

4-1968

## 1968 General Catalog. Quarterly

Central Washington University

Follow this and additional works at: <https://digitalcommons.cwu.edu/catalogs>

---

### Recommended Citation

Central Washington University, "1968 General Catalog. Quarterly" (1968). *Course Catalogs*. 157.  
<https://digitalcommons.cwu.edu/catalogs/157>

This Book is brought to you for free and open access by the University Archives and Special Collections at ScholarWorks@CWU. It has been accepted for inclusion in Course Catalogs by an authorized administrator of ScholarWorks@CWU. For more information, please contact [scholarworks@cwu.edu](mailto:scholarworks@cwu.edu).

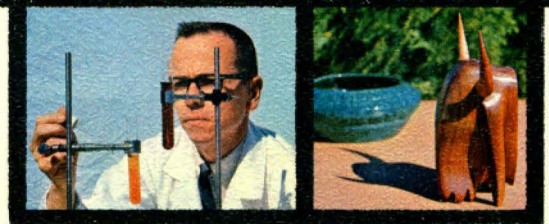
*Brooks*

# GENERAL CATALOG



CENTRAL WASHINGTON STATE COLLEGE

1968



# 1968 GENERAL CATALOG

Quarterly

Volume 60, April, 1968, No. 3

Cover photos by John Foster and John Liboky

Graphics by John Connelly

Prepared by CWSC Office of Information

Entered at Ellensburg, Wash. Post Office as Second Class Matter.

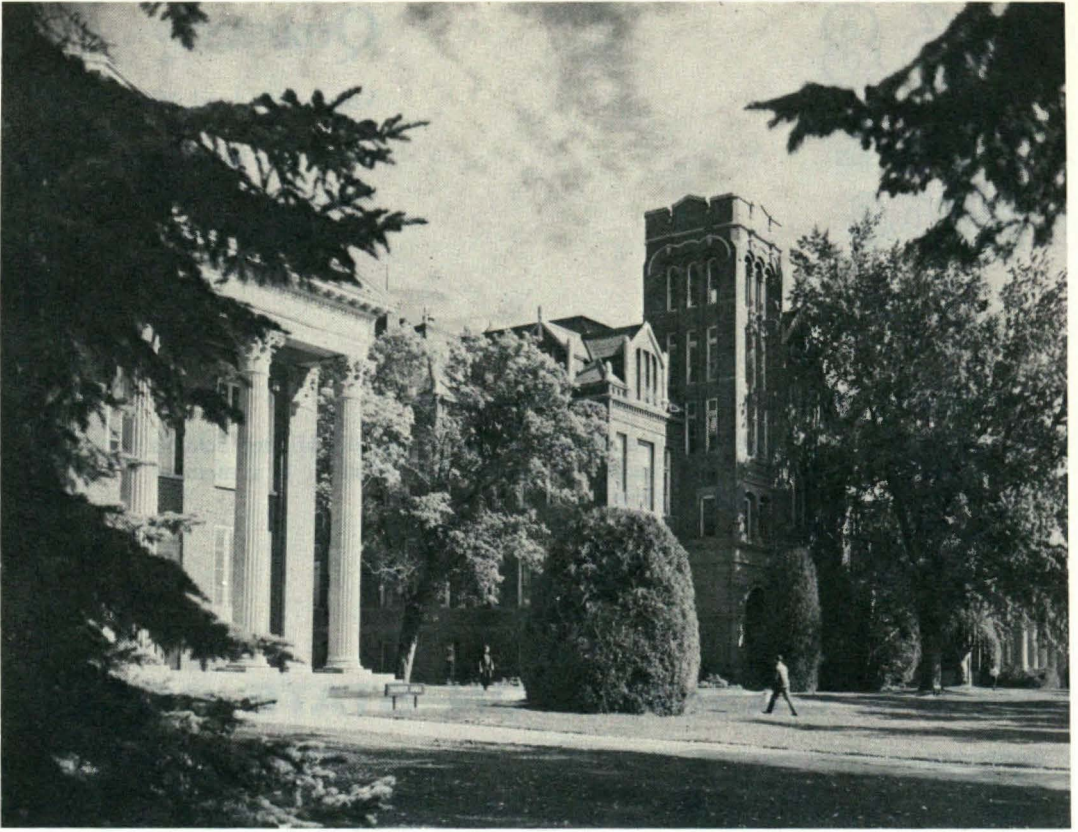
CWSC is accredited by the Northwest Association of Secondary and Higher Schools and by the National Council for Accreditation of Teacher Education. It is a member of the National University Extension Association.

Ellensburg, Washington 98926.

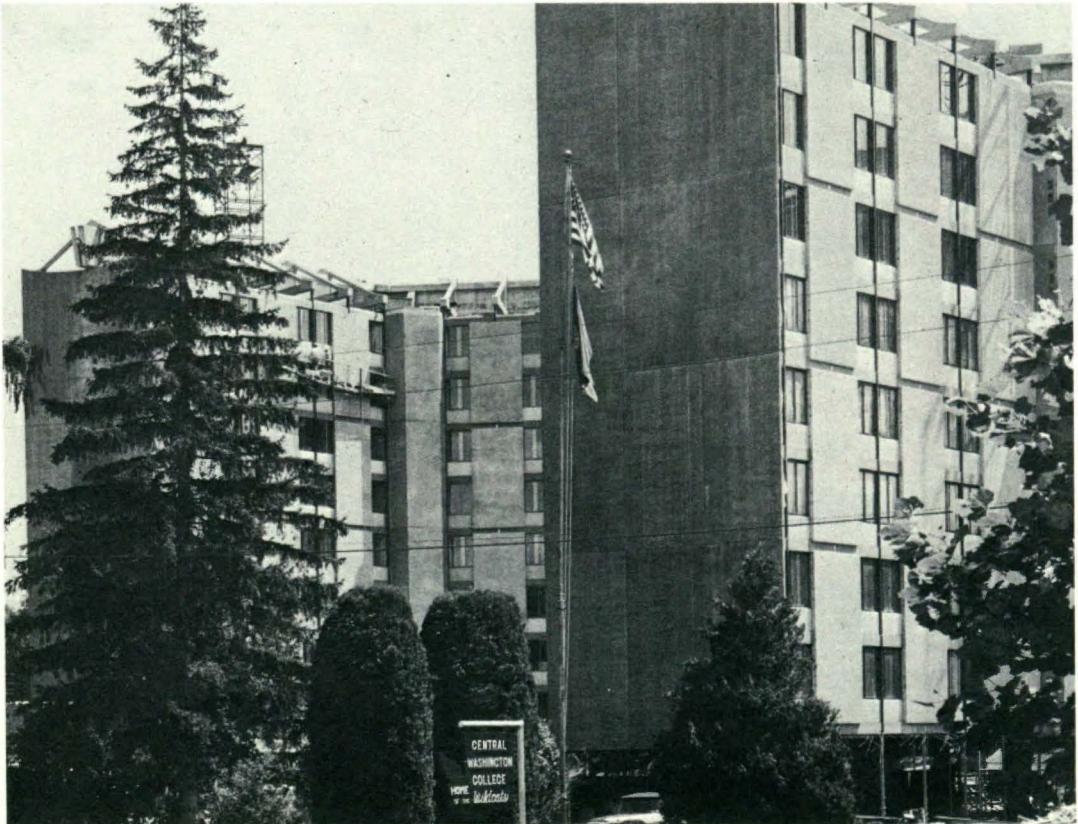
## CENTRAL WASHINGTON STATE COLLEGE



ELLENSBURG, WASHINGTON



*Barge Hall*



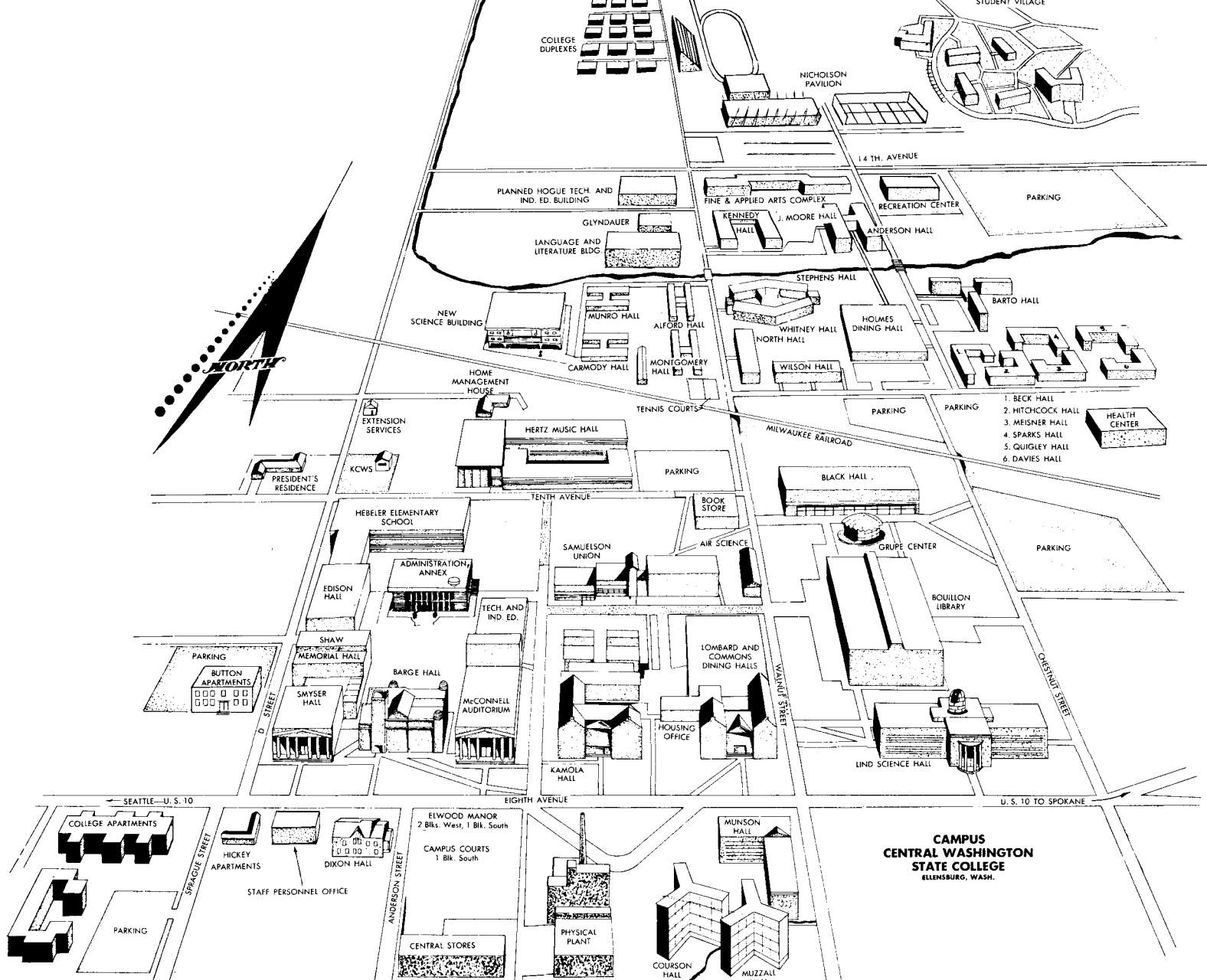
*Muzzall and Courson Halls*

# Table of Contents

	<i>Page</i>		<i>Page</i>
CALENDARS FOR 1967-68.....	4	Fifth Year Certificates.....	47
MAP OF CAMPUS.....	5	GRADUATE STUDY... See Graduate Catalog	
COLLEGE CALENDAR 1968-69.....	6	CURRICULUM.....	49
ADMINISTRATION AND FACULTY..	7	Aerospace Studies.....	49
Board of Trustees.....	7	Anthropology.....	51
Administration.....	7	Art.....	53
Faculty.....	9	Biological Sciences.....	58
Emeritus.....	21	Business Administration.....	62
AN INTRODUCTION TO CENTRAL..	22	Business Education and Administrative	
Historical Statement and Objective....	22	Management.....	63
Accreditation.....	23	Chemistry.....	67
Organization.....	23	Crafts.....	69
FACILITIES AND SERVICES.....	23	Economics and Business Administration	70
Academic Facilities.....	23	Earth Science.....	75
Bouillon Library.....	23	Education.....	76
Other Facilities.....	23	English.....	86
Housing and Food Services.....	24	Fine Arts.....	91
Student Health Services.....	24	Foreign Languages.....	91
Placement Service.....	24	Geography.....	96
Counseling and Testing.....	25	Geology.....	99
Alumni Association.....	25	Health and Physical Education.....	100
Student Government Association.....	25	History.....	100
Student Organizations.....	25	Home Economics.....	103
Student Publications.....	26	Honors.....	107
Athletics.....	26	Humanities.....	107
PROGRAMS OF SPECIAL INTEREST..	26	Industrial Arts.....	108
Distinguished Visiting Professor.....	26	Industrial Education.....	108
Symposium.....	27	Instructional Material.....	108
Foreign Study.....	27	Journalism.....	108
Urban Center Teacher Preparation.....	27	Library Science.....	108
Summer Session.....	28	Mathematics.....	108
Southeast Asian Studies.....	28	Math-Science Major-Elementary.....	111
Air Force ROTC.....	28	Music.....	111
Office of Continuing Education.....	28	Philosophy.....	117
OPPORTUNITIES FOR		Physical Education.....	119
SUPERIOR STUDENTS.....	29	Physics.....	126
Advanced Placement.....	29	Political Science.....	128
Honors Program.....	29	Psychology.....	131
ADMISSIONS, EXPENSES,		Radio-Television.....	135
FINANCIAL AIDS.....	30	Recreation.....	135
Admission Requirements.....	30	Rhetoric and Public Address.....	135
Expenses.....	32	Safety Education.....	135
Financial Aid for Students.....	33	Science.....	135
SCHOLASTIC REGULATIONS.....	34	Social Science.....	136
Individual Study Courses.....	34	Social Studies-Language Art Junior High	
Extension and Correspondence.....	34	Broad Area.....	137
Grading, Attendance.....	35	Sociology.....	137
Graduation, Commencement.....	37	Southeast Asian Studies.....	139
ARTS AND SCIENCES PROGRAM....	39	Special Education.....	139
B.A. Degree Requirements.....	39	Speech and Drama.....	140
TEACHER EDUCATION PROGRAM..	40	Technology and Industrial Education...	146
B.A. and Certificates.....	40	Theatre-Drama.....	149
Student Teaching.....	41	Zoology.....	149
Endorsement.....	47	PRE-PROFESSIONAL PROGRAMS....	149
		INDEX.....	164

<b>JANUARY 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>MAY 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>SEPTEMBER 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
<b>FEBRUARY 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	<b>JUNE 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 <sup>23</sup> <sub>30</sub> 24 25 26 27 28 29	<b>OCTOBER 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
<b>MARCH 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 <sup>24</sup> <sub>31</sub> 25 26 27 28 29 30	<b>JULY 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>NOVEMBER 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
<b>APRIL 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<b>AUGUST 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>DECEMBER 1968</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

<b>JANUARY 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>MAY 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>SEPTEMBER 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
<b>FEBRUARY 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	<b>JUNE 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<b>OCTOBER 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
<b>MARCH 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 <sup>23</sup> <sub>30</sub> <sup>24</sup> <sub>31</sub> 25 26 27 28 29	<b>JULY 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>NOVEMBER 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 <sup>23</sup> <sub>30</sub> 24 25 26 27 28 29
<b>APRIL 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<b>AUGUST 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 <sup>24</sup> <sub>31</sub> 25 26 27 28 29 30	<b>DECEMBER 1969</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31



**CAMPUS  
CENTRAL WASHINGTON  
STATE COLLEGE**  
ELLENSBURG, WASH.

COLLEGE  
DUPLEXES

NICHOLSON  
PAVILION

STUDENT VILLAGE

14 TH. AVENUE

PLANNED HOGUE TECH. AND  
IND. ED. BUILDING

FINE & APPLIED ARTS COMPLEX

RECREATION CENTER

PARKING

LANGUAGE AND  
LITERATURE BLDG.

KENNEDY  
HALL

J. MOORE HALL

ANDERSON HALL

STEPHENS HALL

NEW  
SCIENCE BUILDING

MUNRO HALL

ALFORD HALL

WHITNEY HALL  
NORTH HALL

HOLMES  
DINING HALL

BARTO HALL

HOME  
MANAGEMENT  
HOUSE

CARMODY HALL

MONTGOMERY  
HALL

WILSON HALL

TENNIS COURTS

PARKING

PARKING

1. BECK HALL
2. HITCHCOCK HALL
3. MEISNER HALL
4. SPARKS HALL
5. QUIGLEY HALL
6. DAVIES HALL

HEALTH  
CENTER

EXTENSION  
SERVICES

KCWS

HERTZ MUSIC HALL

PARKING

BLACK HALL

PRESIDENT'S  
RESIDENCE

TENTH AVENUE

MILWAUKEE RAILROAD

PARKING

PARKING

HEBELER ELEMENTARY  
SCHOOL

SAMUELSON  
UNION

AIR SCIENCE

BOOK STORE

GRUPE CENTER

PARKING

PARKING

BUTTON  
APARTMENTS

EDISON HALL

ADMINISTRATION  
ANNEX

TECH. AND  
IND. ED.

SHAW  
MEMORIAL HALL

BOULION  
LIBRARY

BARGE HALL

SMYSER HALL

LOMBARD AND  
COMMONS  
DINING HALLS

LIND SCIENCE HALL

CHERRY STREET

STAFF PERSONNEL OFFICE

DIXON HALL

MCCONNELL  
AUDITORIUM

KAMOLA HALL

HOUSING  
OFFICE

LIND SCIENCE HALL

SEATTLE—U. S. 10

EIGHTH AVENUE

U. S. 10 TO SPOKANE

COLLEGE APARTMENTS

HICKEY  
APARTMENTS

STAFF PERSONNEL OFFICE

DIXON HALL

ELWOOD MANOR  
7 Blks. West, 1 Blk. South

CAMPUS COURTS  
1 Blk. South

PHYSICAL  
PLANT

MUNSON HALL

COURSON HALL

MUZTALL

CENTRAL STORES

SPRAGUE STREET

ANDERSON STREET

WALNUT STREET

# College Calendar 1968-1969

## FALL QUARTER

Last Day to File Applications and Full Registration Fee Refund for Fall Quarter . . .	Monday, August 5
Reception for Students and Parents . . . . .	Sunday, September 22
Registration for Graduates and Seniors . . . . .	Monday, September 23
Registration for Juniors and Sophomores . . . . .	Tuesday, September 24
Registration for Freshmen . . . . .	Wednesday, September 25
Instruction Begins . . . . .	Thursday, September 26
Class Schedules May be Changed . . . . .	Thursday, October 3
Homecoming . . . . .	Friday, October 25
Veteran's-Admissions Day Holiday . . . . .	Monday, November 11
Thanksgiving Holidays . . . . .	1 p.m. Wednesday, November 27 to Monday, December 2
Opening Date of Final Examinations . . . . .	Monday, December 9
Fall Quarter Closes . . . . .	5 p.m. Friday, December 13

## WINTER QUARTER

Last Day to File Application and Full Registration Fee Refund for Winter Quarter . . .	Friday, Dec. 6
Registration for All Students . . . . .	Monday, Tuesday, Wednesday, January 6, 7, 8
Instruction Begins . . . . .	Thursday, January 9
Class Schedules May Be Changed . . . . .	Thursday, January 16
Washington's Birthday Holiday . . . . .	Friday, February 21
Opening Date of Final Examinations . . . . .	Monday, March 10
Winter Quarter Closes . . . . .	5 p.m. Friday, March 14

## SPRING QUARTER

Last Day to File Application and Full Registration Fee Refund for Spring Quarter . . .	Friday, March 7
Registration for All Students . . . . .	Monday, Tuesday, Wednesday, March 24, 25, 26
Instruction Begins . . . . .	Thursday, March 27
Class Schedules May be Changed . . . . .	Thursday, April 3
Symposium . . . . .	April 16, 17, 18, 19
Memorial Day Holiday . . . . .	Friday, May 30
Opening Date of Final Examinations . . . . .	Monday, June 2
Spring Quarter Closes . . . . .	5 p.m. Friday, June 6
Commencement Exercises . . . . .	10 a.m. Saturday, June 7

## SUMMER SESSION

### First Term

Last Day to File Application and Full Registration Fee Refund for Summer Quarter . . .	Friday, June 6
Registration for First and Second Term . . . . .	Monday, June 16 Tuesday, June 17
Class Instruction Begins . . . . .	Wednesday, June 18
Class Schedules May be Changed . . . . .	Friday, June 20
Independence Day Holiday . . . . .	Friday, July 4
First Term Closes . . . . .	Thursday, July 17

### Second Term

Instruction Begins . . . . .	Friday, July 18
Second Term Closes . . . . .	Friday, August 15



# Board of Trustees

Archie S. Wilson, Chairman . . . . . Richland      Mary Ellen Davis . . . . . Kirkland  
Herbert L. Frank, Vice Chairman . . . . . Yakima      Joseph Panattoni . . . . . Ellensburg  
Roy P. Wahle . . . . . Bellevue

## Administration

President . . . . . James Eugene Brooks, Ph.D.  
Secretary to the President . . . . . Mrs. Owen Paul  
Assistant to the President and Special Assistant Attorney General . . Thomas Killin Dalglish, LL.B.  
Dean of Faculty . . . . . Charles John McCann, Ph.D.  
Dean of Arts and Sciences . . . . . Cornelius Willet Gillam, J.D., Ph.D.  
Assistant Dean . . . . . Bernard Loyal Martin, Ph.D.  
Department Chairmen  
Biological Sciences . . . . . Philip Conrad Dumas, Ph.D.  
Chemistry . . . . . Helmi Habib, Ph.D.  
Economics and Business Administration . . . . . Lawrence Alonzo Danton, Ph.D.  
English . . . . . Karl Edwin Zink, Ph.D.  
Foreign Languages . . . . . Odette Golden, Ph.D.  
Geography . . . . . Martin Richard Kaatz, Ph.D.  
History . . . . . Walter Louis Berg, Ph.D.  
Mathematics . . . . . Robert Yost Dean, Ph.D.  
Philosophy . . . . . Chester Ziegler Keller, Ph.D.  
Physics . . . . . Wilbur Vance Johnson, Ph.D.  
Political Science and Anthropology (acting) . . James McKenzie Alexander III, M.S.  
Sociology . . . . . Virgil Jerome Olson, Ph.D.  
Speech and Drama . . . . . Jon Meyer Ericson, Ph.D.  
    Director, Speech Hearing Clinic . . . . . Walter L. LaDue, M.S.  
Director, Honors . . . . . Raeburne Seeley Heimbeck, Ph.D.  
Director, Humanities . . . . . Raymond Albert Smith, Ph.D.  
Director, Interdisciplinary Seminars . . . . . Elwyn Hope Odell, Ph.D.  
Director, Southeast Asia Program . . . . . Robert Yee, Ph.D.  
Dean of Education . . . . . John Albert Green, Ed.D.  
Assistant Dean . . . . . Donald Myron Schliesman, Ed.D.  
Department Chairmen  
Aerospace Studies . . . . . Lt. Col. Richard E. McCarty, M.Ed.  
Art . . . . . Louis Adolph Kollmeyer, Ed.D.  
Business Education and Administrative Management . . . . Eugene John Kosy, Ph.D.  
Education . . . . . Conrad Harold Potter, Ed.D.  
Hebeler Elementary School . . . . . Richard John Lee Covington, Ed.D.  
Home Economics . . . . . Luther Galloway Baker, Ph.D.  
Music . . . . . Wayne Snyder Hertz, Ed.D.  
Physical Education . . . . . Albert Harold Poffenroth, M.S.  
Psychology . . . . . Joseph Ellis Rich, Ed.D.  
Student Teaching . . . . . Ralph Donald Gustafson, Ed.D.  
Technology and Industrial Education . . . . . Ronald Martin Frye, Ed.D.

Dean of Graduate Studies and Director of Summer Session . . . . .	Richard Anthony Nevé, Ph.D.
Assistant Dean . . . . .	
Director of Research and Development . . . . .	
Director, Community College Relations . . . . .	John Naylor Terrey, Ed.D.
Director, Office of Continuing Education . . . . .	David Paul Dillard, M.A.
Assistant . . . . .	Derward Herbert Tozer, M.Ed.
Director of Libraries . . . . .	George H. Fadenrecht, M.A.
Assistant Director of Libraries—	
Public Services . . . . .	Clifford Peter Wolfsehr, M.A.L.S.
Assistant Director of Libraries—	
Audiovisual . . . . .	Charles William Wright, Ed.D.
Registrar and Director of Admissions . . . . .	Enos Edwin Underwood, M.Ed.
Associate Director of Admissions . . . . .	Lonald Lawrence Bridges, M.Ed.
Assistant Registrar . . . . .	Robert Vance Davidson, M.Ed.
Admissions Officer . . . . .	
Credentials Supervisor . . . . .	Patricia Anne Ross, B.A.
Director of Athletics . . . . .	Adrian Lee Beamer, M.Ed.
Chairman, Symposium and Visiting Professors . . . . .	David Burt, M.A.
<b>Dean of Students . . . . .</b>	<b>Younger Theodore Witherspoon, Ph.D.</b>
Assistant Dean of Students . . . . .	Jack Randolph Spithill, M.A.
Dean of Men . . . . .	Donald Everett Wise, Ed.D.
Dean of Women . . . . .	Marybelle Chase Rockey, M.A.
Director of Auxiliary Services . . . . .	Wendell Donald Hill, B.B.A.
Bookstore Manager . . . . .	Thomas Francis Hruska, B.S.
Director of Food Service . . . . .	Ray Morton Ayers
Director of Housing Services . . . . .	James Price Hollister, M.Ed.
Director of Counseling and Testing Service . . . . .	Robert Stanford Miller, Ed.D.
Director of Student Activities and College Union . . . . .	App Davis Legg, M.Ed.
Assistant Director . . . . .	Kenneth Burda, B.A.
Director of Placement . . . . .	Benjamin Dean Owens, M.A.
Director of Student Health Services . . . . .	Rudolf Vernie, M.D.
College Nurse . . . . .	Mrs. Maxine Taylor, R.N.
<b>Dean of Administration . . . . .</b>	
Director of Institutional Research . . . . .	
Alumni Director . . . . .	Gary Hall, M.S.
Director of Information . . . . .	
Assistant—Journalism, news . . . . .	Dudley Morton Lynch, M.A.
Assistant—Journalism, photography . . . . .	John Philip Foster, M.S.
Director of Financial Aids and Development . . . . .	Perry Howard Mitchell, M.A.
Financial Aids Officer . . . . .	John Bert Liboky, M.A.
Comptroller . . . . .	Lloyd Laurel Buckles, B.S.
Chief Accountant . . . . .	Clarence Moncrief, B.A.
Budget Officer . . . . .	Carroll Ross, B.A.
Budget Analyst . . . . .	Vernon LaBay
Internal Auditor . . . . .	
Director of Physical Plant . . . . .	Paul Barton Bechtel, B.S.
Assistant Director . . . . .	Theodore Porter, B.S., B.A.
Campus Safety Officer . . . . .	Donald Redlinger, B.A.
Director of Staff Personnel . . . . .	Robert Lyle Howser, B.B.A.
Purchasing Agent . . . . .	Donald Paul Jongeward
Campus Planner . . . . .	Urban Allen Eberhart
Construction Inspector . . . . .	Ted Johnson
Director of Data Processing . . . . .	Richard Duane Chase

# Faculty

- James Eugene Brooks, 1961 . . . . . President  
and Professor of Geography  
B.A., Central Washington State College; M.A., Ph.D.,  
University of Washington.
- Althea Esther Adams, 1965 . . . . . Assistant  
Professor of Education and Supervisor of  
Student Teaching, Ellensburg  
B.A., Holy Names College; M.Ed., Oregon State University.
- Janis John Agars, 1964 . . . . . Assistant  
Professor of Art  
B.A., University of Washington; M.F.A., Washington State  
University.
- Imtiaz Uddin Ahmad, 1965 . . . . . Associate  
Professor of Economics  
B.A., M.A., Abgarh University (India); Ph.D., State  
University of New York at Buffalo.
- James McKenzie Alexander III, 1965 . . . Acting  
Chairman, Department of  
Political Science and Anthropology and  
Assistant Professor of Anthropology  
A.B., University of New Mexico; M.S., Clemson University.
- Malcolm Douglas Alexander, 1965 . . . Assistant  
Professor of Librarianship  
B.A., University of Idaho; M.Libr., University of  
Washington
- Joel Max Andress, 1966 . . . Assistant Professor  
of Geography  
A.B., University of Pacific; M.A., Ph.D., University of  
California at Berkeley.
- Herbert Leo Anshutz, 1950 . Professor of English  
B.A., Ph.D., University of Washington.
- Ralph Calvin Applebee, 1965 . . . . . Assistant  
Professor of Mathematics  
B.S., M.S., Oregon State University.
- Walter Harvey Arlt, 1968 . . . . . Lecturer  
in Physical Education  
B.S., Washington State University; M.Ed., Central  
Washington State College.
- Grace Angie Armstrong, 1959 . . . . . Associate  
Professor of Education,  
Hebeler Elementary School  
B.S., Kansas State College; M.S., University of Wyoming.
- Ray Morton Ayers, 1963 . . . . . Director  
of Food Services  
Food Service Certificate, Lewis Hotel and Restaurant  
School.
- Emanuel Frank Bach, 1951 . . . . . Associate  
Professor of Art  
B.A., M.A., Colorado State College.
- Jay E. Bachrach, 1967 . . . . . Assistant  
Professor of Philosophy  
A.B., Indiana University; Ph.D., Columbia University.
- Donald Henry Baepler, 1960 . . . . . Dean  
of Administration  
and Associate Professor of Biology  
B.A., Carleton College; M.S., Ph.D., University of  
Oklahoma.
- Luther Galloway Baker, Jr., 1964 . . . Chairman  
Department of Home Economics  
and Associate Professor of Family Life  
A.B., Whitworth College; S.T.B., Boston University School  
of Theology; Ph.D., Oregon State University.
- Wilhelm Bakke, 1948 . . . . . Associate  
Professor of Technology and  
Industrial Education  
B.A., University of Puget Sound; M.S., Oregon State  
University.
- Jan Ernesto Baldi, 1967 . . . . . Assistant  
Professor of Education,  
Hebeler Elementary School  
B.A., Western Washington State College.
- William Wardell Barker, 1966 . . . . . Associate  
Professor of Biology  
B.S., Baldwin-Wallace College; M.S., University of  
Michigan; Ph.D., University of Washington.
- Robert Paul Barnes, 1968 . . . . . Assistant  
Professor of History  
B.A., University of Washington; M.A., University of  
Colorado; Ph.D., University of Southern California.
- David Daryl Basler, 1960 . . . . . Associate  
Professor of Education  
B.A., State College of Iowa; M.A., Ph.D., State University  
of Iowa.
- Benoyd Stephen Bayless, 1964 . Professor of Art  
B.S., Eastern Oregon College; M.S., Southern Oregon  
College; Ed.D., Washington State University.
- Adrian Lee Beamer, 1957 . . . . . Director  
of Athletics and Assistant  
Professor of Physical Education  
B.A. (Ed), M.Ed., Eastern Washington State College.
- Eric Reed Beardsley, 1959 . Wrestling Coach and  
Assistant Professor of Physical Education  
B.A. (Ed.), Central Washington State College; M.S.,  
Springfield College.
- Paul Barton Bechtel, 1957 . . . . . Director  
of Physical Plant  
B.A., Montana State College.
- Eduardo Alberto Beltran, 1966 . . . . . Instructor  
in Spanish  
B.A., M.A., University of Illinois.
- Robert Bowen Bennett, 1967 . . . . . Associate  
Professor of Physics  
B.A., Willamette University; M.A., Ph.D., University of  
Oregon.
- William L. Benson, 1968 . . . . . Assistant  
Professor of Sociology  
B.A., Washington State University.
- Robert Milton Benton, 1967 . . . . . Assistant  
Professor of English  
B.A., Trinity University; B.D., McCormick Seminary; M.A.,  
Ph.D., University of Colorado.
- Walter Louis Berg, 1955 . . . . . Chairman,  
Department of History  
and Associate Professor of History  
B.A., University of Puget Sound; M.A., Ph.D., University  
of Washington.
- Alan Ray Bergstrom, 1959 . . . . . Associate  
Professor of Education  
B.A. (Ed.), Northern Idaho College of Education; M.Ed.,  
Central Washington State College; Ed.D., Washington State  
University.
- Kenneth Russell Berry, 1965 . . . . . Associate  
Professor of Education  
B.A., State College of Iowa; M.A., Ph.D., University of  
Iowa.

## 10 Faculty

- Gerard Joseph Berthold, 1967 . . . . . Lecturer  
in Economics and Business Administration  
B.S. (Economics), University of Illinois; M.A., North-  
western University.
- Herbert Allison Bird, 1947 . . . Professor of Music  
Mus.B., Oberlin Conservatory of Music; M.A., Teachers  
College, Columbia University; Mus.A.D., Boston University.
- Thomas Leroy Blanton, 1967 . . . . . Assistant  
Professor of English  
B.A., M.A., Washington State University.
- Ronald Jean Boles, 1968 . . . . . Assistant  
Professor of Biological Sciences  
B.S., Kansas State University; A.M., Stanford University.
- Frances Kay Ralston Bovos, 1966 . . . Assistant  
Professor of Home Economics  
and Education, Hebel Elementary School  
B.S., Oregon State University; M.S., Iowa State University.
- Theodore Benjamin Bowen, 1956 . . . Associate  
Professor of Chemistry  
B.S., Whitman College; M.A., Washington State University.
- Janice Charlene Boyungs, 1965 . . . . . Assistant  
Professor of Physical Education  
B.S., Western Illinois University; M.Ed., Central  
Washington State College.
- James Franklin Brennan, 1967 . . . . . Assistant  
Professor of History  
B.S., Georgetown University; M.A., Ph.D., University of  
California at Berkeley.
- Charles Brennand, 1966 . . . . . Visiting  
Lecturer in Cello  
Philadelphia String Quartet
- Lonald Lawrence Bridges, 1965 . . . . . Associate  
Director of Admissions  
B.A., M.Ed., Central Washington State College.
- Donald Gordon Brown, 1963 . . . . . Assistant  
Professor of Education  
and Supervisor of Student Teaching,  
Vancouver  
B.A., M.Ed., University of Washington.
- Robert Harrison Brown, 1967 . . . . . Assistant  
Professor of Zoology  
B.S. (Ed.), M.S., Ph.D., University of Arizona.
- Wyland Yoder Brown, 1967 . . . . . Instructor  
in Mathematics  
B.A., Emory University; M.A., University of Washington.
- Barbara Marie Brummett, 1967 . . . . . Assistant  
Professor of Music  
B.M., B.M.E., M.M., Wichita State University.
- Gerald Francis Brunner, 1963 . . . . . Assistant  
Professor of Technology and  
Industrial Education  
B.A., M.A., San Jose State College.
- Michael Stuart Brunner, 1968 . . . . . Assistant  
Professor of Library (Science) Education  
B. of Mus., University of Texas; M.L.S., Northern Texas  
State University.
- Lloyd Laurel Buckles, 1957 . . . . . Comptroller  
B.S., Iowa State University.
- Larry Paul Bundy, 1968 . . . . . Assistant  
Professor of Business Administration  
B.A., Central Washington State College; M.B.A., University  
of Utah.
- Kenneth Francis Burda, 1967 . . . . . Assistant  
Director of Student Activities  
and College Union  
B.A., California State College of Pennsylvania.
- Peter Manning Burkholder, 1965 . . . Assistant  
Professor of Philosophy  
B.A., Harvard University; Ph.D., Tulane University.
- Kenneth Jerome Burns, 1965 . . . . . Lecturer  
in Economics  
B.A., M.A., Memphis State University.
- David Burt, 1959 . . . . . Assistant  
Professor of English  
and Chairman of Symposium  
A.B., Middlebury College; M.A., Montana State University.
- Stanley A. Cain, 1968 . . . Distinguished Visiting  
Professor of Ecology  
B.S., Butler University; M.S., Ph.D., University of Chicago;  
D.Sc., University of Montreal.
- Anthony Canedo, 1962 . . . . . Associate  
Professor of English  
B.A., Ph.D., University of Washington.
- David George Canzler, 1966 . . . . . Assistant  
Professor of English  
B.A., Linfield College; M.A., Ph.D., University of Oregon.
- Franklin Duane Carlson, 1967 . . . . . Assistant  
Professor of Education  
B.A., M.A., State College of Iowa; Ed.D., Washington  
State University.
- Myrtle Victoria Carlson, 1958 . . . . . Assistant  
Professor of Home Economics  
B.S., M.S., University of Washington.
- Robert Keith Carlton, 1964 . . . . . Assistant  
Professor of Education and  
Supervisor of Student Teaching,  
Urban Center Project, Tacoma  
B.A., M.Ed., Eastern Washington State College.
- Eva-Marie Carne, 1968 . . . . . Assistant  
Professor of German  
B.A., University of Bristol; M.A., University of Colorado.
- Prabhat Chandra, 1967 . . . . . Associate  
Professor of Sociology  
M. A. Lucknow University (India); Ph.D., Agra  
University (India).
- Ernest Chan-Nui, 1967 . . . . . Assistant  
Professor of Education  
and Supervisor of Student Teaching,  
Wenatchee  
B.Ed., University of Hawaii; M.A., Ed.D., Columbia  
University.
- Albin Bert Christianson, 1947 . . . . . Professor  
of Music  
B.S. (Ed.), University of North Dakota; M.S. (Mus. Ed.),  
University of Idaho.
- Glen W. Clark, 1964 . . . . . Associate  
Professor of Biology  
B.S., Ricks College; M.S., Utah State University; Ph.D.,  
University of California at Davis.
- Frank McDonald Collins, 1966 . . . . . Associate  
Professor of English  
B.A., Oklahoma City University; M.A., University of  
Oklahoma; Ph.D., University of Wisconsin.
- Thomas Bernard Collins, Jr., 1964 . . . Assistant  
Professor of Psychology  
B.A., University of Portland; M.S., Ph.D., University of  
Washington.

- Dale Robert Comstock, 1964 . . . . . Associate  
Professor of Mathematics  
B.A., Central Washington State College; M.S., Ph.D.,  
Oregon State University.
- Colin Davis Condit, 1965 . . . . . Associate  
Professor of Psychology  
B.A., University of Washington; M.A., Columbia  
University; Ph.D., Washington State University.
- Rodney Everett Converse, 1966 . . . . . Assistant  
Professor of Sociology  
A.B., Columbia University; M.S.W., University of  
Pittsburgh.
- Mariam Lorraine Couch, 1967 . . . . . Instructor  
in English  
B.A., Drake University; M.A., University of Iowa.
- Richard John Lee Covington, 1967 . . . Director  
of Hebel Elementary School  
and Associate Professor of Education  
B.A., Doane College; M.Ed., Whittier College; Ed.D.,  
University of California at Los Angeles.
- Paul Creston, 1968 . . . . . Professor of Music  
Composer-in-Residence
- John Wesley Crum, 1949 . . . . . Professor  
of Education  
B.S., Seattle Pacific College; M.S., Ph.D., University of  
Washington.
- Donald Wayne Cummings, 1960 . . . . . Director  
of English Composition  
and Associate Professor of English  
B.A., M.A., Ph.D., University of Washington
- Robert Lewis Cutler, 1966 . . . . . Instructor  
in English  
B.A., Hofstra College; M.A., Ohio University.
- William Frederick Cutlip, 1968 . . . . . Assistant  
Professor of Mathematics  
B.S., Eastern Illinois University; M.A., University of  
Illinois.
- Thomas Dalglish, 1967 . . . . . Assistant  
to the President and  
Special Assistant Attorney General  
A.B., Dartmouth College; L.L.B., University of Michigan.
- Lawrence Alonzo Danton, 1967 . . . . . Chairman  
Department of Economics and Business  
and Professor of Economics  
B.A., State College of Iowa; M.A., Iowa State University;  
Ph.D., University of Nebraska.
- Robert Vance Davidson, 1965 . . . . . Assistant  
Registrar  
B.A., M.Ed., Central Washington State College.
- Charles William Davis, 1965 . . . . . Assistant  
Professor of Music  
B.A., Pomona College; M.M., University of Southern  
California.
- John Edwin Davis, 1963 . . . . . Associate  
Professor of Education  
B.S., Oregon College of Education; M.Ed., Ed.D.,  
University of Oregon.
- Mary-Lou Day, 1967 . . . . . Assistant  
Professor of Home Economics  
B.S., Washington State University; M.S., University of  
Washington.
- Robert Yost Dean, 1968 . . . . . Chairman,  
Department of Mathematics  
and Professor of Mathematics  
B.A., Willamette; M.S., Ph.D., California Institute of  
Technology.
- John Wright DeMerchant, 1963 . . . . . Assistant  
Professor of Music  
B.A., M.A., University of Washington.
- Clayton Charlton Denman, 1964 . . . . . Associate  
Professor of Anthropology  
B.A., M.A., University of Washington; Ph.D., University  
of California at Berkeley.
- Maurice A. Derbyshire, 1968 . . . . . Assistant  
Professor of Education  
M.Ed., University of Utah.
- Byron L. DeShaw, 1967 . . . . . Assistant  
Professor of Education  
and Supervisor of Student Teaching,  
Wenatchee  
B.A., M.A., Washington State University; Ed.D., University  
of Idaho.
- William Herbert Desmonde, 1966 . . . Professor  
of Philosophy  
B.A., New York University; M.A., Ph.D., Columbia  
University.
- Terry Leigh DeVietti, 1968 . . . . . Assistant  
Professor of Psychology  
B.A., M.S., Ph.D., University of Utah.
- David Paul Dillard, 1965 . . . . . Director  
of Continuing Education  
B.A., Eastern New Mexico University; M.A., The  
University of New Mexico.
- Lucile Doersch, 1968 . . . . . Assistant  
Professor of Music  
B.A., M.Ed., Central Washington State College.
- Richard Tetsuwo Doi, 1965 . . . . . Associate  
Professor of Art  
B.S. (Ed.), Northern Illinois University; M.A., University  
of California at Berkeley; Ed.D., Columbia University.
- Pearl Daisy Maude Douc e, 1964 . . . . . Assistant  
Professor of Home Economics  
B.S., Agricultural and Technical College, Greensboro, N.C.;  
M.S., Oregon State University.
- Stanley Arthur Dudley, 1957 . . . . . Assistant  
Professor of Technology  
and Industrial Education  
B.A., M.Ed., Central Washington State College.
- Philip Conrad Dumas, 1965 . . . . . Chairman  
Department of Biological Sciences  
and Associate Professor of Biology  
B.S., M.A., Ph.D., Oregon State University.
- Leonard Clinton Duncan, 1965 . . . . . Associate  
Professor of Chemistry  
A.B., Wabash College; M.A., Wesleyan University (Conn.);  
Ph.D., University of Washington.
- William Vance Dunning, 1964 . . . . . Assistant  
Professor of Art  
B.F.A., M.F.A., University of Southern California;  
M.F.A., University of Illinois.
- Hazel Agnes (Brain) Dunnington, 1957 . . . . .  
Associate Professor of Speech and Drama  
B.A., University of Washington; M.A., Northwestern  
University.
- Betty Jo Dupin, 1966 . . . . . Assistant  
Professor of Music  
B.A. (Ed), Eastern Washington State College; M.M.,  
Northwestern University.
- Ilda Marie Easterling, 1967 . . . . . Assistant  
Professor of French  
B.A., M.A., University of Utah.

