, 369. W

### **449 HEAT TRANSFER** **4**

One and two dimensional steady-state and transient heat conduction; black body and gray body radiation; free and forced convection. Prerequisites: 326 and Mathematics 312. W

### **451, 452-453 MACHINE DESIGN** **4-4-4**

Practical application of kinematics, materials, mechanics and mechanical processes to the design of machines and machine elements, with due regard to the selection of materials, construction, lubrication, safety and cost. Calculations, layouts and detail drawings as required. Must be taken in sequence. Prerequisites: 301, 312. AWS

**456 VIBRATIONS****4**

Undamped and damped vibrations of single-degree-of-freedom systems; forced vibrations, transient response; many-degrees-of-freedom systems, normal modes. Prerequisite: 431. S

**464, 465, 466 HYDROENVIRONMENTAL  
ENGINEERING II, III, IV****4, 4, 3**

A continuation of 353. Laboratory work required. Must be taken in sequence. Prerequisite: 353. AWS

**467, 468, 469 STRUCTURES II, III, IV****5, 3, 4**

Analysis and design of foundations (with laboratory autumn quarter); reinforced and prestressed concrete and steel determinate and indeterminate structures; industrial and multistory buildings, bridges, rigid frames, arches; elastic, plastic, limit and ultimate strength design procedures; general, matrix and introductory finite element analysis. Includes computation laboratory. Must be taken in sequence. Prerequisite: 338. AWS

**473 TRANSPORTATION AND SYSTEMS****4**

Use of soils and construction materials in the design of highways, waterway and airway terminals and railways; introduction to traffic engineering; analog computing concepts as applied to transportation and other civil engineering systems. Laboratory work. Prerequisites: 331, 335, 465, 468. S

**\*491, 492, 493 SEMINAR I, II, III****1, 1, 1**

Design concepts and problems; team building; design project from conception to model; optimization. Prerequisite: 301, 312, 343. AWS

\*Core Requirement

414

414 ELECTRIC ENERGY CONVERSION  
A study of the various methods of converting energy from one form to another, including the principles of thermodynamics, electromagnetism, and the design of electrical machines and systems.

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A study of the various methods of converting energy from one form to another, including the principles of thermodynamics, electromagnetism, and the design of electrical machines and systems.

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A study of the various methods of converting energy from one form to another, including the principles of thermodynamics, electromagnetism, and the design of electrical machines and systems.

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A study of the various methods of converting energy from one form to another, including the principles of thermodynamics, electromagnetism, and the design of electrical machines and systems.

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A study of the various methods of converting energy from one form to another, including the principles of thermodynamics, electromagnetism, and the design of electrical machines and systems.

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A study of the various methods of converting energy from one form to another, including the principles of thermodynamics, electromagnetism, and the design of electrical machines and systems.

421 ELECTRIC ENERGY CONVERSION

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A study of the various methods of converting energy from one form to another, including the principles of thermodynamics, electromagnetism, and the design of electrical machines and systems.

422 ELECTRIC ENERGY CONVERSION

422 ELECTRIC ENERGY CONVERSION  
A study of the various methods of converting energy from one form to another, including the principles of thermodynamics, electromagnetism, and the design of electrical machines and systems.

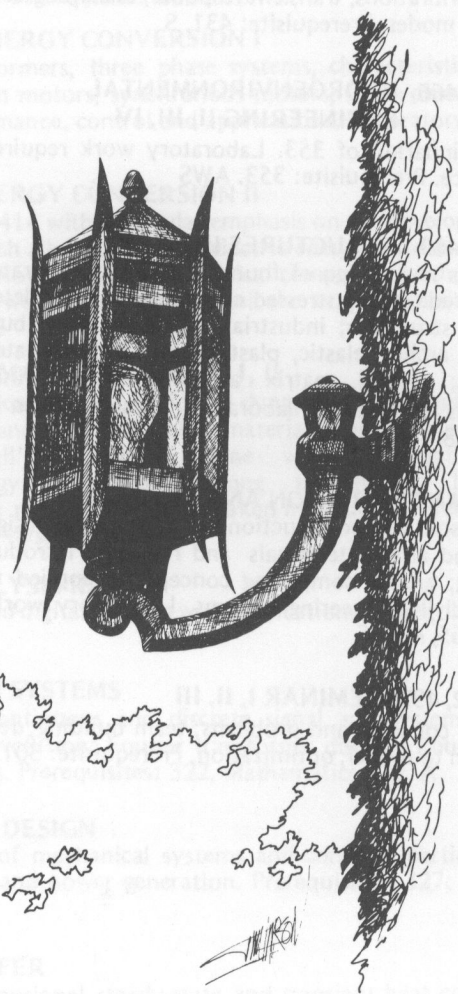
423 ELECTRIC ENERGY CONVERSION

423 ELECTRIC ENERGY CONVERSION  
A study of the various methods of converting energy from one form to another, including the principles of thermodynamics, electromagnetism, and the design of electrical machines and systems.

# OLD VILLAGE HALL LAMP

\*Core Requirement

1890





ENGLISH

, Chairman; R. Emerson, L. French, D. Hepker, N. Moore, Carolyn Stevens, G. Wiss.

The primary objective of the department is to develop competence in the use of the English language and to inspire students with the best in the world's literature.

Major requirements for a Bachelor of Arts degree include the core curriculum and its cognates and one of the specialized areas and its cognates.

BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

Major: English

Core Requirements:

American Literature	224, 225, 226	6
English Literature	244, 245, 246	6
Literary Analysis and Research	286	3
Modern English Grammars	371	3
Introduction to English Linguistics	425	} 3
or		
History of the English Language	426	
Seminar	491	3
Electives, upper-division literature		22
(Students choosing the secondary teaching area must include three hours of American literature.)		46

Required Cognate:

History of England	Hist. 377, 378, 379	6
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In addition to the core requirements, the student must choose one of the following areas of concentration:

Concentration: Teaching in the Elementary School

Literature for Children and Adolescents	412	3
Required Cognates:		
Methods of Teaching High School English	471	4
Writing courses beyond College Writing in English or Journalism		6
		13

Concentration: Teaching in the Secondary School

Literature for Children and Adolescents	412	3
Electives, upper-division literature		2
Required Cognates:		
Methods of Teaching High School English	471	4
Writing courses or Speech		6
(3 credits must be in writing)		15

## ENGLISH

### Concentration: Graduate School and General Cultural Background

Classical Backgrounds	361	3
Electives, upper-division literature		5
Required Cognates:		
Electives		6
(writing courses beyond College Writing or upper-division literature)		14

### ENGLISH—MINOR REQUIREMENTS:

#### Minor: General

Emphasizes reading of literature to provide general cultural background and writing to develop creative and critical skills; will not qualify the student for teacher certification.

American Literature	224, 225, 226	} 6
or		
World Literature	251, 252, 253	} 6
English Literature	244, 245, 246	
Electives (3 credits must be upper division)		15
(writing courses beyond College Writing or upper-division literature)		27

#### Minor: Teaching

Emphasizes the understanding and appreciation of literature and the methodology of teaching literature and writing; qualifies the student for teacher certification on the elementary or secondary level when professional requirements are met.

American Literature	224, 225, 226	6
English Literature	244, 245, 246	6
Modern English Grammars	371	3
Electives, upper-division literature		9
Literature for Children and Adolescents	412	3
Writing course beyond College Writing		3
		30

## COMPOSITION

### \*99 ENGLISH COMPOSITION 3

An intensive one-quarter review of grammar and structure with weekly writing experience; designed for students who need review before taking 101. Meets three to five times per week, depending upon the student's background in English.

\*See Transitional Curriculum listed under Nondepartmental.

**101-102-103 COLLEGE WRITING****3-3-3**

Study and practice in the basic skills necessary for all college writing. In the first quarter, the basic modes of expository writing with emphasis on argument; in the second quarter, applied expository techniques with emphasis on analyses and reports; in the third quarter, research techniques and writing with emphasis on the term paper.

**104-105 COLLEGE WRITING HONORS****3-3**

An honors course designed for students who demonstrate superior ability in composition. Extensive reading and writing are required. Admission: superior score on qualifying tests set by the department. Students who complete 104 and 105 with a B or above will be granted three additional honors credits. Students who earn below a B in 104 will take 102 and 103. Students who earn below a B in 105 will take 103.

**107, 108, 109 ENGLISH AS A SECOND LANGUAGE****3, 3, 3**

A study of English grammar with extensive practice in written communication. Language laboratory (from three to six hours a week according to need) is required. When the student has reached a performance level adequate to enter College Writing 102, he may petition for a waiver of 101. Elective credit only.

**280 ADVANCED WRITING****3**

Additional work beyond College Writing in exposition as well as some narration; extensive reading for ideas and style. Prerequisite: 101-102-103 or 104-105.

**286 LITERARY ANALYSIS AND RESEARCH****3**

A composition course designed to prepare the literature student to write critical and research papers; emphasis on literary forms, analyses, bibliography sources and research methods. Prerequisite: 101-102-103 or equivalent.

**381 TECHNICAL WRITING****3**

A course to develop skills for report and research writing with extensive work in organization and research methodology; designed to aid students in writing research papers in their major fields. Prerequisite: 101-102-103 or 104-105.

**385, 386 CREATIVE WRITING****3, 3**

Techniques of writing beyond those of mere correctness and clarity in creative forms; poetry (385), prose (386). Prerequisite: 101-102-103 or equivalent.

**LITERATURE****224, 225, 226 AMERICAN LITERATURE 2, 2, 2**

A chronological study of American literature with emphasis on major writers and movements from Puritanism to the present. Recommended it be taken in sequence.

**244, 245, 246 ENGLISH LITERATURE 2, 2, 2**

A chronological study of English literature with emphasis on the major writers and movements from Beowulf to the present. Recommended it be taken in sequence.

**251, 252, 253 WORLD LITERATURE 2, 2, 2**

A survey of representative literature from ancient Greece and Rome, England, France, Germany, Italy, the Orient, Russia, Scandinavia, Spain and the United States. Recommended it be taken in sequence.

Courses numbered 300 and above have as prerequisites the appropriate lower-division preparation. Registration only by permission of the department chairman.

**350 DIRECTED READING 1-2; 3**

A course designed for upper-division students who have completed a literature survey course and wish to continue broadening their knowledge of literature by extensive reading; admission only by departmental approval. Prerequisites: 224, 225, 226 or 244, 245, 246 or 251, 252, 253. One to two credits any quarter; maximum, three credits.

**354, 355, 356 TWENTIETH CENTURY LITERATURE 2, 2, 2**

Modern American and British literary achievements studied as a revelation of contemporary attitudes, ideals and conduct. Prerequisites: 224, 225, 226 and 244, 245, 246.

**361 CLASSICAL BACKGROUNDS 3**

A detailed study of selections from classical literature, including the works of Homer, Sophocles, Plato, Virgil, Horace, Dante, Petrarch and Boccaccio. Prerequisites: 224, 225, 226 or 244, 245, 246 or 251, 252, 253.

**404, 405, 406 THE VICTORIAN PERIOD 3, 3, 3**

An advanced study of the poetry and prose of the writers who molded and reflected characteristic opinion and ideals after the first third of the nineteenth century. Among the writers to be discussed are Tennyson, Newman, Mill and Dickens (autumn); the Brownings, Ruskin, the Rossettis and Thackeray (winter); and Matthew Arnold, Hopkins, George Eliot and Hardy (spring). Prerequisite: 244, 245, 246.

**407, 408, 409 AMERICAN LITERARY MASTERS 3, 3, 3**

An advanced study of selected American authors from the following

literary periods: Romanticism (407), Realism (408), Naturalism and related early twentieth century movements (409). Prerequisite: 224, 225, 226.

#### 412 LITERATURE FOR CHILDREN AND ADOLESCENTS 3

The philosophy of the selection and study of literature for kindergarten through grade twelve. Extensive reading of literature written for children and adolescents is required, with separate assignments for the elementary and the high school teacher.

#### 421, 422, 423 THE ROMANTIC PERIOD 2, 2, 2

An analysis of the emergence of Romantic ideals and their manifestation in British literature beginning with the pre-Romantic movement to 1832. Emphasis the first quarter, Wordsworth and Coleridge; the second, Blake and Byron; the third, Shelley and Keats. Prerequisite: 244, 245, 246.

#### 427, 428, 429 RESTORATION AND NEOCLASSIC LITERATURE 2, 2, 2

A study of the chief works of the important writers of the period, including Dryden, Swift, Defoe, Steele and Addison (autumn); Pope, Thomson and others (winter); and Johnson, Boswell, Goldsmith and others (spring). Prerequisite: 244, 245, 246.

#### 441 OLD AND MIDDLE ENGLISH LITERATURE 3

A survey of English literature from *Beowulf* (in translation) to *Everyman*, exclusive of Chaucer, Prerequisite: 244, 245, 246.

#### 442 CHAUCER 3

An advanced study of Chaucer's poetry, including selections from the dream visions, *Troilus and Criseyde* and *The Canterbury Tales*. Readings in literary and philosophical background materials. Prerequisite: 244, 245, 246.

#### 453 AMERICAN LITERATURE BACKGROUNDS 3

A depth study of the ideologies and forms influencing and operating in the development of American literature; extensive work in both secondary and primary works to illuminate trends. Prerequisite: 224, 225, 226.

#### 464, 465, 466 RENAISSANCE LITERATURE 3, 3, 3

A detailed study of the significant literature that reflects the essential temper of the Renaissance period. Autumn quarter includes early drama, the growth of lyricism, and the development of English prose; winter includes drama other than Shakespearean, the Cavalier and metaphysical poets, and the principal seventeenth-century prose writers; spring includes the work of Milton and Bunyan. Prerequisite: 244, 245, 246.



## ENGLISH

### 467 SHAKESPEARE 3

An intensive study of content and form in selected works of Shakespeare, their relationship to their times, and their contribution to the development of drama and poetry in the Renaissance. Prerequisite: 244, 245, 246.

### 468 LITERATURE OF THE BIBLE 3

The study of both poetry and prose in the Old and New Testament, with a detailed analysis of the poem of Job. Prerequisite: 224, 225, 226 or 244, 245, 246 or 251, 252, 253.

### 491 SEMINAR 3

An integrating course required of English majors in the senior year. The study includes practice in bibliography and research methods, problems in areas of special interest to the class members, group conferences and reports.

## GENERAL

### 371 MODERN ENGLISH GRAMMARS 3

The study of grammar and usage in current writing, with examination of traditional, structural and transformational points of view.

### 425 INTRODUCTION TO ENGLISH LINGUISTICS 3

Detailed scientific analysis of the structure of Germanic and Romance languages, stressing those aspects of formative change which help to clarify current English usage.

### 426 HISTORY OF THE ENGLISH LANGUAGE 3

This course is designed to give the student a broad, comprehensive understanding of present-day English. It aims to present the historical development in such a way as to maintain a balance between the external and internal history of the language.

### 471 METHODS OF TEACHING HIGH SCHOOL ENGLISH 4

A study of objectives for and methods of teaching language, composition and literature in grades seven through twelve. Students prepare and present lessons in literature and composition, evaluate student-written themes, and collect and organize a file of teaching materials. Prerequisites: 371 and 412.

### 473 METHODS OF TEACHING MODERN GRAMMARS IN THE ELEMENTARY AND SECONDARY SCHOOLS 3

An intensive course integrating methodologies pertaining to the teaching of traditional, structural and transformational grammars. Prerequisite or corequisite: 371.

# HEALTH, PHYSICAL EDUCATION AND RECREATION

B. Napier, Chairman; G. Hamburg, E. Schneider, Jeanine Turner,  
J. Waterbrook, E. Winter.

The aim of the department is to promote those activities which stimulate habits of regular exercise and develop interests and skills which may be enjoyed throughout life.

## GENERAL REQUIREMENT OF ALL STUDENTS

All students are required to complete a total of 3 credits of physical education *service courses* offered in the department. This requirement should be met during the student's freshman and sophomore years.

## BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

### Major: Physical Education

#### Core Requirements:

Introduction to PE	181	2
Professional Activities I	187, 188, 189	6
Officiating of Sports Activities	284, 285, 286	6
Intramural Activities	295	2
Professional Activities III	381, 382, 383	6
Foundations of PE	422	3
Administration of PE	451	3
Seminar	492, 493	<u>2</u>
		30

#### Concentration: Physical Education

Corrective and Adaptive PE	273	3
Professional Activities II	287, 288, 289	6
Kinesiology	361	3
Physiology of Exercise	363	4
Teaching Techniques of PE Activity	420	<u>2</u>
		18

#### Required Cognates:

Contemporary Health Issues	110	2
First Aid	283	2
Methods of School Health Instruction	431	3
*Anatomy	Bio. 202	5
*Physiology	Bio. 203	5
*General Biology	Bio. 103	4
*The above 14 hours will satisfy the general education science requirement.		
Introductory Chemistry I	Chem. 101-102-103	9
(Students presenting one unit secondary school chemistry with laboratory may be exempt from this requirement.)		
Human Nutrition	HEc. 220	3

A minor in health or biology is recommended.

## HEALTH, PHYSICAL EDUCATION AND RECREATION

### Concentration: Recreation and Outdoor Education

Aquatics	350	3
Arts and Crafts		6
To be selected from this and other departments in counsel with department chairman.		
Mountaineering	234-235	6
Practicum in Outdoor Education	272	
Camping, Survival and Wilderness Living	343	
Leadership in Camping and Outdoor Education	403	
Recreational Programs	342	3
Electives (one credit must be upper-division)		2
		<hr/> 20

### Required Cognates:

General Biology	Bio. 101, 102, 103	12
Ornithology	Bio. 403	8
General Entomology	Bio. 405	
Systematic Botany	Bio. 426	
Mammology	Bio. 444	
General Astronomy	Phys. 241	6
Fine Arts (see p. 61)		
Child Psychology	Psych. 435	6
Adolescent Psychology	Psych. 440	
General Sociology	Soc. 204, 205	6
Fundamentals of Speech Comm.	Comm. 101-102	
Oral Interpretation	Comm. 211	
Play Direction	Comm. 365	

The above emphasis does not prepare the student for a teaching position. Should the student desire teaching certification, additional courses must be taken in counsel with the department chairman and as outlined in the publication, *Guidelines for Certification*.

A minor in biology, psychology or sociology is recommended.

### PHYSICAL EDUCATION—MINOR REQUIREMENTS:

Introduction to PE	181	2-3
or		
Foundations of PE	422	
Professional Activities		12
Officiating of Sports Activities	284, 285, 286	6
Administration of PE	451	3
Electives		7
(to be chosen in counsel with the department chairman; a minimum of 9 upper-division credits is required.)		<hr/> 30-31

## HEALTH, PHYSICAL EDUCATION AND RECREATION

### PHYSICAL EDUCATION

- 181 INTRODUCTION TO PHYSICAL EDUCATION** 2  
A theory course outlined to provide a basic orientation to the field of physical education. A brief survey of the philosophy and objectives as well as the professional opportunities and responsibilities of the physical educator.
- 187, 188, 189 PROFESSIONAL ACTIVITIES I** 2, 2, 2  
Methods, techniques and the skills involved in tumbling and gymnastics. Courses 187, 188 must be taken in sequence. The third quarter is Track and Field activities.
- 230 WATER SAFETY INSTRUCTOR'S COURSE** 2  
This course prepares students to meet the requirements of the National Red Cross Certificate to instruct swimming and supervise swimming areas. A valuable asset for summer employment. Prerequisite: Life-saving.
- 232 SKI INSTRUCTOR'S COURSE** 2  
A course to provide the advanced skiing student with the methods and skills involved in skiing instruction. The student will be required to assist in conducting the various ski classes and will also be eligible for employment as a ski instructor in succeeding years.
- 273 CORRECTIVE AND ADAPTIVE PHYSICAL EDUCATION** 3  
A study of common abnormalities found in students which may be corrected or helped by proper exercise. Extent and limitations of the teacher's responsibility in this phase of education.
- 284, 285, 286 OFFICIATING OF SPORTS ACTIVITIES** 2, 2, 2  
The basic science of officiating in a variety of activities covered in the service areas. Students will be required to act as officials in the intramural activities sponsored by the department.
- 287, 288, 289 PROFESSIONAL ACTIVITIES II** 2, 2, 2  
Methods, techniques and the advanced skills involved in various activities of the physical education program. (Autumn: men — soccer, football; women — soccer, speedball, field hockey; winter: basketball, recreational and low organizational games; spring: volleyball and softball). Prerequisite: demonstration of competency in activities.
- 295 INTRAMURAL ACTIVITIES** 2  
The mechanics of organizing the intramural activities in the school program.

## HEALTH, PHYSICAL EDUCATION AND RECREATION

- 358 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL** 3  
This course deals with the planning of the curriculum in the elementary school and the organization of a balanced activities program. Participation in the elementary school physical education program is required.
- 361 KINESIOLOGY** 3  
Study of joint and muscular mechanism action of muscles involved in fundamental movements. Effect of gravity and other forces on motion. Prerequisite: Biology 202, 203.
- 363 PHYSIOLOGY OF EXERCISE** 4  
The physiological basis for motor fitness; factors limiting human performance in athletic competition; discussion of pertinent research from the sports medicine literature; laboratory techniques used in analysis of motor fitness. One laboratory per week. Prerequisite: Biology 202, 203.
- 381, 382, 383 PROFESSIONAL ACTIVITIES III** 2, 2, 2  
Methods, techniques and advanced skills involved in various activities of the physical education program. Autumn: aquatics; winter: badminton and archery; spring: tennis and golf. Prerequisite: student must demonstrate competency in activities to be presented; Aquatics, Lifesaving.
- 420 TEACHING TECHNIQUES OF PHYSICAL EDUCATION ACTIVITIES** 2  
Techniques of conducting physical education classes in various activities. Laboratory experience in the intramural program as well as class situations will be required.
- 422 FOUNDATIONS OF PHYSICAL EDUCATION** 3  
History and theory of physical education. A practical study of the reasons physical education should be included in the school program and the unique contribution it makes to education.
- 440 COACHING OF TEAM GAMES** 2  
A course to assist the prospective physical educator in managing team sports in physical education classes and intramural activities. Prerequisite: 287, 288, 289.
- 451 ADMINISTRATION OF PHYSICAL EDUCATION** 3  
The student will become conversant with techniques of scheduling, organizing and planning suitable activities. Study is given to purchasing of supplies and equipment, planning and use of facilities, comparative cost and budgeting for the entire health and physical education program as it relates to either the elementary or secondary school depending on the need of the student.



## HEALTH, PHYSICAL EDUCATION AND RECREATION

### 472 METHODS OF TEACHING PHYSICAL EDUCATION 1, 3

A study of the methods and techniques of teaching physical education in both the elementary and secondary schools, indoors and outdoors, individual as well as group activities are stressed. The students are required to observe and demonstrate in classes pertinent to the level in which they plan to teach.

### 492, 493 SEMINAR 1, 1

A study of the modern trends in physical education. Group discussion and presentation of current material in the field. Prerequisite: senior standing.

## SERVICE COURSES IN PHYSICAL EDUCATION

A wide selection of activities is available for the student. Those unable to pass a basic swimming test will be encouraged to enroll in a swimming class in order to acquire this important skill.

### 201, 202, 203 INDIVIDUAL ACTIVITIES 1, 1, 1

Badminton, golf, horsemanship, tennis, skiing and a variety of other individual or dual activities.

### 204, 205, 206 TEAM SPORTS 1, 1, 1

Activities such as softball, basketball, flag football, soccer and volleyball.

### 207, 208, 209 WATER SPORTS 1, 1, 1

Activities from beginning swimming to advanced swimming, lifesaving, springboard diving and SCUBA diving. Students who register for SCUBA diving or who wish to participate in SCUBA diving must obtain a health certificate from the health center before participating in any of the activities.

### 211, 212, 213 TUMBLING, GYMNASTICS 1, 1, 1

Courses in tumbling, gymnastics, weight-lifting and body mechanics are available in this group.

## RECREATION AND OUTDOOR EDUCATION

### 234-235 MOUNTAINEERING AND WILDERNESS TRAVEL 1-1

A course for the individual interested in making the outdoor world his primary hobby. Basics in mountain climbing, survival and essentials of wilderness travel are covered. One class lecture per week and field trips will be arranged.

## HEALTH, PHYSICAL EDUCATION AND RECREATION

- 240 CERAMICS** 2  
This course is offered to help plan the leisure time activity of young people as well as to prepare for a hobby.
- 250 LAPIDARY** 2  
This course is offered to help plan the leisure time activity of young people as well as to prepare for a hobby.
- 272 PRACTICUM IN OUTDOOR EDUCATION** 4  
A four-week program providing controlled application of outdoor skills in a natural wilderness setting under qualified leadership. This program, known as Mission Possible (MiPo), places emphasis on self-discovery and reassessment of the individual's approach to life with assistance from persons trained in counseling.
- 342 RECREATIONAL PROGRAMS** 3  
A course intended to fill the need for leadership in planning a balanced recreational program in the church or community for all age groups.
- 343 CAMPING, SURVIVAL AND WILDERNESS LIVING** 3  
A course to help in the preparation of competent summer camp leaders. Two lectures per week and a four-day camping experience.
- 350 AQUATICS** 3  
A course to give an overview of the entire aquatics program. It will include such items as boating, sailing, canoeing, surfing, water-skiing, etc. Legislation concerning the use of our water resources for recreational purposes will also be included. One lecture per week—Sunday laboratory.
- 403 LEADERSHIP IN CAMPING AND OUTDOOR EDUCATION** 2  
A class for those interested in advanced work in this field. These students will act as laboratory instructors for those in course 343. Prerequisite: 343 and permission of instructor.
- 410 ADVANCED CERAMICS** 2  
An advanced course in ceramics with special emphasis on teaching methods, preparation of teaching aids, sources of material, cost, etc.
- 430 ADVANCED LAPIDARY** 2  
An advanced course in lapidary with special emphasis on teaching methods, preparation of teaching aids, sources of material, cost, etc.

HEALTH, PHYSICAL EDUCATION AND RECREATION

HEALTH

The health program attempts to provide the student with the training necessary to work in overseas missions, intercity work, public health work, and with the background necessary for further study in a Master of Public Health program. The program is designed to give the students several options. The health major fulfills the basic study requirements in physical therapy, radiological technology, respiratory therapy, or occupational therapy.

The department seeks to give the student a good scientific and practical background into the understandings of the health and functions of the human body. The student is taught how to put this knowledge into practice for himself and how to share this knowledge with others.

BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

Major: Health

Introduction to Health	101	3
General Biology	Bio. 101, 102, 103	12
Contemporary Health Issues	110	2
Health Behavior Change	281	2
First Aid	283	2
Community Health Education	324	3
Basic Therapy	329	2
School Health Programs	351	3
Methods of School Health Instruction	431	3
Survey of Renal and Metabolic Health Physiology	461	2
Cardiovascular Diseases	462	2
Field Training	437	3
Electives (3 must be upper-division) chosen from:		15
		54

Drugs and Society	220
School Safety	282
Health Education in Church Programs	352
Kinesiology	361
Physiology of Exercise	363
General Sociology	Soc. 204, 205
Marriage and Family Life	Soc. 230
Social Work Practice With Individuals	Soc. 361
Elementary Statistics	Psych. 350
Motivation	Psych. 442
Psychology of Personality	Psych. 446
Mental Health	Psych. 449

Required Cognates:

Anatomy	Bio. 202	5
Physiology	Bio. 203	5
Introductory Chemistry I	Chem. 101-102-103	} 9-12
or		
General Chemistry	Chem. 161-162-163	

## HEALTH, PHYSICAL EDUCATION AND RECREATION

Child Psychology	Psych. 435	}	3
or			
Adolescent Psychology	Psych. 440		
Human Nutrition	H. Ec. 220		3
Fundamentals of Speech Communication	Comm. 101-102		4
Microbiology	Bio. 222		5
			<hr/>
			34-37

### HEALTH—MINOR REQUIREMENTS:

Contemporary Health Issues	110	2
Community Health Education	324	3
Electives		<hr/>
(as approved by health adviser; 6 credits must be upper-division)		27

- 101 INTRODUCTION TO HEALTH** 3  
A basic course to help the student develop a total philosophy of health. The spiritual, mental and physical aspects of health are studied and integrated.
- 110 CONTEMPORARY HEALTH ISSUES** 2  
A detailed study of current health issues and problems emphasizing modern preventive measures.
- 220 DRUGS AND SOCIETY** 2  
A study of the effects of drugs, including narcotics and alcohol, their relationship to social problems.
- 281 HEALTH BEHAVIOR CHANGE** 2  
A study of behavioral change in health practices. Utilization of group processes and basic behavioral science concepts, relating them to learning and motivation in the health field.
- 282 SCHOOL SAFETY** 2  
Prevention of accidents found in various school situations with special emphasis on care of injuries associated with playground and gymnasium activities.
- 283 FIRST AID** 2  
Standard and advanced American Red Cross first aid including the civil defense medical self-help course. This course prepares the student to deal effectively with minor emergencies and injuries.
- 324 COMMUNITY HEALTH EDUCATION** 3  
The role of the health educator in the community, including his relationship to both public and private health agencies; emphasis given to

## HEALTH, PHYSICAL EDUCATION AND RECREATION

the prevention of disease and the promotion of health through organized community effort.

### 329 BASIC THERAPY 2

Simple, nondrug, therapeutic practices are taught. Also considered are legal implications and quackery.

### 351 SCHOOL HEALTH PROGRAMS 3

The purpose of this course is to develop a sound philosophy of the entire school health program and a concern for its attainment. Recognition of health problems and how to deal with them is emphasized.

### 352 HEALTH EDUCATION IN CHURCH PROGRAMS 3

The planning, implementation and evaluation of church-sponsored health programs.

