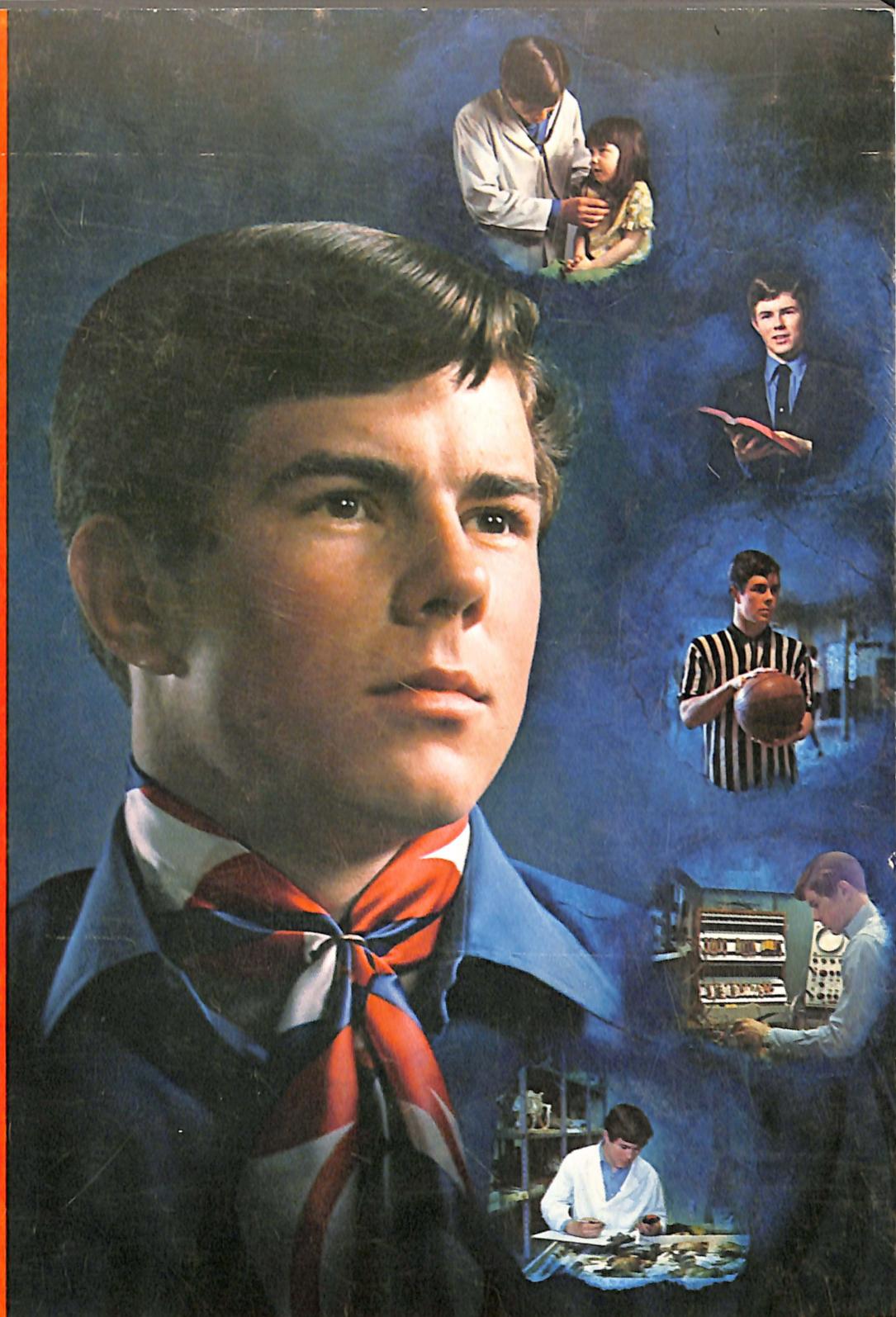


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**Walla Walla College**  
**BULLETIN 1970-71**

LOOKING TOWARD  
A FUTURE IN:



Art  
Accounting  
Biology  
Biblical Languages  
Biophysics  
Business Administration  
Business Education  
Chemistry  
Dental Hygiene  
Elementary Teaching  
Engineering  
English  
Foods and Nutrition  
French  
German  
History  
Home Economics  
Industrial Education & Technology  
Journalism  
Mathematics  
Medical Technology  
Music  
Nursing  
Office Administration  
Physical Education  
Physics  
Religion  
Sociology  
Spanish  
Speech  
Speech and Hearing Therapy  
Theology

These major areas are based on broad studies in humanities, basic science, mathematics, social science and the Christian heritage.

**The College is Accredited by**

The Northwest Association of Secondary and Higher Schools

The Washington State Board of Education

Department of Baccalaureate and Higher Degree Programs of the National League for Nursing

National Association of Schools of Music

**Is a member of**

Association of American Colleges

Association of Seventh-day Adventist Colleges and Secondary Schools

Council of Member Agencies, Department of Baccalaureate and Higher Degree Programs of the National League for Nursing

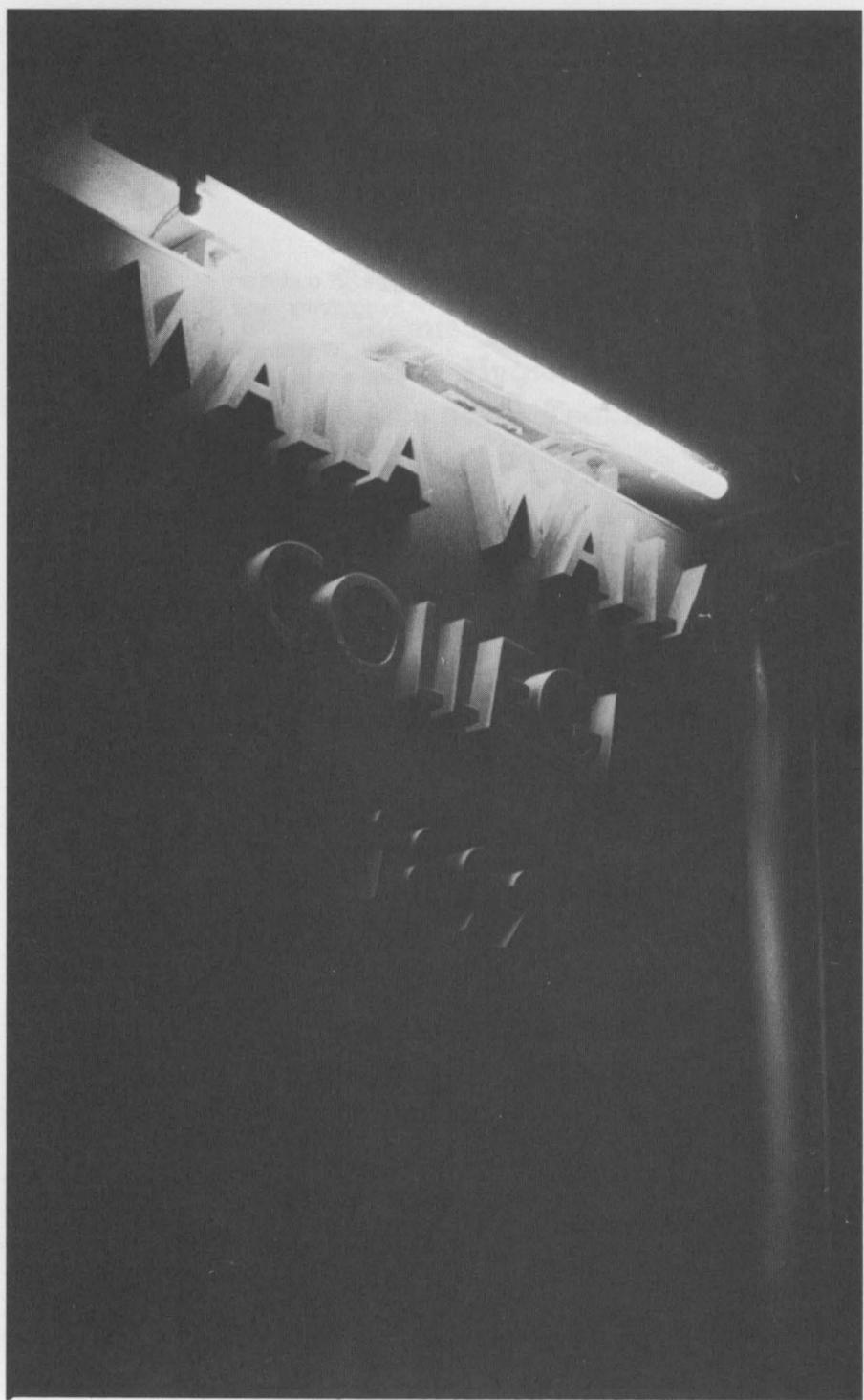
American Council on Education  
National Commission on Accreditation

**is approved by**

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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## FOR INFORMATION

Concerning application blanks, bulletins, general information, student handbooks, viewbooks, write

The Registrar

Concerning apartments, financial arrangements and work, write

Director, Student Finance

Concerning room reservations and other matters of residence, write

The Dean of Men or

The Dean of Women

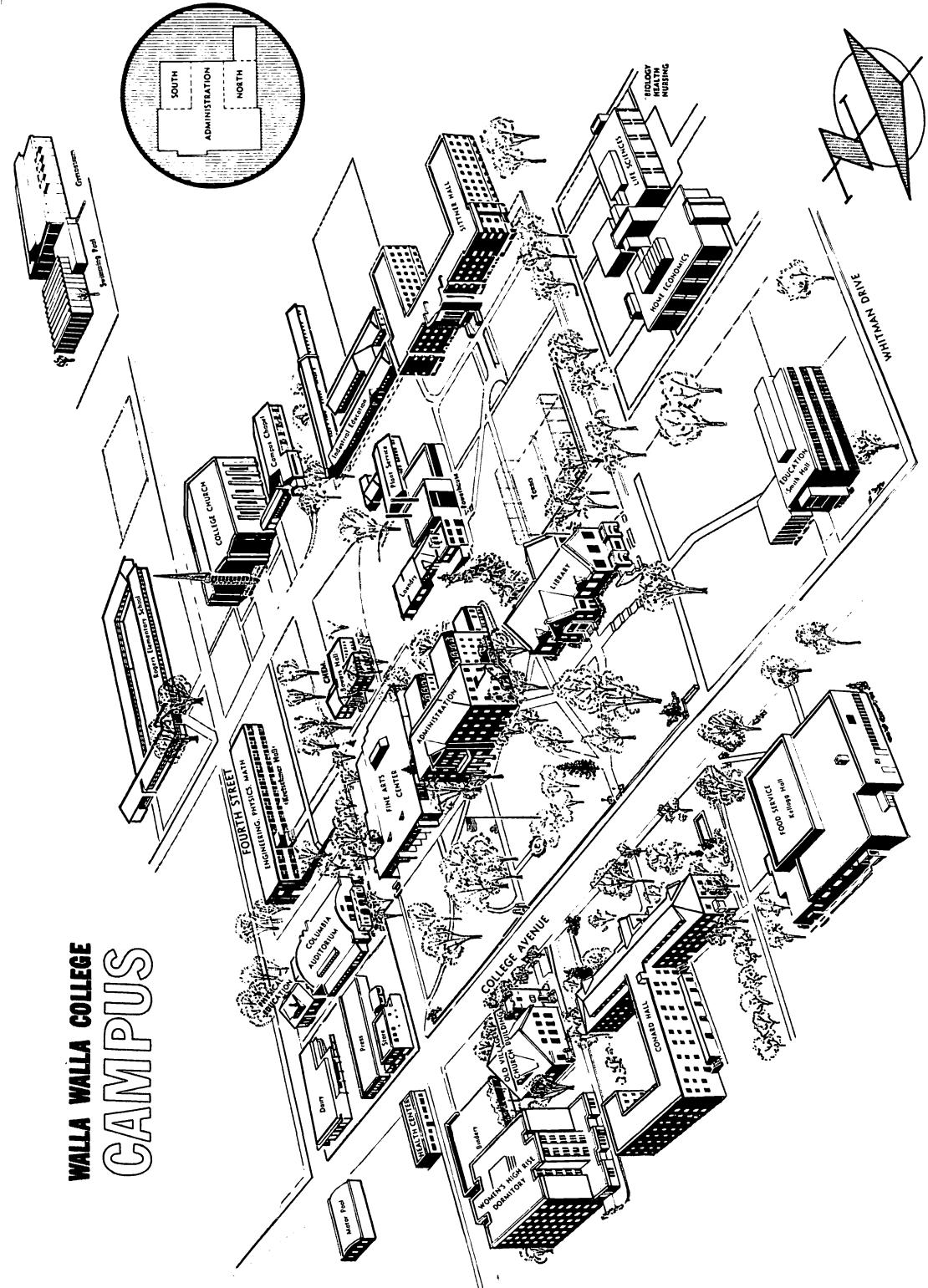
WALLA WALLA COLLEGE  
College Place, Washington 99324

Telephone:

Walla Walla, Area Code 509

525-7560

# WILLA WILLA COLLEGE CAMPUS



Environ Biol Fish (2007) 80:49–57

June							1970							August							
July							July							September							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
1	2	3	4	5	6			5	6	7	8	9	10	11	2	3	4	5	6	7	8
7	8	9	10	11	12	13	12	13	14	15	16	17	18	19	9	10	11	12	13	14	15
14	15	16	17	18	19	20	19	20	21	22	23	24	25	26	16	17	18	19	20	21	22
21	22	23	24	25	26	27	26	27	28	29	30	31			23	24	25	26	27	28	29
28	29	30					26	27	28	29	30	31		30	31						
September							October							November							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
1	2	3	4	5				4	5	6	7	8	9	10	1	2	3	4	5	6	7
6	7	8	9	10	11	12	11	12	13	14	15	16	17	18	8	9	10	11	12	13	14
13	14	15	16	17	18	19	18	19	20	21	22	23	24	25	15	16	17	18	19	20	21
20	21	22	23	24	25	26	25	26	27	28	29	30	31		22	23	24	25	26	27	28
27	28	29	30				25	26	27	28	29	30	31	29	30						
December							January							February							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
1	2	3	4	5				3	4	5	6	7	8	9	1	2	3	4	5	6	
6	7	8	9	10	11	12	10	11	12	13	14	15	16	17	7	8	9	10	11	12	13
13	14	15	16	17	18	19	17	18	19	20	21	22	23	24	14	15	16	17	18	19	20
20	21	22	23	24	25	26	24	25	26	27	28	29	30		21	22	23	24	25	26	27
27	28	29	30	31			31								28						
March							April							May							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
1	2	3	4	5	6			4	5	6	7	8	9	10	1	2	3	4	5	6	
7	8	9	10	11	12	13	11	12	13	14	15	16	17	18	2	3	4	5	6	7	8
14	15	16	17	18	19	20	18	19	20	21	22	23	24	25	9	10	11	12	13	14	15
21	22	23	24	25	26	27	25	26	27	28	29	30			16	17	18	19	20	21	22
28	29	30	31												23	24	25	26	27	28	29
June							July							August							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
1	2	3	4	5				4	5	6	7	8	9	10	1	2	3	4	5	6	7
6	7	8	9	10	11	12	11	12	13	14	15	16	17	18	8	9	10	11	12	13	14
13	14	15	16	17	18	19	18	19	20	21	22	23	24	25	15	16	17	18	19	20	21
20	21	22	23	24	25	26	25	26	27	28	29	30	31		22	23	24	25	26	27	28
27	28	29	30				25	26	27	28	29	30	31	29	30	31					

## CALENDAR, 1970-71

### AUTUMN QUARTER

September 20, Sunday	All students arrive, Orientation and Registration
September 21, Monday	Registration, Tests, Orientation
September 22, Tuesday	Instruction begins, 7:30 a.m.
October 6, Tuesday	Last day to add a course
November 25, 1:30 p.m.-November 29, 10:00 p.m.	Thanksgiving Recess
November 30-December 4	Registration for Winter Quarter
December 16, 1:30 p.m.	Quarter Ends
December 17-January 3, 10:00 p.m.	Christmas Recess

### WINTER QUARTER

January 4 and 5	Registration of New Students
January 4, Monday	Instruction begins, 7:30 a.m.
January 18, Monday	Last day to add a course
March 1-5	Registration for Spring Quarter
March 17, 1:30 p.m.	Quarter Ends
March 18-March 22, 10:00 p.m.	Spring Recess

### SPRING QUARTER

March 23 and 24	Registration of New Students
March 23, Tuesday	Instruction begins, 7:30 a.m.
March 30 and 31	Undergraduate Record Examinations
April 6, Tuesday	Last day to add a course
June 4	Senior Consecration
June 5	Baccalaureate
June 6	Quarter Ends
June 6	Commencement

### SUMMER QUARTER, 1971

June 13-August 8	
August 8	Commencement

## ADMINISTRATION

### BOARD OF TRUSTEES

E. R. WALDE, <i>Chairman</i>	J. W. BOTHE	R. C. REMBOLDT
R. L. REYNOLDS, <i>Secretary</i>	L. W. CROOKER	E. E. RIPPEY
V. H. SIVER, <i>Treasurer</i>	J. C. HANSEN	T. W. WALTERS
F. W. BIEBER	L. H. JENSEN	G. C. WILLIAMSON
M. J. BLAIR	W. L. MURRILL	
W. D. BLEHM	C. J. NAGELE	

### OFFICERS OF ADMINISTRATION

ROBERT L. REYNOLDS, M. A.	President
GEORGE H. AKERS, ED. D.	Vice President, Academic Affairs
ROBERT H. BROWN, PH. D.	Vice President, Student Affairs
VERNON H. SIVER, B. A.	Vice President, Financial Affairs
DONALD O. EICHNER, PH. D.	Vice President, Development and Public Relations
ORPHA N. OSBORNE, B. A.	Registrar
ELWOOD L. MABLEY, M. S. in L. S.	Director of the Library
JERRY M. LIEN, PH. D.	Chaplain
MAYNARD E. LOEWEN, B. A.	Dean of Men
HANNAH R. HAGSTOTZ, M. A.	Dean of Women
GORDON S. BALHARIE, B. D.	Dean, School of Theology
WILMA L. LEAZER, M. S.	Dean, School of Nursing

### ASSOCIATES IN ADMINISTRATION

ANDREWS, KATHRYN; B. A.	Assistant Registrar
BECK, RICHARD A.; B. A.	Director, Student Finance
CHACE, E. STANLEY; ED.D.	Summer Session Director, 1970
DAVIS, CHARLES E.; B. S.	Director of Purchasing
DOWNS, BETTY; B. A.	Assistant Dean of Women
DUNCAN, ELIZABETH; B. A.	Assistant Dean of Women
GILLILAND, W. MELVIN; M. A.	Associate Librarian
GRAVES, SHIRLEY A.; M. S. in L. S.	Assistant Librarian
HELLIE, LOIS M.; B. A.	Chief Accountant
LAY, MAE MACKLIN; B. A.	Director of Publicity
LOSEY, JIMMIE D.; M. D.	College Physician
MASDEN, GLENN W.; M. S. E. E.	Coordinator, Data Processing
OSBORNE, HOWARD I.; M. D.	Associate College Physician
OWENS, ANNABELLE.	Associate Dean of Women
PYKE, GERTRUDE V.; M. L.	Associate Librarian and Associate Registrar
RUDOLPH, NORMAN; B. S.	Assistant Dean of Men
SAMPLE, CLYDE J.; B. S., A. D. A.	Director of Food Service
SPECHKO, HELEN; R. N.	Director of Health Service
STODDARD, GRACE; B. S.	Associate Director of Health Service
TOOP, JUDITH L.; B. A.	Associate Dean of Women
UEHLIN, JOY; M. L. S.	Assistant Librarian
UREN, T. H.; B. A.	Controller, Assistant Treasurer
WICKWARD, JOYCE G.	Assistant Accountant
WINSLOW, GERALD R.; M. A.	Assistant Dean of Men

## THE FACULTY

**ANDERSON, WANDA**, Instructor in Nursing

B. S., 1960, Walla Walla College

**BALHARRIE, GORDON S.**, Professor of Religion

B. A., 1945, Columbia Union College; M. A., 1949, B. D., 1960, Theological Seminary, Andrews University

**BARNES, JOSEPH N.**, Professor of Religion

B. A., 1947, Union College; M. A., 1955, Ph. D., 1965, New York University

**BARNETT, CLAUDE C.**, Professor of Physics

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

**\*BENNETT, FREDERICK R.**, Assistant Professor of Engineering

B. S., 1955, Walla Walla College; P. E., 1961, Washington; M. S., 1966, Washington State University

**BLAICH, ROLAND D.**, Instructor in History

B. A., 1966, California State College at Los Angeles; M. A., 1967, California State College at Los Angeles

**BLAKE, CHESTER D.**, Assistant Professor of Industrial Education and Technology

B. S., 1963, Walla Walla College; M. A., 1968, San Jose State College

**BLOOD, LINDA**, Instructor in Nursing

B. S., 1969, Walla Walla College

**BORDER, GERALDINE**, Instructor in Home Economics

B. S., 1965, Walla Walla College; M. S., 1969, University of Washington

**BRAMAN, CONNIE G.**, Instructor in Nursing

B. S., 1967, Walla Walla College

**BROWN, ROBERT H.**, Professor of Physics

B. A., 1940, Union College; M. S., 1942, University of Nebraska; Ph. D., 1950, University of Washington

**BURGESON, RUTH E.**, Assistant Professor of English

B. A., 1951, M. A., 1957, Pacific Union College

**BUSHNELL, VINSON**, Assistant Professor of Music

B. A., 1958, Southern Missionary College; M. A., 1960, University of Rochester

**CANADAY, LEWIS H.**, Associate Professor of Industrial Education and Technology

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**CARRIGAN, FLORENCE**, Assistant Professor of Nursing

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**CHACE, E. STANLEY**, Professor of Education

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**CHAMBERS, ANNIE MAE**, Assistant Professor of English

B. A., 1944, Columbia Union College; M. A., 1965, University of Southern California

**CHAMBERS, JAMES R.**, Professor of Chemistry

B. A., 1939, Columbia Union College; M. S., 1949 Case Western Reserve University; Ph. D., 1958, Texas A and M University

**CHANCE, JANICE P.**, Assistant Professor of Nursing

B. S., 1959, Walla Walla College; M. S., 1967, Loma Linda University

**CHINN, CLARENCE E.**, Associate Professor of Chemistry

B. A., 1951, Walla Walla College; M. S., 1953, Ph. D., 1956, Oregon State University; 1969, University of Tennessee

\*Leave of absence current year.

**CLAYTON, DALE, Assistant Professor of Biology**

B. A., 1962, Andrews University; M. A., 1964, Loma Linda University; Ph. D., 1968, Michigan State University

**CLEMONS, J. MELVYN, Associate Professor of Theology**

A. B., 1943, Atlantic Union College; M. A., 1953, Theological Seminary, Andrews University; 1968, Clark University; B. D., 1964, Andrews University

**COLE, JON A., Assistant Professor of Engineering**

B. S. C. E., 1961, Illinois Institute of Technology; M. S., 1964, Ph. D., 1970, University of Wisconsin; P. E., 1966

**COWIN, DARRELL J., Instructor in Industrial Education and Technology**

**CROSS, EDWARD F., Professor of Engineering**

M. E., 1929, Stevens Institute of Technology; M. A., 1938, Columbia University; P. E., 1948, Washington; P. E., 1952, Oregon

**CZERATZKI, REINHARD, Assistant Professor of Modern Languages**

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

**DASSENKO, JACK, Instructor in Agriculture**

B. S., 1950, Andrews University; M. S., 1951, University of Minnesota

**DAVIS, DELMER I., Associate Professor of English**

B. A., 1962, Pacific Union College; M. A., 1964, Ph. D., 1968, University of Colorado

**DICKINSON, C. LOREN, Associate Professor of Speech**

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

**DRESSLER III, ANDREW, Assistant Professor of Business Administration**

B. A., 1965, Walla Walla College; M. Acctg., 1967, University of Idaho; C. P. A., 1967, State of Washington

**EICHNER, DONALD O., Associate Professor of Political Science**

B. A., 1951, Walla Walla College; M. A., 1958, Andrews University; Ph. D., 1969, The American University

**EVANS, HELEN WARD, Professor of English**

B. A., 1949, Walla Walla College; M. A., 1955, Ph. D., 1965, Stanford University

**FORSS, CARL A., Associate Professor of Biology**

B. A., 1958, Walla Walla College; M. A., 1959, Ph. D., 1965, Oregon State University

**FRENCH, LLOYD D., Assistant Professor of English**

B. A., 1964, Walla Walla College; M. A., 1969, Washington State University

**FURBER, HELEN, Assistant Professor of Nursing**

B. S., 1964, University of Oregon; M. S., 1965, University of Minnesota

**GIBBONS, C. KEITH, Assistant Professor of Education**

B. A., 1960, M. A., 1966, Walla Walla College; Ed. D., 1969, University of Idaho

**GIBSON, GERTRUDE M., Professor of Office Administration**

B. A., 1943, Walla Walla College; M. A., 1950, Teachers College of Columbia University; Ed. D., 1967, Boston University

**GILLILAND, W. MELVIN, Instructor in Library Science**

B. A., 1949, Union College; M. A., 1965, University of Denver

**GRABLE, ALBERT E., Associate Professor of Biology**

B. S., 1959, La Sierra College; M. S., 1962, Ph. D., 1964, University of Minnesota

**GRAVES, SHIRLEY A., Instructor in Library Science**

B. A., 1960, Loma Linda University; M. A., 1964, University of Redlands; M. S. in L. S., 1969, University of Southern California

**GROVE, J. PAUL, Professor of Religion**

B. A., 1944, Columbia Union College; M. A., 1956, B. D., 1961, Theological Seminary, Andrews University

**GRUESBECK, KENNETH L., Instructor in Industrial Education and Technology**

B. A., 1952, Columbia Union College

**HALL, DONALD E., Associate Professor of Physics**  
B. A., 1961, Southern Missionary College; M. S., 1964, Ph. D., 1967, Stanford University

**HARE, GORDON B., Professor of Mathematics**  
B. A., 1951, Columbia Union College; M. S., 1954, Ph. D., 1964, University of Colorado

**HARRIS, DANIEL S., Assistant Professor of Sociology**  
B. A., 1965, M. A., 1966, La Sierra College

**HARTNELL, CALVIN V., Instructor in Religion**  
B. Th., 1949, Walla Walla College; M. A., 1962, Andrews University

**HAZELTON, ALICE, Assistant Professor of Nursing**  
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**HEISLER, RODNEY J., Assistant Professor of Engineering**  
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**JAMES, LEAH KAY, Instructor in Physical Education**  
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**KNAPP, LUCILE HARPER, Assistant Professor of Biblical Languages**  
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B. S., 1957, Valley City State Teachers College; M. A., 1958, Colorado State College

**LEAZER, WILMA L., Professor of Nursing**  
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**LENO, H. LLOYD, Associate Professor of Music**  
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**LISKE, ELWIN L., Assistant Professor of Industrial Education and Technology**  
B. S., 1963, Walla Walla College; M. A., 1967, San Jose State College

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B. S., 1955, Walla Walla College

**MABERY, NORMAN C., Professor of Education**  
B. Th., 1952, Walla Walla College; M. A., 1954, Andrews University; Ed. D., 1962, University of Southern California

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\*Leave of absence current year.

**MABLEY, ELWOOD L.**, Assistant Professor of Library Science  
 B. A., 1948, Walla Walla College; M. S. in L. S., 1959, University of Southern California

**MACKINTOSH, KENNETH R.**, Associate Professor of Art  
 M. F. A., 1961, Otis Art Institute of Los Angeles County

**MASDEN, GLENN W.**, Associate Professor of Engineering  
 B. S. E. E., 1955, M. S. E. E., 1958, University of Colorado

**MAXWELL, D. MALCOLM**, Associate Professor of Religion  
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**McCULLY, CLYDE E.**, Assistant Professor of Art  
 B. F. A., 1967, University of Oklahoma; M. F. A., 1968, University of Guanajuato, Mexico

**McGHEE, JEANETTE OBERG**, Instructor in Music  
 B. A., 1965, Walla Walla College

**MEDLOCK, JOYCE**, Instructor in Office Administration  
 B. S., 1965, Walla Walla College; M. Ed., 1968, Oregon State University

**MEHLING, J. G.**, Professor of Business and Economics  
 B. B. A., 1934, Walla Walla College; M. A., 1947, University of Washington; C. P. A., 1947, State of Washington

**MILLER, VERA A.**, Instructor in Nursing  
 B. S., 1967, Walla Walla College; M. N., 1969, University of Washington

**MOLL, NANCY**, Instructor in Nursing  
 B. S., 1969, Walla Walla College

\***MOORE, NATHAN**, Assistant Professor of English  
 B. A., 1963, Rockford College; M. A., 1965, Carlton University

**MOORE, ROBERTA J.**, Professor of Journalism  
 B. A., 1948, Atlantic Union College; M. A., 1953, Boston University; Ph. D., 1968, Syracuse University

**MURPHY, WILLIAM H.**, Assistant Professor of Music  
 B. A., 1952, Union College; M. A., 1960, Colorado State College

**MYERS, DANIEL P.**, Instructor in Music  
 B. Mus., 1964, Walla Walla College

**MYERS, JUDI**, Instructor in Music  
 B. A., 1963, Walla Walla College

**NOEL, ROBERT L.**, Associate Professor of Engineering  
 B. S., 1950, M. S., 1951, University of Wisconsin; P. E., 1953, Illinois; P. E., 1955, Michigan

**OCHS, HAROLD T.**, Assistant Professor of Education  
 B. A., 1950, Walla Walla College; M. Ed., 1957, Eastern Washington State College

**OSTERUD, HAROLD H.**, Instructor in Public Health and Epidemiology  
 M. D., 1947, Medical College of Virginia; M.P.H., 1951, University of North Carolina

**PERRY, ALFRED EUGENE**, Associate Professor of Biology  
 B. A., 1953; M. A., 1958, Walla Walla College; Ph. D., 1965, Oklahoma State University

**QUIRING, ED E.**, Assistant Professor of Office Administration  
 B. A., 1964, Walla Walla College; M. Ed., 1968, Oregon State University

**RIGBY, DONALD W.**, Professor of Biology  
 B. A., 1950, La Sierra College; M. A., 1956, Walla Walla College; Ph. D., 1967, Loma Linda University

**RIGBY, DONNIE THOMPSON**, Assistant Professor of Speech  
 B. A., 1952, La Sierra College; M. A., 1965, Redlands University

**RITER, E. JOYCE**, Associate Professor of Nursing  
 B. S., 1960, Walla Walla College; M. N., 1964, University of Washington

\*Leave of absence current year.

**ROCHAT, CHARLES P.**, Assistant Professor of Modern Languages  
 B. A., 1955, Pacific Union College; M. A., 1958, University of California, Berkeley

**RUDOLPH, NORMAN E.**, Instructor in Business  
 B. S., 1969, Walla Walla College

**RUDY, HENRY L.**, Instructor in Religion  
 B. A., 1924, Walla Walla College

**RUSSELL, L. E.**, Instructor in Religion  
 B. S., 1949, Union College; M. A., 1960, University of Oregon

**SCHWANTES, CARLOS A.**, Instructor in History  
 B. A., 1967, Andrews University; M. A., 1968, University of Michigan

**SCHWANTES, MARY**, Instructor in Home Economics  
 B. S., 1968, Eastern Michigan University

**SMITH, LOIS A.**, Assistant Professor of Nursing  
 B. S., 1965, Walla Walla College; M. S., 1967, Loma Linda University

**SOPER, WARD ARTHUR**, Assistant Professor of Mathematics  
 B. A., 1961, Andrews University; M. A., 1962, University of Michigan

**SOSSONG, NORMAN D.**, Assistant Professor of Physics  
 B. S., 1961, Walla Walla College; M. S., 1966; Ph. D., 1969, University of Washington

**\*SPRING, GLENN E., JR.**, Assistant Professor of Music  
 B. A., 1962, La Sierra College; M. Mus., 1964, Texas Christian University

**TEEL, LOIS FLORETTA**, Associate Professor of Education  
 B. A., 1947, Emmanuel Missionary College; M. Ed., 1959, University of Oregon

**TRAUTWEIN, CALVIN L.**, Professor of Industrial Education and Technology  
 B. A., 1945, La Sierra College; B. S., 1950, Pacific Union College; Ed. M., 1955, Oregon State College; Ed. D., 1962, Colorado State College

**UEHLIN, GRÉTA-JOY**, Instructor in Library Science  
 B. A., 1961, Walla Walla College; M. L., 1963, University of Washington

**UHRIG, JOHN WILLIAM**, Instructor in Physical Education  
 B. S., 1961, Union College

**VELAZQUEZ, G. ELADIO**, Instructor in Modern Languages  
 B. A., 1968, Antillian College; M. A., 1969, Pacific Union College

**VINCENT, MERTON L.**, Instructor in Engineering  
 B. S., 1964; M. A., 1965, Michigan State University

**WATERBROOK, JOHN L.**, Instructor in Physical Education  
 B. S., 1966, Walla Walla College

**WAGNER, DALE O.**, Assistant Professor of Education  
 B. A., 1952, Walla Walla College; M. A., 1958, Eastern Washington State College

**WEST, MELVIN K.**, Professor of Music  
 A. B., 1952, Emmanuel Missionary College; M. Mus., 1955, Redlands University; Mus. A. D., 1959, Boston University; F. A. G. O., 1957

**WHITE, ARTHUR L.**, Associate Professor of Economics  
 B. S., 1956, Walla Walla College; M. B. A., 1957, University of Washington

**WINSLOW, GERALD A.**, Instructor in Religion  
 B. A., 1967, Walla Walla College; M. A., 1968, Andrews University

**WINTER, EUGENE S.**, Professor of Physical Education  
 B. A., 1941, Walla Walla College; M. S., 1948, State College of Washington; Ph. D., 1963, University of Oregon

**WISS, GARY ALAN**, Assistant Professor of English  
 B. A., 1966, Walla Walla College; M. A., 1968, University of Oregon

\*Leave of absence current year.

**WOOD, CLARENCE A.**, Assistant Professor of Speech  
B. A., 1961, La Sierra College; M. A., 1963, University of Denver

**WOOLBERT, BARBARA LEE**, Instructor in Nursing  
B. S., 1969, Walla Walla College

**WRIGHT, EVELYNNE F.**, Professor of Home Economics  
B. A., 1941, Pacific Union College; M. S., 1953, Oregon State College

## **EMERITI**

**ALCOCK, HERBERT J.**, Professor of Religion  
B. A., 1927, B. Th., 1927, Emmanuel Missionary College; M. A., 1942, Michigan State University

**APLINGTON, KENNETH A.**, Professor of English  
B. A., 1935, Walla Walla College; M. A., 1942, University of Washington

**BLACK, IRENE T.**, Registrar  
B. A., 1941, Columbia Union College

**BOWERS, GEORGE W.**, Professor of Chemistry  
B. A., 1917, Union College; M. A., 1924, Ph. D., 1935, University of Nebraska; LL. D., 1956, Walla Walla College

**HANSON, FREDRICK R.**, Professor of Nursing  
B. A., 1932, Walla Walla College; M. A., 1942, University of Washington

**LOSEY, LEON B.**, Professor of Agriculture  
B. A., 1921, Walla Walla College; M. S., 1939, Oregon State College

**LUDGATE, T. K.**, Professor of Religion  
B. A., 1942, Columbia Union College; M. A., 1945, Theological Seminary, Andrews University

**MECKLING, FRANK E.**, Professor of History  
B. A., 1929, Columbia Union College; M. A., 1931, University of Maryland; Ph. D., 1950, University of California at Los Angeles

**RASMUSSEN, HANS L.**, Academic Dean 1959-69  
B. A., 1937, Emmanuel Missionary College; M. A., 1943, University of Michigan; Ed. D., 1946, Stanford University

**SCHLÖTHAUER, LILAH GODFREY**, Associate Professor of Mathematics  
B. A., 1923, Walla Walla College; M. S., 1934, University of Washington

**SHANKEL, CECIL W.**, Professor of Chemistry  
B. A., 1924, Walla Walla College, M. A., 1926, University of Nebraska

**SMITH, WALTER I.**, Professor of Education  
B. A., 1911, Union College; M. S., 1917, Whitman College; Ed. D., 1934, George Washington University; LL. D., 1957, Walla Walla College

**SORENSEN, AGNES L.**, Professor of Modern Languages  
B. A., 1923, Emmanuel Missionary College; M. A., 1929, University of Michigan

**STOEHR, HENRIQUE G.**, Professor of Modern Languages  
B. A., 1948, Walla Walla College, Dr. U.P., 1952, University of Paris

**WEAVER, GENEVIEVE STABLER**, Associate Professor of Secretarial Science  
B. A., 1949, Walla Walla College

**WESTERMAYER, HARRY E.**, Professor of History  
B. A., 1917, Clinton Theological Seminary; M. A., 1934, College of the Pacific; Ph. D., 1946, Stanford University

# **FACULTY COMMITTEES**

## **ACADEMIC STANDARDS**

G. H. AKERS, G. S. BALHARRIE, C. C. BARNETT, E. S. CHACE, E. F. CROSS, C. L. DICKINSON, HELEN EVANS, R. A. HENDERSON, WILMA LEAZER, J. G. MEHLING, ORPHA OSBORNE, D. W. RIGBY, M. K. WEST.