## 12 Faculty

- Dee Richard Eberhart, 1965 . . . . . Assistant Professor of Geography  
B.A., University of Washington; M.A., Northwestern University.
- Urban Allen Eberhart, 1966 . . . . . Director of Campus Planning and Programming
- William Sherman Eberly, 1967 . . . . . Associate Professor of Mathematics  
B.S., Seattle Pacific College; M.S., University of Washington; Ph.D., Washington State University.
- Katherine Snow Egan, 1968 . . . . . Associate Professor of Speech Pathology  
B.A., University of Missouri; M.A., Ph.D., Indiana University.
- Henry John Eickhoff, 1950 . . . . . Associate Professor of Music  
B.A., B.D., Concordia Seminary; M.M., Ph.D., Northwestern University.
- Irwin Eisenberg, 1966 . . . . . Visiting Lecturer in Violin  
Philadelphia String Quartet
- Franklin Dale Elmore, 1965 . . . . . Associate Professor of Education, Supervisor of Student Teaching, and Urban Center Project, Seattle  
B.S., Northwest Missouri State College; M.S., Drake University; Ed.D., Nebraska University.
- Clement Adrian Empey, 1968 . . . . . Assistant Professor of History  
Moderatorship, Grade II 1, Trinity College (University of Dublin, Ireland).
- Clifford Albert Erickson, 1958 . . . . . Associate Professor of Education and Supervisor of Student Teaching, West Valley, Wapato and Sunnyside  
B.S., Illinois Institute of Technology; M.Ed., Central Washington State College; Ed.D., Washington State University.
- Jon Meyer Ericson, 1964 . . . . . Chairman Department of Speech and Drama and Professor of Speech  
B.A., Pacific Lutheran University; M.A., Ph.D., Stanford University.
- Betty Ewart Amess Evans, 1967 . . . . . Associate Professor of Drama  
B.Ed., M.Ed., The University of Alberta; Ph.D., University of Oregon.
- Sandra Jean Evers, 1966 . . . . . Assistant Professor of Home Economics  
B.S., Iowa State University; M.A., University of Minnesota.
- George H. Fadenrecht, 1964 . . . . . Director of Libraries and Associate Professor of Librarianship  
A.B., Tabor College; M.A., University of Kansas; M.A.L.S., University of Michigan.
- Richard Richings Fairbanks, 1963 . . . . . Associate Professor of Art  
B.A., University of Washington; M.A., Mills College.
- Stevens Eugene Farkas, 1965 . . . . . Assistant Professor of Geology  
B.S., M.A., University of Wisconsin.
- Joan Dorothy Fennelly, 1956 . . . . . Assistant Professor of Education and Supervisor of Student Teaching, Highline  
B.A., Western Washington State College; M.S., University of Oregon.
- George Robert Figy, 1968 . . . . . Lecturer in Geography  
B.A., Michigan State University; M.A., University of Michigan.
- Lee Fisher, 1967 . . . . . Assistant Professor of Aerospace Education  
B.A. (Ed.), Western Washington State College; M.A., Boston College.
- Robert Alfred Flam, 1957 . . . . . Assistant Professor of Business Education and Administrative Management  
B.S. (Ed.), Valley City State Teachers College (N.D.); M.E., University of North Dakota.
- William Downing Floyd, 1960 . . . . . Associate Professor of Education  
B.A., M.S., Oregon College of Education; Ed.D., Colorado State College.
- John Philip Foster, 1965 . . . . . Assistant in Office of Information and Assistant Professor of Journalism  
B.S., M.S., Indiana University.
- Gary Carlin Frederick, 1967 . . . . . Head Baseball Coach, Assistant Football Coach, and Assistant Professor of Physical Education  
B.A. (Ed.), M.Ed., Central Washington State College.
- Ronald Martin Frye, 1966 . . . . . Chairman Department of Technology and Industrial Education and Associate Professor of Technology and Industrial Education  
B.A., Central Washington State College; M.S., Kansas State College of Pittsburg; Ed.D., University of Missouri.
- William Charles Fuller, 1965 . . . . . Assistant Professor of Music  
B.A., State College of Iowa; M.A., University of Wisconsin.
- Robert Steele Funderburk, 1947 . . . . . Professor of Geography  
B.A., Furman University; M.A., University of North Carolina; Ph.D., George Peabody College for Teachers.
- Lloyd Miller Gabriel, 1966 . . . . . Associate Professor of Education  
B.A., Washington State University; M.Ed., Oregon State University.
- Gerald Elmer Gage, 1960 . . . . . Associate Professor of Psychology  
A.B., Nebraska Wesleyan University; M.A., Ed.D., University of Nebraska.
- Robert Douglas Gaines, 1961 . . . . . Associate Professor of Chemistry  
B.S., M.S., Ph.D., Montana State College.
- Gordon Neale Galbraith, 1966 . . . . . Assistant Professor of Economics  
B.A. (Ed.), M.Ed., Central Washington State College.
- Kenneth Oakland Gamon, 1965 . . . . . Assistant Professor of Mathematics  
B.S., Eastern Washington State College; M.S., Oregon State University.
- Pulin K. Garg, 1968 . . . . . Assistant Professor of Sociology  
M.A., Patna University (India).

- Roger Lee Garrett, 1968. . . . . Instructor in Speech  
B.A., M.A., University of Montana.
- Phillip B. Garrison, 1967. . . . . Instructor in English  
B.A., M.A., University of Missouri.
- William George Gaskell, 1963. . . . . Associate  
Professor of Education  
B.A., M.A., Montana State University; Ed.D., University  
of California at Berkeley.
- Cornelius Willet Gillam, 1968. . . . . Dean  
of Arts and Sciences  
and Professor of Economics and  
Political Science  
B.A., Carleton College; M.A., University of Minnesota;  
J.D., Ph.D., University of Chicago.
- Earl Theodore Glauert, 1968. . . . . Associate  
Professor of History  
A.B., Earlham College; Ph.D., University of Pennsylvania.
- Willard H. Godfrey, Jr., 1968. . . . . Assistant  
Professor of Economics  
B.S., Brigham Young University; M.S., University of  
Arizona.
- Donald Glenn Goetschius, 1957. . . . . Associate  
Professor of Education  
B.A., Morningside College; M.A., University of Iowa;  
Ed.D., University of Wyoming.
- Odette Golden, 1959. . . . . Chairman  
Department of Foreign Languages  
and Associate Professor of French  
B.A., Barnard College; M.A., Columbia University; Ph.D.,  
University of Michigan.
- Virginia G. Goldsmith, 1957. . . . . Professor  
of Education and  
Supervisor of Student Teaching,  
Bellevue and Lake Washington  
B.S., University of Minnesota; M.A., Ed.D., University  
of Washington.
- Darwin Joseph Goodey, 1964. . . . . Assistant  
Professor of Psychology  
B.S., M.S., Utah State University.
- Bryan Frank Gore, 1968. . . . . Assistant  
Professor of Physics  
Bachelor of Engineering Physics, Cornell University; M.S.,  
Ph.D., University of Michigan.
- David Howard Gorrie, 1963. . . . . Lecturer  
in Business Administration  
B.A., L.L.B., University of Washington.
- Roger Frederick Gray, 1967. . . . . Lecturer  
in Education, Hebel Elementary School  
B.A. (Ed.), Central Washington State College.
- John Albert Green, 1968. . . . . Dean of Education  
and Professor of Education  
B.A., Colorado State College; M.Ed., Ed.D., University of  
Colorado.
- Robert John Gregson, 1966. . . . . Swim Coach  
and Assistant Professor of Physical Education  
B.S., M.Ed., Linfield College.
- George Charles Grossman, 1966. . . . . Assistant  
Professor of Education  
B.A. (Ed.), Eastern Washington College of Education;  
M.Ed., D.Ed., University of Washington.
- Ralph Donald Gustafson, 1957. . . . . Chairman  
Department of Student Teaching  
and Professor of Education  
B.A., Willamette University; M.Ed., Ed.D., University of  
Washington.
- Beatrice Baker Haan, 1954. . . . . Assistant  
Professor of Librarianship  
B.A. (Ed.), Central Washington State College;  
M.A., L.S., University of Denver.
- Helmi Shafik Habib, 1964. . . . . Chairman  
Department of Chemistry  
and Associate Professor of Chemistry  
B.S., Walla Walla College; M.S., University of Idaho;  
Ph.D., Washington State University.
- Lyman B. Hagen, 1967. . . . . Assistant  
Professor of English  
B.A., B.S., M.A., University of Washington; Ph.D.,  
University of Portland.
- Curtis Raymond Hahn, 1967. . . . . Lecturer  
in Safety Education and Physical Education  
B.S., M.S., Indiana State University.
- Edward Chauncey Haines, 1958. . . . . Associate  
Professor of Art  
B.A.E., M.A.E., School of Art Institute of Chicago.
- Daniel Hallstrom, 1967. . . . . Lecturer  
in Education and Coordinator of  
Curriculum Materials, Yakima Valley Center  
for the Improvement of Rural Education  
A.B., Midland College (Nebraska); A.M., Colorado State  
University.
- Mark Warren Halperin, 1966. . . . . Instructor  
in English  
B.A., Bard College; M.F.A., State University of Iowa.
- Kenneth A. Hammond, 1967. . . . . Assistant  
Professor of Geography  
B.A., Eastern Washington State College; M.S., Oregon  
State University.
- Marvin Harris, 1968. . . . . Distinguished Visiting  
Professor of Ecology  
A.B., Ph.D., Columbia University.
- Kenneth K. Harsha, 1966. . . . . Associate  
Professor of Business Education  
and Administrative Management  
B.S. (Ed.), M.S., Kansas State Teachers College; Ed.D.,  
University of Wyoming.
- Ruth D. Hartman, 1965. . . . . Documents Librarian  
and Assistant Professor of Librarianship  
B.S., Minot State Teachers College (N.D.); A.M.L.S.,  
University of Michigan.
- Joseph Stanley Haruda, 1951. . . . . Associate  
Professor of Music  
B.A., M.A., Teachers College, Columbia University;  
Ph.D., State University of Iowa.
- Richard Wayne Hasbrouck, 1964. . . . . Associate  
Professor of Chemistry  
B.S., College of Great Falls; M.A., Wesleyan University;  
Ph.D., University of Wyoming.
- Charles Haine Hawkins, 1964. . . . . Associate  
Professor of Sociology  
B.A., Reed College; M.A., Ph.D., University of Chicago;  
M.P.H., University of California at Berkeley.
- Myrtle Ione Hayes, 1966. . . . . Assistant  
Professor of Business Education  
and Administrative Management  
B.A., Northwest Nazarene College; M.S., University of  
Oregon.
- Beverly Ann Heckart, 1967. . . . . Assistant  
Professor of History  
B.A., Hood College; M.A., Ph.D., Washington University.

# 14 Faculty

- Raeburne Seeley Heimbeck, 1967 . . . . . Director  
of Honors Programs and  
Associate Professor of Humanities  
B.A., Stanford University; B.D., Fuller Theological  
Seminary; Ph.D., Stanford University.
- Hyrum Senn Henderson, 1966 . . . . . Associate  
Professor of Special Education  
B.S., Ricks College; M.Ed., Ed.D., Brigham Young  
University.
- Wayne Snyder Hertz, 1938 . . . . . Chairman  
Department of Music  
and Professor of Music  
B.S. (Mus. Ed.), University of Illinois; M.Mus., North-  
western University; Ed.D., New York University.
- John Maurice Herum, 1962 . . . . . Assistant  
Professor of English  
B.A., Carroll College.
- Betty Jean Hileman, 1967 . . . . . Director  
of Women's Section and  
Associate Professor of Physical Education  
B.A., Ohio Wesleyan University; M.S., University of  
Wisconsin; Ph.D., University of Southern California.
- Wendell Donald Hill, 1963 . . . . . Director  
of Auxiliary Services  
B.B.A., Washburn University.
- John Giles Hoglin, 1962 . . . . . Assistant  
Professor of Radio and Television  
B.A., M.A., Wayne State University.
- Webster Franklin Hood, 1966 . . . . . Assistant  
Professor of Philosophy  
B.A., M.A., Ph.D., Pennsylvania State University.
- Robert Charles Hostetter, 1967 . . . . . Assistant  
Professor of Education  
and Supervisor of Student Teaching,  
South Kitsap  
B.A., M.Ed., Central Washington State College.
- Alexander Hamilton Howard, Jr., 1950 . . . . .  
Professor of Education  
B.A. (Ed.), Central Washington State College; A.M.,  
Ph.D., University of Chicago.
- Norman Selby Howell, 1945 . . . . . Associate  
Professor of Speech and Drama  
B.A., M.A., Washington State University.
- Robert Lyle Howser, 1963 . . . . . Director  
of Staff Personnel  
B.B.A., University of Miami.
- Arthur Preston Hutton, 1963 . . . . . Head  
Track Coach and Assistant Professor  
of Physical Education  
B.A., M.S., University of Washington.
- Alan Iglitzin, 1966 . . . Visiting Lecturer in Viola  
Philadelphia String Quartet
- Everett Anthony Irish, 1956 . . . . . Director  
of Men's Physical Education Section  
and Associate Professor  
of Physical Education  
B.A., M.A., State University of Iowa; D.Ed., University  
of Oregon.
- Robert Neil Irving, Jr., 1965 . . . . . Associate  
Professor of Physical Education  
B.A., University of Idaho; M.S., Indiana University; Ed.D.,  
University of Oregon.
- Eldon Ernest Jacobsen, 1950 . . . . . Professor  
of Psychology  
B.S., M.S., Utah State University; Ph.D., University of  
Washington.
- Doris Elizabeth Jakubek, 1959 . . . . . Associate  
Professor of Education,  
Hebeler Elementary School  
B.Ed., State University of New York, Teachers College,  
Geneseo; M.A., State University of Iowa.
- Otto Franklin Jakubek, 1959 . . . . . Assistant  
Professor of Geography  
B.A., M.A., Long Beach State College.
- Jennifer Lee Jaques, 1967 . . . . . Instructor  
in Librarianship  
B.A., Central Washington State College; M.S., L.S.,  
University of Washington.
- John Richard Jensen, 1966 . . . . . Assistant  
Professor of Music  
B.A., University of Washington; M.A., University of  
California at Los Angeles.
- Deloris Mae Johns, 1964 . . . . . Assistant  
Professor of Physical Education  
B.S., M.S., Montana State University.
- (Ellen) Anne Iverson Johnson, 1967 . Assistant  
Professor of Education  
and Supervisor of Student Teaching,  
Ellensburg  
B.A. (Ed.), M.Ed., Central Washington State College.
- Richard Gordon Johnson, 1964 . . . . . Instructor  
in English  
B.A., M.A., University of Washington.
- Sheldon Robert Johnson, 1966 . . . . . Assistant  
Professor of Zoology  
B.A., Occidental College; M.A., University of California at  
Los Angeles.
- Wilbur Vance Johnson, 1965 . . . . . Chairman,  
Department of Physics  
and Associate Professor of Physics  
B.S., University of Washington; Ph.D., Oregon State  
University.
- Jerry L. Jones, 1968 . . . . . Associate  
Professor of Chemistry  
B.A., M.S., Oklahoma State University; Ph.D., University  
of Arkansas.
- Robert E. Jones, 1968 . . . . . Assistant  
Professor of Librarianship and  
Head Catalog Librarian  
B.A., Western State College of Colorado; M.A.L.S.,  
University of Denver.
- Joseph Stanley Junell, 1965 . . . . . Assistant  
Professor of Education  
and Supervisor of Student Teaching,  
Bellevue  
B.A., M.Ed., University of Washington.
- Martin Richard Kaatz, 1952 . . . . . Chairman,  
Department of Geography and  
Professor of Geography  
A.B., A.M., Ph.D., University of Michigan.
- Maria-Maya Kadlec, 1968 . . . . . Assistant  
Professor of Home Economics  
A.A., Santa Monica City College; B.A., California State  
College.
- David Meredith Karol, 1967 . . . . . Assistant  
Professor of Music  
B.Mus., Los Angeles Conservatory of Music; Mus.M.,  
University of Southern California; Mus.D., von Polner  
Conservatory of Music (Switzerland).



- Chester Ziegler Keller, 1960. . . . . Chairman,  
Department of Philosophy  
and Associate Professor of Philosophy  
A.B., Bridgewater College; M.A., Ph.D., University of  
Southern California.
- Erlice Joy Killorn, 1963. . . . . Assistant  
Professor of Physical Education  
B.S., Montana State College; M.S., University of Nevada.
- Donald Richard King, 1968. . . . . Assistant  
Professor of Spanish  
B.A., University of Portland; M.A., New York University.
- Edith Florence Kiser, 1951. . . . . Assistant  
Professor of Education  
B.A. (Ed.), M.Ed., Central Washington State College.
- Edward Paul Klucking, 1960. . . . . Associate  
Professor of Biology  
B.A., Macalester College; M.A., Ph.D., University of  
California at Berkeley.
- Barbara Elsie Kohler, 1947. . . . . Associate  
Professor of Education,  
Hebeler Elementary School  
B.A. (Ed.), Central Washington State College; M.A.,  
Teachers College, Columbia University.
- Louis Adolph Kollmeyer, 1958. . . . . Chairman,  
Department of Art  
and Professor of Art  
B.S., Southwest Missouri State College; M.A., State  
University of Iowa; Ed.D., University of Oregon.
- Eugene John Kosy, 1949. . . . . Chairman,  
Department of Business Education and  
Administrative Management and  
Professor of Business Education  
and Administrative Management  
B.E., Wisconsin State University; M.A., University of  
Minnesota; Ph.D., University of Wisconsin.
- Zoltan Kramar, 1963. . . . . Assistant  
Professor of History  
B.A., M.A., Creighton University; Ph.D., University of  
Nebraska.
- Margaret Gleason Kulik, 1968. . . . . Lecturer  
in Home Economics  
B.S., University of Washington.
- Arthur Folk Ladd, 1951. . . . . Associate  
Professor of Physics  
B.S., M.S., University of Idaho.
- Walter L. LaDue, 1967. . . . . Director  
of Speech and Hearing Clinic and  
Assistant Professor of Speech Pathology  
B.A., Western Washington State College; M.S., University  
of Oregon; Ph.D., University of Utah.
- Louise Fletcher Mason Lampman, 1967. . . . .  
Assistant Professor of Librarianship,  
Hebeler Elementary School  
A.B., Willamette University; M.S.L.S., University of  
Oregon.
- Douglas Alan Lang, 1965. . . . . Assistant  
in the Office of Information  
and Lecturer in Journalism  
B.A., Eastern New Mexico University.
- Lester Danny Langley, 1967. . . . . Assistant  
Professor of History  
B.A., M.A., West Texas State University; Ph.D., University  
of Kansas.
- Larry Lee Lawrence, 1963. . . . . Assistant  
Professor of English  
B.A., Montana State University; M.A., Stanford University.
- Edward Gordon Leavitt, 1965. . . . . Assistant  
Professor of Music  
B.A., Central Washington State College; M.A., Bob Jones  
University.
- App Davis Legg, 1966. . . . . Director  
of Student Activities and College Union  
B.A., Central Washington State College; M.A., Washington  
State University.
- Herbert Hugh Legg, Jr., 1968. . . . . Lecturer  
in Political Science  
B.A., Central Washington State College; L.L.B., University  
of Washington.
- Richard E. Leinaweaver, 1965. . . . . Assistant  
Professor of Drama  
B.A., M.A., University of Colorado; Ph.D., Michigan  
State University.
- Paul Edwin LeRoy, 1961. . . . . Associate  
Professor of History  
B.A., University of Connecticut; M.A., Ph.D., Ohio State  
University.
- James Preston Levell, 1964. . . . . Associate  
Professor of Psychology  
B.A., Whitworth College; M.Ed., Ed.D., University of  
Oregon.
- Albert Luther Lewis, 1965. . . . . Assistant  
Professor of Speech  
B.A., Stanford University; M.A., University of Oregon.
- John Bert Liboky, 1965. . . . . Assistant  
Director of Financial Aids  
B.A., M.Ed., Central Washington State College.
- William Clair Lillard, 1968. . . . . Lecturer  
in Economics  
B.A., Sacramento State College; M.A., The University of  
Texas.
- Glenn Edward Lipskey, 1968. . . . . Lecturer  
in Spanish  
B.A., University of Portland; M.A., New York University.
- Frederick Monie Lister, 1968. . . . . Associate  
Professor of Mathematics  
B.S., Tufts College; M.A., University of Michigan; Ph.D.,  
University of Utah.
- Margaret Jeanne Lions, 1966. . . . . Lecturer  
in English  
B.A., San Francisco State College; M.A., Utah State  
University.
- John Melvin Long, 1967. . . . . Lecturer  
in Business Administration  
B.A., Graceland College; M.B.A., Northern Illinois  
University.
- Janet Marie Lowe, 1949. . . . . Associate  
Professor of Biology  
B.S., University of Washington; S.M., University of  
Chicago.
- Lawrence Leland Lowther, 1965. . . . . Associate  
Professor of History  
B.A., M.A., Ph.D., University of Washington.
- Evart Kay Lybbert, 1965. . . . . Instructor in English  
B.A., Central Washington State College; M.A., University  
of Washington.
- Dudley Morton Lynch, 1968. . . . . Assistant  
in the Office of Information  
and Assistant Professor of Journalism  
B.A., Eastern New Mexico University; M.A., The  
University of Texas.
- Florence Smith MacDonald, 1967. . . . . Acting Head  
Reference Librarian and  
Assistant Professor of Librarianship  
A.B., B.A., M.A. in Librarianship, University of  
Washington.

## 16 Faculty

- George Macinko, 1967. Professor of Geography  
B.A., University of Idaho; M.A., Ph.D., University of Michigan.
- Usha Ganesh Mahajani, 1967. . . . . Associate Professor of Political Science  
B.A., University of Rajaputana; M.A., Smith College, Ph.D., The Johns Hopkins University.
- Darwin Wayne Manship, 1968. . . . . Assistant Professor of Business Education and Administrative Management  
B.A., Northwest Nazarene College; M.S., Utah State University.
- Anne Maurine Marnix, 1966. . . . . Assistant Professor of Business Education and Administrative Management  
B.S., Kansas State at Manhattan; M.S., Kansas State Teachers College.
- Alan Ira Marshlain, 1968. . . . . Lecturer in Special Education  
B.A., Western Washington State College; M.Ed., Central Washington State College.
- Ronald Samuel Marta, 1968. . . . . Instructor in French  
B.A., Sacramento State College; M.A., The University of Texas.
- Marjorie Irene Mathers, 1968. . . . . Assistant Professor of Education and Supervisor of Student Teaching, Highline  
B.A. (Ed.), M.Ed., Central Washington State College.
- Bernard Loyal Martin, 1959. . . . . Assistant Dean of Arts and Sciences and Associate Professor of Mathematics  
B.A., M.Ed., Central Washington State College; M.S., Ph.D., Oregon State University.
- Robert A. Massagli, 1967. . . . . Lecturer in Mathematics  
A.B., University of Pacific; M.A., University of Nebraska.
- Mary Elizabeth Mathewson, 1948. . . . . Associate Professor of English  
A.B., Smith College; M.A., University of Colorado.
- Marshall Willis Mayberry, 1948. . . . . Professor of Botany  
B.A., Washburn University; M.A., Ph.D., University of Kansas.
- Willson Turner Maynard, 1968. . . . . Lecturer in Education and Director of the Yakima Valley Center for the Improvement of Rural Education  
B.S., M.Ed., D.Ed., University of Oregon.
- Donald C. McAfee, 1967. . . . . Associate Professor of Health, Physical Education  
B.S., Ball State Teachers College; M.A., San Jose State College; Ed.D., Oregon State University.
- Helen Margaret McCabe, 1956. . . . . Assistant Professor of Physical Education and Recreation  
B.A., B.E., M.S., Washington State University.
- Charles John McCann, 1962. . . . . Dean of Faculty and Professor of English  
B.A., Yale University; M.S., New York University; M.A., Ph.D., Yale University.
- Richard E. McCarty, 1967. . . . . Chairman, Department of Aerospace Studies and Professor of Aerospace Studies  
Lt. Colonel USAF; B.S., Colorado State University; M.Ed., Whitworth College.
- Wells A. McNelly, 1966. . . . . Staff Counselor in Counseling and Testing and Assistant Professor of Psychology  
B.S., Utah State University; M.A., Ph.D., University of Wyoming.
- Mary Louise McMahon, 1955. . . . . Assistant Professor of Home Economics  
B.S., North Dakota State College; M.A., Montana State University.
- John Eagleton Meany, 1968. . . . . Assistant Professor of Chemistry  
B.S., Seattle University; Ph.D., University of Washington.
- Helen Margaret Michaelsen, 1937. . . . . Associate Professor of Home Economics  
B.S., M.S., University of Washington.
- Beth (Betty) Miller, 1967. . . . . Lecturer in Home Economics and Education  
B.S., Brigham Young University.
- Dohn Alvin Miller, 1958. . . . . Professor of Special Education  
B.S., McPherson College; M.Ed., University of Colorado; Ed.D., Colorado State College.
- Jerome Kenneth Miller, 1967. . . . . Catalog Librarian and Instructor in Librarianship  
A.B., Kansas State Teachers College; A.M.L.S., University of Michigan.
- Robert Stanford Miller, 1966. . . . . Director of Counseling and Testing Services and Associate Professor of Psychology  
B.S. (Ed), Kansas State Teachers College; M.Ed., Ed.D., University of Kansas.
- Perry Howard Mitchell, 1949. . . . . Director of Financial Aid and Development  
A.B., M.A., University of Washington.
- Robert Curtis Mitchell, 1966. . . . . Associate Professor of Physics  
B.S., New Mexico State University; M.S., University of Washington; Ph.D., New Mexico State University.
- Samuel Roop Mohler, 1943. . . . . Professor of History  
A.B., Manchester College; B.D., Yale University; M.A., University of Washington; Ph.D., University of Chicago.
- James M. Monasmith, 1968. . . . . Assistant Professor of Education and Associate Director of the Urban Center Teacher Preparation Program  
B.S., M.S., University of Oregon.
- Clarence Heston Moncrief, 1967. . . . . Chief Accountant  
B.A., Eastern Washington State College.
- Elizabeth Martha Moore, 1962. . . . . Assistant Professor of Education and Supervisor of Student Teaching, Yakima  
B.A. (Ed.), Eastern Washington State College; M.Ed., Central Washington State College.
- Ronald W. Moore, 1967. . . . . Lecturer in Audiovisual Services  
B.S., Abilene Christian College; M.Ed., East Texas State University.
- Wilma Lee Moore, 1962. . . . . Assistant Professor of Physical Education  
B.A. (Ed.), Western Illinois University; M.S., Colorado State College.

- Betty Louise Moyle, 1967 . . . . . Assistant Professor of Home Economics  
B.S., M.S., Brigham Young University.
- Sidnie Davies Mundy, 1946 . . . . . Associate Professor of English  
B.A., Ripon College; M.A., University of Washington.
- Donald Joseph Murphy, 1953 . . . . . Professor of Education  
B.A., Wisconsin State University; M.A., Ph.D., State University of Iowa.
- Elias Smith Murphy, Jr., 1965 . . . . . Associate Professor of Physics  
B.S., Brigham Young University; M.S., Ph.D., Colorado State University.
- Theodor Friedrich Naumann, 1959 . . Professor of Psychology  
M.E., State College of Engineering, Essen, Germany; M.A., Oregon State University; Ph.D., University of Oregon.
- Frank Brown Nelson, 1966 . . . . . Assistant Professor of Psychology  
B.A., Brigham Young University; M.S., Ph.D., University of Utah.
- Richard Anthony Nevé, 1966 . . . . . Dean of Graduate Studies and Professor of Biochemistry  
B.S., Loyola University; M.S., University of San Francisco; Ph.D., University of Oregon.
- Karl Robert Newman, 1967 . . . . . Associate Professor of Geology  
B.S., M.S., University of Michigan; Ph. D., University of Colorado.
- Wilfrid Williams Newschwander, 1939 . . . . . Professor of Chemistry  
B.A., Whitman College; Ph.D., University of Washington.
- Leo Dean Nicholson, 1964 . . . Basketball Coach and Assistant Professor of Physical Education  
B.A., M.Ed., Central Washington State College.
- Melvin Leon Norris, 1965 . . . . . Associate Professor of Education and Supervisor of Student Teaching, Lake Washington  
B.S., M.Ed., Midwestern University; Ed.D., North Texas State University.
- James Grant Nylander, 1957 . . . . . Associate Professor of Physical Education  
B.S., Bradley University; M.A., Ed.D., Colorado State College.
- Elwyn Hope Odell, 1941 . . . . . Director of Interdisciplinary Seminars and Professor of Political Science  
A.B., Albion College; Ph.D., University of Southern California.
- Virgil Jerome Olson, 1960 . . . . . Chairman, Department of Sociology and Associate Professor of Sociology  
B.A., M.A., Southern Methodist University; Ph.D., Washington State University.
- Dolores Jean Osborn, 1965 . . . . . Assistant Professor of Business Education and Administrative Management  
B.S., Eastern Illinois University; M.A., Colorado State College.
- Patrick Reed O'Shaughnessy, 1964 . . Assistant Professor of Business Administration  
B.A., M.B.A., Washington State University; C.P.A.
- Benjamin Dean Owens, 1966 . . . . . Director of Placement  
B.S., M.S., University of Oregon.
- Biswambhar Pahi, 1966 . . . Assistant Professor of Mathematics and Philosophy  
B.A., Utkal University (India); M.A., Allahabad University (India); Ph.D., Yale University.
- Robert Major Panerio, 1963 . . . . . Assistant Professor of Music  
B.A., M.Ed., Central Washington State College.
- Christos John Papadopoulos, 1966 . . . Assistant Professor of Art  
B.F.A., Michigan State University; M.F.A., Cranbrook Academy of Art.
- Jeanette Housner Papadopoulos, 1967 . . Lecturer in Art  
B.A., Milwaukee-Downer College; M.F.A., Cranbrook Academy of Art.
- Tom Jones Parry, 1966 . . . . . Football Coach and Assistant Professor of Physical Education  
B.S., M.A., Washington State University.
- Helen Dorsey Patton, 1965 . . . . . Assistant Professor of Librarianship  
A.B., Earlham College, Indiana; M.A.L.S., George Peabody College.
- John Maurice Pearson, 1964 . . . . . Assistant Professor of Physical Education  
B.S., University of Idaho; M.A. (Ed.), Idaho State University.
- Jack A. Peary, 1968 . . . . . Assistant Professor of Biological Sciences  
B.S., City College of New York; M.S., Ph.D., University of Oregon.
- Wiley Elbert Peeples, 1967 . . . Staff Counselor in Counseling and Testing and Assistant Professor of Psychology  
B.F.A., M.A., Ed.D., University of Wyoming.
- William Jack Peterson, 1968 . . . . . Assistant Professor of Sociology  
B.A., M.A., Washington State University.
- Maurice Leon Pettit, 1950 . . . . . Director of Research and Development and Professor of Education and Psychology  
B.A. (Ed.), Central Washington State College; M.A., Ph.D., University of Washington.
- Albert Harold Poffenroth, 1955 : . . . Chairman, Department of Physical Education and Associate Professor of Physical Education  
B.A. (Ed.), Eastern Washington State College; M.S., Washington State University.
- Durward Aubrey Porter, 1965 . . . . . Assistant Professor of Speech Pathology and Audiology  
B.S., Texas Technological College.
- Conrad Harold Potter, 1967 . . . . . Chairman, Department of Education and Associate Professor of Education  
B.Ed., Plymouth State College; M.A., Montana State University; Ed.D., Stanford University.
- Edwin Frank Price, 1965 . . . . . Associate Professor of Education  
B.A., M.Ed., University of Puget Sound; Ed.D., Washington State University.
- Gerald Albin Priori, 1968 . . . . . Assistant Professor of History  
A.B., Tufts University; M.A., State University of Iowa.

## 18 Faculty

- Dorothy May Purser, 1957 . . . . . Assistant  
Professor of Physical Education  
B.S., Ricks College; M.Ed., University of Idaho.
- Orval Edward Putoff, Jr., 1967 . . . . . Assistant  
Professor of Psychology  
B.A., Chico State College; M.S., University of Oregon.
- Betty Jean Putnam, 1967 . . . . . Associate  
Professor of Physical Education  
B.S. (Ed.), Illinois State Normal University; M.S., Smith  
College; Ph.D., University of Southern California.
- Horace G. Rahskopf, 1968 . . . . . Distinguished  
Visiting Professor of Speech  
(Fall and winter quarters)  
A.B., Willamette University; M.A., Ph.D., State University  
of Iowa.
- Reino Walter Randall, 1938 . . . Professor of Art  
B.A. (Ed), Central Washington State College; M.A.,  
Teachers College, Columbia University.
- Larry Don Reid, 1968 . . . . . Lecturer in Speech  
B.A., Central Washington State College; M.A.,  
University of California at Los Angeles.
- Linwood Earl Reynolds, 1947 . . . . . Associate  
Professor of Physical Education  
B.A., University of Montana; M.A., Stanford  
University.
- Roger R. Reynolds, 1968 . . Instructor in Speech  
B.S., Oregon State University; M.A., University  
of Hawaii.
- Veda Reynolds, 1966 . . . . . Visiting Lecturer  
in Violin  
Philadelphia String Quartet
- Joseph Ellis Rich, 1966 . . . . . Chairman,  
Department of Psychology  
and Associate Professor of Psychology  
B.S., University of Idaho; M.S., Ed.D., University  
of Oregon.
- Kent David Richards, 1966 . . . . . Assistant  
Professor of History  
B.A., Knox College; M.S., Ph. D., University of  
Wisconsin.
- Keith Rinehart, 1953 . . . . . Professor of English  
B.A., M.A., University of Oregon; Ph.D., University  
of Wisconsin.
- Louis Donald Ringe, 1968 . . . . . Assistant  
Professor of Geology  
B.S., M.S., University of Idaho; Ph.D., Washington  
State University.
- Bruce Alan Robinson, 1947 . . . . . Associate  
Professor of Mathematics  
B.S., Seattle Pacific College; M.S., University of  
Washington.
- Howard Bruce Robinson, 1957 . . . . . Associate  
Professor of Psychology  
B.A., Miami University; M.A., Ohio State University.
- Marybelle Chase Rockey, 1966 . . . . . Dean  
of Women  
B.A., State College of Iowa; M.A., Colorado State  
College.
- Floyd Henry Rodine, 1955 . Professor of History  
B.A., Gustavus Adolphus College; M.A., Ph.D.,  
University of Nebraska.
- V. Daniel Rogers, 1968 . . . . . Lecturer  
in Home Economics  
B.S., Brigham Young University.
- John William Rolcik, 1965 . . . . . Lecturer  
in Sociology  
B.A., Central Washington State College; M.A.,  
Washington State University.
- Carroll Dean Ross, 1966 . . . Chief Accountant  
B.A. in Business Administration, University of  
Washington.
- George Russell Ross, 1949 . Professor of Music  
B.M., Morningside College; M.M., Northwestern  
University; D.M.Ed., Chicago Musical College.
- Patricia Anne Ross, 1965 . . . . . Credentials  
Supervisor  
B.A., University of Washington.
- Mildred Marguerite Rothgarn, 1967 . Assistant  
Professor of Home Economics  
B.S., B.A., University of North Dakota; M.A.,  
Michigan State University.
- Alice Lou Roths, 1968 . . . . . Lecturer  
in Business Education  
and Administrative Management  
B.A., Washington State University.
- Diana Mary Roulo, 1966 . . . . . Assistant  
Professor of Art  
B.S., M.A. in Fine Arts, Eastern Michigan University.
- Vivienne Wilda Rowley, 1968 . . . . . Assistant  
Professor of Music  
B.Mus., University of British Columbia; M.Mus., Boston  
University School of Fine and Applied Arts.
- Roy Frederick Ruebel, 1954 . . . . . Professor  
of Education  
B.S., Buena Vista College; M.A., Ed.D., University of  
Wyoming.
- James Michael Sahlstrand, 1963 . . . . . Assistant  
Professor of Art  
B.A., M.F.A., University of Minnesota.
- Margaret Ahrens Sahlstrand, 1965 . . . Assistant  
Professor of Art  
B.A., Lindenwood College; M.F.A., State University  
of Iowa.
- Max Savelle, 1968 . . . . . Distinguished  
Visiting Professor of History  
(Fall quarter only)  
B.A., M.A., Ph.D., Columbia University.
- Donald Myron Schliesman, 1957 . . . . . Assistant  
Dean of Education and  
Associate Professor of Education  
A.B., Northern State Teachers College (S.D.);  
A.M., Ed.D., Colorado State College.
- William Dean Schmidt, 1963 . . . . . Coordinator  
of Instructional Materials  
and Assistant Professor of Education  
B.S., University of Nebraska; M.A., San Diego  
State College.
- Christian I. Schneider, 1968 . . . . . Assistant  
Professor of German  
B.A., Tubingen University; M.A., Antioch.
- John Albert Schwenker, 1964 . . . . . Assistant  
Professor of Education  
B.S., University of Vermont; M.A., Montclair State  
College.
- Howard B. Scott, 1967 . . . . . Assistant  
Professor of Psychology  
B.A., M.Ed., Western Washington State College.
- Roy Lyle Selvage, 1967 . . . . . Assistant  
Professor of Psychology  
B.A., M.A., Central Washington State College.
- Frank Q. Sessions, 1967 . Professor of Sociology  
B.S., Idaho State College; M.S., University of Idaho;  
Ph.D., University of Utah.