### 431 METHODS OF SCHOOL HEALTH INSTRUCTION 3

Concepts of unit planning, methods, techniques, sources and evaluation of instructional materials are studied. Students are required to read widely and collect material pertinent to the course.

### 437 FIELD TRAINING 3

Supervised field experience in community and church health education. Prerequisite: 324 or 352.

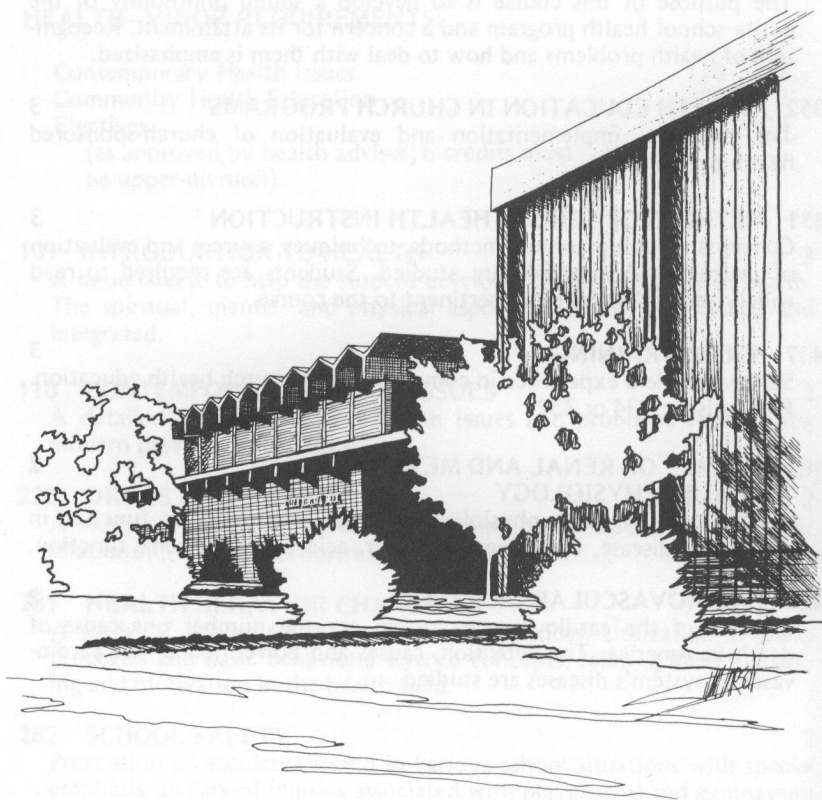
### 461 SURVEY OF RENAL AND METABOLIC HEALTH PHYSIOLOGY 2

A course dealing with physiology of renal and metabolic function in health and disease, including salt, water, acid base and renal function.

### 462 CARDIOVASCULAR DISEASES 2

Diseases of the cardiovascular system are the number one cause of death in America. The detection, causes and prevention of the cardiovascular system's diseases are studied.





TAUSICK MEMORIAL POOL

HISTORY AND POLITICAL SCIENCE

R. Henderson, Chairman; R. Blaich, L. Glaim, C. Schwantes.

The department offers a major in history as well as minors in history and political science.

HISTORY

The purpose of the work in history is fourfold: to promote a better understanding of the past and an appreciation of the present; to broaden the cultural outlook and formulate a constructive philosophy of history and of life; to train in skills of research and evaluation; to prepare students for teaching, graduate and professional schools, and government service.

BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

Major: History

History of Western Civilization	101, 102, 103	9
History of the United States	201, 202, 203	9
Seminar	491-492	4
Electives		32
9 credits MUST be from the European area; and 9 credits from the American area; 9 credits MAY be selected from:		54
American Government	Pol. Sc. 203	
Comparative Governments	Pol. Sc. 303, 304	
State and Local Governments	Pol. Sc. 310	
Constitutional History	Pol. Sc. 401	
International Relations	Pol. Sc. 402	
American Diplomatic History	Pol. Sc. 414, 415, 416	
Western Political Thought	Pol. Sc. 424, 425	
American Political Thought	Pol. Sc. 426	
General Sociology	Soc. 204, 205	
Current Social Problems	Soc. 245	
Racial and Ethnic Relations	Soc. 254	
Cultural Anthropology	Soc. 263	
Population	Soc. 337	
Sociology of Communities	Soc. 351	
Criminology	Soc. 358	
Juvenile Delinquency	Soc. 359	
Principles of Economics	Bus. 221, 222, 223	
Economic History of the United States	Bus. 323	
Comparative Economic Systems	Bus. 422	
Economics of Foreign Trade	Bus. 423	
Development of Economic Thought	Bus. 427	

HISTORY—MINOR REQUIREMENTS:

History of Western Civilization.	101, 102, 103	9
History of the United States	201, 202, 203	9
Electives (9 credits must be upper-division)		12
		30

## HISTORY AND POLITICAL SCIENCE

### HISTORY

- 101, 102, 103 HISTORY OF WESTERN CIVILIZATION** 3, 3, 3  
A survey of European history from antiquity emphasizing the period since the Renaissance.

- 201, 202, 203 HISTORY OF THE UNITED STATES** 3, 3, 3  
A survey of the colonial period, followed by a more detailed study of the national period.

### EUROPEAN HISTORY

- 377, 378, 379 HISTORY OF ENGLAND** 2, 2, 2  
The development and expansion of the English nation from the earliest times to the present.

- 435, 436 HISTORY OF MODERN GERMANY** 3, 3  
A survey of German history since 1870. Diplomatic, political, socio-economic and ideological developments in Imperial, Weimar, Nazi and post-World War II Germany, with special emphasis on the German Question resulting from World War II. Taught alternate years. Prerequisite: 101, 102, 103.

- 461 ANCIENT MEDITERRANEAN CIVILIZATIONS** 3  
A study of the major civilizations of antiquity to the decay of the Roman empire. Taught alternate years.

- 462 EARLY MIDDLE AGES** 3  
A survey of the religious, political, socioeconomic and intellectual developments in the European-Mediterranean world from the disintegration of the Roman empire to the 11th century. Taught alternate years.

- 463 THE LATE MIDDLE AGES** 3  
The general revival of the 11th century to the beginnings of the Italian Renaissance. Taught alternate years.

- 464 THE RENAISSANCE** 3  
The political, economic, intellectual and artistic transformation of Europe between the 14th and 16th centuries. Taught alternate years.

- 465 THE REFORMATION** 3  
Europe, 1500-1648. The era of the Protestant Reformation, Catholic reaction and reform, and religious wars.

- 467 THE CRUCIBLE OF REVOLUTION, 1789-1815** 3  
An examination of the French revolution and the Napoleonic imperium. Taught alternate years.

## HISTORY AND POLITICAL SCIENCE

- 468 THE MODERN TRANSITION, 1815-1914** 3  
Europe against the backdrop of nineteenth century industrialization. Taught alternate years.

- 469 INTERWAR EUROPE, 1914-1945** 3  
Europe between the two world wars. Taught alternate years.

- 470 CONTEMPORARY EUROPE, 1945 TO THE PRESENT** 3  
Post-World War II political, economic and cultural developments.

- 474, 475, 476 HISTORY OF RUSSIA** 3, 3, 3  
Beginning with Kievan Russia, the course traces the emergence and expansion of the Muscovite state, Imperial Russia, social, intellectual and political developments leading up to the Russian Revolution, and the history of the Soviet Union to the present. Taught alternate years.

## AMERICAN HISTORY

- 325 HISTORY OF CANADA** 3  
A survey of Canadian development from the beginnings of the French regime to the present. Taught alternate years.

- 387, 388, 389 HISTORY OF LATIN AMERICA** 2, 2, 2  
A survey of the colonial period, followed by a more detailed study of the development of the individual Latin American nations and their world relationship. Taught alternate years.

- 424 THE AMERICAN FRONTIER** 4  
The exploration, settlement and development of the American west with consideration given to economic, social, cultural and political factors. Taught alternate years.

- 445 THE AMERICAN CIVIL WAR AND RECONSTRUCTION, 1850-1877** 3  
Development of the sectional crisis, war and its impact on American institutions, reconstruction and reunion. Taught alternate years. Prerequisite: 201, 202, 203.

- 446 HISTORY OF THE PACIFIC NORTHWEST** 3  
A course in regional history from the age of discovery to contemporary times including the fur traders, the missionaries, international rivalries, the territorial period and developments since statehood. A study of the State Manual of Washington is included.

- 448 THE MAKING OF MODERN AMERICA (1877-1919)** 3  
A study of maturing America from 1877 to World War I. Special attention is given to the significance of industrialism, urbanization, the Progressive Movement. Taught alternate years. Prerequisite: 201, 202, 203.

**HISTORY AND POLITICAL SCIENCE**

**449 RECENT AMERICA, 1919 TO THE PRESENT 3**

A contemporary study with emphasis on the problems of prosperity, depression and the role of the United States in world affairs. Prerequisite: 201, 202, 203.

**457, 458, 459 SOCIAL AND INTELLECTUAL HISTORY OF THE UNITED STATES 3, 3, 3**

An analysis of the major social and intellectual trends in United States history, including Puritanism, the Enlightenment, Transcendentalism, Social Darwinism and Pragmatism. Taught alternate years. Prerequisite: 201, 202, 203.

**GENERAL**

**358 WORLD GEOGRAPHY 3**

A survey course of the major groups of natural regions. Essentially human geography, but with adequate attention to economic and physical aspects. Will not apply to a history minor.

**471 METHODS OF TEACHING SOCIAL SCIENCE 3**

Methods and techniques of teaching social studies on the secondary school level. Observation, demonstration and class presentation are required of the students as a part of this course. Will not apply on a major or minor in history, political science or sociology.

**491-492 SEMINAR 2-2**

An orientation and research course in problems connected with historical materials and methods. Open to majors and minors.

**POLITICAL SCIENCE**

The objective of the courses in political science is to present techniques and materials with which to analyze governmental systems, diplomacy and international relations, and theories of political power. Students are prepared for careers in teaching, law, government and church service.

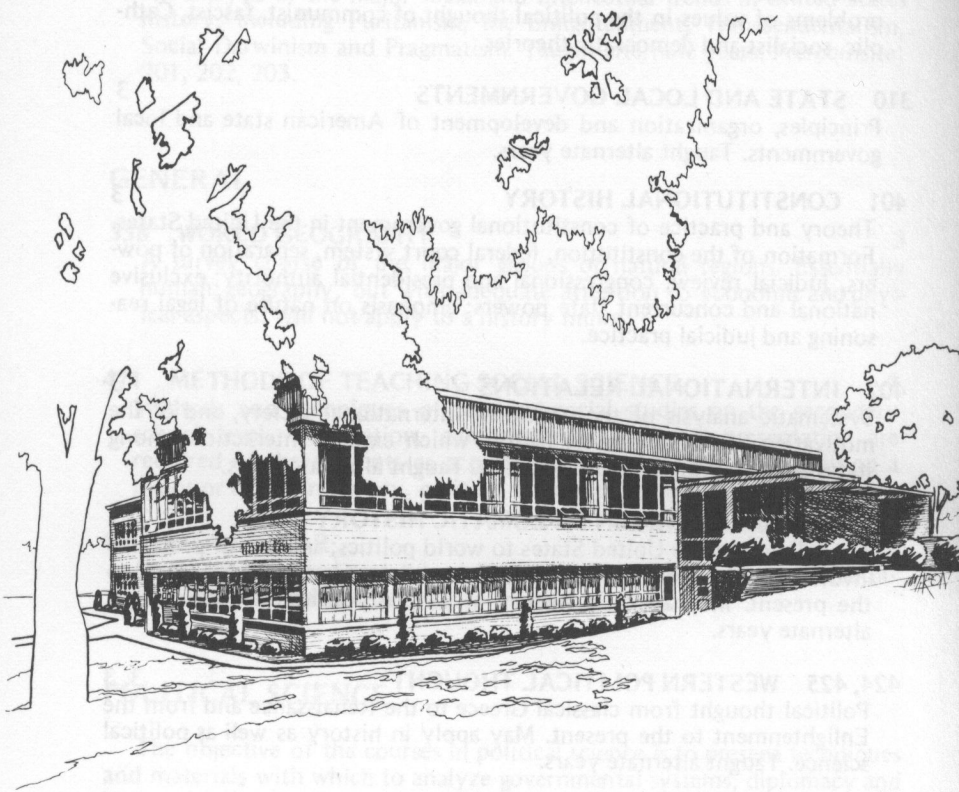
**POLITICAL SCIENCE—MINOR REQUIREMENTS:**

American Government	203	3
Comparative Governments	303, 304	6
Constitutional History	401	3
Electives		15
(3 credits must be in upper-division history; department chairman's approval required)		27



## HISTORY AND POLITICAL SCIENCE

- 203 AMERICAN GOVERNMENT** 3  
Principles, organization and development of the American national government.
- 303, 304 COMPARATIVE GOVERNMENTS** 3, 3  
A comparative study of political institutions, ideologies and processes in modern and developing areas. Will include intensive analytical and critical study of theories of authority, with particular emphasis on problems of values in the political thought of communist, fascist, Catholic, socialist and democratic theories.
- 310 STATE AND LOCAL GOVERNMENTS** 3  
Principles, organization and development of American state and local governments. Taught alternate years.
- 401 CONSTITUTIONAL HISTORY** 3  
Theory and practice of constitutional government in the United States. Formation of the constitution, federal court system, separation of powers, judicial review, congressional and presidential authority; exclusive national and concurrent state powers; emphasis on nature of legal reasoning and judicial practice.
- 402 INTERNATIONAL RELATIONS** 3  
Systematic analysis of the nature of international society, and of the motivating and conditioning factors which explain interaction among states and other international entities. Taught alternate years.
- 414, 415, 416 AMERICAN DIPLOMATIC HISTORY** 2, 2, 2  
The relation of the United States to world politics; analysis of problems involved in the formulation of foreign policies from colonial times to the present. May apply in history as well as political science. Taught alternate years.
- 424, 425 WESTERN POLITICAL THOUGHT** 3, 3  
Political thought from classical Greece to the Renaissance and from the Enlightenment to the present. May apply in history as well as political science. Taught alternate years.
- 426 AMERICAN POLITICAL THOUGHT** 3  
The genesis and development of political thought in the United States. May apply in history as well as political science. Taught alternate years.



KELLOGG HALL — Food Service, Student Association Center

## HOME ECONOMICS

Mary Schwantes, Chairman; June Bishop, Jeanne Lewis, Evelynne Wright

The major in home economics is designed for the general college student and for those preparing to teach. Students who wish to teach should also plan to meet certification requirements.

The major in foods and nutrition is designed to prepare the student for health-science job opportunities, for graduate and professional schools.

### BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

#### Major: Home Economics

Introduction to Home Economics	100	2
Principles of Food Science	101, 102	6
Meal Management and Table Service	103	3
Human Nutrition	220	3
Art in Everyday Living	222, 223	6
Clothing Selection and Construction	242, 243	6
Consumer Education	301	4
Household Management	346	3
Child Development	382	3
Methods of Teaching Home Economics	471	3
Seminar	493	1
Electives, upper division		<u>10</u>
		50

#### Required Cognates:

Introductory Chemistry I	Chem. 101-102-103	9
The Social Psychology of Family Life	Soc. 311	3

### HOME ECONOMICS—MINOR REQUIREMENTS:

(Choose one of the following areas of concentration)

#### Concentration: General

Introduction to Home Economics	100	2
Principles of Food Science	101, 102	6
Meal Management and Table Service	103	3
Human Nutrition	220	3
Art in Everyday Living	222	3
Clothing Selection and Construction	242	3
Consumer Education	301	4
*Electives		<u>6</u>
		30

\*To be chosen in counsel with department chairman.

## HOME ECONOMICS

### Concentration: Interior Design

Art in Everyday Living	222, 223	6
Clothing Selection and Construction	242	3
Textiles	269	2
Consumer Education	301	4
Interior Design	424, 425	6
*Electives		9
		<hr/> 30

### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

#### Major: Foods and Nutrition

Principles of Food Science	101, 102	6
Meal Management and Table Service	103	3
Household Equipment	201	3
Human Nutrition	220	3
Institution Food Preparation	286	3
Consumer Education	301	4
Child Development	382	3
Foods in Cultures of the World	412	3
Experimental Cookery	422	3
Community Nutrition	437-438	3
Advanced Nutrition	441-442	4
Diet in Disease	443	3
Institution Food Purchasing	447	3
Institution Management	448	3
Methods of Teaching Home Economics	471	3
Seminar	493	1
Electives		9
		<hr/> 60

#### Required Cognates:

Physiology	Bio. 203	5
Microbiology	Bio. 222	5
Principles of Management	Bus. 163	4
General Chemistry	Chem. 161-162-163	12
Organic Chemistry	Chem. 321-322-323	12
Biochemistry	Chem. 406, 407	7

### FOODS AND NUTRITION—MINOR REQUIREMENTS:

Principles of Food Science	101, 102	6
Meal Management and Table Service	103	3
Human Nutrition	220	3
Institution Food Preparation	286	3
Foods in Cultures of the World	412	3
Community Nutrition	437-438	3
*Electives		9
		<hr/> 30

\*To be chosen in counsel with department chairman.

**DIETETICS**

Students pursuing careers in therapeutic or administrative dietetics must meet requirements as specified by the American Dietetics Association (ADA). The first two years or 96 credits are to be completed on the Walla Walla College campus. The remaining two years are to be completed in an undergraduate coordinated program approved by ADA.

**ASSOCIATE OF SCIENCE DEGREE—DIETETIC TECHNICIAN**

The Associate of Science Degree with emphasis in nutrition care is designed to be completed in two years. The program aims to prepare the student to assume the responsibilities of a dietetic technician, working under the direction of a registered dietitian. Successful completion of this Associate of Science degree program qualifies one for work in hospitals, community services and clinical or therapeutic dietetic programs.

If after satisfactory completion of the Associate of Science degree program, the student wishes to continue working toward a Bachelor of Science degree with a major in dietetics on the undergraduate coordinated program, or a major in foods and nutrition, credits earned in the two-year program may be applied toward the four-year program.

**ASSOCIATE OF SCIENCE DEGREE—REQUIREMENTS:****Concentration: Nutrition Care****General Requirements:**

College Writing	Eng. 101-102-103	9
Physical Education (service courses)		2
Religion		8

**Area Requirements:**

Principles of Food Science	101, 102	6
Meal Management and Table Service	103	3
Orientation to Nutrition Care I	151	2
Orientation to Nutrition Care II	152	2
Nutrition Care Experience I	153	2
Human Nutrition	220	3
Nutrition Care Experience II	251	2
Nutrition Care Experience III	252	2
Nutrition Care Experience IV	253	2
Community Nutrition	437-438	3
Advanced Nutrition	441-442	4
Diet in Disease	443	3
Seminar	493	1

**Required Cognates:**

Physiology	Bio. 203	5
Microbiology	Bio. 222	5
Principles of Management	Bus. 163	4



## HOME ECONOMICS

Introductory Chemistry I	Chem. 101-102-103	9
General Psychology	Psych. 121, 122	4
General Sociology	Soc. 204	3
Current Social Problems	Soc. 245	3
Fine Arts/Literature/Speech		6
Select one of the following:		
Contemporary Health Issues	H&PE 110	} 2-3
Health Behavior Change	H&PE 281	
Community Health Education	H&PE 324	
Electives		0-1
		<hr/> 96

## EARLY CHILDHOOD EDUCATION

The Associate of Science degree (offered cooperatively between the departments of education and psychology and home economics) with a concentration in early childhood education requires the completion of 96 credits. The degree is designed to be completed in two years.

The purpose of the degree is to prepare the student for employment in nursery schools, day care centers, Head Start programs, parent cooperatives and other early education facilities.

### ASSOCIATE OF SCIENCE DEGREE—REQUIREMENTS:

#### Concentration: Early Childhood Education

##### General Requirements:

College Writing	Eng. 101-102-103	9
Religion		8
Philosophy of Christian Education	Ed. 110	2
Fundamentals of Speech Comm.	Comm. 101-102	4
Physical Education (service courses)		2
Electives (from published bachelor's degree general requirements)		5
		<hr/> 30

##### Area Requirements:

General Psychology	Psych. 121, 122	4
Human Nutrition	HEc. 220	3
Laboratory Experiences in Preschool Education	Ed. 251	12
Early Childhood Education	Ed. 295	3
Parent Education for Preschool Teachers	Ed. 351	3
Child Development	HEc. 382	3
Psychology of Exceptional Children	Psych. 431	3
Child Psychology	Psych. 435	3
Childhood Learning Disorders	Psych. 437	3
Electives from Home Economics and/or Education and Psychology		3
Electives (as approved by adviser)		10
		<hr/> 50

##### Required Cognates:

Contemporary Health Issues	H&PE 110	2
General Sociology	Soc. 204, 205	6

## HOME ECONOMICS

Survey of Speech Pathology and Audiology	Comm. 210	} 3
or		
Oral Language Development and Disorders	Comm. 299	} 2
Social Psychology of Family Life	Soc. 311	
Library Materials for Children	Lib. 365	} 3
or		
Literature for Children and Adolescents	Eng. 412	

### 100 INTRODUCTION TO HOME ECONOMICS 2

Orientation in the areas of home economics and a study of the field in terms of history, philosophy and professional opportunities.

### 101, 102 PRINCIPLES OF FOOD SCIENCE 3, 3

Basic principles of food preparation, purchasing and selection, with emphasis on nutritional and economic values. Prerequisite: 101 or equivalent for 102.

### 103 MEAL MANAGEMENT AND TABLE SERVICE 3

Managerial aspects of planning, preparing and serving food for family meals and special occasions. Prerequisite: 101, 102 or equivalent.

### 151 ORIENTATION TO NUTRITION CARE I 2

Practical experience and tours of health care institutions as an introduction to the kinds of knowledge and skills necessary for dietitians and for dietetic technicians in the health care environment. Permission of instructor required.

### 152 ORIENTATION TO NUTRITION CARE II 2

A continuation of the practical experience acquainting the student with supply and/or service operations. Evaluation of a variety of types of community nutrition services; patient interviews. Prerequisite: 151.

### 153 NUTRITION CARE EXPERIENCE I 2

Practical experience in preparation and serving food in health care institutions, in educating and helping patients plan and/or select modified diets, in the development and use of audio-visual material in nutrition education situations. Prerequisites: 151, 152.

### 201 HOUSEHOLD EQUIPMENT 3

Selection, operation and care of household appliances, electricity in the home and kitchen planning.

### 210 SOCIAL AND PROFESSIONAL ETHICS 2

A course designed to develop an understanding of the current social code for both men and women and to provide experience in its application to college life, home and community living. Acceptable modes of interacting in social and professional situations are presented.

**220 HUMAN NUTRITION****3**

A study of the principles of nutrition and the diet essential for promoting a high degree of physical fitness. A valuable course for the general student, especially those preparing for the ministry, teaching or physical education.

**222, 223 ART IN EVERYDAY LIVING****3, 3**

Introduction in the use of art elements giving consideration to line, form and color as applied in the fundamental principles of design and the various aspects of the home, clothing and everyday living. Problems in selecting and designing. Must be taken in sequence.

**230 Soc. MARRIAGE AND FAMILY LIFE****2**

See the Department of Sociology and Social Work.

**241 CLOTHING FUNDAMENTALS****3**

A course presenting the fundamental processes of hand and machine sewing; construction and selection of simple garments.

**242, 243 CLOTHING SELECTION AND CONSTRUCTION****3, 3**

Aims to develop good taste in dress and to give an appreciation in selection of clothing from standpoint of beauty, health and economy; pattern alterations, fitting problems and use of commercial patterns; construction of garments using cotton, wool, rayon and other materials; consideration of fabrics to determine fundamental differences and to develop judgment in buying clothing; Prerequisite: 241 or equivalent.

**251 NUTRITION CARE EXPERIENCE II****2**

Practical experience in providing high quality nutrition care to patients in harmony with individual requests and diet prescriptions. Opportunity to assist with various community nutrition programs. Prerequisite: 153.

**252 NUTRITION CARE EXPERIENCE III****2**

Further experience in community nutrition education situations, such as: nutrition and weight control clinics, cooking classes, day-care centers. Prerequisite: 251.

**253 NUTRITION CARE EXPERIENCE IV****2**

Field and community experience in nutrition instruction of individuals and/or groups in institutional and home situations. Prerequisite: 252.

**269 TEXTILES****2**

A study of fabrics to determine fundamental differences and to develop judgment in buying clothing and home-furnishing materials.

- 286 INSTITUTION FOOD PREPARATION** 3  
Instruction and laboratory experience in large quantity food preparation and food cost control. Check with instructor before registering for this class.
- 301 CONSUMER EDUCATION** 4  
A study of the consumer in the current world, his responsibilities and protection. Field trips arranged.
- 302 WEAVING AND HOME FURNISHINGS** 3  
The study of the development of weaving, color harmonies and design as applied to fabrics. Construction of hand-woven materials; tailoring draperies, bedspreads and slip covers. Open to upper-division students only.
- 346 HOUSEHOLD MANAGEMENT** 3  
Fundamental concepts in the management of family resources, time, energy, income and the use of credit. A theory course supplemented with a practical problem in the community.
- 382 CHILD DEVELOPMENT** 3  
A study of the care and development of young children, with special reference to home education and nutrition.
- 403 TEXTILE DESIGN** 3  
Study of line, texture and color as applied to weaving. Emphasis on originality in construction and color combinations of hand-woven fabrics. Prerequisite: 302 or equivalent.
- 412 FOODS IN CULTURES OF THE WORLD** 3  
Preparation of regional and national foods emphasizing cultural ethnic and environmental factors. Application of scientific principles in specialized food preparation. Prerequisite: Adequate background in food preparation.
- 422 EXPERIMENTAL COOKERY** 3  
Development of experimental methods, their application of investigations in cookery and the skills involved; acquaintance with the literature in this field; preparation of the student for independent investigations in foods. Prerequisite: 101, 102, 103; and Chemistry 101-102-103 or 161-162-163 or equivalent.
- 424, 425 INTERIOR DESIGN** 3, 3  
A study of period furniture and the decorative arts of the past as a background for an understanding of what is good, true and beautiful in home decoration; instruction in and application of the principles governing the selection of furnishings for the home and their arrangement with appropriate backgrounds. Must be taken in sequence unless by permission of instructor.

## HOME ECONOMICS

- 437-438 COMMUNITY NUTRITION** 2-1  
Survey of current community nutrition problems and of programs designed to alleviate the problems; food habits of population groups which have a high incidence of malnutrition; implications of fad diets. Field experience winter quarter. Prerequisite: 220 or permission of instructor.
- 441-442 ADVANCED NUTRITION** 2-2  
A scientific study of nutrition involving digestion and metabolic processes and products; selection of an optimum diet for health; review of current nutritional literature and preparation of the student for independent investigations in nutrition research. Prerequisites: 101, 102, 103; 220 and Chemistry 101-102-103 or 161-162-163.
- 443 DIET IN DISEASE** 3  
Recent development in the dietary treatment of disease in which nutrition plays a major role. Experience in independent use of journal literature in the field. Prerequisites: 101, 102, 103; 220 or equivalent.
- 447 INSTITUTION FOOD PURCHASING** 3  
Marketing operations, buying procedures, food selection and care. Inspection of merchandise at markets and wholesalers. Check with instructor before registering for this course.
- 448 INSTITUTION MANAGEMENT** 3  
Principles of organization, qualifications for institution managers, planning of work and budget analysis. This course offers practical work in the school cafeteria for those who are interested in being managers in institution food services. Field experience is included in this course. Prerequisite: 286 or permission of instructor.
- 461-462 TAILORING** 2-2  
Principles involved in making suits and coats for women. Open only to those who show skill in construction of garments. Students should provide themselves with material for making coats the autumn quarter. Prerequisites: 241; 242, 243 or equivalent.
- 471 METHODS OF TEACHING HOME ECONOMICS** 3  
The principles and practice of teaching home economics on the elementary and secondary levels, as well as adult education classes. Special attention will be given to the newer methods of presentation in classroom, laboratory and community demonstrations. Observation, demonstration and class presentation are required of the students as a part of this course.

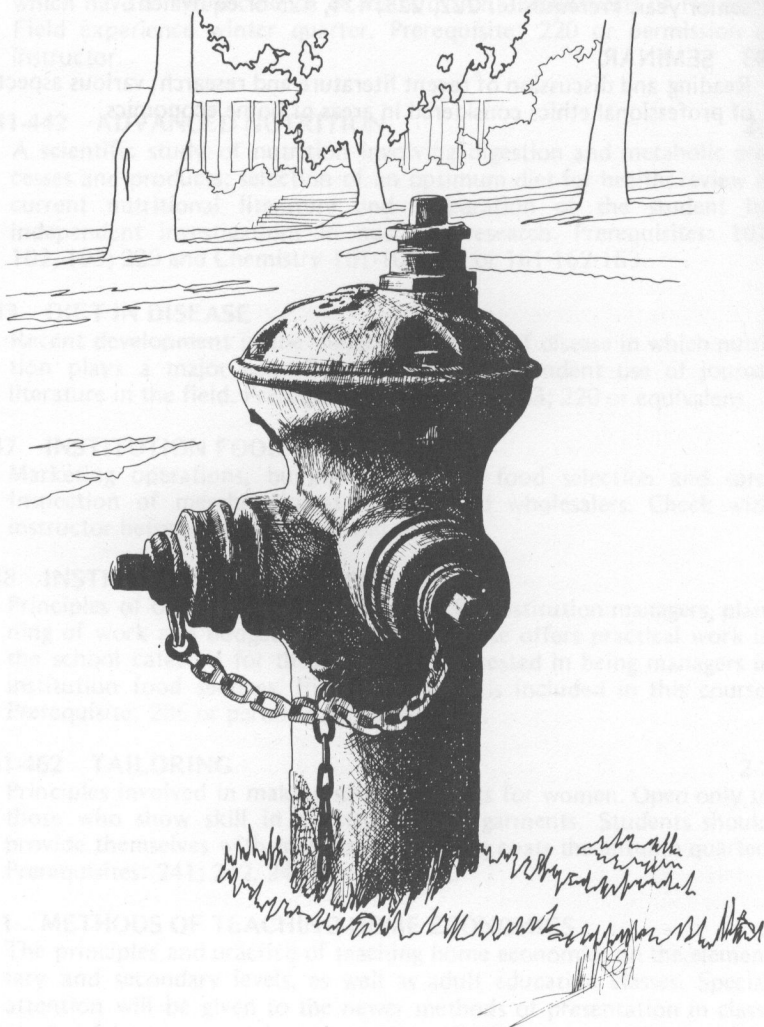


**486 ADVANCED INTERIOR DECORATION 3**

Advanced study in interior decoration with advice, estimates and actual work on decorating problems. Should be taken the last quarter of the senior year. Prerequisite: 222, 223; 424, 425 or equivalent.