## **ADMINISTRATIVE COUNCIL**

R. L. REYNOLDS, G. H. AKERS, G. S. BALHARRIE, R. H. BROWN, D. L. CLAYTON, E. F. CROSS, C. L. DICKINSON, D. O. EICHNER, HELEN EVANS, HANNAH HAGSTOTZ, E. H. LICKY, M. E. LOEWEN, D. M. MAXWELL, ORPHA OSBORNE, V. H. SIVER, A. L. WHITE.

## **ADMISSIONS**

G. H. AKERS, R. A. BECK, R. H. BROWN, GERTRUDE GIBSON, J. P. GROVE, HANNAH HAGSTOTZ, M. E. LOEWEN, G. W. MASDEN, ORPHA OSBORNE, A. E. PERRY.

## **FACULTY SENATE**

R. L. REYNOLDS, G. H. AKERS, R. H. BROWN, ORPHA OSBORNE, V. H. SIVER, and all chairmen of departments.

## **GRADUATE COUNCIL**

D. W. RIGBY, G. H. AKERS, C. C. BARNETT, R. H. BROWN, E. S. CHACE, HELEN EVANS, C. A. FORSS, A. E. GRABLE, G. B. HARE, N. C. MABERLY, ORPHA OSBORNE.

## **HEALTH AND SAFETY**

C. E. DAVIS, FLORENCE CARRIGAN, BETTY DOWNS, LUCILE JONES, M. E. LOEWEN, J. D. LOSEY, C. J. SAMPLE, C. L. TRAUTWEIN, E. S. WINTER.

## **LIBRARY**

G. H. AKERS, J. N. BARNES, C. E. CHINN, C. K. GIBBONS, R. A. HENDERSON, C. T. JONES, E. L. MABLEY, G. W. MASDEN, EVELYNNE WRIGHT.

## **MENTAL HEALTH**

R. H. BROWN, J. N. BARNES, HANNAH HAGSTOTZ, ALICE HAZELTON, LUCILE JONES, M. E. LOEWEN, J. D. LOSEY, D. O. WAGNER.

## **PROFESSIONAL EVALUATION**

R. H. BROWN, G. H. AKERS, C. C. BARNETT, J. R. CHAMBERS, C. E. CHINN, C. A. FORSS, HANNAH HAGSTOTZ, C. T. JONES, M. E. LOEWEN, D. W. RIGBY.

## **PUBLIC RELATIONS**

D. O. EICHNER, R. H. BROWN, D. S. HARRIS, E. H. LICKY, E. L. LISKE, DONNIE RIGBY, V. H. SIVER, E. S. WINTER.

## **RELIGIOUS INTERESTS**

JERRY M. LIEN, G. S. BALHARRIE, J. N. BARNES, R. H. BROWN, J. M. CLEMONS, HANNAH HAGSTOTZ, M. S. LANG, M. E. LOEWEN, D. M. MAXWELL, H. T. OCHS, MARY SCHWANTES.

## **SCHOLARSHIPS AND GRANTS**

R. H. BROWN, G. H. AKERS, R. A. BECK, D. I. DAVIS, D. E. HALL, C. T. JONES, N. MOORE, ORPHA OSBORNE, G. R. WINSLOW.

## **SOCIAL ACTIVITIES**

D. O. EICHNER, G. S. BALHARRIE, J. M. CLEMONS, HANNAH HAGSTOTZ, LOIS HELLIE, E. H. LICKY, E. L. LISKE, M. E. LOEWEN, E. L. MABLEY, M. K. WEST, EVELYNNE WRIGHT.

## **STUDENT AFFAIRS**

R. H. BROWN, R. A. BECK, GERALDINE BORDER, J. M. CLEMONS, J. P. GROVE, HANNAH HAGSTOTZ, M. E. LOEWEN, ORPHA OSBORNE, DONNIE RIGBY, C. A. SCHWANTES, HELEN SPECHKO, G. R. WINSLOW.

## **TEACHER EDUCATION COUNCIL**

E. S. CHACE, G. H. AKERS, R. H. BROWN, ORPHA OSBORNE, and the chairmen of all departments offering a major or minor designed for students planning on elementary or secondary school teaching.

## **FACULTY ADVISERS**

### **ACADEMIC ADVISERS**

**IN 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.

**IN PREPROFESSIONAL PROGRAMS:** Members of the faculty have been appointed to serve as advisers to students preparing for careers in certain professional vocations, as follows:

Dental .....	C. E. CHINN
Dental Assistant .....	A. E. GRABLE
Dental Hygiene .....	A. E. GRABLE
Law .....	A. L. WHITE
Medical .....	C. T. JONES
Medical Technology .....	J. R. CHAMBERS
Nursing .....	WILMA LEAZER, FLORENCE CARRIGAN
Occupational Therapy .....	E. S. WINTER
Optometry .....	D. E. HALL
Pharmacy .....	C. T. JONES
Physical Therapy .....	LUCILE JONES
Social Work .....	D. S. HARRIS
Veterinary .....	D. W. RIGBY
X-ray Technology .....	C. C. BARNETT

### **PERSONAL COUNSELORS**

As a 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 will choose a personal counselor during the latter part of the autumn quarter. Students above the freshman level usually choose to counsel with some teacher within the department of their major field of emphasis.

The Vice President for Student Affairs is the coordinator of the counseling program of the College.

## STUDENT ORGANIZATION ADVISERS

Aleph Gimel Ain .....	HANNAH HAGSTOTZ
American Temperance Society .....	C. L. TRAUTWEIN
ASWWC Center .....	RUTH BURGESON, D. O. WAGNER
ASWWC Graduate Manager .....	A. L. WHITE
ASWWC Nominating Committee .....	R. H. BROWN
ASWWC Religious Activities Committee .....	J. N. BARNES
ASWWC Social Activities Committee .....	DONNIE RIGBY
Aurora Duxes .....	R. K. CZERATZKI
Chiquita Sola .....	ANNIE MAE CHAMBERS
<i>The Collegian</i> .....	ROBERTA MOORE
Cosmopolitan Club .....	C. P. ROCHAT
Epsilon Mu Sigma .....	JOYCE AND M. S. LANG
Missionary Volunteers .....	D. M. MAXWELL
<i>The Mountain Ash</i> .....	L. H. CANADAY
Omicron Pi Sigma .....	M. E. LOEWEN
Peace Corps, Vista .....	D. S. HARRIS
Sabbath School .....	C. L. DICKINSON
WWC Flying Club .....	L. A. BORDER

## PRESIDENTS OF WALLA WALLA COLLEGE

EDWARD A. SUTHERLAND	1892-1897
EMMETT J. HIBBARD	1897-1898
WALTER R. SUTHERLAND	1898-1900
E. 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. SHEPHERD	1964-1968
R. L. REYNOLDS	1968-

## INDUSTRIAL SUPERINTENDENTS

SIVER, V. H., General Manager  
BOGDANOVICH, MICHAEL, Bindery  
BORDER, L. A., Plant Services  
CHENEY, HAZEL I., Store  
CHENEY, M. O., Grounds  
KOENIG, W. E., Farm  
MANDIGO, D. A., Laundry and Dry Cleaners  
MUNROE, E. C., Custodial  
WICKWARD, B. G., Dairy  
WOHLERS, J. D., Press

## SCHOOLS: DIRECTED TEACHING

Many of the senior students do their directed teaching in either of the two church-related schools located close to the Walla Walla College campus.

### Rogers Elementary School:

The Rogers School is an eight-grade elementary school with 12 classrooms and 15 teachers. It is well equipped, has a large playground and maintains a qualified staff.

Dale Wendt, B.S., Principal

### Walla Walla Valley Academy:

Walla Walla Valley Academy is a four-year senior high school with 15 classrooms and 16 teachers. The academy is accredited with the Northwest Association of Secondary and Higher Schools.

Glen W. Davis, M.A., Principal

### Public School:

In addition to the two schools mentioned above, the candidates for teacher certification at Walla Walla College have been fortunate in arranging opportunities to do their directed teaching in several of the public elementary and secondary schools in Walla Walla.

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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." *Education*, Mrs. E. G. White, p. 130.

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.



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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 Chemistry Department 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.

**C O L L E G E C H U R C H.** 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.

**C O L U M B I A A U D I T O R I U M.** Columbia Auditorium, a reinforced concrete gymnasium-auditorium with a seating capacity of over 2,000 persons, is equipped with a Balcon and Vaughn pipe organ. The building serves the college community as an auditorium and as a gymnasium. The large floor provides space for physical education activities, games and roller skating, while retaining the galleries for use of spectators.

**C O N A R D H A L L.** 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.

**E. C. K E L L O G G H A L L.** 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.

**F I N E A R T S C E N T E R.** 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.

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 classrooms and work area provide space and facilities for drawing, painting, design, printmaking and sculpture. A display area for art is provided in the downstairs hallways and courtyards.

**I N D U S T R I A L E D U C A T I O N A N D T E C H N O L O G Y B U I L D I N G.** 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, De-pictics, Electronics, Graphics, Industrial Crafts, Maintenance, Metals and Woods.

**K R E T S C H M A R H A L L.** 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.

**LIBRARY.** The College Library is a vital part of the educational program at Walla Walla College. The main library building was completed in 1944 and remodeled in 1964. Reading room accommodations, the open-shelf system, seminar and conference rooms, and a periodical room contribute to the study and enjoyment of books. Microfilm and microcard readers 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 110,969 volumes. An average of 5,600 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.

**LIFE SCIENCES COMPLEX.** Departments housed in the Life Sciences Complex completed in 1967 are Biology, Home Economics, Human Dynamics Research Institute, and Nursing.

Facilities for Biology include staff and graduate student offices, classrooms, and teaching laboratories. In addition, specialized facilities are research laboratories, controlled environment rooms and chambers, radioisotope laboratory, animal and greenhouse complexes, photographic darkroom, museum, and a shop.

The Home Economics Department is housed in the east wing of the Life Sciences Building. 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 Building are offices and classrooms serving the School of Nursing.

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

**PORLAND 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, the Sittner dormitory accommodates approximately 500 resident men. There are lounges, a recreation room and a large hall for worship.

**SMITH HALL.** The department of education 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 Center.

**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.

## 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 the Director of Purchasing.

**RESIDENCE HALLS.** All unmarried students are required to live in one of the College residence halls and to board in the College cafeteria, unless they live with their parents or with other close relatives in the immediate community. Under special circumstances, however, sophomores and upper-division 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

**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.

### Residence Clubs

Dormitory women; Aleph Gimel Ain (AGA)

Dormitory men; Omicron Pi Sigma (OPS)

Single village women; Chiquita Sola (CS)

Single village men; Aurora Duxes (AD)

Married Students; Epsilon Mu Sigma (EMS)

## Departmental Clubs

American Institute of Physics, WWC Chapter  
Beta Mu (Home Economics)  
Biology Club  
Business Administration Club  
Chemistry Club  
Delta Rho Theta (Speech)  
Der Deutsche Verein (German)  
Engineering Club  
Grammateis Club (Office Administration)  
Gymkhana Club (Physical Education)  
Industrial Education and Technology Club  
International Relations Club (History)  
Le Cercle Francais (French)  
Mathematics Club  
Music Guild  
Pegasus Club (English)  
Sociology Club  
Students National Education Association  
Theology Club

WOMENS RESIDENCE HALL

WALLA WALLA COLLEGE





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## GENERAL REGULATIONS

**I**N 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, 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 cheerful support of all regulations set forth in this bulletin, the *Student Handbook*, or officially as 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.** The assembly, which is held two times each week, is regarded as a vital part of the total education program at Walla Walla College, and all students are required to attend a specified number of these assemblies.

**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 1,550 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: maintaining contact with servicemen, 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.

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**PERSONAL PROPERTY LOSS.** The College cannot accept responsibility for any loss of or damage to the personal property of any student.

**STUDENT HANDBOOK.** The principles and policies governing the extracurricular experience of Walla Walla College students are outlined in the *Student Handbook*. Each student is expected to be thoroughly acquainted with the content of this handbook.



## ACADEMIC INFORMATION

### ADMISSION PROCEDURE

Formal application for admission to the College is required on a form supplied by the Registrar. 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 his acceptance as possible, the applicant should send in his room deposit of \$50 to the Business Office. This will guarantee him his room privileges for the year. This fee is refundable any time until August 1 of each year. See section on Financial Information.

**LATE APPLICATION.** Students who arrive on the campus without having been previously accepted will pay a late fee of \$25 to compensate for expenses and loss of time involved in hurried processing of applications while the school is in operation.

**OFFICIAL TRANSCRIPT.** While a student may receive tentative acceptance on the basis of an unofficial transcript, no one will be permitted to complete registration unless there is an official transcript in the Registrar's Office.

## 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 that this service may be as meaningful as possible and in order that the most efficient aid can be given in the cases of illness and accidents, it is required that all new students and students who have broken residence present a certificate of a recent physical examination. Approved forms are available in the Registrar's Office.

## ADMISSION TO THE FRESHMAN CLASS

Applicants for admission to the freshman class shall have been graduated from a recognized four-year secondary school. Students coming from non-accredited schools may be required to take examinations to validate their credits. The pattern of subjects required for entrance is not rigidly prescribed, but an applicant should have completed those subjects which are prerequisites of the curriculum he wishes to pursue in college. Applicants who are deficient in requirements for entrance to their chosen curriculum are expected to remove this deficiency during the first year of registration in that curriculum.

The following basic secondary school subjects are required for admission:

English	3 units
History	1 unit
Science	1 unit
Mathematics	1-3 units*

Two units of a foreign language, two units of social studies and two units of science are highly recommended.

\***One unit:** Algebra or Geometry

Art, Biblical Languages, Business Education, English, French, German, History, Home Economics (Algebra recommended), Industrial Education and Technology, Journalism, Music, Office Administration, Physical Education, Religion, Spanish, Speech, Speech and Hearing Therapy, Theology; also Associate Degree Programs, and certificate programs in the department of Office Administration.

\***Two units:** Algebra and Geometry

Accounting, Biology, Business Administration, Chemistry, Dental Hygiene, Elementary Teaching, Foods and Nutrition, Mathematics, Medical Technology, Nursing (any two elective units accepted for 1970-71, Algebra and Geometry required beginning with the 1971-72 school year), Sociology.

\***Three units:** Algebra, Plane Geometry, Solid Geometry, Trigonometry, or their equivalents.

Biophysics, Engineering, Physics

**ENTRANCE REQUIREMENTS FOR THE CURRICULUMS.** Certain specific subjects are required for admission to the various curriculums or courses of study in the College. Applicants who are deficient in one or two subjects required for entrance to their chosen curriculum will be required to present high school credit to cover the deficiency, take additional college coursework in the area, or successfully complete a waiver examination.

**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.

**SPECIAL ADMISSION.** Mature individuals ineligible for regular admission may be admitted as special students, and may register for any course for which they have sufficient background. Special students are not eligible for a degree; however, by completing requirements for regular admission they may become degree candidates.

**TRANSIENT ADMISSION.** Students who have been in residence at other institutions of higher learning and who are not candidates for a degree from this College may be classified as transients. The category includes those who wish to transfer limited credit to other institutions and those registering for certain adult education courses. The transient student must show evidence that he is in good and regular standing at the university or college to which the credits are to be transferred.

**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.

**ORIENTATION TESTS.** All new students are required to take a battery of college aptitude tests during the orientation week or as soon thereafter as possible. Students who have taken the Washington Pre-college Test, and transfer students who can have the scores of such or similar tests transferred before registration are exempt.

## **ADMISSION TO ADVANCED STANDING**

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.

Students who present advanced placement credits from courses completed in secondary schools will receive commensurate college credit for these, provided they have been validated by the CEEB examination with passing scores of 5, 4 or 3.

Students transferring from nonaccredited institutions are given conditional status with tentative credit for previous work as evaluated by the Vice President for Academic Affairs and Registrar or the Academic Stan-

dards Committee. 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.

A transfer student with senior standing must be in residence three 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.

## **TRANSFER CREDIT**

Once a student has completed 96 quarter credits, no additional credits may be transferred from a community college.

## **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, and who have been approved by the Registrar are eligible for junior class membership.

**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 and the Master of Education degrees with majors in Biology and Education. For further information concerning graduate courses and degree requirements, see the bulletin of the Graduate Division.

**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 Registrar have been completed and all fees have been paid. Freshmen are assigned faculty advisers who assist in registration and planning programs. Changes

in registration, approved by the adviser, 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 adviser and 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.

**WITHDRAWALS.** Students withdrawing from college or individual courses must file an official drop voucher with the Registrar's Office. Withdrawal slips must be signed by the adviser and the instructor involved. The final date for dropping a class is the last formal class meeting prior to the scheduled final examination for that class. Students doing passing work prior to withdrawal will receive a W (withdrawal). Students doing failing work at the time of withdrawal will receive a Wf (withdrew failing). Students withdrawing from all classes during the quarter will receive W's. Both grades, W and Wf, appear on the transcript but do not affect cumulative grade-point average.

**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 Vice President for Academic Affairs and the instructors involved. Late registrants may expect a reduction in course load.

## REREGISTRATION

Occasionally a student's registration is cancelled when he fails to meet certain prescribed obligations; this does not constitute an expulsion, and as soon as the student has remedied the problem he is reinstated. There is a fee of \$10.00 for reregistration.

## EXPLANATION OF CREDITS

A credit usually 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.

**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 are limited to a study load of 12 quarter credits.

Students in college residence halls may not register for less than nine credits without permission of the Vice President of Student Affairs.

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. Correspondence work is allowed only with permission of the student's faculty adviser and the department chairman.

The following work-study load is recommended.

OUTSIDE WORK	STUDY LOAD
1 - 14 hours per week.....	12 - 16 quarter credits
15 - 20.....	10 - 14
20 - 24.....	8 - 12

The following study loads will satisfy the authorities indicated:

1. Immigration Authorities.....	12 quarter credits
2. Selective Service*.....	16
3. Social Security.....	12
4. Veterans.....	14

\*The Selective Service System requires graduation in four years, that is, 16 credits per quarter.

## COURSE NUMBERING

### PRE-COLLEGE LEVEL

**No credit.** Courses numbered 0 to 99 carry no credit toward a degree or a college program.

### LOWER DIVISION

**Freshman.** Courses numbered 100 to 199 are considered first-year college courses, or the freshman level. Seniors registering for these courses may not count such credits toward the required 192 credits for a degree, unless the courses are electives in the student's program.

**Sophomore.** Courses numbered 200 to 299 are considered second-year college courses, or the sophomore level.

### UPPER DIVISION

**Junior.** Courses numbered 300 to 399 are considered third-year college courses, or the junior level.

**Senior.** Courses numbered 400 to 499 are considered fourth-year college courses, or the senior level. Some of these courses may apply toward a graduate program.

### GRADUATE

Courses numbered 500 to 599 are considered fifth-year college courses, the graduate level. Seniors whose programs for graduation have been approved and who otherwise meet the admission requirements of the Graduate Division may be permitted to take graduate courses if their programs will allow it.

**HYPHENATED NUMBERS.** Course numbers connected with hyphens indicate courses which ordinarily 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.

**ADMISSION TO UPPER DIVISION.** Ordinarily, courses numbered 300 or above may not be taken until 84 credits have been earned and the basic degree requirements have been completed.

However, a sophomore who has completed 75 credits may petition the Academic Standards Committee for permission to register for courses numbered 300-399 if he has completed the basic degree requirements and the course prerequisites, if his scholarship is acceptable, if the coursework needed involves sequenced courses, and if progress in his chosen curriculum would otherwise be jeopardized.

## GRADING SYSTEM

The quality of student effort is measured by a system of grades and by computed grade-point averages. Each grade is assigned a numerical value in points. A report of grades earned is made to both students and parents at the end of each quarter. The following system of grades and point values is used:

A—exceptional	4 grade points per credit
B—above average	3
C—average	2
D—below average	1
F—failure	0

Other symbols used are as follows: S, satisfactory; W, withdrawal; Wf, withdrew failing. I, incomplete; and Au, audit course. The I is given in case of incomplete work due to justifiable causes and must be made up three weeks before the close of the following quarter; otherwise it becomes an F. This regulation also applies to students who discontinue college. Permission to receive an incomplete must be obtained from the instructor. 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.

**GRADE-POINT AVERAGE.** The grade-point average (GPA) is computed by totaling the grade points for all courses and dividing by the total credits for which grades are received. The symbols S, I, W, Wf, and Au are disregarded in computing the grade-point average.

**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. No change in the permanent record will be made after two weeks following the issuance of the grade card.

**REPEAT COURSES.** Students may repeat only courses in which grades lower than a C have been received. This repeat work must be taken in a regularly offered class; 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. Only the second grade will be included in the calculation of the grade-point average.

**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 GPA is again 2.00 or better. The study load for a student on scholastic probation is limited to 12 credits.

## HONORS

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

## CLASS REGULATIONS

Students are not officially registered for a course until the instructor has been informed by the Registrar's 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.

## ADVENTIST COLLEGES ABROAD

Walla Walla College, together with eight other Adventist colleges in the United States, has formed an organization for the purpose of providing opportunities for qualified students to study abroad. Presently, arrangements have been made for students to study a full year at Seminaire Adventiste, Collonges, France; Seminar Marienhöhe, Darmstadt, Germany; Colegio Adventista del Plata, Entre Ríos, Argentina; Middle East College, Beirut, Lebanon, and at Bogenhofen Seminary near Braunau, Austria. Credits will be granted for these studies so that a student will be able to complete almost a full college year abroad. Write to the Registrar for information.

## CORRESPONDENCE WORK

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

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. Ask the Registrar for information.

## **EXTENSION COURSES**

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

## **VOCATIONAL AND TECHNICAL PROGRAMS**

In addition to the regular bachelor's degree program, an associate degree program is offered in the specialties of secretarial, secretarial accounting, and medical secretarial; also auto technology, electronics technology, printing, and maintenance technology.

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

For information on these programs, write to the Registrar.

## **CHALLENGE EXAMINATIONS AND WAIVERS**

By special permission of the department chairman and the course instructor, a student currently registered in the College may be permitted to receive credit by examination for work in which credentials cannot be supplied. Challenge examinations are permitted any time prior to the final quarter of college study. The regular tuition rate is charged for academic credit earned in this manner, and the special examination fee of \$5 is charged for each test prepared by a college instructor. The grades earned, even when unsatisfactory, will be recorded and computed in the grade-point average.

Courses in which a student has earned an F or Wf are not open to challenge examinations.

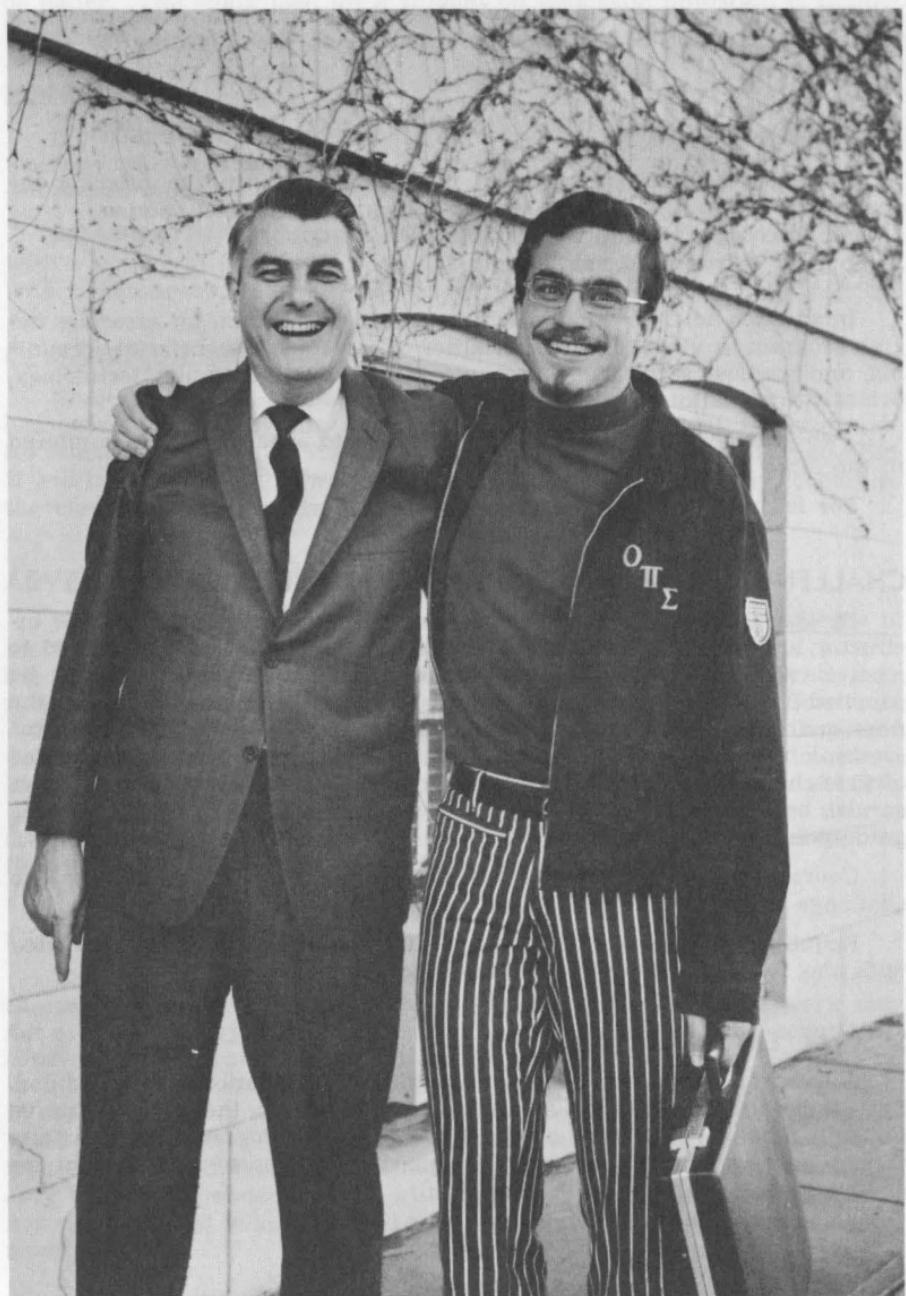
Requests for any waiver of curricular requirements are to be filed with the Academic Standards Committee.

## **SPECIAL EXAMINATIONS**

All students are expected to take final examinations as scheduled. Special administrations are arranged by petition to the Administrative Council, filed at 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.



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# DEGREE REQUIREMENTS

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

Associate of Arts	Bachelor of Science
Associate of Science	in Engineering
Bachelor of Arts	Master of Arts
Bachelor of Science	Master of Education
Bachelor of Music	

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.

For information concerning requirements for the Master of Arts and Master of Education degrees see the bulletin of the Graduate Division.

## 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, the Bachelor of Science in Engineering; the Bachelor of Science with majors in Biophysics, Business, Education, Dental Hygiene, and Nursing.

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.

Majors are available in the following areas:

Accounting	Industrial Education
Applied Music	Journalism
Art	Mathematics
Biblical Languages	Medical Technology
Biology	Music Education
Biophysics	Music Performance
Business Administration	Music Theory
Business Education	Nursing
Chemistry	Office Administration
Dental Hygiene	Physical Education
Elementary Teaching	Physics
Engineering	Religion
English	Sociology
Foods and Nutrition	Spanish
French	Speech
German	Speech and Hearing Therapy
History	Theology
Home Economics	

Minors are available in the following areas:

Art	Journalism
Biblical Languages	Library Science
Biology	Mathematics
Business Administration	Music
Chemistry	Office Administration
Economics	Physical Education
English	Physics
French	Political Science
German	Psychology
Health Education	Religion
History	Sociology
Home Economics	Spanish
Industrial Education	Speech

**COMPREHENSIVE EXAMINATION.** Satisfactory completion of a comprehensive examination in the major is required before a degree may be conferred. A student who fails this examination may not attempt another examination until one quarter has elapsed. Industrial education students will submit an appropriate project and/or report approved by the chairman of the department.

**Residence.** Transfer students must be in residence three consecutive quarters and complete a minimum of 36 credits.

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 Registrar not later than one week after the beginning of the third quarter preceding graduation. Appropriate forms may be obtained from the Registrar's Office. Students are not considered candidates for degrees or eligible for senior class membership until officially notified by the Registrar.

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

paid not later than March 5 in order for candidates to be eligible for graduation.

Seniors must have all unfinished correspondence work and/or incompletes completed by May 15 in order to graduate with the June class. Summer seniors must have all unfinished correspondence work and/or incompletes completed by July 15 in order to graduate with the August class.

## **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 basic course in two of the following areas, as indicated.

12

**Fine Arts:** (6)

207, 208, 209 Cultural Foundations or  
201, 202, 203 Introduction to Music or  
221, 222, 223 Appreciation of Art  
321, 322, 323 History of Art

**Literature:** (6)

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

**Speech:**\* (4)

101-102 Fundamentals of Speech

\*If the Speech sequence is selected, the remaining two hours 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

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

9-21

Majors in the following must complete 9-21 credits:

Chemistry	Language	Religion
English	Mathematics	Sociology
History	Music	Speech
Journalism	Physics	Theology

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 must choose

Greek for their language requirement. Majors in religion may choose Greek or a modern language. Majors in the following must complete 0-12 credits:

Accounting  
Art  
Business Administration  
Home Economics

0-12

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

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.

9

**Religion.** Students who submit two or more units of Bible will complete 18 credits in college. Students who have completed less than two units of Bible and those transferring from non-Seventh-day Adventist colleges will take two credits each quarter in college. Students with fewer than two units in religion must complete either 101, 102, 103 or 201, 202, 203.

Additional credits are to be chosen from the following courses: 104, 105, 106; 141, 142, 143; 201, 202, 203; 257, 258, 259; 322, 323; 341, 342, 343; 364, 365, 366; 384; 402; 426, 427, 428; 444, 445, 446; 464, 465, 466. In addition, students may also choose up to six credits from the following courses in Christian philosophy: 421, 422, 423; 431, 432, 433.

18-24

## PHYSICAL EDUCATION AND HEALTH

**Health.** Completion of the course Health Science or waiver by examination during the freshman year.

2

**Physical Education.** Physical Education is required of all students under 30 years of age. Veterans who have completed basic training are exempt from Physical Education upon presentation of their discharge papers to the Registrar.

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 basic course in two of the following areas, as indicated.

12

**Fine Arts: (6)**

207, 208, 209 Cultural Foundations or  
201, 202, 203 Introduction to Music or  
221, 222, 223 Appreciation of Art  
321, 322, 323 History of Art

**Literature: (6)**

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

**Speech:\*(4)**

101-102 Fundamentals of Speech

\*If the Speech sequence is selected, the remaining two hours 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

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

9-21

Majors in the following must complete 9-21 credits:

**Biology****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. Majors in chemistry should choose French or German.

Majors in chemistry must complete credits in German or French

0-12

No language is required of students who have completed two units in one of these languages on the high school level.

No language is required for the following majors:

Accounting	Industrial Education
Biophysics	Medical Technology
Business Administration	Nursing
Business Education	Office Administration
Dental Hygiene	Physical Education
Elementary Teaching	Physics
Foods and Nutrition	

0

**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 Bible from an academy will complete 18 credits in college. Students who have completed less than two units of Bible in academy, and those transferring from non-Seventh-day Adventist colleges will take two credits each quarter in college. Students with fewer than two units in religion must complete either 101, 102, 103 or 201, 202, 203.

18-24

Additional credits are to be chosen from the following courses: 104, 105, 106; 141, 142, 143; 201, 202, 203; 257, 258, 259; 322, 323; 341, 342, 343; 364, 365, 366; 384; 402; 426, 427, 428; 444, 445, 446; 464, 465, 466. In addition, students may also choose up to six credits from the following courses in Christian philosophy: 421, 422, 423; 431, 432, 433.

18-24

## **PHYSICAL EDUCATION AND HEALTH**

**Health.** Completion of the course Health Science or waiver by examination during the freshman year.

2

**Physical Education.** Physical Education is required of all students under 30 years of age. Veterans who have completed basic training are exempt from Physical Education upon presentation of their discharge papers to the Registrar.

3

## **BACHELOR OF MUSIC**

Students wishing to receive the Bachelor of Music degree must follow the curriculum as outlined under Music. The physical education and religion requirements are the same as for other baccalaureate degrees.

## **BACHELOR OF SCIENCE IN ENGINEERING**

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

## **SECOND BACHELOR'S DEGREE**

Two different degrees may be conferred at the same time if the candidate has met the requirements of both degrees, and has completed a total of 237 credits. The College does not grant two degrees of the same kind to any one person, such as two B.A.'s or two M.A.'s. Students may, however, earn a second degree after one degree has been conferred by completing an additional 45 quarter credits, meeting the basic degree requirements of both degrees, and the requirements of a second major and a second minor.

## **MUSIC CREDIT ALLOWED ON DEGREES**

Students who are not majoring or minoring in music may use nine credits of applied music, including three credits in ensemble, in meeting degree requirements. Thereafter, one credit in music classwork must be completed for each credit in applied music, with a maximum of eight additional credits in ensemble.

## **GRADUATION**

Degrees are conferred twice each year, June and August. Candidates for degrees are required to be present for graduation. The President may grant permission for graduation *in absentia* when all requirements have been met and circumstances warrant this.

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# PREPROFESSIONAL COURSES OF STUDY

EMERSON JAMES

**T**HE 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 two units of high school mathematics (algebra and geometry). Preprofessional courses of study are offered for the professions herein-after listed.

## DENTAL

Adviser: Mr. Chinn

The minimum requirement for admission to the study of dentistry is two years of college. However, most dental schools expect candidates for admission to have completed three to four years of college. Loma Linda University expects a grade-point average of 2.50. A total of 96 credits is required, and should include the following:

Calculus	4
Developmental Biology	5
Freshman Composition	9
General Biology or Zoology	12
General Chemistry	12
Machine Shop	4
Organic Chemistry	9-12
General Physics	12
Religion	6 per year of college
Sufficient electives to complete 96 credits.	

Some schools require nine credits in a foreign language and three to six credits of Quantitative Analysis.

## 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:

*Accounting or Bookkeeping	6
*Beginning Typewriting	6
Freshman Composition	9
Biology	4-12
General Psychology	4
Government	3

*Introductory Chemistry	9
Religion	6
Sociology	3
Speech	4
U.S. History	9

\*Or high school credits

## DENTAL HYGIENE

Adviser: Mr. Grable

Students planning for careers in dental hygiene must complete 96 credits with a cumulative grade-point average of 2.50 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.

### Dental Hygiene Curriculum—Cooperative Program, Walla Walla College and University of Oregon

A minimum grade-point average of 3.00 is required for competition at the University of Oregon.

#### Freshman Year (on Walla Walla College Campus)

Freshman Composition	3	3	3
Religion	2	2	2
General Biology	4	4	4
Introductory Chemistry	3	3	3
Health Science	2		
Philosophy of Christian Education		2	
Fundamentals of Speech			4
Physical Education	1	1	1
	—	—	—
	15	15	17

Sophomore and junior years at the University of Oregon Dental School: courses as required.

#### Senior Year (on Walla Walla College Campus)

Religion	4	4	4
Fine Arts or Literature	2	2	2
American History	3	3	3
Electives in Social Science and/or Humanities	7	7	7
	—	—	—
	16	16	16

The Bachelor of Science degree is awarded by Walla Walla College.