- Robert Shafto, 1968 . . . . . Lecturer in Drama  
(Fall quarter only)  
OCSEB Higher Certificate Degree, Russell School,  
Lancashire, England.
- Jack Michael Sheridan, 1964 . . . . . Associate  
Professor of Education  
Hebeler Elementary School  
B.A., Central Washington State College; M.Ed.,  
D.Ed., University of Oregon.
- John Stanley Shrader, 1957 . . . . . Professor  
of Science Education  
B.S., M.A., Ed.D., University of Washington.
- Donald Roy Shupe, 1968 . . . . . Associate  
Professor of Psychology  
B.S., M.A., Ph.D., University of Utah.
- John Louis Silva, 1962 . . . . . Assistant  
Professor of Psychology  
B.A., M.A., San Jose State College.
- Robert Eugene Silver, 1966 . . . . . Associate  
Professor of Education  
and Supervisor of Student Teaching,  
Bremerton  
B.A., Walla Walla College; M.A., Ed.D., University  
of Washington.
- Jerry Mark Silverman, 1965 . . . . . Assistant  
Professor of Political Science  
B.A., Long Beach State College; Ph.D., Claremont  
Graduate School.
- Robert Bower Smawley, 1966 . . . . . Associate  
Professor of Education  
B.S., Lock Haven College; M.S., Ed.D., University  
of Tennessee.
- Donald King Smith, 1962 . . . Professor of Music  
B.A., M.A., University of Washington; D.M.A.,  
University of Southern California.
- Gary Lee Smith, 1968 . . . . . Athletic Trainer  
and Instructor in Physical Education  
B.S., Northern Michigan University; M.S., Indiana  
University.
- Milo LeRoy Smith, 1956 . . . . . Assistant  
Professor of Speech and Drama  
B.A. (Ed.), Northern Idaho College of Education;  
M.A., University of Oregon.
- Raymond Albert Smith, Jr., 1965 . . . . . Director  
of Humanities  
and Associate Professor of History  
B.A., Washington State University; M.A., Ph.D.,  
Stanford University.
- William Charles Smith, 1968 . . . . . Associate  
Professor of Anthropology  
A.B., Ph.D., University of California at Berkeley.
- George Lester Sogge, 1938 . . . . . Associate  
Professor of Technology  
and Industrial Education  
B.S., Stout State College; M.A., Ohio State University.
- Stanley Alvin Sorsenson, 1965 . . . . . Assistant  
Professor of Physical Education  
B.A., B.S., Washington State University; M.Ed.,  
Central Washington State College.
- Larry Michel Sparks, 1967 . . . . . Assistant  
Professor of Psychology  
B.S., Ph.D., University of Washington.
- Willard Charles Sperry, 1966 . . . . . Associate  
Professor of Physics  
B.S., Stanford University; M.S., Ph.D., University  
of California at Davis.
- William Wayne Speth, 1965 . . . . . Assistant  
Professor of Geography  
B.S., University of Wisconsin; M.S., Northwestern  
University.
- Alma Catherine Spithill, 1966 . . . . . Counselor  
in Counseling and Testing and  
Lecturer in Psychology  
B.A., Seattle University; M.Ed., Central Washington  
State College.
- Jack Randolph Spithill, 1966 . . . . . Assistant  
to the Dean of Students  
B.A., Central Washington State College; M.A.,  
Seattle University.
- Gilbert Ernst Splett, 1965 . . . Lecturer in Speech  
B.A., M.A., University of Wisconsin.
- Edna May Spurgeon, 1939 . . . . . Associate  
Professor of Art  
B.A., M.A., State University of Iowa.
- Charles Ira Stastny, 1965 . . . . . Associate  
Professor of Political Science  
B.A., University of Washington; A.M., Ph.D.,  
Harvard University.
- Roger G. Stewart, 1966 . . . . . Assistant  
Professor of Psychology  
A.B., A.M., Ph.D., University of Illinois.
- Thomas Dean Stinson, 1954 . . . . . Professor  
of Psychology and Education  
B.S., M.Ed., Colorado State University; Ed.D.,  
Colorado State College.
- Warren Robert Street, 1967 . . . . . Assistant  
Professor of Psychology  
B.A., Occidental College; M.A., Ph.D., Claremont  
Graduate School.
- Harry Sidney Sutherland, 1968 . . . . . Associate  
Professor of Education  
and Supervisor of Student Teaching,  
Vancouver  
B.S., M.Ed., Lewis and Clark College; Ed.D.,  
University of Portland.
- Earl William Synnes, 1965 . . . . . Assistant  
Professor of Business Education  
and Administrative Management  
B.S., Bemidji State College; M.A., University of  
Minnesota.
- Azella Taylor, 1964 . . . . . Assistant  
Professor of Education  
and Supervisor of Student Teaching,  
Ellensburg  
B.A., M.A., University of Washington.
- Bruce Earle Teets, 1968 . . . . . Associate  
Professor of English  
A.B., Fairmont State College; A.M., West Virginia  
University; Ph.D., Duke University.
- John Naylor Terrey, 1967 . . . . . Director  
of Community College Relations  
and Associate Professor of Higher Education  
B.A., M.A., Western Washington State College;  
Ed.D., Washington State University.
- Gordon Robert Thomas, 1965 . . . . . Assistant  
Professor of Russian  
B.A., University of Washington; M.A., Ohio State  
University.
- Louise Agnes Tobin, 1959 . . . . . Associate  
Professor of Home Economics  
B.S., University of Washington; M.S., Oregon State  
University.

## 20 Faculty

- Philip Tolin, 1967 . . . . . Assistant  
Professor of Psychology  
B.S., University of Massachusetts; M.A., State University  
of Iowa.
- Donald Paul Tompkins, 1966 . . . . . Associate  
Professor of Art  
B.A., M.F.A., University of Washington.
- Ned Toomey, 1967 . . . . . Assistant  
Professor of English  
B.B.A., American University of Beirut; A.B.J., University  
of Missouri; M.A., West Texas State University.
- Derward Herbert Tozer, 1967 . . . . . Assistant  
Director of Continuing Education  
B.A., M.Ed., Central Washington State College.
- Alva Edwin Treadwell, 1937 . . . . . Associate  
Professor of Business Administration  
B.A., M.A., Washington State University; C.P.A.
- Jeffrey Douglas Treder, 1968 . . . . . Assistant  
Professor of English  
A.B., Stanford University; M.A., Harvard University.
- Betty Lea Trout, 1965 . . . . . Assistant  
Professor of Home Economics  
Education and State Supervisor  
of Home and Family Life Education  
B.S., University of Idaho; M.S., Iowa State University.
- Enos Edwin Underwood, 1958 . . . . . Registrar  
and Director of Admissions  
B.A., M.A., Eastern Washington State College.
- Dan Alex Unruh, 1965 . . . . . Associate  
Professor of Education  
B.S., Oregon College of Education; M.Ed., University  
of Oregon; Ed.D., Columbia University.
- John Grantham Utzinger, 1963 . . . . . Associate  
Professor of Philosophy  
B.A., Occidental College; M.A., Ph.D., University  
of Washington.
- Luis Cesar Valdespino, 1965 . . . . . Lecturer  
in Spanish  
Doctor of Civil Law, Havana University; B.A.,  
Pacific University.
- Barbara RoJean Vernei, 1967 . . . . . Acquisitions  
Librarian and Assistant Professor  
of Librarianship  
B.A., University of Washington; M.A., Kansas State  
University; M.Libr., University of Washington.
- Emil Leopold Vernei, 1965 . . . . . Bibliographer  
and Associate Professor of Librarianship  
Royal Hungarian J. Nador Polytechnic; Ph.D., Royal  
Hungarian P. Pazmany University; M.S.L.S., Columbia  
University.
- Rudolf Vernie, 1967 . . . . . Director  
of Student Health Services  
and Consultant in Psychology  
M.D., University of Leiden, Netherlands.
- Jared Verner, 1965 . . . . . Associate  
Professor of Biology  
B.S., Washington State University; M.S., Louisiana State  
University; Ph.D., University of Washington.
- John Louis Vifian, 1961 . . . . . Assistant  
Professor of English  
B.A. Whitworth College; M.A., Washington State  
University.
- Charles Wesley Vlcek, 1961 . . . . . Coordinator  
of Television Services and Associate  
Professor of Educational Media  
B.S., M.S., Stout State College; Ed.D., Michigan  
State University.
- Jacques Joseph Wachs, 1965 . . . . . Assistant  
Professor of French  
B.A., M.A., University of California at Los Angeles.
- Richard Leo Waddle, 1967 . . . . . Head  
Acquisitions Librarian  
and Assistant Professor of Librarianship  
B.A., Marietta College; M.A., M.Libr., Ph.D.,  
University of Washington.
- Curtis Arthur Wagner, 1968 . . . . . Assistant  
Professor of Physics  
B.A., University of Wisconsin; M.S., Ph.D., University  
of Illinois.
- Thomas Worth Walterman, 1968 . . . . . Assistant  
Professor of History  
B.A., Augustana College; M.A., State University of Iowa.
- Jeannette Huntington Ware, 1950 . . . . . Assistant  
Professor of Home Economics  
Education and State Supervisor of Home  
and Family Life Education  
B.S., University of Washington; M.S., Teachers  
College, Columbia University.
- Shirley Stewart Waugh, 1963 . . . . . Assistant  
Professor of Librarianship  
B.S., Washington State University; M.S., L.S.,  
University of Wisconsin.
- Constance Helen Weber, 1964 . . . . . Assistant  
Professor of Art  
B.A., M.Ed., Central Washington State College.
- William C. Welsch, 1966 . . . . . Assistant  
Professor of Aerospace Studies  
Major, USAF, B.A., University of Maryland.
- Orville Wilson Wensley, 1961 . . . . . Assistant  
Professor of Speech Pathology  
B.A., M.A., Western Michigan University.
- Raymond Louis Wheeler, 1964 . . . . . Assistant  
Professor of Music  
B.A., University of Wyoming; M.M., Eastman  
School of Music.
- Curt Agart Wiberg, 1956 . . . . . Assistant  
Professor of Biology  
B.S., University of Wisconsin; M.S., University of  
Oregon.
- Harold Southall Williams, 1948 . . . . . Professor  
of Economics  
B.A., M.A., Ph.D., State University of Iowa.
- Dan Leroy Willson, 1961 . . . . . Associate  
Professor of Biology  
B.S., M.S., Kansas State Teachers College; Ph.D.,  
University of Oklahoma.
- Mary Louise Wilson, 1968 . . . . . Assistant  
Professor of Mathematics  
B.S., University of Chicago; M.A., Indiana University.
- Roy Russell Wilson, 1957 . . . . . Assistant  
Professor of Education  
Hebeler Elementary School  
A.B., University of Michigan; M.A., University of Denver.
- Donald Everet Wise, 1966 . . . . . Dean of Men  
B.A. (Ed.), Nebraska State University; M.Ed., Ed.D.,  
University of Wyoming.
- Younger Theodore Witherspoon, 1966 . . . . . Dean  
of Students  
and Associate Professor of Anthropology  
B.S., M.S., Ph.D., University of Utah.

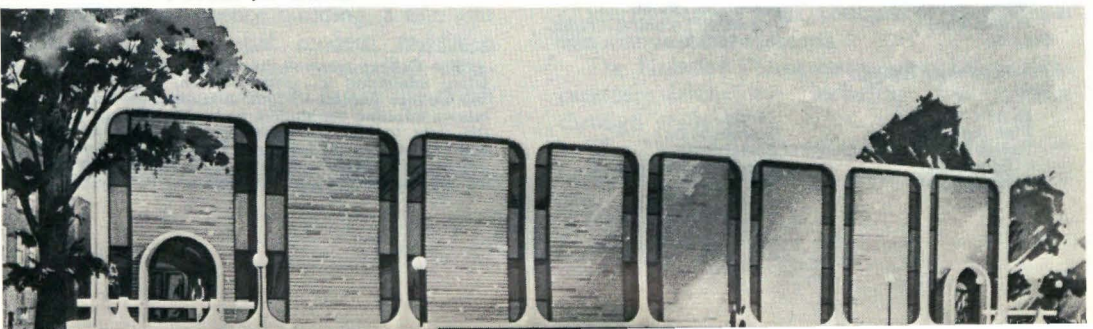
- Clifford Peter Wolfsehr, 1953 . . . . . Assistant  
 Director of Libraries-Public Services  
 and Associate Professor of Librarianship  
 B.A., Linfield College; M.A., Washington State University;  
 M.A., L.S., University of Minnesota.
- Charles William Wright, 1957 . . . . . Assistant  
 Director of Libraries-Audiovisual Services  
 and Associate Professor of Education  
 B.S., Northwest Missouri State College; M.S., University  
 of Colorado; Ed.D., University of Nebraska.
- Robert Yee, 1960 . . . . . Director  
 of Southeast Asian Program  
 and Associate Professor of Political Science  
 B.A., M.A., Ph.D., University of Washington.
- Thomas Yen-Ran Yeh, 1965 . . . . . Assistant  
 Professor of Librarianship  
 B.A., Soochow University; M.A., M.A.L.S., University  
 of Minnesota.
- Madge Arlene Young, 1968 . . . . . Assistant  
 Professor of Education  
 B.S., University of Nebraska; M.A., San Jose State  
 College.
- Karl Edwin Zink, 1968 . . . . . Chairman,  
 Department of English  
 and Professor of English  
 A.B., M.A., University of Florida; Ph.D., University  
 of Washington.
- Max Darrell Zwanziger, 1967 . . . . . Associate  
 Professor of Psychology  
 B.A., State College of Iowa; M.A., University of  
 Denver; Ph.D., University of Utah.

- Dorothy Dean, 1928; Emeritus, 1968  
 . . . . . Associate Professor of Chemistry  
 B.S., Montana State College; S.M., University of Chicago.
- Mary Grace Greene, 1945; Emeritus, 1968  
 . . . . . Associate Professor of Librarianship  
 A.B., Kansas Wesleyan University; M.A., Radcliffe College;  
 B.S.L.S., University of Denver.
- Amanda K. Hebel, 1924; Emeritus, 1960  
 . . . . . Professor of Education  
 B.A., M.A., Teachers College, Columbia University;  
 Ed.M., Eastern Michigan University.
- Annette H. Hitchcock, 1942; Emeritus, 1962  
 . . . . . Associate Professor of English  
 B.A., University of North Dakota; M.A., Teachers  
 College, Columbia University.
- Herbert Glenn Hogue, 1927; Emeritus 1959  
 . . . . . Associate Professor of Industrial Arts  
 B.A., Washington State University.
- Edmund LeRoy Lind, 1936; Emeritus, 1964  
 . . . . . Professor of Chemistry  
 B.A., Wabash College; Ph.D., University of Chicago.
- Robert E. McConnell, 1931; Emeritus, 1959  
 . . . . . President Emeritus  
 B.S., Montana State College; M.S., University of  
 Wisconsin; Ph.D., State University of Iowa.
- Loretta Maude Miller, 1943; Emeritus, 1964  
 . . . . . Professor of Special Education  
 Ph.D., (Ed.), M.A., University of Chicago; Ed.D.,  
 Teachers College, Columbia University.
- Margaret S. Mount, 1928; Emeritus, 1963  
 . . . . . Assistant Professor of Librarianship  
 B.A., Macalester College; Library Certificate,  
 University of California.
- Harold W. Quigley, 1925; Emeritus, 1954  
 . . . . . Professor of Zoology  
 B.S., University of Oregon; M.A., University of Chicago.
- Emil Emanuel Samuelson, 1932; Emeritus, 1968  
 . . . . . Professor of Psychology and Education  
 B.A., Milton College; M.A., Ph.D., University of Wisconsin.
- Mary I. Simpson, 1929; Emeritus, 1963  
 . . . . . Associate Professor of Education  
 B.A., M.A., Colorado State College.
- Donald H. Thompson, 1929; Emeritus, 1962  
 . . . . . Professor of Education  
 B.A., Whitman College; M.A., Stanford University.
- Mildred White, 1951; Emeritus, 1958  
 . . . . . Assistant Professor of Education  
 B.A. (Ed.), M.Ed., Central Washington State College.
- Henry J. Whitney, 1908; Emeritus, 1943  
 . . . . . Professor of Mathematics  
 B.S., Northwestern University.
- Ruth L. Woods, 1941; Emeritus, 1960  
 . . . . . Assistant Professor of Education  
 B.A. (Ed.), M.Ed., Central Washington State College.

## Emeritus

- Mabel T. Anderson, 1918; Emeritus, 1963  
 . . . . . Associate Professor of Education  
 B.A., Washington State University; M.A., Teachers  
 College, Columbia University.
- George F. Beck, 1925; Emeritus, 1959  
 . . . . . Professor of Geology  
 B.S., Washington State University; M.S., University  
 of Washington.
- Lillian M. Bloomer, 1925; Emeritus, 1960  
 . . . . . Associate Professor of Education  
 B.A. (Ed.), Central Washington State College;  
 M.A., Ohio State University.
- Catherine Bullard, 1937; Emeritus, 1964  
 . . . . . Professor of English  
 B.A., Rio Grande College; Ph.D., University of  
 Minnesota.
- John Kenneth Courson, 1932; Emeritus, 1966  
 . . . . . Business Manager  
 B.A., Oregon State University.
- Mary Juanita Davies, 1927; Emeritus, 1965  
 . . . . . Associate Professor of Music  
 B.M., M.M., Chicago Conservatory of Music.

*An administrative annex for CWSC*



# An Introduction to Central Historical Statement and Objective

Central Washington State College was established by the state legislature in 1890. The institution was known as the Washington State Normal School at Ellensburg until 1937 when the legislature changed the name to Central Washington College of Education. Its present name was attained in 1961.

The college has been granting the Bachelor of Arts degree since 1933 and has been authorized to grant Masters degrees since 1947.

Central Washington State College emphasizes quality undergraduate and graduate programs in teacher education and in the arts and sciences. Through its curriculum and programs, the college endeavors to provide, for each of its students, a basis for understanding the world in which he lives.

The Bachelor of Arts (B.A.) degree may be earned in the following fields:

- |                                   |                                |
|-----------------------------------|--------------------------------|
| *Administrative Office Management | *Industrial Technology         |
| Anthropology                      | Mathematics                    |
| Art                               | Music                          |
| Biology                           | *Philosophy                    |
| *Botany                           | Physics                        |
| *Business Administration          | Political Science              |
| Chemistry                         | Psychology                     |
| Economics                         | *Recreation                    |
| English                           | *Rhetoric and Public Address   |
| French                            | Social Science                 |
| Geography                         | Sociology                      |
| *Geology                          | Spanish                        |
| German                            | Speech Pathology and Audiology |
| Health and Physical Education     | *Theatre and Drama             |
| History                           | *Zoology                       |
| Home Economics                    |                                |

The Bachelor of Arts in Education (B.A. in Ed.) degree, leading to the Washington Provisional (teaching) Certificate, may be earned in the fields listed above under the B.A. degree (except those marked \*), and, in addition:

- |                             |   |
|-----------------------------|---|
| Business Education          | Social Studies-Language Arts (Jr. High)   |
| Earth Science               | Special Education                         |
| Industrial Education        | Speech and Drama                          |
| Physical Science (Chem-Phy) | Vocational Technical Trade and Industrial |
| Science                     |   |

For elementary teachers only:

- |                               |                  |
|-------------------------------|------------------|
| Early Childhood               | Music            |
| Fine Arts                     | Science-Math     |
| Health and Physical Education | Social Science   |
| Language Arts                 | Speech and Drama |

Pre-professional programs lead to further study at a university: ( ) indicates the number of years normally spent at the College.

- |                        |                           |
|------------------------|---------------------------|
| Agriculture (1)        | Medicine (3 or 4)         |
| Architecture (1)       | Meteorology (2)           |
| Conservatory Music (2) | Nursing (1)               |
| Dental Hygiene (2)     | Occupational Therapy (2)  |
| Dentistry (3)          | Optometry (2)             |
| Engineering (1-2)      | Pharmacy (2)              |
| Forestry (1)           | Physical Therapy (2 or 3) |
| Home Economics (4)     | Public Health (2)         |
| Journalism (2)         | Social Work (4)           |
| Law (3-4)              | Veterinary (1)            |
| Medical Technology (3) |                           |

Non-degree programs:

- |                    |                      |
|--------------------|----------------------|
| Commercial Art (2) | Secretarial (1 or 2) |
|--------------------|----------------------|

The College's graduate programs lead to degrees, Master of Arts (M.A.), Master of Education (M.Ed.), and Master of Science (M.S.).

The Master of Arts (M.A.) degree may be earned in

- |         |       |
|---------|-------|
| Art     | Music |
| English |       |

The Master of Education (M.Ed.) degree may be earned in

- |                             |                    |
|-----------------------------|--------------------|
| Administration              | Math               |
| Art Education               | Master Teacher     |
| Biology                     | Music              |
| Business Education          | Physical Education |
| Chemistry                   | Reading Specialist |
| English                     | Science            |
| Family Life Education       | School Counseling  |
| Health and Safety Education | School Psychology  |
| History                     | Social Science     |
| Home Economics              | Special Education  |
| Industrial Arts             | Speech             |
| Junior High Broad Area      | Teacher Librarian  |

The Master of Science (M.S.) degree may be earned in

- |           |                                 |
|-----------|---------------------------------|
| Biology   | Counseling Psychology           |
| Chemistry | General Experimental Psychology |
| Math      |                                 |

For further information on the graduate program consult the *Graduate Catalog*.

\*The College reserves the right to change the rules regulating admission to, instruction in, and graduation from the College and its various divisions, and any other regulations affecting the student body. The College also reserves the right to add or withdraw courses at any time. Such regulations shall go into force whenever the proper authorities may determine and shall apply not only to prospective but also to matriculated students.



## Accreditation

The college is fully accredited by the Northwest Association of Secondary and Higher Schools and the National Council for Accreditation of Teacher Education. It has also been approved by the U. S. Attorney General's Office for non-quota immigrant students.

The college is also a member of the American Association of Colleges for Teacher Education and National University Extension Association.

## Location

Central Washington State College is in Ellensburg, a city of about 11,000. Ellensburg is 106 miles east of Seattle. Yakima is 36 miles south. The location away from the rush and congestion of an urban center is ideal for study. Elevation of Ellensburg is 1,597 feet.

## Organization

The College Board of Trustees is appointed by the Governor of the State and approved by the State Senate. Funding for the maintenance of the college comes principally from the State Legislature.

The Dean of Faculty, Dean of Students and Dean of Administration join the President of the College as principal administrators.

A Dean of Education, Dean of Arts and Sciences and a Dean of Graduate Studies complete the higher academic administration.

## The Campus

### Academic Facilities

In its quiet setting in residential Ellensburg, at the foot of the Cascade Mountains, Central's 210 acres are becoming a showplace.

The college buildings are imposing in appearance and thoroughly modern in equipment. Traditional halls—such as McConnell Auditorium, Barge Administration Hall, Smyser Hall—edge the main thoroughfare but new facilities—Bouillon Library, Black Hall, Hertz Music Hall, a new science building, a fine and applied arts complex and modern residence halls offering a variety of unexcelled classrooms and living areas, extend far to the north off Eighth Avenue.

Under planning and construction are an administration annex, a language and literature

building, health center and a technology building. The Samuelson Union is being expanded. In all, CWSC has 64 major buildings.

Outdoor recreation areas and playfields adjoin physical education and residence hall areas.

## Bouillon Library

The Victor J. Bouillon Library is a convenient and unusually attractive place for study and research. A staff of experienced librarians, audiovisual experts, and other specialists are on duty to assure competent service.

The Library holds these resources:

**Printed materials** in 122,000 volumes including books, periodicals, newspapers, **government publications** (49,150), **maps** (8,478), **pamphlets, microprint items** (7,069). All materials are accessible to students on open shelves in or adjacent to comfortable reading areas; the **Music Library** with more than 3,200 phonograph records; **special collections** of archives, maps, and the **Herbert C. Fish Memorial Library of Pacific Northwest History**; **audiovisual materials**, including 2,546 motion picture films, 1,288 filmstrips, 72 sound filmstrips, 23 filmstrip series, 205 slide sets and 563 tapes; **representative teaching machines and programs**. All materials are available without cost to students in their instructional and research work at the college; **closed-circuit television system**, the **instructional materials production laboratory**, the **Tape Learning Laboratory**, the **Curriculum Laboratory**.

## Other Facilities

The **Speech Clinic** provides a training facility for graduate and undergraduate students preparing for careers as professional speech and hearing therapists. Its services are available without charge to all students.

The **Computer Center**, consisting of an IBM 1620 computer and related data processing equipment, may be used by undergraduates in certain courses.

The **Calculator Center** makes statistical laboratory work possible for many fields.

**McConnell Auditorium** provides complete dramatic production facilities.

**Hertz Music Hall** contains a recital hall and many rehearsal rooms.

The **Hebeler Elementary School** is an educational laboratory, including kindergarten through grade six.

The **Nicholson Pavilion** houses the varsity basketball and wrestling gymnasium, the field

house, the swimming pool, courts for basketball, volleyball, and handball, and various exercise rooms. Tennis courts and playing fields adjoin it.

## **Student Housing and Food Services\***

A variety of modern and traditional residence halls, cooperatives, and apartments offer group living experiences to Central students. Rooms are assigned on a first in-first assigned basis.

Students who live on campus must, or those who live off campus may, eat in two modern dining halls—Holmes Dining Hall and Sue Lombard-Commons.

## **Single Student Housing**

(See page 33 for rates.)

Single freshmen and sophomore men and women students under twenty-one years of age not living with parents or relatives with an established home are required to live in college operated residence halls or organized student living groups except when other arrangements have been specifically approved first by the Director of Auxiliary Services and then with written agreement from their parents or guardians.

A residence hall application-contract will be mailed to students from the Admissions Office upon admission.

The residence hall application-contract and a \$40 pre-payment must be mailed to the College Business Office. The pre-payment should be submitted by June 1 when accommodations are requested for fall quarter, and at least one month prior to the beginning of subsequent quarters. The student is urged to make full payment at the time of application (see summary of expenses, page 33). The contract period is for the academic year (fall, winter, and spring quarters).

Residence hall occupancy may be terminated only prior to the first day residence halls are open for a quarter and at the end of a quarter. Cancellations are subject to forfeiture of \$40 depending upon the time. Students who reside in the residence halls board in college dining halls. Refunds for board are not made unless a student is absent for seven or more consecutive days.

Residence halls are closed and no meals are served between quarters.

For further residence hall information, write Director of Auxiliary Services.

## **Married Student Housing**

(See page 33 for rates.)

One hundred fourteen housing units are provided for married students. Application for an apartment may be obtained from the Director of Auxiliary Services. At the time of application, a \$20 deposit should be sent to the College Business Office. This deposit will be returned upon the student's meeting the requirements of the lease.

## **Off-Campus Housing**

The Housing Office maintains a list of off-campus housing for both single and married students.

## **Services**

### **Dean of Students**

The Dean of Students and staff cooperate closely with the faculty to build an environment which will contribute to maximum student opportunity and growth.

Most services for students outside the academic program are organized within the Office of the Dean of Students.

The staff is responsible for assistance with student programs, organizations, and activities; individual advising and educational activities in student residences; and student conduct.

### **Student Health Service**

The college maintains a complete health service. Fulltime registered nurses are available for consultation and health counseling twenty-four hours a day. The campus physician, on campus daily, sees students by appointments.

A voluntary insurance program is available. See page 32 for costs.

### **Placement Service**

The college maintains a central placement service for the assistance of graduating students and alumni seeking new or better positions.

---

\*Assignments to college residence halls and other facilities are made without reference to race, creed, or color and the college expects privately operated accommodations offered through its listing services to be operated in the same manner.

The Placement Service serves students in all departments of the college.

Students who have taken fifteen credit hours of college work, and who are completing degree requirements, are provided initial placement service for a \$1.00 fee (which is included with graduation fees).

A \$5.00 registration or renewal fee is charged to alumni, two-year technical vocation students, graduate students whose undergraduate work was at another institution, and former registrants who desire to use this service.

Registration forms may be obtained upon request.

## Counseling and Testing Services

The Counseling and Testing Center provides services to students without charge. These services are personal and confidential and are in addition to such service as is provided by academic advisers and other agencies of the Student Personnel Services.

In adapting to the college environment the student may be faced with many problems and conflicts not previously encountered. The student therefore must know much about himself in order to make his decisions most wisely and with greatest thought for the future.

In a democratic society built on a belief in the worth and dignity of each person, the student must evaluate himself and his ability to relate to individuals and the society with which he hopes to function. The Center's function is to provide the opportunity for the self examination and to assist students in resolving the problems of choice of major and career, of becoming more efficient academically, and of dealing with personal conflicts.

The Center also administers various local and national testing programs, such as the Washington Pre-College Testing Program, the Graduate Record Examinations, Law and Medical School Admissions Tests.

## Alumni Association

All graduates and former students of the college are eligible for regular membership in the Alumni Association. Annual alumni membership fees are \$3 per year or \$25 for life membership. The activities of the Alumni Association are determined by the Alumni Board of Directors and are coordinated by the College Alumni Director.

## Consulting Services

The Office of Continuing Education coordinates requesting organizations and the faculty for consulting services, including public education consulting. (See also Continuing Education, page 28.)

## Campus Life

### Student Government Association

All regularly enrolled students are members of the Student Government Association.

The college has a long tradition of freedom in students' own government and social activities. Executive power of the Student Government Association is vested in the President, Executive Vice President, Social Vice President, Secretary, and Treasurer.

The Student Government Association Legislature is elected by the students to formulate Student Government policies. Closely associated with the Legislature are student committees, boards, and commissions which carry on specific activities of the Student Government Association.

The Student Government Association supports the intramural program, various forms of entertainment, lecture programs, books for the college library, art shows, American and foreign films, the annual Symposium, campus newspaper and various club and organizational activities. During registration, each student is presented with a membership card which entitles him to participate in all college functions sponsored by the Student Government Association.

### Student Organizations

Many honorary, professional and social organizations are active on campus. A Club Night, each fall quarter, acquaints new students with the functions of these organizations. A Directory of Student Organizations is published by the Student Government Association and distributed to interested persons.

### Residence Hall Senate

Students, represented by the presidents of the residence halls, assume joint responsibility with college authorities through RHS for planning and implementing their own social and intellectual programs.

## Samuelson Union Building And Student Activities

The Samuelson Student Union serves as the center for student activities.

Facilities in the Union include a snack bar, lounge, a games room area (billiards, table tennis), a ball room, the Cavern where hootenannies, jazz and avant-garde activities are programmed, an art gallery, seven conference rooms and a television room. The Union also houses the Student Government Association, the student newspaper (*Campus Crier*) and yearbook (*Hyakem*).

Each student is a member of the Student Union and is invited to participate in the social, recreational, and cultural programs.

## Athletics—Varsity And Intramural

Some 350 students annually participate in a 10-sport intercollegiate athletics program at Central, generating interest which has helped to swell participation in intramural activities to more than 1,500 men and women students.

Central, a member of the Evergreen Conference (EvCo), the National Association of Intercollegiate Athletics (NAIA) and the National Collegiate Athletic Association (NCAA), fields varsity teams in football, basketball, baseball, track and field, wrestling, swimming, golf, tennis, gymnastics and cross-country.

High quality is seen in the Wildcats' strong finishes in national competition. CWSC teams recently have placed third in basketball, swimming, wrestling and tennis, fifth in track and field and tenth in nationwide football polls.

Such success is credited with bolstering other campus activities. The Men's Intramural Association, per its motto, offers "a sport for everyone," while the Women's Recreation Program meets a wide range of similar interests.

In addition, some 150 women participate in an extramural program of field hockey, basketball, tennis, volleyball and gymnastics.

Another popular program which makes athletic facilities available to students and faculty is the weekend Co-Rec periods, three hours of recreational activity sponsored and directed by the Recreation Club and the Student Government Association.

## Student Activity In the Arts

Through student editorship with faculty advisement, the students produce the *Campus Crier*, weekly newspaper, operated in close collaboration with college classes in journalism. *Hyakem*, the college yearbook supported by voluntary purchases, offers students varied experience in writing, editing, proofreading, printing, and photography. *Inscape*, a literary magazine supported through voluntary purchase, is an informal anthology of student and faculty verse, prose, art, and photography.

The college's musical organizations include a concert choir, orchestra, band, stage band, and numerous small ensembles. In addition to regular quarterly campus concerts, the choir and band tour each year.

The college's well-equipped theatre serves as a laboratory workshop for students interested in theatre arts. Offerings range from Shakespeare to original scripts and from children's drama to Broadway musicals. Participation in all forms of activity is open to every student, and advanced drama students are given opportunities to help direct these productions.

KCWS AM-FM is operated by students on a regular broadcast schedule. Opportunities are available for students to work as program directors, engineers, producers, announcers, writers, and music directors.

Intercollegiate speech competition includes debates, impromptu, extemporaneous speaking, oratory, oral interpretation, and expository speaking. Each student competes at the level for which he is qualified, and develops his ability to find, evaluate, and organize facts, to relate them to ideas, and to express those ideas cogently to others.

## Programs of Special Interest Distinguished Visiting Professor Program

In the fall of 1966 the college established a Distinguished Visiting Professorship to give the campus and the community an opportunity to study extensively with established scholars and laymen from other areas.

Kenneth Burke, author and critic and member of the American Academy, held the first

chair, offering a special seminar in methodology for interdisciplinary studies, and giving a series of public lectures.

In 1967 the American composer, Paul Creston, taught an advanced seminar in music theory and composition as well as giving public lectures. During the fall quarter of 1968, the American historian, Max Savelle, will be Distinguished Visiting Professor of History. In addition to a history seminar, Mr. Savelle will offer three public lectures of general interest in October and November.

Stanley Cain, presently an assistant secretary of the Interior—Fish, Wildlife and Parks, and professor of conservation at the University of Michigan, will be Distinguished Visiting Professor during winter quarter.

During spring quarter the position will be filled by Marvin Harris, professor of anthropology at Columbia, who will also serve with the other two professors in a like capacity during fall and winter quarters and during summer of 1969.

## Symposium

To help relate the information and theory of academic subjects to the value choices of everyday life, the college has held a three-day symposium each spring since 1962 under the general heading "American Values."

Such specific themes as "Revolution," "Man Working," and "Language and World Order," encourage a continuing conversation on campus and in the community about matters of common concern.

Films, forums, residence hall discussions, books, and articles on the theme are part of the preparation for the symposium.

The issues involved in the subject are treated in formal talks by speakers from outside, and in informal colloquia and panels headed by faculty and students; during the symposium, other campus activities such as exhibits and dramatic productions are related to the theme.

## Foreign Study

The college is a member of the Northwest Interinstitutional Study Abroad Council which provides opportunities for organized study in Europe and England.

The Office of the Dean of Arts and Sciences develops and coordinates these and other foreign study opportunities, such as the Winter Quarter in Mexico Program in which CWSC cooperates with the University of Americas in Mexico City in presenting a full study program.

## Urban Center Teacher Preparation Program

Central Washington State College in cooperation with the Seattle and Tacoma Public Schools has developed a teacher preparation program especially designed for teaching in urban center schools. The program resulted from the realization that (1) our population continues to urbanize, (2) urban centers frequently represent economically underprivileged people living in environmental conditions significantly different than those of the traditional middle class, (3) nearly all teacher education programs now in existence prepare in a middle class environment for teaching in a middle class school, and (4) many teachers trained in a middle class school are reluctant or ineffective teachers in an urban center, depressed area school.

The program, therefore, represents an attempt to train teachers in an urban center setting to work more effectively with students coming from different economic, cultural, and/or racial backgrounds.

Students live and study in the "central area," downtown Seattle and Tacoma, for approximately thirty-two weeks. Registration for courses, instruction, laboratory experiences and study will take place in the urban center setting.

The faculty involved in the program consists of one college professor assigned full time to the project and living in both Tacoma and Seattle, one college professor assigned part time during the summer field experience and fall quarter who commutes from campus, and three faculty members from each of the Seattle and Tacoma schools who assist on a half-time basis during the autumn quarter. Provisions are made to use consultants, both from the campus and the local urban center community, as frequently as needed throughout the entire thirty-two week period. In addition, consultants from other urban centers are used. (See page 85.)

## Summer Session

The college has a varied summer program including a nine-week session and two 4½-week sessions. Special assistance is given to entering freshmen. For information and summer catalog, write the Director of Summer Session, whose office is with the Dean of Graduate Studies.

## Southeast Asian Studies

The college has inaugurated a program to enable undergraduate students to supplement work in their major fields with courses in the politics, geography, art, economics, etc., of Southeast Asia. In future years the Program will include special seminars, lectures, language study, and the establishment of an undergraduate exchange program of students and staff between Central Washington State College and Southeast Asian universities.

For further information, inquire at the office of the Assistant Dean of Arts and Sciences.

Graduates of the program will be certified as having completed the Southeast Asian Studies Program. (See page 139.)

## Air Force Reserve Officer Training Corps Program

Central Washington State College offers the Air Force Reserve Officer Training Corps two-year program.

Upon successful completion of the AFROTC program and degree attainment, a cadet is commissioned a Second Lieutenant in the United States Air Force Reserve.

Cadets entering the AFROTC program must pass required mental and physical examinations, be approved by a screening board, and satisfactorily complete the six-week's field training course conducted during the summer months at an Air Force base before enrolling in the Professional Officer Course (POC). (See page 49.)

## Office of Continuing Education

### Extension

Central has been offering an Extension program since 1917. In May of 1965 the college became a member of the National University Extension Association, the acknowledged asso-

ciation of institutions which offer instruction by correspondence and extension classes.

The college arranges extension classes in any community in the state as long as the financial obligations and the engagement of resource persons can be met. Generally, any of the regular college courses may be offered by extension provided there is a large enough group in any one center to justify doing so and as long as the class is not dependent upon the campus library and laboratory facilities or is not one of the professional education sequence courses. Persons interested in having an extension class offered in a specific community should address their inquiry to the Director, Office of Continuing Education.

### Correspondence Courses

A number of courses are offered which are carried on entirely by mail and are planned and conducted by campus professors. Credits received in this manner may be applied toward an undergraduate degree to the extent of 48 quarter credits. Additionally, 12 quarter credits may be earned by correspondence toward the Fifth Year Teaching Certificate.

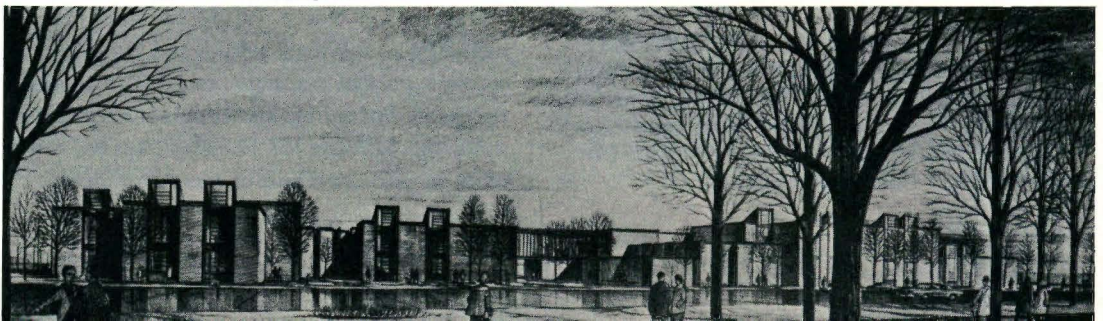
### Conferences, Institutes and Short Courses

All conferences and special courses which are academic in nature are coordinated through the Office of Continuing Education. The development of any conference, institute, or short course is of necessity a cooperative process from initiation and planning through the actual operation between a specific department of instruction on campus and the special interest group desiring the activity. Business, professional and lay groups interested in courses of this nature should contact the Director, Office of Continuing Education.

### Adult Education Programs

To any committee, group or organization which wishes help in setting up Adult Education activities, the College gives all possible assistance. Such activities include adult basic education groups, study groups, forums, lecture series, etc.

*New Fine and Applied Arts Complex*



# Opportunities for Superior Students

## Advanced Placement

Superior high school students who have completed the junior year may attend college classes prior to high school graduation under one or more of the following plans:

- a. By enrolling in college during the summer quarter between the junior and senior high school years.
- b. By enrolling in selected college classes concurrently with enrollment in high school during the senior year.
- c. By enrolling in college extension, correspondence, or televised courses.
- d. By attending summer programs designed especially for high school students who have completed the junior year.
- e. By being admitted to college on a regular basis after having completed the junior year.

With the consent of the department concerned, advanced placement with or without college credit may be granted to a student who successfully completes comprehensive examinations in the subject field in which he has achieved a high degree of competency. Advanced placement or exemption examinations are usually given in subjects required in the General Education sequence.

Advanced placement with college credit will be granted to those who present College Entrance Examination Board Advance Placement Test scores of 3, 4, or 5 in any of the fields covered by these examinations (American history, European history, biology, chemistry, English, French, German, Latin, Spanish, mathematics, physics).

## Honors Program

### The General Honors Program

This program is conceived as a unified course of study covering five consecutive academic quarters (exclusive of summer quarter) and featuring individualized curricula. Interested students should apply during the first quarter of the freshman year, though there may be opportunity for a few to join at a later date.

Those applicants who are accepted take 10 units per quarter under the program during their last two freshman quarters and the entire sophomore year. Participation in the program satisfies the whole General Education Breadth Requirement of 50 units of Humanities, Social Science, and Natural Science. Instruction is conducted on a seminar and tutorial basis.

Students take part in a weekly seminar which they themselves organize and conduct. More importantly, each student is assigned three tutors to whom he reports weekly—a tutor in Humanities, one in Social Science, and another in Natural Science. The tutor helps the student design and supervises a long-range program of individualized studies in each of the three broad General Education areas.

The student has a great deal of self-determination in choosing his own readings, problems, theses, assignments, and a great deal of independence in getting the job done. Rather than taking conventional courses, he works on his own under tutorial supervision. This allows much more time for reading, writing, reflection, and private exploration of subject matter than the standard curriculum affords. (See page 107.)

### Departmental Honors Programs

Junior-Senior honors programs have been established by the following departments: Art, Biology, Chemistry, Economics and Business Administration, Education, English, Foreign Languages, Geography, History, Mathematics, Music, Philosophy, Political Science, Psychology, Sociology, and Rhetoric and Public Address.

Juniors and seniors involved in departmental honors work are usually freed from some of the general departmental requirements and are privileged to engage in individual study, special departmental seminars, research projects, etc., determined in consultation with departmental faculty. (See also: *Credit by Examination and Individual Study Courses*, p. 34.)

Students completing a departmental honors program are graduated with honors in that field: Their graduation records include recommending letters from faculty closely associated with the Honors Program.

# Admissions, Expenses, Financial Aids

## Admission Requirements

Students attending high school in Washington should request from their high school principals or superintendents the uniform application blanks used in this state, which should be completed and forwarded to the Director of Admissions. Graduates from out-of-state high schools should write to the Director of Admissions for application forms. All applicants must meet the application deadline as published in this catalog for the quarter he plans to enroll.