**493 SEMINAR 1**

Reading and discussion of recent literature and research; various aspects of professional ethics considered in areas of home economics.



THE COREY

INDUSTRIAL EDUCATION AND TECHNOLOGY

E. Liske, Chairman; C. Blake, L. Canaday, D. Cowin, D. Dawes, G. Fisher, K. Gruesbeck, A. Perry, C. Trautwein.

The purpose of this department is twofold: to provide instruction and experiences for a college major and minor, with or without concentrations in fields of technology, and to prepare teachers of industrial arts. Specific courses are offered in the following areas:

Automotive	Graphics
Aviation	Industrial Crafts
Biomedical Electronics	Maintenance
Depictics	Metals
Electronics	Woods

Departmental permission must be received to enter any class having a laboratory. Each class meets at least once before its associated laboratory.

An Associate of Science degree may be earned with a concentration as shown in B 1, 3, 4 or 5. General requirements are listed on page 166. No minor is required.

A certificate may be earned with a concentration as shown in B 1, 3, 4 or 5. General requirements are listed on page 167. No minor is required.

BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

The major for a Bachelor of Science degree may be earned as shown in A, B 1, 2, 3, 4 or 5, or C. A minor should be selected from those recommended. General requirements are found on pages 61-62. Concentration A is arranged to afford certification if provisional secondary certification requirements are met as outlined in the publication, *Guidelines for Certification*.

A. INDUSTRIAL ARTS TEACHER EDUCATION:

The course requirements listed below offer an opportunity for individual choices. Consult the department chairman for assistance in planning the program.

Technical Drawing	104, 105	6
Architectural Drawing	203	3
or		
Electrical and Electronic Drawing	209	1
Analysis of Industry	107	
Lettering	123	2
Wood Products and Processes	221-222-223	6

## INDUSTRIAL EDUCATION AND TECHNOLOGY

Machine Tool Practice I	244, 245-246	}	6
or			
Welding	204, 205, 206	}	6
Survey of Electronics	231-232		
or		}	6
Introduction to Graphic Arts	144, 145-146		
Industrial Crafts, electives	113; 247; 248; 249; 262	}	6
or			
Fundamentals of Automotive Technology	101, 102, 103	}	3
Industrial Arts Design	264		
Course Construction	387		3
Shop Administration and Planning	389		3
History and Philosophy of Industrial Education	447		3
Methods of Teaching Industrial Arts	472		3
Independent Study (in supervision)	477		2
Senior Problem	488		1
Electives, upper division			9
Approval of department chairman required.			63

### B. TECHNICS:

Completion of one of the following programs leads to a Bachelor of Science degree, an Associate of Science degree or a Certificate, except the Biomedical Electronics Technology program which leads only toward the Bachelor of Science degree.

#### 1. Automotive Technology

Fundamentals of Automotive Technology	101, 102, 103	6
Analysis of Industry	107	1
Survey of Electronics	231-232	6
Small Gasoline Engines	236	2
Automatic Transmissions	301	3
Engine Repair and Maintenance	302	3
Engine Diagnosis and Tune-up	303	3
Automotive Service	314, 315	6
Air Conditioning	356	2
Shop Administration and Planning	389	3
Oil Hydraulics	399	3
Senior Problem	488	1
Electives chosen from:		24
Technical Drawing	104	63
Lettering	123	
Welding	204, 205, 206	244, 245-246
Machine Tool Practice I	244, 245-246	
Plastics	248	
Machine and Tool Maintenance	330	
Finishing Materials and Methods	345	
Industrial Materials	366	
Machine Tool Practice II	381, 382, 383	
Independent Study	477	
Industrial Practicum	484, 485, 486	

## INDUSTRIAL EDUCATION AND TECHNOLOGY

For a Bachelor of Science degree, a minor may be chosen from:

Business  
Chemistry  
Economics  
Mathematics  
Physics  
Speech Communication

### 2. Biomedical Electronics Technology

Survey of Industrial Operations	241-242	4
Fundamentals of Electronics	271, 272, 273	12
Applied Electronics	291	4
Hospital Safety	311	2
Medical Electronics	331, 332, 333	9
Air Conditioning	356	2
Industrial Electronics	371, 372	8
TV Systems and Circuit Analysis	411, 412, 413	9
Directed Hospital Experience	432, 433	30
Applied Digital and Analog Systems	469	4
		<hr/> 84

### Required Cognates:

General Biology	Bio. 101, 102, 103	} 10-12
or		
Anatomy, Physiology	Bio. 202, 203	} 8
Fundamentals of Mathematics I, II	Math. 121, 122	
General Physics	Phys. 211, 212, 213	9
General Physics Laboratory	Phys. 214, 215, 216	3
Radioisotope Research Techniques	Phys. 352, 353	4
Computer Science I	Engr. 218	2
Digital Logic Circuits	Engr. 355	3
Animal Physiology	Bio. 393	} 4
or		
Biophysics	Bio. 470	} 6-8
Electives (chosen in counsel with department adviser)		
		<hr/> 51

No minor is required.

### 3. Electronics Technology

Technical Drawing	104	3
Analysis of Industry	107	1
Electrical and Electronic Drawing	209	3
Fundamentals of Electronics	271, 272, 273	12
Applied Electronics	291	4



## INDUSTRIAL EDUCATION AND TECHNOLOGY

<b>Broadcast Engineering Emphasis:</b>		
Radio Communications	352, 353	8
Broadcast Techniques and Announcing	Comm. 231	3
Survey of Broadcasting	Comm. 352	3
or		
<b>Industrial Electronics Emphasis:</b>		
Industrial Electronics	371, 372	8
Digital Logic Circuits	Engr. 355	3
Applied Digital and Analog Systems	469	4
TV Systems and Circuit Analysis	411, 412, 413	9
Industrial Practicum	484, 485, 486	2
Senior Problem	488	1
Electives chosen from:		13-14
(including 2 upper-division if Broadcast Engineering emphasis)		
Fundamentals of Mathematics I, II	Math. 121, 122	63
Analytical Geometry and Calculus I	Math. 181	
General Physics	Phys. 211, 212, 213	
General Physics Laboratory	Phys. 214, 215, 216	
Computer Science I	Engr. 218	
Computer Science II	Engr. 220	
Digital Logic Circuits	Engr. 355	
Broadcast Techniques and Announcing	Comm. 231	
Machine and Tool Maintenance	330	
Radio Communications	352, 353	
Industrial Electronics	371, 372	
Shop Administration and Planning	389	
Oil Hydraulics	399	
Applied Digital and Analog Systems	469	
Independent Study	477	
or		
Industrial Practicum	484, 485, 486	

For a Bachelor of Science degree, a minor may be chosen from:

Business  
Chemistry  
Economics  
Journalism  
Mathematics  
Physics  
Speech Communication

### 4. Graphics Technology

Analysis of Industry	107	1
Introduction to Graphic Arts	144, 145-146	6
Principles of Photography	161	2
Offset Lithography	227-228-229	9
Machine Composition	284-285-286	6
Printing Layout and Design	298	3
Printing Management	305	3

## INDUSTRIAL EDUCATION AND TECHNOLOGY

Advanced Letterpress Printing	321-322	6
Applied Photography	362	3
Shop Administration and Planning	389	3
Advanced Lithography	415-416	6
Senior Problem	488	1
Electives chosen from:		14
(including 2 upper-division)		63
Technical Drawing	104	
Bookbinding	113	
Lettering	123	
Survey of Electronics	231-232	
Survey of Industrial Operations	241-242	
Machine Tool Practice I	244, 245-246	
Plastics	248	
Silk Screen Printing	262	
Industrial Arts Design	264	
Machine and Tool Maintenance	330	
Industrial Materials	366	
Photo Assignments	370	
Independent Study	477	
or		
Industrial Practicum	484, 485, 486	
History of Books and Printing	Lib. Sci. 355	

For a Bachelor of Science degree, a minor may be chosen from:

Business  
Chemistry  
English  
Journalism  
Mathematics

### 5. Maintenance Technology

Technical Drawing	104	3
Analysis of Industry	107	1
Welding	204, 205	4
Electrical and Electronic Drawing	209	3
Applied Maintenance	210	6
Wood Products and Processes	221-222-223	6
Survey of Electronics	231-232	6
Machine Tool Practice I	244, 245-246	6
Machine and Tool Maintenance	330	2
Finishing Materials and Methods	345	3
Shop Administration and Planning	389	3
Oil Hydraulics	399	3
Senior Problem	488	1
Electives chosen from:		16
(including 13 upper-division)		63
Fundamentals of Automotive Technology	101, 102, 103	
Technical Drawing	105	
Lettering	123	
Principles of Photography	161	
Architectural Drawing	203	

## INDUSTRIAL EDUCATION AND TECHNOLOGY

Welding	206
Small Gasoline Engines	236
Art Metals	247
Plastics	248
Industrial Arts Design	264
Applied Electronics	291
Furniture Design and Construction	341-342-343
Applied Photography	362
Air Conditioning	356
Industrial Materials	366
Machine Tool Practice II	381, 382, 383
Industrial Practicum	484, 485, 486
Other upper-division courses with department approval.	

For a Bachelor of Science degree, a minor may be chosen from:

Business  
Chemistry  
Mathematics  
Physics

### C. GENERAL:

This program offers considerable latitude in selection of courses. A minimum of 63 credits is required (24 of which must be upper-division) and must include the following:

Technical Drawing	104, 105	6
Analysis of Industry	107	1
Senior Problem	488	1

## INDUSTRIAL EDUCATION AND TECHNOLOGY— MINOR REQUIREMENTS:

### Minor: General

Students not planning to teach must complete a minimum of 30 credits including six upper-division credits. Depictics 104 and a choice of 105, 203 or 209 is required except when 17 credits of graphic arts are included.

### Minor: Industrial Arts Teacher Education

For students planning to teach Industrial Arts, the requirements are as follows:

Technical Drawing	104, 105	6
Analysis of Industry	107	1
Wood Products and Processes	221-222-223	6
One basic "skills" course with laboratory		6
Course Construction	387	3
Shop Administration and Planning	389	3
Industrial Arts in the Elementary School (for elementary certification)	439	3
or		
Methods of Teaching Industrial Arts (for secondary certification)	472	
Independent Study (in supervision)	477	1
Elective		1
		<hr/> 30

## ASSOCIATE OF SCIENCE DEGREE—REQUIREMENTS:

An area of specialization for the Associate of Science degree may be chosen from the Bachelor of Science degree under Section B: Automotive, Electronics, Graphics or Maintenance. No minor is required.

In addition, the following courses must be completed:

### General Requirements:

College Writing	Eng. 101-102-103	9
Religion		8
Physical Education (service courses)		2
Personal Finance	Bus. 131	2

### Required Cognates:

Fundamentals of Speech Comm.	Comm. 101-102	4
Survey of Mathematics	Math. 111, 112	8

## CERTIFICATE PROGRAM—REQUIREMENTS:

A certificate candidate follows a chosen technical program as shown under Section B: Automotive, Electronics, Graphics or Maintenance, except that an approved elective is taken in place of Senior Problem, general graduation requirements are waived, and the following substituted:

Bible Survey	Theo. 101, 102, 103	} 6
Life and Teachings of Jesus	Theo. 104, 105, 106	
Fundamentals of Christian Belief	Theo. 201, 202, 203	
College Writing	Eng. 101	3
Fundamentals of Speech Communication	Comm. 101	2

A total of 74 credits, including 63 credits from one option and the 11 credits shown above with a cumulative grade-point average of 1.3 is required. Only one certificate program may be followed at a given time. Certificate candidates are admitted with one of the following: high school or academy diploma or equivalent, or 18 years of age. One hundred and fifty clock hours of related work for each quarter of attendance after the first three quarters with a minimum of 450 hours must be completed before the certificate is awarded. A fascimile copy of the certificate will be provided to aid the student in securing employment. Consult the instructor in charge of the chosen area to work out a specific program involving the necessary electives.

Students entering this program without a high school diploma, who wish to transfer to a two- or four-year curriculum, must complete secondary school including entrance requirements for the program selected.

## PROFESSIONAL COURSES

### 107 ANALYSIS OF INDUSTRY 1

A study of organization in industry, union-management relationships,

## INDUSTRIAL EDUCATION AND TECHNOLOGY

vocational and industrial arts teaching patterns, the place of the Seventh-day Adventist in industry. Limited field trips will be included to both industry and schools.

### **264 INDUSTRIAL ARTS DESIGN 3**

Basic principles of design as applied to the various industrial arts, including theory of color and study of major periods and styles of furniture.

### **387 COURSE CONSTRUCTION 3**

The course deals with objectives, analysis and selection of content, course of study outline, lesson plans, standards of attainment. Required prior to directed teaching.

### **389 SHOP ADMINISTRATION AND PLANNING 3**

Shop planning, supplies, personnel organization and guidance, and shop management. Recommended prior to directed teaching.

### **439 INDUSTRIAL ARTS IN THE ELEMENTARY SCHOOL 3**

Study of constructional activities as applied to the elementary grades K-8. Emphasis is on methods of application, materials and processes. Designed for both men and women teachers of the elementary school. Taught alternate years.

### **447 HISTORY AND PHILOSOPHY OF INDUSTRIAL EDUCATION 3**

Origin and growth of industrial education, emphasizing aims and objectives in the field of education.

### **472 METHODS OF TEACHING INDUSTRIAL ARTS 3**

Methods and techniques in selection, presentation and testing content material in industrial subjects. Observation, demonstration and class presentation are required of the students as a part of this course. Required prior to directed teaching.

## AUTOMOTIVE

### **101, 102, 103 FUNDAMENTALS OF AUTOMOTIVE TECHNOLOGY 2, 2, 2**

A study of the automobile with emphasis on construction details and service procedures. Live engines and dry units are used in the laboratory. Autumn: engine units; winter: fuel and electrical system units; spring: power train and chassis units. One lecture and one laboratory per week.

### **236 SMALL GASOLINE ENGINES 2**

A study of construction details and operation of small two- and four-stroke cycle engines. Live engines are used to study mechanical features and service of fuel, lubrication, ignition and cooling systems. Typical engines used are Briggs-Stratton, Jacobsen, Wisconsin, etc. One class and one laboratory per week.



## INDUSTRIAL EDUCATION AND TECHNOLOGY

### **301 AUTOMATIC TRANSMISSIONS 3**

Instruction in the operation of planetary gears, fluid drives and hydraulic controls as used in automatic transmissions. Dry units will be used in the laboratory to learn disassembly, reassembly and adjustments to typical automatic transmissions. Two lectures and one laboratory per week. Prerequisite: 103 or equivalent.

### **302 ENGINE REPAIR AND MAINTENANCE 3**

A study of engine rebuilding operations through disassembly and reassembly. Machining operations such as cylinder reconditioning, valve train servicing, lubrication system servicing and cooling system servicing will be covered. Engine designs and valve timing will also be considered. Two lectures and one laboratory per week. Prerequisite: 101 or equivalent.

### **303 ENGINE DIAGNOSIS AND TUNE-UP 3**

Instruction in engine tune-up and diagnosis using meters and the oscilloscope. Compression tests, battery testing, electrical system testing and fuel system checking will be emphasized using Sun and Allen test equipment. Two lectures and one laboratory per week. Prerequisites: knowledge of basic science and electricity and 101, 102 or equivalent.

### **314, 315 AUTOMOTIVE SERVICE 3, 3**

Instruction in service operations as performed in service stations and repair garages. The automotive chassis including the power train, brake systems, suspension and wheel alignment, and general services are included. Two lectures and one laboratory per week.

### **356 AIR CONDITIONING 2**

Instruction in the principles of refrigeration and requirements of air conditioning for body comfort. The operation and servicing of the compressor, condenser, expansion valve, evaporator and system controls will be emphasized. System purging, evacuation and refrigerant replacement will be covered.

## **AVIATION**

### **141 AVIATION GROUND SCHOOL 3**

A study of pre-flight facts, meteorology, the flight computer, navigation and Federal Aviation Regulations. The course is designed to enable the student to pass the FAA private pilot written examination.

### **142 AVIATION FLIGHT TRAINING 3**

A course of coordinated flight and ground instruction designed to prepare the student to meet the requirements for the Federal Aviation Agency private pilot certificate. Training is now available on an approved-school basis. Prerequisite: 141 or equivalent.

## **DEPICTICS**

### **104, 105 TECHNICAL DRAWING 3, 3**

Care and use of instruments; technical sketching, geometry; orthographic, auxiliary and sectional views; production drawings, pictorial

## INDUSTRIAL EDUCATION AND TECHNOLOGY

views and developments and intersections—application to practical problems with emphasis on visualization and analysis. Must be taken in sequence. One lecture and three two-hour laboratories per week.

### **203 ARCHITECTURAL DRAWING** 3

The fundamentals of designing and drawing house plans including architectural drafting techniques, area planning, floor plans, elevations, sections, schedules and specifications. One lecture and three two-hour laboratories per week.

### **209 ELECTRICAL AND ELECTRONIC DRAWING** 3

A specialized course in drafting with emphasis on basic concepts and techniques of delineation of electrical and electronic circuits. Instruction includes schematics, assembly drawings, production illustrations, printed circuitry, interconnection diagrams, graphs and charts. One lecture and three two-hour laboratories per week. Prerequisite: 104 or equivalent; and 231 or 271 recommended.

## ELECTRONICS

### **231-232 SURVEY OF ELECTRONICS** 3-3

An introduction to electricity and electronics. Includes study of electrical fundamentals, operation of electric motors and generators, vacuum tubes, transistors and basic electrical and electronic circuits. At the option of the student, laboratory projects may be altered to include preparation for the novice class amateur radio license examination. Students who plan to teach electronics are advised to take 271, 272, 273 in lieu of 231-232. Two lectures and one laboratory per week.

### **271, 272, 273 FUNDAMENTALS OF ELECTRONICS** 4, 4, 4

A comprehensive course in the fundamentals of electronics technology designed for both preparatory electronics teachers and technology majors. Included in the study are DC and AC circuits, resonance, filters, electronic measurements, solid-state devices and introduction to power supply, amplifier, oscillator and switching circuits. Must be taken in sequence; however, 231-232 may be substituted for 271. Three lectures and one laboratory per week.

### **291 APPLIED ELECTRONICS** 4

Study and practice of the techniques used in the construction of electronic equipment, electronic circuit analysis, and logical troubleshooting. Three lectures and one laboratory session per week. Prerequisites: 231-232 or 271, 272, 273 or equivalent.

### **311 HOSPITAL SAFETY** 2

Study of codes and regulations pertaining to hospital safety. Equipment and techniques involved in leakage current tests, conductivity testing in operating rooms, testing of pressure safety devices, radiation safety checks and the correct handling of explosive gases. Prerequisite: 271.

**331, 332, 333 MEDICAL ELECTRONICS 3, 3, 3**

The use, calibration and maintenance of electromechanical equipment used in the diagnostic and therapeutic phases of medicine and in the clinical laboratory. Areas of study include patient care and monitoring equipment, cardiovascular measurements, measurements of physical variables, biotelemetry and computer applications in medicine. Must be taken in sequence. Prerequisite: 271, 272, 273. Preferred corequisites: 371, 372; 469.

**352, 353 RADIO COMMUNICATIONS 4, 4**

A study of electronics, radio communications theory and Federal Communications Commission regulations, designed to help the student qualify for FCC licenses through radio-telephone first class with endorsement for radar. Study is given to testing and maintenance of studio and communications equipment. Three lectures and one laboratory per week. Prerequisite: 271, 272, 273 or equivalent, and 291 recommended.

**371, 372 INDUSTRIAL ELECTRONICS 4, 4**

A study of electronic devices, systems and circuits used in industry for the purpose of heating, measuring, and controlling. A sampling of the topics studied includes magnetic amplifiers, motor-control systems, and latest solid-state devices and circuitry. Three lectures and one laboratory per week. Prerequisite: 271, 272, 273 or equivalent.

**411, 412, 413 TELEVISION SYSTEMS AND CIRCUIT ANALYSIS 3, 3, 3**

A study of television transmission principles, the theory and operation of monochrome and color television receiver circuits, community antenna television systems and closed-circuit television systems. Special emphasis is given to the use of logical systems and circuit analysis techniques in troubleshooting. Must be taken in sequence. Two lectures and one laboratory per week. Prerequisite: 271, 272, 273 or equivalent.

**432, 433 DIRECTED HOSPITAL EXPERIENCE 15, 15**

Full-time work experience with supplementary training in the biomedical electronics department of an approved hospital; taken only after completion of all course work required for the biomedical electronics program. Application must be made during the first two weeks of the quarter prior to the actual field experience. One laboratory per week.

**469 APPLIED DIGITAL AND ANALOG SYSTEMS 4**

Theory and application of digital and analog systems. Included in study will be computer circuitry, interface devices and physical systems control. Laboratory activity emphasizes construction and troubleshooting techniques. Three lectures and one laboratory per week. Prerequisite: 271, 272, 273 or equivalent. Corequisite: Engineering 355 or equivalent.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

### GRAPHICS

#### 123 LETTERING

2

Basic principles of proportion and design applied to the formation of the letters of the alphabet for display purposes, with special emphasis on a wide variety of methods and materials. Three laboratory lectures per week.

#### 144, 145-146 INTRODUCTION TO GRAPHIC ARTS

2, 2-2

Letterpress printing, straight and display composition, typographical design, imposition and simple presswork. Course 144 is prerequisite to 145 unless one Carnegie unit or equivalent is presented from secondary school. One lecture and one laboratory per week.

#### 161 PRINCIPLES OF PHOTOGRAPHY

2

Basic principles involved in both color and black-and-white. Theory and practice of exposure, development, contact printing and enlarging. Study of various types of equipment.

#### 227-228-229 OFFSET LITHOGRAPHY

3-3-3

Laboratory experience in offset photography, plate making, cold type composition and presswork. Two lectures and one laboratory per week. Prerequisites: 144, 145-146 or equivalent and 161 concurrent or equivalent.

#### 284-285-286 MACHINE COMPOSITION

2-2-2

Care and operation of the linotype machine, study of the assembling, casting and distributing mechanisms, keyboard practice and composition of straight matter, commercial and bookwork. Introduction to impact and photographic typesetting. One lecture and one laboratory per week. Prerequisite: 144, 145-146 or equivalent.

#### 298 PRINTING LAYOUT AND DESIGN

3

Basic principles of design as applied to composition, layout and arrangement in printing. Lectures, demonstrations and assigned individual and group projects. Prerequisite: 144, (145-146 recommended).

#### 305 PRINTING MANAGEMENT

3

Operating management of a commercial printing plant, purchasing of equipment and supplies, inventory control, pricing, personnel and production supervision. Prerequisites: 144, 145-146 and 237-238-239 or equivalent.

#### 321-322 ADVANCED LETTERPRESS PRINTING

3-3

Hand-fed and automatic presswork, including imposition, makeready, care and operation of equipment for numbering, perforating, scoring, die cutting, folding and other processes of printing production. Two lectures and one laboratory per week. Prerequisite: 144, 145-146 or equivalent.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

### 362 APPLIED PHOTOGRAPHY 3

Composition, photochemistry, optics and advanced study of printing, enlarging and processing of chromatic and monochromatic mediums with manipulative experience. Two lectures and one laboratory per week. Prerequisite: 161 or equivalent.

### 370 PHOTO ASSIGNMENTS 1

Individualized assignments to provide a variety of experience in commercial and publication photography, embodying shooting, processing and finishing black and white prints. One laboratory per week. Prerequisite: 362 or equivalent.

### 415-416 ADVANCED LITHOGRAPHY 3-3

Opportunity for advanced projects in lithographic printing with emphasis on duotones, posterization and process color work. Prerequisite: 237-238-239 or equivalent.

## INDUSTRIAL CRAFTS

### 113 BOOKBINDING 2

Practical basic course in the art and craft of bookbinding, designed to afford the student a comprehensive knowledge of the steps in the process of rebinding books and allied crafts. One lecture and one laboratory per week.

### 247 ART METALS 2

Utilization of semi-precious metals to develop skills in metal spinning and craft work in copper, brass, aluminum and pewter with processes applied to projects of practical value and artistic merit. Taught alternate years. One lecture and one laboratory per week.

### 248 PLASTICS 2

An introduction to a variety of operations in plastics involving technical information and experimentation in fundamental manufacturing processes. Taught alternate years. One lecture and one laboratory per week.

### 249 LEATHERS 2

Technical information and fundamental operations including tooling, carving, stamping, lacing, modeling, forming and finishing. Taught alternate years. One lecture and one laboratory per week.

### 262 SILK SCREEN PRINTING 2

Basic screen printing (mitography) including various methods of stencil preparation, types of materials used and preparation of equipment. One lecture and one laboratory per week.



## INDUSTRIAL EDUCATION AND TECHNOLOGY

### METALS

- 204, 205, 206 WELDING** 2, 2, 2  
204—gas welding; 205—arc welding; 206—specialized welding including metallic inert gas (MIG) and tungsten inert gas (TIG). Sequence may be 204, 205, 206 or 205, 204, 206 or equivalent. Individualized study units and one laboratory per week.
- 241-242 SURVEY OF INDUSTRIAL OPERATIONS** 2-2  
Both laboratory experiences and class lectures are used to give a broad introduction to manufacturing operations with factors influencing design and production. One lecture and one laboratory per week.
- 244, 245-246 MACHINE TOOL PRACTICE I** 2, 2-2  
Theory and manipulation of basic machine tools, bench work, hand operations and machine operations combined with prescribed and student-selected projects. Course 244 is prerequisite to 245 unless one Carnegie unit or equivalent is presented from secondary school. Taught alternate years. One lecture and one laboratory per week.
- 381, 382, 383 MACHINE TOOL PRACTICE II** 3, 3, 3  
Advanced processes of turning and hand work together with operations involving milling, shaping, grinding, gear calculation and cutting, with assigned exercises, together with student-selected projects. Prerequisite: 244, 245-246 or equivalent. Taught alternate years. Two lectures and one laboratory per week.

### WOODS

- 221-222-223 WOOD PRODUCTS AND PROCESSES** 2-2-2  
An introduction to wood products and processes incorporating use of basic tools and machines as found in the wood industries. Includes planning and construction of simple furniture. One lecture and one laboratory per week.
- 224-225-226 MINIMALIC CARPENTRY** 2-2-2  
Application of carpentry fundamentals including actual construction in miniature from architect's plans; laboratory work in framing of rafters and selected architectural sections with full-size lumber. One lecture and one laboratory per week. Taught alternate years.
- 341-342-343 FURNITURE DESIGN AND CONSTRUCTION** 3-3-3  
Design and fabrication of complex furniture including cabinet, door, and drawer construction, special machine operations, jigs and fixtures, and machine adjustment. Prerequisite: 221-222-223 and 264 or equivalent. Course 264 may be taken concurrently. Two lectures and one laboratory per week. Taught alternate years.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

### GENERAL

- 210 APPLIED MAINTENANCE** 1-6  
Practical, on-the-job experience for students of Maintenance Technology in the following areas: power plant, painting, carpentry, cabinet making, plumbing, heating, electrical, refrigeration, air conditioning, locksmithing, door hardware and motor pool. Selected in consultation with adviser. One laboratory per week per credit. One or two credits per quarter; maximum, six credits.
- 330 MACHINE AND TOOL MAINTENANCE** 1-2  
Methods of care and maintenance of tools, machines, and supplementary equipment. Selection may be made in any field offered. Prerequisite: adequate background in chosen fields. One laboratory per credit per week. One or two credits any quarter; maximum, two credits.
- 345 FINISHING MATERIALS AND METHODS** 3  
Composition and application of finishing materials, including selection and care of equipment. Two lectures and one laboratory per week. Taught alternate years.
- 366 INDUSTRIAL MATERIALS** 3  
Experimental research structured and arranged to involve materials and products of industry. Taught alternate years.
- 399 OIL HYDRAULICS** 3  
A study of the principles of pressure and flow, operation of basic hydraulic components, how the various components perform, fundamental hydraulic equipment design, and use and maintenance. Taught alternate years.
- 484, 485, 486 INDUSTRIAL PRACTICUM** 1-6  
Advanced laboratory work in a chosen area or teaching-aid construction. Select in counsel with departmental instructor involved. Six credits maximum from this and/or Independent Study in Industrial Education and Technology. One laboratory per week per credit. Prerequisite: lower division work in chosen area.
- 488 SENIOR PROBLEM** 1  
A student-selected, department-approved research, experiment, project or a problem to demonstrate ability to perform in the major field of instruction that has been followed, and from which graduation is sought. Satisfactory completion of this course constitutes the department comprehensive requirement for the Associate or Bachelor's degree with an Industrial Education and Technology major. Approximately two quarters are required for completion. Register any quarter of the senior year and at least one quarter *prior* to the final quarter preceding graduation.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

### METALS

**204, 205, 206 WELDING** 2, 2, 2  
204—gas welding; 205—arc welding; 206—specialized welding including metallic inert gas (MIG) and tungsten inert gas (TIG). Sequence may be 204, 205, 206 or 205, 204, 206 or equivalent. Individualized study units and one laboratory per week.