One school year of residency beyond the freshman year must be taken on the WWC campus.

## Loma Linda University

Experience has indicated that a minimum average of 2.50 is needed to compete for admission to the program at Loma Linda University. The following credits are required in preparation for advanced studies there:

Freshman Composition	9
Speech	4

Select at least two courses	14
Fine Arts	
Foreign Language	
Literature	
Philosophy	
General Biology	12
Microbiology	5
Introductory Chemistry	9
Must include laboratory	
Religion	10
U.S. History	9
American Government	3
General Psychology	4
Introduction to Sociology	3
Physical Education	3
Electives to be chosen in counsel with adviser.	11

The Bachelor of Science degree is awarded by Loma Linda University.

## LAW

Adviser: Mr. White

While most law schools require the bachelor's degree for admission, they do not require any specific courses as prerequisite for entrance; some require Principles of Accounting. Courses which tend to develop skills in the English language and ability to reason and think analytically are highly recommended. Students planning to study law should consult with the Pre-Law adviser to make sure that the courses taken in college will meet the requirements of the law school which they plan to attend.

## MEDICAL

Adviser: Mr. Jones

Most medical schools require completion of 192 credits with a grade-point average of 2.50 or above, computed separately for science and non-science courses. The following credits are normally required:

Developmental Biology	5	Mathematics*	8
English	9	Organic Chemistry	9-12
Foreign Language	9-21	Physics	12
General Biology or Zoology	12	Quantitative Analysis	3-6
General Chemistry	12	Religion	18

\*To include Differential and Integral Calculus.

## MEDICAL TECHNOLOGY

Adviser: Mr. Chambers

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. 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:

<b>First Year</b>		<b>Second Year</b>	
Chemistry 161-162-163	12	Chemistry 244	4
Health and P.E. 110	2	Biological Sciences 101,	
Education 110	2	102, 103	12
Education 121, 122	4	History 201, 202, 203	9
English 101-102-103	9	Physics 181, 182, 183	
Mathematics 121	4	and 184, 185, 186	12
Physical Education	3	Religion	6
Religion	6	Fine Arts, Literature, Speech	6
Electives	6		

#### **Third Year**

Biological Sciences 107 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

#### **Fourth Year**

The clinical year is 12 months at the Portland Adventist Hospital or at another approved hospital during which time there is no tuition charge, and the student is paid a stipend.

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.

## **NURSING**

Advisers: Miss Leazer, Miss Carrigan

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. Winter

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:

Biological Science	15
Chemistry, or Physics or	
Mathematics	9
Freshman Composition	9
History of the United States	9
Physical Education	3
Psychology	9
Religion	12
Sociology	3
Electives. Elect 9 credits from two of the following areas: fine arts, foreign language, literature, phi- losophy, and speech.	27

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. Hall

Two years of college preparation are 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:

Freshman Composition	9	General Chemistry	12
Fundamentals of Mathematics	8	General Physics	12
General Biology	12	General Psychology	4

It is important that the mathematics be taken in the first year, and it is highly recommended that the first quarter of Calculus be taken also.

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.

## PHARMACY

Adviser: Mr. Jones

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	Organic Chemistry	10
Botany	3	Physical Education	2
Freshman Composition	9	Physiology	5
General Physics	12	Psychology	6
Health Principles	2	Quantitative Chemistry	5
General Chemistry	12	U. S. History	9
Mathematics	8	Zoology	9

All pharmaceutical colleges require three years in residency beyond the two years of pre-pharmacy; some require four years.

## PHYSICAL THERAPY

Adviser: Mrs. Jones

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.

### General

Freshman English	9
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### Humanities and Social Sciences

General Psychology	
U. S. History	
Selection from: fine arts, foreign language, literature, philosophy, speech, economics, sociology, psychology.	

### Natural Sciences and Mathematics

*General Biology	
(Exclude anatomy and physiology, microbiology.)	

*Introductory Chemistry	
Physics: introductory or general physics for students not having had secondary school physics.	12
Religion	
Electives	
To meet the minimum of:	96
* Complete course must be taken with lab.	

## VETERINARY SCIENCE

Adviser: Mr. Rigby

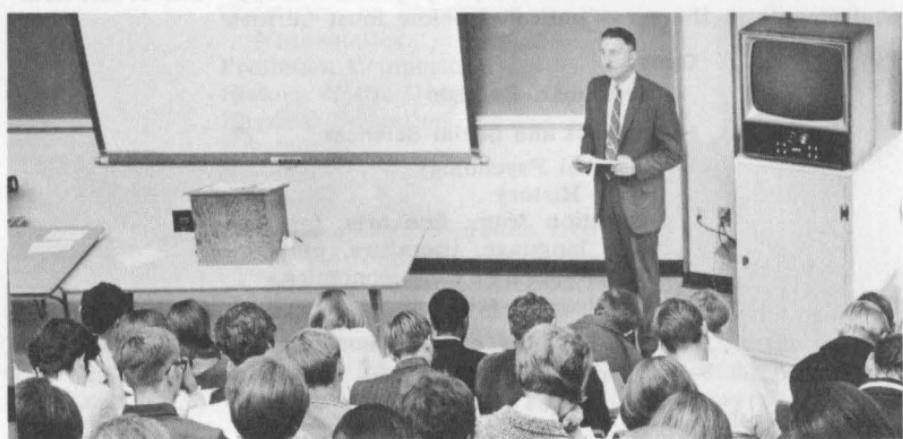
There are approximately 18 colleges of veterinary science in the United States. Since their basic requirements are not exactly the same, the student should confer with the college of his choice. The following will generally meet the preprofessional requirements:

Freshman Composition	9
General Biology and Biology electives	18
General Physics	12
History of the U. S.	9
General Chemistry	12
Mathematics	4
Social Science	3
Speech	3
U. S. Government	3
Zoology	12

## X-RAY TECHNOLOGY

Adviser: Mr. Barnett

Forty-five credits are required for admission to most schools of X-ray 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.



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## DEPARTMENTS OF INSTRUCTION

**T**HIS section contains a list of all courses offered in 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: (1) the number of the course as used in the College records; (2) the title of the course; (3) a brief description of course content; (4) the number of credits given; (5) the quarter in which it is given.

The College will make every effort to offer the courses during the quarters designated in this bulletin. 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" is probably the more reliable guide for personal planning of courseloads and schedules.

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. Thus, "Three credits; autumn, winter, spring," means three credits each quarter, or a total of nine credits for the year.

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 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.

Courses preceded by an \* are not offered in the current year.

# ART

K. MacKintosh, Chairman; C. McCulley

The aim of the Art 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 either the Fine Arts or Commercial Arts Options. The Commercial Arts Option is designed to develop skills in working with the printed word and visual communication. The Fine Arts Option will prepare the student as an artist or as a teacher.

## MAJOR REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:

### Core Requirements

Design	161-162-163	9
Drawing	181-182-183	3
Introduction to Painting	191, 192, 193	3
Introduction to Printmaking	281, 282, 283	6
History of Art	321, 322, 323	6
		27

### Option A—Fine Arts

Painting	201, 202, 203	{	10
Printmaking	311, 312, 313		
Fine Arts Design	301, 302, 303		9
Independent Study	477, 478, 479		3
Commercial Art	204, 205, 206		4
Electives			2
			28

### Option B—Commercial Art

Commercial Art	204, 205, 206	6
Advertising Design	314, 315, 316	9
Advanced Drawing	307-308	4
Independent Study	477, 478, 479	3
Electives		6
		28

### Required Cognates:

Health and P.E.	264	3
Non-departmental	207, 208, 209	6
Industrial Education (option B)	161, 362	5
Theology (option A)	423, 444	4

### Minor requirements in Art:

Same as Core Requirements

## COURSES

161-162-163. **DESIGN.** An intensified study of the basic elements of design aiming to develop cognizance of visual organization. Three credits; autumn, winter, spring.

181-182-183. **DRAWING.** An experience in the use of line with representational and nonfigurative approaches through application to still life and portraiture. One credit; autumn, winter, spring.

191, 192, 193. **INTRODUCTION TO PAINTING.** A first course in painting through various uses of acrylics. One credit; autumn, winter, spring.

201, 202, 203. **PAINTING.** 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. Two credits; autumn, winter, spring.

204, 205, 206. **COMMERCIAL ART.** An introduction to the various processes and media of commercial art, with emphasis on layout, new directions, and craftsmanship. Two credits; autumn, winter, spring.

221, 222, 223. **APPRECIATION OF ART.** 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. Two credits; autumn, winter, spring.

261-262-263. **SCULPTURE.** The study and application of three dimensional forms in space using varied media such as plaster, plasticene, and paper. One credit; autumn, winter, spring.

281, 282, 283. **INTRODUCTION TO PRINTMAKING.** A beginning course in the art of printmaking, relief method of printmaking—linoleum cut, woodcut, and wood engraving. Two credits; autumn, winter, spring.

301, 302, 303. **FINE ARTS DESIGN.** Application of the basic principles and elements of design to be used in the fine arts field. Prerequisites: 161-162-163. Three credits; autumn, winter, spring.

305. **ART IN THE ELEMENTARY SCHOOL.** 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. Three credits; winter.

307-308, 309. **ADVANCED DRAWING.** A utilization of the basic principles of drawing with various experimental approaches. Prerequisites: 181-182-183. Two credits; autumn, winter, spring.

311, 312, 313. **PRINTMAKING.** An advanced course in the various processes of intaglio printing, drypoint, engraving, etching. Open to majors and minors only. Prerequisites: 161-162-163 and 281, 282, 283. Two credits; autumn, winter, spring.

314, 315, 316. **ADVERTISING DESIGN.** Application of the basic principles and elements of design to be used in the commercial field of art. Prerequisites: 161-162-163. Three credits; autumn, winter, spring.

## ART

321, 322, 323. **HISTORY OF ART.** 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. Two credits; autumn, winter, spring.

361-362-363. **ADVANCED SCULPTURE.** Application of basic three-dimensional principles, using metal, fiberglass, emphasizing experimentation in direction, media and techniques. Prerequisites: 261-262-263. Two credits; autumn, winter, spring.

406. **AESTHETICS.** An examination of alternative philosophies for purposes of determining the relation of art to civilization. Two credits; spring.

477, 478, 479. **INDEPENDENT STUDY IN ART.** Individual student projects chosen and carried out under the direction of the chairman of the department. Open to majors and minors only. One to three credits any quarter. Maximum, three credits; any quarter.



## BIOLOGICAL SCIENCES

D. Rigby, Chairman; D. Clayton, C. Forss, A. Grable, A. Perry.

The department offers a Bachelor of Science degree with a major in Biology, and jointly with the Physics Department, a Bachelor of Science degree with a major in Biophysics. Graduate work leading to the Master of Arts degree is also offered. For further information, see the Graduate Division bulletin.

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

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

### BIOLOGY MAJOR—REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

General Biology	101, 102, 103	12
Research Methods I, II, III	251, 352, 453	4
Genetics	261	4
Developmental Biology	266	5
Physiology	392, 393	8
	or	
	392, 401	
	or	
	392, 468	
General Ecology	446	4
Philosophy of Origins	483	3
Electives (U.D. Biology)		12
One course in zoology and one in botany required.		—
		52

#### Required Cognates:

Mathematics	121, 122, 181	12
Chemistry	161-162-163	12
Chemistry	371-372-373	12
Physics, with laboratory	181, 182, 183	12
One summer term at the Marine Biological Station Statistics is highly recommended.		—

### BIOPHYSICS MAJOR—REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

The requirements for the curriculum of Biophysics are listed in the Department of Physics.

### MINOR REQUIREMENTS IN BIOLOGY:

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

## BIOLOGICAL SCIENCES

### COURSES

101, 102, 103. **GENERAL BIOLOGY.** 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. Four credits.

202, 203. **ANATOMY, PHYSIOLOGY.** A survey of human anatomy and physiology is given. Health principles will be integrated in this course. One laboratory per week. Will not apply on biology major or minor. Five credits.

222. **MICROBIOLOGY.** 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. Five credits.

251. **RESEARCH METHODS I.** 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. One credit.

261. **GENETICS.** A study of the principles of inheritance in plants and animals. One laboratory per week. Prerequisites: 101, 102, 103. Four credits.

266. **DEVELOPMENTAL BIOLOGY.** 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. Five credits.

**Course 101, 102, 103 is a prerequisite for all upper-division courses.**

\*350. **BIOSTATISTICS.** Practice and theory in the use of statistical methods in quantitative biology. Four credits.

352. **RESEARCH METHODS II.** 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. One credit.

360. **SURVEY OF THE PLANT KINGDOM.** A study of the life histories, internal anatomy and physiology of the various members of the plant kingdom. One laboratory per week. Prerequisite: 103. Four credits.

389. **NATURAL HISTORY OF VERTEBRATES.** A study of vertebrates with emphasis on natural history, ecology, and taxonomy. Two laboratories per week. Will not apply on the biology major. Five credits.

392, 393. **PHYSIOLOGY.** The study of the principles of physiology of animals and plants and related chemical and physical phenomena at the cellular level comprises the first half of the course. The second half of the course is a study of the organ physiology of animals with emphasis on the vertebrates and is based on the concepts developed during the first

\*Not offered the current year.

## BIOLOGICAL SCIENCES

half of the course. One laboratory per week. Must be taken in sequence. Physics and Organic Chemistry recommended as prerequisites. Four credits.

\*401. **PLANT PHYSIOLOGY.** A course designed to cover the principles of physiology of plants in general. One laboratory per week. Prerequisite: 360, 392. Four credits.

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

405. **GENERAL ENTOMOLOGY.** A study of insect morphology, physiology and ecology. One laboratory per week. Four credits.

407. **PHILOSOPHY OF SCIENCE.** 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. Does not apply on a biology major. Three credits.

412. **PLANT ANATOMY.** 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. Prerequisite: 360. One laboratory per week. Four credits.

420. **COMPARATIVE ANATOMY.** A study of the comparative anatomy of chordates with emphasis on the vertebrates. Detailed dissections of the shark and cat are made in the laboratory. Two laboratories per week. Five credits.

424. **HERPETOLOGY.** A systematic study of amphibians and reptiles with emphasis on natural history and ecology. Two laboratories per week. Four credits.

426. **SYSTEMATIC BOTANY.** Principles of classification of plants with emphasis on the angiosperms. Two laboratories per week. Four credits.

427. **COASTAL FLORA.** A study of the principles of classification and of the ecological relationships of the vascular plants of the Puget Sound area. Special emphasis is given to the salt marshes, fresh-water pond, estuarine, grassland, and forest habitats of the islands and mainland. Four credits. (WWC Marine Biological Station)

428. **PHYSIOLOGY OF THE ALGAE.** A comparative study of the physiology of representative members of the major algal groups. Collection and growth of pure cultures of single-celled forms and related metabolic processes, nutritional factors, light requirements, synchronization and growth will be emphasized. Four credits. (WWC Marine Biological Station)

429. **LIMNOLOGY.** 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. Four credits. (WWC Marine Biological Station)

\*Not offered the current year.

## BIOLOGICAL SCIENCES

**441. MICROTÉCHNIQUE.** A course designed to cover the important methods of making microscope slides. Two laboratories per week. Three credits.

**444. MAMMALOGY.** A systematic study of mammals with emphasis on natural history and ecology. Two laboratories per week. Four credits.

**446. GENERAL ECOLOGY.** 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. Four credits.

**447. PARASITOLOGY.** A systematic study of the morphology, life cycle, and host-parasite relationships of protozoan, helminth, and arthropod parasites. Two laboratories per week. Five credits.

**449. VERTEBRATE HISTOLOGY.** The microscopic anatomy of vertebrate cells, tissues and organs including reference to their functions. Two laboratories per week. Four credits.

**451, 452. INVERTEBRATE ZOOLOGY.** A study of the biology of the invertebrates. The first half of the course includes the organisms through the pseudocoelomates; the second half comprises the eucoelomates. Eight credits. (WWC Marine Biological Station)

**453. RESEARCH METHODS III.** 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. Two credits.

**462. ICHTHYOLOGY.** A systematic study of the fishes found in Puget Sound, with a survey of the fishes of other waters. Four credits. (WWC Marine Biological Station)

**463. MARINE BOTANY.** A systematic study of plants found in Puget Sound, with a survey of marine plants from other areas. Four credits. (WWC Marine Biological Station)

**464. ANIMAL BEHAVIOR.** A comparative study of the behavior of animals with emphasis on an experimental analysis of behavior. A research project will be required. Four credits. (WWC Marine Biological Station)

**465. BACTERIOLOGY.** 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. Five credits.

**467. BIOLOGICAL OCEANOGRAPHY.** A study of physical, chemical and geological effects on marine organisms. Four credits. (WWC Marine Biological Station)

**468. COMPARATIVE PHYSIOLOGY.** A comparative study of the physiology and life processes of animals with emphasis on invertebrates. Prerequisite: 392. Four credits. (WWC Marine Biological Station)

## BIOLOGICAL SCIENCES

**470. BIOPHYSICS.** An introductory course emphasizing the physical aspects of living organisms studied by the experimental and conceptual methods of physics with application to marine life. Four credits. (WWC Marine Biological Station)

**472. METHODS OF TEACHING BIOLOGY.** 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. Three credits.

**474. MARINE INVERTEBRATES.** A study of the biology of selected groups of marine invertebrates. Four credits. (WWC Marine Biological Station)

**477, 478, 479. INDEPENDENT STUDY IN BIOLOGICAL SCIENCE.** Directed study in an approved area. The student will be required to read widely on an assigned subject, follow regular research methods, and present a paper showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits.

**483. PHILOSOPHY OF ORIGINS AND SPECIATION.** 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. Three credits.

**490. TECHNIQUES IN FIELD BIOLOGY.** 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 at the rate of one hour credit for each week spent working in the field. One to six credits.

**495. COLLOQUIUM.** 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.** 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 EVOLUTION.** Detailed study of the variability of the genetic mechanism as the latter relates to speciation. Processes of significance in species formation at the organism and population levels will be considered. Prerequisite: 261. Three credits.

**506. MORPHOLOGY OF PLANTS.** An advanced study of the type forms of the divisions of the plant kingdom. One laboratory per week. Prerequisite: 360 or permission of the instructor. Four credits.

**510. GRADUATE SEMINAR.** Presentation of topics and discussion of current research in specific areas of biology. One credit; any quarter. Maximum: five credits.

## BIOLOGICAL SCIENCES

**511. PRINCIPLES OF TAXONOMY.** A course designed to give the student a working knowledge of the rules of nomenclature, the factors considered in classification, the preparation of synonymies and keys, and new methods for determining relationships. Four credits.

**514. SYMBIOSIS.** A study of sharply defined associations between organisms. Selected examples of the viruses, bacteria, plants and animals are used to illustrate varying degrees of relationships. Prerequisite: Coursework in one group of animals or plants or microbes or parasitology. Chemistry courses through organic are highly recommended. Two laboratories per week. Four credits.

**518. SYSTEMATIC ENTOMOLOGY.** A study of the principles of classification of insects. Laboratory work emphasizes recognition of orders and families with special problems on the specific level. Prerequisite: course 405 highly recommended. Two laboratories per week. Four credits.

**\*519. FOREST ENTOMOLOGY.** A study of economically important forest insects with methods of control. Practical field experience is stressed. One laboratory per week. Prerequisite: 405. Four credits.

**522. CELLULAR BIOLOGY.** 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. Five credits.

**525. READINGS IN ANIMAL PHYSIOLOGY.** 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.** 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.** 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 VERTEBRATE ECOLOGY.** 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.** Analysis of classical and current literature in the field by means of reports and conferences with staff. Two credits. Maximum, four credits.

**537. HELMINTHOLOGY.** A detailed study of the more common helminth parasites of animals is undertaken. Emphasis is given to current areas of research in helminthology. Basic techniques of importance in laboratory work with helminths are covered. Two laboratories per week. Prerequisite: 447. Four credits.

**545. THESIS.** 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. Eight credits.

\*Not offered the current year.

## BUSINESS AND ECONOMICS

J. Mehling, Chairman; A. Dressler, R. Fowler, R. Jones, N. Rudolph, T. Uren, A. White.

The objective of the department is to offer students opportunity to obtain the general education and specialized training necessary for success in society at large as well as in the business world. Courses offered in the department are designed to prepare for business-related careers with the denomination, government and industry.

### BACHELOR OF ARTS—MAJOR DEGREE REQUIREMENTS

Principles of Accounting	131, 132, 133	9
Intermediate Accounting	231, 232, 233	9
Business Law	241, 242, 243	6
Principles of Economics	261, 262, 263	9
Seminar	492	1
Electives, upper division		20
		—
		54

### BACHELOR OF SCIENCE—MAJOR DEGREE REQUIREMENTS

#### Major: Administration and Management

Principles of Accounting	131, 132, 133	9
Intermediate Accounting	231, 232, 233	9
Business Law	241, 242, 243	6
Principles of Economics	261, 262, 263	9
Cost Accounting	331	5
Seminar	492	1
Electives, upper division		32
		—
		71

#### Major: Accounting

Students desiring an accounting major as preparation for a public accounting career and for the C. P. A. examination will complete the specific courses listed above for the management major and include the following in their electives:

Tax Procedure	335	3
Accounting Systems	336	3
Business Finance	375	3
Statistics	411 or equivalent	3
Accounting Problems	431, 432, 433	3-9
Fund Accounting	434	3
Auditing Procedure	439	3

#### Required Cognates:

Mathematics	
Majors in Business Administration	8
Majors in Accounting	12

#### Competence in Typing

Business and accounting majors must demonstrate proficiency in typing by course work or examination.

## BUSINESS AND ECONOMICS

### MINOR IN BUSINESS:

Principles of Accounting	131, 132, 133	9
Principles of Economics	261, 262, 263	9
Electives, upper division		9
	—	27

### MINOR IN ECONOMICS:

Principles of Economics	261, 262, 263	9
Price Theory	361	5
Aggregate Economic Analysis	362	5
Electives		8
	—	27

## COURSES

112. **PERSONAL FINANCE.** A course designed to provide an individual with the techniques to manage his personal finances more efficiently. Two credits; winter.

131, 132, 133. **PRINCIPLES OF ACCOUNTING.** Introduction to accounting, books of original entry, ledgers, statements of condition and of operations. To be taken in sequence. Three credits; autumn, winter, spring.

135, 136. **PRINCIPLES OF ACCOUNTING.** Introduction to accounting, books of original entry, ledgers, statements of condition and of operations. Five credits; winter; four credits, spring.

231, 232, 233. **INTERMEDIATE ACCOUNTING THEORY.** 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, profit determination, fund accounts, inventories, reserves, contingent liabilities, etc. Prerequisite: 131, 132, 133. Three credits; autumn, winter, spring.

236. **INTRODUCTION TO INFORMATION SCIENCE.** An introduction to the logical organization of digital computers, data organization and processing, algorithms, flow diagrams, the use of a computer language as applied to various accounting systems, and the operation of all-purpose bookkeeping machines. Three credits; spring.

241, 242, 243. **BUSINESS LAW.** Fundamentals of law which affect business transactions. Emphasis on contracts, agencies, negotiable instruments, landlord and tenant relationship, personal property, and corporations. Two credits; autumn, winter, spring.

261, 262, 263. **PRINCIPLES OF ECONOMICS.** 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. Three credits; autumn, winter, spring.

321, 322, 323. **MARKETING AND ADVERTISING.** A study of the principles underlying marketing and market organizations in connection with the psychology and science of advertising. Two credits; autumn, winter, spring.

## BUSINESS AND ECONOMICS

**331. COST ACCOUNTING.** Theory and practice in keeping cost records for budgeting, evaluation, and control. Prerequisite: 133. Five credits; autumn.

**335. TAX PROCEDURE.** A study of tax regulations and accounting records necessary to facilitate proper tax accounting and the determination of tax liability for individuals, partnerships, and corporations. Three credits; winter.

**336. ACCOUNTING SYSTEMS.** A study of diversified accounting systems, system construction and installation procedures. Prerequisite: 231, 232, 233. Three credits; spring.

**344. PRINCIPLES OF INSURANCE.** A study of insurance contracts, underwriting organizations, and insurance representation and procedures. Three credits; autumn.

**\*346. REAL ESTATE.** A survey course in the basic principles and problems of real estate management and appraisal. Three credits; spring.

**\*348. LABOR RELATIONS.** The development and present status of labor law and employment problems. Three credits; winter.

**351, 352 BUSINESS COMMUNICATION.** See Secretarial Science 351, 352. Three credits; autumn, winter.

**361. PRICE THEORY.** 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: 261-262, 263. Five credits; autumn.

**362. AGGREGATE ECONOMIC ANALYSIS.** Analysis of the determinants of the aggregate level of employment, output, and income of an economy. Prerequisite: 261-262, 263. Five credits; winter.

**\*366. DEVELOPMENT OF ECONOMIC THOUGHT.** A study of the history of economic doctrine, tracing the origins of contemporary economic theory. Prerequisite: 361, 362. Five credits; spring.

**369. BUSINESS CYCLES.** A study of the business cycle including analysis of cycle theories, appraisal of proposals for controlling cycles and of forecasting techniques. Prerequisite: 361, 362. Five credits; spring.

**375. BUSINESS FINANCE.** A study of the fundamental principles of financial policy in the organization and management of corporate enterprises. Three credits; winter.

**\*411. STATISTICS.** This course stresses an understanding of basic statistical principles and their applications. Graphic presentations, distributions, probabilities, index numbers, correlations and statistical decision making are studied. Prerequisite: Mathematics 121 and 122 or permission from the instructor. Three credits; spring.

**414. BUSINESS MANAGEMENT.** A study of the internal organization of the business enterprise; problems of planning, coordination and production management. Three credits; autumn.

\*Not offered the current year.

## BUSINESS AND ECONOMICS

431, 432, 433. **ACCOUNTING PROBLEMS.** Studies in equities and control of assets in C.P.A. type problems. Prerequisite: 24 credits of accounting. Three credits; autumn, winter, spring.

434. **FUND ACCOUNTING.** A study of the application of accounting principles to trust funds, pledged funds, sinking funds, special tax funds and general funds accumulated for special purposes such as plant extension, debt retirement and operation of non-profit enterprises. Three credits; autumn.

439. **AUDITING PROCEDURE.** A survey of practical auditing procedure as applied in the verification of accounting records, and the preparation and presentation of formal reports. Prerequisite: 231, 232, 233 or permission from the instructor. Three credits; spring.

\*441. **INVESTMENTS.** A study of the principles of making sound investments in the securities markets, managing investment portfolios, evaluating securities, the function of the spectator, the hedging operation and the evaluation of market risks. Three credits; summer.

\*442. **CREDIT ADMINISTRATION.** A study of loan and investment problems from the viewpoint of the credit administrator. Three credits; summer.

453. **HUMAN RELATIONS IN MANAGEMENT.** A survey of the human relations problems found in industry today. Three credits; spring.

\*462. **COMPARATIVE ECONOMIC SYSTEMS.** Compares the operation of modern capitalistic, socialistic and communistic systems as they respond to economic problems. Prerequisite: 263. Three credits; winter.

\*465. **ECONOMICS OF FOREIGN TRADE.** 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 exchange. Prerequisite: 263. Three credits; winter.

467-468-469. **MONEY AND BANKING.** A study of the functional activities of the institutions which comprise our financial system; emphasizing the nature and functions of money, credit, and banking. Two credits; autumn, winter, spring.

477, 478, 479. **INDEPENDENT STUDY IN BUSINESS ADMINISTRATION.** 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 showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits. Autumn, winter, spring.

492. **SEMINAR.** A course in orientation, research, problems and trends in business and economics. Students will do independent study and present a paper. Open to majors only. One credit; winter.

\*Not offered the current year.

# CHEMISTRY

C. Jones, Chairman; J. Chambers, C. Chinn

## MAJOR REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:

General Chemistry	161-162-163	12
Elementary Quantitative Analysis	244, 245-246	10
Elementary Organic Chemistry	321-322-323	12
Physical Chemistry	351, 352, 353	12
		46

Any minor may be chosen. The following courses are also required:

Physics 181, 182, 183, or 201, 202, 203.

Mathematics 181, 182.

## MAJOR REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

General Chemistry	161-162-163	12
Elementary Quantitative Analysis	244, 245-246	10
Elementary Organic Chemistry	321-322-323	12
Advanced Inorganic Chemistry	342, 343	4
Physical Chemistry	351, 352, 353	12
Advanced Organic Chemistry	427, 428	4
Advanced Analytical Chemistry	461, 463	4
Independent Study	477, 478, 479	1-3
Elective		2-4
	Minimum	63

Minors in both mathematics and physics are recommended. Regarding less of the minor the following are required:

Mathematics 181, 281, 282, 283

Physics 181, 182, 183, or 201, 202, 203

## MINOR REQUIREMENTS:

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

## COURSES

101-102-103. **INTRODUCTORY CHEMISTRY I.** An introductory course in chemistry covering the fields of inorganic, organic, and biochemistry. Does not apply on a major or minor. Two lectures, one laboratory per week. Three credits; autumn, winter, spring.

161-162-163. **GENERAL CHEMISTRY.** 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. Three lectures and one laboratory per week. Four credits; autumn, winter, spring.

244, 245-246. **ELEMENTARY QUANTITATIVE ANALYSIS.** 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:

## CHEMISTRY

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. Four credits; autumn. Three credits; winter, spring.

271. **INTRODUCTORY CHEMISTRY II.** This course is a continuation of 101-102-103, emphasizing organic and biochemistry. Will not apply on major or minor. Three lectures per week. Three credits; autumn.

321-322-323. **ELEMENTARY ORGANIC CHEMISTRY.** 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. Four credits; autumn, winter, spring.

342, 343. **ADVANCED INORGANIC CHEMISTRY.** A more detailed study of inorganic substances with emphasis on the metals, their preparation and uses. Prerequisite: 161-162-163. Two credits; winter, spring.

351, 352, 353. **PHYSICAL CHEMISTRY.** 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. Prerequisite: 244, 245-246, Physics 181, 182, 183 or 201, 202, 203 and Mathematics 121, 122, 181, 281, or permission from the instructor. Three lectures, one laboratory per week. Four credits; autumn, winter, spring.

352, 353. Physics. **RADIOISOTOPE RESEARCH TECHNIQUES.** Two credits; winter, spring. (See Physics)

406, 407. **BIOCHEMISTRY.** 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.** A study of the current theories in the field of aliphatic and aromatic chemistry. Prerequisite: 321-322-323. Two credits; autumn, winter.

461, 463. **ADVANCED ANALYTICAL CHEMISTRY.** A study of instrumental methods of analysis. One lecture, one laboratory period per week. Prerequisite 246. Three credits; autumn, spring.

471. **METHODS OF TEACHING CHEMISTRY.** 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. Three credits; winter.

477, 478, 479. **INDEPENDENT STUDY IN CHEMISTRY.** 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 showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits.

## EDUCATION AND PSYCHOLOGY

E. Chace, Chairman; K. Gibbons, N. Maberly, H. Ochs, H. Phillips, Lois Teel, D. Wagner.

The College offers teacher-education programs leading to the bachelor's degree with Washington State and denominational certification for elementary and secondary teaching. Generally, a bachelor's degree and the first certificate (provisional) can be earned in four years of college.

### MASTER'S DEGREE PROGRAM

Graduate work leading to master's degrees in education is also offered. For further information concerning graduate degrees, see the bulletin of the Graduate Division.

### BACHELOR OF SCIENCE WITH CERTIFICATION IN ELEMENTARY EDUCATION

#### I. GENERAL EDUCATION

Candidates must meet the basic requirements for the bachelor of science degree as listed in the section "Degree Requirements" with the following addition:

Fundamentals of Mathematics I & II	8
or	
Survey of Mathematics	12
History of the Pacific Northwest	3

(May be deferred to the 5th year. See requirements for standard certificate, fifth year.)

#### II. PROFESSIONAL EDUCATION

Thirty-nine (39) hours in professional education courses as approved by the Education Department adviser and selected from each of the following areas:

A. Social and Philosophical Foundations	3
210 Introduction to Education	
404 History of Education	
† 522 Philosophy of Education	
† 525 Education in the 20th Century	
B. Psychological Foundations (3 credits from each group)	9
220 Educational Psychology or	
† 521 Psychology of Learning	
390 Educational Evaluation	
435 Child Psychology or	
431 Psychology of Exceptional Children	
C. Curriculum and Instruction (3 credits from each group)	12
362 Reading in the Elementary School	
361 Language Arts in the Elementary School or	
365 Social Studies in the Elementary School	

† Available to seniors only.

## EDUCATION AND PSYCHOLOGY

369 Science in the Elementary School or  
 373 Mathematics in the Elementary School or  
 498 Workshop in Science Instruction

470 Methods and Materials or  
 461 Methods of Audio-Visual Education or  
 † 504 Elementary School Curriculum

Supervised Experiences

450 Directed Teaching—Elementary

Clectives in Professional Education

305Art	Art in the Elementary School
298H&PE	Physical Education in the Elementary School
431H&PE	Elementary School Health Instruction
472Mus	Methods of Teaching Music
365LS	Children's Literature

### III. MINORS

In addition to the requirements listed in I and II above, the student will complete a minor in each of two areas taught in the public schools. Students who so desire may choose a suitable major for elementary teaching in place of the two minors as the area requirement.

**Approved majors and minors for elementary teachers:**

**Majors:** Applied Music  
Art  
English  
French  
German  
History  
Home Economics  
Mathematics  
Music  
Physical Education  
Spanish  
Speech and Hearing Therapy

**Minors:** Art  
Biology  
Business or Economics (not both)  
Chemistry  
English  
French  
German  
Health  
History  
Home Economics  
Industrial Education  
Library Science  
Mathematics  
Music

<sup>†</sup> Available to seniors only.

## EDUCATION AND PSYCHOLOGY

Physical Education  
Physics  
Political Science  
Sociology  
Spanish  
Speech

### IV. ELECTIVES to complete the bachelor of science degree requirements

#### PREPARATION FOR DIRECTED TEACHING

The Department of Education requires the candidate for teacher certification to plan for directed teaching as a "block" of 12 hours in a given quarter plus a special short-term course, Methods and Materials of Instruction, 470, three quarter hours for a total load of 15 hours. Student teaching may be done in one of four quarters, beginning with the spring quarter of the junior year, provided the *prerequisite professional courses* have been taken. Students who elect to take three credits in School Exploratory Experience are not entitled to reduction of the required 12 hours in directed teaching. See course descriptions for 450 and 460 for further information.

#### CERTIFICATION

Attention is given to planning each program to fit the needs of the individual student. Those transferring from other colleges should plan carefully with the Education Department to avoid unnecessary duplication of course work.

State certification procedures must be initiated by the student. The College recommends the student after formal application and the payment of a certification fee of \$1.00 to the County Superintendent of Schools.

Denominational certification applications are filed with the Union Conference Educational Superintendent for processing. The "credentials" on file in the Placement Office do not relate to certification.

#### PROFESSIONAL EDUCATION REQUIREMENTS FOR PROVISIONAL ELEMENTARY CERTIFICATION

Students meeting requirements for the bachelor of science degree with certification in elementary teaching listed in outline on page 67 will qualify for the Washington State Provisional Teaching Certificate.

#### PROFESSIONAL EDUCATION REQUIREMENTS FOR PROVISIONAL SECONDARY CERTIFICATION

In addition to the basic requirements for the bachelor of science degree or for the bachelor of arts degree as listed in the section "Degree Requirements," and the completion of a regular college major and minor in areas taught in the public secondary schools, the student must complete thirty (30) hours in professional education courses as approved by the Education Department adviser, and selected from each of the following areas:

A. Social and Philosophical Foundations

3

210 Introduction to Education

404 History of Education

## EDUCATION AND PSYCHOLOGY

† 522 Philosophy of Education	
† 525 Education in the 20th Century	
<b>B. Psychological Foundations</b>	<b>9</b>
220 Educational Psychology or	
† 521 Psychology of Learning	
plus	
390 Educational Evaluation	
440 Adolescent Psychology	
<b>C. Curriculum and Instruction</b>	<b>6</b>
471 Methods in (major or minor)	
plus one course from:	
470 Methods and Materials	
461 Methods of Audio-Visual Education	
† 508 Secondary School Curriculum	
<b>D. Supervised Experiences</b>	<b>12</b>
460 Directed Teaching—Secondary	

### REQUIREMENTS FOR STANDARD CERTIFICATE—FIFTH YEAR

To be recommended for the Washington Standard Certificate, the candidate must fulfill the following requirements:

1. Hold a valid Washington provisional certificate
2. Complete two years of successful teaching
3. Complete 45 quarter credits beyond the bachelor's degree
4. Take History of the Pacific Northwest (for all elementary teachers and for those secondary teachers who plan to teach in the social sciences).