### 1. High School Graduates

**4.00 to 2.5**—High School seniors will be accepted in the early admission program at the close of the 6th semester if they have attained a 2.5 or higher cumulative grade point average. These students should submit the Standard Application Form at the close of the 6th semester, but not before December 1st of their senior year. Acceptance becomes official upon receipt of the 8th semester grade results with indication of high school graduation.

**Below 2.5**—The Standard Application for Admission should be submitted at the close of the 6th semester, but not before December 1st of the senior year. Acceptance of individuals with high school grade point averages below 2.5 will be determined after the 8th semester, subject to availability of facilities and staff.

### 2. Students Transferring From Other Colleges

Individuals who have had previous college experience may be admitted as follows:

**a. From Other Colleges That Grant Degrees.** Credits earned in accredited colleges will be evaluated and advanced standing allowed on the basis of the official transcript submitted. Credit toward the fulfillment of graduation requirements will be allowed only insofar as the courses satisfactorily completed meet the requirements of the basic course pattern

of Central Washington State College. Two official transcripts from each college attended must be filed one month prior to the registration date given for the quarter in which the student plans to enroll.

These students will be admitted to full standing provided the grade point average of the college work presented is 2.00 (C) or higher. A student in dropped status at any university or college and/or having an unsatisfactory standing (below 2.00 G.P.A.) may not apply for admission to enroll in courses until the expiration of at least one year from the date he was dropped or the quarter of unsatisfactory standing (below 2.00 G.P.A.).

**b. From Community (Junior) Colleges.** Credits earned in accredited junior colleges will be evaluated in accordance with the following provisions:

(1) No more than 96 hours of work (including six in physical education activities) may be allowed for credit.

Transfer credit from a junior college will not be accepted if that credit is earned after the total number of hours of credit accumulated by the student at all institutions attended exceeds one-half of the number of hours needed for earning the baccalaureate degree.

(2) Two official transcripts from each college attended must be filed one month prior to the registration date given for the quarter in which the student plans to enroll.

These students will be admitted to full standing provided the grade point average of the college work presented is 2.00 (C) or higher. A student in dropped status at any university or college, and/or having an unsatisfactory standing (below 2.00 G.P.A.) may not apply for admission to enroll in courses until the expiration of at least one year from the date he was dropped or the



quarter of unsatisfactory standing (below 2.00 G.P.A.).

**c. From Non-accredited Colleges.** Students transferring from non-accredited colleges will be admitted on probation provided the grade point average of the college work is 2.00 (C) or higher. Credits transferred from non-accredited colleges may be accepted as a basis for advanced standing (without credit) only after the applicant has successfully met the minimum academic standards (G.P.A. of 2.00). Two official transcripts from each college attended must be filed two weeks prior to the registration date given for the quarter in which the student plans to enroll.

### 3. Veterans

Veterans follow the same application procedures as others. Those who are not graduates of accredited high schools may be ad-

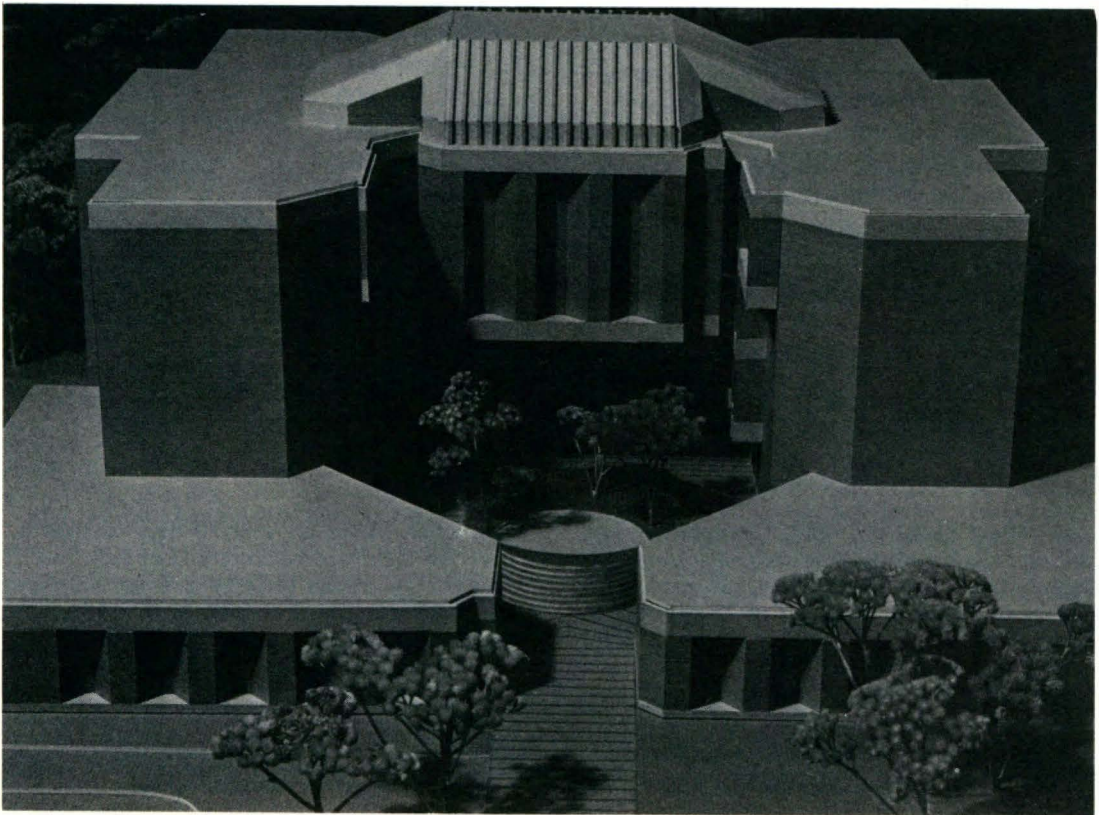
mitted provisionally by taking the General Educational Development Examinations of the Armed Forces Institute. These examinations may be taken at the College. Write the Veterans' Adviser, Dean of Men's Office, for pertinent information concerning Public Law 550 (G. I. Bill).

### 4. Foreign Students

The college accepts qualified students from foreign countries. A faculty committee determines admission on the basis of evidence concerning the student's (a) scholarship and academic eligibility; (b) financial competence; and (c) ability to use and to understand oral and written English.

The college does not provide scholarships for foreign students, and foreign students are expected to provide for all expenses incurred. Regular fee and other charges are paid by foreign students. Write the Foreign Student Adviser, Dean of Women's Office, for further information.

*New Home for English, Languages and Philosophy*



# Expenses\*

REGISTRATION FEES	<i>Per Quarter</i>	
Resident**	\$ 88.00	<b>Board and Room</b> Residence Hall and Food Service fees range from \$189 to \$320 per quarter. Refer to next page for specific costs.
(Tuition—\$19; General Fees—\$69)		
Non-Resident**	157.00	
(Tuition—\$57; General Fees—\$100)		

\*All expense items subject to change without notice.

\*\*"Resident students" means full-time students who have lived in this state at least one year prior to the date of their registration; or, children of federal employees residing within the state; or, children and spouses of college faculty and staff.

## OTHER FEES

Audit	Regular fees
Correspondence	\$10.00 per credit
Extension	10.00 per credit
Special (6 credits or less)	10.00 per credit—minimum fee \$20
Student Teaching outside Kittitas County	58.00, resident; \$127.00, non-resident
Industrial & Fine Arts Materials tickets	Approx. \$7.50 (unused portion refunded)
Science Breakage and Materials tickets	2.00 (unused portion refunded)
Flight training (paid to contract agency)	17.00/hr. dual 12.00/hr. solo
Cap and Gown	B.A. 5.25 M.A., M.Ed., M.S. 11.25
Certificate	1.00
Degree	5.00
Placement	1.00
Student Benefit	1.00
Thesis Binding	15.00
Change of Schedule	1.00
Withdrawal from course	1.00
Special examination	5.00
Transcript	1.00
Student Accident and Health Insurance	22.60 per year
Hyakem (yearbook)	7.50
Testing (if not paid in high school)	7.00
Personal costs, books and supplies (per quarter)	100.00 approximate
†Parking (motor vehicles)	9.00 academic year

## TUITION REFUNDS

A refund of 50 per cent of general fee and tuition will be made if withdrawal from college is made by the last day designated for change of schedule. A refund of 25 per cent of general fee and tuition will be made if withdrawal occurs within the first 20 days of class

instruction. After the first 20 days of class instruction there will be no refund of fees. Special students (6 credits or less) will not receive a refund unless they withdraw prior to the time classes are scheduled to start and under extenuating circumstances.

†The operation of Motor Vehicles on campus by students at Central Washington State College is a privilege rather than a right. In order to exercise this privilege the student must: make adequate provision for liability insurance coverage in accordance with state law; obey the legal stipulations contained in the State Motor Vehicle Code; register his automobile or motor-bike with the college and pay the appropriate parking fee when applicable; and abide by the traffic and parking regulations established for the CWSC campus. Failure to accept these obligations make the student driver subject to the loss of automobile privileges. The College accepts no responsibility for motor vehicles operated or parked on the CWSC campus.

**\*Residence Hall Board and Room Cost Information**

Charges include linen: one pillow case, two sheets, one blanket, one bed pad, one pillow, and telephone service. Laundering of linen is included in the charges listed.

Students living in residence halls are required to take their meals in either Holmes or The Commons dining halls, which serve three meals per day Monday through Saturday, and two meals on Sunday.

**CHARGES**

A \$40 room reservation or pre-payment is to be paid when applying for Residence Hall accommodations. The pre-payment is applied against the last quarter of residence charges.

**Charges for Board and Room and Payment Schedule**

(For Students Who Live In Residence Hall For The Entire Academic Year)

Quarter	①	②	③	④	⑤	⑥	
Prepayment <sup>⑥</sup> . . . . .	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	To Be Paid When Applying
Fall . . . . .	280	307	313	320	277	130	
Winter . . . . .	230	253	258	264	228	107	
Spring . . . . .	189	207	211	216	187	88	
	<u>\$699</u>	<u>\$767</u>	<u>\$782</u>	<u>\$800</u>	<u>\$692</u>	<u>\$325<sup>⑦</sup></u>	

- ① Carmody and Munro Hall.
- ② Kennedy Hall.
- ③ Stephens, Whitney, Barto, Anderson, and Moore Halls.
- ④ All Other Residence Halls.
- ⑤ Cooperative-Student Village.
- ⑥ Single Student in Apartments—Per Student and Charge.
- ⑦ Room only, without linen.
- ⑧ The \$40 is applied to the last quarter of Residence Hall Charges.

Single Rooms—Students who live in a room without a roommate are charged an additional \$2 per week.

Married student apartments: \$67-82 per month. Write the Director of Auxiliary Services for information.

\*For further information on Housing and Food Services see page 24.

**Financial Aid  
For Students**

**Part-Time Employment**

The college employs students on a part-time basis to work in the library, campus offices, union building, laboratories, bookstore, and dining halls. Students seeking part-time employment should contact the Financial Aids Office in Barge Hall.

The College Work-Study Program (Economic Opportunity Act of 1964) is available to qualified students from low-income families.

**Student Loans**

Students should inquire at the Financial Aids Office about loans for which they may be eligible. All forms of loans (other than emergency loans) require a College Scholarship Service form to be on file in the Office of Financial Aids in addition to the application for the financial assistance desired. Returning students may obtain a renewal or re-evaluation form from the Financial Aids Office. This must be received by College Scholarship Service (Berkeley, Calif.) March 1 for those persons applying for scholarships.

All other students seeking loans or grants must also have a C.S.S. report for the Financial Aids Office. This need not necessarily be done by March 1, but must be completed prior to the granting of financial aid.

## Scholarships

A student who applies for a scholarship is usually considered an applicant for all scholarships for which he is eligible.

Below is a partial list of scholarships. All students should feel free to inquire about them at the Financial Aids Office. Students who wish to apply for scholarships for the ensuing year must file application by April 1 to the Financial Aids Office. Winners will be notified by mid-April. As soon as possible following notification, scholarship recipients must notify the Financial Aids Officer whether they accept.

### Scholarships Available to High School and Junior College Graduates

C.W.S.C. Scholarships in Art  
 C.W.S.C. Scholarships in Science  
 C.W.S.C. Music Scholarships  
 Ellensburg Junior Chamber of Commerce Scholarships  
 Ellensburg Telephone Company Scholarship  
 P.T.A. Teacher Education Scholarships (3)  
 John H. Whitney Memorial Scholarship in Art

### Scholarships Available to Students Already Enrolled at C.W.S.C.

Mabel Anderson Hall Scholarship  
 Harold Barto Hall Scholarship  
 Central Women Students Scholarship  
 Central Washington State College Alumni Scholarships  
 Myron Davies Memorial Scholarship  
 Dennis Farrell Memorial Pre-Medicine Scholarship.  
 Eastern Star Scholarship  
 Ellensburg Altrusa Scholarship  
 Ellensburg Coca-Cola Scholarships  
 Ellensburg Telephone Company Scholarship  
 David Hertz Memorial Scholarship  
 History Scholarship  
 Hugh Hitchcock Scholarships  
 James and Minnie Loudon Scholarship  
 Jennie Moore Hall Memorial Scholarship  
 John P. Munson Scholarships  
 Ernest L. Muzzall Memorial Scholarship  
 P.E.O. Chapter D.N. Scholarship  
 P.E.O. Chapter B.F. Scholarship  
 Presser Foundation Scholarship in Music  
 Angie A. Schlien Memorial Scholarship  
 Selah Telephone Company Scholarship  
 Special Education Scholarship  
 C.W.S.C. Speech and Drama Scholarships  
 Stephens Hall Scholarship

# Scholastic Regulations

## Credit by Examination

Students enrolled in the college may receive credit for a course by taking a special examination proving the required performance standards for the course. Contact the Registrar for details.

## Individual Study Courses

"Individual Study" courses (courses numbered 496, 497, 498, and 596) are reserved for superior students and should include either advanced study on specific topics not offered as separate courses or other areas for which the student is prepared, not covered as existing courses.

The content of "Individual Study" courses is planned so that at least twenty-seven hours of intensive study will be required per credit.

Students wishing to register for "Individual Study" courses must, prior to registration: in conference with the appropriate department chairman or a professor designated by him, de-

termine the specific topic to be studied and outline the project; fill out an "Individual Study Permit" form, including the outline on the back of the form; and receive the approval signatures of the instructor and the department chairman.

## Extension and Correspondence Courses

1. Credit is allowed for correspondence and extension courses completed at this college or through other colleges and universities accredited by regional accrediting associations.
2. As many as 48 quarter credits in correspondence and/or extension courses will be allowed toward the Bachelor's degree. As many as 12 quarter credits in correspondence and/or extension courses may be allowed toward the Fifth Year Teaching Certificate. Nine quarter credits by extension classes may be allowed toward the Master's degree in education.

3. Courses taken from other institutions must correspond to those offered at Central Washington State College.
4. Credit earned through extension and/or correspondence courses meets the requirements for graduation; it does not meet the residence requirements.
5. Students who plan to use correspondence credit toward graduation must complete all lessons and the final examination before beginning their final quarter in residence study.
6. The student is solely responsible for complying with all regulations stated in the current *Correspondence Bulletin*.
7. For further stipulations relating to graduate study see the *Graduate Catalog*. For further information address inquiries to the Director of Continuing Education.

## Audit

A student eligible to enroll in a course for credit may enroll as an auditor except in laboratory courses, provided that space is available. Auditors may not enroll prior to the day designated for class changes in any quarter, which will also be the final day for a student to change his status from "credit" to "audit." To receive credit for an audited class, the student must enroll for credit in the same course in a subsequent quarter. When a student's total class load exceeds six credits, including the credits of audited courses, he must pay regular student fees. Students enrolled in six credits or less, including audited courses, pay the special student fees.

Instructors may not compel auditors to write papers or take examinations, but may insist upon other course requirements. The instructor may request the Dean that the auditor be officially withdrawn from the course if these requirements are not met.

## Definition of "Quarter Credit"

A "quarter hour," "quarter hour credit," or "quarter credit" is ordinarily defined as one fifty-minute lecture or recitation period a week or two fifty-minute periods of laboratory or activity work a week for the duration of the quarter, eleven or twelve weeks.

A quarter credit is equal to  $\frac{2}{3}$  of a semester credit. A semester credit equals  $1\frac{1}{2}$  quarter credits.

## Student Load

The standard undergraduate load is sixteen credits per quarter.

Students on academic probation (those whose last quarter of work or whose cumulative grade point average is less than a 2.00—C average) may take up to and including 14 credits.

Students on academic probation are required to take a minimum of ten residence hours each quarter they are on probation.

Students who are in good academic standing (whose cumulative grade point is 2.00—C or above) may take up to and including 19 credits. Undergraduate loads are recommended in accordance with the following schedule:

Cumulative G.P.A.	Maximum Load (for undergraduates) Per Quarter
2.00 to 2.49 . . . . .	15 credits
2.50 to 2.99 . . . . .	17 credits
3.00 or above . . . . .	19 credits

Approval for undergraduate overloads above 20 credits may be granted by the Dean of Students' Office after a check of the student's record has been made.

First quarter transfer students may enroll for no more than 18 credit hours. Any load above 17 hours requires a grade point average of 2.00.

When a student has completed registration, his official study schedule is filed in the Office of the Registrar. Since this schedule is the basis for official reports and records, the student must assume the responsibility for keeping it accurate at all times. (Forms at the back of this catalog will help the student keep his own records.)

Students will be given credit only for the courses for which they are officially registered.

## Catalog Limitation

Subject to a ten-year limitation, candidates for degrees may complete the college's requirements as tabulated in the *General Catalog* for any year the student attends either the college or a community college in the state of Washington.

## Registration Procedures

Students must complete their registration on the day or days designated in the college calendar. Registration is conducted in alphabetical order, rotating each quarter.

Complete registration information will be sent to the student upon admission.

## Classification of Students

Class rank is based upon the number of quarter hours earned as follows: Freshman, 0-44 quarter hours; Sophomore 45-89 quarter hours; Junior, 90-134 quarter hours; Senior, 135-192 quarter hours.

## Marking and Point System

"Grade Points" are assigned to each mark as follows:

A	4.	C	2.
A—	3.7	C—	1.7
B+	3.3	D+	1.3
B	3.	D	1.
B—	2.7	D—	0.7
C+	2.3	E	0

- A distinctly superior
- B above average
- C average
- D substandard
- E failing
- S Satisfactory
- U unsatisfactory
- I incomplete—work must be completed before the end of the next quarter; otherwise the "I" will revert to "E."

\*W withdrawn—indicates passing grade at the time of withdrawal. May be given up to three weeks before end of quarter. Students should begin the withdrawal process in the Registrar's Office.

---

\*1. a. All schedule changes, including withdrawals from classes, must be made on the date indicated in the college calendar. After that date all schedule changes, including withdrawals from classes, are permitted only to adjust for unavoidable errors in registration, failure in prerequisite courses, official changes in publicized quarterly offerings, or other conditions beyond the control of the student. The student is expected to plan his program carefully before scheduling and then to register for the specific courses he intends to pursue for the entire quarter.

b. A request for withdrawal from a course because of emergency circumstances beyond the student's control, such as severe illness or accident, or a comparable situation, must be discussed with the Dean of Students.

c. Any student withdrawing from college after the change of class day, and before the end of the quarter will receive a "W" or an "E" for each course depending upon the quality of his work.

d. Unfinished work shall be completed before the closing date of the next quarter following the one in which the incomplete was given, or the "I" will be changed to an "E" or the grade so indicated by the instructor.

## Scholarship Standards

### Undergraduate

Students are considered to be "in good standing" when their grade point average is 2.00 (C) or better. Whenever a student's scholastic record falls below 2.00 (C) for any quarter, he is placed on probation.

To be recommended for the B.A., the B.A. in Education, or the teaching certificate, the student must have achieved a grade point average of 2.00 (C) for the four years of college work and a grade point average of 2.00 (C) for the final three quarters. He must also earn a 2.25 in his major field.

### Retention

Each student's grades are reviewed at the end of every quarter. In order to remain in good standing a student must maintain a cumulative grade point average of 2.00 (C) or better. Whenever it drops below 2.00, his scholastic status is subject to review by the Academic Standing Committee.

## Class Attendance

Regular class attendance is encouraged, but is not compulsory. The student is responsible, however, for all requirements of the course in which he is enrolled. The student should understand that his grade for a course depends primarily upon the quality of his performance, but also, that in some courses participation in class activity or discussion may also be important.

The faculty has no responsibility to offer makeup work for casual absences, but may give such opportunity to students who have been absent from class for justifiable cause. Instructors or departments formulate their own policies regarding arrangements for makeup work.

## Numbering of Courses

Courses are numbered as follows:

Physical Education Activities	1 through 99
Freshman	100 through 199
Sophomore	200 through 299
Junior	300 through 399
Senior	400 through 499
Graduate	500 through 600

Students may elect courses one year ahead of their present status except when otherwise designated. Courses numbered 500 and above are for graduate students only. However, su-

rior students may take 500 level courses if they obtain prior approval from the Dean of Graduate Studies, declare the 500 level course as part of their future graduate program, and do not use the credit in a Bachelor's degree program. The prerequisites for all courses must be met as indicated by the course description.

## Pass-Fail Option

Students are urged to use the pass-fail option as a way to explore academic areas in which they are interested. Students, with the exception of first quarter freshmen and students on academic probation, are allowed to select one class per quarter to a total of 15 credits for a pass-fail grade.

These classes must be selected from Breadth Requirements and free electives; i.e., they must not be courses in the major, minor, professional, and general education program.

The student may designate the class as pass-fail during registration or on class change day. Pass-fail courses count toward degree credits, but are not included in the computation of grade point averages.

## Requirements for Graduation

1. Graduation from a four-year accredited high school or its equivalent is required.
2. A minimum of 192 credits is required for graduation.
3. No more than twelve credits in music and physical education activities combined may be included in the 192 credit hours required for the degree.
4. Residence study must include at least one academic year (thirty-six weeks) with a minimum of forty-eight credits.
5. Credits earned by correspondence or in extension classes do not count toward meeting the residence requirement.
6. The final quarter preceding graduation must be in residence.
7. The cumulative grade point average must be 2.00 with a grade point average of at least 2.00 for the last three quarters. A 2.25 must be earned in the major field.

8. Not more than one-fourth (48 quarter credits) of the program leading to the Bachelor's degree may be taken in extension classes and/or correspondence.
9. Sixty credits must be in upper division courses (courses numbered from 300 through 499).
10. Transfer students must take a minimum of ten credits in the major field and five credits in the minor field of study at Central Washington State College.
11. Candidates for degrees are required to be present at the commencement exercises unless excused by the Registrar.

## Credit Evaluations

Students must assume the responsibility for meeting all course requirements and total credits for graduation. See form at back of this catalog.

Credit evaluations are furnished for:

- (1) transfer students, by the Admissions Office at the time of acceptance.
- (2) a B.A. in Education by the Registrar's Office, upon request from the Office of the Dean of Education.
- (3) a B.A. in Arts and Science, upon request, during the first quarter of the senior year by the Registrar's Office.
- (4) upon application for a degree.

A fee of \$5 is charged for additional evaluations.

Evaluations provide a basis for advising the student, assure the college that requirements have been met, and assist the student in his planning.

## Application for Graduation

An application for graduation must be made at the Registrar's Office during the quarter preceding the quarter in which the degree is to be received.

## Commencement

Commencement exercises are held at the end of spring quarter for all graduates of the previous summer, fall, winter, and spring quarters.

# Basic and Breadth Requirements For Graduation

**FOR B.A. AND B.A. IN EDUCATION DEGREES . . . . .62 credits**

**Basic Requirements (12 credits)**

English 101, 301 (6 credits)

Students with marked proficiency in the English Placement Test are excused from English 101. Those with deficiency will be enrolled in English 100. English 100 offers no credit and carries a special registration fee in addition to the regular fee.

(English Composition Clinic. No credit. Required of every student receiving "D" in English 301 or formally referred to the clinic by any of his professors because of marked deficiencies in writing skills. Diagnosis of writing weaknesses and in-clinic practice designed to bring the student up to an acceptable level of writing proficiency.)

Physical Education Activities (6 credits)

**Breadth Requirements (50 credits)**

(1) Each student must take at least 50 credits<sup>1</sup> distributed among the three broad areas of knowledge. (Humanities, Social Sciences, and Natural Sciences).

(2) At least 10 of the 50 credits are to be from the area in which the student's major discipline appears, and no fewer than 20 credits from each of the other two areas.

(3) The 20-credit areas must include at least two disciplines.<sup>2</sup>

**Breadth Requirements may be selected from any course in the listed disciplines**

(4) Each student must also choose at least one laboratory course in the biological or physical sciences.

**Teacher education students also take:**

History 201, History and Government of Washington or Pacific Northwest History and Government is required for all persons recommended for teaching social science subjects in elementary or secondary schools. This requirement applies to (1) persons completing majors and/or minors in social science subjects (e.g., history, geography, sociology, economics, political science, anthropology, social science, junior high school broad area social studies—language arts or core curriculum, or similar programs) and (2) those desiring endorsement to teach in self-contained or regular classroom programs covering the following designated ranges: grades 1 through 6 or 8, or grades 4 through 6 or 8.

**Elementary Teachers: recommended**

- a. one course in following:
  1. Literature (English Language)
  2. Mathematics
  3. Music
  4. Public Speaking
- b. Laboratory course in:
  1. Biological Science and
  2. Physical Science.

HUMANITIES	SOCIAL SCIENCES	NATURAL SCIENCES
English Foreign Languages (French, German, Russian, Spanish) Humanities Music Philosophy Speech and Drama Technology and Indus. Ed. or Art or Crafts	Anthropology Economics Geography History Political Science Psychology Sociology	Biological Sciences (Biology, Botany, Zoology) Chemistry Geology Mathematics Physics
or the following specific courses		
*Education 467 Journalism 260 or Journalism 369 or Radio and Television 450 Library 445 Physical Education 161	Business Administration 241 or Business Administration 374 or Business Education 375 or Home Economics 391 *Education 362 Education 468 *Home Economics 295	Health Education 100 or Home Economics 200 Health Education 349

<sup>1</sup>These credits may be used to satisfy the requirements of the student's minor(s) program. Courses in the student's major discipline, however, will not satisfy Breadth Requirements, except that in the case of double majors a student may designate one of the majors to meet Breadth Requirements. Students whose major discipline is not included in one of the three broad areas may designate the broad area from which ten credits are taken. Credits in the ten credit area must be distributed over at least two disciplines.

<sup>2</sup>Honors courses may be designated in the appropriate area by the Director of the Honors Program.

\*These are double-listed courses and cannot be repeated for credit.

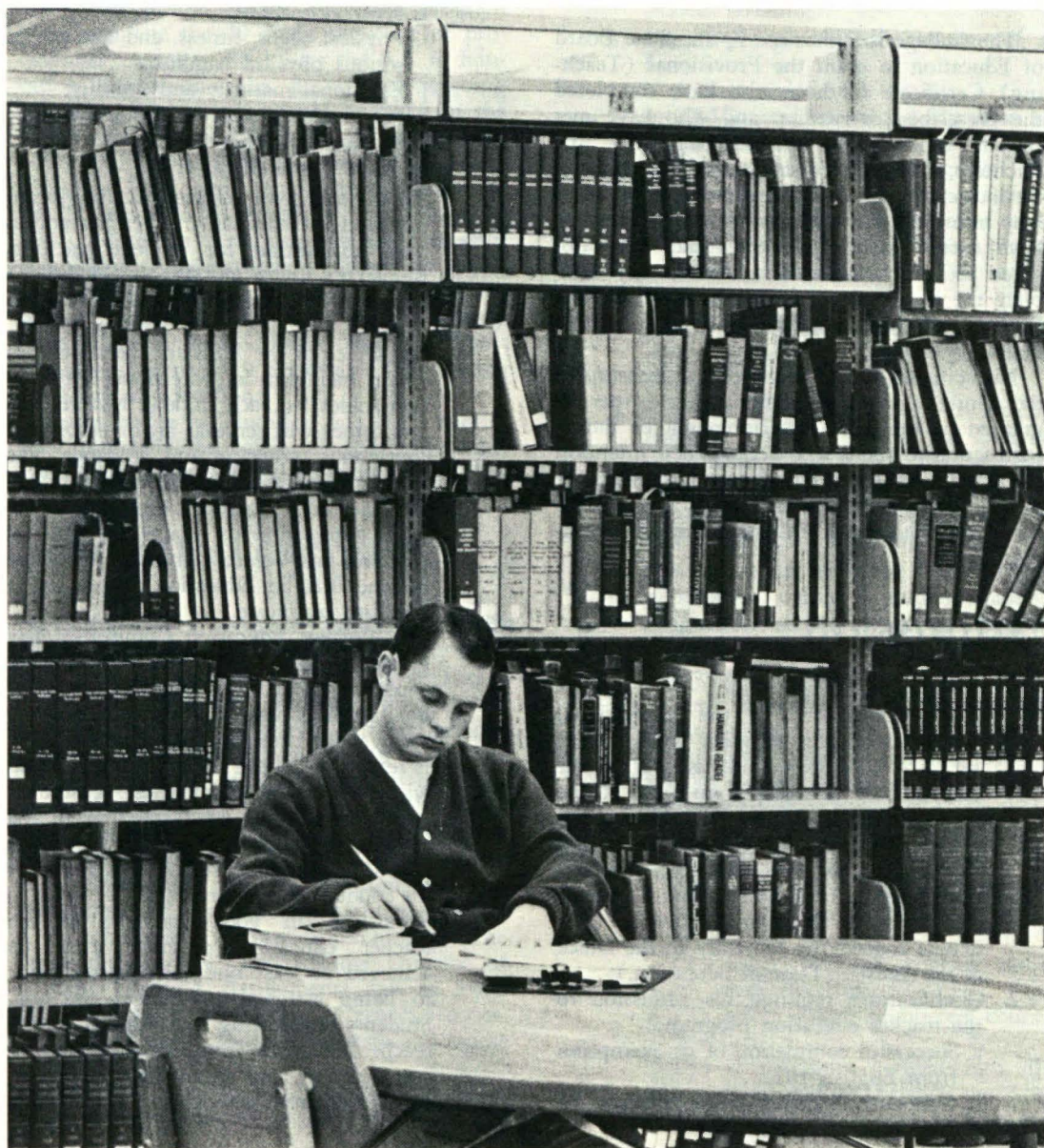


# Arts and Sciences Program

## B.A. Degree Requirements

Students who wish to earn a B.A. degree must fulfill the general requirements for graduation, page 37, and the following specific requirements: (1) The Basic and Breadth (general education) subjects from the list required of all degree candidates; (2) a concen-

tration of 60-75 credits which may be satisfied by a major, or a major and minor, or a major and courses in other fields as prescribed by the major department; and (3) electives in sufficient quantity to bring the total quarter credits to 192.



# The Teacher Education Program

## B.A. in Education And Certificates

The College is authorized by the State Board of Education to grant the Provisional (Teaching) Certificate to those who have completed the prescribed curriculum and who have met certain other requirements. Ordinarily the Bachelor of Arts in Education and the teaching certificate are granted at the same time. Students who transfer from other institutions where they have earned standard degrees but have not taken professional education courses may complete the requirements for a certificate and the Bachelor of Arts in Education degree in three or four quarters.

Non-citizens should know that citizenship in the United States of America, or a permit granted by the State Superintendent of Public Instruction to aliens who declare their intention to become American citizens, and to exchange teachers from foreign countries, is required for certification to teach in the State of Washington.

## Admission

1. Students preparing to teach (B.A. in Ed.) make application to the professional teacher education program when taking Ed. 307. (Transfer students: during the first quarter of their attendance at the College.) Students who delay making application beyond these dates may find their college program prolonged. Applications must be hand-written and filed with the Assistant Dean of Education. (For details contact the Secretary in the Office of the Assistant Dean of Education.)
2. Qualifications required for admission to the teacher education program:<sup>1</sup>
  - a. Successful completion of or exemption from English 101.
  - b. Cumulative grade point average of 2.00 (C) or better.

- c. English usage clearance.
- d. Reading skill clearance.
- e. Spelling clearance.
- f. Handwriting clearance.
- g. Arithmetic clearance.
- h. Speech clearance.
- i. Physical vigor, fitness, and absence of serious physical handicaps.
- j. Emotional maturity and stability.
- k. Personality suitable for the classroom.
- l. Professional promise.
- m. Good moral character.

3. All students shall declare and list (in application for admission to teacher education, application for student teaching, Registrar's Office and Placement Office) all areas of concentration (majors and minors).
4. The Office of the Assistant Dean of Education maintains a professional information folder for each student. Materials in this folder will serve as an inventory for continuous screening and guidance. The student's qualifications for teaching will be reviewed periodically, especially at the time application is made for student teaching and before being recommended for the B.A. in Education degree and a teaching certificate.
5. The Teacher Education Committee may grant provisional admission to the teacher education program when one or more qualifications have not been met satisfactorily at the time of application but there is reason to believe the applicant can and will correct the deficiencies. A student cannot remain in good standing in the teacher education program if he is on probationary status either as a result of his conduct or low grades.
6. Admission in good standing to the teacher education program must be achieved at least one full quarter prior to being assigned to student teaching. Students transferring to Central or to the teacher education program after having completed at least seven quarters of college work may have this time schedule modified (see the Assistant Dean of Education).
7. The applicant will be notified in writing

<sup>1</sup>Psy. 100 is highly recommended.

concerning the status of his application within one quarter from the time the application is filed.

8. Students in the teacher education program have the right of appeal to the Dean of Education and/or the Teacher Education Committee.

## Required Sequence of Professional Courses

Students in the teacher education program must complete the 40 credit sequence of professional courses to qualify for the B.A. in Education degree and the provisional teaching certificate. The courses should be taken in the following sequence: Education 307, Psychology 309, 310, Education 314, 341, 442, 445 and 490. (Teachers with one or more years of experience should substitute Education 492 for Education 490.) Admission to the program and successful completion of the preceding courses are requisites to enrollment in each phase of the sequence. Students transferring to the College may have this schedule modified if they have completed equivalent work elsewhere. (See Assistant Dean of Education.)

Letter grades in Education 341, 442; Special Education 448.0 through 448.6; and Early Childhood Education 442.1 will be either "S" or "U."

## Student Teaching

A minimum of 14 quarter credits of student teaching is to be completed on an all-day basis for one quarter's duration. On rare occasions, students may receive permission to complete their student teaching in two half-day sessions during two quarters. Not more than 21 quarter credits in student teaching may be used for graduation purposes. A student who desires to take more than 21 hours of student teaching and count more than 21 credits toward the degree requirement must petition the Admission, Matriculation, and Graduation Committee.

All applications for student teaching must be made through the Office of the Director of Student Teaching. Assignments will be made after reviewing the student's records, recommendations, needs, abilities, interests, and fitness for teaching.

Students are assigned to student teaching in accordance with the following regulations:

1. Admission to the teacher education pro-

gram must be achieved at least one full quarter prior to being assigned to student teaching. (See regulations on admission to the teacher education program.) Students transferring to the college or to the teacher education program after having completed at least seven quarters of college work may have this time schedule modified. (See the Assistant Dean of Education.)

2. All prerequisites stated in the course description for Student Teaching (see Ed. 442, Student Teaching) must be completed satisfactorily prior to beginning student teaching.
3. Cumulative grade point average of at least
  - a. 2.25 in major field.
  - b. 2.00 in professionalized education sequence.
  - c. 2.00 in overall college program.
 Students on probation are not permitted to do student teaching unless prior permission is granted by the Assistant Dean of Education or the Teacher Education Committee.
4. All of the General Education requirements should be completed before being assigned to student teaching.
5. Application for assignment to student teaching must be made to the Director of Student Teaching at the time announced by him. Application forms may be obtained from the Office of the Director of Student Teaching.
6. One quarter in residence at the College is required before a student may be assigned to student teaching unless an exception is approved by the Teacher Education Committee.
7. Students must declare and list in application for student teaching all areas of concentration (majors and minors).
8. Student must be endorsed for student teaching by their major and minor departments. The endorsement requires:
  - a. At least seventy-five per cent of the major and minor areas completed in accordance with the following guidelines:
    - (1) select required courses rather than electives.
    - (2) select lower numbered courses first.
    - (3) if major is divided into discrete sections, balance the work taken between the various sections.

- b. A minimum g.p.a. of 2.25 in major area and 2.00 in minor area.
9. Students transferring to the College must demonstrate their competencies to the respective faculties in order to be endorsed for student teaching in their major and minor fields.
  10. Students must have evidence on file in the Student Health Office showing freedom from tuberculosis.

## Student Teaching Assignment

1. Most student teaching assignments will be made at student teaching centers outside of Kittitas County. Students should plan their programs well in advance so that they will be ready to finance one quarter of work away from the campus (outside Kittitas County) regardless of marital status, campus commitments, or work opportunities. Opportunity for preliminary planning will be offered in Education 307, Introduction to Education.
2. Students must file an "Intent to Student Teach" during the academic year prior to actual assignment.
3. Arrangements for student teaching must be made only through the Director of Student Teaching. Students may express preferences regarding choice of student teaching centers and grade levels; they should, however, be prepared to accept assignment at the center selected by the Director.
4. Teachers may be exempted from the student teaching requirement provided they have had several years of recent highly successful teaching experience. In lieu of the credit needed for student teaching, course work may be taken in Ed. 446, Directed Observation, and/or Ed. 447, Classroom Teaching Problems. All decisions with respect to exemptions from or substitutions for student teaching must be approved by the Assistant Dean of Education.

## Student Teaching In Summer Sessions

During summer school a limited number of experienced teachers may be assigned to Education 442, Student Teaching, 5 credits; Education 546, Advanced Laboratory Experience, 3 credits; or selected special education courses. Applica-

tions for student teaching during the summer session should be made to the Director of Student Teaching prior to May 1.

## B.A. in Education Degree Program

Students in the Teacher Education program must fulfill the general requirements for graduation, page . . ., and the following specific course requirements: (1) basic and breadth requirements, (2) professional education sequence, (3) areas of concentration including major and minor requirements in the fields of his own choice, and (4) electives.

### Basic and Breadth Requirements

(62 Credits)

A student must fulfill the Basic and Breadth requirements specified for all Bachelor's degree candidates. See page 38 for details.

**Washington State History and Government (History 201) or Pacific Northwest History and Government is required for all persons recommended for teaching any social science subject in elementary or secondary schools.** This requirement applies to (1) persons completing majors and/or minors in any of the social science subjects (e.g., history, geography, sociology, economics, political science, anthropology, social science, junior high school broad area social studies—language arts or core curriculum, or similar programs, and, (2) those desiring endorsement to teach in self-contained or regular classroom programs covering the following designated ranges: grades 1 through 6 or 8, or grades 4 through 6 or 8.

**Prospective elementary school teachers:** It is recommended that all prospective elementary school teachers take:

- (a) at least one course in each of the following:
  - Literature (English Language)
  - Mathematics
  - Music
  - Public Speaking (e.g., Speech 201 or 253)
- (b) a laboratory course in biological science and a laboratory course in a physical science.

## Professional Education Sequence

Education 307, Introduction to Education..	4
Psychology 309, Human Growth and Development .....	4
Psychology 310, Learning and Evaluation..	4
Education 314, Curriculum, Methods and Materials .....	4
Education 341, Classroom Management (September Experience) .....	4
All students should plan to take Ed. 341 during September prior to fall quarter. See course description for details.	
Education 442, K, P, I, U, J, or S, Student Teaching .....	14
Education 445, Student Teaching Seminar.	2
Education 490, Seminar in Education Problems .....	4

The above courses must be taken in the sequence shown beginning with Education 307 (not earlier than the sophomore year). Education 442, Student Teaching, is accompanied by Education 445, Student Teaching Seminar.

Letter grades in Education 341, 442; Special Education 448.0 through 448.6; and Early Childhood Education 442.1 will be either "S" or "U".

## Concentration

### Elementary Education Areas

All students preparing for teaching in regular or self-contained elementary school classroom situations must complete the Elementary School Professionalized Subjects Minor, either in combination with a major or in the three-area program.

1. **A forty-five credit major (or sixty or more credit broad area major) and twenty credit elementary school professionalized subjects minor.**

The forty-five credit (or sixty or more credit broad area) major must be in an area or field taught in elementary schools, to be selected from the groups of teaching fields that are either "highly recommended" (two asterisks) or "recommended" (one asterisk) for regular elementary school teachers, unless it is accompanied by an extra minor or major included in either the "highly recommended" or "recommended" list. The major, along with the elementary school professionalized subjects minor, qualifies an individual for elementary teaching. Students electing to fulfill the major re-

quirement by pursuing a sixty (or more) credit broad-area major shall realize that this action reduces the number of free electives available and may lengthen the Bachelor of Arts in Education degree program.

2. **A three-area program which includes (a) thirty credits from a forty-five (or sixty or more credit broad-area major, (b) a twenty credit minor, and (c) the elementary school professionalized subjects minor.**

The three-area program is designed for those wishing to teach in the kindergarten, primary, intermediate, and upper grade regular or self-contained classrooms. One of these areas shall be selected from the groups of teaching fields (majors or minors) that are either "highly recommended" (two asterisks) or "recommended" (one asterisk) for regular elementary school teachers.