**241-242 SURVEY OF INDUSTRIAL OPERATIONS** 2-2  
Both laboratory experiences and class lectures are used to give a broad introduction to manufacturing operations with factors influencing design and production. One lecture and one laboratory per week.

**244, 245-246 MACHINE TOOL PRACTICE I** 2, 2-2  
Theory and manipulation of basic machine tools, bench work, hand operations and machine operations combined with prescribed and student-selected projects. Course 244 is prerequisite to 245 unless one Carnegie unit or equivalent is presented from secondary school. Taught alternate years. One lecture and one laboratory per week.

**381, 382, 383 MACHINE TOOL PRACTICE II** 3, 3, 3  
Advanced processes of turning and hand work together with operations involving milling, shaping, grinding, gear calculation and cutting, with assigned exercises, together with student-selected projects. Prerequisite: 244, 245-246 or equivalent. Taught alternate years. Two lectures and one laboratory per week.

### WOODS

**221-222-223 WOOD PRODUCTS AND PROCESSES** 2-2-2  
An introduction to wood products and processes incorporating use of basic tools and machines as found in the wood industries. Includes planning and construction of simple furniture. One lecture and one laboratory per week.

**224-225-226 MINIMALIC CARPENTRY** 2-2-2  
Application of carpentry fundamentals including actual construction in miniature from architect's plans; laboratory work in framing of rafters and selected architectural sections with full-size lumber. One lecture and one laboratory per week. Taught alternate years.

**341-342-343 FURNITURE DESIGN AND CONSTRUCTION** 3-3-3  
Design and fabrication of complex furniture including cabinet, door, and drawer construction, special machine operations, jigs and fixtures, and machine adjustment. Prerequisite: 221-222-223 and 264 or equivalent. Course 264 may be taken concurrently. Two lectures and one laboratory per week. Taught alternate years.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

### GENERAL

- 210 APPLIED MAINTENANCE** 1-6  
Practical, on-the-job experience for students of Maintenance Technology in the following areas: power plant, painting, carpentry, cabinet making, plumbing, heating, electrical, refrigeration, air conditioning, locksmithing, door hardware and motor pool. Selected in consultation with adviser. One laboratory per week per credit. One or two credits per quarter; maximum, six credits.
- 330 MACHINE AND TOOL MAINTENANCE** 1-2  
Methods of care and maintenance of tools, machines, and supplementary equipment. Selection may be made in any field offered. Prerequisite: adequate background in chosen fields. One laboratory per credit per week. One or two credits any quarter; maximum, two credits.
- 345 FINISHING MATERIALS AND METHODS** 3  
Composition and application of finishing materials, including selection and care of equipment. Two lectures and one laboratory per week. Taught alternate years.
- 366 INDUSTRIAL MATERIALS** 3  
Experimental research structured and arranged to involve materials and products of industry. Taught alternate years.
- 399 OIL HYDRAULICS** 3  
A study of the principles of pressure and flow, operation of basic hydraulic components, how the various components perform, fundamental hydraulic equipment design, and use and maintenance. Taught alternate years.
- 484, 485, 486 INDUSTRIAL PRACTICUM** 1-6  
Advanced laboratory work in a chosen area or teaching-aid construction. Select in counsel with departmental instructor involved. Six credits maximum from this and/or Independent Study in Industrial Education and Technology. One laboratory per week per credit. Prerequisite: lower division work in chosen area.
- 488 SENIOR PROBLEM** 1  
A student-selected, department-approved research, experiment, project or a problem to demonstrate ability to perform in the major field of instruction that has been followed, and from which graduation is sought. Satisfactory completion of this course constitutes the department comprehensive requirement for the Associate or Bachelor's degree with an Industrial Education and Technology major. Approximately two quarters are required for completion. Register any quarter of the senior year and at least one quarter *prior* to the final quarter preceding graduation.



PETERSON LIBRARY



LIBRARY SCIENCE

E. Mabley, Chairman; M. Gilliland, Shirley Graves, Carolyn Hazelton, T. Ruhl, Helen Sickler.

The department offers a minor designed to provide the knowledge basic to the organization and management of learning resource centers in elementary and secondary schools.

LIBRARY SCIENCE—MINOR REQUIREMENTS:

Use of Books and Libraries	100	2
General Reference Sources	271	3
Introductory Cataloging and Classification	286	3
Library Materials for Children	365	3
or		
Literature for Children and Adolescents	Eng. 412	3
School Library as a Materials Center	382	
or		3
Administration of School Libraries	483	
Selection of Library Materials	413	3
Methods of Audiovisual Education	Ed. 461	2
Instructional Aids—Production	Ed. 462	2
†Elementary School Curriculum	Ed. 504	3
or		
†Secondary School Curriculum	Ed. 508	
A Human Relations Course		2
Electives		4
In addition to courses from the department, one of the following may be used as electives:		30
Literature for Children and Adolescents	Eng. 412	
Oral Interpretation	Comm. 211	
Bookbinding	IE&T 113	
Lettering	IE&T 123	

†Available to seniors only.

100 USE OF BOOKS AND LIBRARIES 2

Introduction to the Walla Walla College Library; a survey of general reference materials as well as reference sources in various subject fields. Designed primarily for the new student.

271 GENERAL REFERENCE SOURCES 3

Presentation of methods for locating information in the library and a survey of the most commonly used reference sources. Prerequisite: 100 or equivalent.

## LIBRARY SCIENCE

- 286 INTRODUCTORY CATALOGING AND CLASSIFICATION 3**  
An introduction to principles, techniques and practices of cataloging and classifying materials for use in instructional materials centers. Laboratory required.
- 291 LIBRARIES AND SOCIETY 3**  
Development of the principal types of libraries with discussion of their characteristics and functions; study of current issues and trends in librarianship.
- 353 STORYTELLING 2**  
Consideration of the place of storytelling in the educational process; selection, preparation and presentation of diversified materials.
- 355 HISTORY OF BOOKS AND PRINTING 3**  
Development of the book in its various forms from earliest times to the beginning of the twentieth century; a survey of early writing materials, history of the alphabet and writing, books in manuscript, history of printing, book illustration and binding, and modern fine printing.
- 365 LIBRARY MATERIALS FOR CHILDREN 3**  
An overview designed to develop the ability to choose library materials according to the child's needs, interests and abilities. There will be extensive reading of children's literature from numerous subject areas.
- 382 SCHOOL LIBRARY AS A MATERIALS CENTER 3**  
Role of the library within the elementary and secondary school; services to the educational program; methods of organization and management.
- 384 ADVANCED CATALOGING AND CLASSIFICATION 3**  
Advanced principles, techniques and practices of cataloging and classifying book and non-book materials. Prerequisite: 286. Laboratory required.
- 413 SELECTION OF LIBRARY MATERIALS 3**  
Criteria for selecting library materials and appraisal of selection aids; library acquisition policies and methods of building and maintaining collections; survey of current publishing world.
- 461 REFERENCE MATERIALS IN THE SOCIAL SCIENCES 3**  
Examination and evaluation of library resources in business and economics, education and psychology, history and geography, political science and sociology. Prerequisite: 271.
- 464 REFERENCE MATERIALS IN THE HUMANITIES 3**  
Examination and evaluation of library resources in the fine arts, literature, philosophy and religion. Prerequisite: 271.

**467 REFERENCE MATERIALS IN THE SCIENCES 3**

Examination and evaluation of library resources in the natural sciences, physical sciences and technology. Prerequisite: 271.

**472 METHODS OF LIBRARY INSTRUCTION 3**

Techniques of library orientation designed for teachers who plan to instruct students in the use of the school library; demonstration and class presentation are required.

**483 ADMINISTRATION OF SCHOOL LIBRARIES 3**

General principles of administration; application of techniques to the organization and management of the school library.

**490 DIRECTED FIELD WORK 1-3; 3**

Practical experience in elementary or secondary school libraries under the supervision of qualified librarians. Application must be made during the first two weeks of the quarter *prior* to the actual field work. One to three credits any quarter; maximum, three credits.

**493 SEMINAR IN SCHOOL LIBRARY PROBLEMS 3**

Consideration of problems and responsibilities in the selection and use of instruction materials, finances, buildings and equipment, personnel, public relations and legal structure.

**Required Courses:**

Principles of Physics

Phys 251, 252, 253

Principles of Physics Lab

Phys 254, 255, 256

General Biology

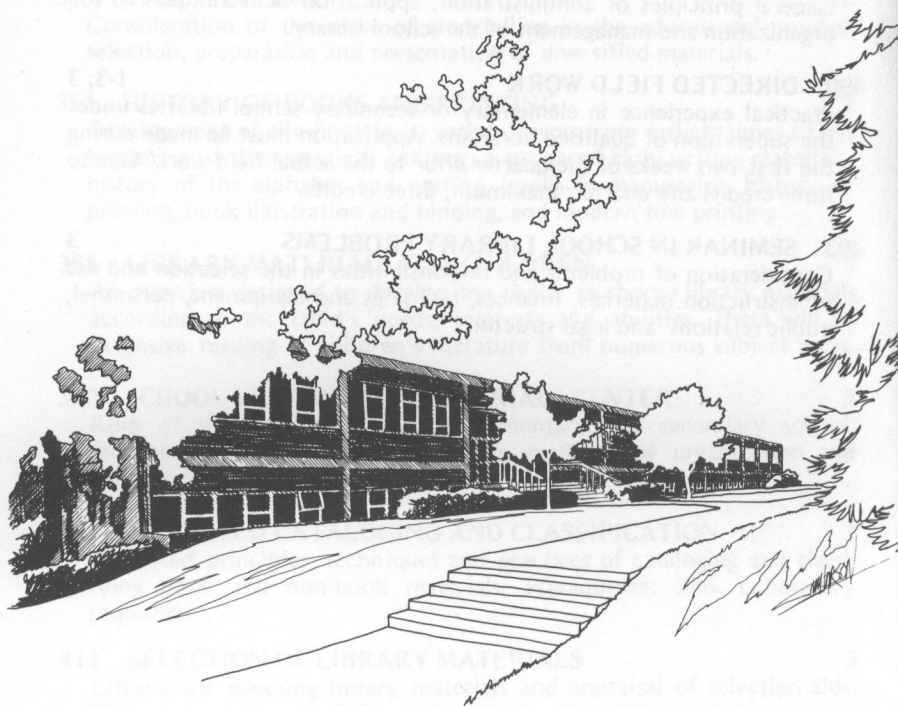
Bio 101, 201, 103

or

General Chemistry — Engineering Mathematics

**MATHEMATICS — MINOR REQUIREMENTS:**

A minimum of 26 credits, including four upper-division credits, chosen in consultation with the department chairman.



KRETSCHMAR HALL — Engineering, Mathematics, Physics

MATHEMATICS

G. Hare, Chairman; M. Lang, R. May, W. Soper, T. Thompson.

The department of mathematics offers two majors leading to baccalaureate degrees. The mathematics entrance requirements for both majors are a year of algebra and a year of geometry. It is highly recommended that students have at least one additional year of mathematics on the secondary level including approximately one-half semester of trigonometry.

BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

Major: Mathematics

Advanced Calculus	351, 352, 353	9
Modern Algebra	411, 412, 413	12
Electives		26
(Must be chosen from remaining mathematics courses in consultation with department chairman) may include:		47
Computer Science I	Engr. 218	
Computer Science II	Engr. 220	
Computer Science III	Engr. 346	

BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

Major: Mathematics

Analytic Geometry and Calculus	181, 281, 282, 283	16
Advanced Calculus	351, 352, 353	9
Modern Algebra	411, 412, 413	12
Electives		18
(Must be chosen from upper-division mathematics courses in consultation with department chairman) may include:		55
Computer Science I	Engr. 218	
Computer Science II	Engr. 220	
Computer Science III	Engr. 346	

Required Cognates:

Principles of Physics	Phys. 251, 252, 253	9
Principles of Physics Lab.	Phys. 254, 255, 256	3
General Biology	Bio. 101, 102, 103	12
or		
General Chemistry	Chem. 161-162-163	

MATHEMATICS—MINOR REQUIREMENTS:

A minimum of 28 credits, including four upper-division credits, chosen in consultation with the department chairman.



## MATHEMATICS

### **\*99 INTERMEDIATE ALGEBRA**

3

A one-quarter review of intermediate algebra including topics such as sets; numbers; exponents; polynomials; factoring; rational algebraic expressions; graphs; and first- and second-degree equations and inequalities.

A

### **111, 112, 113 SURVEY OF MATHEMATICS**

4, 4, 4

A terminal course for nonscience students in which applied problems form a basis for introducing various topics. Algebra, geometry, trigonometry, analytic geometry, probability, statistics and elementary calculus are the major branches of mathematics studied. Must be taken in sequence. Will meet the basic requirement in mathematics for the baccalaureate degree, but will not apply on a major or a minor in mathematics. AWS

### **117 PRECALCULUS**

5

College algebra and trigonometry including topics such as equations and inequalities; functions and their graphs; logarithmic, exponential and trigonometric functions and complex numbers. AW

### **121, 122 FUNDAMENTALS OF MATHEMATICS I, II**

4, 4

An integrated course in college algebra and trigonometry including a study of the integers; rational, real and complex numbers; equations and inequalities; polynomials; functions, relations and their graphs; exponential and logarithmic functions; trigonometry; the binomial theorem; matrices and determinants; progressions and mathematical induction. Prerequisite: two years of algebra or a year of algebra and a year of Euclidean geometry. AWS

### **130 FUNDAMENTALS OF ELEMENTARY MATHEMATICS**

4

An elementary course in sets, number theory, geometry, numeration, computer programming, number systems, relations, graphs, probability, and the metric system. This course is designed primarily for elementary and junior high school teachers. This course along with Mathematics 121, 122 will meet the basic requirement in mathematics for the baccalaureate degree, but will not apply on a major or a minor in mathematics. Prerequisite: 111 or 121 or equivalent. S

### **181, 281, 282, 283 ANALYTIC GEOMETRY AND CALCULUS I, II, III, IV**

4, 4, 4, 4

An integrated course in which topics of analytic geometry are introduced as needed in developing the topics in calculus. Prerequisite: 117 or 122 or a satisfactory score on a departmental qualifying examination. Each course in the sequence available every quarter. AWS

### **293 LINEAR ALGEBRA AND ITS APPLICATIONS**

3

Vector spaces, linear transformations, matrices and determinants. Emphasis will be on applications. S

\*See Transitional Curriculum listed under Nondepartmental.

- \*304, 305 INTRODUCTION TO THE THEORY OF NUMBERS 3, 3**  
 Congruences, continued fractions, Diophantine equations, quadratic residues. Permission of the instructor required. WS
- 311 PROBABILITY AND STATISTICS 4**  
 Probability, discrete and continuous probability density functions, moments, sampling, correlation, regression and testing of hypotheses. Prerequisite: 283. A
- 312 ORDINARY DIFFERENTIAL EQUATIONS 4**  
 Differential equations of first order, linear differential equations of order  $n$ , series solutions, applications. Prerequisite: 283. W
- \*313 PARTIAL DIFFERENTIAL EQUATIONS 4**  
 Solutions of various types of partial differential equations with emphasis on solutions of boundary value problems. Prerequisite: 312. S
- \*342, 343 NUMERICAL ANALYSIS 3, 3**  
 Iterative and recursive numerical techniques as they relate to computer oriented applications. Topics include matrices, numerical integration, linear programming, solutions of linear and nonlinear equations, polynomials and differential equations. Prerequisites: 312 and Engineering 218. WS
- \*351, 352, 353 ADVANCED CALCULUS 3, 3, 3**  
 Functions, continuity, differentiation, integration, infinite series, differential geometry and vector calculus. Prerequisite: 283. AWS
- \*411, 412, 413 MODERN ALGEBRA 4, 4, 4**  
 Groups, rings, fields, modules, vector spaces, dual spaces, matrices, matrix algebra, similarity and linear transformations. Must be taken in sequence. Permission of the instructor required. AWS
- \*423 INTRODUCTION TO THE THEORY OF COMPLEX VARIABLES 4**  
 Functions of a complex variable, the geometry of elementary functions, integration, power series, calculus of residues, and conformal mapping. Prerequisite: 283. S
- 471 METHODS OF TEACHING MATHEMATICS 3**  
 Methods, materials and techniques of teaching mathematics on the secondary school level. Observation, demonstration and class presentation are required of the students as a part of this course. Will not apply on a major or minor in mathematics. A

\*Taught alternate years.



CONARD HALL — Women's Dormitory

MODERN LANGUAGES

G. Caviness, Chairman; Solange Henderson, R. Czeratzki.

The main objectives of the department are to develop competence in the ability to understand, speak, read and write a foreign language and to provide through the knowledge of foreign languages a deepened understanding and appreciation of the literature and culture of other people.

In order to achieve these ends, foreign language majors are advised to participate in the Adventist Colleges Abroad program and spend at least one school year studying in the native country.

Majors and minors are offered in French, German and Spanish.

Majors planning to teach should confer with their departmental adviser and with the department of education and psychology in regard to certification and teaching credentials.

BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

Major: French, German or Spanish

Intermediate French	201, 202, 203	} 9
or		
Intermediate German	211, 212, 213	
or		
Intermediate Spanish	221, 222, 223	} 36
Electives		
(must be upper-division language courses with at least one literature course taken in sequence)		45

Required Cognate:

Methods of Teaching Modern Languages	471	} 3
or		
Introduction to English Linguistics	Eng. 425	

It is recommended that the general education requirements include:

Arts and Ideas	Nondept. 207, 208, 209
History of Western Civilization	Hist. 101, 102, 103

FRENCH, GERMAN OR SPANISH—MINOR REQUIREMENTS:

A minimum of 24 credits beyond the elementary course, 15 of these must be on the upper-division level.

FRENCH

101, 102, 103 ELEMENTARY FRENCH 4, 4, 4

Introduction to the basic language skills of understanding, speaking, reading and writing of French, with stress on understanding and speaking. Minimum of three hours laboratory per week.

## MODERN LANGUAGES

- 151, 152, 153 CONVERSATIONAL FRENCH** 2, 2, 2  
Introduction and practice in the spoken language for travelers and others who are about to make personal contact with nationals of the language. Will meet the practical needs of tourists, missionaries and professional people in everyday conversation. Will not apply on a major or minor.
- 201, 202, 203 INTERMEDIATE FRENCH** 3, 3, 3  
Development of the basic language skills leading to conversation and intensive reading and writing of French. Minimum of two hours laboratory per week. Must be taken in sequence.
- 301, 302, 303 SURVEY OF FRENCH LITERATURE** 3, 3, 3  
A survey of French masterworks from La Chanson de Roland to the present. Introduction to literary analysis; lectures, reports, required library reading. The class is conducted in French. Prerequisite: 201, 202, 203.
- 304, 305, 306 ADVANCED FRENCH** 3, 3, 3  
Intensive training in oral and written French. Review of grammar and extensive prose reading. Exercises in composition and conversation. Laboratory required. Conducted in French. Must be taken in sequence.
- 404, 405, 406 FRENCH DIRECTED READING** 1-3; 6  
The work consists of assigned reading and reports. Prerequisite: 304, 305, 306. One to three credits any quarter; maximum, six credits.
- 408 ROMANTICISM AND REALISM** 4  
Study of the period from 1800 to 1870. Special attention to writers such as Hugo, Vigny, Musset, Balzac and Flaubert.
- 419 THE SEVENTEENTH CENTURY** 4  
Study of the major writers of the French Classical period. Particular attention will be paid to the works of Corneille, Racine, La Fontaine and La Bruyere.
- 427, 428, 429 FRENCH CULTURE AND CIVILIZATION** 2, 2, 2  
A historical study of the major aspects of French culture and civilization as they appear in painting, architecture, science, music, philosophy and history. Conducted entirely in French. Must be taken in sequence.
- 438 MODERN PERIOD OF FRENCH LITERATURE** 4  
Study of the period extending from the turn of the century to Albert Camus. Intensive reading and discussion of the most representative works of this period.



## GERMAN

### 111, 112, 113 ELEMENTARY GERMAN 4, 4, 4

Development of listening comprehension, speaking, reading and writing skills. Minimum of three hours laboratory per week.

### 161, 162, 163 CONVERSATIONAL GERMAN 2, 2, 2

Introduction and practice in the spoken language for travelers and others who are about to make personal contact with nationals of the language. Will meet the practical needs of tourists, missionaries and professional people in everyday conversation. Will not apply on a major or minor.

### 211, 212, 213 INTERMEDIATE GERMAN 3, 3, 3

Continued development of basic language skills leading to conversation, intensive reading and composition. Minimum of two hours laboratory per week. Must be taken in sequence.

### 311, 312, 313 SURVEY OF GERMAN LITERATURE 3, 3, 3

Development of German literature from the eighth century to the present, supplemented by readings from representative masterpieces of the language. Conducted in German.

### 314, 315 GERMAN CIVILIZATION 2, 2

The development of the cultural, social and political life in German-speaking lands as reflected in architecture, art, history, literature, music and philosophy. Lectures, films, reports. Conducted in German. Must be taken in sequence.

### 317, 318, 319 ADVANCED GERMAN 3, 3, 3

Intensive practice in oral and written German. Reading, analysis and discussion of selected prose. Laboratory practice required. Conducted in German. Must be taken in sequence.

### 323 SCIENTIFIC GERMAN 2

An introduction to the reading of technical German in various scientific fields.

### 403 MODERN GERMAN LITERATURE 4

A study of German literature since Naturalism, focusing on works by Hauptmann, Th. Mann, Kafka, Brecht and others. Considerable attention will also be devoted to representative post-war writers. Conducted in German.

### 411, 412, 413 GERMAN DIRECTED READING 1-3; 6

Individual supervision of readings selected for each student separately. Written and oral reports and quarter examination. Approval of instructor required. Prerequisite: 311, 312, 313. One to three credits any quarter; maximum, six credits.

## MODERN LANGUAGES

### 421 GERMAN CLASSICISM 4

A study of the classical periods in German literature as revealed in the works of Lessing, Goethe and Schiller. Conducted in German.

### 422 GERMAN ROMANTICISM 4

A study of writings, philosophies and literary theories of German romanticism from Friedrich Schlegel to Heinrich Heine. Conducted in German.

## SPANISH

### 99 SPANISH REVIEW 2

Open to students needing additional review of Spanish to be registered for a parallel with 221, 222, 223. Credits received from this course will not count toward the 192 credits required for graduation.

### 121, 122, 123 ELEMENTARY SPANISH 4, 4, 4

Development of the basic skills of understanding, speaking, reading and writing of Spanish through a thorough internalization of the Spanish sounds and conceptual patterns. Minimum of three hours laboratory per week.

### 171, 172, 173 CONVERSATIONAL SPANISH 2, 2, 2

Introduction and practice in the spoken language for travelers and others who are about to make personal contact with nationals of the language. Will meet the practical needs of tourists, missionaries and professional people in everyday conversation. Will not apply on a major or minor.

### 221, 222, 223 INTERMEDIATE SPANISH 3, 3, 3

Continued emphasis on the development of understanding, speaking, reading and writing Spanish with stress being placed on reading and writing. This course is designed to prepare students to use Spanish as a means of communication as a cultural and research tool. Minimum of two hours laboratory per week. Must be taken in sequence.

### 324, 325, 326 SURVEY OF SPANISH LITERATURE 3, 3, 3

A survey of the history of Spanish literature; lectures, reports, outside reading; the main currents of the development of the various genres of Spanish literature with a study of representative works.

### 331, 332 HISPANIC CULTURE AND CIVILIZATION 2, 2

An overview of the development of the culture of the Spanish-speaking peoples from their peninsular origins to the American expansions. Analysis and interpretation of the Hispanic mind as revealed in art, folklore, literature and music.

## MODERN LANGUAGES

### 341, 342, 343 ADVANCED SPANISH 3, 3, 3

Intensive training in oral and written Spanish. Review of grammar and extensive prose reading. Exercises in composition and conversation. Conducted in Spanish. Laboratory required. Must be taken in sequence.

### 414, 415, 416 SPANISH DIRECTED READING 1-3; 6

The work consists of assigned readings and reports. Prerequisite: 341, 342, 343. One to three credits any quarter; maximum, six credits.

### 424, 425, 426 CONTEMPORARY SPANISH LITERATURE 2, 2, 2

An intensive study and analysis of Spanish literature from about 1898 to the latest writers who have achieved critical acclaim. Emphasis placed on development of literary critical ability and evaluation of modern Spanish literature from historical and social points of view.

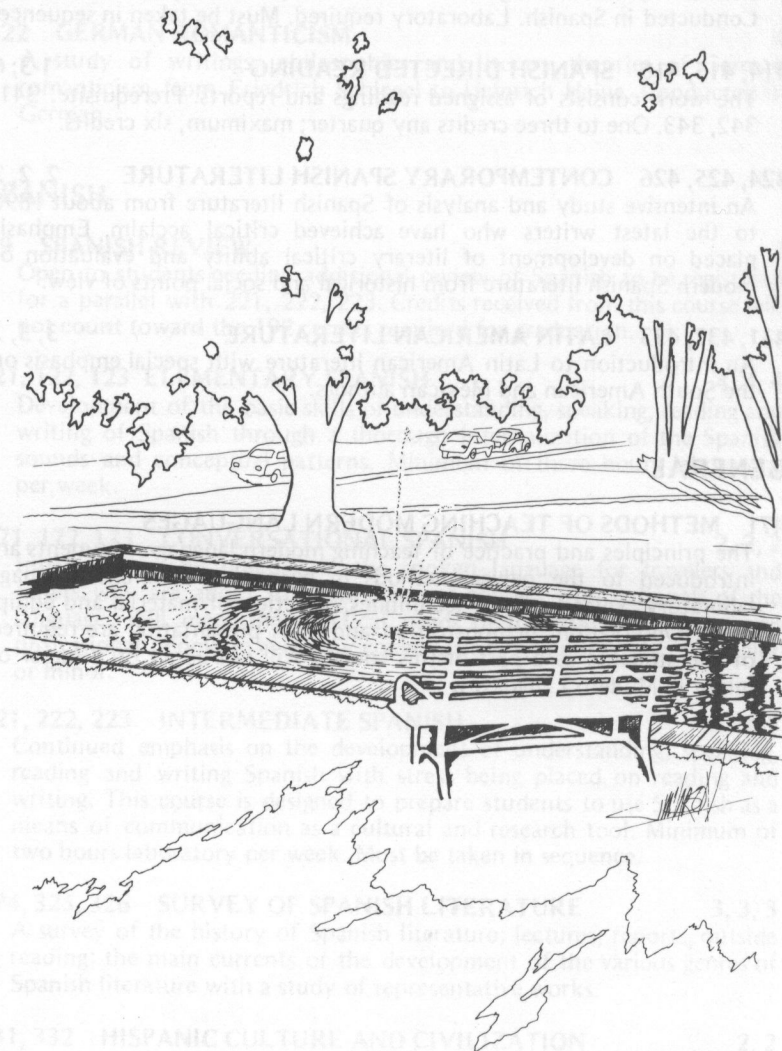
### 431, 432, 433 LATIN AMERICAN LITERATURE 3, 3, 3

An introduction to Latin American literature with special emphasis on the South American and Mexican authors.

## GENERAL

### 471 METHODS OF TEACHING MODERN LANGUAGES 3

The principles and practice of teaching modern languages. Students are introduced to the newer methods in both classroom and language laboratory; voice machine techniques, selection of material and equipment. Observation, demonstration and class presentation are required of the students as a part of this course. Will not apply on a major or minor in Modern Languages.



CONARD POND

MUSIC

H. Lickey, Chairman; Sandra Camp, G. Ferguson, S. Hiscock, R. Hunter, L. Leno, G. Spring, R. Tupper, M. West.

The department offers instruction for those who wish to choose music as a career and for those who wish to develop a cultural appreciation of music. Two curriculums are offered in music: the Bachelor of Music with majors in Performance or Music Education, and the Bachelor of Arts with majors in Music Theory or Applied Music.

BACHELOR OF MUSIC

The Bachelor of Music degree is a professional degree with a choice of two majors: Performance or Music Education. Sincerity of purpose, application and aptitude must be demonstrated during the first year before full status as a major student is granted.

In fulfilling the musical organization requirement, voice majors must be in a choral group, string majors in the orchestra, and brass and woodwind majors in the band. Piano and organ majors may elect up to six credits of Ensemble as partial fulfillment of the organization requirement.

The department designates required attendance each quarter at a variety of musical functions—recitals (general, senior and faculty), and concerts (departmental, WWC lyceum, community concerts, etc.).

As a part of their work in private lessons, music majors will attend a regularly scheduled performance class. Each student performs for his/her fellow students and teacher(s) in a master class situation.