Of the 45 credits, 22½ credits must be in residence; 30 credits may be earned prior to the first year of teaching; at least 15 hours must be earned after the first year of teaching; a maximum of 12 credits may be earned by correspondence and/or extension study. Correspondence or extension credits must be from schools approved by the college recommending the candidate for certification.

The fifth-year program must be planned by authorized personnel in the Education Department. By careful programming, some students are able to complete the requirements for the master's degree in education at the same time they are fulfilling the requirements for the Standard Certificate. For preliminary information, consult the bulletin of the Graduate Division.

### PRINCIPAL'S CREDENTIALS

Walla Walla College provides course offerings leading to both the provisional and standard principal's credentials (elementary, secondary and general).

### PSYCHOLOGY MINOR

The psychology minor serves as a basis for further training for a variety of occupations including careers in school counseling, industrial

† Available to seniors only.

## EDUCATION AND PSYCHOLOGY

guidance services and certain types of social work. It can be integrated, by advisement, with related areas of sociology and health for candidacy for certification as a school psychologist.

### Minor Requirements:

General Psychology	121, 122	4
Psychological Experiments	225	2
Educational Psychology	220	3
Educational Evaluation	390	3
Elementary Statistics	350	3
Child Psychology	435	
or		
Adolescent Psychology	440	3
Psychology of Personality	446	3
Mental Health	449	2
Electives		5

May include select courses in  
sociology chosen in counsel with  
the chairman of the department.

—  
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## COURSES IN EDUCATION

110. **PHILOSOPHY OF CHRISTIAN EDUCATION.** A study of the ideals and principles of Christian education, especially as interpreted by the Seventh-day Adventist church. Two credits.

150. **TEACHER AIDE.** Designed to prepare the paraprofessional for non-teaching activities in the classroom at either the elementary or secondary level. Two credits.

210. **INTRODUCTION TO EDUCATION.** A study of historical and philosophical foundations underlying the current organization and objectives of American education. Directed exposure to the educational process at all levels. Three credits.

239IE. **INDUSTRIAL EDUCATION FOR ELEMENTARY TEACHERS.**  
(See Dept. of Industrial Ed. & Tech.)

298H&PE. **PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL.** See Department of Health and Physical Education.

305Art. **ART IN THE ELEMENTARY SCHOOL.** See Department of Art.

361. **LANGUAGE ARTS IN THE ELEMENTARY SCHOOL.** Materials, objectives and methods used in the teaching of the language arts in the elementary school—composition, spelling, reading, listening, speaking. Three credits.

362. **READING IN THE ELEMENTARY SCHOOL.** Objectives and methods in the teaching of reading in the elementary school. Three credits.

## EDUCATION AND PSYCHOLOGY

**365. SOCIAL STUDIES IN THE ELEMENTARY SCHOOL.** Materials, objectives and methods used in teaching social studies in the elementary school, chosen from the fields of geography, history, civics and economics. Three credits.

**365LS. CHILDREN'S LITERATURE.** See Library Science.

**369. SCIENCE IN THE ELEMENTARY SCHOOL.** Objectives and materials used in the teaching of science at the primary and intermediate levels with particular emphasis on the application of the scientific method. Three credits.

**373. MATHEMATICS IN THE ELEMENTARY SCHOOL.** Methods of teaching modern mathematics in the elementary school. Proficiency test required for admission. Three credits.

**390. EDUCATIONAL EVALUATION.** A study of the statistics and methods of using evaluative instruments in the elementary and secondary school. Three credits.

**404. HISTORY OF EDUCATION.** A survey of the history of education. Three credits.

**411LS. LITERATURE IN THE SECONDARY SCHOOL.** See Library Science.

**426. EDUCATIONAL GUIDANCE.** The philosophy, functions, organization, personnel and evaluation of the school guidance program. Three credits.

**431H&PE. ELEMENTARY SCHOOL HEALTH INSTRUCTION.** See Department of Health and Physical Education.

**447. SCHOOL EXPLORATORY EXPERIENCE.** 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—three to four weeks. This "September experience" does not replace directed teaching requirements. Three credits.

**450. DIRECTED TEACHING—Elementary.** Professional laboratory experiences for students preparing to teach on the elementary level. A weekly seminar will be conducted for students teaching in the Walla Walla area. Application for the Autumn quarter must be 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, after completion of the required courses in professional education. (See page 67) Maximum: twelve credits.

**452. DIRECTED TEACHING—In-Service.** Directed laboratory experience for a teacher desiring to improve his professional skills. Training in methods of analysis of teaching and practice in the use of these methods of self-analysis will be included. Registration only after approval of the Academic Standards Committee and by permission of the Student Teaching Committee after completion of the required courses in professional education. Maximum: twelve credits.

## EDUCATION AND PSYCHOLOGY

**454. DIRECTED FIELD EXPERIENCE—Speech and Hearing.** Professional laboratory experience at both elementary and secondary school level for the Speech and Hearing Therapy major. A weekly seminar will be conducted for students working in the Walla Walla area. Application for the Autumn quarter must be 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, after completion of the required courses in professional education. (See pages 67, 69) Maximum: twelve credits.

**460. DIRECTED TEACHING—Secondary.** Professional laboratory experience for students preparing to teach at the secondary school level. A weekly seminar will be conducted for students teaching in the Walla Walla area. Application for the Autumn quarter must be 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, after completion of the required courses in professional education. (See page 69) Maximum: twelve credits.

**461. METHODS OF AUDIO-VISUAL EDUCATION.** A survey of the methods of instruction through the use of audio-visual aids. The course provides training in equipment utilization, integration of techniques into instructional practices and selection and evaluation of audio-visual media. Two credits.

**462. INSTRUCTIONAL AIDS—PRODUCTION.** Designed for teachers, audio-visual directors and others interested in laboratory experience in the production of instructional aids; emphasis is on course-of-study implementation through production techniques feasible at the local school level. By permission of instructor. Two credits.

**470. METHODS AND MATERIALS OF INSTRUCTION.** Considers the basic principles of instruction and fundamental teaching procedures which are applicable at any grade level. Includes orientation in organization of classroom procedures, keeping records, making reports, guiding and disciplining students and other activities which support the instructional program. Course is coordinated with twelve-hour "block-of-time" student teaching assignments. Meets daily for two or three periods during the first and last weeks of the quarter. Three credits.

**471, 472 or 473. METHODS COURSES.** Several methods courses are offered by the various departments of the College. They deal with materials and specific methods applicable to the teaching of each individual subject. Actual classroom presentation and demonstration is included. (All courses have the same numbers.) Three credits.

**477, 478, 479. INDEPENDENT STUDY IN EDUCATION.** Directed study in an approved area. The student will be required to read widely on an assigned subject, follow regular research methods, and present a paper showing competence in and extent of his study. Open to students preparing for teaching certification. Permission from the chairman of the department is required. One to three credits any quarter. Maximum, three credits.

**489. VOCATIONAL DEVELOPMENT THEORY.** Theories of vocational choice and methods of studying occupations and occupational information are considered as they relate to educational and vocational guidance. Three credits.

## EDUCATION AND PSYCHOLOGY

490. **TEACHING HIGH SCHOOL READING.** Basic principles of reading instruction; methods, materials and organization of the developmental and corrective reading programs in high school. Three credits.

492. **EDUCATION OF THE GIFTED.** Emphasis is placed upon the design of learning opportunities for gifted children in the light of psychological characteristics of such children. Three credits.

495. **EARLY CHILDHOOD EDUCATION.** A critical review of the experimental literature of the cultivation of intellectual abilities in the young child with implications for the curriculum in nursery school and kindergarten. Prerequisites: 220 and 435. Three credits.

496. **ELEMENTARY SCHOOL GUIDANCE.** A study of the rationale for elementary school guidance with emphasis upon current research and issues. Attention will be focused upon the tools and techniques of both classroom and out-of-class guidance functions and services. Three credits.

497. **WORKSHOP IN AEROSPACE EDUCATION.** A study of the basic phases of the aerospace age, e.g., economic, social, geographical, military and technical. Special areas will be meteorology, navigation, international problems in space, astronaut training and public safety. Three credits.

498. **WORKSHOP IN SCIENCE INSTRUCTION.** A workshop designed to assist elementary and junior high school personnel to be cognizant of contemporary objectives in science instruction and to explore appropriate methods of motivation and teaching. A review of textual materials and teaching aids will be included. Three credits.

### Graduate Courses

500. **GRADUATE SEMINAR.** A weekly discussion period in which faculty and students explore significant issues in education. One credit.

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

508. **SECONDARY SCHOOL CURRICULUM.** Overview of the secondary school curriculum, with emphasis on the various subject fields; organization of the school for curriculum development; educational objectives; the courses of study; evaluation of the secondary school curriculum. Three credits.

515. **COUNSELING THEORIES AND TECHNIQUES.** A study and application of the theories and techniques for counseling. Professional relationships and ethics are considered. Prerequisite: 426 or equivalent. Three credits.

518. **GROUP COUNSELING.** Theories and techniques of counseling in group situations. Prerequisite: 515. Two credits.

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

## EDUCATION AND PSYCHOLOGY

525. **EDUCATION IN THE TWENTIETH CENTURY.** Historical background of modern education with emphasis on trends and developments in the twentieth century. Three credits.

526. **SCHOOL FINANCE.** A course designed for administrators, emphasizing origin and disbursement of school funds derived from tax sources and other revenues. Techniques of budget construction are studied and a general overview is given of the principles of financing education. Three credits.

527. **SCHOOL PLANNING AND CONSTRUCTION.** 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. Three credits.

535. **TEACHING OF REMEDIAL READING.** Diagnostic and remedial reading techniques, how to recognize reading difficulties and improve reading skills. Laboratory experience required. Three credits.

539. **SUPERVISION.** For principals, classroom teachers or those planning to be supervisors. Problems, responsibilities, privileges and duties of both teacher and supervisor, and the improvement of teachers in service through a comprehensive program of supervision. Three credits.

544. **ADMINISTRATION OF THE ELEMENTARY SCHOOL.** Organization, supervision and administration of elementary schools. Three credits.

550. **SCHOOL LAW.** 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. Three credits.

551. **ADMINISTRATION OF THE SECONDARY SCHOOL.** Problems and procedures in the organization and administration of secondary schools. Three credits.

553. **SCHOOL PUBLIC RELATIONS.** This course will investigate the factors which contribute to desirable relations between a school and its several publics. It will also deal with some of the specific causes of problems which arise in this area and methods of handling them. Three credits.

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

558. **SCHOOL ACTIVITIES.** Designed to acquaint the student with the range of the school activities program; to understand and define the purposes 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. Two credits.

560. **ADMINISTRATIVE PRACTICUM.** Professional laboratory experience for candidates for an administrative credential. The course is designed to involve each candidate in a variety of practical administrative experiences and to assist in his successful induction into school leadership. Five credits.

## EDUCATION AND PSYCHOLOGY

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

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

570. **TOPICS.** Selected topics in education involving research and reports in addition to regular class activities. Maximum, six credits. Three credits, any quarter.

581, 582, 583. **PROFESSIONAL PROJECT.** Selected areas of advanced study involving reading and research. Formal report required. Prerequisite: consent of department head and graduate standing. Maximum, six credits. Two, four or six credits; any quarter.

590. **THESIS.** Eight credits.

## COURSES IN PSYCHOLOGY

121, 122. **GENERAL PSYCHOLOGY.** 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. Two credits.

220. **EDUCATIONAL PSYCHOLOGY.** This course emphasizes the application of psychological principles to the art of teaching. The responsibility of the school in developing a dynamic, social, and ethical personality is stressed. The practices of the modern school are studied in the light of empirical data, experimental research, and case studies. Three credits.

225. **PSYCHOLOGICAL EXPERIMENTS.** A laboratory course providing undergraduate students with elementary experience in designing and conducting experimental research in the field of psychology. Two credits.

350. **ELEMENTARY STATISTICS.** Descriptive techniques and other selected fundamental procedures for summarizing and interpreting data from tests and research in education and psychology. Three credits.

430. **PSYCHOLOGICAL TESTING.** 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. Three credits.

431. **PSYCHOLOGY OF EXCEPTIONAL CHILDREN.** Characteristics and problems of all types of exceptional children with consideration of essential educational adaptation. Prerequisite: 121, 122. Three credits.

435. **CHILD PSYCHOLOGY.** Principles of growth as related to various phases of human development during the pre-adolescent years: physical, mental and emotional. Prerequisite: 121, 122. Three credits.

440. **ADOLESCENT PSYCHOLOGY.** Principles of growth as related to various phases of human development during the adolescent years: physical, mental and emotional. Prerequisite: 121, 122. Three credits.

## EDUCATION AND PSYCHOLOGY

442. **MOTIVATION.** A study of basic drives and causes of behavior in organisms with emphasis upon human behavior. This course includes a laboratory. Four credits.

444. **SOCIAL PSYCHOLOGY.** A study of personality patterns that function in the interpersonal and inter-group life into which all human beings are born and within which they develop and mature. The course is concerned with human behavior, attitudes and processes of the phenomena of communication, suggestion, conflict, accommodation, assimilation and socialization. Three credits.

445. **SOCIAL PSYCHOLOGY LABORATORY.** Prerequisite: 444. One credit.

446. **PSYCHOLOGY OF PERSONALITY.** Major theories concerning personality development, assessment, and adjustment will be considered. Three credits.

449. **MENTAL HEALTH.** Physiological and psychological factors related to emotional maturity. Identification of mental health activities. Individual mental health, classroom climate, patterns of acceptance and rejection. Three credits.

### Graduate Courses

501. **STATISTICS IN RESEARCH.** An introduction to probability and statistical inference including t-ratio, simple analysis of variance, chi square and other selected non-parametric statistics used in educational or psychological research. Prerequisite: 350 or equivalent. Three credits.

521. **PSYCHOLOGY OF LEARNING.** The course includes analysis of the mechanisms involved in the learning process. The physiological and psychological bases for functional learning are discussed, and the experimental evidence supporting psychological hypotheses is reviewed. Three credits.

531. **INDIVIDUAL TESTING—BINET.** A course designed to familiarize the student with the Stanford-Binet Intelligence scale, its administration, interpretation and the writing of the psychological report. Prerequisite: 430 and permission of the instructor. Two credits.

532. **INDIVIDUAL TESTING—WECHSLER.** A course designed to familiarize the student with the Wechsler Intelligence scales, WAIS, WISC, WPPS, their administration, interpretation, and the writing of the report. Prerequisite: 430 and permission of the instructor. Three credits.

534. **ASSESSMENT OF THE INDIVIDUAL.** An introduction to and the use of methods applicable to assessment in schools where the counselor may be required to describe behavior. Experience in collecting data and writing case reports will be provided. Prerequisites: 430, 445, 531, 532. Three credits.

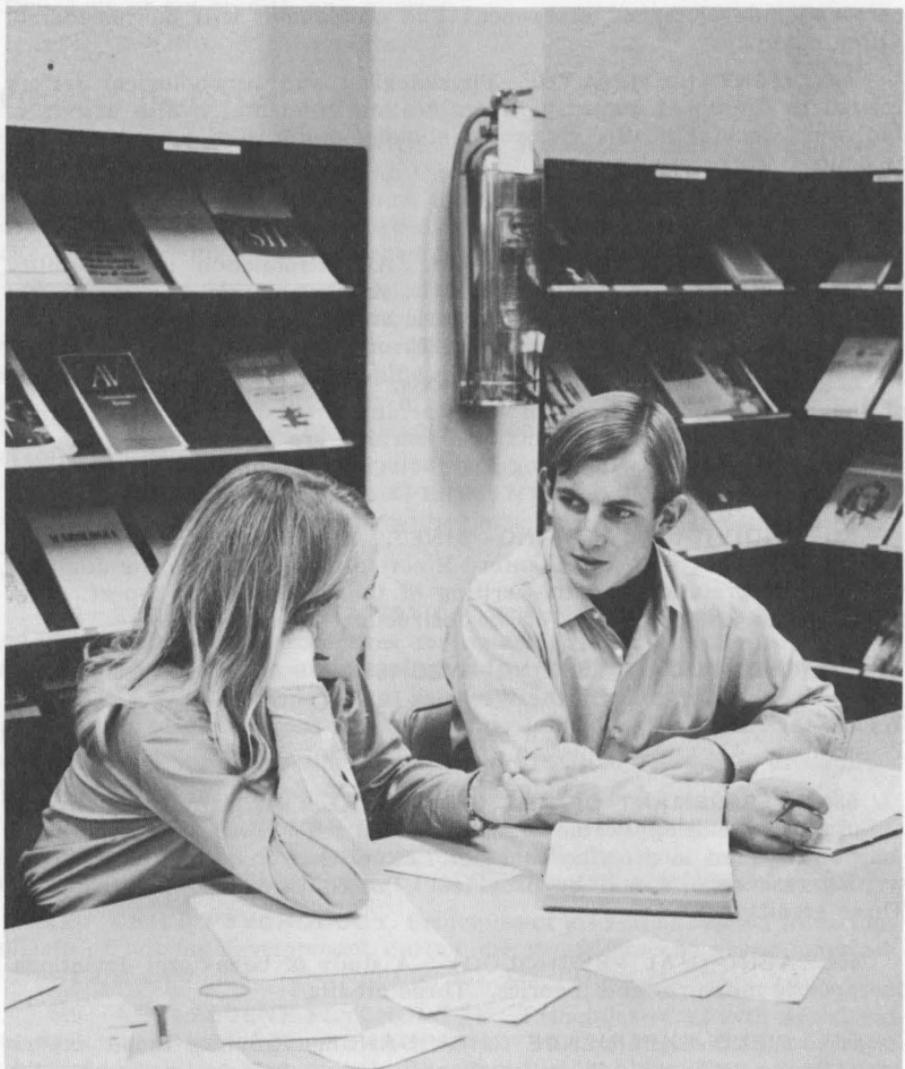
564. **ABNORMAL PSYCHOLOGY.** A study of behavioral deviations, therapeutic measures and theories. Three credits.

565. **FIELD EXPERIENCE IN GUIDANCE.** Provides broad experiences in the various guidance functions in actual field settings under the

## EDUCATION AND PSYCHOLOGY

supervision of the college and qualified guidance workers. Prerequisite: 426. Three credits.

**566. PRACTICUM IN SCHOOL COUNSELING.** An opportunity for professional in-depth experience in the counseling function under the supervision of the college and qualified school counselors. Prerequisites: 515, 534, and department approval. Five credits.



## ENGINEERING

E. Cross, Chairman; J. Cole, R. Heisler, G. Masden, O. McNeil, R. Noel.

The College offers courses leading to the degree of Bachelor of Science in Engineering. 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. 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 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 chairman of the department, the student may concentrate his efforts in the areas related to civil, electrical or mechanical engineering. Should the student then wish to follow a specialized career in fields such as architectural engineering, aeronautical engineering, bio-engineering, electronics engineering, highway engineering, sanitary engineering or other such, he is prepared so to do through professional experience or graduate study.

Aside from the entrance requirements stated earlier in the 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.

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 interpreted as follows: Such grade may 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 do not hold, the courses involved must be repeated.

In the senior year, the following non-course 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.

# ENGINEERING

## REQUIREMENTS FOR A BACHELOR OF SCIENCE IN ENGINEERING DEGREE:

First Year		Second Year	
Religion	6	Religion	6
Freshman Composition	9	Philosophy of Christian Educ.	2
Precalculus and Calculus	13	Calculus	8
Inorganic Chem. 141-142; 143	12	Linear Algebra	3
Engineering Core Courses	7	Introductory Physics	15
Physical Education	3	Engineering Core Courses	18
	—	Engineering Electives	0-6
	50	Humanistic-Social Electives	0-2
			51-54
Third Year		Fourth Year	
Religion	0-6	Religion	0-6
Probability and Statistics	4	Engineering Core Courses	11
Ord. Differential Equations	4	Engineering Electives	21-26
Engineering Core Courses	21	Humanistic-Social Elecs.	11-12
Engineering Electives	10-22		—
Humanistic-Social Electives	0-9		50-52
	50-54	Grand total	205

Engineering Elective Sequences recommended for emphasis in:

**Areas related to Civil Engineering:** 212, 213, 302, 305, 334, 335, 336, 338, 339, 359, 367, 388, 434, 437, 438, 439.

**Areas related to Electrical Engineering:** 317, 318, 319, 322, 323, 412, 413, 415, 416, 417, 418, 419 and Mathematics 313.

**Areas related to Mechanical Engineering:** 322, 327, 367, 368, 369, 408, 412, 413, 448, 449, 451-452-453.

**Elective sequences in Humanistic-Social areas** to be selected in conference with the chairman of the department.

## ENGINEERING CORE COURSES:

**107-108-109. INTRODUCTION TO ENGINEERING.** Engineering communications, with emphasis upon sketching, conventional engineering drafting practices, pictorial representation; principles of descriptive geometry; study of engineering analysis using slide rule, desk calculator and digital computer; introduction to the design process and elements of professional engineering. Two credits; autumn, winter, spring.

**207-208-209. ENGINEERING MECHANICS.** Statics, two and three dimensional; analytical and graphical methods; kinetics; work and energy; dynamics of rotation, translation, and plane motion; impulse and momentum, vibrations, modified vector approach to be used throughout. Corequisite: Mathematics 281, 282, 283. Three credits; autumn, winter, spring.

## ENGINEERING

218, 219. **COMPUTER SCIENCE I.** Introduction to the principles of computing, digital computers and programming. Includes the concept of the program; characteristics of the computer; programming techniques—problem analysis, algorithm development, flow-chart construction, coding, debugging and documentation. This course may be taken by non-engineering students during the winter quarter when it will be taught with emphasis on BASIC (Beginner's All-purpose Symbolic Instruction Code) and supported via teleprocessing, or it may be taken during the spring quarter by engineering students with emphasis on an assembly coding language and supported by a desk-top digital computer. Two credits; winter. One credit; spring.

220. **COMPUTER SCIENCE II.** A continuation of Computer Science I, with emphasis upon the FORTRAN language. Input-output and format statements, arithmetic assignment statements, mathematical functions, control statements, subscripted variables, subroutines, processing of non-numeric data, algorithm development, debugging and documentation. All instruction will be supported with a large-scale, general-purpose computing system. Prerequisite: 219. Two credits; autumn, or spring.

228. **ELECTRIC CIRCUIT ANALYSIS I.** Electric circuit variables and parameters; Kirchoff's laws and circuit equations; AC steady-state analysis; frequency characteristics; two-terminal networks and equations; maximum power theorem and Thevenin's theorem. Laboratory is coordinated with classroom work and covers techniques of electrical measurement using bridges, potentiometer recorders, D'Arsonval meters, dynamometer meters, iron-vane meters, high impedance meters. Prerequisite: Mathematics 281; corequisite: Physics 202. Four credits; winter.

229. **ELECTROMAGNETIC FIELDS I.** Study of static electric fields, vector notation and coordinate systems, Coulomb's law, energy and potential theory, mapping, resistance and capacitance; fundamental principles of other types of fields will be studied, using the analogy principle. Prerequisites: 228 and Physics 202. Three credits; spring.

301. **MECHANICS OF MATERIALS.** Stresses, deformations and deflections of posts, shafts, beams, columns; combined stresses. Prerequisite: 207-208-209. Four credits; autumn.

312, 313. **ENGINEERING MATERIALS.** Study of the science of engineering materials—metallic and non-metallic; properties, uses, tests, behavior under stress; laboratory. Three credits; winter, spring.

325. **FLUID MECHANICS.** Fluid statics; fluid dynamics; nozzles, orifices, and weirs; impulse and reaction turbines; pipe flow; channel flow. Prerequisite: 207-208-209. Four credits; autumn.

326. **ENGINEERING THERMODYNAMICS I.** Properties of gases and vapors; entropy; PV, TS, HS, and HV planes; gas and vapor cycles; psychrometry; applications. Prerequisite: Physics 202; Mathematics 283. Four credits; winter.

329. **ENGINEERING ELECTRONICS I.** Characteristics and applications of electronic devices from the circuit viewpoint with major emphasis upon solid-state devices; diode circuits, biasing circuits, and amplifier circuits are studied, using both graphical techniques and equivalent-circuit models. Laboratory work required. Prerequisite: 228. Three credits; spring.

## ENGINEERING

**343. ENGINEERING ADMINISTRATION.** Business, economic, and ethical phases of engineering practice; engineering organization. Three credits; spring.

**414. ENERGY CONVERSION I.** A study of transformers, polyphase systems, characteristics of DC three-phase machines, induction motors, synchronous motors, single-phase motors; particular emphasis upon performance characteristics and applications of electrical machinery. Laboratory work required. Prerequisite: 228. Four credits; autumn.

**424. ANALOG COMPUTER PROGRAMMING.** A study of the characteristics and applications of the analog computer; basic computing techniques; problem analysis, time and amplitude scaling, flow charting, documentation; problems solved during the course will be drawn from several different scientific disciplines. Permission of the instructor required. Prerequisite: Mathematics 312. One credit; autumn.

**491-492-493. SEMINAR.** Presentation and discussion by faculty and students of design problems and current trends in engineering. One credit; autumn, winter, spring.

## ENGINEERING GENERAL COURSES:

**212. PUBLIC HEALTH ENGINEERING.** A consideration of the general aspects of environmental engineering as related to solutions of problems in environment, sanitation and health. Three credits; winter.

**213. SURVEYING I.** Use of basic surveying instruments, computational methods for traverses, simple curves, earthworks, mapping. Prerequisites: 107-108-109 and Mathematics 117. Three credits; spring.

**226. COMPUTER SCIENCE III.** An expansion of Computer Science II which either: (1) covers the FORTRAN language in greater breadth; or (2) gives experience in depth through the development and documentation of non-elementary computer programs. Prerequisite: Computer Science I, or equivalent. Corequisite: Computer Science II. Permission of the instructor required. One credit; autumn.

**302. CONTRACTS AND SPECIFICATIONS.** Preparation and interpretation of contracts and specifications; relation of the engineer to the owner and contractor. Two credits; spring.

**305. TRANSPORTATION ENGINEERING.** Highway, railroad, and airport planning, design; introduction to traffic engineering. Three credits; spring.

**317, 318, 319. ELECTROMAGNETIC FIELDS II, III AND IV.** Continuation of 229 with introduction of dynamic conditions and development of Maxwell's equations; interpretation and application of Maxwell's equations relative to circuit theory; development of concepts of energy propagation in waves along transmission lines, wave-guides, radiation from simple antennae. Laboratory work each quarter will provide experimental support of theory. Must be taken in sequence. Prerequisite: 229. Three credits; autumn, winter. Two credits; spring.

## ENGINEERING

322, 323. **ELECTRIC CIRCUIT ANALYSIS II AND III.** Network equations and theorems; Fourier theorem and harmonic analysis; Laplace transform; impulse function and convolution theorem; one-port and two-port network analysis and synthesis. Must be taken in sequence. Prerequisite: 228. Three credits; winter, spring.

327. **ENGINEERING THERMODYNAMICS II.** A continuation of 326, with applications to engineering processes and systems. Prerequisite: 228. Four credits; spring.

334. **SURVEYING II.** Advanced concepts of surveying as applied to cadastral, route and land surveying methods, using computer techniques; mapping. Prerequisite: 213. Two credits; autumn.

335, 336. **SOIL MECHANICS AND FOUNDATIONS.** Fundamental principles; testing, classification and interpretation of soil tests; applications to analysis and design of foundations, substructures, highways; geology. Laboratory work required. Prerequisite: Chemistry 161-162-163; corequisite: 338, 339. Three credits; winter.

338, 339. **STRUCTURAL ANALYSIS.** Graphical and algebraic analysis of statically determinate and indeterminate structures and their elements as applied to timber, steel and concrete construction; basic design concepts of beams, girders, columns, trusses, connections. Prerequisite: 301. Four credits; winter, spring.

359. **SANITARY COLLECTION AND DISTRIBUTION SYSTEMS.** Design of water, sewage, and storm water transport systems; collection of ground and surface waters for public use. Prerequisite: 325, 388. Three credits; spring.

367, 368, 369. **MECHANICAL ENGINEERING LABORATORY I.** Fuels and lubricants; calorimetry; instrumentation, calibrations, flow of fluids. Corequisite: 325, 326. One credit; autumn, winter, spring.

388. **HYDROLOGY.** Occurrence, measurement, and storage of ground and surface waters. Corequisite: 325. Three credits; autumn.

408. **MECHANICAL ENGINEERING LABORATORY II.** Mechanical system studies. Prerequisite: 367, 368, 369. Three credits; winter.

412. **SYSTEMS I.** A study of mechanical, electrical, fluid and thermal dynamic systems; idealized models, response and analytical description; emphasis placed upon transient analysis by both classical and Laplace transform methods. Prerequisites: 228. Mathematics 312, Physics 203. Three credits; winter.

413. **SYSTEMS II.** An introduction to control and feedback systems mechanical, electrical, fluid, and thermal; major emphasis upon stability of components and system; block diagrams and signal-flow methods. Laboratory work required. Prerequisite: 322, 323, 412. Four credits; spring.

415, 416. **ENERGY CONVERSION II AND III.** A continuation of 414, with particular emphasis upon the electromagnetic energy conversion fundamentals and the development of electric circuit models for electrical machinery; operation of rotating machines and systems of machines for control purposes. Laboratory work required. Prerequisites: 322, 414. Three credits; winter. Two credits; spring.

## ENGINEERING

417, 418, 419. **ENGINEERING ELECTRONICS II, III, IV.** Continuation of 329; small-signal equivalent circuits, AC and DC coupled amplifiers, frequency response, RF amplifiers, band-pass amplifiers, broadband amplifiers; switching circuits, pulse and wave-shaping circuits; AM, FM and pulse modulation and demodulation systems. Laboratory work required. Must be taken in sequence. Prerequisite: 329. Four credits; autumn, winter. One credit; spring.

434. **SANITARY ENGINEERING PROCESS DESIGN.** Analysis of water and wastes, with subsequent design of physical, chemical, and biological treatment facilities for domestic and industrial use. Laboratory work required. Prerequisites: 212, 359; Chemistry 161-162-163. Three credits; autumn.

437, 438, 439. **STRUCTURAL DESIGN.** Analysis and design of steel, reinforced concrete and prestressed concrete determinate and indeterminate structures; industrial and multi-story buildings, bridges, rigid frames, arches; elastic, plastic, limit and ultimate strength design procedures. Includes computation laboratory. Prerequisite: 338, 339. Four credits; autumn, winter, spring.

449. **HEAT TRANSFER.** A study of the basic laws of heat transfer by conduction, convection, and radiation. Prerequisite: 326, 327; Mathematics 312, 313. Four credits; autumn.

451-452-453. **MACHINE DESIGN.** 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. Prerequisite: 301, 312, 313. Four credits; autumn, winter, spring.

477, 478, 479. **INDEPENDENT STUDY IN ENGINEERING.** Directed independent study in an approved area. The student will be required to read widely; follow regular research and/or design methods; present a paper and/or engineering design showing competence in arriving at an acceptable solution. For senior engineering students only, by permission of the head of the department. One to three credits. Maximum, three credits; autumn, winter, spring.

## ENGLISH

Helen Evans, Chairman; Ruth Burgeson, Annie Mae Chambers, D. Davis, L. French, N. Moore, 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:

American Literature	224, 225, 226	6
English Literature	244, 245, 246	6
Seminar	491-492-493	3
Electives, upper-division literature (Three credits must be in American Literature)	30	
		—
		45

#### Required Cognates:

Advanced English Grammar	306	3
History of the English Language	426	3
Literary Analysis and Research	286	3
Writing courses in English or Journalism beyond Freshman Composition		3
History of the U. S.	201, 202, 203	9
History of England	404, 405, 406	6
		—
		27

### MINOR REQUIREMENTS:

American Literature	224, 225, 226	6
English Literature	244, 245, 246	6
Writing courses beyond Freshman Composition		3
Advanced English Grammar	306	3
Electives, upper-division literature		9
		—
		27

#### Required Cognate:

Methods of Teaching English	472	3
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## COMPOSITION

99. **ENGLISH COMPOSITION.** 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. No credit; autumn.

## ENGLISH

101-102-103. **FRESHMAN COMPOSITION.** A study of the principles of composition; extensive reading of both prose and poetry to formulate and develop ideas logically. Three credits; autumn, winter, spring.

104-105. **FRESHMAN COMPOSITION HONORS.** 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. Three credits; autumn, winter.

107, 108, 109. **ENGLISH FOR THE FOREIGN STUDENT.** 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 Freshman Composition 102, he may petition for a waiver of 101. Three elective credits; autumn, winter, spring.

280. **ADVANCED WRITING.** Additional work beyond the Freshman Composition level in exposition as well as some narration; extensive reading for ideas and style. Three credits; any quarter.

286. **LITERARY ANALYSIS AND RESEARCH.** 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. Three credits; spring.

306. **ADVANCED ENGLISH GRAMMAR.** The study of grammar and usage in current writing, with examination of traditional, structural, and transformational points of view. Three credits; winter.

385, 386. **CREATIVE WRITING.** Techniques of writing beyond those of mere correctness and clarity in creative forms; poetry (385), prose (386). Three credits; autumn, winter.

401. **EXPOSITORY PROSE.** Intensive work in analyzing and writing expository prose; emphasis on research methods, bibliography and idea development; designed to aid students in writing of research projects in their major fields. Two credits; summer.

## LITERATURE

224, 225, 226. **AMERICAN LITERATURE.** A chronological study of American literature with emphasis on major writers and movements from Puritanism to the present. Recommended it be taken in sequence. Two credits; autumn, winter, spring.

244, 245, 246. **ENGLISH LITERATURE.** 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. Two credits; autumn, winter, spring.

## ENGLISH

251, 252, 253. **WORLD LITERATURE.** 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. Two credits; autumn, winter, spring.

**Courses numbered 300 and above have as prerequisites the appropriate lower-division preparation. Registration only by permission of the department chairman.**

301, 302, 303. **TWENTIETH CENTURY LITERATURE.** Modern American and British literary achievements studied as a revelation of contemporary attitudes, ideals, and conduct. Prerequisites: 224, 225, 226 and 244, 245, 246. Two credits; autumn, winter, spring.

304. **CLASSICAL BACKGROUNDS.** 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. Three credits; spring.

350, 351, 352. **DIRECTED READING.** 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.

404, 405, 406. **THE VICTORIAN PERIOD.** 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. Three credits; autumn, winter, spring.

407, 408, 409. **AMERICAN LITERARY MASTERS.** 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. Three credits; autumn, winter, spring.

421, 422, 423. **THE ROMANTIC PERIOD.** An analytical examination of the emergence of Romantic ideals and their manifestation in literature, beginning with the pre-Romantic school to 1832. Prerequisite: 244, 245, 246. Two credits; autumn, winter, spring.

427, 428, 429. **RESTORATION AND NEOCLASSIC LITERATURE.** 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. Two credits; autumn, winter, spring.

441, 442, 443. **OLD AND MIDDLE ENGLISH LITERATURE.** An advanced study in its historical setting of English literature from the earliest Anglo-Saxon remains to about 1450; Old English works studied in translation and Middle English, including Chaucer, largely in the originals. In the first quarter, Old English prose and poetry as well as selected medieval

## ENGLISH

romances; in the second quarter, Chaucer; in the third quarter, fourteenth and fifteenth century literature exclusive of Chaucer. Prerequisite: 244, 245, 246. Three credits; autumn, winter, spring.

453. **AMERICAN LITERATURE BACKGROUNDS.** 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. Three credits; spring.

464, 465, 466. **RENAISSANCE LITERATURE.** Detailed exploration in the significant literature that reflects the essential temper of the Renaissance period, with chief emphasis on Spenser, Shakespeare and Milton. Prerequisite: 244, 245, 246. Three credits; autumn, winter, spring.