A major must be completed by the end of the fifth year of teacher education. This may be accomplished by expanding either the 30 credit area, the 20 credit academic minor, or by developing a new major.

The following forty-five credit multidisciplinary majors for elementary school teachers only must be completed during the Bachelor's degree program and may not be used from which to select a 30-credit area:

- Fine Arts Major for Elementary Teachers Only
- Language Arts Major for Elementary Teachers Only
- Health and Physical Education Major for Elementary Teachers Only
- Science-Mathematics Major for Elementary Teachers Only
- Social Science Major for Elementary Teachers Only.

Individuals electing to follow the three-area program must select at least thirty credits from a major field in accordance with the following guidelines:

- a. Select courses specified in the major rather than elective subjects.
- b. Select lower numbered courses first.
- c. If major is divided into discrete sections, balance the work taken between the various sections.
- d. Observe special instructions for three-area program students that may be given in conjunction with the major.

3. **Special subjects taught in elementary schools by high school teachers**

There are three areas in which high school teachers are prepared to work in their special fields from kindergarten through grade twelve. Persons who complete one of the majors listed below, include special methods and curriculum courses at both school levels, and do satisfactory student teaching involving both elementary and secondary levels, will be endorsed to teach the specific field in both elementary and secondary schools.

- Art (Broad Area)—65 credits
- Music (Broad Area)—64 credits
- Health and Physical Education—Elementary and Secondary—45 credits

Similar two-level endorsement possibilities may exist for majors in French and Spanish, depending upon the availability of two-level student teaching assignments. Consult with chairman of the Department of Foreign Languages, the Foreign Language Teacher Educator, and the Assistant Dean of Education about the possibilities in these fields.

It is not necessary for these majors to be accompanied by the Elementary School Professionalized Subjects minor for the multi-level endorsement. However, if persons taking these majors wish to prepare for endorsement to teach in regular or self-contained classrooms at the elementary school level, they must qualify under either No. 1 or No. 2 immediately above.

4. **Special school services personnel majors**

Certain special school services personnel majors are designed to prepare teachers to perform specialized services at the elementary or combined elementary and secondary school levels. Persons who complete the major listed below and do satisfactory student teaching involving students at both the elementary and secondary school levels will be endorsed to work at both levels in the specific service function.

- Speech Pathology and Audiology (Speech Therapy)—45 credits

It is not necessary for this major to be accompanied by the Elementary School Professionalized Subjects Minor for the multi-level endorsement. However, if persons taking this major wish endorsement for teaching in regular or self-contained elementary school classrooms,

they must qualify under either No. 1 or No. 2 immediately above.

**Secondary Education Areas**

1. **Broad area major of sixty or more credits**

There are nine broad area (60 or more credits) majors available: Art, Business Education, Home Economics, Industrial Education, Junior High School Social Science-Language Arts, Music, Physical Science (Chemistry-Physics), Science, and Social Science.

2. **A forty-five credit (area or field) major and a twenty credit minor**

This plan is usually followed by those planning to teach in the senior high school or special single subject areas in junior high school. The major must be in a teaching field in which one can expect a full-time student teaching and regular teaching assignment or be accompanied by other majors or minors that will prepare for endorsement for a full-time assignment. Students should select their majors and supporting minor areas with care, considering carefully the type of teaching position they may reasonably expect to obtain as a beginning teacher. The Elementary School Professionalized Subject Minor may not apply in secondary education programs.

3. **Two majors**

A prospective secondary school teacher may elect to complete two majors instead of a major and a minor. One major must be in a field in which one may expect a full-time student teaching and regular teaching assignment or accompanied by other preparation that will provide endorsement for full-time assignments.

**Combined Elementary and Secondary Areas**

Persons may complete major and minor subject preparation for teaching at both the elementary and secondary school levels by carefully combining the requirements for both levels. This necessitates taking the appropriate special methods and curriculum courses for both levels and doing student teaching to qualify for endorsement for both levels. Persons desiring multi-level endorsement must plan early with the Assistant Dean of Education.

**Major Fields**

All majors listed below may be used by prospective elementary, junior high and senior high school teachers except as otherwise designated either below or in the major listing.

Individuals wishing endorsement to teach in regular or self-contained elementary school classrooms must elect one teaching field concentration (major, minor, or thirty credits from a major) from the groups of teaching fields that are either "highly recommended" or "recommended." Areas that are "highly recommended" are preceded by two asterisks (\*\*) and those that are "recommended" are preceded by one asterisk (\*).

Persons preparing to teach at the secondary school level should note with care that certain majors must be accompanied by a second major in which full-time student teaching and regular teaching assignments can reasonably be expected.

## Teaching Majors

### Anthropology—45 credits.

(Secondary junior and senior high school teachers must accompany this with a second major in which the major portion of full-time teaching assignment can be expected.)

### \*Art—45 credits.

(This should be accompanied by a minor from the "recommended" group in English, Social Studies or Science for endorsement to teach in regular or self-contained classrooms in elementary schools.)

### Art-Broad Area—65 credits. (Combined Elementary-Secondary.)

#### Biology—45 credits.

#### Business Education-Broad Area—60 credits.

#### Business Education, Plan I—45 credits.

#### Business Education, Plan II—45 credits.

#### Chemistry—45 credits.

(High school teachers should consider combining this major with both physics and mathematics or with biology in order to assure adequate preparation for full-time assignment. Junior high school teachers should see the Science Major.)

#### Earth Science—45 credits.

(Senior and junior high school teachers must accompany this with another endorsable area.)

#### Economics—45 credits.

(Senior high school teachers must combine this with a major in history or some other field in which a full-time assignment can be expected. Junior high teachers must: (1) follow the pattern outlined for senior high teachers; or (2) combine this major with minors in at least two of the following fields: English, geography, and history; or (3) consider a Junior High School Broad Area Social-Studies-Language Arts Major.)

### \*English—45 credits.

(Qualifies for teaching secondary English. To qualify for teaching in "block of time" programs, junior high school teachers should consider combining this with minors in both history and geography, or complete a Junior High School Broad Area Social Studies-Language Arts Major.)

### \*\*Fine Arts Major for Elementary Teachers—45 credits.

(May not be used for 30-credit area in a Three Area Program (30-20-20), but may be used for

30 credits from outside majors required by Special Education and Early Childhood Education majors.)

#### French—45 credits.

### \*Geography—45 credits.

(Senior high school teachers must combine this with a major in history or some other field in which a major portion of full-time teaching assignment can be expected.)

#### German—45 credits.

#### Health and Physical Education (combined Elementary-Secondary)—45 credits.

### \*\*Health and P.E. for Elementary Teachers Only—45 credits.

(May not be used for 30-credit area in a Three Area Program (30-20-20), but may be used for 30 credits from outside majors required by Special Education and Early Childhood Education majors.)

### \*History—45 credits.

(Qualifies for teaching history in secondary schools. To qualify for teaching in "block of time" programs, junior high school teachers must combine this with minors in both English (composition or language) and geography.)

#### Home Economics-Broad Area (vocational)—66 credits.

#### Home Economics—45 credits.

#### Industrial Education-Broad Area—63 credits.

#### Industrial Education—45 credits.

#### Junior High School Social Studies-Language Arts-Broad Area—65 credits.

### \*\*Language Arts for Elementary Teachers Only—45 credits.

(May not be used for 30-credit area in a Three Area Program (30-20-20), but may be used for 30 credits from outside majors required by Special Education and Early Childhood Education majors.)

### \*Mathematics—45 credits.

#### Music-Broad Area (combination Elementary-Secondary)—64 credits.

### \*Music (Elementary Teachers Only)—45 credits.

(This should be accompanied by a minor from "recommended" group in English, social science, or science and Elementary School Professionalized Subjects Minor for endorsement to teach in regular or self-contained elementary school classrooms.)

#### Physical Science (Chemistry-Physics)-Broad Area—66 credits.

(Qualifies for high school chemistry and physics at minimum level—consider accompanying this with a mathematics minor. For junior high school science teaching, see Science Major or add the other specific courses required in the Science Major.)

### Physics—45 credits.

(Senior high school teachers must accompany this with a mathematics minor and should consider preparation in chemistry in order to assure adequate preparation for normal full-time assignments. Junior high school teachers see Science Major.)

#### Political Science—45 credits.

(Senior high school teachers must accompany

this major with a major in history or some other field in which a full-time assignment can be expected. To qualify for teaching in "block of time" programs, junior high school teachers must accompany it with minors in English and Geography.)

- \*Science-Broad Area—65 credits.
- \*\*Science Mathematics-Elementary—45 credits.  
(May not be used for 30-credit area in a Three Area Program (30-20-20), but may be used for 30 credits from outside majors required by Special Education and Early Childhood Education majors.)
- \*Social Science-Broad Area—60 credits.  
(Qualifies for secondary social science teaching. Junior high teachers should accompany this with an English major or minor to prepare for teaching in "block of time" programs.)
- \*\*Social Science for Elementary Teachers Only—45 credits.

(May not be used for 30-credit area in a Three Area Program (30-20-20), but may be used for 30 credits from outside majors required by Special Education and Early Childhood Education majors.)

Sociology—45 credits.

(Secondary teachers must accompany this with a major in some other field in which a full-time teaching assignment can be expected.)

Spanish—45 credits.

Speech and Drama for Elementary and Junior High—45 credits.

Speech and Drama for Secondary Only—45 credits.

(Secondary teachers should accompany this with a major or minor that will prepare them to teach in a related field, e.g. English.)

Vocational-Technical Trade and Industrial Major—45 credits.

(Qualifies for teaching vocational reimbursable programs in the senior high school and community college. Candidates must possess a background of industrial experience.)

### School Service Personnel Majors

Early Childhood Education—45 credits.

(Teachers must accompany this with a minimum of 30 credits from a highly recommended or recommended major plus an Elementary School Professionalized Subjects Minor and must complete the second major prior to the end of the fifth year of teacher education.)

Psychology—45 credits.

(Secondary teachers must accompany this with a second major in a field in which full-time student teaching and regular teaching assignments can be expected.)

Speech Pathology and Audiology (combined Elementary-Secondary) (Speech Therapy)—45 credits.

Special Education—45 credits.

(Secondary teachers must accompany this with a second major in which a full-time teaching assignment may be expected. Elementary teachers must accompany this with a minimum of 30 credits from a highly recommended or recommended major plus an Elementary School Pro-

fessionalized Subjects Minor and must complete the second major prior to the end of the fifth year of teacher education. For endorsement at both levels, teachers must accompany this with a completed second major applicable for teaching in secondary schools and the Elementary School Professionalized Subjects Minor.)

### Minor Fields

Elementary School Professionalized Subjects Minor—19 credits.

(Required of all teachers desiring endorsement for teaching in regular or self-contained elementary school classrooms. May not be counted toward secondary school endorsement.)

### Teaching Minors

Art—20 credits.

\*Biology-Elementary—20 credits.

Biology-Secondary—20 credits.

Botany—20 credits.

Business Education, Plan I—20 credits.

Business Education, Plan II—22 credits.

Business Education, Plan III—20 credits.

Chemistry—20 credits.

Crafts—20 credits.

Drama-Elementary or Junior High—20 credits.

Drama-Secondary—22 credits.

Driver and Traffic Safety Education—20 credits.

Earth Science—21 credits.

Economics—20 credits.

\*English Composition—20 credits.

\*English Language—20 credits.

\*English Literature—20 credits.

French—21 credits.

\*Geography—20 credits.

Geology—21 credits.

German—21 credits.

Health Education—20 credits.

\*History—20 credits.

Home Economics—20 credits.

Industrial Education—22 credits.

Journalism—20 credits.

\*Mathematics—20 credits.

Music—20 credits.

Physical Education—20 credits.

\*Physical Science—20 credits.

Physics—20 credits.

Political Science—20 credits.

Russian—21 credits.

\*Science-Elementary—20 credits.

Sociology—20 credits.

Spanish—21 credits.

Speech-Elementary or Junior High—20 credits.

Speech-Secondary—20 credits.

Zoology—20 credits.



### Supporting and/or Background Minors

- Anthropology—20 credits.
- Philosophy—20 credits.
- Psychology—19 credits.
- Radio and Television—20 credits.
- Recreation and Outdoor Education—20 credits.

### School Service Personnel Minors

- Instructional Materials—19-20 credits.
- Psychology—19 credits.
- School Librarianship. (See Instructional Materials.)
- Special Education—20 credits.
- Special Education-Remedial Education—19-20 credits.
- Special Education-Mentally Retarded Children—20 credits.
- Special Education-Emotionally Disturbed—20 credits.

### Electives

Electives to complete the total of 192 credits required for the Degree of Bachelor of Arts in Education.

Total credits required for graduation. . . 192

## Beginning Teachers Endorsement—School Level and Teaching Field

The College will endorse its teacher education graduates, according to its judgment of their competency, to begin teaching at specific school levels and/or in specific subject fields or areas as required by the State Board of Education.

The State's policies normally permit a teacher to teach full time in a major field and not to exceed two periods per day in a minor field of preparation. Central endorses graduates to teach in major fields, but does not give specific subject field endorsement in all minor fields. Refer to statements in the major and minor listings for endorsement possibilities and limitations.

A grade point average of 2.25 or higher in the major field, 2.00 in the minor field, and 2.00 in the professional education sequence courses is required for endorsement for first year placement.

## Provisional Certificate Basic Requirements

In addition to the requirements for the Bachelor of Arts in Education degree, the following requirements for the teaching certificate must be met:

1. Age of eighteen at the date of granting certificate.
2. Good moral character and personal and physical fitness for teaching.
3. Citizenship in the United States of America or a permit granted by the State Superintendent of Public Instruction to aliens who declare their intention to become American citizens and to exchange teachers from foreign countries.
4. Satisfaction of state requirement in Washington State History and Government or Pacific Northwest History and Government. See Basic and Breadth Requirements, page 38.

## Fifth Year Study for Standard Teaching Certificate

The fifth year consists of 45 quarter credits of work taken after completion of requirements for the Provisional Teaching Certificate. Credits counted toward completion of fifth-year requirements must be identified with the following objectives of the fifth year:

- a. To strengthen areas of weakness discovered during the first year of teaching.
- b. To develop a professional specialization. The specialization may be earned independent of or in conjunction with an advanced degree.
- c. To fulfill institutional requirements by completion of:
  - (1) an undergraduate major, if full major was not taken in baccalaureate program.
  - (2) fifteen credits in subject matter area(s) related to teaching field(s) and/or major.
  - (3) seven and one-half credits from the following list of professional courses:
    - Ed. 362, Educational and Psychological Statistics.
    - Ed. 415, Instructional Media: Utilization.

Ed. 417, Radio and TV in Classrooms.  
 Ed. 447, Classroom Teaching Problems.  
 Ed. 450, Instructional Media: Production.  
 Ed. 452, Junior High School Curriculum.  
 Ed. 459, Teacher-Counseling.  
 Ed. 460, Parent-Teacher Conferences.  
 Ed. 462, Construction and Use of Classroom

Tests.

Ed. 467, Philosophy of Education.  
 Ed. 468, History of Education.  
 Ed. 476, School and Community.  
 Ed. 507, Introduction to Graduate Study.  
 Ed. 508, Comparative Education.  
 Ed. 551, Elementary School Curriculum.  
 Ed. 552, Senior High School Curriculum.  
 Ed. 555, Program of Curriculum Improve-

ment.

Ed. 562, Evaluation of the School Program.  
 Ed. 570, Educational Foundations.  
 Psy. 552, Human Growth and Development,

Advanced.

- d. Complete any undergraduate requirements that were delayed until the fifth year by special action.
- e. Electives to broaden one's general education.
- f. Students who have not had History and Government of Washington or Pacific Northwest History and Government and are teaching in any of the social science subjects (e.g., history, geography, sociology, economics, political science, anthropology, social science, junior high school broad area social studies—language arts or core curriculum or similar programs; and those teaching in self-contained or regular classroom programs in grades 4 through 6 or 8, must meet this requirement during the fifth year.

Some points to be remembered:

1. Renewal for the second three-year period requires completion of a minimum of 12 quarter credits and one year of successful teaching. Renewals must be negotiated directly with the Office of State Superintendent of Public Instruction.
2. Conversion to the Standard Teaching Certificate requires completion of a fifth year of teacher education. Two years of successful teaching experience are also required. Of the total credits earned:

- a. Normally not more than 15 credits may be applied to fifth year requirements prior to the first year of teaching. Such credits must be approved upon petition to the Assistant Dean of Education.
- b. A maximum of 12 credits may be earned by correspondence and/or extension.
- c. At least one-half of the total credits must be 300 level or above.
- d. Twenty-two and one-half (22½) credits are to be earned in residence in a single institution.

3. The student may choose any accredited college for completion of his fifth year. If the college chosen is in Washington, that college will be responsible for recommendation for the Standard Certificate. If the college chosen is outside Washington, Central Washington State College must be consulted prior to development of the program and will be responsible for recommending the certificate.
4. A candidate may begin the fifth year following issuance of the Provisional Teaching Certificate or during the quarter in which requirements for the certificate are completed.
5. The State Board of Education allows six calendar years for conversion of the Provisional Teaching Certificate to the Standard Teaching Certificate. Therefore, a time limit of six years is observed on course work. The fifth year must be completed as outlined in the *General Catalog* in force when the program is begun or according to any subsequent *General Catalog*.
6. Qualified students may organize their fifth year of study to include work toward both a Master's degree and the fifth year requirements for the Standard Teaching Certificate. (See Master's degree requirements in *Graduate Catalog*.)
7. The fifth year program outlined above is designed for those who are progressing normally through Washington's current teacher education program, who hold a valid Provisional Teaching Certificate, and who are seeking a regular Standard Teaching Certificate. Others should consult the Credentials Supervisor in the Registrar's Office concerning requirements for other certificates.

# Curriculum

## Aerospace Studies (also Aviation)

Professor: McCarty.

Assistant Professors: Welch, Fisher.

Central Washington State College offers Aerospace courses of study which prepare students for specialized teaching assignments or work in Aerospace industries as well as the Air Force Reserve Officer Training Corps Program. The aviation courses prepare students to qualify for a Commercial and/or Instructor Pilot License and also provides a capability to Aerospace education. The ROTC Program strives through motivation and education:

1. To develop in cadets by precept, example, and participation, the attributes or character, personality, and attitude essential for leadership.
2. To develop in cadets an interest and an understanding of the Air Force mission, organization, operations, problems, and techniques.
3. To provide that military education and training which will give cadets a general background and a sound foundation upon which to build a career as an Air Force Officer.

Upon successful completion of the AFROTC program and degree attainment, a cadet is commissioned a Second Lieutenant in the United States Air Force Reserve.

Cadets entering the AFROTC program must pass required mental and physical examinations, be approved by a screening board, and satisfactorily complete the six-week's field training course conducted during the summer months at an Air Force base before enrolling in the Professional Officer Course (POC).

The Professional Officer Course consists of six quarters of classroom work during the junior and senior years. Completion of the six-weeks field training or equivalent is prerequisite to enrollment in the Professional Officer Course.

In the Advanced AFROTC Course there are three categories of cadets. These categories are as follows:

Category I: Consists of those cadets who qualify for flying training. This category is divided into military categories, I-P for pilot candidates and I-N for navigator candidates.

Category II: Consists of those cadets enrolled in college leading to a baccalaureate degree, with majors in engineering, biological sciences, physical sciences, earth sciences, mathematics or those who have applied for basic meteorology training through the Air Force Institute of Technology.

Category III: Consists of cadets enrolled in college leading to baccalaureate degrees, with majors in other than engineering, biological sciences, physical sciences, earth sciences or the mathematics field of study.

### (A/S) AEROSPACE STUDIES MINOR

Minor (15 to 30 credits)	<i>Credits</i>
Aerospace studies 331, 332, 333.....	9
Electives from Aerospace studies 441, 442, 443 or 444, 250, 350.....	6 to 21
	<hr/> 15-30

### AEROSPACE COURSES

**Aerospace Studies 331, 332, 333. Growth and Development of Aerospace Power.** 3 credits each quarter. Professional Officer Course (1st year). A survey course about

the nature of war; development of airpower in the United States; mission and organization of the Defense Department; Air Force concepts, doctrine, and employment; astronautics and space operations; and the future development of aerospace power. Includes the U.S. space program, vehicle systems and problems in space exploration. Three class hours per week and one hour per week of corps training during all quarters.

**Aerospace Studies 350. Four-Week Field Training.** 3 credits. A four-week period of training for Professional Officer Course cadets conducted at an Air Force installation

for cadets who are members of the four-year program. The course may be taken between the junior and senior years or after the senior year. Training includes organization, operation, and mission of an Air Force base; physical conditioning; drill; individual weapons; survival orientation; familiarization flying; field exercises; Air Base problems; and leadership training. This course may be taken by arrangement only.

**Aerospace Studies 351. Six-Week Field Training.** 5 credits. Prerequisite, junior or senior standing. A six-week period of military training conducted at an Air Force installation for applicants for the two-year AFROTC program. Successful completion is a prerequisite for membership in the two-year program. This course is normally taken between the sophomore and junior years. Students planning for a fifth academic year will take the course between the junior and senior years. Training includes organization, operation and mission of an Air Force base; Air Base problems; computer systems and data processing; leadership training; physical conditioning; drill; individual weapons; survival training; familiarization flying and field training. This course may be taken by arrangement only.

**Aerospace Studies 441, 442, 443. The Professional Officer.** Professional Officer Course (2nd year). 3 credits each quarter. A study of professionalism, leadership, and management. Includes the meaning of professionalism, professional responsibilities, the Military Justice System; leadership theory, functions, and practices; management principles and functions; problem solving; and management tools, practices and controls. Three class hours per week and one hour per week of corps training during all quarters.

**Aerospace Studies 444. Professional Airman'ship.** 3 credits. A course designed to familiarize advanced AFROTC cadets with technical problems encountered in aerospace careers. Emphasis is placed upon duties and responsibilities of rated Air Force Officers.

**Aerospace Studies 445. Professional ROTC Flight Instruction.** 3 credits. Prerequisite, AS 444 and Senior or Graduate Standing. A course for Category I cadets to fulfill the requirements of ROTC Flight Instruction Program and Air Force Aeronautical skills. Course consists of approximately 36½ hours of pilot training specified and paid for by the Air Force, approximately 40 hours of flight critiqueing, working knowledge of Air Force Flying Safety Procedures and successful completion of three flight phase check rides.

## <sup>1</sup>AVIATION COURSES

**Av. 351. Introduction to Aviation.** 2 credits.

Covers that portion of the FAA written examination for a Private Pilot's License and Commercial Pilot's License which pertains to rules of flight. Covers also, U.S. air traffic regulations, radio use, aircraft data and nomenclature, airport traffic systems, airport regulations, and aviation traffic problems. Visits will be made to local FAA facilities. This course is a prerequisite or required concurrent course to Aviation 371 for qualifying as a Student Pilot with solo privileges.

**Av. 352. Air Navigation.** 3 credits. Map use, radio aids, flight planning, and navigational problems. The scope of this course includes that portion of the FAA written examination for a Private Pilot's License and Commercial Pilot's License which is concerned with navigation and flight planning. It is a prerequisite or required concurrent course to Aviation 372, which qualifies a Student Pilot for performing cross-country solo flights.

**Av. 353. Meteorology.** 3 credits. Includes coverage of the remaining portion of FAA written examination for a Private Pilot's License and Commercial Pilot's License, and is a prerequisite or required concurrent course to Aviation 373 which qualifies the student for the FAA Private Pilot's flight examination. Visits will be made to local FAA weather facilities.

**Av. 354. Theory of Flight.** 2 credits. Although this course is not required for passing the FAA written and flight examination, it is strongly recommended for those who plan to continue flying, and for those who will teach aviation subjects.

**Av. 355. Aircraft Structures, Categories, and Power Plants.** 5 credits. Prerequisite, Aviation 354. Factors influencing aircraft design and construction, structural problems, the "area rule," nomenclature, types of aircraft, types and usage of power plants, aircraft fields, design and development trends and structural materials. Recommended for aviation education students and for private pilots.

**Av. 371. Elementary Flight Laboratory.** 1 credit. Prerequisite, Aviation 351 (may be taken concurrently). Individuals who hold a Student Pilot's License, Private Pilot's License or any higher form of pilot's rating may not register in this course for credit. Consists of a minimum of 12 hours of flight instruction (approximately 10 hours dual, 2

<sup>1</sup>The courses in aviation are designed principally to meet the needs of two groups: those who wish to earn the FAA (Federal Aviation Agency) Pilot's License, and those preparing to teach aviation subjects in the public schools.

hours solo) and 12 hours of flight discussion conducted at the flight line. Will qualify the individual for a Student Pilot's License with solo privileges.

- Av. 372. Intermediate Flight Laboratory.** 1 credit. Prerequisites, Aviation 352 (may be taken concurrently), and 371. Individuals who hold a Private Pilot's License (or higher pilot rating) may not register in this course for credit. Consists of a minimum of 12 hours of light instruction (approximately 6 hours dual, 6 hours solo) and 12 hours of flight discussion conducted on the flight line.
- Av. 373. Advanced Flight Laboratory.** 1 credit. Prerequisites, Av. 353 (may be taken concurrently) and 372. Individuals who hold a Private Pilot's License (or higher pilot rating) may not register in this course for credit. Consists of a minimum of 12 hours of flight instruction (approximately 11 hours solo and 1 hour dual) and 12 hours of flight line discussion. Those applying for a Private Pilot's License will receive a 1½ hour flight check by a FAA agent. To be eligible

for this license, a student must also pass the FAA written examination for a Pilot's License.

- Av. 422. Aerospace Education.** 3 credits. Prerequisites, 10 credits in aviation or permission. Credit may not be received both in this course and in Education 330. A course for those planning to work with aerospace education in public schools. Curriculum, methods and instructional materials appropriate to the various grade levels and subjects in elementary and secondary schools.
- Av. 440.0-9. Workshop, Aviation and Space Education.** 1 to 6 credits. The economic and sociological impacts of aircraft and space craft in local, national, and international affairs. Designed to acquaint the educator with ways of incorporating aviation education into various aspects of the curriculum. Orientation flights, visitations to key Air Force Base activities and major aircraft manufacturing plants are part of the workshop experiences. Summer quarter. See *Summer Session Bulletin* for complete details.

# Anthropology

Associate Professors: Denman, Smith, Witherspoon.

Assistant Professor: Alexander.

Anthropology—literally, the study of man—is traditionally divided into physical anthropology and cultural anthropology. The latter is further sub-divided into linguistics, archaeology, ethnology, and social anthropology. All of these areas except linguistics are currently represented in the anthropology curriculum, and the anthropology major requires some exposure to each.

Anthropology offers both field and laboratory experience in local archaeology. Advanced students can also gain field experience (under certain conditions) in ethnology or social anthropology through the individual study course (Anthro. 496).

## (A/S) ANTHROPOLOGY MAJOR

Major (45 to 60 credits)	<i>Credits</i>
Basic Courses .....	16
Anthro. 107, General Anthropology	
Anthro. 141, Introduction to Cultural Anthropology	
Anthro. 160, Introduction to Archaeology	
Anthro. 175, Introduction to Physical Anthropology	
Linguistics .....	3
Eng. 240, Introduction to Linguistics	
Theoretical Anthropology .....	4
Anthro. 451, History and Theory of Anthropology	
Anthropological Method .....	4
Anthro. 360, Methods in Archaeology	
Ethnology, elect two .....	8
Anthro. 343, Ethnology of Africa	
Anthro. 344, Ethnology of Asia	
Anthro. 347, Indian Cultures of North America	
Anthro. 441, Comparative Ethnology	
Anthro. 445, Peasant Societies and Cultures	

Archaeology, elect one .....	4
Anthro. 361, Old World Prehistory	
Anthro. 365, North American Archaeology	
Physical Anthropology, elect one .....	2-4
Anthro. 373, Studies in Primate Social Behavior	
Anthro. 377, Theories of Race	
Anthro. 471, Fossil Man	
Topical, elect one .....	3-4
Anthro. 355, Culture and Personality	
Anthro. 447, Religion of Primitive Societies	
Anthro. 448, Non-Western Political and Economic organization	
Anthro. 454, Cultural Change	
Anthro. 457, Applied Anthropology	
Guided electives in anthropology or supporting fields .....	1-16
	45-60

## (A/S) ANTHROPOLOGY MINOR

Minor (20 to 30 credits)	<i>Credits</i>
Anthro. 107, General Anthropology .....	4
Anthro. 141, Introduction to Cultural Anthropology .....	4

Anthro. 160, Introduction to Archaeology or Anthro. 175, Introduction to Physical An- thropology .....	4
Electives in Anthropology to complete minor .....	8-18
	20-30

**(T/Ed) ANTHROPOLOGY MAJOR**

Secondary (junior and senior high school) teachers must accompany this with a second major in which the major portion of full-time teaching assignment can be expected. Qualifies for teaching both anthropology and the second major field. For elementary teaching see page 45.

Major (45 credits)	<i>Credits</i>
Basic Courses, take .....	12
Anthro. 107, General Anthropology	
Anthro. 141, Introduction to Cultural An- thropology and elect one	
Anthro. 160, Introduction to Archaeology	
Anthro. 175, Introduction to Physical An- thropology	
Linguistics .....	3
Eng. 240, Introduction to Linguistics	
Theoretical Anthropology .....	4
Anthro. 451, History and Theory of Anthro- pology	
Ethnology, elect two .....	8
Anthro. 343, Ethnology of Africa	
Anthro. 344, Ethnology of Asia	
Anthro. 347, Indian Cultures of North America	
Anthro. 441, Comparative Ethnology	
Anthro. 445, Peasant Societies and Cultures	
Archaeology, elect one .....	4
Anthro. 361, Old World Prehistory	
Anthro. 365, North American Archaeology	
Physical Anthropology, elect one .....	2-4
Anthro. 373, Studies in Primate Social Be- havior	
Anthro. 377, Theories of Race	
Anthro. 471, Fossil Man	
Topical, elect two .....	7-8
Anthro. 355, Culture and Personality	
Anthro. 447, Religion of Primitive Societies	
Anthro. 448, Non-Western Political and Economic Organization	
Anthro. 454, Cultural Change	
Anthro. 457, Applied Anthropology	
Electives in Anthropology.....	2-5
	45

**(T/Ed) ANTHROPOLOGY MINOR**

Minor (20 credits)	<i>Credits</i>
Anthro. 107, General Anthropology.....	4
Anthro. 141, Introduction to Cultural An- thropology .....	4
Anthro. 160, Introduction to Archaeology or Anthro. 175, Introduction to Physical Anthropology .....	4
Anthro. 441, Comparative Ethnology.....	4
Anthro. 454, Cultural Change.....	4
	20

**ANTHROPOLOGY COURSES**

- Anthro. 107. General Anthropology.** 4 credits. Methods and concepts used by anthropology in the study of the physical and cultural development of mankind.
- Anthro. 141. Introduction to Cultural Anthropology.** 4 credits. Ethnological theory and comparative survey of selected cultures.
- Anthro. 160. Introduction to Archaeology.** 4 credits. Objectives and methods of archaeology and its contribution toward understanding cultural growth and development.
- Anthro. 175. Introduction to Physical Anthropology.** 4 credits. Man's place among the primate forms, fossil man, evolutionary theory, and racial differentiation.
- Anthro. 343. Ethnology of Africa.** 4 credits. A survey of the traditional cultures and acculturation problems of African peoples.
- Anthro. 344. Ethnology of Asia.** 4 credits. Peoples and cultures of Asia, including Malaysia.
- Anthro. 347. Indian Cultures of North America.** 4 credits. Aboriginal and present day American Indian cultures.
- Anthro. 355. Culture and Personality.** 3 credits. See Sociology 355 for description. (Same as Sociology 355. Students may not receive credit in both.)
- Anthro. 360. Methods of Archaeology.** 4 credits. Basic field course in the gathering and analyzing of archaeological data.
- Anthro. 361. Old World Prehistory.** 4 credits. The cultural development of Old World prehistory from the earliest Stone Age to the Iron Age.
- Anthro. 365. North American Archaeology.** 4 credits. A survey of the archaeological resources and prehistory of North America.
- Anthro. 373. Studies in Primate Social Behavior.** 4 credits. Survey of the field studies of non-human primates; relevance to the study of human social systems and adaptation.
- Anthro. 377. Theories of Race.** 2 credits. Theories concerning similarities and differences among modern populations.
- Anthro. 441. Comparative Ethnology.** 4 credits. A comparative survey of selected cultures, both historical and contemporary.
- Anthro. 445. Peasant Societies and Cultures.** 4 credits. A world survey.
- Anthro. 447. Religion of Primitive Societies.** 4 credits. An analysis of religion, cosmology and world view.
- Anthro. 448. Non-Western Political and Economic Organization.** 4 credits. Com-

parative analysis of the political and economic organization of selected non-Western societies, such as those found in tribal and pre-literate societies. (Anthro. 448 and Pol. Sci. 448 are the same course. Students may not receive credit in both.)

**Anthro. 451. History and Theory of Anthropology.** 4 credits. Anthropological theories and methods with emphasis on the historical development of these ideas in Western culture.

**Anthro. 454. Cultural Change.** 4 credits. An analysis of anthropological theories of cultural change.

**Anthro. 457. Applied Anthropology.** 4

credits. Theory and method applied to the control of cultural change in the areas of technical aid, education and agriculture.

**Anthro. 471. Fossil Man.** 4 credits. The history of human and prehuman forms of man.

**Anthro. 484. Ethnology and Cultural Problems of Southeast Asia.** 2 credits. Summers only. Ethnological and cultural problems related to nation-building in Southeast Asia.

**Anthro. 496. Individual Study.** 2-4 credits. Prerequisite, junior standing and twenty hours of anthropology. Field, laboratory or library research on selected topics, under the direction of staff members.

## Art

### (See also Crafts, Fine Arts)

Professors: Bayless, Kollmeyer, Randall.

Associate Professors: Bach, Doi, Fairbanks, Haines, Solberg, Spurgeon, Tompkins.

Assistant Professors: Agars, Dunning, Papadopoulos, Rowe, J. Sahlstrand, M. Sahlstrand, Weber.

Programs of study in art include art education, general art in the arts and sciences program, a two-year pre-professional program in commercial arts, crafts as a minor field of study, and two graduate degree programs in art.

Two art majors are available under the B.A. in Education Degree program: a 45-credit major qualifying graduates to teach art at either or both the elementary and secondary levels, and a 65-credit broad area major qualifying one to teach at all public school levels as well as to serve as an art consultant or supervisor in city and county school districts.

The department also cooperates with the Music Department in offering a Fine Arts major for elementary teachers. Under the B.A. Degree program, an art major of 45-60 credits is available. Minors in art and crafts are also offered under both of the B.A. degree programs.

The pre-professional program in commercial art prepares students to work directly in the fields of advertising and design or to enroll in specialized professional art schools in the fields of design or commercial art.

Graduate degrees include: the M.Ed. degree with an art major including also an optional creative thesis; and the M.A. degree in art with the creative thesis or the opportunity of concentrating in art history for the major emphasis. (See also Crafts.)

### (A/S) ART MAJOR

Major (45 to 60 credits)	<i>Credits</i>		
Drawing .....	6	Art 285, Printmaking	
Art 150, 250, Drawing		Art 287, Intaglio Printmaking	
Design .....	6	Art 385, Serigraphy	
Art 170, 270, Design		Art History and Seminar .....	11
Painting, elect two courses .....	6	Art 348, Ancient and Medieval Art	
Art 260, 261, Oil Painting		Art 448, Renaissance through Nineteenth Century Art	
Art 262, Water Color		Art 451, Contemporary Art	
Sculpture .....	6	Art 499, Art Seminar	
Art 280, 281, Sculpture		Elect from fields of painting, sculpture, print making .....	3
Printmaking, elect one course: .....	3	Electives from Art and/or Crafts .....	4-19
			45-60

**(A/S) ART MINOR**

Minor (15-30 credits)	<i>Credits</i>
Art 150, Drawing .....	3
Art 170, Design .....	3
Art 260, Oil Painting or Art 280, Sculpture	3
Elect from art history area.....	2-3
Electives from Art to complete minor.....	4-18
	<hr/> 15-30

**(T/Ed) ART MAJOR**

Qualifies for teaching art, either or both elementary or secondary, depending upon special methods courses (430, 431, 432) completed. For endorsement to teach in regular or self-contained classrooms in elementary schools, this should be accompanied by a minor from the "recommended" group in English, Social Studies or Science.

Major (45 credits)	<i>Credits</i>
Drawing .....	6
Art 150, 250, Drawing	
Design .....	6
Art 170, 270, Design	
Painting, elect two courses.....	6
Art 260, 261, Oil Painting	
Art 262, Water Color	
Sculpture .....	6
Art 280, 281, Sculpture	
Printmaking, elect one .....	3
Art 285, Printmaking	
Art 287, Intaglio Printmaking	
Art 385, Serigraphy	
Art Education, elect one at appropriate level .....	3
Art 430, Art in the Elementary School	
Art 431, Art in the Junior High School	
Art 432, Art in the High School	
Art History and Seminar.....	11
Art 348, Ancient and Medieval Art	
Art 448, Renaissance Through Nineteenth Century Art	
Art 451, Contemporary Art	
Art 499, Art Seminar	
Electives from art or crafts.....	4
	<hr/> 45

**(T/Ed) ART MINOR**

Minor (20 credits)	<i>Credits</i>
Art 150, Drawing .....	3
Art 170, Design .....	3
Art 260, Oil Painting or 262, Water Color.	3
Art 280, Sculpture .....	3
Elect from art education appropriate to the level of teaching .....	3
Art 325, Arts and Crafts, Primary	
Art 425, Arts and Crafts, Intermediate	
Art 430, Art in the Elementary School	
Art 431, Art in the Junior High School	
Art 432, Art in the High School	
Elect from art history .....	2-3
Add electives in art or crafts.....	2-3
	<hr/> 20

**(T/Ed) ART MAJOR**

**(Broad Area)**

Qualifies for teaching art, both elementary and secondary.	
Major (65 credits)	<i>Credits</i>
Drawing .....	6
Art 150, 250, Drawing	
Design .....	6
Art 170, 270, Design	
Painting (elect 9 credits from the following): .....	9
Art 260, 261, Oil Painting	
Art 262, 263, Water Color	
Printmaking (elect 6 credits from the following):	
Art 285, Printmaking	
Art 287, Intaglio Printmaking	
Art 385, Serigraphy	
Art 387, Intaglio Printmaking	
Art 485, Advanced Serigraphy	
Sculpture .....	6
Art 280, 281, Sculpture	
Select 8-10 hours from the following in at least two fields: .....	8-10
Jewelry (Crafts 347, 447)	
Pottery (Crafts 262, 362)	
Metal (Crafts 244, 344)	
Wood (Crafts 242, 342)	
Leather (Crafts 245)	
Plastics and Glass (Crafts 243, 343)	
Enameling (Crafts 349)	
Commercial Art (Art 271, 277, 373, 377)	
Photography (Art 290, 390)	
Art History and Seminar .....	11
Art 348, Ancient and Medieval Art	
Art 448, Renaissance through Nineteenth Century Art	
Art 451, Contemporary Art	
Art 499, Art Seminar	
Art Education .....	9
Art 432, Art in the High School, 3 credits (required) with 6 hours elected from the following:	
Art 325, Arts and Crafts Primary	
Art 425, Arts and Crafts Intermediate	
Art 430, Art in the Elementary School	
Art 431, Art in the Junior High School	
Elect courses from the various above categories to complete the major.....	2-4
	<hr/> 65

**<sup>1</sup>ART COURSES**

- Art 100. Introduction to Art.** 3 credits. Graphic and plastic arts, emphasizing the study of painting, print, sculpture, and architecture.
- Art 102. Basic Studio.** 2 credits. Art expression through introductory laboratory activities. Four hours of studio per week. Not recommended in major or minor program.
- Art 150. Drawing.** 3 credits. Studio experience, emphasizing an understanding of form

<sup>1</sup>The Department of Art reserves the right to withhold an example of each student's work for each studio or laboratory course each year for its permanent collection. Material costs of works chosen will be met by the department.