BACHELOR OF MUSIC DEGREE IN PERFORMANCE—REQUIREMENTS:

Major: Piano, Organ or Voice

General Requirements:

Religion (see page 60)		18-24
College Writing	Eng. 101-102-103	9
Language <sup>1</sup>		12
Arts and Ideas	Nondept. 207, 208, 209	6
Philosophy of Christian Education	Ed. 110	2
Physical Education (service courses)		3
		<hr/> 50-56

Major Requirements:

The Art of Listening	103	3
Theory I	104, 105-106	9
Basic Musicianship—Aural I	111, 112-113	3
*Basic Musicianship—Keyboard I	114, 115-116	3
Theory II	204-205-206	9
Basic Musicianship—Aural II	211-212-213	3
Basic Musicianship—Keyboard II	214-215-216	3
Form and Analysis	304, 305	6
History of Music	351, 352, 353	9

\*Students whose major performance is keyboard will not register for Basic Musicianship—Keyboard I.



## MUSIC

Conducting	387 and 388 or 389	4
Counterpoint	406	3
Orchestration	409	3
Composition I, II	411, 412, 413; 415	6
Musical Organization		12
Applied Performance Major		48
Electives in Music <sup>2</sup>		12-21
Cognates <sup>3</sup>		0-6
		<hr/> 142

<sup>1</sup> Voice majors who have had two units of French or German on the secondary level must take one year of French or German, whichever language the student has not had. If the student has not had French or German on the secondary level, he must take one year each of French and German. Each student must pass a language diction examination in German, French and Italian to be administered by the voice faculty. Those failing any or all sections of the examination will be required to register for the appropriate section(s) of Singer's Diction.

<sup>2</sup> A voice major who takes both Vocal Techniques and Singer's Diction will have 12 credits of electives. A keyboard major who takes neither and also does not take Basic Musicianship—Keyboard I, will have 21 credits of electives. Instrumental majors will fall between these extremes.

<sup>3</sup> Voice majors must take Vocal Techniques and Methods.

A recital during both the junior and senior years is required.

This curriculum does not result in denominational or state teaching certification.

### BACHELOR OF MUSIC DEGREE IN MUSIC EDUCATION—REQUIREMENTS:

#### General Requirements:

Religion (see page 60)		18-24
College Writing	Eng. 101-102-103	9
History	(preferably Hist. 101, 102, 103)	9
Science or Mathematics (see page 60)		12
Arts and Ideas	londept. 207, 208, 209	6
General Psychology	Psych. 121, 122	4
Philosophy of Christian Education	Educ. 110	2
Physical Education (service courses)		3
		<hr/> 63-69

#### Core Requirements:

The Art of Listening	103	3
Theory I	104, 105-106	9
Basic Musicianship—Aural I	111, 112-113	3
*Basic Musicianship—Keyboard I	114, 115-116	3
Theory II	204-205-206	9
Basic Musicianship—Aural II	211-212-213	3
Basic Musicianship—Keyboard II	214-215-216	3
History of Music	351, 352, 353	9
Orchestration	409	3
Organization		11
		<hr/> 56

\*Students whose major performance is keyboard will not register for Basic Musicianship—Keyboard I.

**Concentrations:**

In addition to the general requirements and the core requirements, the student must choose one of the following concentrations:

**Concentration: Elementary School Music**

Elementary School Music Literature	312	2
Conducting	387, 388, 389	6
Form and Analysis	304 or 305 *	3
Philosophy of Music and Music Education	471	2
Teaching Music in Elementary School	472	2
Major Performance		15
Minor Performance <sup>1</sup>		6
Selected Topics, Independent Study or Topics <sup>2</sup>		2
*Electives (must include 25 credits for certification requirements)		31-32
Cognates <sup>3</sup>		3-4
		<hr/> 73

<sup>1</sup>To be chosen in consultation with the department chairman except for instrumental majors who will choose the four Instrumental Techniques and Methods courses (6 hours of which will fulfill this requirement with the remaining hours counting toward the cognates).

<sup>2</sup>At least one hour must be taken in the area of elementary vocal techniques.

<sup>3</sup>Students whose major performance area is piano must take Piano Pedagogy and Literature. Students whose major performance area is instrumental will count their four additional credits of Instrumental Techniques toward this requirement. Those whose major performance area is voice must take Vocal Techniques and Methods. The variation in elective credits results from the variable cognate requirement.

**Concentration: Secondary School Music**

Conducting <sup>1</sup>	387, 388 and/or 389	4-6
Form and Analysis	304, 305	6
Philosophy of Music and Music Education	471	2
Teaching Music in the Secondary School	473	2
Major Performance <sup>2</sup>		22
Minor Performance <sup>3</sup>		6
Voice <sup>4</sup>		1
*Certification Requirements		26
Cognates <sup>5</sup>		0-6
		<hr/> 72-77

<sup>1</sup>Students whose major performance is voice or instrumental elect both Instrumental and Choral Conducting while the keyboard students may elect either.

<sup>2</sup>Usually a student will take a total of 22 credits in *one* applied field. However, students who reach a high level of proficiency in less than 22 credits may, with music faculty approval and guidance, complete the 22 credits by electing

\*Students should consult the publication *Guidelines for Certification* for certification requirements on p. 107 of this bulletin.

## MUSIC

courses which will strengthen their preparedness in other areas within the music field. In no case, will students take less than 15 credits in one applied field.

<sup>3</sup> Students whose major performance area is organ will take piano and those whose major performance is piano will take organ. Students whose major performance is instrumental will take all the Instrumental Techniques and Methods courses (the additional hours beyond the 6 allowed in the minor performance will apply toward the cognates. Voice majors will, with departmental counsel, elect their 6 credits from other applied music areas including instrumental techniques classes and piano.

<sup>4</sup> Not required of students whose major performance is voice.

<sup>5</sup> Voice majors must either pass a diction examination in German, French and Italian, or take the appropriate section(s) of Singer's Diction. They must also take Vocal Techniques and Methods. Piano majors must take Piano Pedagogy and Literature.

A joint senior recital (or solo recital) is required of all candidates for this degree. With the counsel of the music faculty, a music major may be allowed to substitute a conducting or research project for the senior recital upon evidence of equivalent musicianship in these areas.

## BACHELOR OF ARTS

The Bachelor of Arts degree offers a choice of two majors: Music Theory and Applied Music. Sincerity of purpose, application and aptitude must be demonstrated during the first year before full status as a major student is granted. This curriculum is not intended to prepare the student for a career in music, but in some circumstances may precede graduate study in this field.

Participation in a musical organization is required for two years but without credit. Majors in Applied Music will enroll for the following organizations: choral group for voice majors, orchestra for string majors, band for brass and woodwind majors. Piano and organ majors may elect one year of Ensemble as partial fulfillment of the organization requirement.

The department designates required attendance each quarter at a variety of musical functions—recitals (general, senior and faculty) and concerts (departmental, WWC lyceum, community concerts, etc.).

## BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

### Major: Music Theory

The Art of Listening	103	3
Theory I	104, 105-106	9
Basic Musicianship—Aural I	111, 112-113	3
*Basic Musicianship—Keyboard I	114, 115-116	3
Theory II	204-205-206	9
Basic Musicianship—Aural II	211-212-213	3
Basic Musicianship—Keyboard II	214-215-216	3

\*Students whose major performance is keyboard will not register for Basic Musicianship—Keyboard I.

# MUSIC

Form and Analysis	304, 305	6
History of Music	351, 352, 353	9
Counterpoint	406	3
Orchestration	409	3
Composition I	411, 412, 413	3
Applied Music		9-12
Electives <sup>1</sup>		0-3

<sup>1</sup>Keyboard majors will have 3 credits of electives to substitute for waiving Basic Musicianship—Keyboard I. 66

## Required Cognate:

Arts and Ideas Nondept. 207, 208, 209 6  
The music theory major will present a senior project for which approval must be obtained from the music faculty.

## Major: Applied Music

The Art of Listening	103	3
Theory I	104, 105-106	9
Basic Musicianship—Aural I	111, 112-113	3
*Basic Musicianship—Keyboard I	114, 115-116	3
Theory II	204-205-206	9
Basic Musicianship—Aural II	211-212-213	3
Basic Musicianship—Keyboard II	214-215-216	3
Form and Analysis	304, 305	6
History of Music	351, 352, 353	9
Applied Music		18

(12 hours must be in one field; the remainder is to be chosen in consultation with the Department chairman)

Electives<sup>1</sup> 66

<sup>1</sup>Keyboard majors will have 3 credits of electives to substitute for waiving Basic Musicianship—Keyboard I.

\*Students whose major performance is keyboard will not register for Basic Musicianship—Keyboard I.

## Required Cognates:

Arts and Ideas Nondept. 207, 208, 209 6  
Singer's Diction 221, 222, 223 0-3

(Required of voice majors who are unable to pass a diction examination in Italian, German and French)

The applied music major will present a joint (or solo) senior recital.

## MUSIC—MINOR REQUIREMENTS:

### Minor: General

Theory I	104, 105-106	9
Basic Musicianship—Aural I	111	1
Basic Musicianship—Keyboard I	114	1
Introduction to Music	201, 202, 203	6
Applied Music		6

(in one field, with an examination by the music faculty at the end of the first and second years of private lessons)

Electives 7  
(3 credits must be upper division. No more than 3 credits of musical organizations may apply toward this requirement.) 30

## MUSIC

### Minor: Teaching

Theory I	104, 105-106	9
Basic Musicianship—Aural I	111	1
Basic Musicianship—Keyboard I	114	1
Introduction to Music	201, 202, 203	6
Basic Conducting	387	2
Applied Music		6
(in one field with an examination by the music faculty at the end of the first and second years of private lessons)		
Philosophy of Music and Music Education	471	2
Teaching of Music in the Elementary School	472	2
or		
Teaching of Music in the Secondary School	473	1
Electives		
		30

## THEORY AND COMPOSITION

### 103 THE ART OF LISTENING 3

Designed to develop critical listening skills through study of the various elements of music as they are used in selected works from the standard repertoire.

### 104, 105-106 THEORY I 3, 3-3

Introduction to the elements of notation, rhythm, scales, key signatures and terms. Traditional harmonic concepts through secondary dominants will be taught during the winter and spring quarters. Corequisites: 111, 112-113 and 114, 115-116.

### 111, 112-113 BASIC MUSICIANSHIP—Aural I 1, 1-1

Intensive training in fundamental aural skills. Emphasis is on rhythmic, melodic and harmonic concepts. Corequisite: 104, 105-106.

### 114, 115-116 BASIC MUSICIANSHIP—Keyboard I 1, 1-1

Designed to develop basic skills including keyboard orientation, sight-reading, scales, chord progressions, harmonization of simple melodies and transposition. Corequisite: 111, 112-113.

### 204-205-206 THEORY II 3-3-3

A continuation of Theory I with emphasis on the melodic and harmonic developments of the late nineteenth and twentieth centuries. Prerequisites: 104, 105-106; 111, 112-113; 114, 115-116. Corequisites: 211-212-213; 214-215-216.

### 211-212-213 BASIC MUSICIANSHIP—Aural II 1-1-1

A continuation of 111, 112-113. Normally taken concurrently with Theory II. Prerequisite: 111, 112-113.



**214-215-216 BASIC MUSICIANSHIP—Keyboard II 1-1-1**

A continuation of 114, 115-116. Completion of this course satisfies the piano proficiency requirement. Prerequisite: 114, 115-116 or permission of the instructor.

**304, 305 FORM AND ANALYSIS 3, 3**

A detailed study of musical structure. Must be taken in sequence.

**406 COUNTERPOINT 3**

A continuation of 305 with concentration on the more intricate forms of contrapuntal writing such as motet, canon and fugue. Prerequisite: 304, 305.

**409 ORCHESTRATION 3**

Practical consideration of the techniques, capabilities and effective uses of orchestral instruments in various combinations. Scoring for small and large combinations of instruments is included. Prerequisite: 304, 305.

**411, 412, 413 COMPOSITION I 1-2, 1-2, 1-2**

A study of the art of composing in the smaller forms. Special emphasis is given to twentieth century techniques. Prerequisite: 204-205-206 and/or the permission of the instructor. One or two credits each quarter.

**415 COMPOSITION II 1-3; 3**

Advanced composition in the larger forms. Prerequisite: 411, 412, 413 and/or permission of instructor. One to three credits any quarter; maximum, three credits.

**HISTORY AND LITERATURE****201, 202, 203 INTRODUCTION TO MUSIC 2, 2, 2**

A course which seeks to develop an awareness of the emotional, aesthetic, and intellectual appeals of music. The appreciation and enjoyment of music is promoted through a study of selected masterworks with guided listening experiences. Students beginning with winter or spring quarter must obtain permission of the instructor. Credit is not allowed toward a music major.

**351, 352, 353 HISTORY OF MUSIC 3, 3, 3**

A study of music history from Gregorian Chant to the present with special attention to musical styles as evidenced through the development of musical forms, instrumentation and performance practice. Open to music majors; others accepted with permission of the instructor.

## MUSIC

### MUSIC EDUCATION

- 221, 222, 223 SINGER'S DICTION** 1, 1, 1  
A study of correct pronunciation of Italian, German and French, enabling singers to perform the extensive literature available in these languages. Required of all voice majors who are unable to pass a diction examination in Italian, German and French.
- 274, 275, 276 BRASS TECHNIQUES AND METHODS** 1, 1, 1  
Class instruction in the playing and teaching of brass instruments.
- 281, 282, 283 WOODWIND TECHNIQUES AND METHODS** 1, 1, 1  
Class instruction in the playing and teaching of woodwind instruments.
- 284, 285, 286 STRING TECHNIQUES AND METHODS** 1, 1, 1  
Class instruction in the playing and teaching of stringed instruments.
- 287 PERCUSSION TECHNIQUES AND METHODS** 1  
Class instruction in the playing and teaching of percussion instruments.
- 308 PIANO PEDAGOGY AND LITERATURE** 3  
A course conducted as an introduction to the teaching of piano including both the private and the class approaches. Combined with the problems of technique, sight reading, memorizing and interpretation will be a brief survey of literature as it applies to teaching situations.
- 312 ELEMENTARY SCHOOL MUSIC LITERATURE** 2  
A study of the literature for classroom presentation and children's voices in grades one to eight.
- 382 VOCAL TECHNIQUES AND METHODS** 3  
A study of the factors involved in correct voice production and artistic performance of vocal literature. Attention is given to pedagogy.
- 471 PHILOSOPHY OF MUSIC AND MUSIC EDUCATION** 2  
The role of music in the life of the individual, society, the school and the church in the context of Seventh-day Adventist philosophy.
- 472 THE TEACHING OF MUSIC  
IN THE ELEMENTARY SCHOOL** 2  
Objectives, procedures and materials of music education for kindergarten level through grade six. Emphasis on classroom instruction for all students. Also open to nonmusic majors who have completed 471 and who have had musical experience satisfactory to the instructor.
- 473 THE TEACHING OF MUSIC  
IN THE SECONDARY SCHOOL** 2  
Objectives, procedures and materials of music education for grades seven through twelve. Emphasis on classroom instruction for all students.

## GENERAL

**208-209 MINISTRY OF MUSIC 2-2**

A study of the purpose and use of music in religious services. Attention is given to the aesthetics of the church service, hymnology and group song leadership.

**387 BASIC CONDUCTING 2**

A course specifically designed to lay the foundation for the development of the skill and the art of conducting musical ensembles of all kinds.

**388 INSTRUMENTAL CONDUCTING 2**

Instruction and experience with conducting live performances of representative works of band and orchestral literature. Prerequisite: 387.

**389 CHORAL CONDUCTING 2**

Instruction and experience with conducting live performances of representative works of choral literature. Prerequisite: 387.

**481, 482, 483 SELECTED TOPICS IN MUSIC 1-3; 3**

Directed independent study on selected advanced topics. All study is done under the supervision of the instructor and elected only after consultation with the chairman of the department. One to three credits any quarter; maximum, three credits.

## VOCAL AND INSTRUMENTAL ENSEMBLES

**224, 225, 226 CONCERT CHOIR 1, 1, 1**

Organized to provide a large ensemble for the performance of a major choral work each quarter. Open to all students and community singers.

**241, 242, 243 SCHOLA CANTORUM 1, 1, 1**

A select ensemble for those with unusual vocal talent and musicianship. A challenging choice of specialized types of choral literature, both sacred and secular, is studied and performed. Regular appearances on and off campus are customary. Membership is by invitation and/or audition.

**244, 245, 246 CHORALE 1, 1, 1**

This eight-part choral organization performs regularly as one of the church choirs, in addition to presenting concerts on and off campus. A wide variety of choral works from all periods comprises the repertoire. Membership is by audition.

**247, 248, 249 CONCERT BAND 1, 1, 1**

A select organization which serves the College by performing concerts

## MUSIC

each year both on and off campus. The repertoire encompasses music of a wide range of styles and periods and includes both original band works as well as appropriate transcriptions. Members are selected on the basis of talent, musicianship, technical development and the need for a balanced instrumentation. Membership is by audition.

### **251, 252, 253 STRING ORCHESTRA** 1, 1, 1

An organization which performs both on and off campus a cross-section of standard literature from the Baroque Era to the present. Membership is by audition.

### **254, 255, 256 WALLA WALLA SYMPHONY** 1, 1, 1

A community symphonic orchestra which presents four subscription concerts per season. Membership is by audition.

### **257, 258, 259 ENSEMBLE** 1, 1, 1

Any vocal or instrumental duo, trio, quartet or larger group may study music peculiar to their ensemble under the direction of one of the music department staff. Piano and organ majors may elect up to six credits of ensemble in lieu of belonging to one of the larger college organizations.

## APPLIED MUSIC

One to four credits of applied music may be earned each quarter. One credit of applied music presupposes four to six hours of practice per week.

Not more than 9 credits in applied music (including 3 credits of Ensemble) may be earned toward graduation without an equal number of credits in music classwork.

Transfer students majoring in music must take a minimum of 6 credits in applied music at Walla Walla College.

### **107, 108, 109 APPLIED MUSIC** 1, 1, 1 Beginning.

### **117, 118, 119 APPLIED MUSIC-CLASS INSTRUCTION** 1, 1, 1 Teachers may offer instruction to groups in general or specialized areas of performance interest. Voice and piano classes are most common.

### **127, 128, 129 APPLIED MUSIC** 1, 1, 1 Intermediate.

### **227, 228, 229 APPLIED MUSIC** 1, 1, 1 Upper intermediate.

## MUSIC

**327, 328, 329 APPLIED MUSIC**  
Lower advanced.

**1, 1, 1**

**427, 428, 429 APPLIED MUSIC**  
Advanced.

**1, 1, 1**

## 95 DEVELOPMENTAL READING

This course is designed to help college students develop speed and comprehension in reading. The latest reading techniques are taught and some of the best equipment is available for classroom use. It is a highly recommended course, especially for students whose reading habits are poor. Proficiency in reading means improved study skills.

## 207, 208, 209 ARTS AND IDEAS

**2, 1, 1**

A course designed to survey and integrate the arts of architecture, sculpture, painting, literature and music, and to show their relation to the general trends of Western culture as an aesthetic outgrowth of the historical, intellectual, and economic conditions of the various periods of history.

## 233 MISSION

**2**

An introduction to the Christian mission. Acquaints the student missionary with cultural differences through a cultural orientation and exposure to the principles and goals of Christian service. Emphasis is also placed on the philosophy of the Christian mission.

## TNAA

Students are required to complete a minimum of 192 credits in the TNAA program. This includes all courses required for graduation, including the required English courses, and the required credits in the TNAA program.

In addition to courses within the regular college curriculum as approved by the Transitional Curriculum adviser.

Students are prepared for courses within this curriculum on the basis of test scores from their entrance examinations and/or high school grades. Credits received from the courses in this curriculum are non-transferable and will be in addition to the 192 credits required for graduation.

A transitional curriculum coordinator closely advises and schedules regular academic counseling sessions for all students in this program. This counseling procedure continues throughout the freshman year although most transitional students are able to carry a full college load by the beginning of the sophomore year.



1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

## 251, 252, 253 STRING ORCHESTRA

Organization which performs both on and off campus a cross-section of standard literature from the Baroque Era to the present. Membership is by audition.

## 254, 255, 256 WALLA WALLA SYMPHONY

A community symphonic orchestra which presents frequent musical concerts per season. Membership is by audition.

## 257, 258, 259 APPLIED MUSIC

Students may receive credit for applied music instruction in a variety of instruments. Instruction is available for the following instruments: piano, voice, guitar, bass, drums, and other instruments. Credit is given for up to six credits in applied music at Walla Walla College.



## 107, 108, 109 APPLIED MUSIC

Beginning

## 117, 118, 119 APPLIED MUSIC CLASS INSTRUCTION

Teachers may offer instruction to groups in general or specialized areas of performance interest. Voice and piano classes are most common.

## 127, 128, 129 APPLIED MUSIC

Intermediate

SITTNER HALL — Men's Dormitory

## 227, 228, 229 APPLIED MUSIC

Upper intermediate

## **NONDEPARTMENTAL**

### **GENERAL**

#### **90 DEVELOPMENTAL READING 2**

This course is designed to help college students develop speed and comprehension in reading. The latest reading techniques are taught and some of the best equipment is available for classroom use. It is a highly recommended course, especially for students whose reading habits are poor. Proficiency in reading means improved study skills.

#### **207, 208, 209 ARTS AND IDEAS 2, 2, 2**

A course designed to survey and integrate the arts of architecture, sculpture, painting, literature and music, and to show their relation to the general trends of Western culture as an aesthetic outgrowth of the intellectual interests and economic conditions of the various periods of history.

#### **233 MISSIONS ORIENTATION 2**

An interdisciplinary course designed to acquaint the student missionary with cultural differences through conceptual orientation and exposure to the practical aspects of foreign service. Emphasis is also placed on the philosophy and purpose of missions.

## **TRANSITIONAL CURRICULUM**

The transitional curriculum is designed for freshman students who have been accepted by the college with an inadequate background for attempting a full academic program. It consists of courses in English (99 - English Composition), mathematics (99 - Intermediate Algebra) and Developmental Reading, in addition to courses within the regular college curriculum as approved by the Transitional Curriculum adviser.

Students are registered for courses within this curriculum on the basis of test scores from their entrance examinations and/or high school grades. Credits received from the courses in this curriculum are non-transferable and will be in addition to the 192 credits required for graduation.

A transitional curriculum coordinator closely advises and schedules regular academic counseling sessions for all students in this program. This counseling procedure continues throughout the freshman year although most transitional students are able to carry a full college load by the beginning of the winter quarter.

## NURSING, SCHOOL OF

Wynelle Huff, Dean; Rosalee Abrams, Wanda Anderson, Florence Carrigan, Janice Chance, Edna Downing, Judy Farnsworth, Juanita Hunter, Ingrid Johnsen, Lenoa Jones, Miriam Kelly, Anne Lindt, Annette Lofftus, Bonnie Meyer, Verlene Meyer, Ronald Mitchell, Wanda Newcomb, Carolyn Olson, Harold Osterud, Sharon Rawson, Joyce Riter, Vivian Robertson, Ruth Schneider, Laura Tomanka, Fred Troutman, Betty Wallace, Robert Wolgamott, Lois Whitchurch, Betty Winslow.

### PHILOSOPHY AND OBJECTIVES

Walla Walla College School of Nursing, as part of a Seventh-day Adventist Church-sponsored educational system, builds its philosophy on the basic concept that the character of God is love and that the entire relationship of man-to-God and man-to-man should be one of unselfish love.

This gives rise to the concept of loving service which is seen as the motivating factor in the interaction between the Christian nurse and those in his/her care. This interacting service is directed to positive movement of the state of man toward an optimum level of wellness. This optimum level of wellness, which is reflected in his ability to function interdependently in his individual, familial and societal environment, is directly related to the extent to which his basic needs are met.

The Christian professional nurse possesses characteristics of compassion and concern which complements his/her abilities to promote, directly or indirectly, high-level wellness. A strong scientific foundation provides the basis for these abilities which include the application of descriptive, explanatory and predictive principles of the making of wise and independent judgments for the improvement of nursing services and adaptation to changing situations. Based on these judgments, the nurse makes decisions for action and accepts responsibility for the outcome of these actions.

A graduate of this program will be expected to:

Implement the nursing process of assessment, planning, intervention and evaluation; (This involves professional insights into the physical, mental, emotional, social and spiritual needs of persons of all ages and in all environments.)

Demonstrate the use of leadership skills in the coordination of nursing care; (This operates in the context of independent action and in cooperation with other members of the health team.)

Communicate significantly in interpersonal relationships, and as a practicing professional;

Teach health concepts and health care to individuals, families and associated personnel;

Demonstrate professional growth.

## COOPERATING INSTITUTIONS

Extended campus facilities are located in Portland, Oregon. Teachers' offices, classrooms and a library are housed in a facility of Portland Adventist Hospital.

In order to achieve the educational objectives of the program, observation and laboratory practice is selected according to planned experiences. The school of nursing has agreements with many health agencies and institutions which provide facilities for instruction of students. In the Walla Walla area these include the Veterans Administration Hospital, Walla Walla General Hospital, Walla Walla Family Planning Clinic, Walla Walla Mental Health Center, Migrant Labor Camp and the Eastern Oregon Hospital and Training Center located in Pendleton, Oregon. Agencies used by agreement in the Portland area include the Portland Adventist Hospital, Woodland Park Hospital, Woodland Park Mental Health Center, Kaiser Permanente Clinic, Child Development and Rehabilitation Center, University of Oregon, Cedar Hills Psychiatric Hospital, Clackamas County Health Department, Southwest Washington Health District Health Department, Multnomah County Health Department, Washington County Health Department, and several public and parochial elementary and secondary schools. Other agencies may be used for the elective quarter.

## ACCREDITATION AND LICENSURE

The school of nursing holds agency membership in the Department of Baccalaureate and Higher Degree Programs of the National League for Nursing and is accredited by the Board of Review of that body. It is approved by the Washington State Board of Professional Nursing and is registered with the Board of Regents of the Department of Education of the General Conference of Seventh-day Adventists.

Upon successful completion of the four-year baccalaureate program, graduates are eligible for admission to the examination for licensure as registered nurses.

## PROGRAM INFORMATION

The dean of the school of nursing maintains offices in College Place, Washington, and in Portland, Oregon. Students who need special information or assistance with program planning may correspond with the dean at the following address:

6014 Southeast Yamhill  
Portland, OR 97215

## ADMISSION

The nursing program is open to the following:

Freshman students by a diploma of graduation from an accredited high school or academy;

Transfer students from other accredited colleges or universities;

Registered nurse students.

## **NURSING**

Applicants in all categories listed above must send their application for admission to:

Director, Admissions and Records  
Walla Walla College  
College Place, WA 99324

The general high school prerequisites for admission to Walla Walla College are listed on page 38; the special prerequisites for nursing include two units of mathematics (one must be algebra, the other more advanced than algebra). High school chemistry is highly recommended.

### **Registered Nurse Students**

Graduates from approved diploma and associate degree programs may be admitted to the nursing program. The same high school prerequisites and general liberal arts courses or equivalent courses are required of registered nurse applicants that are required of basic students.

Registered nurses may establish credit by transfer of courses from other accredited colleges or universities, by validating examinations, or by taking courses as offered to basic students.

Validating examinations in nursing are given by the faculty of the school of nursing. If the student feels competent, he may establish credit by examination in the following nursing courses: 221, 222, 223; 341, 342, 343. If a satisfactory grade is earned on the examination, full credit for the course is allowed.

Credit for nursing courses carrying numbers above 400 may not be established by validating examinations.

## **TRANSPORTATION**

Students are responsible for their own transportation to agencies and institutions used for educational experience. Because public transportation is not always available, the student needs access to a car during the sophomore and junior years. A valid driver's license and use of an automobile are mandatory during the senior year in which the student has community health nursing experiences. Transportation costs will vary from quarter to quarter.

## **CURRICULUM**

The nursing program contains approximately equal portions of general education and professional courses and may be completed in twelve quarters.

If summer sessions are utilized for non-nursing classes, the program may be accelerated. Students who wish to have certain quarters free for work,



study, travel or relaxation, or who may wish to work on requirements for a minor, may plan an extended type of program. Students must plan their individual academic programs in consultation with the nursing advisers. Four to six quarters are spent on the Portland campus.

Students whose cumulative grade-point average falls below 2.00 (or C) on courses completed or who have received a grade lower than C in any nursing course will not be permitted to proceed with further coursework within the nursing major. Preference for continuation is given to students whose grade-point average is 2.25 or above. Any high school deficiencies must be completed by the beginning of the sophomore year or the student may not proceed in the nursing courses.

Nursing majors must meet the requirements for a Bachelor of Science degree as listed in the section "Degree Requirements." (See page 61-62.)

Students are not permitted to be dually enrolled at Walla Walla College and another college or university. Exception to this must be approved by the dean and the Academic Standards Committee and will be granted only in most unusual circumstances.

In addition to the regular degree requirements of the College, the following courses are required:

#### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

##### Major: Nursing

*Level II Nursing	221, 222, 223	12
Level III Nursing	341, 342, 343	39
Level IV Nursing	421, 422, 423	36
Introduction to Community Health and Epidemiology	322	4
*Anatomy†	Bio. 202	5
*Physiology†	Bio. 203	5
*Microbiology†	Bio. 222	5
*Introductory Chemistry I†	Chem. 101-102-103	9
*Human Nutrition	H. Ec. 220	3
*General Sociology	Soc. 204, 205	6

\*Must be completed before transfer to the Portland campus

†Meets the basic science requirement

In addition to the courses listed above as indicated by an asterisk (\*), the following general education courses must also be completed before transfer to the Portland campus:

College Writing	Eng. 101-102-103	9
Fine Arts/Literature/Speech (two basic courses, see p. 61.)		12
General Psychology	Psych. 121, 122	4
History of Western Civilization	Hist. 101, 102, 103	9
or		
History of the United States	Hist. 201, 202, 203	9
Religion		1
Physical Education (service course)		1
Electives		11

## NURSING

### Courses taken on the Portland campus:

Level III Nursing	341, 342, 343	39
Level IV Nursing	421, 423	24
Level IV Nursing	422	12
(Students may arrange to take at College Place or other approved site)		
Introduction to Community Health and Epidemiology	322	4
Religion		9
Physical Education (service courses)		2
Philosophy of Christian Education	Ed. 110	2

All nursing courses are offered each quarter of the regular academic year with the exception of 322 which is offered winter and spring quarters only.