468. **LITERATURE OF THE BIBLE.** Reading of both poetry and prose in the Old Testament, with a detailed study of the poem of Job as probably the greatest masterpiece in any language. Prerequisite: 224, 225, 226 or 244, 245, 246 or 251, 252, 253. Three credits; winter.

491-492-493. **SEMINAR.** 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. One credit; autumn, winter, spring.

## GENERAL

425. **INTRODUCTION TO ENGLISH LINGUISTICS.** Detailed scientific analysis of the structure of the English language, stressing those aspects of formative change which help to clarify current usage. Two credits; winter.

426. **HISTORY OF THE ENGLISH LANGUAGE.** 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. Three credits; spring.

472. **METHODS OF TEACHING ENGLISH IN THE SECONDARY SCHOOL.** Content, organization, methods and techniques of teaching English and related subjects in the secondary school. Observation, demonstration, and class presentation are required. Three credits; spring.

## HEALTH AND PHYSICAL EDUCATION

E. Winter, Chairman; Leah James, Lucile Jones, J. Uhrig, J. Waterbrook.

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 REQUIREMENTS OF ALL STUDENTS

All students are required to complete a total of three credits of the service courses offered in the department of Physical Education. This requirement should be met during the student's freshman and sophomore years.

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.

## PHYSICAL EDUCATION

### MAJOR REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

Introduction to PE	181	2
Professional Activities I, II, III	187, 188, 189 287, 288, 289 381, 382, 383	18
Kinesiology	265	3
Intramural Activities	295	2
Officiating of Sports Activities	284-285	2
Physiology of Exercise	363	3
Teaching Techniques of Physical Education Activities	420	2
Foundations of PE	422	3
Tests and Measurements in PE	424	1
Administration of PE	451	3
Seminar	492, 493	2
Electives, upper division		4
		—
Total	45	

### Required Cognates:

Biology 101, 102, 103; 203

Chemistry 101-102-103

(Students presenting one unit secondary school chemistry with laboratory may be exempt from this requirement)

Home Economics 220

Health 110; 283; 351, 432

A minor in health or biology is recommended.

### MINOR REQUIREMENTS:

Introduction to PE	181	2
Professional Activities		12

## HEALTH AND PHYSICAL EDUCATION

Administration of PE	451	3
Electives in the elementary or secondary areas to be chosen in counsel with the chairman of the department	10	
		27

## HEALTH

The courses in health are offered with the objective of preparing elementary and secondary school teachers, physical education instructors, nurses, and social workers to cope competently with health problems in school and community and to teach health principles and practices effectively.

### MINOR REQUIREMENTS:

Health Science	110	2
Principles of Community Health	266	3
School Safety	282	2
First Aid	283	2
Medical Self-Help	287	1
School Health Program	351	3
Elementary School Health Instruction or Secondary School Health Instruction	431	3
	432	3
Electives:		12
To be chosen in counsel with the department chairman.		
Elementary Physiology (Biology)	220	
Human Nutrition (Home Economics)	220	
Marriage and Family Life (Soc.)	230	
Child Psychology (Education)	435	
Adolescent Psychology (Education)	440	
Independent Study (H&PE)	477, 478, 479	

## PHYSICAL EDUCATION

181. **INTRODUCTION TO PHYSICAL EDUCATION.** 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. Two credits; autumn.

187, 188, 189. **PROFESSIONAL ACTIVITIES I.** 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. Two credits; autumn, winter, spring.

230. **WATER SAFETY INSTRUCTOR'S COURSE.** This course prepares students to meet the requirements of the National Red Cross Certificate to instruct in swimming and supervise in swimming areas. A valuable asset for summer employment. Two credits; any quarter.

## HEALTH AND PHYSICAL EDUCATION

**232. SKI INSTRUCTORS' COURSE.** 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. Two credits; winter.

**264. ANATOMY.** Gross anatomy: a study of skeletal and muscular structure of the human anatomy. Three credits; autumn.

**265. KINESIOLOGY.** Study of joint and muscular mechanism action of muscles involved in fundamental movements. Effect of gravity and other forces on motion. Prerequisite: 264, or equivalent Three credits; winter.

**273. CORRECTIVE PHYSICAL EDUCATION.** 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. Three credits; spring.

**284-285. OFFICIATING OF SPORTS ACTIVITIES.** 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. One credit; autumn, winter.

\*287, 288, 289. **PROFESSIONAL ACTIVITIES II.** Methods, techniques and the skills involved in various activities of the physical education program. Autumn: soccer and football; men will take football, women will take rhythmic activities. Winter: badminton and games of low organization; spring: tennis and archery. Prerequisite: 187, 188, 189, or equivalent. Two credits; autumn, winter, spring.

**295. INTRAMURAL ACTIVITIES.** The mechanics of organizing the intramural activities in the school program. Two credits; winter.

**298. PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL.** 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. Three credits; winter.

**350. AQUATICS.** 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 lab. Three credits; autumn, spring, or summer.

**363. PHYSIOLOGY OF EXERCISE.** Physiological results of muscular exercise. Prerequisite: Biological Sciences 203. Three credits; spring.

381, 382, 383. **PROFESSIONAL ACTIVITIES III.** Methods, techniques, and advanced skills involved in various activities of the physical education program. Autumn: speedball and recreational games; winter: volleyball and basketball; spring: softball and golf. Prerequisite: 287, 288, 289, or equivalent. Two credits; autumn, winter, spring.

**420. TEACHING TECHNIQUES OF PHYSICAL EDUCATION ACTIVITIES.** Techniques of coaching individuals and teams in a variety of sport activities. Laboratory experience in the intramural program as well as class situations will be required. Two credits; autumn, winter, or spring.

\*Not offered the current year.

## HEALTH AND PHYSICAL EDUCATION

**422. FOUNDATIONS OF PHYSICAL EDUCATION.** 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. Three credits; winter.

**424. TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION.** A study of various testing devices which may be used in physical education. Practical experience will be given by test administration and scoring. Prerequisite: Education 390. Three credits; autumn.

**451. ADMINISTRATION OF PHYSICAL EDUCATION.** 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. Three credits; autumn.

**472. METHODS OF TEACHING PHYSICAL EDUCATION.** 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. Three credits; winter.

**477, 478, 479. INDEPENDENT STUDY IN HEALTH AND PHYSICAL EDUCATION.** 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 showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits. Autumn, winter, spring.

**492, 493. SEMINAR.** A study of the modern trends in physical education. Group discussion and presentation of current material in the field. Prerequisite: senior standing. One credit; winter, spring.

### 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. At least one quarter of gymnastics is strongly recommended.

**100. FUNDAMENTALS OF PHYSICAL ACTIVITY.** A prerequisite for all service courses. Lecture, various methods of body development, physical fitness and motor ability tests, mass games and calisthenics. One credit; any quarter.

**201, 202, 203. INDIVIDUAL ACTIVITIES.** Badminton, golf, tennis, skiing and a variety of other individual or dual activities. One credit; autumn, winter, spring.

**204, 205, 206. TEAM SPORTS.** Activities such as softball, basketball, Touch football, soccer and volleyball. One credit; autumn, winter, spring.

**207, 208, 209. WATER SPORTS.** Activities from beginning swimming to advanced swimming, lifesaving, spring-board diving and SCUBA diving. One credit; autumn, winter, spring.

## HEALTH AND PHYSICAL EDUCATION

211, 212, 213. **TUMBLING, GYMNASTICS.** Courses in tumbling, gymnastics, weight-lifting and body mechanics are available in this group. One credit; autumn, winter, spring.

### HEALTH

110. **HEALTH SCIENCE.** A study of the healthy, wholesome personality including the underlying principles governing the harmonious development of the human body. It includes personal, home and community health. Two credits; any quarter.

266. **PRINCIPLES OF COMMUNITY HEALTH.** A study of community health problems which United States citizens are facing and their most feasible solutions to date. Prerequisite: 110. Three credits; winter.

282. **SCHOOL SAFETY.** Prevention of accidents found in various school situations with special emphasis on care of injuries associated with playground and gymnasium activities. Two credits; winter.

283. **FIRST AID.** Standard and advanced American Red Cross first aid course; satisfies the requirements for this basic course in several curriculums. Two credits; spring.

287. **MEDICAL SELF-HELP.** This is the civil defense medical self-help training course constituted to prepare the individual for some of the minor medical first aid that the layman may practice safely. One credit; spring.

351. **SCHOOL HEALTH PROGRAM.** 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. Three credits; autumn.

431. **ELEMENTARY SCHOOL HEALTH INSTRUCTION.** Concepts of unit planning, methods, techniques, sources and evaluation of materials for use in elementary schools are studied. Students are required to read widely and collect material pertinent to the course. Three credits; winter.

432. **SECONDARY SCHOOL HEALTH INSTRUCTION.** Concepts of unit planning, methods, techniques, sources and evaluation of instructional materials for secondary schools are studied. Students are required to read widely and collect material pertinent to the course. Three credits; winter.

### RECREATION

231-232. **MOUNTAINEERING AND WILDERNESS TRAVEL.** 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. One credit; autumn, winter.

## HEALTH AND PHYSICAL EDUCATION

240. **CERAMICS.** This course is offered to help plan the leisure time activity of young people as well as to prepare for a hobby. Two credits; any quarter.

250. **LAPIDARY.** This course is offered to help plan the leisure time activity of young people as well as to prepare for a hobby. Two credits; any quarter.

343. **CAMP CRAFT AND MANAGEMENT.** A course to help in the preparation of competent summer camp leaders. Two lectures per week, and a four-day camping experience. Three credits; spring.

403. **LEADERSHIP IN CAMPING AND CAMP CRAFT.** 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. Two credits; spring.

420. **ADVANCED CERAMICS.** An advanced course in ceramics with special emphasis on teaching methods, preparation of teaching aids, sources of material, cost, etc. Two credits; any quarter.

430. **ADVANCED LAPIDARY.** An advanced course in lapidary with special emphasis on teaching methods, preparation of teaching aids, sources of material, cost, etc. Two credits; any quarter.



# HISTORY, POLITICAL SCIENCE AND SOCIOLOGY

R. Henderson, Chairman; G. Balharrie, R. Blaich, D. Harris, C. Schwantes.

The department offers majors in history and sociology, and minors in history, political science, and sociology.

## 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; and to prepare teachers and social workers.

### MAJOR REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:

History of Civilization	101, 102, 103	9
History of the United States	201, 202, 203	9
Seminar	491-492	4
Electives (Nine credits must be from the European area and nine credits from the American area. Nine credits may be selected from Political Science, Sociology, and Economics from the following courses:		
Political Science 203, 303, 304, 311, 401, 402, 414, 415, 416, 424, 425, 426.		
Sociology 204, 205, 245, 254, 263, 321, 337, 351, 357.		
Economics 261, 262, 263, 366, 453, 462, 465.	32	
		54

### MINOR REQUIREMENTS:

History of Civilization	101, 102, 103	9
History of the United States	201, 202, 203	9
Electives		12
Nine credits must be upper-division		
		30

## COURSES

### BASIC

101, 102, 103. **HISTORY OF CIVILIZATION.** A survey of world history from antiquity to the present. Three credits; autumn, winter, spring.

201, 202, 203. **HISTORY OF THE UNITED STATES.** A survey of the colonial period, followed by a more detailed study of the national period. Three credits; autumn, winter, spring.

### EUROPEAN HISTORY

\*321, 322, 323. **HISTORY OF THE ANCIENT NEAR EAST.** A study of the major civilizations of antiquity as clarified by modern archaeological

\*Not offered the current year.

## HISTORY, POLITICAL SCIENCE AND SOCIOLOGY

research. In tracing the development of the various successive empires of the ancient Mediterranean world, special emphasis is placed upon the history of Babylonia, Palestine, Egypt, Greece, and Rome. Two credits; autumn, winter, spring.

404, 405, 406. **HISTORY OF ENGLAND.** The development and expansion of the English nation from the earliest times to the present including the development of the British Empire. Two credits; autumn, winter, spring.

407, 408. **EUROPE SINCE 1815.** Political, economic, and social developments in nineteenth and twentieth century Europe, with special attention to our own times. Five credits; autumn, winter.

\*421, 422, 423. **HISTORY OF RUSSIA.** 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. Three credits; autumn, winter, spring.

426. **THE EARLY CHRISTIAN ERA.** Significant events and trends in the development of Christianity from the time of Christ to Charlemagne including a study of the Church in relation to the Roman Empire. Attention is also given to the missionary expansion of the Church, its cultural, social and political influence, heretical sects, Ecumenical Councils, Christological controversies, and the rise of the papacy. Three credits; spring.

427. **THE LATE MIDDLE AGES.** The period of papal revival, the growth of the towns, the struggle of Empire and Papacy, the emergence of royal authority, the rise of the bourgeoisie, growing dissent in the medieval church. Three credits; autumn.

428. **THE RENAISSANCE.** The decline of feudalism, the guild system, papal authority, and scholastic thought, followed by the Italian Renaissance and Humanism in the north. Three credits; winter.

429. **THE REFORMATION.** The revolution in religion. A study of the main branches of Protestantism and their relation to the political life of Europe; the Catholic Counter-Reformation. Three credits; spring.

435. **HISTORY OF MODERN GERMANY.** 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. Five credits; spring.

## AMERICAN HISTORY

424, 425. **THE AMERICAN FRONTIER.** The exploration, settlement, and development of the American west with consideration given to economic, social, cultural, and political factors. Three credits; autumn, winter.

\*Not offered the current year.

## HISTORY, POLITICAL SCIENCE AND SOCIOLOGY

445. **HISTORY OF THE PACIFIC NORTHWEST.** 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. Three credits; spring.

446. **THE AMERICAN CIVIL WAR AND RECONSTRUCTION, 1850-1877.** Development of the sectional crisis, war and its impact on American institutions, reconstruction and reunion. Three credits; spring.

447, 448, 449. **THE MAKING OF MODERN AMERICA SINCE 1877.** A study of maturing America from 1877 to the present. Special attention is given to the significance of industrialism, urbanization, the Progressive Movement, the New Deal, prosperity and depression, and the expanding role of the United States in world affairs. Three credits; autumn, winter, spring.

\*457, 458, 459. **SOCIAL AND INTELLECTUAL HISTORY OF THE UNITED STATES.** An analysis of the major social and intellectual trends in United States history, including Puritanism, the Enlightenment, Transcendentalism, Social Darwinism and Pragmatism. Three credits; autumn, winter, spring.

\*467, 468, 469. **HISTORY OF LATIN AMERICA.** 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. Two credits; autumn, winter, spring.

477, 478, 479. **INDEPENDENT STUDY IN HISTORY.** 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 showing competence in and extent of his study. Open only to majors and minors. Instructor's approval required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring.

491-492. **SEMINAR.** An orientation and research course in problems connected with historical materials and methods. Open to majors and minors. Two credits; autumn, winter.

### GENERAL

358. **WORLD GEOGRAPHY.** A survey course of the major groups of natural regions. Essentially human geography, but with adequate attention to economic and physical aspects. Three credits; spring.

471. **METHODS OF TEACHING SOCIAL SCIENCE.** 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. Three credits; autumn.

### POLITICAL SCIENCE

The objectives of the courses in Political Science are to give an understanding of the functions of our government and of international relations, and to prepare for teaching, religious liberty work, and study in law.

\*Not offered the current year.

# HISTORY, POLITICAL SCIENCE AND SOCIOLOGY

## MINOR REQUIREMENTS:

American Government	203	3
Comparative Governments	303, 304	6
Constitutional History	401	3
World Politics	402	3
Electives (Three credits must be in history.)		12
Instructor's approval required.)		—
		27

## COURSES

203. **AMERICAN GOVERNMENT.** Principles, organization and development of the American national government. Three credits; spring.

303, 304. **COMPARATIVE GOVERNMENTS.** 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. Three credits; winter and spring.

311. **INTERNATIONAL ORGANIZATION.** The organization of interaction among nations, institutional structures, patterns of communications, processes of collaboration and integration; special attention to the United Nations and to problems arising from the UN system. Three credits; autumn.

401. **CONSTITUTIONAL HISTORY.** 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. Three credits; winter.

402. **WORLD POLITICS.** Systematic analysis of the nature of international society, and of the motivating and conditioning factors which explain interaction among states and other international entities. Three credits; spring.

414, 415, 416. **AMERICAN DIPLOMATIC HISTORY.** 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. Two credits; autumn, winter, spring.

\*424, 425, 426. **POLITICAL HISTORY AND THEORY.** Origin and evolution of major concepts in Western political thought from Pericles to Machiavelli, from Machiavelli to Edmund Burke, and from the American colonial times to the present. Three credits; autumn, winter, spring.

477, 478, 479. **INDEPENDENT STUDY IN POLITICAL SCIENCE.** 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 showing competence in and extent of his study. Open only to minors. Instructor's approval required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring.

\*Not offered the current year.

## HISTORY, POLITICAL SCIENCE AND SOCIOLOGY

### SOCIOLOGY

The objectives of the study of sociology are to contribute to the understanding of the entire world society as well as one's own cultural background; to broaden the student's perspective of the overall organization and function of the society; to understand the factors that promote cultural stability and change; to analyze social movements and their effects. The objectives also include the providing of a general background for employment in social welfare, corrections, and related fields; for teachers of social science; and for better personal adjustment of the individual.

#### MAJOR REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:

General Sociology	204, 205	6
Cultural Anthropology	263	3
Family in Society	310	2
Principles of Social Welfare	321	3
Sociology of the Community	351	3
History of Sociological Theory	465	2
Methods of Social Research	466	2
Electives (up to 12 credits may be chosen from):		24
		—
		45
Prin. of Economics	Bus. 426	3
Educational Guid.	Ed. 431	3
Psych. of Excep. Child.	Ed. 435	3
Child Psychology	Ed. 440	3
Adolescent Psych.	Ed. 447, 448, 449	6
20th Century America	Hist. 203	3
American Govt.	Pol. Sc. 261, 262, 263	9

#### Required Cognates:

Statistics	Ed. 350	3
Social Psychology	Ed. 444	3
Intro. to Philosophy	Rel. 421	2

#### MINOR REQUIREMENTS:

General Sociology	204, 205	6
Cultural Anthropology	263	3
Family in Society	310	2
Principles of Social Welfare	321	3
Electives		11

#### Required Cognates:

Intro. to Philosophy	Rel. 421	2
Social Psychology	Ed. 444	3
		—
		30

### COURSES

204, 205. **GENERAL SOCIOLOGY.** 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. Three credits; autumn, winter.

## HISTORY, POLITICAL SCIENCE AND SOCIOLOGY

**230. MARRIAGE AND FAMILY LIFE.** 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. Will not apply on a major or minor in history. Two credits; any quarter.

**245. CURRENT SOCIAL PROBLEMS.** The course deals with the dimensions of social problems as to role, status, stress, the ethical and intellectual implications of twentieth century material abundance with the consequent social pathologies, and such problems as adolescence, courtship and family, present conditions of the underprivileged, race, and community changes. Three credits; spring.

**254. RACIAL AND ETHNIC RELATIONS.** The history, present status and problems of racial, religious and ethnic minorities in the United States and other countries. Three credits; autumn.

**263. CULTURAL ANTHROPOLOGY.** A study of the origin and nature of culture, the uniformities and variations in man's cultural development as seen in pre-literate societies, with special emphasis upon the value of the cultural concept. Prerequisite: 204, 205. Three credits; winter.

**305. HUMAN RELATIONS.** A course which deals with the psychological, environmental, and social factors influencing human behavior. Emphasis is placed on the effective use of these factors for best interpersonal relationships between leaders and those with whom they work. Classes are conducted by lecture, case study discussions, and student reports. Two credits; winter.

**310. THE FAMILY IN SOCIETY.** The student is introduced to problems confronting the family as a unit of society in modern life, including comparison of problems of an American family with those of other cultures. Two credits; winter.

**321. PRINCIPLES OF SOCIAL WELFARE.** The history of social welfare and the underlying philosophy and principles of modern social work. Three credits; autumn.

**322. SOCIAL WELFARE IN THE COMMUNITY.** The legal and social factors involved in social welfare; techniques and skills used by professional workers in the various agencies to help people meet their needs in society. Prerequisite: 321. Three credits; winter.

**323. FIELD WORK.** 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. Prerequisites: 204, 205, 321, 322 and permission of the instructor. Three credits; spring.

**337. POPULATION.** Principles of demography and analysis of population problems. Prerequisite: 204, 205. Two credits; winter.

**351. SOCIOLOGY OF THE COMMUNITY.** Analysis of community development and structure; consideration of both rural and urban communities with special emphasis on urbanization and suburbanization. Prerequisite: 204, 205. Three credits; autumn.

## HISTORY, POLITICAL SCIENCE AND SOCIOLOGY

**357. CRIME AND DELINQUENCY.** A study of the historical background of delinquency and crime as forms of deviant social behavior; an analysis of contributing factors; and an evaluation of the remedial measures now in common use. Prerequisite: 204, 205, Ed. 121, 122 or permission of the instructor. Three credits; autumn.

**369. URBAN SOCIOLOGY.** Review and analysis of recent research on urban areas, including their social organization, culture and subcultures, institutions, and contemporary problems. Three credits; spring.

**431. SOCIOLOGY OF EDUCATION.** 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. Two credits; winter.

**432. SOCIOLOGY OF RELIGION.** 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. Two credits; winter.

**433. SOCIOLOGY OF LAW.** 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. Two credits; spring.

**442. SOCIOLOGY OF LEADERSHIP.** The course is concerned with the phenomena that leadership and followership together comprise the gist of social interaction; furthermore, that certain behavior and personality traits possess special leadership value. The various areas of study concern: theories of leadership; social, mental, and executive leadership; and a further sequence—autocratic, paternalistic, and democratic leadership. Two credits; spring.

**465. HISTORY OF SOCIOLOGICAL THEORY.** History of sociological thought since earliest times including a study of early social writers and leading sociologists of the nineteenth and twentieth centuries, including Comte, Malthus, Marx, Spencer, Durkheim, Weber, and others. Two credits; autumn.

**466. METHODS OF SOCIAL RESEARCH.** Application of sociological concepts and methodology to the investigation of social problems. Prerequisites: Senior standing, 204, 205, Education 350. Two credits; spring.

**471. METHODS OF TEACHING SOCIAL SCIENCE.** 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. Three credits; autumn.

**477, 478, 479. INDEPENDENT STUDY IN SOCIOLOGY.** 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 showing competence in and extent of his study. Open only to majors and minors. Instructor's approval required. One to three credits; autumn, winter, spring. Maximum three credits.

## HOME ECONOMICS

Evelynne Wright, Chairman; Geraldine Border, Mary Schwantes

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 meets the requirements of the American Dietetic Association and prepares the student to enter a dietetic internship.

### HOME ECONOMICS MAJOR—REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:

Introduction to Home Economics	100	2
Principles of Food Science	101, 102	6
Meal Management	103	3
Social and Professional Ethics	210	2
Human Nutrition	220	3
Art in Everyday Living	222, 223	6
Clothing Selection & Construction	242, 243	6
Household Management	346	3
Child Development	382	3
Methods of Teaching Home Economics	471	3
Seminar	493	1
Electives, upper division		12
		50

#### Required Cognates:

Biological Science 107	5
Chemistry 101-102-103	9

#### Minor:

Principles of Food Science	101, 102	6
Meal Management	103	3
Human Nutrition	220	3
Clothing Selection & Construction	242	3
Seminar	493	1
Electives (to be chosen in counsel with the department chairman.)		14
		30

### FOODS AND NUTRITION MAJOR—REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

Introduction to Home Economics	100	2
Principles of Food Science	101, 102	6
Meal Management	103	3
Human Nutrition	220	3
Institution Food Preparation	286	3
Child Development	382	3
Advanced Nutrition	441, 442	6

## HOME ECONOMICS

Diet in Disease	443	3
Institution Management	448	3
Methods of Teaching Home Economics	471	3
Seminar	493	1
Electives, including 2 upper division		9
		45

### Required Cognates:

Course work as specified by the American Dietetic Association in Biology, Business, Chemistry, and Education.

## COURSES

**100. INTRODUCTION TO HOME ECONOMICS.** Orientation in the areas of home economics and a study of the field in terms of history, philosophy and professional opportunities. Required of all majors. Two credits; autumn.

**101, 102. PRINCIPLES OF FOOD SCIENCE.** Basic principles of food preparation, purchasing and selection, with emphasis on nutritional and economic values. Prerequisite: 101 or equivalent for 102. Three credits; autumn, winter.

**103. MEAL MANAGEMENT AND TABLE SERVICE.** Managerial aspects of planning, preparing and serving food for family meals and special occasions. Prerequisite: 101, 102 or equivalent. Three credits; spring.

**201. EQUIPMENT.** Selection, operation and care of household and institutional appliances, electricity in the home and kitchen planning. Three credits; spring.

**210. SOCIAL AND PROFESSIONAL ETHICS.** 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. Two credits; autumn, winter or spring.

**220. HUMAN NUTRITION.** 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. Three credits; autumn, winter or spring.

**221. CONSUMER ECONOMICS.** A study of the consumer in the current world; his responsibilities and protection. Three credits; autumn.

**222, 223. ART IN EVERYDAY LIVING.** 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. Three credits; winter, spring.

## HOME ECONOMICS

230 Soc. **MARRIAGE AND FAMILY LIFE.** See Sociology.

241. **CLOTHING FUNDAMENTALS.** A course presenting the fundamental processes of hand and machine sewing; construction and selection of simple garments. Three credits; autumn.

242, 243. **CLOTHING SELECTION AND CONSTRUCTION.** 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. Three credits; winter, spring.

269. **TEXTILES.** A study of fabrics to determine fundamental differences and to develop judgment in buying clothing and home-furnishing materials. Two credits; spring.

286. **INSTITUTION FOOD PREPARATION.** Instruction and laboratory experience in large quantity food preparation, and food cost control. This course is primarily for those interested in actual preparation of food in college and academy cafeterias. Prerequisite: 101, 102, 103. Three credits; autumn.

302. **WEAVING AND HOME FURNISHINGS.** 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. Three credits; winter.

346. **HOUSEHOLD MANAGEMENT.** Management problems of the homemaker in regard to income, time, labor, and family relationships. Study of the selection, operation, care and arrangement of household equipment. Three credits; winter.

382. **CHILD DEVELOPMENT.** A study of the care and development of young children, with special reference to home education and nutrition. Three credits; spring.

403. **TEXTILE DESIGN.** 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. Three credits; spring.

412. **ADVANCED FOOD PREPARATION.** Preparation of regional and national foods emphasizing cultural, ethnic and environmental factors. Application of scientific principles in specialized food preparation. Prerequisite: 101, 102, 103; Chemistry 101-102-103, or 161-162-163 or equivalent. Three credits; winter.

422. **EXPERIMENTAL COOKERY.** 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. Three credits; spring.

424, 425. **INTERIOR DECORATION.** 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. Three credits; autumn, winter.

441, 442. **ADVANCED NUTRITION.** A scientific study of nutrition involving digestion and metabolic processes and products; selection of an optimum diet for health; recent investigations of nutritional deficiency diseases. Prerequisite: 101, 102, 103; 220 and Chemistry 101-102-103 or 161-162-163. Three credits; autumn, winter.

443. **DIET IN DISEASE.** 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. Prerequisite: 101, 102, 103, 220 or equivalent. Three credits; spring.

447. **INSTITUTION FOOD PURCHASING.** Marketing operations, buying procedures, food selection and care. Inspection of merchandise at markets and wholesalers. Prerequisite: 101, 102, 103. Three credits; winter.

448. **INSTITUTION MANAGEMENT.** Principles of organization, qualifications for institution managers, purchasing and maintenance of equipment, planning of work, budget analysis. This course offers practical work in the school cafeteria for those who are interested in being managers in institution food services. Prerequisite: 101, 102, 103. Three credits; spring.

461-462. **TAILORING.** 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. Prerequisite: 241, 242, 243 or equivalent. Two credits; autumn, winter.

471. **METHODS OF TEACHING HOME ECONOMICS.** The principles and practices 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. Three credits; autumn.

477, 478, 479. **INDEPENDENT STUDY IN HOME ECONOMICS.** 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 showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring.

486. **ADVANCED INTERIOR DECORATION.** 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. Three credits; spring.

493. **SEMINAR.** Studies of selected topics and reviews of current literature. Special investigation of problems. One credit; autumn or spring.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

C. Trautwein, Chairman; C. Blake, L. Canaday, D. Cowin, K. Gruesbeck, E. Liske.

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	Metals
Depictics	Industrial Crafts	Woods
Electronics		

Departmental permission must be received to enter any class having a laboratory. Each class meets at least once before its associated laboratory.

### MAJOR REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

The major for a Bachelor of Science degree may be earned in concentrations A, B, or C below.

#### A. INDUSTRIAL ARTS TEACHER EDUCATION:

The course requirements listed below offer an opportunity for individual choices. Consult the department head for assistance in planning the program.

Depictics	104, 105; 203 or 209	9
Analysis of Industry	107	1
Lettering	123	2
Wood Products and Processes	221-222-223	6
Machine Tool Practice I	244, 245-246	
or		
Welding	204, 205, 206	6
Survey of Electronics	231-232	
or		
Introduction to Graphic Arts	144, 145-146	6
Industrial Crafts, electives	113; 247, 248,	
or	or 249	
Minimalic Carpentry	224-225-226	6
or		
Fundamentals of Automotive		
Technology	101, 102, 103	
Industrial Arts Design	264	3
Course Construction	387	3
Shop Administration		
and Planning	389	3
History & Philosophy of		
Industrial Education	447	3
Independent Study		
(in supervision)	477, 478, or 479	2
Senior Problem	488	1
Electives, upper division		12
Approval of the Chairman		
of the department required.		63

# INDUSTRIAL EDUCATION AND TECHNOLOGY

## B. TECHNICS:

Listed below are four programs leading to a Bachelor of Science degree in the fields of: Automotive, Electronics, Maintenance, and Graphics.

### 1. Automotive Technology

#### Required Courses:

Fundamentals of Automotive Technology		
	101, 102, 103	6
Analysis of Industry	107	1
Hydraulic and Power Brakes	207	2
Survey of Electronics	231-232	6
Small Gasoline Engines	236	2
Chassis Service	314, 315	6
Automotive Transmissions	301	3
Engine Repair and Maintenance	302	3
Engine Diagnosis and Tune-up	303	3
Automotive Air Conditioning	356	3
Shop Administration & Planning	389	3
Oil Hydraulics	399	3
Senior Problem	488	1
Electives chosen from:		21
		—
		63
Technical Drawing		
	104	3
Lettering	123	2
Welding	204, 205, 206	6
Machine Tool Practice I	244, 245-246	6
Plastics	248	2
Machine & Tool Maint.	330	1-2
Finishing Materials & Meth.	345	3
Industrial Materials	366	3
Machine Tool Practice II	381, 382, 383	9
Independent Study	477, 478, 479	1-6
Special Projects	484, 485, 486	1-6

Two hundred clock hours of approved related work is to be completed during the latter half of the bachelor's program.

The department recommends that a minor be chosen from Business, Chemistry, Economics, Mathematics, Physics or Speech.

### 2. Electronics Technology

#### Required Courses:

Technical Drawing	104, 105	6
Analysis of Industry	107	1
Electrical and Electronic Drawing	209	3
Survey of Industrial Operations	241, 242	4
Fundamentals of Electronics	271, 272, 273	12
Applied Electronics	331	4
Industrial Electronics	371, 372	4

# INDUSTRIAL EDUCATION AND TECHNOLOGY

Television Systems &			
Circuit Analysis	412, 413	9	
Independent Study	477, 478, 479	2	
Senior Problem	488	1	
Electives (including 4 upper division) chosen from:		17	
		—	
		63	

## Fundamentals of Mathematics

	Math. 121, 122	8
Principles of Photography	161	2
Anal. Geom. & Calculus	Math. 181	4
General Physics	Phy. 181, 182, 183	9
Gen. Physics Lab	Phy. 184, 185, 186	3
Computer Science I	Engr. 218	1
Computer Science II	Engr. 220	2
Sheet Metal	229	2
Broadcasting Techniques &		
Announcing	Sp. 231	3
Plastics	248	2
Industrial Arts Design	264	3
Machine & Tool Maint.	330	1-2
Radio Communications	351, 352	8
Applied Photography	362	3
Shop Administration and		
Planning	389	3
Oil Hydraulics	399	3
Independent Study	477, 478, 479	1-6
Special Projects	484, 485, 486	

Two hundred clock hours of approved related work is to be completed during the latter half of the bachelor's program.

The department recommends that a minor be chosen from Biology, Business, Chemistry, Economics, Journalism, Mathematics, Physics or Speech.

## 3. Maintenance Technology

### Required Courses:

Technical Drawing	104, 105	6
Analysis of Industry	107	1
Electrical & Electronic Drawing	209	3
Wood Products and Processes	221-222-223	6
Survey of Electronics	231-232	6
Machine Tool Practice I	244, 245-246	6
Industrial Arts Design	264	3
Machine & Tool Maintenance	330	2
Finishing Materials & Methods	345	3
Industrial Materials	366	3
Shop Administration & Planning	389	3
Oil Hydraulics	399	3
Senior Problem	488	1
Electives (including 9 upper division) chosen from:		23
	—	
	63	

## INDUSTRIAL EDUCATION AND TECHNOLOGY

Fund. of Automotive Tech.	101, 102, 103	6
Lettering	123	2
Principles of Photography	161	2
Architectural Drawing	203	3
Sheet Metal	229	2
Small Gasoline Engines	236	2
Art Metal	247	2
Plastics	248	2
Applied Photography	362	3
Automotive Air Conditioning	356	3

Two hundred fifty clock hours of work in our plant service department is required for each year of attendance at WWC while following this curriculum.

The department recommends that a minor be chosen from Business, Chemistry, Mathematics, or Physics.

### 4. Graphics Technology

#### Required Courses:

Analysis of Industry	107	1
Introduction to Graphic Arts	144, 145-146	6
Principles of Photography	161	2
Linotype Composition	284-285-286	6
Printing Layout and Design	298	3
Printing Management	306	3
Advanced Letterpress	321-322	6
Offset Lithography	327-328-329	9
Applied Photography	362	3
Shop Administration & Planning	389	3
Advanced Lithography	416	3
Senior Problem	488	1
Electives chosen from:		17
		—
		63

Technical Drawing	104	3
Bookbinding	113	2
Lettering	123	2
Survey of Electronics	231-232	6
Survey of Ind. Operations	241-242	4
Machine Tool Practice I	244, 245-246	6
Plastics	248	2
Silk Screen Printing	262	2
Industrial Arts Design	264	3
Machine & Tool Maint.	330	2
Industrial Materials	366	3
Press Photography	370	1
Independent Study	477, 478, 479	2

Two hundred clock hours of approved related work is to be completed during the latter half of the bachelor's program.

The department recommends that a minor be chosen from Art, Business, Chemistry, English, Journalism or Mathematics.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

### C. GENERAL:

This concentration 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:

Depictics	104, 105; 203 or 209	9
Senior Problem	488	1

### REQUIREMENTS FOR AN ASSOCIATE OF SCIENCE DEGREE:

The concentration for an Associate of Science degree may be chosen from the same areas as the Bachelor of Science degree under Section B: Automotive, Electronics, Maintenance and Graphics.

In addition, the following courses must be completed:

#### General Requirements:

Freshman Composition	Eng. 101-102-103	9
Religion		9
Physical Education		2
Personal Finance	Bus. 112	2

#### Required Cognates:

Fundamentals of Speech	Sp. 101-102	4
Survey of Mathematics	Math. 111, 112	8

### CERTIFICATE PROGRAM:

A certificate candidate follows a chosen technical program as is shown under section B, Technics, paragraphs 1, 2, 3, or 4 the same as other majors, except that general graduation requirements are waived and the following substituted:

Religion	101, 102, 103	
	104, 105, 106	6
	201, 202, 203	
English	101	3
Speech	101	2

A total of 90 credits from one option including the 11 credits shown above with a cumulative GPA 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 eighteen years of age. One hundred and fifty clock hours of related work for each quarter of attendance, except the first with a maximum of 750 hours must be completed before the certificate is awarded. A facsimile 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 the four-year curriculum, must complete secondary school and the requirements for the bachelor's degree.