- through various drawing materials and techniques. Six hours of studio per week.
- Art 170. Design.** 3 credits. Two and three dimensional studio problems in design employing various media. Six hours of studio per week.
- Art 250. Drawing.** 3 credits. Prerequisite, Art 150. A continuation of work under Art 150 with increased emphasis upon interpretation of structure and form. Six hours of studio per week.
- Art 260. Oil Painting.** 3 credits. Prerequisite, Art 150, 170, or consent of instructor. The development of sensitivity to light, form and color through composing in oil. Six hours of studio per week.
- Art 261. Oil Painting.** 3 credits. Prerequisite, Art 260 or consent of instructor. A continuation of investigation into the aesthetic and expressive problems of Art 260. Six hours of studio per week.
- Art 262. Water Color.** 3 credits. Prerequisite, Art 150, 170, and sophomore standing. Various techniques of water color painting. Six hours of studio per week.
- Art 263. Water Color.** 3 credits. Prerequisite, Art 262 or consent of instructor. A continuation of Art 262 stressing a higher degree of individual expression. Six hours of studio per week.
- Art 270. Design.** 3 credits. Prerequisite, Art 170. The application of design elements to practical problems in the crafts and industrial design. Six studio hours per week.
- Art 271. Layout and Design.** 5 credits. Prerequisite, Art 170 and 277. The techniques and design used in modern advertising and packaging. Ten hours of studio per week.
- Art 277. Lettering.** 3 credits. The basic anatomy of pen and brush lettering. Six hours of studio per week.
- Art 280. Sculpture.** 3 credits. Prerequisite, Art 150, 170, or consent of instructor. Technical aspects of sculpture using clay, plaster and similar media; reference to historical and contemporary sculpture. Six hours of studio per week.
- Art 281. Sculpture.** 3 credits. Prerequisite, Art 280. Carving and construction in wood, stone carving, and metal techniques. Six hours of studio per week.
- Art 285. Printmaking.** 3 credits. Prerequisite, Art 150, 170, 250. Chief emphasis upon relief print. Six hours of studio per week.
- Art 287. Intaglio Printmaking.** 3 credits. Prerequisite, Art 150, 170, 250. Techniques of etching, engraving and drypoint in black and white. Six hours of studio per week.
- Art 290. Photography.** 3 credits. A basic course covering equipment, processes of black and white photography, composition, and practical dark room methods. One hour of lecture and four hours of studio per week.
- Art 325. Arts and Crafts, Primary.** 3 credits. Prerequisite, Art 100. The art program for children from kindergarten through third grade with laboratory work related to the theory and techniques of teaching at these levels. Two hours of lecture and two hours of studio per week.
- Art 342. Exhibit Techniques.** 2 credits. Experience in designing and installing exhibits, bulletin boards and displays, using both two and three dimensional materials.
- Art 348. Ancient and Medieval Art.** 3 credits. The art forms of prehistoric peoples; a study of the relationship between art, life, and environment in the main cultures of mankind from the early civilizations through the Gothic period in Europe.
- Art 349. Art and Modern Living.** 2 credits. The relationship of art to modern living; architecture, housing and community life, furnishings of the home, painting, sculpture, industrial design products.
- Art 360. Oil Painting.** 3 credits. Prerequisite, Art 261. Continued study in the field outlined in Art 261. Six hours of studio per week.
- Art 361. Oil Painting.** 3 credits. Prerequisite, Art 360 or consent of instructor. A continued study in the field as outlined in Art 360. Six hours of studio per week.
- Art 362. Water Color.** 3 credits. Prerequisite, Art 263. A continuation of the study outlined in Art 263, with emphasis upon development of individual direction. Gouache and mixed media are introduced. Six hours of studio per week.
- Art 363. Advanced Water Color.** 3 credits. Prerequisite, Art 362. A continuation of the development of painting in transparent and opaque water color media. Six studio hours per week.
- Art 371. Advanced Layout and Design.** 5 credits. Prerequisites, Art 271, 277. Advanced work in the problems proposed in Art 271, stressing poster design. Ten hours of studio per week.
- Art 372. Production Techniques in Advertising Art.** 5 credits. Prerequisites, Art 170, 271, 277, 371. Production techniques as applied to advertising, lithography and plate-

- making with problems designed for plate-printing. Ten hours of studio per week.
- Art 373. Interior Design.** 3 credits. Prerequisite, Art 100, 150, 170. Problems of the professional interior decorator; rendering interiors, using color fabrics, floor and wall coverings, in both domestic and industrial design situations. Six hours of studio per week.
- Art 377. Advanced Lettering.** 2 credits. Prerequisite, Art 277. Advanced work in techniques in lettering applicable to layout and design. Four hours of studio per week.
- Art 380. Sculpture.** 3 credits. Prerequisite, Art 281. A concentrated study in any of the sculpture media giving increased attention to concepts and aesthetic quality. Six hours of studio per week.
- Art 385. Serigraphy.** 3 credits. Prerequisite, Art 150, 170. Experience in the basic techniques of silk screen printing. Problems in using the medium as applied to fine art, commercial art, and art education. Six hours of studio per week.
- Art 386. Collagraph.** 3 credits. Prerequisite, Art 170, 250. Studio work in original plate-making and plate-printing. Experimentation with various materials and techniques of collagraph printmaking. Six hours of studio per week.
- Art 387. Intaglio Printmaking.** 3 credits. Prerequisite, Art 287. A continuation of Art 287 with more advanced work in etching, engraving and aquatint selected according to student interest. Six hours of studio per week.
- Art 390. Photography.** 3 credits. Prerequisite, Art 290. The development of skill in picture making; experimental work in the chemistry of photography, special developers, retouching, and projection control. One hour of lecture and four hours of studio per week.
- Art 425. Arts and Crafts, Intermediate.** 3 credits. Prerequisite, Art 100. The art of children in the intermediate grades; studio work such as puppetry, clay modeling and weaving, relating this to the developmental level of children. Two hours of lecture and two hours of studio per week.
- Art 430. Art in the Elementary School.** 3 credits. Prerequisite, Art 100 or permission of instructor. The elementary school art program, its organization and content, including representative studio experiences. Two hours of lecture and two hours of studio per week.
- Art 431. Art in the Junior High School.** 3 credits. The needs and abilities of the pre-adolescent pupil relative to art expression; an evaluation of art materials and the curriculum of the art program at this level.
- Art 432. Art in the High School.** 3 credits. Current philosophies and curriculum in art in the secondary school; objectives, planning the art program, evaluation, methods of teaching, materials, equipment, and facilities; visits to public schools.
- Art 440. Workshop.** 1-6 credits. Individual and group study of specific or general problems in art education, including laboratory experience, lectures and demonstrations. The credit to be earned determined upon scheduling.
- Art 445. Art for Handicapped Children.** 3 credits. Art experiences for physically and mentally handicapped children with emphasis upon their special needs and abilities; theory and studio work with appropriate art and craft materials. Two hours of lecture and two hours of studio per week.
- Art 448. Renaissance Through Nineteenth Century Art.** 3 credits. The art of the Renaissance and the following centuries up to the post-impressionists.
- Art 450. Advanced Drawing.** 3 credits. Prerequisites, Art 150, 250. Advanced study with various media; figure and life drawing. Six studio hours per week.
- Art 451. Contemporary Art.** 3 credits. The contemporary visual arts and their historical development since impressionism, including an interpretation of current art forms.
- Art 452. Art of the Americas.** 2 credits. The art of North, Middle, and South America from the beginning of the pre-Columbian period and including the more recent work of the American Indian and Eskimo peoples.
- Art 453. Art in the United States.** 3 credits. Sculpture, painting, and architecture from the Colonial period to the Armory Show. Foreign influences are identified and traced to their assimilation.
- Art 456. Art of the Orient and Near East.** 3 credits. Comparative study of architecture, sculpture, painting, and crafts of the Orient and Near East cultures.
- Art 457. African and Oceanic Art.** 2 credits. The art of primitive African and Oceanic areas; their symbolism and form as relative to artistic trends in Europe and the United States.
- Art 458. Life Drawing.** 3 credits. Prerequisite, two courses of drawing. Drawing the human figure with a study of its structure;

- the development of form and composition. Four hours of studio per week.
- Art 459. Art of Southeast Asia.** 2 credits. Major art forms in Burma, Thailand, Vietnam, Laos, Cambodia and the Malayan peninsula from the 1st through the 19th century. The art of the Indonesian Archipelago is also considered.
- Art 460. Advanced Painting.** 3 credits. Prerequisite, Art 361. Advanced painting problems; research in methods and materials. Six hours of studio per week.
- Art 470. Advanced Design.** 3 credits. Prerequisite, Art 270. Emphasis upon advanced three-dimensional problems. Six hours of studio per week.
- Art 480. Advanced Sculpture.** 3 credits. Prerequisite, Art 380. Research and experimentation with new materials in sculpture. Six hours of studio per week.
- Art 485. Advanced Serigraphy.** 3 credits. Prerequisite, Art 385. The use of silk screen as an expressive printmaking medium. Six hours of studio per week.
- Art 486. Advanced Collagraph.** 3 credits. Prerequisite, Art 386. Continuation of Art 386, with emphasis on refinement of printmaking methods. Some work in color may be introduced. Six hours of studio per week.
- Art 487. Advanced Intaglio Printmaking.** 3 credits. Prerequisite, Art 287, 387. Intensive experimentation in etching, engraving and drypoint with emphasis on the problems and techniques of multiple plate color printing using copper, galvanized and zinc plates. Six hours of studio per week.
- Art 490. Advanced Photography.** 3 credits. Prerequisite, Art 390. Development of photography as a medium of creative expression. Individual direction is encouraged. Special problems in developing, enlarging, cropping, etc. An opportunity to work in color. One hour of lecture and four hours of studio per week.
- Art 495. Travel Study.** 2-8 credits. Conducted tour in this country and abroad as a means of studying art. Students registering for credit will be required to do reading concerning the area to be visited before making the tour, to participate in study sessions during the tour, and to submit a report of the art studied for evaluation at the end of the trip. The amount of credit to be granted will be determined by the college at the time the tour is approved, but it must not exceed 1½ credits per week of planned travel study.
- Art 496, 497, 498. Individual Study.** 2 credits each. Prerequisite, approval of the instructor and chairman of the department. Unit courses for advanced students who desire to take more individual study than the regular courses provide or who wish to pursue work in areas not provided by regular courses.
- Art 499. Art Seminar.** 2 credits. Prerequisite, art major or permission of instructor. A study of issues in art; theories and philosophies which have influenced current art movements.
- Art 545. Administration of the School Art Program.** 3 credits.
- Art 548. Art Since 1945.** 3 credits.
- Art 550. Advanced Life Drawing.** 3 credits.
- Art 560, 560.2. Advanced Studies in Painting.** 2-5 credits each. Prerequisite, Art 460 or equivalent.
- Art 561. Media and Techniques.** 3 credits.
- Art 564. Research Procedures in Art.** 3 credits.
- Art 570. Advanced Studies in Design.** 2-5 credits.
- Art 580, 580.2. Advanced Studies in Sculpture.** 2-5 credits each. Prerequisite, Art 480 or equivalent.
- Art 585. Advanced Studies in Printmaking.** 3-5 credits. Prerequisite, either Art 486 or Art 487.
- Art 586. Relief Print.** 2 credits. Prerequisite, Art 285 and an additional printmaking course.
- Art 587. Advanced Studies in Intaglio.** 3 credits. Prerequisite, Art 487.
- Art 590. Advanced Studies in Photography.** 2-5 credits. Prerequisite, Art 490 or equivalent.
- Art 595. Seminar in Aesthetic and Criticism.** 3 credits.
- Art 596, 597, 598. Individual Study.** 2 credits each.
- Art 599. Seminar in Art Education.** 2 credits.
- Art 600. Thesis.** 6 credits. The thesis may be the usual written type dealing with research in the fields of art or it may take the form of original creative work accompanied by a typewritten text, illustrated, and adequately discussing the work. Candidates selecting the creative thesis may choose any one of the following fields: painting, graphic art, design, sculpture, jewelry, pottery, photography.

# Biological Sciences

Professors: Mayberry, Nevé, Shrader.

Associate Professors: Baepler, Barker, Clark, Dumas, Klucking, Lowe, Verner, Willson.

Assistant Professors: Boles, Brown, Johnson, Peary, Smith, Wiberg.

The Department of Biological Sciences includes the following disciplines: biology, botany, microbiology, paleontology, science education, and zoology. While offering broad coverage of the biological sciences, the department has developed special emphasis on natural history and environmental biology. Students in advanced courses may expect to be involved in field studies and other types of on-the-site investigations.

## (A/S) BIOLOGY MAJOR

	<i>Credits</i>
Major (60 credits)	
Bio. Sci. 110, 111, 112, Biology	12
Bot. 263, Plant Taxonomy	5
*Bot. 360, Plant Physiology or	
*Zool. 372, Zoophysiology	5
Bio. Sci. 365, Genetics	4
Electives from Biological Science, Botany, Zoology and/or Paleontology from courses numbered 300 or above	34
	60

\*A knowledge of organic chemistry is required.

## (A/S) BIOLOGY MINOR

	<i>Credits</i>
Minor (18 to 30 credits)	
Bio. Sci. 110, 111, 112, Biology	12
Electives in Biological Sciences, Botany, Zoology, or Paleontology to complete minor	6-18
	18-30

## (T/Ed) BIOLOGY MAJOR

Qualifies for high school biology. For junior high school science, see Science Broad Area Major. For elementary school, see Science-Mathematics Major.

	<i>Credits</i>
Major (44 credits)	
Bio. Sci. 110, 111, 112, Biology	12
Bot. 263, Plant Taxonomy	5
Zool. 372, *Zoophysiology or Bot. 360 Physiology	5
Bio. Sci. 347, Paleontology	5
Bio. Sci. 365, Genetics	4
Bio. Sci. 370, Microbiology	5
Bio. Sci. 470, General Ecology	5
Sci. Ed. 324, Science Education in the Sec- ondary School	3
	44

\*Prerequisite: Knowledge of organic chemistry.

## (T/Ed) BIOLOGY MINOR

	<i>Credits</i>
Elementary only minor (20 credits)	
Bio. Sci. 110, 111, 112 or Bio. Sci. 104, Bot. 211, Zoo. 211	12-14
Sci. Ed. 322, Science Education in the ele- mentary schools	3
Electives in the biological sciences	3-5
	20

## (T/Ed) BIOLOGY MINOR

	<i>Credits</i>
Secondary only minor (20 credits)	
Bio. Sci. 110, 111, 112, Biology	12
Electives in the biological sciences	8
	20

(For minimum secondary certification complete Bio. Sci. 365, Bot. 360 or Zoo. 373, Bio. Sci. 370, Bio. Sci. 470, and Sci. Ed. 324.)

## BIOLOGICAL SCIENCE COURSES

**Bio. Sci. 102. General Biology.** 3 credits. The biological principles that are applicable to plants and animals, with emphasis on cellular biology. Lectures.

**Bio. Sci. 103. General Laboratory.** 2 credits. Prerequisite, Bio. Sci. 102. Experience in working with plant and animal materials; assigned reading appropriate to the organisms studied. Four hours laboratory a week.

**Bio. Sci. 104. Interpretive Biology.** 4 credits. Stresses the involvement of biology with the modern world. Three lectures and two hours laboratory-discussion a week. May not be counted for credit toward a major in the biological sciences.

**Bio. Sci. 110, 111, 112. Biology.** 4 credits each course. Bio. Sci. 110 is prerequisite to either Bio. Sci. 111 or 112. First quarter: cellular structures and functions including cellular reproduction and genetics; second quarter: plant biology; third quarter: animal biology. Three lectures and three hours of laboratory per week. (NOTE: This sequence of courses may substitute for Bio. Sci. 102, Bot. 161 and 162, Zool. 151 and 152 in Biology, Botany and Zoology majors or minors.) (Credits may not be received for both the beginning biology sequence and the botany-zoology sequence.)

**Bio. Sci. 250. Microtechnique.** 3 credits. Prerequisite, 10 hours of botany or zoology. The fundamentals of a wide range of useful standard methods in the preparation of microscopic materials. One hour lecture and four hours laboratory a week.

- Bio. Sci. 347. Paleontology.** 5 credits. Prerequisite, ten hours of biology. The history of the earth as revealed by the fossil record. The major groups of plants and animals, their evolutionary history, and their distribution in time and space. This is a field course.
- Bio. Sci. 365. Genetics.** 4 credits. Prerequisite, Bio. Sci. 110. A lecture and laboratory course in the basic principles of heredity of plants and animals. Three lectures and two hours of laboratory a week.
- Bio. Sci. 370. Microbiology.** 5 credits. Prerequisite, Bio. Sci. 110, and Chem. 104 or 182. Organic chemistry is also recommended. A lecture and laboratory course dealing with principles of micro-biological practice; including isolation, cultivation, morphological and physiological methods of analysis, and variability. Two lectures and six hours of laboratory a week.
- Bio. Sci. 395. Impact of Science on Society.** 4 credits. Historical, philosophical, and sociological relationships and implications of the physical and biological sciences. (Same as Physics 395. Students may not receive credit in both.)
- Bio. Sci. 411. Soil Microbiology.** 5 credits. Prerequisite, Bio. Sci. 370. Ecology of the microflora and microfauna of the soil. Two lectures and six hours laboratory a week.
- Bio. Sci. 447. Invertebrate Paleontology.** 5 credits. Prerequisite, Bio. Sci. 112. Invertebrate animals of past geologic ages. Three lectures and four hours of laboratory a week.
- Bio. Sci. 449. Paleobotany.** 5 credits. Prerequisite, Bio. Sci. 111. The history of plant life on earth with particular emphasis on the Pacific Coast region. Includes a study of the fossil leaves and woods for which this area is noted. Three lectures and four hours of laboratory a week. This is a field course.
- Bio. Sci. 455. Paleoclimatology.** 4 credits. Prerequisite, permission of instructor. Climates of the past. Four lectures per week.
- Bio. Sci. 470. General Ecology.** 5 credits. Prerequisite, one year of college biology. Interrelationships of plants and animals with their environment. Three lectures and three hours of laboratory or field work a week.
- Bio. Sci. 480. Limnology.** 5 credits. Prerequisite, Chem. 104 or 182; and Bio. Sci. 111 or 112; or permission. Chemical, physical, and biological characteristics of inland waters. Three lectures, four hours of laboratory a week.
- Bio. Sci. 485. Modern Developments in Evolution.** 3 credits. Prerequisite, Bio. Sci. 365

or permission of instructor. Recent advances in the understanding of evolution in a variety of fields in biological science. Three lecture-discussions a week.

- Bio. Sci. 490. Biological Principles for Teachers.** 5 credits. The more important commonly discussed biological principles and concepts. Designed for teachers at all levels and particularly for those needing a broader background in this subject area.
- Bio. Sci. 496, 497. Individual Study.** 2 to 4 credits, each course. Open to advanced students with the consent of the staff member in charge.
- Bio. Sci. 570. Cellular Physiology.** 5 credits. Prerequisite, Zool. 372.
- Bio. Sci. 575. Microbial Physiology.** 5 credits. Prerequisites, Bio. Sci. 370 and Chem. 365.
- Bio. Sci. 576. Comparative Morphology and Physiology of the Higher Bacteria.** 4 credits. Prerequisites, Bio. Sci. 370 and Chem. 360 or 361.
- Bio. Sci. 596, 597. Individual Study.** 2 to 4 credits each course. Prerequisite: Consent of of instructor.
- Bio. Sci. 598, 599. Biology Seminar.** 1 credit each.
- Bio. Sci. 600. Thesis.** 6 credits. Students may enroll for six credits during one quarter or may distribute the credits over two quarters.

### (A/S) BOTANY MAJOR

Major (48 to 60 credits)	<i>Credits</i>
Bio. Sci. 110, 111, 112, Biology.....	12
Bot. 263, Plant Taxonomy .....	5
Bot. 358, Plant Anatomy .....	5
*Bot. 360, Plant Physiology .....	5
Electives from Botany, Biological Sciences, Geology, by advisement .....	21-33
	48-60

\*A knowledge of organic chemistry is required.

### (A/S) BOTANY MINOR

Minor (18 to 30 credits)	<i>Credits</i>
Bio. Sci. 102, General Biology and.....	3
Bot. 161, or .....	5
Bio. Sci. 110 and 111.....	8
Electives in Botany.....	10-22
	18-30

### (T/Ed) BOTANY MINOR

May not be used in combination with a Biology Major.

Minor (20 credits)	<i>Credits</i>
Bio. Sci. 102, General Biology and.....	3
Bot. 161, 162, Botany.....	10
(Bio. Sci. 110, 111, 112, Biology, may be substituted for the above 13 credits) ..	(12)
Bot. 263, Plant Taxonomy .....	5
Electives in Botany .....	2-3
	20

## BOTANY COURSES

- Bot. 161, 162. Botany.** 5 credits each course. Prerequisite or corequisite, Bio. Sci. 102. Bot. 161 is prerequisite to Bot. 162. First quarter: The fundamentals of structure as evidenced by the flowering plant; second quarter: the morphology and life history of representative forms of the major groups of the plant kingdom. Three lectures and four hours of laboratory a week.
- Bot. 165. Dendrology.** 4 credits. Prerequisite, Bio. Sci. 111 or permission of the instructor. A study of trees, their habits of growth, the characteristic forest areas of North America. Two lectures and four hours of laboratory a week. A field course.
- Bot. 211. Botany.** 5 credits. Major forms of the plant world. Three lectures and three hours of laboratory a week. (Not open to majors in the Biological Sciences.)
- Bot. 250. Economic Botany.** 3 credits. Prerequisite, Bio. Sci. 111 or permission of instructor. Plants useful to man, their origin, breeding, propagation, cultivation, processing and utilization.
- Bot. 263. Plant Taxonomy.** 5 credits. Prerequisite, Bio. Sci. 111. An introductory course in the classification of flowering plants, using local flora. An herbarium of plants is required. Two lectures and six hours of laboratory, including field work, a week. A field course.
- Bot. 341. General Plant Ecology.** 5 credits. Prerequisite, Bio. Sci. 111. Plants and plant communities in relation to their environment. Three lectures and four hours of laboratory a week.
- Bot. 350. Ornamental Trees and Shrubs.** 3 credits. Prerequisite, Bio. Sci. 111 or permission of instructor. The identification and landscaping uses and values of the more common trees and shrubs. The elements of horticultural practices, including pruning, propagation, and general care. A field course.
- Bot. 358. Plant Anatomy.** 5 credits. Prerequisite, Bio. Sci. 111. A treatment of the fundamental facts and aspects of anatomy found in vascular plants, chiefly the angiosperms. Plant tissues with special reference to their development, organization and biological significance. Three lectures and four hours of laboratory a week.
- Bot. 360. Plant Physiology.** 5 credits. Prerequisites, Bio. Sci. 111 and Chem. 360 or equivalent. A critical study of the various physiological activities of plants, such as photosynthesis, respiration and responses to various stimuli. Three lectures and four hours of laboratory a week.
- Bot. 363. Plants of Washington.** 3 credits. Prerequisite, Bio. Sci. 111 or permission of the instructor. Designed to give the student a knowledge of the important kinds of trees and other flowering plants, and a skill in using a standard means of identifying them. Two lectures and two hours of laboratory a week. A field course. May not be counted as credit towards Botany or Biology major.
- Bot. 375. Plant Geography.** 4 credits. Prerequisite, permission of instructor. The distribution of plants from an ecological and historical viewpoint.
- Bot. 441. Advanced Plant Ecology.** 5 credits. Prerequisite, Bot. 341. Structure, methods of analysis and dynamic behavior of plant communities. Three lectures and four hours of laboratory a week.
- Bot. 448. Advanced Plant Physiology.** 4 credits. Prerequisite, Bot. 360. Experimental study of the physiological activities of plants. One lecture and six hours of laboratory a week.
- Bot. 450. Agrostronomy.** 3 credits. Prerequisite, Bot. 263. A systematic study of grasses and grass-like plants. Two 3-hour laboratories a week.
- Bot. 451. Selected Studies in Botany.** 3 credits. Prerequisite, 10 hours of botany. Modern aspects of botany. Lecture and discussion.
- Bot. 460. Plant Pathology.** 3 credits. Prerequisite, Bio. Sci. 111. Representative diseases of plants and the bacterial and fungal organisms which cause them. Two lectures and two hours of laboratory a week.
- Bot. 461. The Plant Kingdom.** 5 credits. Prerequisite, Bio. Sci. 111. Representative organisms found in the succession of plant phyla from primitive plant forms through the seed plants. Three lectures and four hours of laboratory a week.
- Bot. 462. Comparative Morphology of Vascular Plants.** 5 credits. Prerequisite, 10 credits in botany. Form, structure, and habits of the major groups of vascular plants. Three lectures and four hours of laboratory a week.
- Bot. 463. Mycology.** 4 credits. Prerequisite, Bio. Sci. 111. The morphological diversity that occurs among the fungi. Three lectures and two hours of laboratory a week.
- Bot. 464. Fresh-Water Algae.** 4 credits. Prerequisites, eight credits of biology including one course in botany. Taxonomy and ecology of fresh-water algae. Two lectures and four hours of laboratory a week. A field course.

Bot. 496, 497. Individual Study. 2 to 4 credits, each course. Open to advanced students with the consent of the staff member in charge.

Bot. 596, 597. Individual Study. 2 to 4 credits each course. Prerequisite: Consent of instructor.

Bot. 600. Thesis. 6 credits. Students may enroll for six credits during one quarter or may distribute the credits over two quarters.

**(A/S) ZOOLOGY MAJOR**

Major (48-60 credits)	<i>Credits</i>
Bio. Sci. 110, 111, 112, Biology.....	12
Zool. 348, Embryology .....	5
Zool. 311, Cold-blooded Vertebrates, Zool. 345, Ornithology or Zool. 435, Mammalogy .....	4-5
Zool. 361, Invertebrate Zoology .....	5
Zool. 351 and 352, Comparative Anatomy or 8 credits from Zool. 362, General Entomology, Zool. 380, Parasitology, Zool. 381, Protozoology, or Bio. Sci. 447.....	8
*Zool. 372, Zoophysiology .....	5
Bio. Sci. 365, Genetics .....	4
Electives from any Biological Science, Physical Science, or Mathematics area .....	4-17
	48-60

\*A knowledge of organic chemistry is required.

**(A/S) ZOOLOGY MINOR**

Minor (18 to 30 credits)	<i>Credits</i>
Bio. Sci. 110, 111, 112, Biology.....	12
Electives in Zoology to complete minor...	6-18
	18-30

**(T/Ed) ZOOLOGY MINOR**

Minor (20 credits)	<i>Credits</i>
Bio. Sci. 102, General Biology and.....	3
<sup>1</sup> Zoology 151, 152, General Zoology.....	10
(Bio. Sci. 110, 111, 112, Biology, may be substituted for the above 13 credits.....)	(12)
Electives in Zoology .....	7-8
	20

May not be used in combination with a Biology Major.  
<sup>1</sup>Prerequisite: Bio. Sci. 102 (may be taken concurrently).

**ZOOLOGY COURSES**

Zool. 151, 152. General Zoology. 5 credits, each course. Prerequisite, Bio. Sci. 102 (may be taken concurrently). Zool. 151 is prerequisite to Zool. 152. Genetics, anatomy, physiology, and ecology of representative invertebrates and vertebrates. Three lectures and four hours of laboratory a week.

Zool. 211. General Zoology. 5 credits. A survey of the anatomy, physiology, ecology and taxonomy of representative invertebrate and vertebrate animals. Three lectures and three hours of laboratory a week. (Not open to majors in the biological sciences.)

Zool. 270. Human Physiology. 3 credits. Organ system of man. Not open to students with credit in Zool. 372. May not be counted towards the Biology or Zoology major.

Zool. 311. The Cold-Blooded Vertebrates. 5 credits. Prerequisite, one year of college biology. An introduction to the biology, taxonomy and distribution of fishes, amphibians and reptiles with special reference to the Pacific Northwest. Three lectures and three hours of laboratory or field studies a week.

Zool. 345. Ornithology. 5 credits. Prerequisite, ten hours of biological science. Birds, habits, adaptations and migrations. Field work and laboratory. Three lectures and four hours of laboratory a week.

Zool. 348. General Vertebrate Embryology. 5 credits. Prerequisite, Bio. Sci. 112. Comparative development; fertilization, growth and differentiation, experimental morphogenesis, and establishment of the early organ systems. Two lectures and six hours of laboratory a week.

Zool. 351, 352. Comparative Anatomy of Chordates. 4 credits each course. Prerequisite, Bio. Sci. 112; Zool. 351 is prerequisite to Zool. 352. Vertebrate organ system developmental relationships. Dissection and analysis of selected vertebrate types. Two lectures and four hours of laboratory a week.

Zool. 361. Invertebrate Zoology. 5 credits. Prerequisite, Bio. Sci. 112 or permission of instructor. Morphology, phylogeny, physiology, and embryology of the invertebrate phyla, exclusive of parasitic forms. Two lectures and six hours of laboratory or field work a week.

Zool. 362. General Entomology. 3 credits. Prerequisite, Bio. Sci. 112 or permission. Insect biology, life history, behavior and taxonomy. Two lectures and two hours of laboratory a week. A field course.

Zool. 372. Zoophysiology. 5 credits. Prerequisites, Bio. Sci. 112 and Chemistry 360 or equivalent. Vertebrate; laboratory experience in physiological techniques. Three lectures and four hours of laboratory per week.

Zool. 380. Parasitology. 5 credits. Prerequisite, Bio. Sci. 112. Biological relations of animal parasite and host; structure, classification, and methods of diagnosis of parasitic protozoa, worms, and arthropods. Two lectures and six hours of laboratory a week.

Zool. 381. Protozoology. 4 credits. Prerequisite, Bio. Sci. 112. Free-living and parasitic protozoans; classification, morphology, physiology and ecology. Laboratory includes pro-

- tozoan collection, culture and taxonomy. Two lectures and four hours of lab a week.
- Zool. 435. Mammalogy.** 5 credits. Prerequisite, Bio. Sci. 112. Distribution, ecology, life history, and taxonomy of Pacific Northwest mammals. Three lectures and four hours of laboratory a week. A field course.
- Zool. 445. Avifauna of Washington.** 4 credits. Prerequisite, Zool. 345. Taxonomic study at the subspecies level, comparison with the avifauna of the northern hemisphere. Two lectures and four hours of laboratory a week including occasional Saturday field trips. A field course.
- Zool. 451. Selected Studies in Zoology.** 3 credits. Prerequisite, permission of instructor.
- Zool. 470. Advanced Physiology.** 5 credits. Prerequisite, Zool. 372 or biochemistry. Physiological mechanisms, emphasis on the invertebrates. Development of experimental techniques. Three lectures and four hours of laboratory a week.
- Zool. 471. Histology.** 4 credits. Prerequisite, Bio. Sci. 112. Systematic study, description and identification of microscopic structures of animal tissues. Two lectures and four hours of laboratory per week.
- Zool. 472. Natural History of the Vertebrates.** 5 credits. Classification, life histories, and ecology of the fish, amphibians, reptiles, mammals, and birds of Washington. Three lectures and four hours of laboratory a week. A field course.
- Zool. 473. Animal Ecology.** 4 credits. Prerequisites, Bio. Sci. 111, 112. Interrelationships between animals and environment, with emphasis on vertebrates. This is a course in evolutionary ecology, with three lectures and one 2-hour discussion or laboratory period per week.
- Zool. 474. Zoogeography.** 4 credits. Origins of animal groups, their geographical distribution. Four lectures per week.
- Zool. 475. Ethology.** 4 credits. Prerequisite, Zool. 372. Origins of animal groups, their geographical distribution. Four lectures per week.
- Zool. 496, 497. Individual Study.** 2-4 credits, each course. Open to advanced students with the consent of the staff member in charge.
- Zool. 511. Advanced Herpetology.** 4 credits. Prerequisite, permission of instructor. The biology, taxonomy, and distribution of amphibians and reptiles.
- Zool. 512. Advanced Ichthyology.** 4 credits. Prerequisite, permission of instructor. The biology, taxonomy, and distribution of fishes.
- Zool. 596, 597. Individual Study.** 2-4 credits each course. Prerequisite, consent of instructor.
- Zool. 600. Thesis.** 6 credits. Students may enroll for six credits during one quarter or may distribute the credits over two quarters.

## Business Administration

(See Economics and Business Administration)

*Making a point to business students*





# Business Education and Administrative Management

Professor: Kosy.

Associate Professor: Harsha.

Assistant Professor: Flam, Hayes, Manship, Marnix, Osborn, Synnes.

Lecturer: Roth.

The Department provides a program directed towards the preparation of business teachers for the secondary school within the Bachelor of Arts in Education Program. The degree in Administrative Management leads to a Bachelor of Arts in the Arts and Sciences Program. In addition to the two degree programs, a one and two-year pre-professional secretarial program is provided for those individuals who wish to enter business but find it impossible to complete a four-year regular college program.

## (T/Ed) BUSINESS EDUCATION MAJOR (Broad Area)

Qualifies for teaching secondary business education. For elementary, see page 43.

Endorsement for student teaching requires a minimum g.p.a. in each of the basic skill areas (typewriting, shorthand, accounting) equal to that required for the major as a whole (2.25).

It is recommended that Bus. Ed. 321 be completed prior to student teaching and Ed. 314 be completed before taking Bus. Ed. 321.

	<i>Credits</i>
Major (60 credits)	
Bus. Ed. 151, 152, and 153, or 152, 153, and 254, Typewriting .....	6
Bus. Ed. 161, 162, and 163, or 162, 163, and 264, Shorthand .....	13
Bus. Ed. 271, Office Machines .....	3
Bus. Ed. 275, Business Organization and Office Procedures I .....	4
Bus. Ed. 285, Business Communications ..	3
Bus. Ed. 321, Methods in Business Education ..	5
Bus. Ed. 371, Office Management .....	3
Bus. Ed. 375, Personal Finance .....	3
Bus. Ed. 376, Business and Office Procedures II .....	4
Bus. Admr. 251, 252, Principles of Accounting I, II .....	10
Elect from the following courses, including at least 2 areas .....	6
Bus. Ed. 270, Operation of Dictating and Transcribing Machines .....	1
Bus. Ed. 272, Vocational Proficiency in Office Machines .....	5
Bus. Ed. 392, Records Management .....	3
Bus. Admr. 241, Business Law .....	5
Bus. Admr. 366, Principles of Marketing ..	4
Bus. Admr. 370, Business Finance .....	4
Bus. Admr. 374, Investments for Beginners ..	2
Econ. 351, Intermediate Price Theory .....	4
Econ. 470, Money and Banking .....	5
Geog. 245, Economic Geography .....	5
Journ. 365, High School Publications .....	3
Math. 150, Elementary Computer Programming .....	3
Math. 163, College Algebra .....	5

60

It is recommended that Business Education majors take Econ. 251 and 252.

## (T/Ed) BUSINESS EDUCATION MAJOR Plan I

Qualifies for teaching secondary business education. For elementary, see page 43.

Endorsement for student teaching requires a minimum g.p.a. in each of the basic skill areas (typewriting, shorthand, accounting) equal to that required for the major as a whole.

It is recommended that Bus. Ed. 321 be completed prior to student teaching and Ed. 314 be completed before Bus. Ed. 321.

	<i>Credits</i>
Major (45 credits)	
Bus. Ed. 151, 152, and 153, or 152, 153, and 254, Typewriting .....	6
Bus. Ed. 161, 162, and 163, or 162, 163, and 264, Shorthand .....	13
Bus. Ed. 275, Business Organization and Procedures I .....	4
Bus. Ed. 285, Business Communication .....	3
Bus. Ed. 321, Methods in Business Education .....	5
Bus. Ed. 375, Personal Finance .....	3
Bus. Admr. 251, 252, Principles of Accounting I, II .....	10
Elect from the following courses: .....	1
Bus. Ed. 270, Operation of Dictating and Transcribing Machines .....	1
Bus. Ed. 271, Office Machines .....	3
Bus. Ed. 371, Office Management ..	3
Bus. Ed. 376, Business and Office Procedures II .....	4
Bus. Ed. 392, Records Management ..	3
Journ. 365, High School Publications .....	3
Math. 150, Elementary Computer Programming .....	3
Math. 163, College Algebra .....	5

45

It is recommended that Business Education majors take Econ. 251 and 252.

## (T/Ed) BUSINESS EDUCATION MAJOR Plan II (Without Shorthand)

Qualifies for teaching business education subjects, except shorthand at secondary school levels. For ele-

mentary school teaching, see page 43.

Endorsement for student teaching requires a minimum g.p.a. in each of the basic skill areas (typewriting, accounting) equal to that required for the major as a whole.

It is recommended that Bus. Ed. 321 be completed prior to student teaching and Ed. 314 be completed before Bus. Ed. 321.

Major (45 credits)	<i>Credits</i>
Bus. Ed. 151, 152, and 153, or 152, 153, and 254, Typewriting .....	6
Bus. Ed. 271, Office Machines .....	3
Bus. Ed. 275, Business Organization and Office Procedures I .....	4
Bus. Ed. 285, Business Communication....	3
Bus. Ed. 321, Methods in Business Education .....	5
Bus. Ed. 371, Office Management .....	3
Bus. Ed. 375, Personal Finance .....	3
Bus. Admr. 251, 252, Principles of Accounting I, II .....	10
Elect from the following courses: .....	8
Bus. Ed. 376, Business and Office Procedures II .....	4
Bus. Admr. 241, Business Law.....	5
Bus. Admr. 246, Business Statistics. 3	
Bus. Admr. 341, Business Law....	5
Bus. Admr. 366, Principles of Marketing .....	4
Bus. Admr. 374, Investments for Beginners .....	2
Journ. 365, High School Publications .....	3
Math. 150, Elementary Computer Programming .....	3
Math. 163, College Algebra .....	5
	45

It is recommended that Business Education majors take Econ. 251 and 252.

**(T/Ed) BUSINESS EDUCATION MINOR**

**Plan I (Typewriting and General Business)**

Qualifies for teaching secondary typewriting and general business not to exceed two periods per day.

It is recommended that Bus. Ed. 321 be completed prior to student teaching and Ed. 314 be completed before Bus. Ed. 321.

Minor (20 credits)	<i>Credits</i>
Bus. Ed. 151, 152 and 153, or 152, 153, and 254, Typewriting .....	6
Bus. Ed. 321, Methods in Business Education .....	5
Elect from the following courses: .....	9
Bus. Ed. 146, Accounting for Secretaries, or Bus. Admr. 251, Principles of Accounting I .....	5
Bus. Ed. 271, Office Machines .....	3
Bus. Ed. 275, Business Organization and Office Procedures I .....	4
Bus. Ed. 285, Business Communications .....	3
Bus. Ed. 375, Personal Finance....	3
Bus. Ed. 376, Business and Office Procedures II .....	4
Bus. Ed. 392, Records Management. 3	
	20

It is recommended that Business Education Minors take Econ. 251 and 252.

**(T/Ed) BUSINESS EDUCATION MINOR**

**Plan II**

Qualifies for teaching secondary typing and/or shorthand not to exceed two periods per day.

It is recommended that Bus. Ed. 321 be completed prior to student teaching and Ed. 314 be completed before Bus. Ed. 321.

Minor (22 credits)	<i>Credits</i>
Bus. Ed. 152, 153, or 153 and 254, Typewriting .....	4
Bus. Ed. 161, 162, and 163, or 162, 163 and 264, Shorthand .....	13
Bus. Ed. 321, Methods in Business Education .....	5
	22

It is recommended that Business Education Minors take Econ. 251 and 252.

**(T/Ed) BUSINESS EDUCATION MINOR**

**Plan III (Bookkeeping)**

Qualifies for teaching secondary bookkeeping not to exceed two periods per day.

It is recommended that Bus. Ed. 321 be completed prior to student teaching and Ed. 314 be completed before Bus. Ed. 321.

Minor (20 credits)	<i>Credits</i>
Bus. Admr. 251, 252, Principles of Accounting I, II .....	10
Bus. Ed. 321, Methods in Business Education .....	5
Elect from the Following: .....	5
Bus. Ed. 151, Typewriting I.....	2
Bus. Ed. 152, Typewriting II.....	2
Bus. Ed. 153, Typewriting III....	2
Bus. Ed. 254, Vocational Typewriting .....	2
Bus. Ed. 271, Office Machines.....	3
Bus. Admr. 241, Business Law.....	5
	20

It is recommended that Business Education Minors take Econ. 251 and 252.

**(A/S) ADMINISTRATIVE (Office) MANAGEMENT MAJOR\***

Major (60 credits)	
Required:	<i>Credits</i>
Bus. Ed. 275, Bus. Org. and Office Procedures I .....	4
Bus. Ed. 285, Business Communications...	3
Bus. Admr. 251, Principles of Accounting I	5
Bus. Admr. 252, Principles of Accounting II	5
Econ. 251, Principles of Economics I.....	4
Econ. 252, Principles of Economics II.....	4
Bus. Ed. 371, Office Management.....	3
Bus. Ed. 376, Business and Office Procedures II .....	4
Bus. Ed. 377, Business and Office Procedures III .....	4
Electives: (From the following) .....	24
Bus. Ed. 152, Typewriting II .....	2
Bus. Ed. 153, Typewriting III.....	2
Bus. Ed. 254, Vocational Typewriting .....	2

\*If a minor is desired, Economics is recommended.

Bus. Ed. 162, Shorthand II . . . . . 4  
 Bus. Ed. 163, Shorthand III. . . . . 4  
 Bus. Ed. 264, Shorthand IV . . . . . 5  
 Bus. Ed. 270, Operation of Dictating  
 and Transcribing Machines. . . . . 1  
 Bus. Ed. 271, Office Machines. . . . . 3  
 Bus. Ed. 346, Office Occupations In-  
 ternship . . . . . 5  
 Bus. Ed. 485, Business Report Writ-  
 ing . . . . . 5  
 Bus. Admr. 366, Principles of Mar-  
 keting . . . . . 4  
 Bus. Admr. 370, Business Finance. . . 4  
 Bus. Admr. 381, Personnel Manage-  
 ment . . . . . 4  
 Bus. Admr. 241, Business Law . . . . 5  
 Math. 150, Elementary Computer  
 Programming . . . . . 3  
 Math. 163, College Algebra . . . . . 5  
 Psych. 456, Personnel Psychology. . 3

**BUSINESS EDUCATION COURSES**

- Bus. Ed. 142. Typewriting for Personal Use.** 2 credits. Introduction to touch typewriting for beginners. No credit will be given to students who have received credit for one semester of high school or one quarter of college typewriting, but they may audit the course. Five hours per week of laboratory activity interspersed with lectures and demonstrations.
- Bus. Ed. 146. Accounting for Secretaries.** 5 credits. For secretaries and general office workers who are required to keep a simple set of books and complete the various government reports.
- Bus. Ed. 151. Typewriting I.** 2 credits. First course in touch typewriting. May not be taken for college credit by students with one year or more of high school typewriting, but can be audited. Five hours per week of laboratory activity interspersed with lectures and demonstrations. May be waived by examination.
- Bus. Ed. 152. Typewriting II.** 2 credits. Prerequisite, Bus. Ed. 151 or equivalent. Speed, accuracy; introduction of office typewriting problems. Five hours per week of laboratory activity interspersed with lectures and demonstrations. May be waived by examination.
- Bus. Ed. 153 Typewriting III.** 2 credits. Prerequisite, Bus. Ed. 152 or equivalent. Development of speed and accuracy in solving of office problems with emphasis on form and style. Five hours per week of laboratory activity interspersed with lectures and demonstrations. May be waived by examination.
- Bus. Ed. 161. Gregg Shorthand I.** 5 credits. Fundamental theory and principles of Gregg shorthand. May not be taken for college

credit by students with one year or more of high school Gregg shorthand, but can be audited. May be waived by examination.