### 175 NURSE'S AIDE SKILLS

2

A laboratory course providing for learning and hospital practice of skills which a nurse's aide would need to perform in the care of adult patients who are either totally or partially dependent on others for help with daily activities of living. Does not apply toward the nursing major. Open to all students. Two three-hour laboratory sessions per week.

### 221, 222, 223 LEVEL II NURSING

4, 4, 4

A study of man in wellness with an emphasis placed on normal basic needs and the sequential stages of growth and development. Interrelationships of these needs and their effects on the functioning of the whole person at an optimum level of health are considered. Nursing process skills of assessment, diagnosis, objective development, planning, implementation and evaluation are practiced on individuals and groups which are functioning on a wellness level. The student learns to differentiate normal from abnormal factors and to identify potentialities for enhancing healthful living capacities for themselves, other individuals, families and communities. An introduction to various roles of the professional nurse is included. The courses may be taken in any sequence. Each course is offered every quarter of the regular school year.

### 221 BASIC NEEDS IN WELLNESS - PSYCHOSOCIAL

This course includes theories of: love and love relationships; an individual's place in the world; group dynamics; communication process; psychosocial development throughout the life cycle; emotions; defense mechanisms; developmental crisis intervention, development of self-actualization and nutritional counseling.

Laboratory experiences provide for practical application of the theories. Prerequisites: Psychology 221, 222; Home Ec. 220.

### 222 BASIC NEEDS IN WELLNESS - SAFETY, COGNITIVE, AESTHETIC

A study of environmental pollution and hazards which interfere with a state of optimal wellness in man; safety aspects which include the prevention of illness and injury due to accidents, and first aid for various types of accidental injuries as covered in the American Red Cross Multi-media Course. The cogni-

tive section includes a study of the learning process; effects of mind on body; creativity; principles of research; health teaching; cultural aspects influencing the formation of beliefs, habits and values; a brief history of nursing; and ethical and legal considerations. Aesthetics includes the consideration of personal and environmental factors which produce pleasurable sensory stimuli and influence a person's state of wellness. Prerequisites: Biology 220; Corequisites: Sociology 204, 205.

## 223 BASIC NEEDS IN WELLNESS - PHYSIOLOGICAL

Opportunities are given for the student to implement the nursing process in the following areas: respiratory function, circulatory transport, fluid and electrolyte balance, body defenses, and neural and chemical regulations. Techniques for physical assessments are incorporated into the nursing process. Prerequisites: Biology 202, 203; Chemistry 101, 102, 103.

## 322 INTRODUCTION TO COMMUNITY HEALTH AND EPIDEMIOLOGY

4

A study of the historical background and general organization and structure of community health. Includes study of selected communicable diseases to assist the student in understanding the cause, prevention and control of disease. Includes an introduction to the use of statistics. W, S

## 341, 342, 343 LEVEL III NURSING

13, 13, 13

Opportunity is provided for guided practice in planning, giving and evaluating nursing care of the ill person in a variety of settings including hospital and community. A study of the interacting psycho-social, biological, spiritual and cultural factors which adversely affect the health of the individual from conception to death. Learning experiences are organized to include observation and care of expanding and contracting families. The interaction of family members and behavior manifest in times of physical and emotional crisis provide a basis for planning interventions by the health-team approach. Emphasis is placed on identifying and developing the nurse's role. Prerequisites: 221, 222, 223.

## 421 LEVEL IV NURSING—COMMUNITY HEALTH

12

Application of knowledge of health principles, methods and nursing skills for meeting the needs of individuals, family units and groups in the community. Emphasis is on how communities meet their health needs including the promotion of wellness. Experiences are obtained from community service agencies including mental health facilities. Prerequisites: 322; 341, 342, 343.

## 422 LEVEL IV NURSING—ELECTIVE

12

The student chooses an area of nursing where he/she will have guided in-depth study and practice. Principles, methods and practice in research related to nursing are included. Prerequisites: 341, 342, 343, 421 if student chooses community health elective; 423 if student chooses leadership elective.

**423 LEVEL IV NURSING—LEADERSHIP**

**12**

An exploration of the health care systems tracing the development of the team concept as well as other emerging patterns of nursing organization. Principles of administration, management and teaching are considered as they relate to the role of the professional nurse. Study is given to present-day trends in nursing, professional organizations, patterns of nursing education, nursing legislation and opportunities in the field of nursing. Laboratory experience is provided in planning, organizing and implementing nursing for groups of health care consumers. Prerequisite: 341, 342, 343.

## OFFICE ADMINISTRATION

Lee Loewen, Chairman; Virginia Mabley, E. Quiring.

The degree programs aim to train the student for an executive secretarial career and for the teaching profession. Administrative preparation on the collegiate level is integrated with a broad cultural education. The department also seeks to equip students with knowledge and skills necessary for stenographers and general office workers.

### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

#### Major: Office Administration

Secretarial Procedures	207, 208	8
Advanced Typewriting	222, 223	4
Business Machines	262, 263	4
Advanced Shorthand and Transcription	287, 288, 289	9
Business Communications	351, 352	6
Advanced Secretarial Procedures	409	4
The Professional Secretary	417, 419	6
Office Administration Seminar	491	1
Electives, upper-division		9
		<hr/> 51

#### Required Cognates:

Principles of Accounting	Bus. 111, 112	7
Data Processing	Bus. 153	4
Principles of Economics	Bus. 221, 222	6

Students preparing for medical secretarial work should complete the following:

Medical Office Procedures	447	3
Medical Terminology	448	5
*Anatomy	Bio. 202	5
*Physiology	Bio. 203	5
*Microbiology	Bio. 222	5

\*This sequence will meet the basic science requirement for graduation.

#### Major: Business Education

Secretarial Procedures	207, 208	8
Advanced Typewriting	221, 222, 223	6
Business Machines	262, 263	4
Advanced Shorthand and Transcription	287, 288, 289	9
Business Communications	351, 352	6
Advanced Secretarial Procedures	409	4
Methods of Teaching Business Education Subjects	472	4
Electives, upper-division, chosen from:		<hr/> 15
Office Administration	(12)	53-56
Business and/or Economics	(12)	
Office Administration, Business Administration and/or Economics	(15)	



## OFFICE ADMINISTRATION

### Required Cognates:

Principles of Accounting	Bus. 111, 112, 113	10
Data Processing	Bus. 153	4
Principles of Economics	Bus. 221, 222, 223	9
Business Law	Bus. 341, 342, 343	9

The student must meet teacher certification requirements as outlined in the publication, *Guidelines for Certification*. (Refer to p. 107 of this bulletin.)

No minor is required for the Bachelor of Science degree with a major in Business Education.

Students planning to do graduate work should complete Business Statistics (Business 444) or Elementary Statistics (Psychology 350).

### OFFICE ADMINISTRATION—MINOR REQUIREMENTS:

Advanced Typewriting	221, 222, 223	6
Business Machines	262, 263	4
Advanced Shorthand and Transcription	287, 288, 289	} 9
or		
Proficiency in Voicescription (If voicescription is chosen, approved electives are required.)		
Advanced Secretarial Procedures	409	4
Electives		7
		<hr/> 30

The following courses do not apply toward a major or minor for the Bachelor of Science degree or as electives for the Associate of Science degree:

Beginning Typewriting	121, 122, 123
Shorthand Theory	141, 142, 143

## ASSOCIATE OF SCIENCE DEGREE

The Associate of Science degree with areas of specialization in office secretary, medical secretary and secretarial accounting is offered, requiring the completion of 96 credit hours including certain specified courses. The program is designed to be completed in two years.

The program aims to prepare the student for the responsibilities of a secretarial career as compared with the more limited training of the stenographer, which depends upon the basic skills of typewriting and shorthand. While these skills are emphasized, the advanced students in this two-year program are given the opportunity for specialization in the business and professional areas of the secretarial field through the three courses of study described below.

If, after successful completion of this two-year program, the student wishes to continue for the Bachelor of Science degree with a major in office administration or business education, he may do so without loss of credit.

**ASSOCIATE OF SCIENCE DEGREE—REQUIREMENTS:****General Requirements:**

College Writing	Eng. 101-102-103	9
Religion		8
Physical Education (service courses)		2
Personal Finance	Bus. 131	2
Electives (from published bachelor's degree general requirements)		12
		<hr/> 33

**Concentration: Office Secretary**

Mathematics of Business	171	2
Secretarial Procedures	207, 208	8
Advanced Typewriting	221, 222, 223	6
Traditions and Practices of Business	235	4
IBM Key Punch	240	1
Business Machines	262, 263	4
Advanced Shorthand and Transcription	287, 288, 289	9
Business Communications	351, 352	6
Applied Office Administration	380	1
Electives from the Department		6
Electives (as approved by department chairman)		8
		<hr/> 55

**Required Cognates:**

Principles of Accounting	Bus. 111	4
Data Processing	Bus. 153	4

**Concentration: Medical Secretary**

Mathematics of Business	171	2
Advanced Typewriting	221, 222, 223	6
Traditions and Practices of Business	235	4
IBM Key Punch	240	1
Business Machines	262, 263	4
Advanced Shorthand and Transcription	287, 288, 289	9
Business Communications	351, 352	6
Applied Office Administration (Clinical)	380	1
Medical Office Procedures	447	3
Medical Terminology	448	5
Electives from the Department		4
		<hr/> 45

**Required Cognates:**

*Anatomy	Bio. 202	5
*Physiology	Bio. 203	5
Principles of Accounting	Bus. 111	4
Data Processing	Bus. 153	4

\*Students planning to continue at another institution for  
Medical Records Librarianship must also complete Biology 222.

## OFFICE ADMINISTRATION

### Concentration: Secretarial Accounting

Principles of Accounting	Bus. 111, 112, 113	10
Mathematics of Business	171	2
Secretarial Procedures	207, 208	8
Advanced Typewriting	221, 222, 223	6
Traditions and Practices of Business	235	4
IBM Key Punch	240	1
Business Machines	262, 263	4
Business Communications	351, 352	6
Applied Office Administration	380	1
Electives from the Department		6
Electives (as approved by department chairman)		11
		59

### Required Cognate:

Data Processing	Bus. 153	4
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### TWO-YEAR CERTIFICATE—REQUIREMENTS:

This program constitutes the first two years of the four-year degree program. It is designed for the student who is interested in obtaining basic secretarial skills and early job employment.

After successful completion of this two-year program, the student may continue toward the Bachelor of Science degree with a major in office administration or business education.

Shorthand Theory	141, 142, 143	9
Mathematics of Business	171	2
Secretarial Procedures	207	4
Advanced Typewriting	221, 222, 223	6
Traditions and Practices of Business	235	4
Business Machines	262, 263	4
Advanced Shorthand and Transcription	287, 288, 289	9
Applied Office Administration	380	1
Electives (in counsel with department chairman)		46

### Required Cognates:

Personal Finance	Bus. 131	2
College Writing	Eng. 101	3
Religion		6
		96

### CLERICAL CERTIFICATE—REQUIREMENTS:

A two-year certificate with same requirements as above except the student may substitute, in counsel with the department chairman, an elective in place of the shorthand requirement.

### 121, 122, 123 BEGINNING TYPEWRITING 2, 2, 2

Introduction to touch typewriting with emphasis on basic theory, speed, accuracy. The first quarter (121) of this course will be offered

each quarter and may be taken by anyone for personal-use typewriting. Does not apply toward a major or minor for the Bachelor of Science degree or as an elective for the Associate of Science degree.

**141, 142, 143 SHORTHAND THEORY 3, 3, 3**

The principles of Gregg shorthand are taught with emphasis on correct writing and transcribing of shorthand notes. Does not apply toward a major or minor for the Bachelor of Science degree or as an elective for the Associate of Science degree.

**171 MATHEMATICS OF BUSINESS 2**

Includes the study of payroll mathematics, interest, negotiable instruments, markup, discounts, depreciation, sinking funds, insurance and installment buying.

**207, 208 SECRETARIAL PROCEDURES 4, 4**

A preparation for the activities and procedures common to most stenographic jobs, including business English, records management, receptionist duties and office ethics.

**221, 222, 223 ADVANCED TYPEWRITING 2, 2, 2**

A continuation of the study of touch typewriting with emphasis on increase of speed, accuracy and skill in the production of business papers. The course work is arranged to provide for individual differences due to the background of the student in typewriting.

**235 TRADITIONS AND PRACTICES OF BUSINESS 4**

The development of the basic traditions and concepts of law in business practices and a study of the impact of consumer decisions upon the American economy with emphasis on the application of economic principles to the solution of the problems of individuals and society in general.

**240 IBM KEY PUNCH 1**

Gives basic knowledge and skill in punch card operation. Supervised experience on the IBM 029 Printing Card Punch is provided. Permission from the instructor required.

**262, 263 BUSINESS MACHINES 2, 2**

Instruction and practice in the use of adding and calculating machines, duplicating machines and voicescription machines. Prerequisite: 121.

**287, 288, 289 ADVANCED SHORTHAND AND TRANSCRIPTION 3, 3, 3**

A review of the principles of Gregg shorthand and emphasis on speed in taking and transcribing business dictation. The criteria for this course is mailability of all business correspondence.

**351, 352 BUSINESS COMMUNICATIONS 3, 3**

A study of the principles basic to effective communication with application to specific problems related to business.

## OFFICE ADMINISTRATION

### **380 APPLIED OFFICE ADMINISTRATION 1-3; 3**

For qualified students to gain practical, on-the-job training experience in the following areas: advanced business machines, receptionist and PBX, clinical office practice. One to three credits any quarter; maximum, three credits.

### **409 ADVANCED SECRETARIAL PROCEDURES 4**

A study of the duties and problems of the secretary in business, including the study of personality, office relations and data processing.

### **417, 418, 419 THE PROFESSIONAL SECRETARY 3, 3, 3**

Considers the present and future problems facing the professional secretary including human relations, supervisory responsibilities and office management. The material covered gives the student the necessary background for taking the CPS examination.

### **427 ADVANCED TRANSCRIPTION AND SPEED BUILDING 4**

A course designed to develop speed in shorthand writing with rapid and accurate transcription. Special attention is given to transcribing reports, theses and bibliographies.

### **447 MEDICAL OFFICE PROCEDURES 3**

Designed to acquaint students with the specialized duties of a medical office with emphasis given to the preparation of medical office records.

### **448 MEDICAL TERMINOLOGY 5**

A study of the development of the basic medical vocabulary. Practice is given in the transcription of medical reports from voicescription machines. One laboratory per week. Prerequisite: Biology 202, 203 or equivalent substitution with consent of department chairman.

### **463 Bus. HUMAN RELATIONS IN MANAGEMENT 4**

See Department of Business.

### **463 THE LEGAL SECRETARY 2**

A course designed to acquaint students with legal terminology, preparation of legal documents, court procedures and management of the legal office.

### **472 METHODS OF TEACHING BUSINESS EDUCATION SUBJECTS 4**

A survey of the objectives, methods and techniques of teaching business education subjects in the secondary school. Observation, demonstration and class presentation are required.

### **474 THE DENOMINATIONAL SECRETARY 2**

A course which deals with denominational vocabulary, reporting techniques and the work of the denominational secretary. Special emphasis



## OFFICE ADMINISTRATION

is placed on an understanding of the Seventh-day Adventist denominational organization and activities.

### 491 OFFICE ADMINISTRATION SEMINAR

1-3; 3

For office administration majors for discussion, study, special problems, analysis of new trends in the field and study of the major areas in office administration. One to three credits any quarter; maximum, three credits.

### BACHELOR OF SCIENCE IN PHYSICS REQUIREMENTS:

Major: Physics		
Introductory Physics	PHYS 115, 116	2
*Principles of Physics	PHYS 212, 253	9
Principles of Physics	PHYS 215, 256	3
Introductory Electromagnetism	PHYS 311, 314	4
Thermodynamics	PHYS 313	4
Physics	PHYS 312, 315	4
Optics	PHYS 316	1
Optics	PHYS 321, 322	6
Physics	PHYS 317, 318	3
Theory of Relativity	PHYS 319	3
Electromagnetic Theory		
Advanced Nuclear Physics		
Physics		

#### Required Cognates:

General Chemistry	Chem. 161-162-163	12
Computer Science I	Eng. 218	2
Survey of Industrial Operations	IE&T 241, 242	4
Analytic Geometry and Calculus I, II, III, IV	Math. 181, 281, 282, 283	16
Probability and Statistics	Math. 311	4

### FOREMAN HALL - Women's Dormitory

\*Students having 9 hours of credit in General Physics, 211, 212, 213, may meet the Principles of Physics, 212, 222, 253, requirements by passing an examination set by the department of physics.

†Other courses involving manipulative skills may be substituted in consultation with the physics department chairman.

437. OFFICE ADMINISTRATION SEMINAR  
 For office administration majors for discussion, research, special projects, analysis of new trends in the field and study of the major areas in office administration. One to three credit hours depending on minimum class standing in various office positions and study and to give a general survey of the office position and study of personnel to give the

# 417; 418; 419 THE PROFESSIONAL SECRETARY 3, 3, 3

Considers the present and future problems facing the professional secretary including human relations, supervisory responsibility and office management. The material covered gives the student the necessary background for taking the C.P.S. exam.

## 427 ADVANCED TRAINING 4

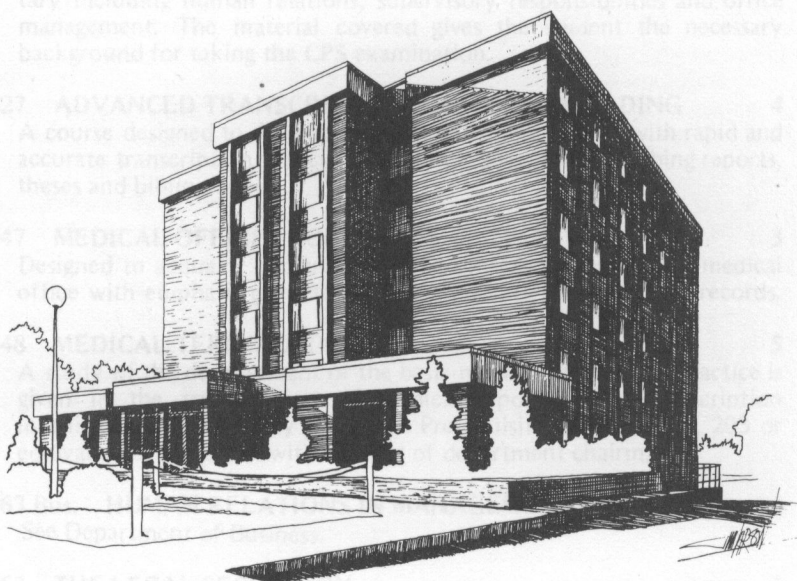
A course designed to give the student a thorough knowledge of the various aspects of the business world and to give the student a thorough knowledge of the various aspects of the business world and to give the student a thorough knowledge of the various aspects of the business world.

## 447 MEDICAL SECRETARY 3

Designed to give the student a thorough knowledge of the various aspects of the medical field and to give the student a thorough knowledge of the various aspects of the medical field.

## 448 MEDICAL SECRETARY 3

Designed to give the student a thorough knowledge of the various aspects of the medical field and to give the student a thorough knowledge of the various aspects of the medical field.



## 463 THE LEGAL SECRETARY 2

A course designed to give the student a thorough knowledge of the various aspects of the legal field and to give the student a thorough knowledge of the various aspects of the legal field.

## 472 METHODS OF TEACHING BUSINESS EDUCATION SUBJECTS 4

A survey of the various methods of teaching business education subjects in the secondary school. Observation, demonstration and class preparation are required.

## 474 THE DENOMINATIONAL SECRETARY 2

A course which deals with denominational vocabulary, reporting techniques and the work of the denominational secretary. Special emphasis

## PHYSICS

C. Barnett, Chairman; T. Anderson, G. Johnson.

The department offers a Bachelor of Arts degree and a Bachelor of Science degree with a major in physics, and jointly with the department of biology a Bachelor of Science degree with a major in biophysics. The physics major who is preparing for secondary teaching will normally choose the Bachelor of Arts degree, including the certification requirements as outlined in the publication, *Guidelines for Certification*. The Bachelor of Science degree is designed to prepare the student for graduate study and a career in applied or basic research and college teaching. The interdisciplinary major in biophysics should best fill the needs of the student who plans a career in medicine, or who plans on research and advanced study into the physics of living systems.

### BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

#### Major: Physics

Introduction to Experimentation	115, 116	2
*Principles of Physics	251, 252, 253	9
Principles of Physics Laboratory	254, 255, 256	3
Introduction to Modern Physics	311, 314	4
Thermodynamics	313	4
Physical Electronics	312, 315	4
Optics Laboratory	316	1
Optics	321, 322	6
Physics Seminar I	317, 318, 319	3
Theoretical Mechanics	362, 363	6
Electricity and Magnetism	401, 402	
Atomic and Nuclear Physics	411, 412, 413	
Physics Seminar II	417, 418, 419	3
		<hr/> 45

#### Required Cognates:

General Chemistry	Chem. 161-162-163	12
Computer Science I	Engr. 218	2
†Survey of Industrial Operations	IE&T 241, 242	4
Analytic Geometry and		
Calculus I, II, III, IV	Math. 181, 281, 282, 283	16
Probability and Statistics	Math. 311	4

\*Students having 9 hours of credit in General Physics, 211, 212, 213, may meet the Principles of Physics, 251, 252, 253, requirements by passing an examination set by the department of physics.

†Other courses involving manipulative skills may be substituted in consultation with the physics department chairman.

## PHYSICS

### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

#### Major: Physics

Introduction to Experimentation	115, 116	2
*Principles of Physics	251, 252, 253	9
Principles of Physics Laboratory	254, 255, 256	3
Introduction to Modern Physics	311, 314	4
Thermodynamics	313	4
Physical Electronics	312, 315	4
Optics Laboratory	316	1
Optics	321, 322	6
Physics Seminar I	317, 318, 319	3
Theoretical Mechanics	362, 363	6
Electricity and Magnetism	401, 402	8
Atomic and Nuclear Physics	411, 412, 413	9
Experimental Physics	414, 415, 416	3
Physics Seminar II	417, 418, 419	3

65

#### Required Cognates:

General Chemistry	Chem. 161-162-163	12
Computer Science I	Engr. 218	2
Circuit Analysis I	Engr. 228	4
Instrumentation	Engr. 324	} 3-4
or		
Digital Logic Circuits	Engr. 355	} 4
†Survey of Industrial Operations	IE&T 241, 242	
Analytic Geometry and		
Calculus I, II, III, IV	Math. 181, 281, 282, 283	16
Linear Algebra or equivalent	Math. 293	3
Probability and Statistics	Math. 311	4
Ordinary Differential Equations	Math. 312	4
Partial Differential Equations	Math. 313	} 4
or		
Intro. Theory of Complex Variables	Math. 423	

#### Major: Biophysics

##### Biology Requirements:

General Biology	101, 102, 103	12
Genetics	261	} 4
or		
Developmental Biology	266	} 4
Cell Physiology	392	

\*Students having 9 hours of credit in General Physics, 211, 212, 213, may meet the Principles of Physics, 251, 252, 253, requirements by passing an examination set by the department of physics.

†Other courses involving manipulative skills may be substituted in consultation with the department chairman.

## PHYSICS

Animal Physiology	393	}	4
or			
Plant Physiology	401		
or		}	4
Comparative Physiology	468		
General Ecology	446		4
Research Methods I, II, III	351, 352, 453		4
Colloquium	495		0
Required each quarter of juniors and seniors while in residence.			32

### Physics Requirements:

Introduction to Experimentation	115, 116	2
Principles of Physics	251, 252, 253	9
Principles of Physics Laboratory	254, 255, 256	3
Introduction to Modern Physics	311, 314	4
Thermodynamics	313	4
Optics Laboratory	316	1
Optics	321, 322	6
Physics Seminar I	317, 318, 319	3
Simulation and Modeling	371	3
Physics Seminar II	417, 418, 419	3
		38

### Required Cognates:

General Chemistry	Chem. 161-162-163	12
Organic Chemistry	Chem. 321-322-323	} 12
or		
Physical Chemistry	Chem. 351, 352, 353	
Computer Science I	Engr. 218	2
Circuit Analysis, Instrumentation	Engr. 228, Engr. 324	} 5-7
or		
Biophysics	Bio. 470	
Analytic Geometry and		
Calculus I, II, III, IV	Math. 181, 281, 282, 283	16
Probability and Statistics	Math. 311	4

No minor required. One summer term at the Marine Station is required.

### PHYSICS—MINOR REQUIREMENTS:

A minimum of 27 credits chosen in counsel with the department chairman.

#### 115, 116 INTRODUCTION TO EXPERIMENTATION 1, 1

Introduction to the principles and practice of hypothesis testing including physical measurement, experiment design and data analysis. Emphasis is placed on the use of the computer for data acquisition, graphical presentation and analysis of data and simple simulation. Prerequisite: Engineering 218. WS



## PHYSICS

### **211, 212, 213 GENERAL PHYSICS 3, 3, 3**

An introductory course in mechanics, heat, sound, light, electricity, atomic and nuclear physics, elementary particles, quantum mechanics and special relativity, designed primarily for the non-physics major to acquaint him with the ideas and methods of physics for possible application to problems in other areas of human endeavor. Prerequisites: Mathematics 121, 122 or equivalent. Physics 211 prerequisite for 212 or 213. Corequisite: 214, 215, 216, AWS

### **214, 215, 216 GENERAL PHYSICS LABORATORY 1, 1, 1**

Laboratory work integrated with 211, 212, 213. AWS

### **241, 242, 243 GENERAL ASTRONOMY 4, 4, 4**

Introduction to modern astronomy with emphasis on the place of astronomy in man's cultural and scientific thought and experience: planets, moons, comets, meteors, the solar system as a unit; the sun, stars, galaxies and the sidereal universe. Laboratory or night observation once a week. This course will meet the basic science requirement for the baccalaureate degree. Taught alternate years. AWS

### **251, 252, 253 PRINCIPLES OF PHYSICS 3, 3, 3**

An introductory course in mechanics, relativity, electromagnetism and wave motion, designed to provide the science and engineering major with an intuitive and a mathematical understanding of fundamental physical concepts. Must be taken in sequence. Prerequisites: Mathematics 181, 281. Corequisite: 254, 255, 256; Mathematics 282, 283. AWS

### **254, 255, 256 PRINCIPLES OF PHYSICS LABORATORY 1, 1, 1**

Experimental exploration and study of the fundamental concepts of physics. AWS

Physics 251, 252, 253 or equivalent and Mathematics 181, 281, 282, 283 prerequisite for all courses numbered 300 or above except 350, 352, 353, 471.

### **311 INTRODUCTION TO MODERN PHYSICS 3**

Basic principles of quantum theory, atomic and nuclear structure. Corequisite: 314, Mathematics 311. A

### **312 PHYSICAL ELECTRONICS 3**

Physical principles of solid state, gaseous and vacuum electronic devices. Prerequisite: 313. Corequisite: 315. S

### **313 THERMODYNAMICS 4**

An introduction to the physical theories of equilibrium thermostatics and irreversible thermodynamics based on elementary statistical mechanics. Prerequisite: 311, Mathematics 311. W

- 314 MODERN PHYSICS LABORATORY** 1  
Experimental study of the characteristics of alpha, beta and gamma radiation, interaction of radiation with matter, neutron activation. Co-requisite: 311. A
- 315 PHYSICAL ELECTRONICS LABORATORY** 1  
Experiments in crystal and semiconductor physics, properties of ionized gases, measurement of fundamental physical constants. Corequisite: 312. S
- 316 OPTICS LABORATORY** 1  
Experimental study of geometrical and physical optics. W
- 317, 318, 319 PHYSICS SEMINAR I** 1, 1, 1  
Contemporary and classical topics in physics presented for discussion and study with emphasis placed on underlying principles and the interrelation of physical concepts. Major topics will not be repeated more often than biyearly. Regular use will be made of the current literature of physics. AWS
- 321, 322 OPTICS** 3, 3  
Classical theory of radiation and optics based on Maxwell's equations: reflection, refraction, dispersion, diffraction, interference, coherence, polarization, scattering, polychromatic waves. Corequisite: 316. AW
- 350 PHYSICS AND MODERN LIFE** 3  
A study of the relations of physics to modern life in such areas as technology, economics, sociology, fine arts, philosophy and religion. One area is selected for emphasis. No prerequisites. S
- 352, 353 RADIOISOTOPE RESEARCH TECHNIQUES** 2, 2  
Laboratory work accompanied by lectures appropriate to the techniques studied in the laboratory; radiation detection, instrumentation, radiological safety, interaction of radiation with matter, ionization chambers, proportional counters, Geiger counters, scintillation counters, spectrometers, monitoring and survey instruments, activation analysis, selected biological and chemical studies. Prerequisite: 211, 212, 213, or Chemistry 161-162-163. Offered alternate years. WS
- 362, 363 THEORETICAL MECHANICS** 3, 3  
Statics and dynamics of particles, fluids and rigid bodies, harmonic and orbital motion, Lagrangian and Hamiltonian mechanics. WS
- 371 SIMULATION AND MODELING** 3  
Study of contemporary methods of simulation and modeling of deterministic and probabilistic systems using BASIC, FORTRAN and ISL

## PHYSICS

(Integrated Simulation Language). Applications to biology, business, engineering and physics. Prerequisites: Engineering 218 or equivalent; Mathematics 181 and 293 or equivalent; Biology 350 or Business 444 or Mathematics 311 or equivalent. S

### **401, 402 ELECTRICITY AND MAGNETISM 4, 4**

Electric and magnetic field theory, polarization, magnetization, solutions to the equations of Laplace and Poisson, Maxwell's equations, applications to plane waves, and dipole radiation. AW

### **411, 412, 413 ATOMIC AND NUCLEAR PHYSICS 3, 3, 3**

Experimental and theoretical foundations of modern atomic and nuclear physics: special relativity, elementary quantum mechanics, atomic structure and spectra, nuclear structure, nuclear reactions, fundamental particles. Prerequisite: 311, 321. Corequisite: 414, 415, 416. AWS

### **414, 415, 416 EXPERIMENTAL PHYSICS 1, 1, 1**

Experimental investigations in classical and modern physics. AWS

### **417, 418, 419 PHYSICS SEMINAR II 1, 1, 1**

Contemporary and classical topics in physics presented for discussion and study, with emphasis placed on underlying principles and the interrelation of physical concepts. Major topics will not be repeated more often than biyearly. Regular use will be made of the current literature of physics. AWS

### **471 METHODS OF TEACHING PHYSICAL SCIENCE 3**

Materials, techniques and methods of teaching the physical sciences on the secondary level. Observation, demonstration and class presentation are required. Special attention is given to newer methods of teaching science to the secondary student.