### MINOR REQUIREMENTS:

#### Minor: Teaching

For students planning to teach Industrial Education, the requirements are as follows:

## INDUSTRIAL EDUCATION AND TECHNOLOGY

Technical Drawing	104, 105	6
Analysis of Industry	107	1
Wood Products & Processes	221-222-223	6
One basic "skills" course with lab.		6
Course Construction	387	3
Shop Administration & Planning	389	3
Methods of Teaching		
Industrial Arts	472	3
Independent Study (in supervision)	477, 478, 479	1
Elective		1
		—
		30

### Minor: General

Students not planning to teach must complete a minimum of 30 credits including six upper-division credits. Depictics 104, 105, 203 or 209 is required except when 17 credits of graphic arts are included.

## PROFESSIONAL

107. **ANALYSIS OF INDUSTRY.** A study of organization in industry, union-management relationships, 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. One credit; autumn.

239. **INDUSTRIAL ARTS FOR ELEMENTARY TEACHERS.** A cross sectional approach to those industrial arts offerings that are most likely to occur in elementary schools, including operations involving art metals, leathers, plastics, simple graphics, elementary photography, beginning electronics and special woodwork. Three credits; summer.

264. **INDUSTRIAL ARTS DESIGN.** Basic principles of design as applied to the various industrial arts, including theory of color and study of major periods and styles of furniture. Three credits; autumn.

387. **COURSE CONSTRUCTION.** The course deals with objectives, analysis and selection of content, course of study outline, lesson plans, standards of attainment. Required prior to Directed Teaching. Three credits; autumn.

389. **SHOP ADMINISTRATION AND PLANNING.** School shop planning, supplies, personnel organization and guidance, and shop management. Required prior to Directed Teaching. Three credits; spring.

420. **DRIVER TEACHER EDUCATION.** Designed to prepare and equip a prospective teacher with the methods and skills necessary to operate a Driver Education program on the secondary level. Two credits; summer.

447. **HISTORY AND PHILOSOPHY OF INDUSTRIAL EDUCATION.** Origin and growth of industrial education, emphasizing aims and objectives in the field of education. Three credits; autumn.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

**472. METHODS OF TEACHING INDUSTRIAL ARTS.** 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. Three credits; winter.

**477, 478, 479. INDEPENDENT STUDY IN INDUSTRIAL EDUCATION.** Supervisory experience for prospective teachers or tradesmen, research problems, or teaching-aid construction. Area to be selected in counsel with department chairman. Prerequisite: lower division work in same area for supervisory or teaching-aid construction. Six credits maximum from this and/or Special Projects. Autumn, winter, spring.

### AUTOMOTIVE

**101, 102, 103. FUNDAMENTALS OF AUTOMOTIVE TECHNOLOGY.** Basic study of auto chassis construction details and service procedures using dry units in laboratory. Autumn: power train, brakes, suspension, and steering units; winter: engine units; spring: fuel system and automotive electrical system. One class and one three-hour laboratory per week. Two credits; autumn, winter, spring.

**207. HYDRAULIC AND POWER BRAKES.** A study of the hydraulic brake including the hydraulic power brake. Repair and service of the power master cylinder, the dual-piston master cylinder, plus the differential valve and metering valves will be covered. One lecture and one laboratory per week. Prerequisite or co-requisite: 101 or equivalent. Two credits; autumn.

**236. SMALL GASOLINE ENGINES.** Comprehensive study of small gas engine construction and operation of the cooling, lubrication, ignition and fuel systems. Live engines will be used such as Briggs-Stratton, Jacobson, Wisconsin, etc. One class and one laboratory per week. Two credits; spring.

**301. AUTOMATIC TRANSMISSIONS.** 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. Three credits; autumn.

**302. ENGINE REPAIR AND MAINTENANCE.** 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. Three credits; winter.

**303. ENGINE DIAGNOSIS AND TUNE-UP.** Instruction in complete engine tune-up and diagnosis using both Sun and Allen test equipment. Meter testing and oscilloscope interpreting will be emphasized. Smog control devices will be studied. Two lectures and one laboratory per week. Prerequisite: 101, 102 or equivalent. Three credits; spring.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

314, 315. **CHASSIS SERVICE.** A comprehensive study of the chassis including the power train, brakes, suspension systems, wheel balance and alignment. Trouble-shooting and repair operations will be done under production shop conditions. Two lectures and one laboratory per week. Three credits; autumn, winter.

356. **AUTOMOTIVE AIR CONDITIONING.** A comprehensive study of air conditioning principles and service. Removing refrigerant, system evacuation, replenishing refrigerant and lubricating oil, compressor service and system leakage testing will be covered. Two lectures and one laboratory per week. Three credits; spring.

### DEPICTICS

104, 105. **TECHNICAL DRAWING.** Care and use of instruments; technical sketching, geometry; orthographic, auxiliary and sectional views; production drawings; pictorial views and developments and intersections-application to practical problems with emphasis on visualization and analysis. Must be taken in sequence. Three credits; autumn, winter.

203. **ARCHITECTURAL DRAWING.** The fundamentals of designing and drawing house plans including area planning, floor plans, elevations, sections, schedules, specifications, and model construction. Prerequisite: 104, 105. Three credits; spring.

209. **ELECTRICAL AND ELECTRONIC DRAWING.** 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, inter-connection diagrams, graphs, and charts. One lecture and three two-hour laboratories per week. Prerequisite: 104, 105 or equivalent; and 231 or 271 recommended. Three credits; spring.

### ELECTRONICS

231-232. **SURVEY OF ELECTRONICS.** 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. Three credits; autumn, winter.

271, 272, 273. **FUNDAMENTALS OF ELECTRONICS.** 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. Four credits; autumn, winter, spring.

331. **APPLIED ELECTRONICS.** A study of the techniques used in electronic circuit analysis and logical circuit trouble-shooting. Vehicle for this study is the superheterodyne receiver. Three lectures and one

## INDUSTRIAL EDUCATION AND TECHNOLOGY

laboratory per week. Prerequisite: 231-232, or 271, 272, 273 or equivalent. Four credits; autumn.

351, 352. **RADIO COMMUNICATIONS.** 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 331 recommended. Four credits; winter, spring.

371, 372. **INDUSTRIAL ELECTRONICS.** A study of electronic systems and circuits used in industry for purposes of heating, measuring and controlling. Typical circuits and devices studied are: thyratrons, silicon controlled rectifiers, multivibrators, integrated circuits, photoelectric devices, diodes and transistor logic gates. Prerequisite: 271, 272, 273 or equivalent. One lecture and one laboratory per week. Two credits; winter, spring.

411, 412, 413. **TELEVISION SYSTEMS AND CIRCUIT ANALYSIS.** 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. Prerequisite: 271, 272, 273 or equivalent. Three credits; autumn, winter, spring.

## GRAPHICS

123. **LETTERING.** 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. Two credits; spring.

144, 145-146. **INTRODUCTION TO GRAPHIC ARTS.** 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. Two credits; autumn, winter, spring.

161. **PRINCIPLES OF PHOTOGRAPHY.** 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. Two credits; autumn.

262. **SILK SCREEN PRINTING.** Basic screen printing (mitography) including various methods of stencil preparation, types of materials used, and preparation of equipment. Two credits; winter.

284-285-286. **LINOTYPE COMPOSITION.** Care and operation of the linotype machine, study of the assembling, casting, and distributing mechanisms, keyboard practice and composition of straight matter, tabular forms, and display work. Prerequisite: 144, 145-146 or equivalent. Two credits; autumn, winter, spring.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

298. **PRINTING LAYOUT AND DESIGN.** Basic principles of design as applied to composition, layout, and arrangement in printing. Lectures, demonstrations and assigned individual and group projects. Three credits; winter.

306. **PRINTING MANAGEMENT.** Operating management of a commercial printing plant, purchasing of equipment and supplies, inventory control, pricing, personnel and production supervision. Three credits; spring.

321-322. **ADVANCED LETTERPRESS PRINTING.** 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. Prerequisite: 144, 145-146 or equivalent. Three credits; autumn, winter.

327-328-329. **OFFSET LITHOGRAPHY.** Laboratory experience in offset photography, plate making, cold type composition, and presswork. Prerequisite: 144, 145-146 or equivalent, and 161 concurrent or equivalent. Three credits; autumn, winter, spring.

362. **APPLIED PHOTOGRAPHY.** Composition, photochemistry, optics, and advanced study of printing, enlarging and processing of chromatic and monochromatic mediums, with manipulative experience. Camera required. Prerequisite: 161 or equivalent. Three credits; winter.

370. **PRESS PHOTOGRAPHY.** Experience in commercial photography, embodying shooting, processing, and finishing prints for publication. Prerequisite: 362 or equivalent. One credit; autumn, winter, or spring.

416. **ADVANCED LITHOGRAPHY.** Opportunity for advanced projects in lithographic printing, with emphasis on duotones, posterization, and process color work. Prerequisite: 327-328-329 or equivalent. Three credits; spring.

## INDUSTRIAL CRAFTS

113. **BOOKBINDING.** 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. Two credits; spring.

247. **ART METALS.** 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. Two credits; autumn.

248. **PLASTICS.** An introduction to a variety of operations in plastics involving technical information and experimentation in fundamental manufacturing processes. Two credits; winter.

249. **LEATHERS.** Technical information and fundamental operation including tooling, carving, stamping, lacing, modeling, forming, and finishing. Two credits; spring.

# INDUSTRIAL EDUCATION AND TECHNOLOGY

## METALS

204, 205, 206. **WELDING.** Autumn, gas welding; winter, arc welding; spring, brazing and braze welding, cutting and specialized welding processes with direct emphasis on production of assigned and student-selected projects. Two credits; autumn, winter, spring.

229. **SHEET METAL.** Basic principles and practices in sheet metal operations including theory and practical application of design, layout and fabrication. One class and one laboratory per week. Two credits; spring.

241-242. **SURVEY OF INDUSTRIAL OPERATIONS.** Particularly for premedical students and physics majors, but is open to Industrial Education majors and minors who have taken no credits in metals. Both laboratory experiences and class lectures are used to give a broad introduction to manufacturing operations with factors influencing design and production. Two credits; autumn, winter.

244, 245-246. **MACHINE TOOL PRACTICE I.** 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. Two credits; autumn, winter, spring.

381, 382, 383. **MACHINE TOOL PRACTICE II.** 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. Three credits; autumn, winter, spring.

## WOODS

221-222-223. **WOOD PRODUCTS AND PROCESSES.** An introduction to wood products and processes incorporating use of basic tools and machines as found in the wood industry. Includes planning and construction of simple furniture. Two credits; autumn, winter, spring.

224-225-226. **MINIMALIC CARPENTRY.** 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. Two credits; autumn, winter, spring.

341-342-343. **FURNITURE DESIGN AND CONSTRUCTION.** 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. Three credits; autumn, winter, spring.

## GENERAL

330. **MACHINE AND TOOL MAINTENANCE.** 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 or two credits; any quarter. Maximum, two credits.

345. **FINISHING MATERIALS AND METHODS.** Composition and application of finishing materials, selection and care of equipment. Three credits; winter.

## INDUSTRIAL EDUCATION AND TECHNOLOGY

366. **INDUSTRIAL MATERIALS.** Experimental research structured and arranged to involve materials and products of industry. Three credits; spring.

399. **OIL HYDRAULICS.** 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. Three credits; spring.

484, 485, 486. **SPECIAL PROJECTS.** Advanced laboratory work in a chosen area, to be selected in counsel with the department chairman. Six credits maximum from this and/or Independent Study in Industrial Education. Prerequisite: lower division work in chosen area. Autumn, winter, spring.

488. **SENIOR PROBLEM.** A student-selected, department-approved project to demonstrate ability to perform in the major field of instruction that has been followed, and from which graduation is sought. In addition, an associated research report is required. The first preliminary copy is due eight weeks before graduation, and the final accepted copy must be on file in the department no later than four weeks before graduation. Satisfactory completion of this course constitutes the department comprehensive requirement for the Bachelor's degree with an Industrial Education and Technology major. Satisfactory completion of this course without the research report constitutes the comprehensive requirement for the Associate degree. One credit; winter.



# JOURNALISM

Roberta Moore, Chairman

The aims of professional courses are to train writers for both newspaper and magazine journalism and to provide an 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 to competent writing and responsible journalism.

## MAJOR REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:

Liberal arts beyond the basic degree requirements (chosen in counsel with the chairman of the department) from three of the following areas: 30

- Literature, art and music
- History and political science
- Sociology and psychology
- Science and mathematics
- Religion and philosophy

### Professional courses, including

News Writing	164-165, 166	9
Electives		21
	—	—
		60

### Required Cognates:

Industrial Education	144, 145-146	6
Demonstrate a proficiency in typing.		

## MINOR REQUIREMENTS:

A minimum of 27 credits.

## COURSES

164-165, 166. **NEWS WRITING.** 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. Two lectures and one laboratory per week. Three credits; autumn, winter, spring.

264, 265, 266. **ADVANCED REPORTING AND NEWS EDITING.** A course in reporting public affairs, selecting, preparing, and displaying news. One class period per week, with three-hour laboratory in which students will edit copy, do sample make-up, and headlines. Prerequisite: 164-165, 166. Two credits; autumn, winter, spring.

326. **MASS COMMUNICATION MEDIA.** A consideration of print and broadcast media, with emphasis on ethics, controls and effects. Three credits; spring.

## JOURNALISM

341, 342, 343. **MAGAZINE ARTICLE WRITING.** Fact writing with analysis of magazine markets, fundamentals of gathering materials for articles and preparation of manuscripts for publication. Two credits; autumn, winter, spring.

\*351. **SEMINAR IN MAGAZINE JOURNALISM.** A survey of magazine journalism history in America and of current editorial practices. Individual research projects. Three credits; autumn.

\*352, 353. **MAGAZINE EDITING.** 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, 343. Three credits; winter, spring.

382. **EDITORIAL WRITING.** The writing of editorials, interpretive articles, and critical reviews, with a study of these types as found in today's newspaper. Two credits; winter.

\*383. **SEMINAR IN RELIGIOUS JOURNALISM.** A survey of the history of religious journalism in America and of current practices. Individual research projects in church news coverage and religious magazines. Three credits; autumn.

\*385, 386. **RELIGIOUS WRITING.** 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. Three credits; winter, spring.

412, 413. **NARRATIVE WRITING.** A course in the writing of stories. Students will analyze short narratives in current periodicals to see how successful writers handle their material. Three credits; winter, spring.

417. **HISTORY OF JOURNALISM.** Consideration of the development of the American press, including such aspects as press freedom and privileges, leaders of the press, and early political and religious organs. Three credits; autumn.

426. **SCHOOL PUBLICATIONS.** 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. Two credits; spring.

477, 478, 479. **INDEPENDENT STUDY IN JOURNALISM.** 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 showing competence in and extent of his study. Open only to majors and minors. Instructor's approval required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring.

\*Not offered the current year.

## LIBRARY SCIENCE

E. Mabley, Chairman; M. Gilliland, Shirley Graves, Joy Uehlin.

The department offers a minor designed to provide the knowledge basic to the organization and management of Learning Resources Centers in elementary and secondary schools.

### Minor Requirements:

Use of Books and Libraries	100	2
General Reference Sources	270	3
Introductory Cataloging and Classification	285	3
Literature in the Elementary School	360	
or		
Literature in the Secondary School	Ed. 511	3
School Library as a Materials Center	380	3
Selection of Library Materials	410	3
Electives		4

In addition to courses from the Library Science Department, the following may be used as electives:

Oral Interpretation	Sp. 211
Bookbinding	I.E. 113

### Required Cognates:

Methods of Audio-Visual Education	Ed. 461	2
Instructional Aids—Production	Ed. 462	2
Elementary School Curriculum	Ed. 504	
or		
Secondary School Curriculum	Ed. 508	3
Lettering	I.E. 123	2
Human Relations	So. 305	2

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**100. USE OF BOOKS AND LIBRARIES.** 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. Two credits; any quarter.

**271. GENERAL REFERENCE SOURCES.** Presentation of methods for locating information in the library and a survey of the most commonly used reference sources. Prerequisite: 100 or equivalent. Three credits; autumn.

**286. INTRODUCTORY CATALOGING AND CLASSIFICATION.** An introduction to principles, techniques, and practices of cataloging and classifying materials for use in instructional materials centers. Laboratory required. Three credits; spring.

**\*291. LIBRARIES AND SOCIETY.** Development of the principal types of libraries with discussion of their characteristics and functions; study of current issues and trends in librarianship. Three credits; autumn.

\*Not offered the current year.

## LIBRARY SCIENCE

353. **STORYTELLING.** Consideration of the place of storytelling in the educational process; selection, preparation and presentation of diversified material. Two credits; spring.

\*355. **HISTORY OF BOOKS AND PRINTING.** Technical and aesthetic aspects of writing and printing from the time of cuneiform writing to the present day; discussion of book production and distribution. Three credits; winter.

362. **LITERATURE IN THE ELEMENTARY SCHOOL.** An evaluation of the literary qualities of children's library materials; discussion of selection and use in relation to children's abilities, habits, and needs. Designed for teachers and librarians. Three credits; winter.

382. **SCHOOL LIBRARY AS A MATERIALS CENTER.** Role of the library within the elementary and secondary school; services to the educational program; methods of organization and management. Three credits; winter.

\*384. **ADVANCED CATALOGING AND CLASSIFICATION.** Advanced principles, techniques, and practices of cataloging and classifying book and non-book materials. Prerequisite: 286. Laboratory required. Three credits.

413. **SELECTION OF LIBRARY MATERIALS.** 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. Three credits; spring.

\*461. **REFERENCE MATERIALS IN THE SOCIAL SCIENCES.** Examination and evaluation of library resources in business and economics, education and psychology, history and geography, political science, and sociology. Prerequisite: 271. Three credits.

\*464. **REFERENCE MATERIALS IN THE HUMANITIES.** Examination and evaluation of library resources in the fine arts, literature, philosophy, and religion. Prerequisite: 271. Three credits.

\*467. **REFERENCE MATERIALS IN THE SCIENCES.** Examination and evaluation of library resources in the natural sciences, physical sciences, and technology. Prerequisite: 271. Three credits.

\*472. **METHODS OF LIBRARY INSTRUCTION.** 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 of the students as a part of this course. Three credits; autumn.

477, 478, 479. **INDEPENDENT STUDY IN LIBRARY SCIENCE.** 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 showing competence in and extent of his study. Open only to minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring.

\*483. **ADMINISTRATION OF SCHOOL LIBRARIES.** General principles of administration; application of techniques to the organization and management of the school library. Three credits; spring.

\*Not offered the current year.

## LIBRARY SCIENCE

490. **DIRECTED FIELD WORK.** Practical experience in elementary or secondary school libraries under the supervision of qualified librarians. One to three credits; any quarter.

\*493. **SEMINAR IN SCHOOL LIBRARY PROBLEMS.** Consideration of problems and responsibilities in the selection and use of instruction materials, finances, buildings and equipment, personnel, public relations, and legal structure. Three credits; spring.

495. **DIRECTED STUDY.** Systematic study under faculty direction. Two to four credits.



\*Not offered the current year.

## MATHEMATICS

G. Hare, Chairman; R. Jorgensen, M. Lang, W. Soper.

The Department of Mathematics offers two majors leading to baccalaureate degrees. As far as mathematics entrance requirements for both majors are concerned, all students must have 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.

### MAJOR REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:

A minimum of 47 credits including 351, 352, 353; 411, 412, 413. Other courses require the approval of the chairman of the department.

May include courses selected from Engineering 218, 220, 226.

### MAJOR REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

A total of 90 credits in mathematics and science is required. Forty-seven credits must be in mathematics, the remaining 43 credits must include an elementary course in physics and an elementary course in either biology or chemistry. The 47 credits in mathematics must include 351, 352, 353; 411, 412, 413.

May include courses selected from Engineering 218, 220, 226.

### MINOR REQUIREMENTS:

A minimum of 28 credits. Approval of the chairman of the department required.

## COURSES

111, 112, 113. **SURVEY OF MATHEMATICS.** A terminal course in mathematics for nonscience students emphasizing the structure of the number system, elementary number theory, basic concepts of algebra including algebraic structures, and informal geometry. 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. Four credits; autumn, winter, spring.

117. **PRECALCULUS.** A precalculus course including a study of inequalities, functions, graphs, logarithms, trigonometry, complex numbers, and theory of equations. Five credits; autumn.

121. **FUNDAMENTALS OF MATHEMATICS I.** A systematic study of the sets of integers, rational numbers, real numbers, and complex numbers; mathematical induction; equations and inequalities; functions and their graphs; systems of equations; binomial theorem; progressions; matrices; determinants. Four credits; autumn or winter.

122. **FUNDAMENTALS OF MATHEMATICS II.** Theory of equations, exponential and logarithmic functions, trigonometry. Prerequisite: 121. Four credits; winter or spring.

181. **ANALYTIC GEOMETRY AND CALCULUS I.** An integrated course in which topics of analytic geometry are introduced as needed in developing the topics in calculus. Prerequisite: 117, 122 or a satisfactory score on a departmental qualifying examination. Four credits; autumn, winter or spring.

## MATHEMATICS

281. **ANALYTIC GEOMETRY AND CALCULUS II.** A continuation of 181. Four credits; autumn, winter or spring.

282. **ANALYTIC GEOMETRY AND CALCULUS III.** A continuation of 281. Four credits; autumn, winter or spring.

283. **ANALYTIC GEOMETRY AND CALCULUS IV.** A continuation of 282. Four credits; autumn, winter or spring.

293. **LINEAR ALGEBRA AND ITS APPLICATIONS.** Vector spaces, linear transformations, matrices and determinants. Emphasis will be on applications. Three credits; spring.

304-305-306. **INTRODUCTION TO THE THEORY OF NUMBERS.** Congruences, continued fractions, Diophantine equations, quadratic residues. Permission of the instructor required. Two credits; autumn, winter, spring.

311. **PROBABILITY AND STATISTICS.** Probability, discrete and continuous distribution functions, sampling, correlation, regression, testing of hypotheses. Prerequisite: 283. Four credits; autumn.

312. **ORDINARY DIFFERENTIAL EQUATIONS.** Differential equations of first order, linear differential equations of order  $n$ , series solutions, applications. Prerequisite: 283. Four credits; winter.

313. **PARTIAL DIFFERENTIAL EQUATIONS.** Solutions of various types of partial differential equations with emphasis on solutions of boundary value problems. Prerequisite: 312. Four credits; spring.

351, 352, 353. **ADVANCED CALCULUS.** Functions, continuity, differentiation, integration, infinite series, differential geometry, and vector calculus. Prerequisite: 283. Three credits; autumn, winter, spring.

411, 412, 413. **MODERN ALGEBRA.** 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. Four credits; autumn, winter, spring.

471. **METHODS OF TEACHING MATHEMATICS.** 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. Three credits; autumn.

477, 478, 479. **INDEPENDENT STUDY IN MATHEMATICS.** 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 showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits; any quarter. Maximum three credits.

## MODERN LANGUAGES

C. Rochat, Chairman; R. Czeratzki, E. Velazquez.

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.

### MAJOR REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:

A minimum of 42 credits beyond the elementary course, of these 33 credits must be on the upper-division level with at least one literature course taken in sequence. Required cognate: 471.

### 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.** 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. Four credits; autumn, winter, spring.

201-202-203. **INTERMEDIATE FRENCH.** Development of the basic language skills leading to conversation and intensive reading and writing of French. Minimum of two hours laboratory per week. Three credits; autumn, winter, spring.

301-302-303. **ADVANCED FRENCH.** Intensive training in oral and written French. Review of grammar and extensive prose reading. Exercises in composition and conversation. Laboratory required. Conducted in French. Three credits; autumn, winter, spring.

304, 305, 306. **SURVEY OF FRENCH LITERATURE.** 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. Three credits; autumn, winter, spring.

401-402-403. **FRENCH CULTURE AND CIVILIZATION.** 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. Two credits; autumn, winter, spring.

404, 405, 406. **FRENCH DIRECTED READING.** The work consists of assigned reading and reports. Prerequisite: 301-302-303. One to three credits; autumn, winter, spring. Maximum, six.

## MODERN LANGUAGES

**407. THE SEVENTEENTH CENTURY.** 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 Bruyère. Four credits; autumn.

**408. ROMANTICISM AND REALISM.** Study of the period from 1800 to 1870. Special attention to writers such as Hugo, Vigny, Musset, Balzac and Flaubert. Four credits; winter.

**409. MODERN PERIOD OF FRENCH LITERATURE.** 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. Four credits; spring.

## GERMAN

**111-112-113. ELEMENTARY GERMAN.** Development of listening comprehension, speaking, reading, and writing skills. Minimum of three hours laboratory per week. Four credits; autumn, winter, spring.

**211-212-213. INTERMEDIATE GERMAN.** Continued development of basic language skills leading to conversation, intensive reading, and composition. Minimum of two hours laboratory per week. Three credits; autumn, winter, spring.

**311-312-313. ADVANCED GERMAN.** Intensive practice in oral and written German. Reading, analysis, and discussion of selected prose. Laboratory practice required. Conducted in German. Three credits; autumn, winter, spring.

**314-315. GERMAN CIVILIZATION.** 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. Two credits; autumn, winter.

**316. SCIENTIFIC GERMAN.** An introduction to the reading of technical German in various scientific fields. Two credits; spring.

**317-318-319. SURVEY OF GERMAN LITERATURE.** Development of German literature from the eighth century to the present, supplemented by readings from representative masterpieces of the language. Conducted in German. Three credits; autumn, winter, spring.

**411, 412, 413. GERMAN DIRECTED READING.** 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. Maximum, six credits. Autumn, winter, spring.

**414. GERMAN CLASSICISM.** A study of the classical period in German literature as revealed in the works of Lessing, Goethe, and Schiller. Conducted in German. Four credits; autumn.

**415. GERMAN ROMANTICISM.** A study of writings, philosophies, and literary theories of German romanticism from Friedrich Schlegel to Heinrich Heine. Conducted in German. Four credits; winter.

## MODERN LANGUAGES

416. **MODERN GERMAN LITERATURE.** 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. Four credits; spring.

### SPANISH

121-122-123. **ELEMENTARY SPANISH.** 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. Four credits; autumn, winter, spring.

221-222-223. **INTERMEDIATE SPANISH.** 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 too. Minimum of two hours laboratory per week. Three credits; autumn, winter, spring.

321-322-323. **ADVANCED SPANISH.** Intensive training in oral and written Spanish. Review of grammar and extensive prose reading. Exercises in composition and conversation. Conducted in Spanish. Laboratory required. Three credits; autumn, winter, spring.

324, 325, 326. **SURVEY OF SPANISH LITERATURE.** 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. Three credits; autumn, winter, spring.

331, 332. **HISPANIC CULTURE AND CIVILIZATION.** 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. Two credits; autumn, winter.

402. **SPANISH APPLIED LINGUISTICS.** A close analysis of Spanish phonology, morphology, and syntax as these apply to the classroom situation. Abundance of individual drill. Three credits; summer.

414, 415, 416. **SPANISH DIRECTED READING.** The work consists of assigned readings and reports. Prerequisite: 321-322-323. One to three credits. Maximum, six credits. Autumn, winter, spring.

424, 425, 426. **CONTEMPORARY SPANISH LITERATURE.** 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. Two credits; autumn, winter, spring.

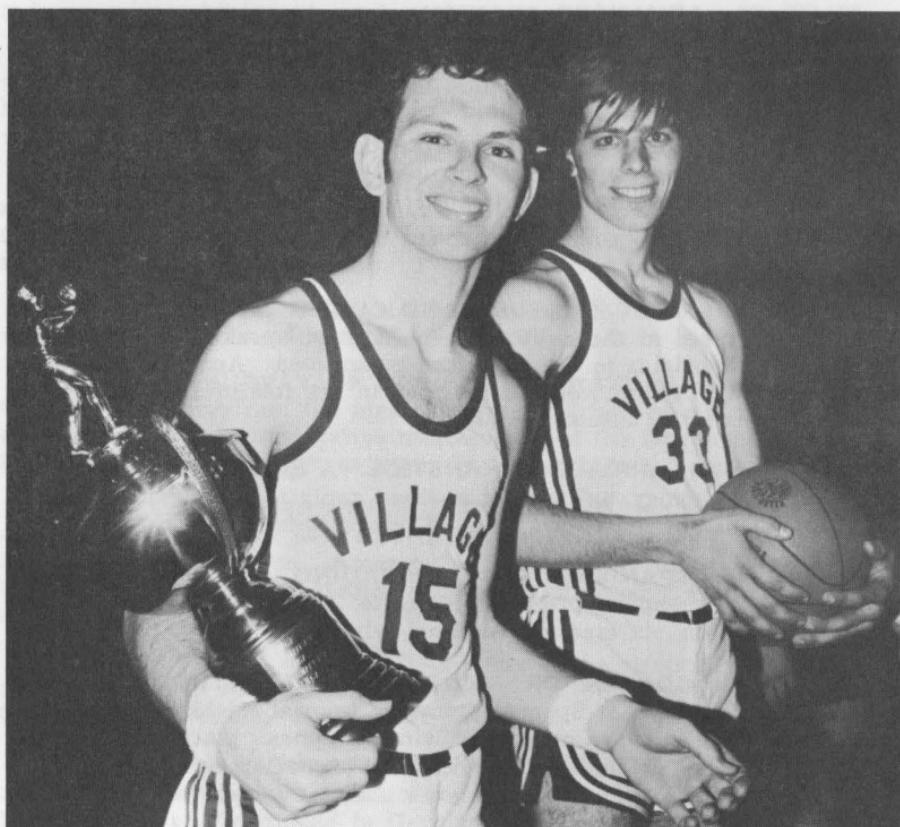
## MODERN LANGUAGES

431, 432, 433. **LATIN AMERICAN LITERATURE.** An introduction to Latin American literature with special emphasis on the South American and Mexican authors. Three credits; autumn, winter, spring.

## GENERAL

471. **METHODS OF TEACHING MODERN LANGUAGES.** 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. Three credits; winter or spring.

477, 478, 479. **INDEPENDENT STUDY IN MODERN LANGUAGES.** Directed, independent study in an approved area of French, German, or Spanish. The student will be required to read widely on an assigned subject, follow regular research methods, and present a paper showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits. Autumn, winter, spring.



## MUSIC

M. West, Chairman; V. Bushnell, L. Leno, H. Lickey, Jeanette McGhee, W. Murphy, D. Myers, Judi Myers, G. Spring.

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. Walla Walla College offers two curriculums in music: the Bachelor of Music with majors in Performance or Music Education, and the Bachelor of Arts with majors in Music Theory and Applied Music.

### BACHELOR OF MUSIC

The Bachelor of Music degree is a professional degree with a choice of two majors: Performance and Music Education. Precollege musical experience and a natural gift for music are prerequisites. All majors must audition for the music faculty before enrolling in an applied field. Sincerity of purpose, application, and aptitude must be demonstrated during the first year before full status as a major student is granted.

Participation in a musical organization is required for each quarter in residence. Voice majors must be in a choral group, string majors in the orchestra, and brass and woodwind majors in the orchestra or band. Piano and organ majors may elect up to six credits of Ensemble as partial fulfillment of the organization requirement.

Attendance at all general recitals and three concerts is required for each quarter in residence. Attendance is also required of majors at all senior recitals. Majors must pass the examinations on all six departmental Listening Lists, and the Piano Proficiency Examination.

#### REQUIREMENTS FOR A BACHELOR OF MUSIC DEGREE IN PERFORMANCE WITH MAJORS IN PIANO, ORGAN OR VOICE:

First Year		Second Year	
Religion	6	Hist. & Lit. of Music	6
Freshman Composition	9	Applied Major	12
Phil. of Christian Education	2	Basic Musicianship II	3
Applied Major	12	Theory II	9
Basic Musicianship I	3	Organization	3
Theory I	9	Language <sup>1</sup>	12
Organization	3	Electives	3
Physical Education	3		
Elective	1		
			48

## MUSIC

Third Year		Fourth Year	
Religion	6	Religion	6
Applied Major	12	Applied Major	12
Hist. & Lit. of Music	6	Counterpoint	3
Basic Conducting	2	Orchestration	3
Inst. or Choral Conduct.	2	Composition	6
Analytical Techniques	6	Independent Study	3
Organization	3	Organization	3
Cognates <sup>2</sup>	3-6	Hist. & Apprec. of Art	6
Electives	5-8	Electives	6
	48		48

<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 which will 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>Voice majors must take Vocal Techniques. Organ majors must take Keyboard Harmony.

A recital during both the junior and senior years is required. This curriculum does not result in denominational or state teaching certification.

### REQUIREMENTS FOR A BACHELOR OF MUSIC DEGREE WITH A MAJOR IN MUSIC EDUCATION:

First Year		Second Year	
Religion	6	Religion	6
Freshman Composition	9	Hist. (101, 102, 103 preferred)	9
General Psychology	4	Hist. & Lit. of Music	6
Phil. of Christian Ed.	2	Basic Musicianship II	3
Basic Musicianship I	3	Theory II	9
Theory I	9	Major Performance	6
Major Performance	6	Minor Performance	3
Minor Performance <sup>1</sup>	3	Instrumental Techniques <sup>2</sup>	3
Organization	3	Organization	3
Physical Education	3		
	48		48

Third Year		Fourth Year	
Science or Math	12	Religion	6
Hist. & Lit. of Music	6	Literature	4
Conducting <sup>3</sup>	4-6	Analytical Techniques	6
Major Performance	6	Orchestration	3
Organization	3	Methods of Teaching Music in the Secondary School	2
Methods of Teaching Music in the Elementary School	2	Major Performance <sup>5</sup>	6
Introduction to Education	3	Voice <sup>6</sup>	1
Educational Evaluation	3	Organization	3
Educational Psychology	3	Directed Teaching	12
Cognates <sup>4</sup>	3-6	Methods and Materials	3
Electives	0-4	Adolescent Psychology	3
	49-50		47-48

<sup>1</sup>Voice majors will take piano unless they are able to pass the Piano Proficiency Examination. Organ majors will take piano, and piano majors will take organ. Instrumental majors may count their additional hours in instrumental techniques as fulfilling this requirement.

<sup>2</sup>Instrumental majors must take all the instrumental techniques courses. Voice and keyboard majors will elect either Brass, Woodwind, or String Techniques.

<sup>3</sup>Basic Conducting is required of all majors. Voice and instrumental majors elect both Instrumental and Choral Conducting, while keyboard majors may elect either.

<sup>4</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.

<sup>5</sup>The music faculty may allow 3 hours of Selected Topics in Conducting toward the fulfillment of this requirement.

<sup>6</sup>Not required of voice majors.

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.

This curriculum prepares the student for teaching on the elementary or secondary level and results in denominational and Washington Provisional certification. Upon completion of the Fifth Year (see Education Department, p. 72) the student is eligible for the Washington State Standard Certificate.

## **BACHELOR OF ARTS**

The Bachelor of Arts degree offers a choice of two majors: Music Theory and Applied Music. All majors must audition for the music faculty before enrolling in an applied field. 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, orchestra or band for brass and woodwind majors. Piano and organ majors may elect one year of Ensemble as partial fulfillment of the organization requirement.

Attendance at all general recitals and three concerts is required for each quarter in residence. Attendance is also required of majors at all senior recitals. Majors must pass the examinations of all departmental Listening Lists and the Piano Proficiency Examination.

# MUSIC

## MAJOR REQUIREMENTS FOR MUSIC THEORY:

Basic Musicianship I and II	6
Theory I and II	18
History and Literature of Music	12
Counterpoint	3
Orchestration	3
Analytical Techniques	6
Composition	3
Keyboard Harmony	3
Applied Music	12
	—
	66

### Required Cognate:

Art 221, 222, 223

## MAJOR REQUIREMENTS FOR APPLIED MUSIC:

Basic Musicianship I and II	6
Theory I and II	18
History and Literature of Music	12
Analytical Techniques	6
Applied Music	21
Electives	3
Piano and Instrumental majors will take Ensemble with the approval of the department.	
Organ majors will take Keyboard Harmony.	
Voice majors will take Vocal Techniques.	
	—
	66

### Required Cognates:

Art 221, 222, 223

Singer's Diction (for voice majors who are unable to pass a diction examination in Italian, German and French) 211-212-213

The Music Theory major will present a senior project for which approval must be obtained from the music faculty. The Applied Music majors will present a joint (or solo) senior recital.