- Bus. Ed. 162. Gregg Shorthand II.** 4 credits. Prerequisite, one year high school shorthand or Bus. Ed. 161, or equivalent. Review of Gregg shorthand theory with primary emphasis on dictation and speed building. May be waived by examination.
- Bus. Ed. 163. Gregg Shorthand III.** 4 credits. Prerequisite, Bus. Ed. 162, or equivalent. Speed building with a brief introduction to transcription. May be waived by examination.
- Bus. Ed. 166, 167, 168. Machine Shorthand. (Stenograph).** 4 credits each quarter. Course must be taken in sequence. Development of vocational competency in the operation of the Stenograph and the transcription of the dictation.
- Bus. Ed. 254. Vocational Typewriting.** 2 credits. Prerequisite, Bus. Ed. 153 or equivalent. Uses actual office forms and procedures. Five hours of laboratory activity interspersed with lectures and demonstrations.
- Bus. Ed. 264. Gregg Shorthand IV.** 5 credits. Prerequisite, Bus. Ed. 163 or equivalent. Transcription of business letters, a review of principles, further speed building, shortcuts in dictation. Five hours lecture per week and two hours per week of laboratory interspersed with lectures and demonstrations. May be waived by examination.
- Bus. Ed. 270. Operation of Dictating and Transcribing Machines.** 1 credit. The use of various types of voice writing machines. One hour scheduled and one hour arranged. Typing ability a prerequisite. One hour per week lecture and one hour per week laboratory arranged.
- Bus. Ed. 271. Office Machines.** 3 credits. Proficiency in the use of calculators, adding machines and special office machines. One hour per week of lecture and four hours per week of laboratory activity interspersed with lectures and demonstration.
- Bus. Ed. 272. Vocational Proficiency in Office Machine Operation.** 5 credits. Prerequisite, Bus. Ed. 271 or equivalent.
- Bus. Ed. 275. Business Organization and Office Procedures I.** 4 credits. Functions, practices and organization of the business enterprise.
- Bus. Ed. 285. Business Communications.** 3 credits. Composing and completing letters, preparing and interpreting business reports, composing and understanding other types of communications.

- Bus. Ed. 321. Methods in Business Education.** 5 credits. An introductory survey of the teaching of business subjects.
- Bus. Ed. 346. Internship in Office Occupations.** 5 credits. Part-time employment in an approved office position under departmental supervision and with departmental approval. Minimum of fifteen hours a week on the job and attendance at weekly group conferences.
- Bus. Ed. 371. Office Management.** 3 credits. Management and organization of the office; functional office layout and equipment; office personnel, scientific analysis and control; automation; planning, organizing, and controlling office services; executive control of office work.
- Bus. Ed. 373. Practical Duplicating Techniques.** 2 credits. New improvements, latest techniques in color and sketch duplicating, publication of school newspapers, programs, bulletins, etc.
- Bus. Ed. 375. Personal Finance.** 3 credits. Buymanship, choice making, money management, insurance, investments, shelter, personal legal aspects, and taxes.
- Bus. Ed. 376. Business and Office Procedures II.** 4 credits. Prerequisites, Bus. Ed. 151, 142, or equivalent. Filing and reproduction—equipment, principles, procedures and systems.
- Bus. Ed. 377. Business and Office Procedures III.** 4 credits. Prerequisites, Bus. Ed. 142 or 151, Bus. Ed. 146 or Bus. Adm. 251 or equivalents. Automated office practices and systems analysis.
- Bus. Ed. 392. Records Management.** 3 credits. The records department as related to the other departments of a business. Special consideration given to the managerial aspects of handling records and reports; and to the establishing and evaluating of active filing systems.
- Bus. Ed. 420. Methods and Materials for Teaching Bookkeeping and Accounting.** 3 credits. The most recent research and publication in methods and techniques of teaching bookkeeping.
- Bus. Ed. 424. Methods for Teaching Shorthand and Transcription.** 3 credits. Provision is made for the construction of teaching and/or resource units.
- Bus. Ed. 425. Typewriting Methods.** 3 credits. Problems of the beginning and the experienced teacher in teaching typewriting.
- Bus. Ed. 426. Methods and Materials in Basic Business Subjects.** 3 credits.
- Bus. Ed. 440. Workshop.** 1 to 6 credits.
- Bus. Ed. 445. Coordination of Work Experience in the Office and Distributive Occupations.** 3 credits. Philosophy, place, methods, and techniques of coordinating work experience.
- Bus. Ed. 485. Business Report Writing.** 5 credits. Prerequisite, Bus. Ed. 285. Preparation and analysis of internal and external reports and media used in business.
- Bus. Ed. 496. Individual Study.** 2 credits. Prerequisite, completion of twenty hours of work in Business Education.
- Bus. Ed. 520. Tests and Measurements in Business Education.** 3 credits.
- Bus. Ed. 522. Methods for Teaching Secretarial Procedures.** 3 credits.
- Bus. Ed. 524. The High School Business Education Program.** 3 credits.
- Bus. Ed. 526. Machine Shorthand for Teachers (Stenograph).** 5 credits. Methods, materials and skill development. Non-teachers may register with permission of the instructor.
- Bus. Ed. 528. Improvement of Instruction in Typewriting.** 3 credits. Prerequisite, one year of practical teaching experience in Business Education.
- Bus. Ed. 550. Principles of Business Education.** 3 credits.
- Bus. Ed. 580. Seminar in Business Education.** 3 credits.
- Bus. Ed. 595. Research in Business Education.** 3 credits.

# Chemistry

Professor: Newschwander.

Associate Professors: Bowen, Duncan, Gaines, Habib, Hasbrouck, Jones.

Assistant Professor: Meany.

Chemistry is the study of matter and the changes it undergoes.

The Department offers undergraduate curricular programs providing foundations in descriptive and theoretical chemistry. During the first three years the curriculum emphasizes fundamental topics in chemistry, mathematics, and physics. In the third and the fourth year, the student is encouraged to work with the departmental advisor in the selection of courses leading to the Arts and Sciences or Education degree.

Those students in the Arts and Sciences program will choose advanced courses in chemistry, mathematics and physics in addition to general subjects leading to a broad education.

Students in the Education program will elect professional subjects in addition to the general electives. The Department offers an active seminar and undergraduate research program in addition to a broad selection of courses.

The chemistry major, with suitable electives, is designed to prepare the student for a variety of objectives such as graduate study in chemistry or related fields; employment as a chemist by industry, government or institution; or employment as a secondary school teacher.

The Chemistry Department also offers graduate courses of study leading to the degrees Master of Science in Chemistry and Master of Education in Chemistry.

## (A/S) CHEMISTRY MAJOR

Major (60 credits)	Credits
Chem. 181, 181.1, 182, 182.1, 183, 185, General Chemistry and Laboratory . . . . .	15
Chem. 251, Quantitative Analysis . . . . .	5
Chem. 361, 361.1, 362, 362.1, 363, 363.1, Organic Chemistry and Laboratory . . . . .	15
Chem. 381, 382, 382.1, 383, 383.1, Physical Chemistry and Laboratory . . . . .	14
Chem. 350, Inorganic Chemistry . . . . .	3
Chem. 452, Instrumental Analysis . . . . .	4
Electives from Chemistry, Math, or Physics from courses above 300 by advisement . .	4
	<hr/> 60

<sup>1</sup> Chem. 361 and 361.1, or 360 . . . . .	5
Chem. 381, 382, 382.1, 383, 383.1, Physical Chemistry . . . . .	14
Chem. 350, Inorganic Chemistry . . . . .	3
Sci. Ed. 324, Science Education in the Sec- ondary School . . . . .	3
	<hr/> 45

<sup>1</sup> Note: Chemistry 361, 361.1, 362, 362.1, 363, 363.1 will have to be completed if student goes on for a Master's degree in chemistry or the credits will not be counted as part of master's degree program. They will be considered deficiencies and will have to be taken without counting them on the master's degree program.

## (A/S) CHEMISTRY MINOR

Minor (15 to 30 credits)	Credits
Chem. 181, 181.1, 182, 182.1, 183, 185, General Chemistry and Laboratory . . . . .	15
Electives in Chemistry to complete minor . .	15
	<hr/> 15-30

## (T/Ed) CHEMISTRY MINOR

Minor (20 credits)	Credits
Chem. 181, 181.1, 182, 182.1, 183, 185 General Chemistry . . . . .	15
Electives in Chemistry . . . . .	5
	<hr/> 20

## (T/Ed) CHEMISTRY MAJOR

Qualifies for high school chemistry. High school teachers should consider combining this with both physics and mathematics or with biology in order to assure adequate preparation for full-time assignment. See also Physical Science Broad Area Major. For junior high school science teaching, see the Science Major. For elementary teaching, see page —.

The Department of Chemistry will not endorse under this major for teaching of Chemistry with less than the completion of the full major.

Major (45 credits)	Credits
Chem. 181, 181.1, 182, 182.1, 183, 185, General Chemistry . . . . .	15
Chem. 251, Quantitative Analysis . . . . .	5

## CHEMISTRY COURSES

**Chem. 101. Survey of General Chemistry.**  
4 credits. Introductory for the non-scientist.  
Three lectures and one quiz section weekly.

**Chem. 101.1. Chemistry Laboratory.** 1 credit.  
Prerequisite, concurrent registration in Chem.  
101. One laboratory section weekly.

**Chem. 102. Survey of Organic Chemistry.**  
4 credits. For the non-scientist. Prerequisite,  
Chem. 101, 101.1. Three lectures and one  
quiz section weekly.

**Chem. 102.1. Chemistry Laboratory.** 1  
credit. Prerequisites, Chem. 101, 101.1; con-

## 68 Chemistry Courses

- current registration in Chemistry 102. One laboratory section weekly.
- Chem. 103. Survey of Biochemistry.** 4 credits. Prerequisite, Chem. 102, 102.1. Introductory for the non-scientist. Three lectures and one quiz section weekly.
- Chem. 103.1. Chemistry Laboratory.** 1 credit. Prerequisites, Chem. 102, 102.1; concurrent registration in Chem. 103. One laboratory session weekly.
- Chem. 181. General Chemistry.** 4 credits. Prerequisite, high school chemistry or Chem. 101. Three lectures and a quiz section weekly.
- Chem. 181.1. General Chemistry Laboratory.** 1 credit. Prerequisite, concurrent enrollment in Chem. 181. One laboratory session weekly.
- Chem. 182. General Chemistry.** 4 credits. Prerequisite, Chem. 181, 181.1. Three lectures and a quiz section weekly.
- Chem. 182.1. General Chemistry Laboratory.** 1 credit. Prerequisite, concurrent enrollment in Chem. 182. One laboratory session weekly.
- Chem. 183. General Chemistry.** 2 credits. Prerequisite, Chem. 182, 182.1. Two lectures weekly.
- Chem. 185. Qualitative Analysis.** 3 credits. Prerequisite, Chem. 182. One lecture and two laboratory sessions weekly.
- Chem. 245. Glass Blowing.** 1 credit. Techniques of glass blowing and manipulation.
- Chem. 251. Quantitative Analysis.** 5 credits. Prerequisites, Chem. 183 and 185. Three lectures and two laboratory sessions weekly.
- Chem. 299. Seminar.** 1 credit. An orientation course for research or teaching chemistry. Chemical literature and informal discussion of assigned chemical topics. One meeting a week.
- Chem. 350. Inorganic Chemistry.** 3 credits. Prerequisite, Chem. 383. Three lectures weekly.
- Chem. 360. Elementary Organic Chemistry.** 5 credits. Prerequisite, 8 credits in college chemistry. Three lectures and four hours of laboratory weekly.
- Chem. 361, 362, 363. Organic Chemistry.** 3 credits each course. Prerequisites, Chem. 183 and 185. Three lectures weekly.
- Chem. 361.1. Organic Chemistry Laboratory.** 2 credits. Prerequisite, registration in Chem. 361. Two laboratory sessions weekly.
- Chem. 362.1. Organic Chemistry Laboratory.** 2 credits. Prerequisites, 361.1 and registration in 362. Two laboratory sessions weekly.
- Chem. 363.1. Organic Chemistry Laboratory.** 2 credits. Prerequisites, 362.1 and registration in Chem. 363. Two laboratory sessions weekly.
- Chem. 365. Biological Chemistry.** 3 credits. Prerequisite, Chem. 360 or equivalent. Three lectures a week.
- Chem. 365.1. Biological Chemistry Laboratory.** 2 credits. Prerequisite, enrollment in Chem. 365. Two laboratory sessions weekly.
- Chem. 381. Physical Chemistry.** 4 credits. Prerequisites, Chem. 183 and 185, Physics 163 and Math. 271.3. Three lectures and a quiz section weekly.
- Chem. 382, 383. Physical Chemistry.** 3 credits, each course. Prerequisite, Chem. 381. Three lectures a week.
- Chem. 382.1. Physical Chemistry Laboratory.** 2 credits. Prerequisite, enrollment in 382. Two laboratory sessions weekly.
- Chem. 383.1. Physical Chemistry Laboratory.** 2 credits. Prerequisites, Chem. 382.1 and enrollment in Chem. 383. Two laboratory sessions weekly.
- Chem. 452. Instrumental Analysis.** 4 credits. Prerequisites, Chem. 251 and Chem. 383. Two lectures and two laboratory sessions weekly.
- Chem. 454. Introduction to Spectroscopy.** 3 credits. Prerequisites, previous or current enrollment in Chem. 363 and Chem. 383. Three lectures a week.
- Chem. 461, 462. Advanced Organic Chemistry.** 3 credits, each course. Prerequisites, Chem. 363 and Chem. 383. Course includes theoretical treatment of organic reactions and reaction mechanisms. Three lectures a week.
- Chem. 464. Organic Preparations.** 3 credits. Prerequisite, Chem. 363. Advanced techniques and theory of organic chemical research. One lecture and six hours of laboratory weekly.
- Chem. 470. Radiochemistry.** 3 credits. Prerequisite, Chem. 383. Three lectures a week.
- Chem. 470.1. Radiochemistry Laboratory.** 2 credits. Prerequisite or co-requisite, Chem. 470. Two laboratory sessions weekly.
- Chem. 471. Chemistry of the Transition Elements.** 3 credits. Prerequisite, Chem. 350. Three lectures weekly.
- Chem. 472. Inorganic Preparations.** 3 credits. Prerequisite, Chem. 350. Common techniques and reactions of preparative inorganic chemistry. One lecture and six hours of laboratory a week.
- Chem. 496, 497. Individual Study.** 2 to 4 credits, each course. Open to advanced stu-

- dents with consent of staff members in charge.
- Chem. 498.1, 498.2, 498.3. Individual Research.** 2 credits each course. Prerequisite, consent of staff.
- Chem. 500, 501, 502. Advanced Biochemistry.** 3 credits each course. Prerequisite, Chem. 365.
- Chem. 505. Biochemical Methods.** 3 credits. Prerequisite, Chem. 500.
- Chem. 550. Advanced Analytical Chemistry.** 3 credits. Prerequisite, Chem. 452.
- Chem. 561. Advanced Topics in Organic Chemistry.** 3 credits. Prerequisites, Chem. 383 and Chem. 462.
- Chem. 570.1, 570.2. Advanced Inorganic Chemistry.** 3 credits each course. Prerequisite, Chem. 350.

- Chem. 581.1, 581.2, 581.3. Advanced Topics in Physical Chemistry.** 3 credits, each course.
- Chem. 596. Individual Study.** 3 credits, may be repeated for credit. Prerequisites, graduate standing and approval of department.
- Chem. 598.1, 598.2, 598.3. Graduate Seminar.** 1 credit each course. Prerequisite, graduate standing or consent of staff.
- Chem. 600. Thesis.** 6 credits. Prerequisite, graduate standing in chemistry.

## Chemistry-Physics Broad Area

(See Physics)

## Crafts

(See also Art)

### (A/S) CRAFTS MINOR

Minor (18-30 credits)	<i>Credits</i>
Art 170, Design .....	3
Crafts 262, Pottery .....	3
Crafts 242, Wood .....	3
Crafts 244, Metal, or Crafts 347, Jewelry..	3
Elect from:	
Art 348, Ancient and Medieval Art, Art 452, Art of Americas, Art 456, Art of the Orient and Near East, or Art 457, African and Oceanic Art .....	2-3
Guided electives from Crafts and/or Art 270, 385, 452, 457, 470, Home Economics 260, 460 .....	4-17
	18-30

### (T/Ed) CRAFTS MINOR

Minor (20 credits)	<i>Credits</i>
Elect from Crafts 242, Wood and Crafts 244, Metal .....	
Crafts 262, Pottery .....	3
Crafts 347, Jewelry .....	3
Elect from Crafts 242, 243, 244, 245, 246, 342, 344, 348, 349, 362, 447, 462, and Home Ec. 260, 460 .....	
	11
	20

### CRAFTS COURSES

- Crafts 242. Wood.** 3 credits. Prerequisite, Art 170. Designing craft articles in wood, stressing a knowledge of materials, processes and appreciation. Six hours of studio per week.
- Crafts 243. Plastics and Glass.** 3 credits. Prerequisite, Art 170. Designing in plastics and

- glass stressing integrity in the use of these materials. Six hours of studio per week.
- Crafts 244. Metal.** 3 credits. Prerequisite, Art 170. Designing and construction articles in metal, involving hand and machine work, appreciation and technical skills. Six hours of studio per week.
- Crafts 245. Leather.** 3 credits. Prerequisite, Art 170. Designing and making crafts items in leather stressing creative use of the material. Six hours of studio per week.
- Crafts 246. Fabrics.** 3 credits. Prerequisite, Art 170. Designing in fabrics with emphasis placed upon surface treatment. Six hours of studio per week.
- Crafts 262. Pottery.** 3 credits. Prerequisite, Art 170, sophomore standing. Basic procedures of handbuilding and throwing on the potter's wheel; techniques of decoration and glaze application, historic and contemporary vessel forms. Six hours of studio per week.
- Crafts 342. Advanced Wood.** 2 credits. Prerequisite, Crafts 242. Advanced individual crafts problems in wood. Four hours of studio per week.
- Crafts 343. Advanced Plastics and Glass.** 2 credits. Prerequisite, Crafts 243. Individual design problems in plastics and glass. Four hours of studio per week.
- Crafts 344. Advanced Metal.** 3 credits. Prerequisite, Crafts 244. Continues the work

- offered in Crafts 244 with selection of individual problems. Six hours of studio per week.
- Crafts 346. Advanced Fabrics.** 2 credits. Prerequisite, Crafts 246. Designing in fabrics with emphasis upon structural treatment of the material. Four hours of studio per week.
- Crafts 347. Jewelry.** 3 credits. Prerequisite, Art 170. Design and construction; base metals and stone setting. Six hours of studio per week.
- Crafts 348. Lapidary.** 2 credits. Selection, cutting, polishing, and use of semi-precious stones. Elementary identification of usable minerals. Four hours of studio per week.
- Crafts 349. Enameling.** 2 credits. Various techniques, small murals, bowls and jewelry. Four hours of studio per week.
- Crafts 362. Pottery.** 3 credits. Prerequisite, Crafts 262. Continued development of throwing skills. Understanding of ceramic raw materials and basic glaze chemistry with extensive testing. Six hours of studio per week.
- Crafts 447. Advanced Jewelry.** 2 credits. Prerequisite, Crafts 347. New developments in jewelry, design and construction with experiments in cast silver, uncut stones, and other materials. Four hours of studio per week.
- Crafts 462. Advanced Pottery.** 3 credits. Prerequisite, Crafts 362. Execution of individual projects. Development of high fire glaze. Stacking and firing kilns. Six hours of studio per week.
- Crafts 496, 497, 498. Individual Study.** 2 credits each. Prerequisite, approval of the instructor and chairman of the department.
- Crafts 547. Advanced Studies in Jewelry.** 2-5 credits. Prerequisite, Crafts 447. Two hours of studio for each credit.
- Crafts 562. Advanced Studies in Ceramics.** 2-5 credits. Two hours of studio for each credit.
- Crafts 596, 597, 598. Individual Study.** 2 credits each.

## Economics and Business Administration

Professors: Danton, Williams.

Associate Professors: Ahmad, Lillard, Treadwell.

Assistant Professors: Bundy, Galbraith, Godfrey, O'Shaughnessy.

Lecturer: Berthold, Burns, Gorrie, Long.

The Department offers majors in Arts and Science degree in Business Administration and in Economics. Upon graduation, graduates are employed in a wide variety of business positions with many currently entering management training programs.

### (A/S) BUSINESS ADMINISTRATION MAJOR

<sup>1</sup> Major (60 credits)	<i>Credits</i>
Core Subjects	
Bus. Ad. 241, Business Law . . . . .	5
Bus. Ad. 246, Business and Economics Statistics . . . . .	3
Bus. Ad. 251, Principles of Accounting I . . . . .	5
Bus. Ad. 252, Principles of Accounting II . . . . .	5
Econ. 251, Principles of Economics I . . . . .	4
Econ. 252, Principles of Economics II . . . . .	4
Bus. Ad. 335, Principles of Production . . . . .	4
Bus. Ad. 346, Advanced Business and Economics Statistics . . . . .	3
Bus. Ad. 366, Principles of Marketing . . . . .	4
Bus. Ad. 370, Business Finance . . . . .	4
<sup>2</sup> Electives in field of specialization . . . . .	19
	60

### Fields of Specialization

Complete the required courses and select from electives to complete one specialization of 19 hours.

#### Accounting

Required: Bus. Ad. 350, 351.  
Electives: Bus. Ad. 341, 352, 356, 450, 453, 454, 456; Econ. 481; Math. 150.

#### Banking and Finance

Required: Bus. Ad. 372; Econ. 470.  
Electives: Bus. Ad. 341, 377, 383, 475; Econ. 480, 481; Math. 150.

#### Business Economics

Required: Econ. 351, 356.  
Electives: Bus. Ad. 383, 469; Econ. 385, 446, 480, 484, 485, 488.

#### General Business

The electives for the field of specialization requirement may be completed from upper

<sup>1</sup>It is recommended that Math 163 be elected.  
<sup>2</sup>It is recommended that Economics be elected as a minor.



division Business Administration or Economics courses, but is limited to no more than 10 credits from any other specialization. Courses taken to complete this area of specialization should be approved by the department chairman.

**Management**

Required: Econ. 356, 485.  
Electives: Bus. Ad. 341, 356, 379, 435; Econ. 355; Math. 150.

**Marketing**

Required: Bus. Ad. 368, 468, 469.  
Electives: Bus. Ad. 461; Bus. Ed. 285; Econ. 351; Math. 150.

**Office Management**

Required: Bus. Ed. 278, 285.  
Electives: Bus. Ed. 270, 271, 371, 373, 390, 392; Econ. 355, 356.

**Statistics**

Required: Econ. 446, 447.  
Electives: Bus. Ad. 469; Econ. 351; Math. 150 and any upper division Math. courses.

**(A/S) BUSINESS ADMINISTRATION MINOR**

Minor (30 credits)	<i>Credits</i>
<sup>1</sup> Econ. 244, Introduction to Economics . . .	5
Bus. Ad. 246, Business and Economics Statistics . . . . .	3
Bus. Ad. 251, Principles of Accounting I . . .	5
Bus. Ad. 252, Principles of Accounting II . . .	5
Bus. Ad. 335, Principles of Production . . . .	4
Bus. Ad. 366, Principles of Marketing . . . .	4
Bus. Ad. 370, Business Finance . . . . .	4
	30

<sup>1</sup>Econ. 251 will substitute for Econ. 244.

**BUSINESS ADMINISTRATION COURSES**

- Bus. Admr. 241. Business Law.** 5 credits. Introduction to law, its origins and development; formation and performance of contracts; fraud, mistakes, duress and undue influence; agency vs. employer-employee relationships; negotiable instruments; personal property; bailments; and transportation.
- Bus. Admr. 246. Business and Economic Statistics.** 3 credits. Prerequisites, Math. 163, Econ. 252. Methods of collection and presentation of data; analyzing and interpreting economic and business data through the techniques of averaging, index numbers, time series, sampling and correlation.
- Bus. Admr. 251. Principles of Accounting I.** 5 credits. An introduction to the entire field of accounting; systems from the simple to the complex; financial statements, their collection, interpretation, and analysis.
- Bus. Admr. 252. Principles of Accounting II.** 5 credits. Prerequisite, Bus. Admr. 251. A continuation of Bus. Admr. 251, with

special emphasis on partnerships and corporation accounting; payroll, social securities, income tax, construction of operative reports, operation of balance sheets.

- Bus. Admr. 310. Machine Accounting.** 2 credits. Prerequisite, Bus. Admr. 251. Modern punch-card machines and their application to accounting procedures.
- Bus. Admr. 320. Managerial Accounting Analysis.** 3 credits. Prerequisite, Bus. Admr. 252. Use of cost data for control and decision making, from the point of view of management, collection and transmission of quantitative information to meet various needs within the firm. Planned for students not specializing in accounting.
- Bus. Admr. 324. Financial Accounting Analysis.** 3 credits. Prerequisite, Bus. Admr. 252. Underlying concepts preparation of financial statements from the point of view of the users of these statements. Planned for students who are not specializing in accounting.
- Bus. Admr. 325. Transportation and Distribution Management.** 4 credits. Transportation and distribution management; the physical transportation plan of the United States and its performance; carrier responsibilities, service, and cooperation; economic and legal bases of rates, freight classification and tariff preparation and interpretation, rate structures, and relationships between transportation and the location of economic activities.
- Bus. Admr. 335. Principles of Production.** 4 credits. Theory and practice of production management; problems of internal organization; management of physical resources; product development; material controls; production controls; production standards; and managerial controls.
- Bus. Admr. 341. Business Law.** 5 credits. The law of sales, duties and liabilities of parties; nature and kinds of insurance; suretyship and guaranty; partnerships; corporations; real property; mortgages; leases; trusts and decedents' estates; bankruptcy; business torts and crimes.
- Bus. Admr. 346. Advanced Business and Economic Statistics.** 3 credits. Prerequisite, Bus. Admr. 246. Advanced statistical techniques: Chi Square, variance analysis, multiple correlation, sampling theory, and statistical quality control. Laboratory problems.
- Bus. Admr. 350. Intermediate Accounting I.** 5 credits. Theory underlying the presentation of current and fixed assets, liabilities, and net worth.

- Bus. Admr. 351. Intermediate Accounting II.** 5 credits. A continuation of the theory underlying the presentation of assets, liabilities, and net worth. Financial statement analysis, comparative statements, and statement of application of funds.
- Bus. Admr. 352. Cost Accounting.** 5 credits. Economics of cost accounting; industrial analysis, production control through costs; types of cost systems; burden application.
- Bus. Admr. 356. Income Tax Accounting.** 5 credits. Accounting theory and practices of federal income taxation, based on a study of governmental publications—the law, regulations, and digest of official income tax decisions.
- Bus. Admr. 359. Federal Taxation.** 5 credits. Covers the entire field of federal taxation, emphasizing the federal income tax, social security taxes, federal estate taxes, federal gift taxes and federal excise taxes.
- Bus. Admr. 366. Principles of Marketing.** 4 credits. Functions, agencies and methods in the marketing of industrial and consumer goods.
- Bus. Admr. 368. Marketing Middleman.** 4 credits. Activities of wholesalers, retailers, and outside salesmen; retail and wholesale store organization, inventory and expense control, and gauging efficiency. Principles of salesmanship, tasks involved in prospecting, meeting quotas, and customer relations.
- Bus. Admr. 370. Business Finance.** 4 credits. Prerequisite, Bus. Admr. 251. Conservation of corporate working capital and the securing of additional funds through bank loans and the sale of stocks and bonds.
- Bus. Admr. 372. Real Estate.** 4 credits. Real estate principles and practices, with special emphasis on urban land-use analysis; nature of real property rights; organization of the real-estate industry and market; land-use competition; real estate financing; the impact of government policies upon the real estate industry.
- Bus. Admr. 374. Investments for Beginners.** 2 credits. Problems of investing, including corporate securities, investment companies, and the brokerage office. Not to be taken after Bus. Admr. 475.
- Bus. Admr. 377. Principles of Insurance.** 5 credits. Nature of risk and uncertainty; methods of meeting risk; the insurance mechanism; legal problems of insurance; various types of contracts and carriers; purchase of insurance by the individual.
- Bus. Admr. 379. Collective Bargaining.** 3 credits. Prerequisites, Economics 244 or 251-252 and junior standing. Contemporary collective bargaining contracts and procedures, the role of government in labor-management relations.
- Bus. Admr. 380. Management Decision Making.** 5 credits. History and trends in management thought, its development, change, and probable future; relationship of managers and their decision processes to external influences of society; formal and informal organization theory and organizational change and growth; and planning and control as decision processes in organizational systems.
- Bus. Admr. 381. Personnel Management.** 4 credits. Selection of personnel; methods of training and re-training workers; workers; wage policy; utilization of human resources; job training; administration of labor contracts; and public relations.
- Bus. Admr. 383. Business Cycles.** 4 credits. Prerequisites, Bus. Admr. 246, Econ. 251, Econ. 252, and junior standing. Theories, nature, measurement of business cycles; problems arising from business fluctuations; and policies to achieve economic stability.
- Bus. Admr. 410. Application of Digital Computers.** 4 credits. Prerequisites, Math. 150, Bus. Admr. 252 and 346, or permission of the instructor. Methods of programming electronic computers for business operations. Projects in accounting, operations research, and statistics.
- Bus. Admr. 435. Production Management.** 4 credits. Prerequisite, Bus. Admr. 335. Decision-making in production planning; types of decisions and variables involved; possibilities for quantification of variables; criteria for decision; methods of analysis; applications of modern analysis in the solution of practical production problems.
- Bus. Admr. 450. Advanced Accounting.** 5 credits. Prerequisites, Bus. Admr. 251, 252. Partnership and joint venture accounting; agency and branch accounts. Corporate consolidations; balance sheet; profit and loss; investments.
- Bus. Admr. 453. Accounting Theory.** 5 credits. Prerequisite, Bus. Admr. 351. Accounting literature theory. History, formal statements of principles, special depreciation problems, relations of economics and accounting, and the effect of price-level changes upon financial statements.

**Bus. Admr. 454. Auditing.** 5 credits. Prerequisite, Bus. Admr. 351. Auditor's functions and responsibilities. Evaluation of the system of internal control, the determination of appropriate auditing procedures, and the extent of their application.

**Bus. Admr. 456. Advanced Income Tax Accounting.** 5 credits. Prerequisite, Bus. Admr. 356. Tax accounting practice, including gross income deductions, depreciation, capital gains and losses, estates and trusts, corporate problems, and administrative procedure.

**Bus. Admr. 461. Principles of Advertising and Sales Management.** 5 credits. Prerequisite, Bus. Admr. 366. The place of advertising and sales management in marketing. Analysis of media and budgets, research, advertising institutions, economic and social aspects; management of sales personnel, recruitment training, work assignments, quotas, supervision motivation, and appraisal of performance.

**Bus. Admr. 468. Marketing Problems.** 4 credits. Prerequisite, Bus. Admr. 366. Managerial marketing problems of the manufacturer, wholesaler, and retailer.

**Bus. Admr. 469. Market Research.** 4 credits. Prerequisites, Bus. Admr. 246 and Bus. Admr. 366 or consent of instructor. Application of research to economics and business; tools of research design; planning investigations; gathering, organizing, and interpreting data; presentation of findings.

**Bus. Admr. 475. Investments.** 4 credits. Prerequisite, Bus. Admr. 370. Not to be taken by those electing Bus. Admr. 374. The nature of corporate securities.

**Bus. Admr. 496, 497. Individual Study.** 2 or 3 credits, each course. Open to advanced students with the consent of the staff member in charge.

**(A/S) ECONOMICS MAJOR**

Major (50 to 60 credits)	<i>Credits</i>
Econ. 251, Principles of Economics I . . . . .	4
Econ. 252, Principles of Economics II . . . . .	4
Bus. Ad. 246, Business and Economics Statistics . . . . .	3
Bus. Ad. 251, Principles of Accounting I . . . . .	5
Bus. Ad. 346, Advanced Business and Economics Statistics . . . . .	3
Hist. 348, Economic History of the United States . . . . .	5
Econ. 351, Intermediate Price Theory . . . . .	4
Econ. 470, Money and Banking . . . . .	5
Econ. 480, Public Finance . . . . .	5
Econ. 488, National Income Analysis . . . . .	4
Electives in Economics or Bus. Ad. . . . .	8-18

**(A/S) ECONOMICS MINOR I**

Minor I (15 to 30 credits)	<i>Credits</i>
Econ. 251, Principles of Economics I . . . . .	4
Econ. 252, Principles of Economics II . . . . .	4
Electives in upper division Economics courses or Hist. 348 . . . . .	7-22

**(A/S) ECONOMICS MINOR II**

Minor II (20 to 30 credits)	<i>Credits</i>
(For Business Administration Majors)	
Econ. 351, Intermediate Price Theory . . . . .	4
Econ. 355, Economics of Labor . . . . .	5
Econ. 470, Money and Banking . . . . .	5
Econ. 480, Public Finance . . . . .	5
Electives in upper division Economics courses or History 348 . . . . .	1-11

Another approved Economics course must be substituted for any of the above courses which are taken as part of the Business Administration major specialization.

**(T/Ed) ECONOMICS MAJOR**

Senior high school teachers must combine this with a major in history or some other field in which a major portion of a full-time assignment can be expected. Qualifies for teaching both secondary economics and accompanying major field. For elementary, see page 43.

Junior high school teachers must (1) follow the pattern outlined for senior high school teachers; or (2) combine this major with minors in at least two of the following fields: English, geography, and history; or (3) consider a Junior High School Broad Area Social Studies-Language Arts Major.

Major (45 credits)	<i>Credits</i>
Econ. 251, Principles of Economics I . . . . .	4
Econ. 252, Principles of Economics II . . . . .	4
Econ. 470, Money and Banking . . . . .	5
Econ. 480, Public Finance . . . . .	5
Bus. Ad. 251, Principles of Accounting I . . . . .	5
Econ. 348, Economics History of the United States . . . . .	5
Soc. Sci. 420 or 421, Methods and Materials in the Social Sciences—Elementary or Secondary or Hist. 421, Methods and Materials in History—Secondary . . . . .	2-3
Electives (Five hours from history, geography or political science; upper division electives—ten hours in economics or business administration) . . . . .	14-15

**(T/Ed) ECONOMICS MINOR**

Minor (20-23 credits)	<i>Credits</i>
Econ. 251, Principles of Economics I . . . . .	4
Econ. 252, Principles of Economics II . . . . .	4
Select from: . . . . .	12-15
Econ. 345, Current Issues in Economics . . . . .	2
Econ. 355, Economics of Labor . . . . .	5
Econ. 346, Comparative Economic System . . . . .	5
Econ. 470, Money and Banking . . . . .	5
Econ. 480, Public Finance . . . . .	5
Econ. 348, Economic History of the United States . . . . .	5

## ECONOMICS COURSES

- Econ. 244. Introduction to Economics.** 5 credits. For the student who desires a general knowledge of economics. Condensation of Econ. 251 and Econ. 252. Students who have had 251 and/or 252 should not enroll in Econ. 244.
- Econ. 251. Principles of Economics I.** 4 credits. Organization of the U.S. economy, structure and role of the monetary system, problems of unemployment and inflation, government spending and taxation and their impact on the economy. Labor unions, economic growth, and a comparison of capitalism with other economic systems.
- Econ. 252. Principles of Economics II.** 4 credits. Prerequisite, Econ. 251. The function of the price system in the allocation of scarce resources, determination of prices and output in competitive and monopolistic markets, U.S. agriculture, distribution of income, and world economic problems.
- Econ. 345. Current Issues in Economics.** 2 credits. Prerequisite, Econ. 251, and Econ. 252. Contemporary economic issues with an application of macro and micro economic theory.
- Econ. 346. Comparative Economic Systems.** 5 credits. Prerequisites, Econ. 251 and Econ. 252. The basic economics of socialism, capitalism, communism, and fascism plus the variations practiced in select countries in the twentieth century.
- Econ. 348. Economic History of the United States.** 5 credits. Economic factors in the development of the American nation, from the European background to the present. Same as History 348. (Students may not receive credit in both.)
- Econ. 351. Intermediate Price Theory.** 4 credits. Prerequisites, Econ. 251 and Econ. 252. Principles of economic analysis as they apply to the determination of price and output under competitive and monopolistic market conditions, the distribution of income, and welfare economics.
- Econ. 354. Economics of the Pacific Northwest.** 3 credits. Current economics problems in the Pacific Northwest. Topics covered are industrial location, growth, taxes, international trade, river basin development, conservation, and labor relations.
- Econ. 355. Economics of Labor.** 5 credits. Prerequisites, Econ. 251 and Econ. 252. Present conditions and problems of labor; the rise, structure, philosophy, policies, and methods of trade unionism. Essentials of labor law as related to collective bargaining and efforts of the community to promote industrial peace.
- Econ. 356. Government and Business.** 4 credits. Prerequisites, Econ. 251 and Econ. 252. The development and current status of government-business relations in the United States. Public policy toward business; government powers and private rights; regulation of competition and monopoly; government aids; and public enterprise.
- Econ. 385. International Economics.** 5 credits. International economics theory and relations, adjustment between national economies, the role of international agencies in building a world economy.
- Econ. 388. Economic History of Europe Since 1760.** 5 credits. The Industrial Revolution in Great Britain and on the Continent, its resultant social and cultural effects, the rise of trade unionism, socialism, anarchism, imperialism, economics and war in the twentieth century, and the rise of the welfare state. Same as History 388. (Students may not receive credit in both.)
- Econ. 444. Economic Education.** 3 credits. The inclusion of economic institutions in the public school program.
- Econ. 445. Current Economics.** 3 credits. Selected economic issues in the United States, basic concepts needed to keep abreast of current developments. Materials available.
- Econ. 446. Introduction to Econometrics.** 3 credits. Prerequisites, Bus. Admr. 246 and Bus. Admr. 346. Elementary mathematical formulations including functions, simple determinants matrices, elements of calculus and the application of these methods to economic problems; statistical inference and multiple regression analysis.
- Econ. 447. Advanced Econometrics.** 3 credits. Prerequisites, Econ. 446, or Bus. Admr. 246 and a course in calculus (Math. 175); or Math. 175 and Math. 311 and a course in economics. An extension of multiple regression analysis. Introduction to econometric models, static and dynamic, problems of economic time series.
- Econ. 450. History of American Labor Relations.** 3 credits. Present day industrial government, growth of the organized labor movement, attitudes of government and business.
- Econ. 453. History of Economic Thought.** 3 credits. Prerequisites, Econ. 251, Econ. 252, and senior standing. Economic thought from the Physiocrats to modern times, contributions of the various schools of thought to economics.

**Econ. 470. Money and Banking.** 5 credits. Money, credit, and banking, history of monetary and banking systems in the United States.

**Econ. 480. Public Finance.** 5 credits. Prerequisites, Econ. 251 and Econ. 252. Theory of public expenditures, growth of federal, state and local government expenditures, and the principles of taxation. Structure of the American tax system, shifting and incidence of taxes and economic effects of various taxes. Fiscal policy and public debt management.

**Econ. 481. State and Local Government Finance.** 5 credits. Prerequisite, Econ. 480. Major issues and problems in state and local government expenditures, trends and determinants of expenditures. Theoretical and practical aspects of financing education and highways. Structure of state and local government taxes; their impact on business location; evaluation of local revenue situation. State and local government debt.

**Econ. 484. Economic Development.** 4 credits. Prerequisites, Econ. 251 and Econ. 252, and senior standing. Social and economic variables underlying economic development of the less developed nations. Issues in growth theory capital development and rates of progress in different countries.

**Econ. 485. Managerial Economics.** 3 credits. Prerequisites, Econ 251, 252, Bus. Admr. 251 and Bus. Admr. 246 and senior standing.

The managerial decision-making process, cost analysis, pricing decisions, marginal decision, research and development expenditures, programing and financial problems.

**Econ. 488. National Income Analysis.** 4 credits. Prerequisites, Econ. 251 and Econ. 252 and junior standing. Analysis and measurement of U.S. national income and product accounts; determinants of income, employment, and prices under the Classical and Keynesian system; problems of inflation, economic growth, and stabilization policy.