# SOCIOLOGY AND SOCIAL WORK

Wilma Hepker, Chairman; R. Gardner, Ronaele Whittington

The Department of Sociology and Social Work offers a Bachelor of Arts degree in sociology and a Bachelor of Science degree in social work. A minor is available in both sociology and social work.

## SOCIOLOGY

Sociology broadens the student's perspective of the overall organization and function of society. A sociologist is concerned with the scientific study of social phenomena arising out of group relationships. A major in sociology is useful as preprofessional preparation for advanced research and teaching in sociology, community planning, public administration, law and medical professions, and other fields concerned with plural relationships.

### BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

#### Major: Sociology

General Sociology	204, 205	6
History of Sociological Thought	464	3
Sociological Theory	465	3
Methods of Social Research	466	3
Electives		<u>30</u>
A program of 30 elective credits must be planned in consultation with, and approved by, a sociology adviser. Courses will be selected from a variety of sociological areas such as family, religion, criminal justice, etc.		45

A minimum of 15 elective credits must be on the upper-division level.

Up to 9 credits of *approved* electives may be taken in psychology, social work, history, political science, economics and biology.

#### Required Cognates:

Elementary Statistics	Psych. 350	4
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### SOCIOLOGY—MINOR REQUIREMENTS:

General Sociology	204, 205	6
Electives (10 credits must be upper-division)		<u>24</u>

A program of 24 elective credits must be planned in consultation with, and approved by, a sociology adviser. Courses will be selected from a variety of sociological areas such as family, religion, criminal justice, etc.

A minimum of 10 elective credits must be on the upper-division level.

Up to 9 credits of *approved* electives may be taken in psychology, social work, history, political science, economics and biology.

## SOCIOLOGY AND SOCIAL WORK

### SOCIAL WORK

The major in social work is designed to prepare the student to begin professional social work practice, to pursue graduate professional education in social work, and to use the major as preparation for other professions and services. Supervised field experience in selected social work agencies is an integral part of the program.

#### BACHELOR OF SCIENCE DEGREE—MAJOR REQUIREMENTS:

##### Major: Social Work

Introduction to Social Work	201	3
General Sociology	204, 205	6
Human Development and the Family	310	3
Social Welfare as a Social Institution	321	3
Sociology of Communities	351	3
Social Work Practice with Individuals	361	3
Social Work Practice with Families and Small Groups	362	3
Field Work	370	12
Methods of Social Research	466	3
Electives (6 credits must be upper-division)		<u>21</u>

A program of 21 elective hours must be planned in consultation with and approved by the social work adviser. Courses will be selected from the areas of Sociology; Social Work; Corrections, Law Enforcement and Criminal Justice; Psychology.

60

Each student must take at least 3 credits of psychology in addition to the basic requirement of General Psychology. (This requirement would not apply to those majors who choose a psychology minor.)

Up to 10 credits of *approved* electives taken in departments other than those represented above may be applied to the social work program.

##### Required Cognates:

Elementary Statistics	Psych. 350	4
American Government <i>or</i>	Pol. Sc. 203	} 3
The Making of Modern America (1877-1919) <i>or</i>	Hist. 448	
Recent America, 1919 to Present	Hist. 449	

#### SOCIAL WORK—MINOR REQUIREMENTS:

Introduction to Social Work	201	3
General Sociology	204, 205	6
Human Development and the Family	310	3
Social Welfare as a Social Institution	321	3
Electives		<u>15</u>

A program of 15 elective credits must be planned in consultation with, and approved by the social work adviser. Courses will be selected from the areas of Sociology, Social Work, Corrections, Law Enforcement and Criminal Justice, and Psychology. Up to 6 credits of *approved* electives taken in departments other than those represented above may be applied to the social work minor.

30



## SOCIOLOGY

- 204, 205 GENERAL SOCIOLOGY** 3, 3  
A course dealing with the fundamentals of group behavior, social conditions and dynamics. Attention is also given to such phases as culture, groups, population trends, religions, institutions, social problems, theories and objectives. Must be taken in sequence.
- 230 MARRIAGE AND FAMILY LIFE** 2  
A course designed to help a student make the physical, economic and psychological adjustments necessary for happy marriage and parenthood; Christian philosophy and principles will be stressed; staff members and guest speakers will lecture and lead discussions.
- 245 CURRENT SOCIAL PROBLEMS** 3  
Applications of sociology to the study of social problems of particular concern in contemporary society.
- 254 RACIAL AND ETHNIC RELATIONS** 3  
The history, present status and problems of racial, religious and ethnic minorities in the United States and other countries.
- 263 CULTURAL ANTHROPOLOGY** 3  
A study of the origin and nature of culture, the uniformities and variations in man's cultural development as seen in preliterate societies, with special emphasis upon the value of the cultural concept. Prerequisite: 204, 205.
- 310 HUMAN DEVELOPMENT AND THE FAMILY** 3  
A developmental approach to the study of the individual as seen in the context of the family. The interrelation of biological, psychological and sociocultural systems and their effect on human development and behavior will be explored. The complete life cycle of the growth of an individual is studied and current theories concerning each stage of the family life cycle will be examined as they apply to the modern American family as well as families of other cultures. Prerequisites: 204, 205; Psychology 121, 122.
- 311 THE SOCIAL PSYCHOLOGY OF FAMILY LIFE** 3  
The social-psychological aspects of family life with special reference to the processes of family interaction in the development and maintenance of personal relationships.
- 337 POPULATION** 2  
Principles of demography and analysis of population problems.

## SOCIOLOGY AND SOCIAL WORK

- 351 SOCIOLOGY OF COMMUNITIES** 3  
The study of the social structure and interaction patterns of communities. The history of community development with special emphasis on urbanization and its effects on society.
- 431 SOCIOLOGY OF EDUCATION** 3  
Analysis of factors influencing the structure and function of the educational institution. Sociological factors related to the role of the school as a social system, with emphasis on peer groups and teenage subcultures, leadership types, power groups and the school as a selecting and sorting agency; sociometric devices.
- 432 SOCIOLOGY OF RELIGION** 2  
A sociological approach to organized religion, emphasizing the interaction between the church and its social setting. Varieties and sources of collective religious behavior with examination and classification of religious movements and reforms. Prerequisite: 204, 205.
- 447 SOCIOLOGY OF HEALTH AND ILLNESS** 3  
The study of social relations and culture as factors affecting health and illness, its prevention and treatment.
- 453 SOCIAL CONCEPTS OF GERONTOLOGY** 3  
A study of problems concerning the social role of the aged in society.
- 464 HISTORY OF SOCIOLOGICAL THOUGHT** 3  
History of sociological thought since earliest times including a study of early social writers and leading sociologists of the 19th and 20th centuries, including Comte, Malthus, Marx, Spencer, Durkheim, Weber and others.
- 465 SOCIOLOGICAL THEORY** 3  
A survey of modern theories with emphasis on theory construction in preparation for developing research designs.
- 466 METHODS OF SOCIAL RESEARCH** 3  
Application of sociological concepts and methodology to the investigation of social problems. Prerequisites: 204, 205; Psychology 350; senior standing.
- SOCIAL WORK**
- 201 INTRODUCTION TO SOCIAL WORK** 3  
The profession of social work in the United States; principles, methods and values of the social worker; settings for social work practice. Observations and field trips arranged.

**321 SOCIAL WELFARE AS A SOCIAL INSTITUTION** 3  
 Historical development of the current social welfare system, legal and political premises of social welfare, humanistic and democratic values of society and its implications for social welfare policy. Prerequisite: 201.

**361 SOCIAL WORK PRACTICE WITH INDIVIDUALS** 3  
 An introduction to social work methods provided through a survey of basic intervention skills and basic interviewing techniques. The Christian value system as it relates to social work practice is explored. Students participate in field experiences and videotaped interviews. Prerequisite: 201.

**362 SOCIAL WORK PRACTICE WITH FAMILIES AND SMALL GROUPS** 3  
 Building on basic intervention skills, students learn to apply knowledge about group processes in families and small groups in order to help individuals and groups more effectively. Students participate in observation and leadership of small groups. Corequisite or Prerequisite: Communications 207; Prerequisites: 201; 361.

**370 FIELD WORK** 2, 4, 6, 12; 12  
 Training under a professional worker in a public or private welfare or correction agency. Credit is earned at the rate of one credit hour for three hours of field work per week approved by the supervisor and instructor. Written reports and evaluations are included. Students who take twelve credits during one quarter will register for **block placement**. Block placements are designed to provide specialized training in social work or criminal justice. Instruction is offered on the College Place campus as well as at other locations in such fields as medical social work, school social work, secondary school residence counseling, pastoral social work, and public health social work. Prerequisites: 201; 204, 205; 321 and permission of the instructor. Corequisite or Prerequisite: 361, 362. Twelve credits are required for a social work major.

**383 SOCIAL WORK IN COMMUNITY SERVICES** 3  
 The social work method known as community organization is explored for its value in meeting the needs of large groups of persons such as churches, schools and neighborhoods for whom social problems are sought. Recommended prerequisite or corequisite: 351.

**452 CHILD WELFARE** 3  
 Historical and contemporary aspects of problems affecting children and the welfare services assigned to deal with these problems.

**461 COMPARATIVE THEORIES OF SOCIAL WORK PRACTICE** 3  
 An in-depth study of selected models of social work practice with individuals, families and groups. Social work students will become skilled in the use of at least one of these models. Prerequisites: 201; 321; 361; 362.

## **CORRECTIONS, LAW ENFORCEMENT AND CRIMINAL JUSTICE**

The student planning to go into the field of corrections, law enforcement and criminal justice is advised to select carefully the appropriate courses within the sociology or social work majors. Some financial aid may be available for those students who meet the requirements under the Law Enforcement Education Program (LEEP). Application for such aid must be presented to the student finance counselor at the beginning of the school year after the student has worked out his program of studies with his adviser in the department. At the student's request, the corrections emphasis will be indicated by a letter accompanying the transcript from the associate director of records.

### **220 INTRODUCTION TO LAW ENFORCEMENT AND CRIMINAL JUSTICE**

3

Philosophy and history of law enforcement; overview of crime and police problems; agencies involved in administration of criminal justice; processes of justice from detection of crime to parole of offender; evaluation of modern police services; survey of professional career opportunities and qualifications required. Observations and field trips arranged.

### **358 CRIMINOLOGY**

2

A study of the historical background of crime and factors of deviant social behavior; a survey of criminological theories to analyze contributing factors and evaluate remedial measures now in common use. Visits to agencies and institutions arranged.

### **359 JUVENILE DELINQUENCY**

2

A study of factors in delinquency, juvenile courts, detention and probation; an investigation and comparison of programs of treatment and prevention as well as the study of the role of volunteer service. Field trips arranged.

### **433 SOCIOLOGY OF LAW**

2

A general treatment of the social origins and consequences of law and legal process. Special emphasis is placed on problems of legal change and on the structure and functioning of legal sanctions. Social conditions affecting the administration of justice; role of social science in jurisprudence.

### **440 TREATMENT THEORIES AND PROGRAMS IN CORRECTIONS**

3

This course includes an analysis of major treatment theories utilized by counseling and rehabilitation personnel in major penal institutions and in community-based correctional programs. Emphasis is given to the influences of the entire criminal justice system on theories of treatment, and preventive as well as rehabilitative programs. Both adult and juvenile treatment programs are considered.



# THEOLOGY, SCHOOL OF

G. Balharrie, Dean; J. Brunt, E. Bursey, J. Dybdahl, J. Grove, Lucile Knapp, L. Lewis, M. Maxwell, A. Thompson, G. Winslow.

The principal purposes of the school of theology are to provide undergraduate education for students seeking to enter the ministry and to offer courses in religion as desired by students in various other curricula of the College.

Candidates for the ministry are selected on the basis of scholarship, spiritual qualities, cultural refinement, social sympathies and skills. Ministerial students are admitted to candidacy for a Bachelor of Arts degree with a major in theology upon the approval of the theology faculty at the beginning of the junior year. Those approved will then work to meet seminary entrance requirements by completing a theology major. Two additional years of graduate study at the Theological Seminary of Andrews University are recommended as prerequisite for the ministerial internship.

Those who expect a recommendation to the seminary and/or those who plan to be pastors, evangelists, Bible workers, or Bible teachers should take a theology major. The religion major is available to those who are not planning on the ministry, and for those planning on additional graduate training in such fields as medicine, dentistry and law.

All majors must successfully complete a senior comprehensive examination. Those planning to attend the seminary should make sure that they obtain the necessary undergraduate subjects required for entrance. Students who plan to teach religion in academies must aim for teacher certification as outlined in the publication, *Guidelines for Certification*, and they should consult the dean of the school of theology about courses required as early as possible in their college career.

## BACHELOR OF ARTS DEGREE—MAJOR REQUIREMENTS:

### Major: Theology

Ministerial Orientation	150	0
Theology I	141, 142, 143	9
Theology II	221, 222, 223	9
Development of the Christian Church	371, 372	6
Seminar in Theology	416	4
Elective (counsel with department adviser)		30
(11 hours must be upper-division)		<u>58</u>

### Required Cognates:

Greek I	Bib.Lang. 101-102-103	15
Greek II	Bib.Lang. 221, 222, 223	9
History of Civilization	Hist. 101, 102, 103	9
Fundamentals of Speech	Comm. 101-102	4



## THEOLOGY

Pulpit Address	Comm. 381, 382	6
Communication electives		2
Philosophy of Science	Bio. 407	3

### Major: Religion

Orientation for Religion Majors	250	0
Seminar in Religion	415	2
Electives (counsel with department adviser)		<u>48</u>
(19 credits must be upper-division)		50

### Major: Biblical Languages

Greek I	101-102-103	15
Greek II	221, 222, 223	9
Doctrinal Epistles of Paul	341, 342, 343	6-12
Later Epistles of Paul	344, 345, 346	
Pastoral and General Epistles	347, 348, 349	
Hebrew I	441, 442, 443	9
Hebrew Reading	451, 452, 453	0-6
Textual Criticism of the New Testament	461, 462	
Translation Problems	463	
Independent Study in Biblical Languages	477	<u>45</u>

### Required Cognates:

A Scientific Approach to Biblical Interpretation	Theo. 444	2
Biblical Archaeology	Theo. 445	2
The History of the English Bible	Theo. 446	2
Ancient Mediterranean Civilizations	Hist. 461	3
or		
Development of the Christian Church	Theo. 371	

## RELIGION—MINOR REQUIREMENTS:

A minimum of 30 credits, at least 9 of which must be upper-division.

## BIBLICAL LANGUAGES—MINOR REQUIREMENTS:

A minimum of 30 credits, at least 6 of which must be in upper-division language courses. Theology 371; 444, 445, 446 and History 461 are strongly recommended.

## BIBLICAL STUDIES

### 101, 102, 103 BIBLE SURVEY

2, 2, 2

An introductory course designed to provide the tools necessary for an understanding of the Bible. Portions of both the Old and New Testaments are studied in order that the student may gain insight into the major divisions of the Scripture story. Students having had Bible courses on the secondary or college level should not register for this course.

- 104, 105, 106 LIFE AND TEACHINGS OF JESUS** 2, 2, 2  
 A study of the life of Christ, His teachings, His methods, and the principles of His kingdom as they apply to life in the world today. *Those having had Theology I should not register for this course without special permission.*
- 111 MESSAGE OF THE OLD TESTAMENT** 4  
 A survey of the basic themes of the Old Testament.
- 112 THEOLOGY OF CHRISTIAN WITNESSING** 3  
 A study of the theology and methodology of the individual Christian witness in a contemporary world.
- 141, 142, 143 THEOLOGY I** 3, 3, 3  
 An introductory course which inductively leads the student into a study of the God-man, the nature of His kingdom and the teachings of Christ concerning Himself, His law and the way of salvation. The concepts of Matthew and John are studied so that the theology of Christ is seen against the background of His earthly life. Open only to theology majors. Must be taken in sequence.
- 150 MINISTERIAL ORIENTATION** 0  
 A ministerial orientation seminar offered the autumn quarter by the theology staff and visiting lecturers which includes the many facets of the ministerial profession. Required of all freshman and transfer theology majors.
- 201, 202, 203 FUNDAMENTALS OF CHRISTIAN BELIEF** 2, 2, 2  
 An introductory course in the evidences and principles of Christianity, consisting of a study of the basic concepts of religious faith and practice, and a survey of the fundamental doctrines as taught in the Bible.
- 211 CONTEMPORARY ISSUES IN ADVENTIST THOUGHT** 4  
 A study of current ideas and issues in Adventist theology designed for those who have an adequate background in Adventist doctrine.
- 221, 222, 223 THEOLOGY II** 3, 3, 3  
 An exegetical study of the writings of Paul and the General Epistles of the New Testament within their historical context. This course is particularly geared for those students planning for the ministry and is, therefore, open only to theology majors. *Students who have taken 257, 258, 259 or 464, 465, 466 should not register for this course without special permission.*
- 250 ORIENTATION FOR RELIGION MAJORS** 0  
 A departmental course to orient the student to the field of religion. Emphasis will be given to the relationship between the student's college program and his chosen life work. Required of all religion majors.

## THEOLOGY

### **257, 258, 259 THE PAULINE LETTERS** 2, 2, 2

An exegetical examination of each of Paul's letters within its historical context to determine the particular message of each, the literary devices employed to convey this message and its relevance for today.

### **321 DANIEL** 3

An advanced course on the historical setting and significance of the book. The prophetic features of the book are studied in the light of both secular and church history to provide the student with a clearer insight into contemporary religious conditions.

### **322 THE REVELATION** 3

An advanced course on the historical setting and significance of the book. The prophetic features of the book are studied in the light of both secular and church history to provide the student with a clearer insight into contemporary religious conditions.

### **351 PENTATEUCH** 3

An exegetical examination of significant passages in Pentateuch. Attention is given to the historical setting, authorship, time, circumstance of writing and other literary questions.

### **352 WRITINGS** 3

An exegetical examination of the historical and poetic books of the Bible. Attention is given to authorship, the time and circumstance of writing, and other literary questions.

### **353 OLD TESTAMENT HISTORY** 3

A study of the historical framework in which the religion of Israel developed. Attention is paid to dominant events and trends in God's saving relationship to His covenant people.

### **364, 365, 366 HEBREW PROPHETS** 3, 3, 3

A study of the major and minor prophets from the viewpoint that these things "were written for our admonition upon whom the ends of the world are come." Attention is given to the historical setting of the prophecies, with careful exegetical study of the text, emphasizing the fundamentals of the gospel as contained therein. Course 364 prerequisite to 365 or 366.

### **384 DOCTRINE OF THE SANCTUARY** 3

A study of the Hebrew tabernacle and its services with special emphasis on its significance for Christian faith in the twentieth century.

### **\*\*415 SEMINAR IN RELIGION** 2

This seminar involves intensive individual study, written reports and group discussion on assigned Biblical topics and contemporary theological and ethical issues. Open only to religion majors.

**\*\*Does not meet the basic religion requirements.**

**\*\*416 SEMINAR IN THEOLOGY 2; 6**

These seminars involve intensive individual study, written reports and group discussion on assigned Biblical topics and contemporary theological and ethical issues. Open only to theology majors who are advanced to candidacy. Two credits per quarter; maximum, six credits.

**426 ESCHATOLOGY 3**

A study of the final events of this earth's history as outlined in the great lines of Bible prophecy and the writings of Ellen G. White. Emphasis is placed upon the important issues in the great controversy between good and evil and the final establishment of God's everlasting kingdom upon the earth.

**464, 465, 466 NEW TESTAMENT EPISTLES 3, 3, 3**

An exegetical study of the writings of Paul and the General Epistles of the New Testament within their historical context. This course is intended for any student who wishes to make a thorough study of this literature. *Students who have taken 257, 258, 259 should not register for this course without special permission.*

**467, 468, 469 THE GOSPELS 3, 3, 3**

An exegetical examination of each gospel within its historical context to determine the particular message of each and the literary devices employed to convey this message and its relevance for today.

**CHRISTIAN PHILOSOPHY****330 CONTEMPORARY CHRISTIAN ETHICS 2**

A study of Biblical ethics in relation to current ethical views on conduct and behavior.

**341, 342 SPIRIT OF PROPHECY 2, 2**

A study of inspiration and revelation as given by God to meet the needs of man and their function through the centuries. Emphasis in the second quarter will be placed on the gift of prophecy as seen in the ministry of Ellen White. Must be taken in sequence.

**343 DENOMINATIONAL HISTORY 2**

A study of the rise and development of the Seventh-day Adventist denomination.

**421 INTRODUCTION TO PHILOSOPHY 2**

A course designed to acquaint the beginner with the vocabulary, methods and concerns of philosophy. Study is made of the living issues facing mankind and the efforts of philosophy to provide answers to these major human problems.

**\*\*Does not meet the basic religion requirements.**



## THEOLOGY

### 422 PHILOSOPHY OF RELIGION

2

A constructive study of religious feeling, thought and practice from a philosophical point of view. Attention is especially given to the fundamental reasoning underlying the Christian faith in general and the beliefs of Seventh-day Adventists in particular. Prerequisite: 421.

### 423 CONTEMPORARY PHILOSOPHY

2

A critical examination of the significant philosophical thinking of our time. The theories of naturalism, idealism, realism, pragmatism, logical empiricism, existentialism and other related movements will receive careful scrutiny. This comparative survey of twentieth-century systems is designed to assist the student in relating and communicating to the present civilization.

### 427, 428 CHRISTIAN DYNAMICS

3, 3

An analytical study and practical application of the dynamics of Christian behavior. An advanced course designed to guide the student in understanding and experiencing the moving physical, mental, spiritual and social forces that produce constructive thought, healthy motivation and positive action in the religious life. One lecture, one discussion, one laboratory period each week.

### 429 STUDIES IN CHRISTIAN DYNAMICS

2

A survey of research methods combined with individual, independent study carried out under the direction of the instructor. A representative paper will be required in which the student must show competence in study and research on an independent basis. Registration by permission of the instructor. Prerequisite: 427, 428.

## ARCHAEOLOGY AND RELIGIOUS HISTORY

### 371, 372 THE DEVELOPMENT OF THE CHRISTIAN CHURCH

3, 3

A course on the rise and development of Christianity from the apostolic age to modern times.

### 402 MODERN DENOMINATIONS

3

This course deals with the cardinal teachings of a number of the prominent religions of the world. Comparisons are made of the teachings relating to God, salvation, sin and the future.

### 403 WORLD RELIGIONS

3

A short study of the greater religions of mankind, such as Animism, Hinduism, Buddhism, Confucianism, Shintoism, Islam and Christianity. Consideration is given to the historical setting out of which these religions arose, their founders, their basic teachings and rituals, their conceptions of God and man, as well as their influence on cultural development.



**444 A SCIENTIFIC APPROACH TO BIBLICAL INTERPRETATION 2**

The doctrines of inspiration and revelation are considered in preparation for a survey of the history of the canon and the critical disciplines employed by scholars to arrive at a better understanding of the text.

**445 BIBLICAL ARCHAEOLOGY 2**

An introduction to the science of archaeology with particular attention to those discoveries which bear on the interpretation of the Biblical text.

**446 THE HISTORY OF THE ENGLISH BIBLE 2**

A survey of the history of the Bible from the earliest manuscripts through the science of textual criticism to a comparison of the numerous English versions currently available.

**APPLIED THEOLOGY****383 CHURCH ADMINISTRATION 3**

Study of church organization, election and duties of church officers, church boards, business meetings and finances, with opportunity for observation and participation in these phases of church activity. Careful study is given to principles of Christian worship and the special services of the church.

**393 CHURCH LEADERSHIP 3**

A course for the nontheology student to acquaint him with the operation of the church so that, as an informed layman, he may participate effectively in its operation.

**410 HOSPITAL MINISTERIAL TRAINING 2 or 6**

This course is offered as a seminar at the Portland Adventist Hospital or the Walla Walla General Hospital. Besides a balanced program of clinical experience, there will be films, discussion, lectures by physicians, chaplains and other resource personnel. Registration by permission only; class limited to five students. (Two credits, Walla Walla General Hospital; six credits, Portland Adventist Hospital.)

**442 PERSONAL EVANGELISM 2**

A course designed for students desiring to learn methods of individual religious instruction, the techniques of meeting objections, and the art of securing decisions. The preparation and giving of Bible studies will be featured. Special attention given to junior and youth evangelism.

**447 PASTORAL EVANGELISM 3**

A survey of evangelistic methods used by Seventh-day Adventist pastors. Emphasis will be placed on health evangelism, Sabbath-School outreach, cottage meetings, small-scale public evangelism and other soulwinning programs commonly used in the local church. Students will be encouraged to develop unique evangelistic approaches.

## **THEOLOGY**

- 460 FIELD EVANGELISM** 1-3; 3  
Experience in evangelistic techniques is obtained by giving Bible studies and/or holding meetings. One to three credits any quarter; maximum, three credits.
- 471 METHODS OF TEACHING BIBLE IN THE SECONDARY SCHOOL** 3  
An examination of current teaching practices in the secondary school in the area of religion with emphasis on objectives, content, organization, and materials and resources available. Observations in the schools along with microteaching giving opportunity to demonstrate competency is required. Will not apply on a major or minor in theology or religion.
- 472 PASTORAL COUNSELING** 3  
The basic principles of counseling studied from the perspective of the pastor.
- 473 INTRODUCTION TO PASTORAL CARE** 3  
The nature and function of pastoral care from a theological perspective. Practical applications of theological insights will be made to the vocation of the pastor.

## **BIBLICAL LANGUAGES**

- 101-102-103 GREEK I** 5-5-5  
An introductory study of the elements of New Testament Greek with experience in translation. This course emphasizes the development of the ability to read the original language, and at the same time aims to create an interest in the New Testament. The First Epistle of John is translated as well as selected chapters in the Gospel of John.
- 221, 222, 223 GREEK II** 3, 3, 3  
Continued reading in the Greek New Testament with emphasis upon principles of interpretative translation. The book of Revelation and selections from the Gospels are used in developing a facility in translation.
- 341, 342, 343 DOCTRINAL EPISTLES OF PAUL** 2, 2, 2  
An exegetical study of the great doctrinal epistles of Paul. Selections from the letters to the Thessalonians, Corinthians, Romans and Galatians are especially studied as examples of the apostle's theological writings.
- 344, 345, 346 LATER EPISTLES OF PAUL** 2, 2, 2  
An exegetical study of examples of Paul's later letters, especially the so-called prison epistles. The epistles of Paul to the Ephesians, Philipians and Colossians are studied as typical of this period of the apostle's life.

## THEOLOGY

### 347, 348, 349 PASTORAL AND GENERAL EPISTLES 2, 2, 2

An exegetical study of the Pastoral Epistles and the General or "Catholic" Epistles. Selections are studied from Paul's epistles to Timothy and Titus, and from the epistles of Peter, James and Jude.

### 441-442-443 HEBREW I 3-3-3

An introductory course in Biblical Hebrew. Emphasis is placed upon an intensive study of the grammar of this ancient language. The student is taught the ability to read from the Hebrew Bible and to use lexical materials.