### Minor Requirements:

Basic Musicianship I	3
Theory I	9
Introduction to Music	6
Basic Conducting	2
Applied Music (in one field, with an examination by the music faculty at the end of the first and second years of private lessons)	6
Electives	4
	—
	30

## THEORY AND COMPOSITION

102. **FUNDAMENTALS OF MUSIC.** A basic course intended to lay a foundation in the following: notation, rhythm, scales, key signatures, chords, terms, form and sight-singing. This course will not apply toward a major or minor in music. Two credits; autumn.

104-105-106. **THEORY I.** A course intended to teach the essential crafts of melody construction and harmonization in two, three, and four parts, within the framework of eighteenth and early nineteenth century tonal practice. Prerequisite: 102 or its equivalent. To be taken concurrently: 121-122-123. Three credits; autumn, winter, spring.

121-122-123. **BASIC MUSICIANSHIP I.** Designed to provide intensive training in the fundamental skills of musicianship, with emphasis on the rhythmic, melodic, and harmonic concepts presented in Theory I, with which it is to be taken concurrently. One credit; autumn, winter, spring.

204-205-206. **THEORY II.** A continuation of Theory I with emphasis on the melodic and harmonic developments of the late nineteenth century to the present. Prerequisites: 104-105-106 and 121-122-123. To be taken concurrently: 221-222-223. Three credits; autumn, winter, spring.

221-222-223. **BASIC MUSICIANSHIP II.** A continuation of Basic Musicianship I, normally to be taken concurrently with Theory II. Prerequisite: 121-122-123. One credit; autumn, winter, spring.

304. **ANALYTICAL TECHNIQUES—HOMOPHONIC FORMS.** Structural analysis of homophonic forms from the Classical Era to the present. Prerequisite: 204-205-206. Three credits; autumn.

305. **ANALYTICAL TECHNIQUES—CONTRAPUNTAL FORMS.** Structural analysis of contrapuntal forms from the Renaissance to the present. Writing in the various styles under consideration is required. Prerequisite: 204-205-206. Three credits; winter.

331-332-333. **KEYBOARD HARMONY.** A course designed to acquaint keyboard majors with the various practical facets of musicianship such as harmonization of figured and unfigured basses and melodies, transposition, open-score reading, modulation, and elementary improvisation. Prerequisite: 204-205-206 and/or the permission of the instructor. One credit; autumn, winter, spring.

406. **COUNTERPOINT.** A continuation of Course 305 with concentration on the more intricate forms of contrapuntal writing such as motet, canon, and fugue. Prerequisite: 304 and 305. Three credits; spring.

409. **ORCHESTRATION.** 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 and 305. Three credits; spring.

411, 412, 413. **COMPOSITION I.** 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; autumn, winter, spring.

## MUSIC

**415. COMPOSITION II.** Advanced composition in the larger forms. Prerequisite: 411, 412, 413 and/or permission of instructor. One to three credits any quarter; maximum, three credits. Autumn, winter, spring.

## HISTORY AND LITERATURE

**201, 202, 203. INTRODUCTION TO MUSIC.** An introduction to the appreciation and enjoyment of music through a study of its basic literature with extensive listening. The course seeks to develop an awareness of the emotional, aesthetic and intellectual appeals of music. Students beginning with winter or spring quarter must obtain approval of the instructor. Credit is not allowed toward a major. Two credits; autumn, winter, spring.

**\*291, 292, 293. HISTORY AND LITERATURE OF MUSIC TO 1750.** A study of Western music from pre-Christian times to 1750, with emphasis on the evolution of forms, styles and media. Lectures will be supplemented with reading, performance and listening to the music of the periods under consideration. Open to music majors; others accepted with permission of instructor. Two credits; autumn, winter, spring.

**341, 342, 343. HISTORY AND LITERATURE OF MUSIC SINCE 1750.** A study of Western music from 1750 to the present, with emphasis on the evolution of forms, styles and media. Lectures will be supplemented with reading, performance and listening to music of the period under consideration. Open to music majors; others accepted with permission of instructor. Two credits; autumn, winter, spring.

**481, 482, 483. SELECTED TOPICS IN MUSIC.** 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: maximum, three credits; autumn, winter, spring.

## MUSIC EDUCATION

**211-212-213. SINGER'S DICTION.** 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. One credit; autumn, winter, spring.

**\*277, 278, 279. BRASS TECHNIQUES.** Class instruction in the playing and teaching of brass instruments. One credit; autumn, winter, spring.

**281, 282, 283. WOODWIND TECHNIQUES.** Class instruction in the playing and teaching of woodwind instruments. One credit; autumn, winter, spring.

**\*284, 285, 286. STRING TECHNIQUES.** Class instruction in the playing and teaching of stringed instruments. One credit; autumn, winter, spring.

**287. PERCUSSION TECHNIQUES.** Class instruction in the playing and teaching of percussion instruments. One credit; autumn.

\*Not offered the current year.

## MUSIC

**308. KEYBOARD PEDAGOGY AND LITERATURE.** A course conducted as an introduction to the teaching of piano and organ, 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. Three credits; winter.

**\*382. VOCAL TECHNIQUES.** A study of the factors involved in correct voice production and artistic performance of vocal literature. Three credits; winter.

**\*472. THE TEACHING OF MUSIC IN THE ELEMENTARY SCHOOL.** Philosophy, techniques, procedures, and materials for music education in grades Kindergarten through six. Emphasis on classroom instruction for all students. Two credits; spring.

**473. THE TEACHING OF MUSIC IN THE SECONDARY SCHOOL.** Philosophy, techniques, procedures, and materials for music education in grades seven through twelve. Emphasis on classroom instruction for all students. Two credits; spring.

**477, 478, 479. INDEPENDENT STUDY IN MUSIC.** Directed study in an approved area. The student will be required to read widely on an assigned subject, follow regular research methods, and present a paper showing competence in and extent of his study. Open only to majors and minors. Instructor's approval required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring.

### CONDUCTING

**387. BASIC CONDUCTING.** A course specifically designed to lay the foundation for the development of the skill and the art of conducting musical ensembles of all kinds. Two credits; autumn.

**388. INSTRUMENTAL CONDUCTING.** Instruction and experience with conducting live performances of representative works of band and orchestral literature. Prerequisite: 387. Two credits; winter.

**389. CHORAL CONDUCTING.** Instruction and experience with conducting live performances of representative works of choral literature Prerequisite: 387. Two credits; spring.

### CHURCH MUSIC

**208-209. MINISTRY OF MUSIC.** A study of the purpose and use of music in religious services. Attention is given to the aesthetics of the church service and hymnology. Two credits; winter, spring.

### VOCAL AND INSTRUMENTAL ENSEMBLES

**224, 225, 226. CONCERT CHOIR.** Organized to provide a large ensemble for the performance of a major choral work each quarter. Open to all students and community singers. One credit; autumn, winter, spring.

\*Not offered the current year.

## MUSIC

234, 235, 236. **MEN'S GLEE CLUB.** Organized to provide a musical outlet for men with a special interest in male chorus music. A wide variety of musical styles of interest to the general student will be included. Regular performances are planned. Membership is by audition. One credit; autumn, winter, spring.

237, 238, 239. **WOMEN'S GLEE CLUB.** Organized to provide musical opportunities for the many women who desire choral participation. In addition to attractive musical selections for women's voices, joint performances with the Men's Glee Club as a mixed chorus are planned. Membership is by audition. One credit; autumn, winter, spring.

241, 242, 243. **SCHOLA CANTORUM.** 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. One credit; autumn, winter, spring.

244, 245, 246. **CHORALE.** This eight-part choral organization performs regularly as the church choir, in addition to presenting concerts on and off campus. Standards of repertoire and performance are equal to those of the Schola Cantorum, but have a different musical objective. Great masterpieces of choral literature are performed each quarter. Membership is by audition. One credit; autumn, winter, spring.

247, 248, 249. **CONCERT BAND.** A select organization which serves the College by performing numerous concerts 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. Auditions are held during registration. A more select band called the Wind Ensemble will be organized as a part of the Concert Band. One credit; autumn, winter, spring.

251, 252, 253. **STRING ORCHESTRA.** An organization which rehearses and performs, both on and off campus, a cross-section of standard literature from the Baroque Era to the present. Membership is by audition. One credit; autumn, winter, spring.

254, 255, 256. **WALLA WALLA SYMPHONY.** A community symphonic orchestra which presents four subscription concerts per season. Membership is by audition. One credit; autumn, winter, spring.

257, 258, 259. **ENSEMBLE.** 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. One credit; autumn, winter, spring.

## APPLIED MUSIC

One to four credits of applied music may be earned each quarter. One credit of applied music presupposes 50 hours of practice per quarter; two credits, 100 hours. One hundred forty hours of practice are required

## MUSIC

per quarter for three credits; and 180 hours for four credits. (Music majors are required to take a weekly 1-hour lesson unless advised otherwise by the music faculty.)

Music majors are required to take lessons on their chosen instrument each quarter in residence regardless of the amount of credit accumulated.

Not more than nine credits in applied music (including three credits of ensemble) may be earned toward graduation without an equal number of hours in music classwork.

Transfer students majoring in music must take a minimum of six hours in applied music at Walla Walla College.

107, 108, 109. **APPLIED MUSIC.** Beginning.

127, 128, 129. **APPLIED MUSIC.** Intermediate.

227, 228, 229. **APPLIED MUSIC.** Upper intermediate.

327, 328, 329. **APPLIED MUSIC.** Lower advanced.

427, 428, 429. **APPLIED MUSIC.** Advanced.

### PIANO PROFICIENCY REQUIREMENTS:

All non-keyboard majors will be required to attain the following minimum skills in piano proficiency:

1. Sightread second-grade piano literature, simple accompaniments, and hymns.
2. Demonstrate the ability to prepare third-grade literature within a specified time period.

All students who are not able to pass this examination will be expected to register for piano each quarter until they have met this requirement.

## NON-DEPARTMENTAL

### GENERAL

90. **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. No credit.

207, 208, 209. **CULTURAL FOUNDATIONS.** A course designed to survey the aesthetic values expressed by Western cultural groups through their painting, sculpture, architecture, music and literature. Two credits; autumn, winter, spring.

### AGRICULTURE

261. **SOIL MANAGEMENT.** Types of soil, terrain study, plant food, and how to feed plants, irrigation, testing soil, and conservation of plant nutrients in the soil. Three credits; autumn.

262. **FRUIT CULTURE.** Varieties of fruit, deciduous, citrus, and others. Propagation, home orchards, application of plant food, pest control. Two credits; winter.

263. **VEGETABLE PRODUCTION.** Includes production of vegetable varieties, soil preparation, harvesting, seed production, and the economics of vegetable production. Prerequisite: 261. One three-hour laboratory per week. Three credits; spring.

### AVIATION

211, 212. **AVIATION GROUND SCHOOL.** 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. Three credits, autumn; two credits, winter.

250. **AVIATION FLIGHT TRAINING.** 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. The training involves 45 hours of flying, 25 of which are dual instruction. Three credits; any quarter.

the lower college curriculum. The program includes drama, music, art, etc.

### APPLIED MUSIC

One or four credits are offered music students for studies in applied music. One credit is applied music encompasses 10 hours of instruction per quarter, two credits, 20 hours. One hundred forty hours of instruction are required.

## NURSING, SCHOOL OF

Wilma Leazer, Dean; Wanda Anderson, Linda Blood, Betty Booth, Connie Braman, Florence Carrigan, Janice Chance, Sue Fessler, Helen Furber, Alice Hazelton, Ingrid Johnsen, Edna Johnson, Annette Lofftus, Vera Miller, Nancy Moll, H. Osterud, Sharon Rawson, Joyce Riter, Lois Smith, Barbara Woolbert.

### 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 self-sacrificing love. The faculty of this school believes that man was created perfect in the image of God. However, this image has been marred by disobedience to His laws of life and health, but because of God's love for man, a Way, in the example and sacrifice of Jesus Christ, has been provided to restore man to his original state of perfection.

"To restore in man the image of his Maker, to bring him back to the perfection in which he was created, to promote the development of body, mind, and soul, that the divine purpose in his creation might be realized—this was to be the work of redemption. This is the object of education, the great object of life. Love, the basis of creation and of redemption, is the basis of true education." *Education*, Mrs. E. G. White, pp. 15, 16.

Man possesses the capacity of intellectual creativity and self-direction. He is a unified whole with intrinsic worth and a value system worthy of respect. His education should include an interacting development of physical vigor, intellectual alertness, social relationships, and spiritual perceptivity. Adaptation, change, and growth are accomplished through interaction of intrinsic and extrinsic factors.

Health is more than the absence of disease; it includes abundant living and can be attained only as man lives in accordance with the laws of health. The laws of health are based on the interaction of spiritual, mental, emotional, social, physical, biological, and cultural factors which represent the main areas of human need.

The Christian professional nurse, in response to the love of God, manifests unselfish love to meet the needs of man. This love is reflected in every aspect of nursing care.

The nurse is an integral part of a health team whose purpose is to maintain, promote, and restore the optimum level of health—to the individual, the family, and the community. The nurse utilizes knowledge and skills from the humanities, sciences, professionally related courses, and nursing to coordinate, direct, and/or administer the care of patients. Complexities of a rapidly changing society demand professional nurses who are self-directive, adaptable, and who can habitually study and think independently. They are able to take discriminative action as agents of change.

## **NURSING**

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 patients, families, and associated personnel.

Maintain a commitment to personal, spiritual, and professional growth.

Recognize nursing functions in the context of a changing society.

## **COOPERATING INSTITUTIONS**

Extended campus facilities are located in Portland, Oregon. Teachers' offices, classrooms, and a library are housed in a facility at the 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 off-campus facilities for instruction of students. In the Walla Walla area these include the Veteran's Administration Hospital, Walla Walla General Hospital, the Department of Public Assistance, 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, St. Vincent Hospital, Shriner's Hospital for Crippled Children, Portland Children's Center, Albina Child Care Center, Clackamas County Health Department, and Clark-Skamania District Health Department.

## **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 PLANNING**

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 SE. Yamhill Street  
Portland, Oregon 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.

Applicants in all categories listed above must send their application for admission to:

Office of the Registrar  
Walla Walla College  
College Place, Washington 99324

The general high school prerequisites for admission to Walla Walla College are listed on page 30; the special mathematics prerequisites for nursing are listed there also.

### **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 generic 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: 227-228; 267; 271; 354-355; 357-358; 363. If a satisfactory grade is earned on the examination, full credit for the course is allowed. Unsatisfactory grades of D or F are recorded and the student is required to take these classes with the generic students.

Credit for nursing courses carrying numbers above 400 may not be established by validating examinations.

## **TRANSPORTATION**

Students are responsible for their own transportation to most of the agencies and institutions used for educational experience. Transportation costs will vary from quarter to quarter. A valid driver's license and use of an automobile are mandatory during the quarter the student is in Public Health Nursing.

## NURSING

### CURRICULUM

The nursing program contains approximately equal portions of general education and professional courses and may be completed in 12 quarters. Five quarters are spent at the extended campus facility in Portland, Oregon.

Attendance at one summer session is required either after the freshman or sophomore year. If two summer sessions are utilized, 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 whose cumulative grade-point average falls below 2.00 (or C) on courses completed or who have received a grade lower than C in the Fundamentals of Nursing courses will not be permitted to proceed with further coursework within the nursing major.

Nursing majors must meet the requirements for a Bachelor of Science degree as listed in the section "Degree Requirements" on pages 42-44.

If it becomes necessary for a student to register for liberal arts classes at a local college or university in the Portland area, the student is required to pay the tuition to that college or university.

In addition to the regular degree requirements of the College, the following courses are required:

		Credits
Fundamentals of Nursing	227-228	11
Adult Nursing I, II, III	267, 354-355	23
Parent-Child Nursing I, II, III	271, 357-358	17
Psychiatric Nursing	363	8
Introduction to Public Health and Epidemiology	322	4
Public Health Nursing	402	11
Physiological Principles Applied to Nursing	409	3
Selected Problems in Nursing	411	6
Leadership in Nursing	424	8
Biological Sciences	107, 201-203	15
Chemistry	101-102-103	9
Home Economics	220	3
Sociology	204, 205	6
*General Electives		To bring total hours to 192

\*Six hours must be chosen from upper-division psychology and/ sociology courses.

## NURSING

### A TYPICAL \*FOUR-YEAR NURSING PROGRAM

#### Bachelor of Science Degree

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\*This program may vary from quarter to quarter as necessitated by group scheduling.

# NURSING

## FIRST YEAR

Autumn	Winter	Spring
Freshman Comp. 3	Freshman Comp. 3	Freshman Comp. 3
Introd. Chemistry 3	Introd. Chemistry 3	Introd. Chemistry 3
Religion 2	Religion 2	Religion 2
Fine Arts, Literature, or Speech 2	Fine Arts, Literature, or Speech 2	Fine Arts, Literature, or Speech 2
Anatomy and Phys. 5	Anatomy and Phys. 5	History 3
Physical Education 1	General Psychology 2	General Psychology 2
—	—	Physical Education 1
16	17	16

## SECOND YEAR

Autumn	Winter	Spring
Microbiology 5	Fund. of Nursing 6	Fund. of Nursing 5
General Sociology 3	General Sociology 3	Electives 2
History 3	History 3	Sociology or Psych. (UD) 3
Fine Arts, Literature, or Speech 2	Fine Arts, Literature, or Speech 2	Fine Arts, Literature, or Speech 2
Nutrition 3	Religion 3	Religion 3
—	—	Physical Education 1
16	17	16

## Summer

Adult Nursing I	9
Parent-Child Nursing I	7
—	16

## THIRD YEAR

Autumn	Winter	Spring
Adult Nursing II 7	Adult Nursing III 7	Psychiatric Nursing 8
Parent-Child Nursing II 5	Parent-Child Nursing III 5	Sociology or Psych. (UD) 3
Religion 3	Introd. to Pub. Health 4	Phil. of Christian Education 2
—	16	Electives 3

## FOURTH YEAR

Autumn	Winter	Spring
Leadership in Nurs. 8	Public Health Nurs. 11	May be required of some students due to scheduling pattern.
Selected Problems in Nursing 6	Religion (UD) 3	
Physiological Principles 3	—	14
—	17	16

## NURSING

### COURSES

227-228. **FUNDAMENTALS OF NURSING.** A study of the basic principles of professional nursing, including a fundamental understanding and practice of interpersonal relationship techniques and simple basic nursing skills with an emphasis on the underlying physical principles. Consideration of common religious beliefs will be given as an aid to the nurse's understanding of the patient's spiritual needs. Community facilities are utilized as clinical practice areas. Prerequisites: The freshman nursing curriculum completed. Six credits, winter and summer; five credits, autumn and spring.

267. **ADULT NURSING I.** A study of the interacting psychosocial, spiritual, biological and cultural factors which influence the health of the adult. The role of the professional nurse as a member of the health team is examined. Opportunity is provided for guided practice in planning, giving and evaluating nursing care of the hospitalized adult, and this forms the basic study of the professional nurse's role in the care of the adult patient in the general hospital. This course runs concurrently with Parent-Child Nursing I, and areas of common application will be explored. Prerequisite: 227-228. Nine credits; spring or summer. Summer session, ten weeks.

271. **PARENT-CHILD NURSING I.** A beginning study of normal psychosocial, biophysical development from conception to late adolescence. Current philosophies of child development and care based on recent research are considered. Opportunities will be given for observation and care of the average child and his family in various settings. This course runs concurrently with Adult Nursing I, and appropriate areas will be correlated in theory and practice. Prerequisite: 227-228. Seven credits; spring or summer. Summer session, ten weeks.

322. **INTRODUCTION TO PUBLIC HEALTH AND EPIDEMIOLOGY.** A study of the historical background and general organization and structure of public 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. Four credits; winter, summer.

354-355. **ADULT NURSING II, III.** A continuation of Adult Nursing I with deepening emphasis on the nursing care of the ill adult and role of the professional nurse in the care of patients with more complex nursing problems. These courses also run concurrently with Parent-Child Nursing II and III, and areas of common application will be explored. Prerequisite: 267. Seven credits; autumn, winter.

357-358. **PARENT-CHILD NURSING II, III.** A continued study of human psychosocial and biophysical development. The interaction of family members and the resulting behavior in times of physical and emotional stress provide a basis for planning nursing interventions by the health team approach. Learning experiences are organized to include pregnancy, neonates and children in various family constellations. The home, hospital, and selected community agencies are utilized. This course

runs concurrently with Adult Nursing II and III, and appropriate areas will be correlated in theory and practice. Prerequisite: 271. Five credits; autumn, winter.

**363. PSYCHIATRIC NURSING.** Psychiatric Nursing deals with the study of human behavior and its relationship to the prevention, treatment, and rehabilitation of the emotionally ill in the community and psychiatric setting. Emphasis is placed on development of understanding and skill in observation of behavior, communication and therapeutic use of self in interpersonal relationships. Clinical nursing experience and student-teacher conferences provide the student with guided opportunity to develop skill in meaningful relationships and to participate in the psychiatric health team. Prerequisite: 355, 358. Eight credits; any quarter.

**401. PUBLIC HEALTH NURSING.** Principles of public health nursing in family and community health services. Prerequisite: 322. Five credits; any quarter, current school year only.

**402. PUBLIC HEALTH NURSING.** Application of knowledge of health principles, methods and nursing skills in the care of families and communities. Emphasis is on how communities care for their health problems and the resources they provide for meeting them. Opportunities for experience in application are offered by official agencies. Prerequisites: 322, 355, 358, 363. Eleven credits; any quarter.

**404. PUBLIC HEALTH NURSING LABORATORY.** Application of public health principles and skills in family and community health situations. Prerequisite: 322. Five credits; any quarter, current school year only.

**409. PHYSIOLOGICAL PRINCIPLES APPLIED TO NURSING.** Analysis of selected complex nursing situations in terms of physical and physiological bases for nursing action. Prerequisites: 355, 358, 363. Three credits; any quarter.

**411. SELECTED PROBLEMS IN NURSING.** Analysis of and experience in dealing with complex nursing problems in patients with acute or chronic illness. Simple research design and writing are included as an approach to evaluation of nursing care or practice. Prerequisites: 355, 358, 363. Six or seven credits; any quarter.

**424. LEADERSHIP IN NURSING.** An exploration of the historical sociology of the hospital, tracing the development of the team concept as well as other emerging patterns of nursing care 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 care for groups of patients utilizing team nursing concepts and methods, followed by observer/participant experience with administrative nursing personnel. Seven or eight credits; any quarter.

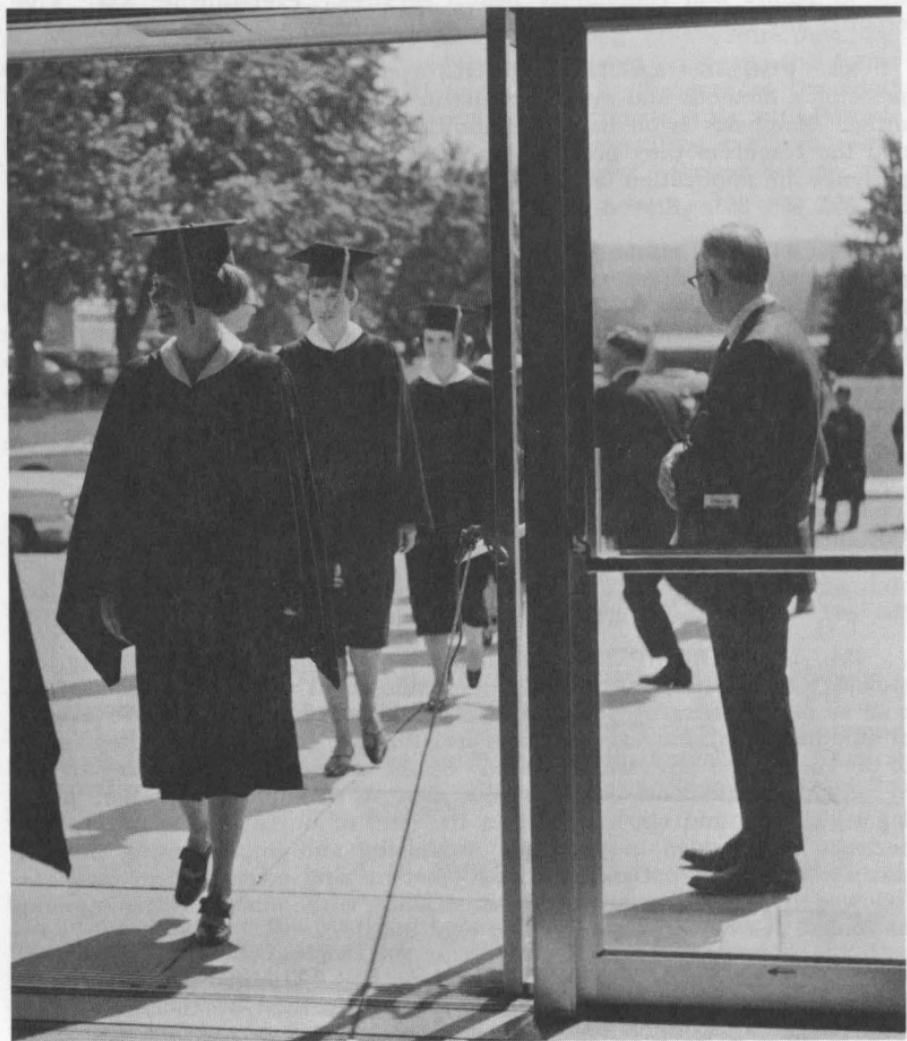
**444. TRENDS AND PROFESSIONAL RELATIONSHIPS IN NURSING.** A study of present-day trends in nursing and how they evolved. Study is given to professional organizations, patterns of nursing education,

## NURSING

nursing legislation, opportunities in the field of nursing, and other problems in nursing practice. Two credits; winter, summer, current school year only.

477, 478, 479. **INDEPENDENT STUDY IN NURSING.** Directed, independent study in an approved area in nursing science or practicum. The student will be required to read widely on an assigned subject, follow regular research methods, and present a paper showing competence in and extent of his study. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits.

493. **SEMINAR IN NURSING.** Seminar on techniques of health education. One credit; any quarter, current school year only.



## OFFICE ADMINISTRATION

Gertrude Gibson, Chairman; Joyce Medlock, E. Quiring.

The degree programs aim to train 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.

### MAJOR REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

#### Major: Office Administration

Secretarial Procedures	208	3
Advanced Typewriting	222, 223	4
Business Machines	262, 263	4
Advanced Shorthand and Transcription	287, 288, 289	9
Business Communications	351, 352, 353	6
The Professional Secretary	418, 419	6
Advanced Secretarial Procedures	420	3
Independent Study	477, 478, or 479	1
Office Administration Seminar	492	1
Upper division, electives		10
		—
	Minimum	47

#### Required Cognates:

Business and Economics 131, 132; 261, 262.

#### Major: Business Education

*Secretarial Procedures	207, 208	6
Advanced Typewriting	221, 222, 223	6
*Advanced Shorthand and Transcription	287, 288, 289	9
Business Communications	351, 352, 353	6
Advanced Secretarial Procedures	420	3
Methods of Teaching Typewriting and Shorthand	471	4
Methods of Teaching Bookkeeping	473	2
Principles of Accounting	Bus. 131, 132, 133	3
Introduction to Informational Science	Bus. 236	3
Business Law	Bus. 241, 242, 243	6
Principles of Economics	Bus. 261, 262, 263	9
Electives, upper-division Chosen from:		15 or 18
Office Administration	(15)	
Business and/or Economics	(15)	
Office Admin., Business Admin. and/or Economics	(18)	

## OFFICE ADMINISTRATION

The student must meet teacher certification requirements (see Education Department).

No minor required.

\*Alternate courses in this area accepted with permission of department chairman.

### MINOR IN OFFICE ADMINISTRATION:

Advanced Typewriting	221, 222, 223	6
Business Machines	262, 263	4
*Advanced Shorthand and Transcription	287, 288, 289	9
Advanced Secretarial Procedures	420	3
Electives		7-16
		—
		29

\*This course or a proficiency in Voicescription.

### ASSOCIATE OF ARTS DEGREE WITH A CONCENTRATION IN SECRETARIAL SCIENCE

The Associate of Arts degree with majors in Secretarial, Secretarial Accounting, and Medical Secretary fields 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.

### REQUIREMENTS FOR AN ASSOCIATE OF ARTS DEGREE:

#### Concentration: Secretarial

Mathematics of Business	171	2
Secretarial Procedures	207, 208	6
Advanced Typewriting	221, 222, 223	6
Traditions and Practices of Business	235, 236	4
IBM Key Punch	240	1
Business Machines	262, 263	4
Advanced Shorthand and Transcription	287, 288, 289	9
Business Communications	351, 352, 353	6
Applied Office Administration (Receptionist and P.B.X.)	380	1
Principles of Accounting	Bus. 131	3
Introduction to Information Science	Bus. 236	3
Electives from the Department		6
Electives from the Humanities and/or Social Sciences		12
		—
		63

## OFFICE ADMINISTRATION

### Concentration: Secretarial Accounting

Those wishing a Secretarial Accounting major will substitute 12 hours of accounting for Advanced Shorthand and Transcription in the Secretarial Program.

### Concentration: Medical Secretarial

Mathematics of Business	171	2
Advanced Typewriting	221, 222, 223	6
Traditions and Practices of Business	235, 236	4
IBM Key Punch	240	1
Business Machines	262, 263	4
Advanced Shorthand and Transcription	287, 288, 289	9
Business Communications	351, 352, 353	6
Applied Office Administration (Receptionist and P.B.X.) (Clinical)	380	2
Medical Office Procedures	447	3
Medical Terminology	448, 449	6
Anatomy, Physiology	Bio. 202, 203	3
Principles of Accounting	Bus. 131	10
Introduction to Information Science	Bus. 236	3
Electives, from the Department		4

Students planning to continue at another institution for Medical Records Librarianship must also complete Biology 107.

### General Requirements:

Freshman Composition	Eng. 101-102-103	9
Religion		9
Physical Education		2
Personal Finance	Bus. 112	2
Electives (from published Bachelors Degree general requirements)		11

### REQUIREMENTS FOR THE TWO-YEAR CERTIFICATE:

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.

If, after successful completion of this two-year program, the student wishes to continue for the degree in Office Administration, he may do so without loss of credit.

Advanced Typewriting	221, 222, 223	6
Shorthand Theory	141, 142, 143	12
Advanced Shorthand and Transcription	287, 288, 289	9
Secretarial Procedures	207, 208	6
Mathematics of Business	171	2

## OFFICE ADMINISTRATION

Traditions and Practices of Business	235, 236	4
Business Machines	262, 263	4
Applied Office Administration (Receptionist and P.B.X.)	380	1

### Required Cognates:

Freshman Composition	Eng. 101-102-103	9
Religion		6
Physical Education		2
Health Science	H&PE. 110	2
Electives		29
In counsel with Department Chairman.		—
		96

### REQUIREMENTS FOR CLERICAL CERTIFICATE:

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.

## OFFICE ADMINISTRATION

121, 122, 123. **BEGINNING TYPEWRITING.** Introduction to touch typewriting with emphasis on basic theory, speed, accuracy. The first quarter of this course may be taken by anyone for personal use of typewriting. Does not apply toward a major or minor. Two credits; autumn, winter, spring.

141-142-143. **SHORTHAND THEORY.** The principles of Gregg Short-hand are taught with emphasis on correct writing and transcribing of shorthand notes. Does not apply toward a major or minor. Four credits; autumn, winter, spring.

171. **MATHEMATICS OF BUSINESS.** Includes the study of payroll, mathematics, interest, negotiable instruments, markup, discounts, depreciation, sinking funds, insurance, and installment buying. Two credits; spring.

207, 208. **SECRETARIAL PROCEDURES.** A preparation for the activities and procedures common to most stenographic jobs, including business English, records management, receptionist duties, and office ethics. Three credits; autumn, winter.

221, 222, 223. **ADVANCED TYPEWRITING.** Emphasis on increase of speed, accuracy, and skill in the production of business papers. The class is taught in two sections to provide for individual differences due to the background of the student in typewriting. Two credits; autumn, winter, spring.

235, 236. **TRADITIONS AND PRACTICES OF BUSINESS.** 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. Two credits; winter, spring.

## OFFICE ADMINISTRATION

240. **IBM KEY PUNCH.** Gives basic knowledge and skill in punch card operation. Supervised experience on the IBM 029 Printing Card Punch is provided. Permission from the chairman of the department required. One credit; autumn, winter, or spring.

262, 263. **BUSINESS MACHINES.** Instruction and practice in the use of adding and calculating machines, duplicating machines, and voicescription machines. Prerequisite: 121, 122, 123. Two credits; winter, spring.

287, 288, 289. **ADVANCED SHORTHAND AND TRANSCRIPTION.** 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 work. The class is taught in two sections to provide for individual differences due to the background of the student in shorthand. Three credits; autumn, winter, spring.

351, 352, 353. **BUSINESS COMMUNICATIONS.** A study of the principles basic to effective communication with application to specific problems related to business. Two credits; autumn, winter, spring.

380. **APPLIED OFFICE ADMINISTRATION.** For qualified students to gain practical experience in the following areas: on-the-job training—advanced business machines, receptionist and PBX, clinical office practice. One to three credits any quarter. Maximum, three credits.

418, 419. **THE PROFESSIONAL SECRETARY.** 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. Three credits; autumn, winter.

423. **ADVANCED SECRETARIAL PROCEDURES.** A study of the duties and problems of the secretary in business, including the study of personality, office relations, and data processing. Three credits; spring.

427. **ADVANCED TRANSCRIPTION.** A course for senior students to develop to a high degree of accuracy and speed the transcription of shorthand notes. Special attention is given to practice in transcribing outlines, reports, theses, and bibliographies. Three credits; winter.

428. **SHORTHAND SPEED BUILDING.** A course designed to develop speed in shorthand writing, with rapid and accurate transcription. Three credits; spring.

447. **MEDICAL OFFICE PROCEDURES.** Designed to acquaint students with the specialized duties of a medical office with emphasis given to the preparation of medical office records. Three credits; autumn.

448, 449. **MEDICAL TERMINOLOGY.** A study of the development of the basic medical vocabulary. There will be practice in the transcription of medical records from voicescription machines. Prerequisite: Biology 202, 203 or equivalent substitution with consent of department chairman. Three credits; winter, spring.

453BUS. **HUMAN RELATIONS IN MANAGEMENT.** See Business and Economics 453. Three credits; spring.

## OFFICE ADMINISTRATION

### 471. METHODS OF TEACHING TYPEWRITING AND SHORTHAND.

A survey of the objectives, methods and techniques of teaching typewriting and shorthand in the secondary school. Observation, demonstration, and class presentation are required. Four credits; autumn.

### 472. METHODS OF TEACHING BOOKKEEPING.

Consideration of materials and methods in the teaching of bookkeeping in the secondary school. Observation, demonstration, and class presentation are required. Three credits; winter.

### 477, 478, 479. INDEPENDENT STUDY IN OFFICE ADMINISTRATION.

Directed, independent study in an approved area such as denominational or legal terminology, current business and office problems. The student will be required to read widely, follow regular research methods, and present a paper showing competence in and extent of his study. Open only to upper-division students. One to three credits any quarter. Maximum, three credits.

### 491. OFFICE ADMINISTRATION SEMINAR.

For Office Administration majors for discussion, research, special problems, analysis of new trends in the field, and study of the major areas in Office Administration. One to three credits; autumn.



# PHYSICS

C. Barnett, Chairman; D. Hall, N. Sossong

The department offers a Bachelor of Arts degree and a Bachelor of Science degree with a major in physics, and jointly with the biology department, 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. 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.

## PHYSICS MAJOR—REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:

Introduction to Experimental Physics	114, 115, 116	3
Introductory Physics*	201, 202, 203	
	204, 205, 206	15
Electricity and Magnetism**	301, 302	8
Physical Optics**	303, 316	5
Introduction to Modern Physics	311, 314	4
Physical Electronics	312, 315	4
Thermodynamics	313	3
Physics Seminar I	317, 318, 319	3
Physics Seminar II	417, 418, 419	3
		48

\*Students having 12 hours of credit in General Physics may meet the Introductory Physics requirement by passing an examination set by the Physics Department and electing an additional three hours of physics.

\*\*Electronics option: In place of Physics 301, 302, 303 the student may elect Engr. 228, 229, 329 and Physics 414, 415, 416.

### Required Cognates:

Chemistry	161-162-163
Engineering	225
***Industrial Education	241-242
Mathematics	181, 281, 282, 283

\*\*\*Other courses involving manipulative skills may be substituted in consultation with department chairman.

## PHYSICS MAJOR—REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

Introduction to Experimental Physics	114, 115, 116	3
Introductory Physics	201, 202, 203	
	204, 205, 206	15
Electricity and Magnetism	301, 302	8
Physical Optics	303, 316	5

# PHYSICS

Introduction to Modern Physics	311, 314	4
Physical Electronics	312, 315	4
Thermodynamics	313	3
Physics Seminar I	317, 318, 319	3
Atomic and Nuclear Physics	411, 412, 413	9
Experimental Physics	414, 415, 416	3
Physics Seminar II	417, 418, 419	3
Theoretical Mechanics	421, 422	6
		—
		66

## Required Cognates:

Chemistry	161-162-163
Engineering	225, 228, 329
***Industrial Education	241-242
Mathematics	312, 351, 352, 353

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

\*\*\*Other courses involving manipulative skills may be substituted in consultation with department chairman.

## BIOPHYSICS MAJOR—REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE:

### Biology

General Biology	101, 102, 103	12
Developmental Biology*	266	5
Physiology**	392, 393	8
General Ecology	446	4
Research Methods I, II, III	251, 352, 453	4
		—
		33

\*Biology 261 may be elected in place of Biology 266.

\*\*Biology 401 or 468 may be elected in place of Biology 393.

### Physics

Introduction to Experimental Physics	114, 115, 116	3
Introductory Physics	201, 202, 203	
	204, 205, 206	15
Introduction to Modern Physics	311, 314	4
†Physical Electronics	312, 315	4
Thermodynamics	313	3
Optics Lab	316	1
Physics Seminar I	317, 318, 319	3
Physics Seminar II	417, 418, 419	3
		—
		36

†Biology 470 may be elected in place of Physics 312, 315.

## Required Cognates:

Chemistry	161-162-163; 244 and either 321-322-323, or 351, 352, 353
Engineering	225, 228, 329
Mathematics	181, 281, 282, 283, 311

## PHYSICS

Candidates for this degree must meet all basic graduation requirements with the exception of language and health principles. The minor requirements for this degree are met in the cognates listed above. One summer term at the Marine Biological Station is highly recommended.

### MINOR REQUIREMENTS:

A minimum of 27 credits chosen in counsel with the department chairman.

### COURSES

114, 115, 116. **INTRODUCTION TO EXPERIMENTAL PHYSICS.** The principles and practice of physical measurements, experiment design and evaluation. One credit; autumn, winter, spring.

181, 182, 183. **GENERAL PHYSICS.** 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. Prerequisite: Mathematics 111, 112, 113 or 121, 122. Physics 181 prerequisite for 182 or 183. Corequisite: 184, 185, 186. Three credits; autumn, winter, spring.

184, 185, 186. **GENERAL PHYSICS LABORATORY.** Laboratory work integrated with 181, 182, 183. One credit; autumn, winter, spring.

201, 202, 203. **INTRODUCTORY PHYSICS.** 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. Prerequisite: Mathematics 181. Corequisite: 204, 205, 206; Mathematics 282, 283, 284. Four credits; autumn, winter, spring.

204, 205, 206. **INTRODUCTORY PHYSICS LABORATORY.** Experimental exploration and study of the fundamental concepts of physics. One credit; autumn, winter, spring.

\*241, 242, 243. **PHYSICAL ASTRONOMY.** 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. Offered alternate years. Four credits; autumn, winter, spring.

Physics 201, 202, 203 or equivalent and Mathematics 181, 281, 282, 283 prerequisite for all courses numbered 300 or above except 352, 353, 471.

Students registered for courses numbered 300 or above, except 352, 353, 471, are required to be concurrently registered for Physics Seminar.

\*Not offered current year.

## PHYSICS

301, 302. **ELECTRICITY AND MAGNETISM.** 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. Corequisite: 317, 318. Four credits; autumn, winter.

303. **PHYSICAL OPTICS.** Classical theory of radiation and optics based on Maxwell's equations: reflection, refraction, dispersion, diffraction, interference, coherence, polarization, scattering, polychromatic waves. Prerequisite: 302. Corequisite: 316, 319. Four credits; spring.

311. **INTRODUCTION TO MODERN PHYSICS.** Basic principles of quantum theory, atomic and nuclear structure. Corequisite: 314, 317. Three credits; autumn.

312. **PHYSICAL ELECTRONICS.** Physical principles of solid state, gaseous, and vacuum electronic devices. Prerequisite: 313. Corequisite: 315, 319. Three credits; spring.

313. **THERMODYNAMICS.** An introduction to the physical theories of equilibrium thermostatics and irreversible thermodynamics based on elementary statistical mechanics. Prerequisite: 311. Corequisite: 316, 318. Three credits: winter.

314. **MODERN PHYSICS LABORATORY.** Experimental study of the characteristics of alpha, beta and gamma radiation, interaction of radiation with matter, neutron activation. One credit; autumn.

315. **PHYSICAL ELECTRONICS LABORATORY.** Experiments in crystal and semi-conductor physics, properties of ionized gases, measurement of fundamental physical constants. One credit; spring.

316. **OPTICS LABORATORY.** Experimental study of geometrical and physical optics. One credit; winter.

317, 318, 319. **PHYSICS SEMINAR I.** 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 bi-yearly. Regular use will be made of the current literature of physics. One credit; autumn, winter, spring.

\*\*352, 353. **RADIOISOTOPE RESEARCH TECHNIQUES.** 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: 181, 182, 183, or Chemistry 141-142; 143. Offered alternate years. Two credits; winter, spring.

411, 412, 413. **ATOMIC AND NUCLEAR PHYSICS.** Experimental and theoretical foundations of modern atomic and nuclear physics: special relativity, elementary quantum mechanics, atomic structure and spectra,

\*\*Not offered 1971-72.

## PHYSICS

nuclear structure, nuclear reactions, fundamental particles. Prerequisite: 301, 302, 303. Corequisite: 414, 415, 416; 417, 418, 419. Three credits; autumn, winter, spring.

414, 415, 416. **EXPERIMENTAL PHYSICS.** Classical and modern experiments in atomic and nuclear physics. One credit; autumn, winter, spring.

417, 418, 419. **PHYSICS SEMINAR II.** 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 bi-yearly. Regular use will be made of the current literature of physics. One credit; autumn, winter, spring.

421, 422, 423. **THEORETICAL MECHANICS.** Statics and dynamics of particles, fluids, and rigid bodies, harmonic, orbital, and wave motion, Lagrangian and Hamiltonian mechanics. Corequisite: 417, 418, 419. Three credits; autumn, winter, spring.

471. **METHODS OF TEACHING PHYSICAL SCIENCE.** 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. Three credits.

477, 478, 479. **INDEPENDENT STUDY IN PHYSICS.** 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 showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring.



## SPEECH

L. Dickinson, Chairman; G. Balharrie, R. Greenlaw, Donnie Rigby, C. Wood.

The program of the department is directed toward the traditional objective of preparing the student to be a well-informed, publicly acceptable person who can present well-organized material by the oral media thus strengthening his personality and capacity for responsibility and leadership in society, business and the professions.

One curriculum leads to preparation for teaching of speech; another trains the student to become a speech and hearing therapist.

### MAJOR REQUIREMENTS—BACHELOR OF ARTS DEGREE

#### Major: Speech

Fundamentals of Speech	101-102	4
Voice and Articulation	107	2
Group Discussion	207	3
Oral Interpretation	211	2
Broadcast Tech. & Ann.	231	
or		
Public Broadcasting	352	3
Speech Science	291	3
Advanced Public Address	323	
or		
Persuasive Speaking	443	3
Speech and Hearing Therapy	371, 372, 373	9
Introduction to Semantics	401	2
Speech Comp. & Anal.	422	3
Rhetoric and Public Address	453	3
Electives	11	
		48

#### Major: Speech and Hearing Therapy

Fundamentals of Speech	101-102	4
Voice and Articulation	107	2
Group Discussion	207	3
Phonetics	274	2
Speech Science	291	3
Speech and Hearing Therapy	371, 372, 373	9
Clinical Tech. & Practices	374, 375, 376	6
Speech Reading and		
Auditory Training	388	3
Audiology	391	3
Introduction to Semantics	401	2
Electives	11	
		48

#### Required Cognate:

Biology	101, 102, 103	12
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**MINOR REQUIREMENTS:**

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

**COURSES IN SPEECH**

**101-102. FUNDAMENTALS OF SPEECH.** 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. Two credits; autumn, winter; or four credits, autumn, winter or spring.

**107. VOICE AND ARTICULATION.** 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. Two credits; spring.

**207. GROUP DISCUSSION.** A study of the nature of group process; leadership and participation in group discussion. Three credits; winter.

**211. ORAL INTERPRETATION.** 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. Two credits; autumn.

**231. BROADCAST TECHNIQUES AND ANNOUNCING.** Instruction covering studio and control room operation including microphone techniques. Emphasis on voice, diction 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. Three credits; autumn.

**323. ADVANCED PUBLIC ADDRESS.** 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. Three credits; spring.

**332. DIAGNOSIS IN SPEECH PATHOLOGY.** Diagnostic and appraisal procedures of communicative disorders. Includes the use of speech and language tests, associated behavior, and instrumentation techniques. Three credits; winter.

**\*341. PRINCIPLES OF ARGUMENTATION AND DEBATE.** Theory and practice of argumentation and debate. Evidence and forms of reasoning; logical analysis and organization of argument. Three credits; autumn.

**\*352. PUBLIC BROADCASTING.** Study of organization and operation of stations, networks, and world systems of broadcasting as well as study of legal and regulatory control of radio-tv. Three credits; winter.

**363. PROJECTS IN INTERPRETATION.** The study of the history of drama including work in directing and acting; also planning and producing secular and sacred programs. Prerequisite: 211. Four credits; spring.

\*Not offered the current year.

## SPEECH

381, 382. **PULPIT ADDRESS.** 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. Three credits; autumn, winter.

401. **INTRODUCTION TO SEMANTICS.** 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 department. Two credits; spring.

422. **SPEECH COMPOSITION AND ANALYSIS.** A comprehensive treatment of speech organization, content, and delivery. Analysis of great American speeches. Prerequisite: 101-102. Three credits; winter.

443. **PERSUASIVE SPEAKING.** 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. Three credits; winter.

453. **RHETORIC AND PUBLIC ADDRESS.** Study of the principles of rhetoric proposed by Aristotle, Quintillian and Cicero. The relationship of the principles of rhetoric to modern speechmaking. Prerequisite: 101-102. Three credits; spring.

472. **METHODS OF TEACHING SPEECH.** The basic principles and practices of teaching speech on the elementary 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. Three credits; autumn.

477, 478, 479. **INDEPENDENT STUDY IN SPEECH.** 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 showing competence in and extent of his study. Permission from the chairman of the department required. One to three credits any quarter; maximum, three credits.

497. **SEMINAR IN SPEECH.** Studies of selected topics and review of current literature in speech. Special investigations of problems. One credit; autumn.

## COURSES IN SPEECH AND HEARING THERAPY

274. **PHONETICS.** The theory, history, development and application of the international phonetic alphabet and its application to speech correction and to adequate pronunciation. Two credits; autumn.

291. **SPEECH SCIENCE.** A comprehensive study of the anatomy, physiology and physics of speech and hearing; their normal development and usage. Prerequisite: 101-102. Three credits; autumn.

371, 372, 373. **SPEECH AND HEARING THERAPY.** An introduction to etiology, evaluation, prognosis, and treatment of defective speech and

## SPEECH

hearing. Autumn: history and development of programs in speech and hearing; qualifications of the therapist; hearing impairment, test, and treatment. Winter: functional speech disorders. Spring: organic speech disorders. Three credits; autumn, winter, spring.

**374, 375, 376. CLINICAL TECHNIQUES AND PRACTICE.** Instruction in techniques of diagnosis and therapy of speech and hearing problems and supervised practice in clinical and school situations. Prerequisite: 371, 372, 373 or equivalent. Two credits; autumn, winter, spring.

**378. SPEECH AND LANGUAGE DEVELOPMENT.** Intensive study of pre-speech activities, early speech development and learning theory as these affect language development. Knowledge of phonetic alphabet recommended. Two credits; winter.

**379. THERAPY FOR APHASIA.** A study of the etiology of aphasia and the techniques employed during therapy. Case histories are studied in detail. Prerequisite: 373. Two credits; spring.

**388. SPEECH READING AND AUDITORY TRAINING.** 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. Three credits; winter.

**391. AUDIOLOGY.** The nature, measurement, and evaluation of hearing impairment. Rehabilitation of the acoustically handicapped. Prerequisite: 371. Three credits; spring.

**399. THERAPY FOR ARTICULATION DISORDERS.** Intensive study of the causes, types, variations, evaluation, and remediations of articulation disorders. Prerequisite: 372. Two credits; spring.

**\*462. THERAPY FOR STUTTERING.** A study of the causes of stuttering and the techniques employed during therapy. Case histories are studied in detail. Prerequisite: 372. Two credits; winter.

**\*473. THERAPY FOR CLEFT PALATE.** A study of the etiology of cleft palate and the techniques employed during therapy. Case histories are studied in detail. Prerequisite: 373. Two credits; spring.

\*Not offered the current year.

## THEOLOGY, SCHOOL OF

G. Balharrie, Dean; J. Barnes, M. Clemons, J. Grove, C. Hartnell, Lucile Knapp, L. Lewis, M. Maxwell, L. Russell, 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 upper-division standing in the School of Theology upon approval of the theology faculty and must 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 desire a concentration in religion but are not planning it as a profession.

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, and they should as early as possible in their college career consult the dean of the School of Theology about courses required.

### **THEOLOGY MAJOR—REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:**

Theology I	141, 142, 143	9
Theology II	221, 222, 223	9
Seminars in Theology	411, 412 or 413	4
Electives (Counsel with department chairman.)		32
		—
		54

### **Required Cognates:**

Biblical Languages	101-102-103; 221, 222, 223	24
History	101, 102, 103; 426 or 429	9
Speech	101-102; 381, 382 and electives	10
Biological Science	407	2

### **RELIGION MAJOR—REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE:**

Fifty-four credits of electives chosen in counsel with the chairman of the department.

### **MINOR REQUIREMENTS:**

Religion, 30 credits, including 9 upper division.

## THEOLOGY

### MINOR REQUIREMENTS:

Religion, 30 credits, including 9 upper division.

### BIBLICAL LANGUAGES MAJOR—REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE.

A minimum of 45 credits. The following cognates are required: Religion 444, 445, 446 three credits taken from either History 321, 322, 323 or 426.

### MINOR REQUIREMENTS:

A minimum of 30 credits, at least 6 of which must be in upper-division language courses. The lecture courses 461, 462, and 463, are strongly urged as additional electives; Religion 444, 445, and History 321, 322, and 323 are recommended.

## THEOLOGY

101, 102, 103. **BIBLE SURVEY.** 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. Two credits; autumn, winter, spring.

104, 105, 106. **LIFE AND TEACHINGS OF JESUS.** 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. Two credits; autumn, winter, spring.

141, 142, 143. **THEOLOGY I.** 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. Three credits; autumn, winter, spring.

201, 202, 203. **FUNDAMENTALS OF CHRISTIAN BELIEF.** 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 held by the Seventh-day Adventist denomination. Two credits; autumn, winter, spring.

221, 222, 223. **THEOLOGY II.** This course consists of a thorough study of the basic teachings of the Bible. Students will be required to organize their concepts of Bible doctrines and teach them to others, in groups and individually, in class and community. Lectures, discussion and seminar methods will be employed. Open only to Theology majors. Three credits; autumn, winter, spring.

257, 258, 259. **THE PAULINE LETTERS.** A survey of the writings of the great apostle to the Gentiles. Particular attention will be given to the present-day application of Paul's counsels and their practical value for Christians. Two credits; autumn, winter, spring.

## THEOLOGY

321. **DANIEL.** 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. Three credits; autumn.

322. **THE REVELATION.** 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. Three credits; winter.

364, 365, 366. **HEBREW PROPHETS.** 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. Three credits; autumn, winter, spring.

384. **DOCTRINE OF THE SANCTUARY.** A study of the Hebrew tabernacle and its services with special emphasis on its significance for the twentieth century. Three credits; autumn.

411, 412, 413. **SEMINAR IN THEOLOGY.** These seminars involve intensive, individual study, written reports and group discussion on assigned Biblical topics and contemporary theological issues. Open only to Theology majors. Two credits; autumn, winter, spring.

426. **ESCHATOLOGY.** 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. Three credits; spring.

464, 465, 466. **NEW TESTAMENT EPISTLES.** An exegetical study of the epistles of the New Testament, with attention being given in each case to the introductory matters. This course is intended for Theology students although it is open to others with a mature background in Bible. (Not open to students who have taken or are concurrently enrolled in Theology 257 or 258, Pauline Letters.) Three credits; autumn, winter, spring.

477, 478, 479. **INDEPENDENT STUDY IN RELIGION.** 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 showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring.

## CHRISTIAN PHILOSOPHY

341, 342, 343. **SPIRIT OF PROPHECY AND DENOMINATIONAL HISTORY.** A careful review of the Gift of Prophecy in the remnant

church. The bestowal of this gift in the beginning, after the fall of man, and its work during the centuries to the 1844 movement. The rise of the denomination in its connection with the prophetic movement of Revelation 10 and in its development during the last one hundred years is carefully studied. Course 341 prerequisite to 342 or 343. Two credits; autumn, winter, spring.

**421. INTRODUCTION TO PHILOSOPHY.** 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. We encourage the serious-minded student who wishes to explore in depth the issues of philosophy to enroll concurrently for 431. Two credits; autumn.

**422. PHILOSOPHY OF RELIGION.** 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. We encourage the serious-minded student who wishes to explore in depth the issues of philosophy to enroll concurrently for 432. Prerequisite: 421. Two credits; winter.

**423. CONTEMPORARY PHILOSOPHY.** 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. We encourage the serious-minded student who wishes to explore in depth the issues of philosophy to enroll concurrently for 433. Prerequisite: 421. Two credits; spring.

**431, 432, 433. SEMINAR IN PHILOSOPHY.** A course in examining and discussing philosophical thoughts; to be taken concurrently with 421, 422, 423. One credit; autumn, winter, spring.

## **BIBLICAL LANGUAGES**

**101-102-103. GREEK I.** 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. Five credits; autumn, winter, spring.

**221, 222, 223. GREEK II.** 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. Three credits; autumn, winter, spring.

**341, 342, 343. DOCTRINAL EPISTLES OF PAUL.** 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. Two credits; autumn, winter, spring.

## THEOLOGY

344, 345, 346. **LATER EPISTLES OF PAUL.** An exegetical study of examples of Paul's later letters, especially the so-called prison epistles. The epistles of Paul to the Ephesians, Philippians, and Colossians are studied as typical of this period of the apostle's life. Two credits; autumn, winter, spring.

347, 348, 349. **PASTORAL AND GENERAL EPISTLES.** 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. Two credits; autumn, winter, spring.

441-442-443. **HEBREW I.** 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. Three credits; autumn, winter, spring.

451, 452, 453. **HEBREW READING.** 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. Two credits; autumn, winter, spring.

461, 462. **TEXTUAL CRITICISM OF THE NEW TESTAMENT.** 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. Two credits; autumn, winter.

463. **TRANSLATION PROBLEMS.** 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. Two credits; spring.

477, 478, 479. **INDEPENDENT STUDY IN BIBLICAL LANGUAGES.** 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 showing competence in and extent of his study. Open only to majors and minors. Permission from the chairman of the department required. One to three credits any quarter. Maximum, three credits; autumn, winter, spring.

## ARCHAEOLOGY AND RELIGIOUS HISTORY

402. **MODERN DENOMINATIONS.** 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. Three credits; winter.

403. **WORLD RELIGIONS.** 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. Three credits; spring.

444, 445, 446. **BIBLICAL BACKGROUNDS.** An exploration of those archaeological, historical, and scientific studies of the present age which make the scriptural record more meaningful. Special emphasis is placed upon recent archaeological and manuscript discoveries that throw light upon the life and times of the Bible period. Two credits; autumn, winter, spring.

## APPLIED THEOLOGY

383. **CHURCH ADMINISTRATION.** 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. Three credits; spring.

386. **INTRODUCTION TO PASTORAL CARE.** The aim of this course is to examine new thrusts and techniques of pastoral care and counseling, including supportive and directive counseling. It is designed to relate newer ideas to the traditional role of the minister in healing, sustaining, guiding and reconciling. Three credits; spring.

410. **HOSPITAL MINISTERIAL TRAINING.** This course is offered as a seminar at the Portland Adventist 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. Six credits; 5 weeks, summer.

427, 428. **CHRISTIAN DYNAMICS.** 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. Three credits; autumn, winter.

429. **STUDIES IN CHRISTIAN DYNAMICS.** 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. Two credits; spring.

441, 442, 443. **PERSONAL EVANGELISM.** 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. Two credits; autumn, winter, spring.

447, 448. **PUBLIC EVANGELISM.** Advanced study in the art of preaching with particular emphasis upon Bible exposition. Detailed attention will be given to the various phases of evangelistic work including advertising and the planning of public meetings. This course is definitely designed for young men who desire to make the gospel ministry their vocation. Admission to the class will be upon the recommendation of the professor. Prerequisite: Speech 381, 382. Two credits; autumn, winter.

460. **FIELD EVANGELISM.** Experience in evangelistic techniques is obtained by giving Bible studies and/or holding meetings. One to three credits. Maximum, three credits.

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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	\$ 38 (per credit)
13-16	510 (per quarter)
above 16	32 (additional per credit)

Residence hall students will be charged a minimum of \$456 per quarter tuition except seniors in their final quarter who need less than 12 credits to graduate.

The tuition includes all laboratory fees, music lessons, all rentals (typewriter, piano and organ), and registration fee.

**GENERAL FEE:** A general fee of \$25 per quarter is charged students registered for six or more credits which provides student association membership, dormitory or village club membership, student insurance, health service, use of ID card, and a lyceum ticket.

**AUDITING.** Regular tuition is charged for auditing classes.

**CHALLENGE EXAMINATION CREDITS.** Regular 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 \$250 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 \$250.

## DISCOUNTS

**CASH.** Students taking 12 or more credit hours will be given a discount of \$15 when the total tuition charge is paid in full at the time of registration.

**FAMILY.** 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 \$50 to \$75 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. 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. Failure to meet these payments may jeopardize the next quarter's registration. The College operates on a cash basis and needs your cash support.

## REMITTANCES

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

## SPECIAL FEES

Advanced standing credit by examination per quarter credit	\$ 2.00
Application Fee (not refundable)	10.00
Aviation (as announced)	
Band and orchestral instruments, per quarter	5.00
Ceramics	10.00
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	7.50
Degree, <i>in absentia</i> , Bachelor's	17.50
Degree, Master's	25.00
Degree, <i>in absentia</i> , Master's	35.00
Developmental reading, per quarter	25.00
Entrance tests (at academies or on campus)	7.00
Lapidary per quarter	10.00
Late application	25.00
Late registration	15.00
P. E. Accounts (additional)	
Scuba Diving per quarter	10.00

Skating	10.00
Skiing per quarter	25.00
Water Aquatics per quarter	25.00
Special examination	5.00
Transcript, first copy	free
Additional copies each	1.00

## MUSIC FEES

Rentals (Students taking music without credit are charged the following rentals)

Practice room, 1-9 hours per week	7.00
Practice room, 10 hours or more per week	12.00
Practice room, individual hourly basis, per hour	.50
Organ, 1-9 hours per week	18.00
Organ, 10 hours or more per week	30.00

## RESIDENCE HALL EXPENSES

Where there is dual occupancy, the room rental charge for each student per quarter is \$125. When rooms are available, single occupancy is permitted at an extra charge of \$30 per quarter.

The above charge includes flat laundry service. Dormitory students should *not* bring their own laundry bags, as special bags will be provided by the College. Name tapes are recommended on clothing sent to the College Laundry.

**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 used in the College dining hall. The minimum charge for board per month is as follows:

Men	\$48.00
Women	\$37.00

**AUTOMOBILE PARKING FEE.** Residence hall students bringing automobiles with them will be charged a fee of \$4 per quarter for parking privileges. Covered parking is available at a slightly 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 will be carried by the College under a blanket policy for all students enrolled for six or more hours per quarter. A brochure describing the coverage will be supplied to each student. Detailed information is available at the Health Center. Insurance coverage is terminated whenever a student discontinues school.

## 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 may not be released until the student's account is paid in full.

To expedite the release of transcripts, diplomas, and other legal documents, the student should send a *money order* or *certified check* to cover the balance of his account when requesting transcripts, et cetera.

## INQUIRIES

Inquiries concerning student financial matters should be directed to the Student Finance Office, and those concerning academic or instructional program or admission should be directed to the Vice President for Academic Affairs or the Registrar of the College.

## FINANCIAL AIDS

**STUDENT LABOR.** Walla Walla College has year-round campus work opportunities to help students earn a portion of their school expenses. These opportunities, while not unlimited, are many, and ordinarily take care of all students who need part-time employment. Students needing employment should seek their assignment through the Student Finance Office.

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 AND FELLOWSHIPS**

**FRESHMAN SCHOLARSHIPS.** The College awards a \$300 scholarship to one senior from each academy of the North Pacific Union and one graduating senior from a high school in each of the conferences of the North Pacific Union. These scholarships are based on high scholastic performance and need. High school applicants should write to the Chairman of the Scholarships and Grants Committee for application forms. Academy applicants should ask their principals to recommend them for consideration to the Chairman of the Scholarships and Grants Committee.

**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, 1544 S.E. Hawthorne Blvd., Portland, Oregon 97214.

**ELEMENTARY TEACHING SCHOLARSHIPS.** The conferences of the North Pacific Union offer a \$300 scholarship to Elementary Education majors who plan to teach church schools of this union. Students are eligible for scholarship consideration beginning with their sophomore year. For further information, contact the Educational Secretary of the conference in which you desire to teach.

**GRADUATE ASSISTANTSHIPS.** A few assistantships are available for graduate students in Biology and Education. Each assistantship consists of \$900 and full tuition. Candidates applying for these should write the respective departments.

**W.C.P.T. SCHOLARSHIP.** One scholarship per year is offered a Washington resident enrolling at Walla Walla College by the Washington Congress of Parents and Teachers.

This award is limited to entering freshmen. In determining the recipient of this award, the College will give consideration to the financial needs of the applicants rather than high academic achievement.

This scholarship totals \$750 and is awarded at the rate of \$175 per year for four years.

Applications are available through the College Student Finance Office. The cut-off date for submitting applications to the College is April 1.

## **GRANTS**

**EDUCATIONAL OPPORTUNITY GRANTS.\*** A limited number of undergraduate grants are available to qualified students. To qualify, a student must be enrolled as a full-time student and have exceptional financial need. Applications are available in the Student Finance Office.

## **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. Parents desiring further information concerning this deferred payment plan should contact the Student Finance Office or Education Funds, Inc., 10 Dorrance Street, Providence, Rhode Island 02901.

## **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. The following loan funds are recommended and applications may be obtained from the Student Finance Office:

**CALIFORNIA STATE SCHOLARSHIP AND LOAN COMMISSION:** California State residents may borrow up to \$1,000 per year under this plan, if they are accepted for enrollment or are enrolled in good standing and carrying a full-time course of study. Applications are available in the Student Finance Office, or you may write to California State Scholarship and Loan Commission, 520 Capitol Mall, Sacramento, California 95814.

**FEDERALLY INSURED LOANS:** Many banks are offering the Federally Insured loans to college students. These are long-term, low interest loans that need not be repaid until a student completes his course of study. Consult the loan officer of your bank for additional information.

**NATIONAL DEFENSE EDUCATION LOAN:**\* National Defense Education loan is made available through the Federal Government and Walla Walla College. Repayments begin after the applicant's student status terminates.

**NATIONAL DEFENSE NURSING LOAN:**\* National Defense Nursing loan is made available through the Federal Government and Walla Walla College. This loan is available only to full-time nursing students. Repayments begin after the applicant's full-time nursing student status terminates.

**OREGON STATE SCHOLARSHIP COMMISSION:** Oregon State residents may borrow up to \$1,000 per year under this plan, if they are accepted for enrollment or are enrolled in good standing and carrying a full-time course of study. Applications are available in the Student Finance Office, or you may write to Oregon State Scholarship Commission, P. O. Box 3175, Eugene, Oregon 97403.

**UNITED STUDENT AID FUND:** Arrangements can be made through Walla Walla College and your local bank to obtain funds at a low rate of interest. These funds can be obtained without collateral and are repaid after graduation. Not all banks participate in this program. You should consult the loan officer of your bank for policies regarding this loan fund.

**OTHER LOANS.** Walla Walla College has several short-term loan funds available. Repayments begin during the year in which the loans are made. Additional information available in the Student Finance Office.

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\*Applications for this aid must be received in the Student Finance Office no later than August 15, 1970.

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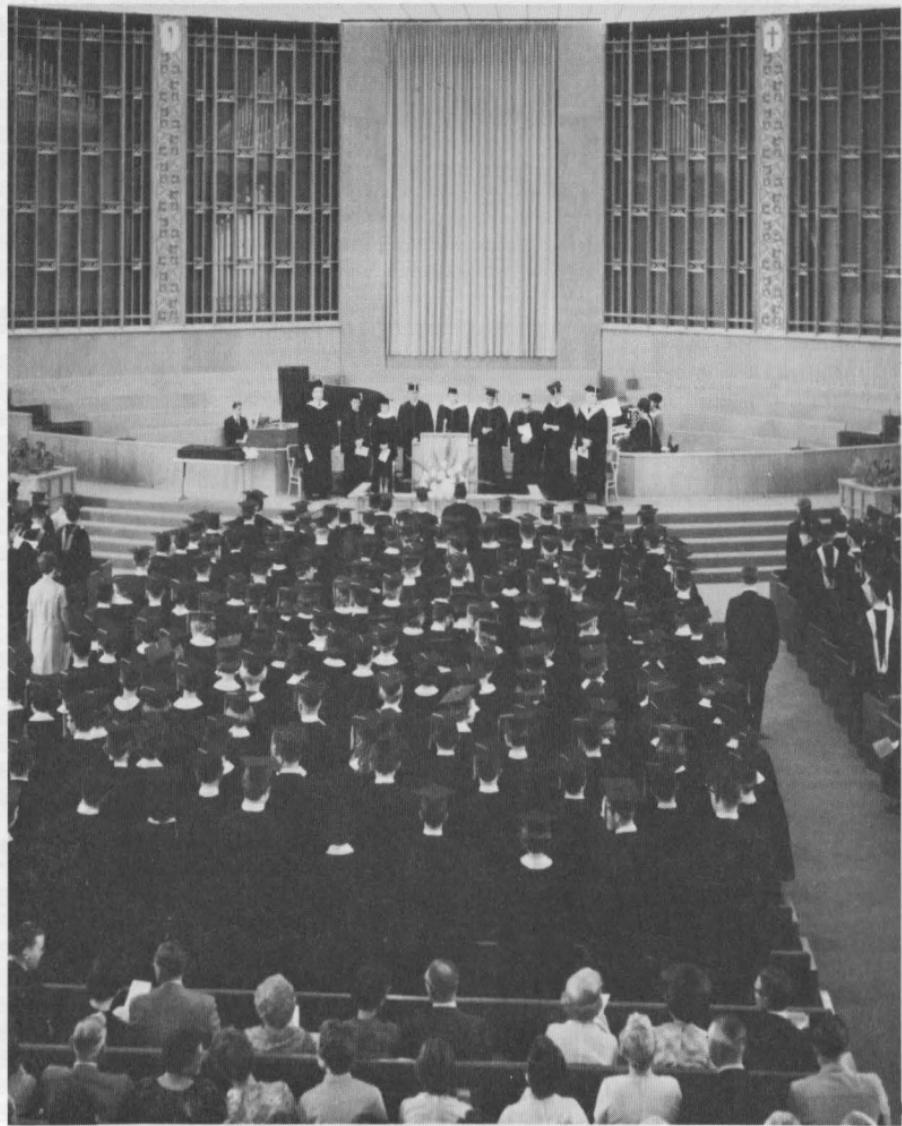
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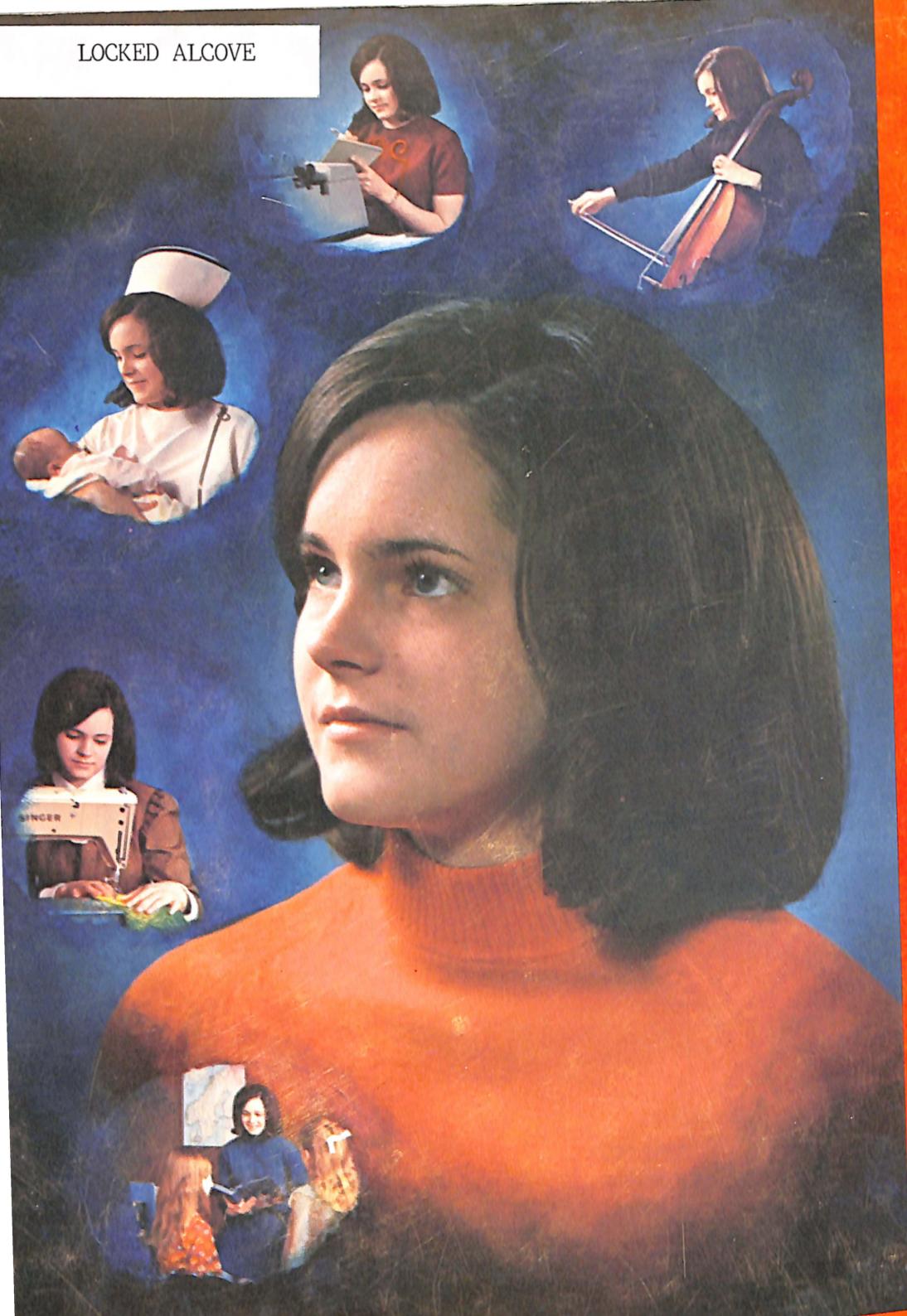
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