### 451, 452, 453 HEBREW READING 2, 2, 2

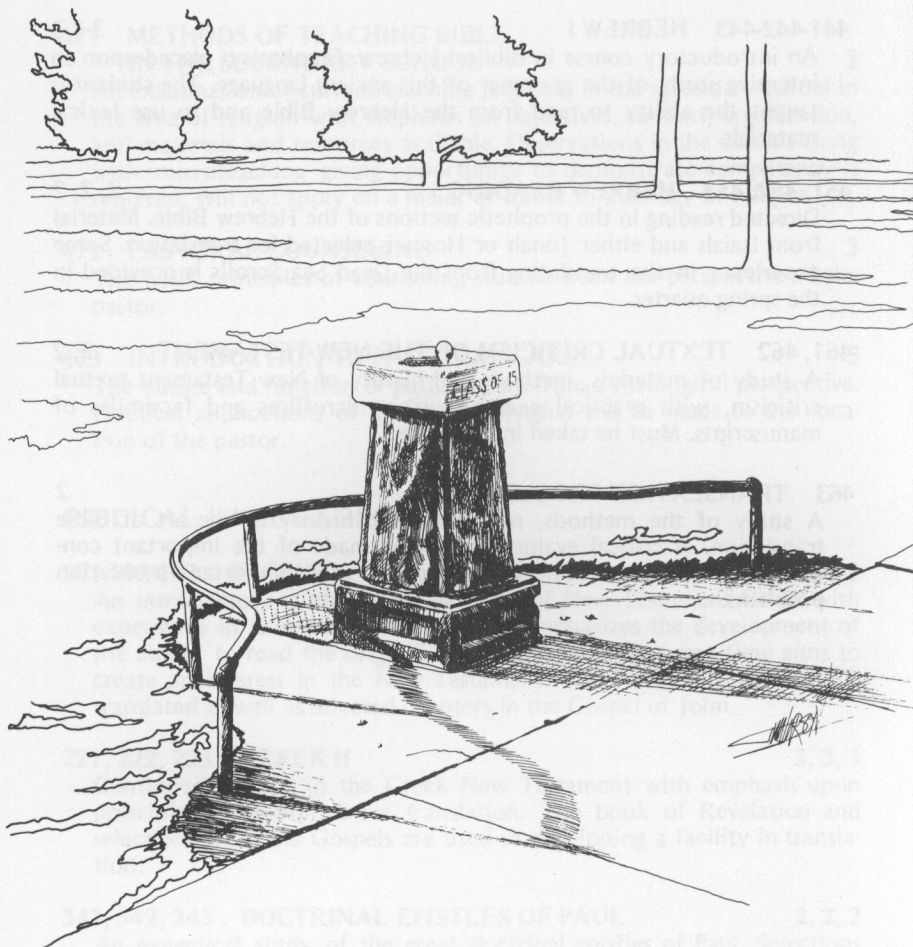
Directed reading in the prophetic sections of the Hebrew Bible. Material from Isaiah and either Jonah or Hosea is selected for translation. Some experience in the translating from the Dead Sea Scrolls is provided in the spring quarter.

### 461, 462 TEXTUAL CRITICISM OF THE NEW TESTAMENT 2, 2

A study of materials, methods and history of New Testament textual criticism, with practical exercise using microfilms and facsimiles of manuscripts. Must be taken in sequence.

### 463 TRANSLATION PROBLEMS 2

A study of the methods, resources and history of the art of Bible translation. A critical evaluation will be made of the important contemporary translations and of some of the more important translation problems.



FOUNTAIN OF '15

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## PREPROFESSIONAL COURSES OF STUDY

The College offers courses which are prerequisite for admission to professional or technical schools. Students wishing to secure admission to such schools should familiarize themselves with the admission requirements of the school of their choice. Most preprofessional curriculums require 2 units of high school mathematics (algebra and geometry). Preprofessional courses of study are offered for the professions hereinafter listed.

### CHIROPRACTIC

Adviser: Mr. Chambers

Two years of college preparation are generally required, including one year of biology and at least one year of chemistry. The student should obtain a bulletin from each chiropractic college to which he wishes to apply for information on entrance requirements. State requirements also vary, and such information is available from the chiropractic college. Of the dozen approved schools in the United States, Western States Chiropractic College in Portland, Oregon, is the only one in the Northwest.

### DENTAL

Adviser: Mr. Chinn

The minimum requirement for admission to the study of dentistry is 96 quarter credits. However, most dental schools expect candidates for admission to have completed a bachelor's degree. The following courses are basic:

College Writing	9
Religion	6 per year
Mathematics	8
General Biology or Zoology	12
General Chemistry	12
General Physics	12
Organic Chemistry	12
Survey of Industrial Operations	4
Sufficient electives to complete 96 credits.	

### DENTAL ASSISTANT

Adviser: Mr. Grable

The minimum requirement for admission to the study of dental assistantship is 48 credits from a liberal arts college. The following courses are to be included for the Associate of Science degree from Loma Linda University:



*Accounting or Bookkeeping	6
*Beginning Typewriting	6
Biology	4-12
College Writing	9
General Psychology	4
*Introductory Chemistry	9
Religion	6
Sociology	3
Speech	4
*U.S. History	9

\*Or secondary school credit with a grade of C or better. At least three of these areas should be taken on the secondary level to be able to complete the program in one year.

## DENTAL HYGIENE

Adviser: Mr. Grable

Students planning for careers in dental hygiene must complete 96 credits with a cumulative grade-point average of 3.0 or above before seeking admission to the various dental hygiene programs. Some schools require that electives include a foreign language. Other schools require the advanced First Aid Certificate; check with adviser.

### Loma Linda University

Experience has indicated that a minimum average of 3.00 is needed to compete for admission to the program at Loma Linda University. The following credits are required in preparation for advanced studies there:

College Writing	9
Speech	4
General Biology	12
Microbiology	5
Introductory Chemistry	9
Religion	12
History	9
General Psychology	4
General Sociology	3
Physical Education	3
Literature, Fine Arts and/or Foreign Language	15
Electives to be chosen in counsel with adviser	11

The Bachelor of Science degree is awarded by Loma Linda University.

## LAW

Adviser: Mr. Joice

There is no specific curriculum for pre-law students. The student should secure a broad liberal arts preparation. Courses which are designed to develop skills in both oral and written communication and ability to reason and think analytically are strongly recommended. Some of the courses generally considered desirable for pre-law students include:

Business 111, 112, 113—Principles of Accounting  
 Business 221, 222, 223—Principles of Economics  
 Business 341, 342, 343—Business Law  
 Communications 101-102—Fundamentals of Speech Communication  
 Communications 341—Logic  
 Communications 443—Persuasive Speaking  
 English 280—Advanced Writing  
 English 401—Expository Prose  
 Political Science 203—American Government  
 Political Science 401—Constitutional History  
 Sociology 220—Introduction to Law Enforcement and Criminal Justice  
 Sociology 433—Sociology of Law  
 Sociology 464—History of Sociological Thought

Most law schools require the completion of a bachelor's degree for admission. Admission requirements also include a satisfactory grade-point average and score on the Law School Admission Test (LSAT). Law schools vary in the levels of achievement required for admission. Students planning to study law should consult with the pre-law adviser to make sure the student's proposed schedule of courses will meet the requirements of the law school which they plan to attend.

## MEDICAL

Adviser: Mr. Chambers

Most medical schools require completion of a bachelor's degree with a grade-point average of 3.0 or above, computed separately for science and nonscience courses. The following courses are normally required:

English	9
General Biology	12
General Chemistry	12
Organic Chemistry	9-12
Physics	12
Religion	18

Calculus strongly recommended.

If applying to a medical school other than Loma Linda University, it is recommended the following courses also be included:

Developmental Biology  
 Quantitative Analysis  
 Physical Chemistry  
 Foreign Language

## MEDICAL TECHNOLOGY

Adviser: Mr. Schneider

Students wishing to become medical technologists may complete the first three years at the College and transfer to the Portland Adventist Hospital or other approved hospitals for the fourth year. Students should make application to the Portland Adventist Hospital during the summer

following the second year, or as soon thereafter as possible. Candidates who plan to go to hospitals other than the Portland Adventist Hospital must submit their request to the Academic Standards Committee for approval if they wish to obtain a degree from Walla Walla College. Upon completion of the fourth year, the student may receive a Bachelor of Science degree. The following courses must be completed:

First Year		Second Year	
Chemistry 161-162-163	12	Chemistry 244	4
Education 110	2	Biological Sciences	
Education 121, 122	4	101, 102, 103	12
English 101-102-103	9	History 101, 102, 103 or	
Mathematics 121, 122 or 181	8	201, 202, 203	9
Physical Education	3	Physics 211, 212, 213 and	
Religion	6	214, 215, 216	12
Electives	4	Religion	6
		Fine Arts, Literature, Speech	6
Third Year		Fourth Year	
Biological Sciences		The clinical year is 12 months at the Portland Adventist Hospital or at another approved hospital during which time there is no tuition charge.	
222 or 465	5		
Biological Sciences 202, 203 or			
392, 393	8-10		
Chemistry 321-322-323	12		
Chemistry 406	4		
Fine Arts, Literature, Speech	6		
Religion (UD)	6		
Electives (UD)	6-11		

Students majoring in medical technology must meet all degree and general educational requirements. During the pre-clinical experience the student must complete 144 credits, including 30 upper-division credits.

Students wishing a double major in medical technology and clinical chemistry should refer to the chemistry section of the bulletin.

## NURSING

Advisers: Miss Huff, Mrs. Lindt

For details about courses, etc., in nursing, please see Nursing, School of. Candidates who plan to enter other schools should write to the director of the nursing school of their choice and ask for specific requirements.

## OCCUPATIONAL THERAPY

Adviser: Mr. Schneider

Students who are preparing for the Bachelor of Science degree in occupational therapy should plan to complete 96 quarter credits before entering the professional training. The following curriculum is recommended:

Anatomy and Physiology	10
Microbiology	5
Chemistry or Physics or Mathematics	12
College Writing	9
Social Science	12
To include sociology, psychology; additional courses may be selected from economics, history or political science.	
Humanities	12
To include speech, general crafts and ceramics, and one or more of the following: fine arts (3 credits of applied music may be included), humanities, language, literature and philosophy.	
Religion	12
Electives	24
To meet the minimum of 96 credits. Courses in art and behavioral sciences are recommended.	

More than 30 institutions of higher learning accredited by the Council on Medical Education and Hospitals of the American Medical Association offer training in occupational therapy. Loma Linda University is generally chosen by Walla Walla College students.

## OPTOMETRY

Adviser: Mr. Anderson

Two years of college preparation are the minimum required for admission to most optometry schools, and this is generally followed by four years of training for the Doctor of Optometry degree. In some cases the Bachelor of Science degree may also be awarded by the optometry school.

The preprofessional curriculum should include as a minimum the following courses:

College Writing	9
*Fundamentals of Mathematics	8
Analytic Geometry and Calculus	4
General Biology	12
General Chemistry	12
General Physics	12
General Psychology	4

\*Fundamentals of Mathematics should be taken the first year.

It is important that the student obtain a catalog from each college of optometry he may wish to enter, since these schools differ widely in their recommendations of other courses for the pre-optometry program. Other commonly required courses include:

Organic Chemistry	12
Psychological Experiments	2

Competition for admission to some optometry schools is enough that the student would do well to complete a third year of college (and advanced courses in chemistry and biology) unless he achieves a very strong academic record.

## OSTEOPATHY

Adviser: Mr. Chambers

Schools of osteopathic medicine usually require a degree from an accredited college. The course requirements are essentially the same as for medical schools. (See the medical requirements as listed on page 247.)

## PHARMACY

Adviser: Mr. Chambers

At least two years of general college work are required. Students should consult with the college of pharmacy of their choice about courses required. The following should be included:

Bacteriology	5
Botany	3
College Writing	9
General Physics	12
Health Science	2
General Chemistry	12
Mathematics	8
Organic Chemistry	10
Physical Education	2
Physiology	5
Psychology	6
Quantitative Chemistry	5
U.S. History	9
Zoology	9

All pharmaceutical colleges require three years in residency beyond the two years of pre-pharmacy; some require four years.

## PHYSICAL THERAPY

Adviser: Mr. Schneider

The minimum requirement is the completion of 96 credits. The student should consult the adviser for pre-physical therapy. The credit hour requirements in the areas indicated below must be met.

College Writing	9
Humanities	12

Select from at least two fields: fine arts (3 quarter credits of applied music or arts may be included), language, literature, philos-



ophy or speech (highly recommended).

**Natural Sciences and Mathematics**

General Biology or Anatomy and Physiology 12

Microbiology 5

Chemistry 9-12

(a complete course with laboratory).

Physics 6

(a course with laboratory is required, in addition, of students not having had high school physics).

**Social Science 12**

To include child or adolescent psychology, general psychology, (minimum 4 credits).

Additional courses may be selected from economics, history, political science or sociology.

**Religion 12**

**Electives 18-21**

To meet the minimum of 96 credits. Courses in art and behavioral sciences are recommended.

## **PUBLIC HEALTH**

Adviser: Mr. Schneider

Loma Linda University offers a Master of Public Health (M.P.H.) as a professional degree that can be completed in three to six quarters. Major areas of study include biostatistics, environmental health, epidemiology, health administration, health education, nutrition, preventive care and tropical health.

The Master of Science in Public Health (M.S.P.H.) degree is offered in health education, biostatistics and parasitology and can usually be completed in four quarters.

Research and thesis programs leading to the Master of Science (M.S.) degree are offered through the graduate school by the departments of biostatistics and nutrition.

Specific information about prerequisites and programs leading to the above-mentioned degrees is available in the School of Health bulletin, Loma Linda University.

## RADIOLOGICAL TECHNOLOGY

Adviser: Mr. Schneider

Forty-five credits are required for admission to most schools of radiological technology. College courses should be chosen to remove high school deficiencies in mathematics and science, if such exist. Courses such as anatomy and physiology, chemistry, general psychology, general physics and mathematics should be taken, and, whenever possible, typing. Inquiry should be made of the school to be attended for specific entrance requirements.

## VETERINARY SCIENCE

Adviser: Mr. Rigby

There are approximately 18 colleges of veterinary science in the United States. Since the basic requirements are not exactly the same, the student should confer with the college of his choice. The following will generally meet the requirements:

Biology	17-25
General Biology	12
*Microbiology or Bacteriology	5
Electives	8
Chemistry	24-28
General Chemistry	12
Organic Chemistry	12
*Biochemistry	4
Physics	12
General Physics	12
Mathematics	8-12
Fundamentals of Mathematics	8
*Calculus I	4
College Writing	6-9
Humanities and Social Sciences	15-20
Physical Education	0-4

\*Not required by certain schools.

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## FINANCIAL INFORMATION

Walla Walla College desires that the financial arrangements and transactions be as considerate as possible for both students and parents. Several plans are available which should make it possible, as far as finances are concerned, for almost everyone who desires to attend Walla Walla College to realize this aim.

### 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.

### TUITION

1-12 credits	\$ 70 (per credit)
13-16 credits	895 (per credit)
above 16	60 (additional per credit)

Residence hall students will be charged a minimum of \$744 per quarter tuition except seniors in their final quarter who need less than 12 credits to graduate.

**STUDENT ASSOCIATION FEE.** A fee of \$15 per quarter is charged students registered for six or more credits which provides membership in the student association.

**AUDITING.** Regular tuition is charged for auditing classes.

**CHALLENGE EXAMINATION CREDITS.** One-half tuition is charged for credits received by challenge examinations.

**TUTORING.** Triple tuition is charged for individual tutoring.

**PAYMENTS REQUIRED TO REGISTER.** An advance payment of \$700 plus any balance due from a previous quarter shall be paid at time of registration. Part-time students shall pay the full tuition charge in advance if less than \$700.

## **FAMILY DISCOUNTS**

A ten percent discount will be allowed on tuition for each child when three or more single children from one family are in attendance at Walla Walla College during the same quarter.

Discounts will be forfeited if student status is terminated prior to the end of the period for which the discount was given.

## **BOOKS AND SCHOOL SUPPLIES**

Textbooks, stationery, gym suits and equipment and other materials needed for schoolwork may be obtained at the College Store at reasonable prices. **THESE ITEMS ARE TO BE PAID FOR IN CASH AT THE TIME OF PURCHASE.** Parents should allow the student \$75 to \$100 extra for such purchases each quarter.

## **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:

Accounting Office  
Walla Walla College  
College Place, WA 99324

## **SPECIAL FEES**

Application Fee (not refundable)	\$10.00
Aviation (as announced)	
Change of program, per subject	1.00

Classes having numerous or extended field trips will be given notice of special fees to cover expenses

Degree, Bachelor's and Associate	7.50
Degree, <i>in absentia</i> , Bachelor's and Associate	17.50
Degree, Master's	25.00
Degree, <i>in absentia</i> , Master's	35.00
ID Card Replacement	3.00
Late Registration	15.00
Special Examination	5.00
Transcript, first copy	free
Additional copies each	1.00
Validating Examination Fee—per quarter credit	2.00

## MUSIC FEES

Music lessons are offered on either a credit or non-credit basis. Where credit is desired, regular tuition is charged, and in addition a music fee of \$25, except for those music majors who have enrolled for Music Theory II.

Students not desiring credit will be charged as follows:

Half-hour lesson	\$ 70.00
One-hour lesson	140.00
Private lessons from a student	60.00

### Rentals:

Practice room (per quarter for students desiring practice only)	\$12.00
Organ (per quarter for students desiring practice only)	25.00
Band or orchestral instrument (per quarter for students desiring lessons and not possessing their own instrument)	10.00

## PHYSICAL EDUCATION FEES

Aquatics	\$25.00
Archery	5.00
Canoeing	10.00
Ceramics	20.00
Fencing	5.00
Golf, Beginning	10.00
Golf, Advanced	25.00
Horsemanship	40.00
Ice Skating	20.00
Lapidary	15.00
Mountaineering	10.00
Sailing	10.00
SCUBA Diving	15.00
Skating	20.00
Skiing (Spout Springs)	35.00



## RESIDENCE HALL EXPENSES

Where there is dual occupancy, the room rental charge for each student per quarter is:

Conard Hall	\$183
Foreman Hall	195
Sittner Hall	183
Whitman Lodge; Hallmark	183-210

The above charge includes flat laundry service (sheets, pillowcases, towels).

When rooms are available, single occupancy is permitted at an extra charge of \$35 per quarter.

Dormitory students should *not* bring their own laundry bags, as special bags will be provided by the College. Name tapes are recommended on items sent to the College Laundry.

**PERSONAL PROPERTY LOSS.** The College cannot accept responsibility for any loss of or damage to the personal property of any student.

**ROOM RESERVATIONS.** Each student resident in one of the college residence halls will be required to make a \$50 room deposit which will be credited to the account when the student permanently discontinues dormitory residence, less any room charges turned in by the dean for delayed departure, uncleaned rooms or room damage. This deposit will secure continuous room reservation on a year-by-year basis as long as the student desires dormitory residence.

A refund will be made until *August 1* each year upon receipt of a written cancellation of room reservation, but no refund is made thereafter.

**BOARD.** The cafeteria plan is followed in the college dining hall. Actual charges for food are billed to the student's statement each month.

**AUTOMOBILE PARKING FEE.** Residence hall students bringing automobiles with them will be charged a fee of \$5 per quarter for parking privileges. Covered parking is available at additional cost. The College does not carry parking lot insurance which will cover damage to the vehicle, or theft, or loss of any sort while parking in the lot. If such insurance is desired, comprehensive coverage can be secured by the owner at a more reasonable rate than can be provided by the College.

## REFUNDS

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

- Tuition: 90% during first week of quarter
- 75% between first and third weeks
- 50% between third and sixth weeks
- No tuition is refunded after the sixth week

Room Rent: 80% during first two weeks of quarter  
50% between third and fifth weeks  
30% between sixth and 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. (Also see *Room Reservations*.)

## INSURANCE—ACCIDENT AND HOSPITALIZATION

Student accident and hospital insurance is carried by the College under a blanket policy for all students enrolled for six or more quarter credits. The premium is charged on the student's September statement of account and provides coverage for 12 months whether or not the student remains in school for the full period of coverage. Information describing cost, coverage, and claim procedures will be supplied each student. Inquiries should be directed to the student health center.

## STUDENT HEALTH CENTER

The clinical facilities and 12 beds of the health center are available for students requiring treatment or minor hospitalization. Prescriptions and other medicines are available at special prices. A reasonable charge is made for hospitalization in excess of three days per quarter. The three days allowed per quarter are not cumulative. In case of serious illness or surgery, the Walla Walla General Hospital provides complete service to students. Financial arrangements must be made directly with the hospital.

## RELEASE OF TRANSCRIPTS OR DEGREES

By action of the Board of Trustees of the College, a degree or transcript of credit (official or unofficial) may not be released until the student's account is paid in full.

To expedite the release of transcripts, diplomas and other legal documents, the student should send a *money order* or *certified check* to cover the balance of his account when requesting transcripts, etc.

## INQUIRIES

Inquiries concerning student financial matters should be directed to the director of student accounts and labor, and those concerning financial aid should be directed to the director of financial aid. Inquiries concerning the academic or instructional program or admission should be directed to the office of admissions and records.

## FINANCIAL AIDS

**FINANCIAL AID POLICY.** Walla Walla College assumes that a student and his parents will take the primary obligation to pay for his education. Parents are expected to provide, as they are able, the basic essentials of life, whether the student lives in the community or on campus.

For families unable to meet the full costs of attending Walla Walla College, financial aid is available in the form of student employment, grants, long-term loans and scholarships. Grants and scholarships are *gift aid* and do not have to be repaid. Interest rates for long-term loans are extremely low, and repayment does not begin until after a student leaves college.

A freshman requesting aid is expected to earn at least \$600 during the school year.

Eligibility for aid is based on individual financial need and is evaluated by submitting an Application for Financial Aid to Walla Walla College, and a Parents' Confidential Statement (PCS) to College Scholarship Service (CSS). CSS will provide the college with a need analysis for determining the amount of aid to be awarded. In most cases, a student will be offered a package of financial aid including several forms of assistance.

PCS's are available from secondary school counselors and the WWC Financial Aid Office. First consideration for awards will be given to those students with greatest financial need who have complete materials (1. Results of PCS from CSS) (2. WWC Financial Aid Application) in the WWC Financial Aid Office prior to April 15.

**STUDENT LABOR.** Walla Walla College has year-round campus work opportunities, including work in Harris Pine Mills, College Place Plant, located on the campus, to help students earn a portion of their school expenses. These opportunities, while not unlimited, are many, and ordinarily take care of most students who need part-time employment. Students needing employment should seek their assignment through the office of student accounts and labor.

Students should not plan to earn all their expenses as there needs to be a balance between work and study. Students of average ability will find 8-12 hours a week an adequate work program. Students planning to work in the industrial departments such as the press, bindery, laundry, dairy and farm should plan to work a 15-20 hour week. *The responsibility of taking advantage of campus work opportunities rests with the student.*

## SCHOLARSHIPS, ASSISTANTSHIPS AND GRANTS

### MAXIMUM SCHOLARSHIP:

\$200 per year  
Nonrenewable

### ENTERING FRESHMAN ACHIEVEMENT AWARD.

The College awards a \$200 nonrenewable scholarship to any entering freshman who has placed scholastically in the upper five percent of his graduating class. To validate this award, evidence of class standing must be submitted to the director of financial aid.

\$300-\$500 per year  
Nonrenewable

**NATIONAL MERIT SCHOLARSHIPS.** The College will award scholarship to entering freshmen of the North Pacific Union Conference of Seventh-day Adventists who have placed in the National Merit Scholarship competition as follows:

Finalist	\$500
Semifinalist	\$400
Commended Student	\$300

These scholarships are nontransferable and nonrenewable.

Variable

**FORUM SCHOLARSHIP.** The Walla Walla College chapter of the Adventist Forum makes available several scholarships. Candidates must be of minority ethnic groups. Preference will be given to students from the North Pacific Union Conference. For additional information, contact the Adventist Forum Scholarship Fund Coordinator, c/o Walla Walla College, College Place, WA 99324.

Variable

**PUBLISHING HOUSE SCHOLARSHIPS.** Students may earn a portion of their school expenses by selling denominational literature during the summer. These scholarships apply to room, board, tuition and other direct school expenses. For details regarding this scholarship plan, write to the Publishing Secretary of the North Pacific Union Conference, P.O. Box 16677, Portland, OR 97216.

\$700 per year  
Renewable

**YOUTH SERVICE OPPORTUNITIES.** The College, in cooperation with the youth department of the North Pacific Union and the local conferences, makes available \$700 scholarships for students participating in the Youth Services Opportunities program during the summer. Service opportunities will be in the areas of youth camp work, vacation Bible schools, door-to-door visitations, etc. For additional information and application forms, write: Youth Department, P.O. Box 16677, Portland, OR 97216.

**MAXIMUM ASSISTANCE:**

\$1,350 per year  
and tuition waiver

**MAXIMUM GRANT:**

\$1,500 per year  
Renewable

**GRADUATE ASSISTANTSHIPS.** A few assistantships are available for graduate students in biology and education. Candidates applying for these assistantships should write to the respective department chairmen.

**SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT.** A limited number of undergraduate grants are available to qualified students. These grants are made available by the United States Department of Health, Education and Welfare. To qualify, a student must be enrolled as at least a half-time student and have *except-*



*tional* financial need as evidenced by submission of a Parents' Confidential Statement (PCS), and a WWC application for financial aid. Applications and PCS's are available through the college financial aid office.

\$100 per year  
Nonrenewable

#### **W.C.P.T. FINANCIAL GRANT FOR EDUCATION.**

The Washington Congress of Parents and Teachers provides two grants per year for entering freshmen. Applicants must have graduated from a high school located in the state of Washington. The College will give first consideration to the financial need of applicants rather than high academic achievement in making these awards.

Applications are available through the college financial aid office. The cut-off date for submitting applications to the College is April 1.

\$450  
Renewable

**WASHINGTON STATE NEED GRANT.** The State of Washington has made available a grant program for **state residents** only. Qualifications are state residency and financial need. Residency of students follows that of the parents. A student must have been domiciled in the state for one full year prior to the commencement of the first day of the quarter for which aid is requested.

Application forms consist of a WWC financial aid application and a Parents' Confidential Statement (PCS) and may be obtained from the college financial aid office.

\$750

**NPUC EMPLOYMENT GRANT.** The North Pacific Union Conference of Seventh-day Adventists and Walla Walla College jointly provide funds for this grant. Applicants must be baptized Seventh-day Adventists having home church membership in the North Pacific Union Conference. Grants are awarded on the basis of need as evidenced by submission of a Parents' Confidential Statement (PCS) and an application for financial aid. Grant awards must be matched by student earnings from a school-term work program. Matching earnings may be earned on or off campus from October through and including May.

\$750  
Renewable

**LAW ENFORCEMENT EDUCATION GRANT.** The United States Department of Justice makes available a limited number of educational grants for students who are full-time employees of law enforcement agencies. These grants may amount to as much as \$250 per quarter. *Financial need is not a criterion in approving this aid.*

Applications are available from the college financial aid office.



\$1,400  
Renewable

### **BASIC EDUCATIONAL OPPORTUNITY GRANT.**

This program is made available by the United States Department of Health, Education and Welfare (DHEW). To qualify students must be enrolled at least half time (8 hours or more) and have need according to a formula established by DHEW. Applications may be obtained from high school or academy counselors or the College financial aid office.

Variable  
Renewable

**B.I.A. GRANTS.** Students having at least one-fourth American Indian or Eskimo blood may obtain considerable grant assistance from the Bureau of Indian Affairs. For applications and additional information, write to Bureau of Indian Affairs, 1425 NE Irving Street, Portland, OR 97208.

## **DEFERRED PAYMENT PLANS**

**EDUCATIONAL FUNDS, INCORPORATED.** For students and parents desiring to pay education expenses in monthly installments, a low-cost deferred-payment program is available through Education Funds, Inc. E.F.I. contracts run for a maximum of twelve months, and must be renewed each school year. Parents desiring further information concerning this deferred payment plan should contact the student finance office or Education Funds, Inc., 36 South Wabash, Room 1000, Chicago, Illinois 60603.

**THE INSURED TUITION PAYMENT PLAN.** This program provides for dividing the entire four-year educational expenses into equal monthly payments. An extended repayment plan is available.

It includes insurance on the parent for death or total disability. The insurance is designed so that its value is always adequate to pay the remaining planned educational expense.

The earlier the plan is begun, the smaller will be the monthly payments and the longer the term of insurance coverage.

Additional information may be obtained from the student finance office or Richard C. Knight, Insurance Agency, Inc., Insured Tuition Payment Plan, 6 St. James Avenue, Boston, Massachusetts 02116.

## **LOANS**

An increasing number of students are financing their education through the use of loan funds. Several of these funds are available, making it possible for the great majority of students to continue school without interruption due to lack of finances.

**MAXIMUM  
LOAN:**

\$2,500 per year  
Renewable

**ALASKAN STATE LOAN.** Alaskan students may borrow up to \$2,500 per year for collegiate expenses through this program. Up to 40 percent of this loan may be forgiven if the student returns to Alaska after graduation.

Applications may be obtained from the Department of Education, Student Loan Office, Pouch F, Juneau, AK 99801.

\$2,500 per year  
Renewable

**FEDERALLY INSURED LOAN.** Many banks are offering Federally Insured Loans to college students. These are long-term, low interest loans that need not be repaid until the student completes his course of study. Consult the loan officer of your bank for additional information.

Applications are available through the college financial aid office.

\$5,000  
Aggregate for  
Undergraduate  
Students

**NATIONAL DIRECT STUDENT LOAN.** The National Direct Student Loan is made available through the United States Department of Health, Education and Welfare and Walla Walla College. To qualify, the students must have financial need as evidenced by submission of a WWC application for financial aid and a Parents' Confidential Statement (PCS). 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 PCS's are available through the college financial aid office and should be submitted by June 1.

\$2,500 per year  
Renewable

**NURSING STUDENT LOAN.** Nursing Student Loans are made available through the United States Department of Health, Education and Welfare and Walla Walla College.

To qualify, a student must have financial need as evidenced by submission of a WWC application for financial aid and a Parents' Confidential Statement (PCS). Priority in awarding this aid is given to students with the greatest financial need. Repayments begin after the applicant's full-time nursing student status terminates.

Applications and PCS's are available through the college financial aid office and should be submitted by June 1.

\$1,500 per year  
Renewable

**OREGON STATE STUDENT LOAN.** Under this plan Oregon State residents may borrow from their home-town bank if they are accepted for enrollment or are enrolled in good standing and carrying at least a half-time course of study.

Applications are available in the student finance office.

**OTHER LOANS.** Walla Walla College has several short-term emergency loan funds available. Repayments begin during the year in which the loans are made. Additional information is available in the student finance office.



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