**Econ. 490. Monetary Theory and Policy.** 4 credits. Prerequisite, Econ. 470 and/or 488. Factors affecting the money supply and bank reserves; study of the flow of funds system of national accounts. Monetary theories of interest; pattern and structure of interest rates. The mechanics and effectiveness of monetary policy; relationship of monetary policy to debt management; integration of monetary policy and fiscal policy.

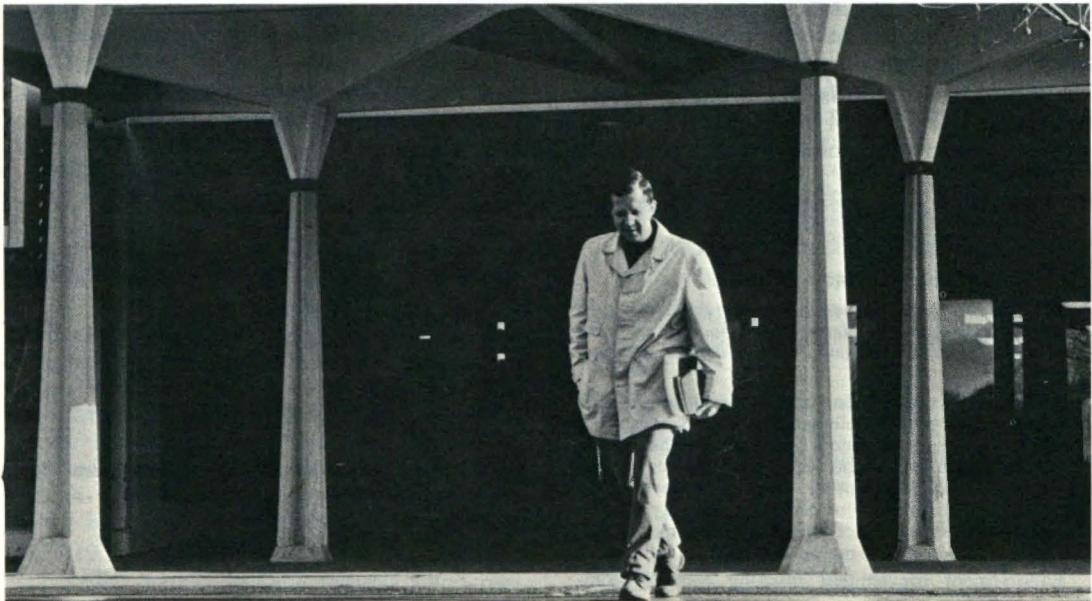
**Econ. 495. Research Seminar.** 2 credits. Students may register only at the invitation of the economics faculty.

**Econ. 496, 497. Individual Study.** 2 or 3 credits, each course. Open to advanced students with the consent of the staff member in charge.

## Earth Science

(See Geology)

*End of a library session*



# Education

Professors: Crum, Howard, Miller, Murphy, Ruebel.

Associate Professors: Basler, Bergstrom, Berry, Davis, Floyd, Gaskell, Goetschius, Henderson, Potter, Price, Rickels, Schliesman, Smawley, Terrey, Unruh, Vleck, Wright.

Assistant Professors: Adams, Brunner, Carlson, Carleton, Derbyshire, Gabriel, Grossman, Kiser, Monasmith, Patton, Taylor, Schmidt, Young.

Lecturers: Mathers, Nicholson.

## *Hebeler Elementary School Faculty*

Associate Professors: Armstrong, Covington, Jakubek, Kohler, Sheridan.

Assistant Professors: Baldi, Bovos, Lampman, Miller, Wachs, Wilson.

Lecturers: Gray, Males.

## *Student Teaching Faculty*

Professors: Goldsmith, Gustafson.

Associate Professors: Elmore, Erickson, Norris, Silver, Sutherland, Taylor.

Assistant Professors: Adams, Brown, Carlton, Chan-Nui, DeShaw, Fennelly, Hostetter, Johnson, Junell, Moore.

Lecturers: Mathers, Nicholson, Nielsenosen.

The undergraduate program in the Department of Education, in close cooperation with other departments, prepares students for teaching in elementary, junior high schools, or high schools. Special programs include Urban Center Education, Early Childhood Education, Special Education, and Instructional Media. Post-bachelors degree study in the Department of Education prepares for teaching, administration, and/or special staff assignments in the schools. A program of fifth year study leads to the Standard Teaching Certificate. Master's degree programs prepare students for administration, supervision, and leadership roles in such areas as audio-visual, reading, counseling, and psychology. Master's degree work and post-master's degree work meets state requirements for Provisional and Standard Principal's Credentials.

The Department of **Hebeler Campus-Laboratory School** is that part of the education program which is essentially committed to investigation in education. It provides the format, facilities, and staff to promote research, experimentation, and innovation in educational practices and encourages observation and demonstration of the processes and substance of change in the educational enterprise.

**September Experience**, explained in the catalog as Education 341, Classroom Management, is a laboratory experience which takes place at the beginning of the Public School Year, in which a potential teacher has an opportunity under apprentice conditions to learn what is necessary to begin a school year, organizing the classroom, grouping the students, etc.

Two courses comprise the **Student Teaching Experience**: Education 442, and Education 445. Education 442 is for 14 credits and is the laboratory experience called Student Teaching. Education 445 is a two credit Seminar which accompanies Student Teaching.

## (T/Ed) PROFESSIONALIZED SUBJECTS MINOR (Elementary School)

*All students preparing to teach in regular or self-contained classrooms in elementary schools must complete the Elementary School Professionalized Subjects Minor.*

A student preparing to teach in regular or self-contained classrooms in elementary schools must take the first three courses listed below plus nine credits from the remainder of the list. These courses should be selected from fields other than those covered by the academic major and minor. Courses may not be counted as meeting the credit requirements in two different minors or in a major and minor.

Endorsement for student teaching requires com-

pleting fifteen credits, including Ed. 322, 323, and 420.

*Students who follow a 30-20-20 program must complete a major by the end of the fifth year of Teacher Education.*

Minor (19 credits)	Credits
Take the following three courses:	
Ed. 322, Teaching of Reading.....	3
Ed. 323, Teaching of Arithmetic.....	3
Ed. 420, Teaching the Language Arts.....	4
	10
Complete minor by selecting courses from the following: .....	9
Art 430, Art in the Elementary School .....	3
P.E. 334, Physical Education Act, for the Elementary School.....	3

Eng. 320, Children's Literature . . . . .	3
Sp. 420, Teaching Speech in the Elementary School . . . . .	3
Music 326, Music in the Classroom. . . . .	3
Sci. Ed. 322, Science Education in the Elementary School . . . . .	3
Soc. Sci. 420, Methods and Mate- rials in the Social Sciences—Ele- mentary . . . . .	3
	19

**(A/S) EDUCATION MINOR  
(School Psychologist)**

Only for those seeking School Psychologist Certification without Teacher Certification. See School Psychology graduate specialization.

Minor (16 credits)	<i>Credits</i>
Ed. 307, Introduction to Education . . . . .	4
Sp. Ed. 343, Educating Exceptional Chil- dren . . . . .	3
Psy. 455, Case Studies in Psychology . . . . .	2
Ed. 446, Directed Observation . . . . .	3
Electives chosen with advice of Education Department Chairman . . . . .	4
	16

**(A/S) EDUCATION MINOR**

Minor (15 to 30 credits)	<i>Credits</i>
Ed. 307, Introduction to Education . . . . .	4
Psy. 309, Human Growth and Development	4
Psy. 310, Learning and Evaluation . . . . .	4
*Electives chosen with Education Department Chairman adviser to complete minor . . . . .	3-18
	15-30

\*Electives usually include Ed. 467 and 468.

**EDUCATION COURSES**

- Ed. 307. Introduction to Education.** 4 credits. Prerequisite, sophomore standing. Meets daily. Teaching as a career and essential features of preparation for it. The American public school system, the responsibilities of schools in a democratic society, the work of the teacher in the school, characteristics of good teachers, preparation for professional competencies, and certification. Laboratory experiences, which are a basic part of this course, will be scheduled regularly.
- Ed. 314. Curriculum Methods and Materials.** 4 credits. Prerequisite, Ed. 307, Psy. 309, Psy. 310, and admission to the teacher education program. Meets daily. The basic principles of curriculum and instruction, fundamental teaching procedures, orientation to curriculum content, classroom activities, and instructional materials typical of primary, intermediate, junior high, and senior high school levels. Laboratory experiences will be scheduled regularly.
- Ed. 319. Cursive and Manuscript Writing.** 1 credit. Sociological, physiological and psy-

chological factors as they relate to handwriting. Designed primarily for secondary teachers.

- Ed. 322. Teaching of Reading.** 3 credits. For students who have not had any teaching experience. Readiness, vocabulary and analysis, comprehension, teaching procedures on levels of reading.
- Ed. 323. Teaching of Arithmetic.** 3 credits. Principles and methods of instruction; fundamental processes, the "discovery" method as one means of putting the "meaning theory" into practice, the use of proof, the building of number concepts, and the purpose of problems.
- Ed. 330. Air Age Education.** 3 credits. The influence of aviation upon world culture. The problems that confront society as a result of the influence of aviation and its impact upon education.
- \*Ed. 341. Classroom Management.** (September Experience). 4 credits. Prerequisites, Ed. 307, Psy. 309, admission to the teacher education program plus a current physical and chest X-ray examination showing freedom from tuberculosis. Meets daily. A laboratory experience course dealing with the teacher's non-instructional duties in organizing classroom procedures, procuring materials and supplies, keeping records, making reports, guiding and disciplining students, working with colleagues, and other administrative activities which support the instruction program. This course will be evaluated with the letters "S" or "U" only.
- Ed. 342. Classroom Management.** 4 credits. Prerequisites, Ed. 307, Psy. 309, admission to the teacher education program, and special permission of the Chairman of the Department of Education. Meets daily. The teacher's non-instructional duties in organizing classroom procedures, procuring materials and supplies, keeping records, making reports, guiding and disciplining the students, working with colleagues, and other administrative activities which support the instructional program. Laboratory experiences will be offered.
- Ed. 358. Introduction to Guidance.** 3 credits. Philosophy, techniques, and their application.
- Ed. 362. Educational and Psychological Statistics.** 4 credits. Use and interpretation of elementary statistical techniques. (Psy. 362 and Ed. 362 are the same course. Students may not receive credit in both).

\*Students with recent successful teaching experience, certificated and under contract may apply to the Assistant Dean of Education for exemption.

- Ed. 410. **Teaching Nursery School and Kindergarten.** 3 credits. Prerequisite, Ed. 314. Procedures, desirable equipment, materials, and curriculum.
- Ed. 415. **Instructional Media: Utilization.** 5 credits. Prerequisite, Ed. 314. Instructional materials, equipment, and special techniques for selection, procurement, presentation, and evaluation. Opportunity is given for laboratory practice.
- Ed. 416. **Programed Learning.** 3 credits. Prerequisite, Psy. 310. Historical developments; types, underlying psychological principles; program development and evaluation; utilization, socio-philosophical issues; research trends. (Also listed as Psy 416).
- Ed. 417. **Radio and Television in the Classroom.** 3 credits. Background, use of equipment, research in the field.
- Ed. 419. **Reading Readiness.** 2 credits. Prerequisites, Psy. 309 and 310. Factors intimately related to success in beginning reading.
- Ed. 420. **Teaching the Language Arts.** 4 credits. For elementary teachers, junior high school teachers, principals and supervisors. Curriculum, selection, materials, methods and research. The laboratory period will concentrate on the psychological bases of legible writing and the fundamentals of manuscript and cursive writing in the primary, intermediate and upper grades. Three lectures and two laboratory periods per week.
- Ed. 421. **Modern Reading Program, Primary.** 3 credits. For experienced teachers.
- Ed. 422. **Modern Reading Program, Intermediate.** 3 credits. For experienced teachers.
- Ed. 423. **Reading Problems in the Secondary School.** 3 credits. Remedial and developmental methods and materials.
- Ed. 424. **Reading in Content Fields.** 3 credits. For junior and senior high school teachers. Vocabulary analysis, comprehension, reading rate, study skills, reading interests, and reading instructions as related to the content fields.
- Ed. 425. **Psychology of Reading.** 3 credits. Prerequisite, senior standing. Principles of learning and readiness, perception, psychological and physiological aspects of reading. (Also listed as Psy. 425.)
- Ed. 426. **Studies and Problems in Reading.** 3 credits. For experienced teachers.
- Ed. 427. **Modern Arithmetic Program. (Primary).** 3 credits.
- Ed. 428. **Modern Arithmetic Program. (Intermediate and Upper Grades).** 3 credits.
- Ed. 431. **Intercultural Education.** 3 credits. Race, nationality, minority groups, income groups, urban and rural groups, and methods of teaching and measuring intergroup relations.
- Ed. 433. **Family Life Education.** 3 credits. Prerequisites, Psy. 295 or equivalent and Ed. 314 or take Ed. 314 concurrently. (Ed. 433 may well be taken subsequent to student teaching). Objectives, trends, methods and materials, and methods of gaining community acceptance and cooperation. (Ed. 433 and H. Ec. 433 are the same course. Students may not receive credit in both).
- Ed. 435. **Safety Education.** 3 credits. Factors affecting the safety of individuals.
- Ed. 438. **Individualizing Instruction.** 2 credits. Prerequisite, Ed. 314 or equivalent. Basic techniques appropriate to the elementary school.
- Ed. 440. **Workshop.** 1 to 6 credits. Laboratory facilities will be included as part of the workshop; specialists will lead discussions on various problems concerning education.
- Ed. 441. **Studies in Education.** 1-6 credits. The amount of credit and the area of education to be studied shall be determined. Affords experienced teachers and administrators the opportunity of pursuing a definite educational program in relation to school, school district or individual needs. A lecture-discussion course, intended for extension services.
- \*Ed. 442K, P, I, U, J, or S. **Student Teaching.** 14 credits. (For experienced teachers, 5 credits in summer session; variable credits by special arrangement during academic year.) Prerequisites, Ed. 307, admission to the Teacher Education Program, a minimum grade point average of 2.0. Psy. 309, Psy. 310, Ed. 314, Ed. 341, plus a current physical and chest X-ray examination showing freedom from tuberculosis. Students enrolled in Ed. 442 (14 credits) are also required to enroll in Ed. 445 (2 credits), a seminar to be held after school hours. All assignments for Student Teaching are made through the Student Teaching office. In registering for this course, indicate the level of the assignment (K, P, I, U, J, S). A maximum of twenty-one hours of student teaching credits may be allowed for graduation. Special Education majors may meet this requirement through a combination of Ed. 442 and Spec.

\*Students with recent successful teaching experience, certificated and under contract may apply to the Assistant Dean of Education for exemption.



- Ed. 448.0 and/or 448.1. Special Education minors may meet this requirement through a combination of Ed. 442, and Spec. Ed. 448.0, 448.2, or 448.3 as is appropriate for the particular minor. This course will be evaluated with the letters "S" or "U" only.
- \*Ed. 445. **Student Teaching Seminar.** 2 credits. Prerequisites same as for Ed. 442. To be taken in conjunction with Ed. 442. The seminar will meet a total of 20 clock hours at a time other than school hours and at a place designated by the college supervisor.
- Ed. 446. **Directed Observation.** 3 credits. Prerequisite, teaching experience or junior standing. Recommended for those experienced teachers who need to fulfill student teaching requirements during the summer.
- Ed. 447. **Classroom Teaching Problems.** 3 credits. Prerequisite, teaching experience. Open to experienced teachers in lieu of part of the requirements for student teaching.
- Ed. 449. **Audiovisual Electronics.** 3 credits. Prerequisite, Ed. 415. Electrical, electronic, magnetic, optical, and mechanical aspects of audiovisual equipment.
- Ed. 450. **Instructional Media: Production.** 3 credits. Prerequisite, Ed. 415. The problems and techniques of local production of instructional media of several types.
- Ed. 451. **Core Curriculum.** 3 credits. For the classroom teacher and administrator. The essential characteristics and major contributions of the core curriculum. Planning, organizing, conducting, and evaluating core programs.
- Ed. 452. **Junior High School Curriculum.** 3 credits. Curriculum and instruction; block-of-time programs and recent trends.
- Ed. 459. **Teacher-Counseling.** 3 credits. Prerequisite, Ed. 358. Theory and techniques of interviewing, advising and counseling; school personnel services, community and state special services.
- Ed. 460. **Parent-Teacher Conferences.** 2 credits. Planning, organizing, and conducting.
- Ed. 462. **Construction and Use of Classroom Tests.** 2 credits. Objectives, test theory, item theory; techniques of preparing.
- Ed. 467. **Philosophy of Education.** 3 credits. Various philosophic positions which lead to an understanding of the educational enterprise. (Same as Phil. 467.)
- Ed. 468. **History of Education.** 2 credits. Background; historical development in America.
- Ed. 469. **Advanced Psychological and Educational Statistics.** 4 credits. Prerequisite, Ed. 362. Application of tests of significance and correlation techniques to research problems and the design of experiments. (Same as Psy. 469.)
- Ed. 470. **Nongraded Elementary School.** 2 credits. The relationship of the instructional program to levels of learning based on individual capacities and maturity.
- Ed. 471. **Vocational Development Theory.** 3 credits. Prerequisite, Ed. 358 with Psy. 444 recommended. Theories of occupational choice, career patterning, and methods of studying occupations and occupational information are examined in relation to counseling. (Also listed as Psy. 471.)
- Ed. 476. **School and Community.** 3 credits. For classroom teachers, principals, administrators and lay leaders. Developing and maintaining effective public relation between school and community.
- Ed. 487. **Group Processes and Leadership.** 3 credits. The role of group processes in improving human relations in group situations. Group leadership in interpersonal relations, climate making, role playing and group discussions. (Ed. 487 and Psy. 487 are the same course. Students may not receive credit in both.)
- Ed. 488. **Group Dynamics and the Individual.** 3 credits. Prerequisite, Ed. 487 or equivalent. A human interaction laboratory to facilitate the development of self-insight, understanding of the basis for interpersonal operations in groups and the acquisition of skill in diagnosing individual, group, and organizational behavior. (Psy. 488 and Ed. 488 are the same course. Students may not receive credit in both.)
- Ed. 490. **Seminar in Education Problems.** 4 credits. Prerequisite, successful completion of student teaching. Meets daily. (May not be taken by teachers with one or more years of experience. Such experienced teachers should substitute Ed. 492.)
- Ed. 492. **Contemporary Movements.** 3 credits. Organization, curriculum, teaching methods; their philosophies and psychologies.
- Ed. 496. **Individual Study.** 1-3 credits. Prerequisite, approval of the instructor and Chairman of the Department of Education.
- Ed. 499. **Seminar in Education.** 3 credits.
- Ed. 507. **Introduction to Graduate Study.**

\*Students with recent successful teaching experience, certificated and under contract may apply to the Assistant Dean of Education for exemption.

## 80 Education Courses

- 3 credits. Required of all M.Ed. degree candidates.
- Ed. 508. **Comparative Education.** 3 credits.
- Ed. 516. **Instructional Media: Advanced Theory and Practice.** 3 credits. Prerequisite, Ed. 415.
- Ed. 545. **Directed Observation in a Core Class.** 3 credits. Prerequisite, teaching experience.
- Ed. 546. **Advanced Laboratory Experience.** 2-5 credits. Prerequisite, an X-ray examination of the chest showing freedom from tuberculosis. Conducted in the Hebel Elementary School. Consult Chairman of Department of Education for permission to register for this course.
- Ed. 547. **Supervision of Student Teachers.** 3 credits. Prerequisite, one year of teaching experience.
- Ed. 550. **Production of Photographic Instructional Materials.** 4 credits. Meets daily. Prerequisites, Ed. 415, a high school or college basic photography course, and recommended prerequisite of Ed. 450.
- Ed. 551. **Elementary School Curriculum.** 3 credits.
- Ed. 552. **Senior High School Curriculum.** 3 credits.
- Ed. 555. **Program of Curriculum Improvement.** 3 credits.
- Ed. 558. **Administration of the Pupil Personnel Program.** 3 credits. Prerequisite, Ed. 358 or consent of department chairman.
- Ed. 559.1. **E, I, or SC, Practicum in Counseling.** 2 credits. To be taken concurrently with Psy. 560. Prerequisite, consent of Department Chairman. Introduction to the practice of counseling. Observations, role playing, and analysis of interview behaviors. In registering for this course, indicate the level of assignment (E, Elementary; I, Institutional; or SC, Secondary-College.) (Also listed as Psy. 559.1, E, I, or SC)
- Ed. 559.2. **E, I, or SC, Practicum in Counseling.** 4 credits. Prerequisites, Psy. 560 and Ed. 559.1. In registering for this course, indicate the level of assignment. (E, Elementary; I, Institutional; or SC, Secondary-College.) (Also listed as Psy. 559.2)
- Ed. 562. **Evaluation of the School Program.** 3 credits.
- Ed. 570. **Educational Foundations.** 3 credits. Required of all students who are candidates for an M.Ed. degree.
- Ed. 574. **Adult Education.** 3 credits.
- Ed. 576. **Personnel Relations in Schools.** 3 credits. For school administrators.
- Ed. 577. **In-Service Programs.** 3 credits.
- Ed. 578. **Instructional Media: Administration.** 3 credits. Prerequisite, Ed. 415.
- Ed. 579. **Elementary School Principal.** 5 credits. Prerequisite, one year of teaching experience.
- Ed. 581. **High School Principal.** 5 credits. Prerequisite, one year of teaching experience.
- Ed. 582. **Internship in School Administration.** 5, 10, or 15 credits. Prerequisite, teaching experience. The intern will be assigned to assist a principal, a supervisor, a superintendent, or some other staff member in a school system. In addition to the experiences gained in a school situation, a program of studies will be planned by the intern, the appropriate member of the school staff, and Chairman of the Education Department, who will maintain a close working relationship with the intern and other persons involved. The internship may be planned for a half-day's basis or a full-day's basis for a quarter's duration.
- Ed. 583. **Field Project in School Administration.** 1-15 credits. (The amount of credit will be determined at the time the project is approved.) Meets the laboratory and internship requirements outlined by the State Board of Education for candidates for principals' credentials. The Dean of Graduate Studies will furnish necessary forms and information. Since much cooperative effort is necessary, preliminary planning should be begun during the academic year preceding the internship assignment.
- Ed. 585. **School Supervision.** 5 credits. Prerequisite, one year of teaching experience.
- Ed. 587. **Educational Administration.** 5 credits. Prerequisite, one year of teaching experience.
- Ed. 588. **The Politics of Education: Federal, State and Local.** 3 credits.
- Ed. 589. **School Plant Planning.** 3 credits.
- Ed. 590. **Public School Finance.** 5 credits.
- Ed. 595. **The Community, Junior College.** 3 credits.
- Ed. 596. **Individual Study.** 1-6 credits. Needs approval of the Chairman of the Department of Education.
- Ed. 599A. **Seminar in Educational Administration.** 3 credits.
- Ed. 599C. **Seminar in Curriculum.** 2 credits.
- Ed. 599CC. **Seminar in Core Curriculum.** 2 credits.
- Ed. 600. **Thesis.** 3 or 6 credits.

**(T/Ed) INSTRUCTIONAL MATERIALS MINOR**

A program to prepare persons to become school librarian-instructional materials specialists. This minor exceeds the minimum requirements for elementary, junior high, and high schools as established by the State Board of Education in 1960.

Minor (20 credits)	<i>Credits</i>
Lib. 307, School Library Profession and Its Literature .....	3
Ed. 415, Instructional Media: Utilization ..	5
Eng. 320, Children's Literature, or Lib. 420, Reading Materials for Adolescents	3
Lib. 350, Selection of School Library Materials .....	3
Lib. 318, Library Resources and Services...	3
Lib. 360, Cataloging and Classification....	3
	20
Related Courses:	
Ed. 450, Instructional Media: Production..	3
Sp. 243, Interpretive Reading .....	4
Sp. 312, Creative Dramatics .....	4
Sp. 362, Practice in Creative Dramatics....	4

**(A/S) LIBRARY SCIENCE MINOR**

Minor (23 credits)	<i>Credits</i>
Lib. 307, The School Library Professional and Its Literature.....	3
Ed. 415, Instructional Media: Utilization..	5
Lib. 318, School Reference Work.....	3
Lib. 350, Selection of Library Materials...	3
Lib. 360, Cataloging and Classification...	3
Ed. 450, Instructional Media: Production..	3
Lib. 470, School Library Administration...	3
	23

The following course is especially recommended:

Eng. 320, Children's Literature .....	3
Electives courses, which may be added to the courses above include Lib. 145, Lib. 445, Lib. 490 and Lib. 485.	

**LIBRARY SCIENCE COURSES**

- Lib. 145. Use of Library Resources.** 3 credits. General reference books, the card catalog, and indexes. Familiarization with library materials useful in college courses. Open to all students.
- Lib. 307. The School Library Profession and Its Literature.** 3 credits.
- Lib. 318. Library Resources and Services.** 3 credits. Services of a school librarian related to securing information; major reference works.
- Lib. 350. Selection of School Library Materials.** 3 credits.
- Lib. 360. Cataloging and Classification.** 3 credits. Principles and techniques of cataloging and classifying, both print and non-print materials. Dewey Decimal classification.
- Lib. 418. Reference in Subject Areas.** 4 credits. Prerequisite, Lib. 318. Survey of basic reference tools used regularly in fields

of humanities, sciences, and social sciences at all grade levels.

- Lib. 420. Reading Materials for Adolescents.** 3 credits.
- Lib. 440. Workshop or Clinic.** 1 to 6 credits.
- Lib. 445. Understanding and Application of Library Resources.** 3 credits. Utilization of library resources for more effective scholarship. Importance of libraries; ideas, symbols and values.
- Lib. 460. Advanced Cataloging and Classification.** 3 credits. Prerequisite, Lib. 360. Problems in cataloging and classification of all forms of materials. Includes basic understanding of Library of Congress classifications.
- Lib. 470. School Library Administration.** 3 credits. Objectives, organization and administration; standards, selection of materials, routines, and programs of activities.
- Lib. 485. Research and Bibliography.** 2 credits. Problems and methods of research and bibliographic form.
- Lib. 490. Historical Survey of Books and Libraries.** 3 credits. Introduction to the history of the book and a brief survey of the development of libraries.

**(T/Ed) SPECIAL EDUCATION MAJOR**

Secondary teachers must accompany this with a second major in which a full-time teaching assignment may be expected. Elementary teachers must accompany this with a minimum of 30 credits from a highly recommended or recommended major plus an Elementary School Professionalized Subjects Minor and must complete the second major prior to the end of the fifth year of teacher education.

Prospective elementary school teachers may complete 30 credits from this major and accompany it with 30 credits from a recommended or highly recommended major plus an Elementary School Professionalized Subjects Minor and complete both majors during the fifth year.

For endorsement at both levels, teachers must accompany this with a completed second major applicable for teaching in secondary schools and the Elementary School Professionalized Subjects Minor.

Special Education Majors will do some student teaching in a regular classroom under Education 442. If a portion of the regular 14 credit student teaching assignment is in Special Education, it shall be under appropriate Special Education numbers, 448.0 to 448.6.

Special Education 448.0 and/or 448.1 will be required in the major as extra laboratory experience(s) when both are not satisfied in the 14 credit student teaching assignment through one of the combinations listed above.

Major (45 credits)	<i>Credits</i>
Sp. 277, Introduction to Speech Correction	3
Spec. Ed. 343, Education Exceptional Children .....	3

Spec. 413, Psychology and Education of the Mentally Retarded .....	4
Spec. 415, Behavior Problems, Causes and Treatment .....	4
Spec. Ed. 416, Education of Disturbed and Conduct-Problem Children .....	4
Spec. Ed. 418, Problems of Teaching Trainable Mentally Retarded or Spec. Ed. 425, Education the Slow Learner .....	3-4
Spec. Ed. 421, Principles of Remedial Education .....	4
Spec. Ed. 437, The Gifted Child and Society	4
Spec. Ed. 457, Psychology of Exceptional Children .....	3
Spec. Ed. 460, Counseling Parents of Exceptional Children .....	3
Guided Electives in Special Education (Must include Spec. Ed. 448.0 and Spec. Ed. 448.1 unless these are taken in lieu of or part of Ed. 442) .....	9-10
	<hr/> 45

**(T/Ed) SPECIAL EDUCATION MINOR**

Minor (20 credits)	<i>Credits</i>
Spec. Ed. 343, Educating Exceptional Children .....	3
Spec. Ed. 457, Psychology of Exceptional Children .....	3
Spec. Ed. 413, Psychology and Education of the Mentally Handicapped .....	4
Spec. Ed. 460, Counseling Parents of Exceptional Children .....	3
Spec. Ed. 490, Seminar in Special Education Problems .....	4
Guided Electives in Special Education (must include Spec. Ed. 448.1 or 448.2 unless these were taken in lieu of or part of Ed. 442) .....	3
	<hr/> 20

**(T/Ed) SPECIAL EDUCATION MINOR (Remedial Education)**

Minor (20 credits)	<i>Credits</i>
Spec. Ed. 343, Educating Exceptional Children .....	3
Spec. Ed. 421, Principles of Remedial Education .....	4
Spec. Ed. 422, Diagnostic Techniques in Remedial Education .....	4
Spec. Ed. 438, Remedial Reading .....	3
Spec. Ed. 429, Remedial Arithmetic .....	2
Guided Electives in Special Education (must include Spec. Ed. 448.3 unless it was taken in lieu of or part of Ed. 442) .....	3-4
	<hr/> 19-20

**(T/Ed) SPECIAL EDUCATION MINOR (Mentally Retarded)**

Minor (20 credits)	<i>Credits</i>
Spec. Ed. 343, Educating Exceptional Children .....	3
Spec. Ed. 457, Psychology of Exceptional Children .....	3

Spec. Ed. 413, Psychology and Education of the Mentally Retarded .....	4
Spec. Ed. 460, Counseling Parents of Exceptional Children .....	3
Spec. Ed. 490, Seminar in Special Educational Problems .....	4
Guided Electives in Special Education (must include Spec. Ed. 448.1 or Spec. Ed. 448.2 if not taken in lieu of or part of Ed. 442) .....	3
	<hr/> 20

**(T/Ed) SPECIAL EDUCATION MINOR**

**(Emotionally Disturbed)**

Minor (20 credits)	<i>Credits</i>
Spec. Ed. 343, Educating Exceptional Children .....	3
Spec. Ed. 457, Psychology of Exceptional Children .....	3
Spec. Ed. 415, Behavior Problems, Causes and Treatments .....	4
Spec. Ed. 416, Education of Disturbed and Conduct-Problem Children .....	4
Spec. Ed. 467, Maladjusted Children .....	3
Guided Electives in Special Education (must include Spec. Ed. 448.0 unless it is taken in lieu of part of or Ed. 442) .....	3
	<hr/> 20

**SPECIAL EDUCATION COURSES**

- Spec. Ed. 307. Introduction to Special Education.** 2 credits. Emotionally disturbed, socially maladjusted, disadvantaged, mentally retarded, gifted and talented, physically handicapped; remedial and learning disorders.
- Spec. Ed. 343. Educating Exceptional Children.** 3 credits. Prerequisite, Psy. 309, or consent of department. Types and characteristics of talented, mentally deficient, physically handicapped; adjusting instruction to their needs.
- Spec. Ed. 413. Psychology and Education of the Mentally Retarded.** 4 credits. Prerequisite, Psy. 309, Spec. Ed. 343. Social, emotional, physical and learning characteristics, assessment and evaluation; problems of adjustment.
- Spec. Ed. 414. Curriculum and Problems of Instruction for the Mentally Handicapped.** 4 credits. Methods, materials, curriculum development, management of classrooms for educable and training mentally deficient children at all levels. Three hours lecture, two hours laboratory per week.
- Spec. Ed. 415. Behavior Problems, Causes and Treatments.** 4 credits. Prerequisite, Spec. Ed. 343. Behavioral abnormalities in children, with particular consideration of types of social and emotional maladjustments, their causes and treatment.

- Spec. Ed. 416. Education of Disturbed and Conduct-Problem Children.** 4 credits. Prerequisite, Spec. Ed. 415. Social, emotional and learning characteristics of children who are disturbed or who exhibit problems of conduct; methods of diagnosis and differentiation; educational environments and teaching methods used for their remediation.
- Spec. Ed. 418. Problems of Teaching Trainable Mentally Retarded Children.** 4 credits. Prerequisite, Spec. Ed. 343 or by permission of instructor. Individualized behavioral study and procedures for trainable mentally retarded children of pre-adolescent and adolescent age.
- Spec. Ed. 421. Principles of Remedial Education.** 4 credits. Factors associated with under-achievement; general principles of diagnosis and remediation; diagnostic instruments and remedial resources. A first course with application to both elementary and secondary education.
- Spec. Ed. 422. Diagnostic Techniques in Remedial Education.** 4 credits. Prerequisite, Spec. Ed. 421, Ed. 322 and Ed. 323. Analysis of difficulty with the skills of reading, arithmetic, spelling, language, and handwriting; interpretation of group and individual diagnostic achievement tests, diagnostic procedures; development of the diagnostic report. May be taken concurrently with Spec. Ed. 448.3. Practicum, Remedial and Learning Disorders.
- Spec. Ed. 425. Educating the Slow Learner.** 3 credits. Prerequisite, Ed. 442, teaching experience or by permission of Education Department chairman. Characteristics, methods of identification, curriculum development, methods and materials, and management of classrooms for the slow learning child.
- Spec. Ed. 429. Remedial Arithmetic.** 2 credits. Prerequisite, Ed. 314. Psychology of learning arithmetic; difficulties encountered by the slow learned and handicapped child.
- Spec. Ed. 433. The Disadvantaged Child.** 4 credits. Understanding special learning problems of children from culturally deprived areas. Approaches to understanding of and effectiveness with the disadvantaged.
- Spec. Ed. 437. The Gifted Child and Society.** 4 credits. Identification and understanding, characteristics, criteria for class placement, development of creativity, motivation, ability grouping, enrichment, programs for both elementary and secondary school gifted children, counseling parents of gifted children.
- Spec. Ed. 438. Remedial Reading.** 3 credits. Prerequisites, Ed. 314 and Ed. 322 or teaching experience. Causes of low reading ability, techniques for teaching; mechanics of reading, diagnosis, motivation aids, problems of the partially sighted and those with other handicaps.
- Spec. Ed. 440.0 to 440.9. Workshop, —.** 1-6 credits.
- Spec. Ed. 440CCH. Crippled Children Workshop.** 4 credits.
- Spec. Ed. 440CCC. Camping for Crippled Children.** 4 credits.
- Spec. Ed. 446. Directed Observation.** 3 credits. Prerequisite, teaching experience or junior standing. Primarily for teachers. Observation in Special Education classrooms. Recommended for experienced teachers who need to fulfill student teaching requirements during the summer.
- Spec. Ed. 448.0, 448.1, 448.2, 448.3, 448.4, 448.5, 448.6. Practicum.** 3 to 9 credits. Prerequisite, permission of Education Department. Practical experience working with children having learning and/or behavioral disorders. The course number indicates the types of experience for which credit is given: 448.0. Emotionally Disturbed and Socially Maladjusted.  
448.1. Educable Mentally Retarded.  
448.2. Trainable Mentally Retarded.  
448.3. Remedial and Learning Disorders.  
448.4. The Disadvantaged.  
448.5. Physically Handicapped.  
448.6. Gifted and Talented.
- This course will be evaluated with the letters "S" or "U" only.
- Spec. Ed. 457. Psychology of Exceptional Children.** 3 credits. Prerequisite, Spec. Ed. 343 or consent of Psychology Department. Physical disability, impaired hearing, defective speech, impaired vision, crippling defects, mental and emotional deficiencies, giftedness and special talents. (Spec. Ed. 457 also listed as Psych. 457.)
- Spec. Ed. 460. Counseling Parents of Exceptional Children.** 3 credits. Prerequisite, Spec. Ed. 343, Spec. Ed. 457, or consent of Psychology Department. (Also listed as Psy. 460.)
- Spec. Ed. 463. Special Diagnostic Techniques.** 3 credits. Prerequisites, Psy. 205 or by permission of the Education Department. Hard-of-hearing, partially sighted, speech defectives, mental defectives, orthopedically and neurologically handicapped. Also listed as Psy. 463.)
- Spec. Ed. 467. Maladjusted Children.** 3 credits. Prerequisite, Psy. 205 or Spec. Ed.

84 Early Childhood Courses

- 457 or consent of Psychology Department. Characteristics and treatment. (Also listed as Psy. 467.)
- Spec. Ed. 490. Seminar in Special Education Problems. 4 credits. Prerequisite, Spec. Ed. 448.
- Spec. Ed. 496, 497. Individual Study. 2 credits each. Open to advanced students with a minimum of 12 hours special education, with the consent of the Education Department.
- Spec. Ed. 499. Seminar in Special Education. 4 credits.
- Spec. Ed. 585. Administration and Supervision of Special Education Programs. 4 credits. Prerequisite, Ed. 585 or Ed. 587.
- Spec. Ed. 596. Individual Study. 1-6 credits. Requires approval of the Chairman of the Education Department.

(T/Ed) EARLY CHILDHOOD EDUCATION MAJOR

Teachers must accompany this with a minimum of 30 credits from a highly recommended or recommended major plus an Elementary School Professionalized Subjects Minor and must complete the second major prior to the end of the fifth year of teacher education. With the written approval of the Early Childhood Education Committee Chairman, student may take at least 30 credits from the ECE major, accompany it with both 30 credits from a recommended or highly recommended major and a 20 credit Elementary School Professionalized Subjects minor, and complete both the ECE and the recommended or highly recommended majors during the fifth year.

Students will substitute ECE 309.2 for Psych. 309; take Ed. 341 (September Experience) at the primary level; and take Ed. 442K at the kindergarten level.

Major (45 credits)	<i>Credits</i>
ECE 309.0, Child Development I . . . . .	4
ECE 309.1, Child Development II . . . . .	4
ECE 307, Introduction to Early Childhood Education . . . . .	1
ECE 330, Field Study: Early Childhood . . . . .	0
ECE 420, Parent Education . . . . .	3
ECE 435, Curriculum Enrichment for Young Children . . . . .	5
ECE 438, The Nursery School . . . . .	3
ECE 439, Teaching in the Kindergarten . . . . .	4
ECE 442.1, Practicum in Nursery School . . . . .	4
ECE 495, Studies in Early Childhood Education . . . . .	3
Soc. 260, Social Interaction . . . . .	5
Soc. 355, Culture and Personality . . . . .	3
H. Ec. 294, Family Development . . . . .	3
H. Ec. 492, Child Care and Family Dynamics . . . . .	3
	45

EARLY CHILDHOOD EDUCATION COURSES

ECE 307. Introduction to Early Childhood Education. 1 credit. Prerequisite, ECE Majors or permission. To be taken concurrently

with Ed. 307. Early childhood education programs in America. History, philosophical foundations, characteristics of teachers, certification and specialization, programs for young children, parent involvement.

ECE 309.0. Child Development I. 4 credits. Recommend prior completion of Psy. 100 and H. Ec. 200. Developmental characteristics and needs of the infant and toddler. Guided observations and experiences. Consideration of pre-natal development. Meets daily.

ECE 309.1. Child Development II. 4 credits. Prerequisite, ECE 309.0 or Home Economics Major. Developmental characteristics and behavior of nursery and kindergarten age children. Observation of nursery school and kindergarten. Meets daily.

ECE 309.2. Child Development III. 4 credits. Prerequisites, Ed. 307, ECE 307, 309.0, and 309.1. Behavior and development in middle and late childhood and early adolescence. Observations appropriate to age level. This course will substitute for Psychology 309 in professional education sequence for those individuals pursuing ECE major. Meets daily.

ECE 330. Field Study: Early Childhood. No credit. Prerequisites, Ed. 314 and ECE 309.2. Three day study tour of existing programs for young children in between college quarters.

ECE 420. Parent Education. 3 credits. Prerequisites, ECE 309.2 or Psy. 309. Relationships of parents and children; resources for meeting problems with emphasis on discussion and conferences as methods.

ECE 435. Curriculum Enrichment for Young Children. 5 credits. Prerequisite, ECE 309.2. Development of programs for nursery and kindergarten children based on developmental characteristics and needs, application through participation in nursery school and kindergarten. Participation in nursery school and kindergarten.

ECE 438. The Nursery School. 3 credits. Prerequisites, ECE 309.2 and permission. Procedures, desirable equipment, materials. Students enrolled in ECE 438 must also enroll in ECE 442.1, a practicum in the nursery school. This is the same course as H. Ec. 490.

ECE 439. Teaching in the Kindergarten. 4 credits. Prerequisites, ECE 435 and Ed. 314. Procedures, desirable equipment, materials. Participation in the kindergarten.

ECE 442.1. Practicum Experience in the Nursery School. 4 credits. Prerequisite,

ECE 435. To be taken concurrently with ECE 438. Practical application of knowledges, skills and abilities related to the teaching of young children. This course will be evaluated with the letters "S" or "U" only.

ECE 495. **Studies in Early Childhood Education.** 3 credits. Prerequisites, ECE 309.2 or Psy. 309. Issues, problems, and research, including Montessori, Piaget, Bijou, Baer, Kelly, Rogers and others. Behavior modification techniques.

**Urban Center Teacher Program**

The course of study:

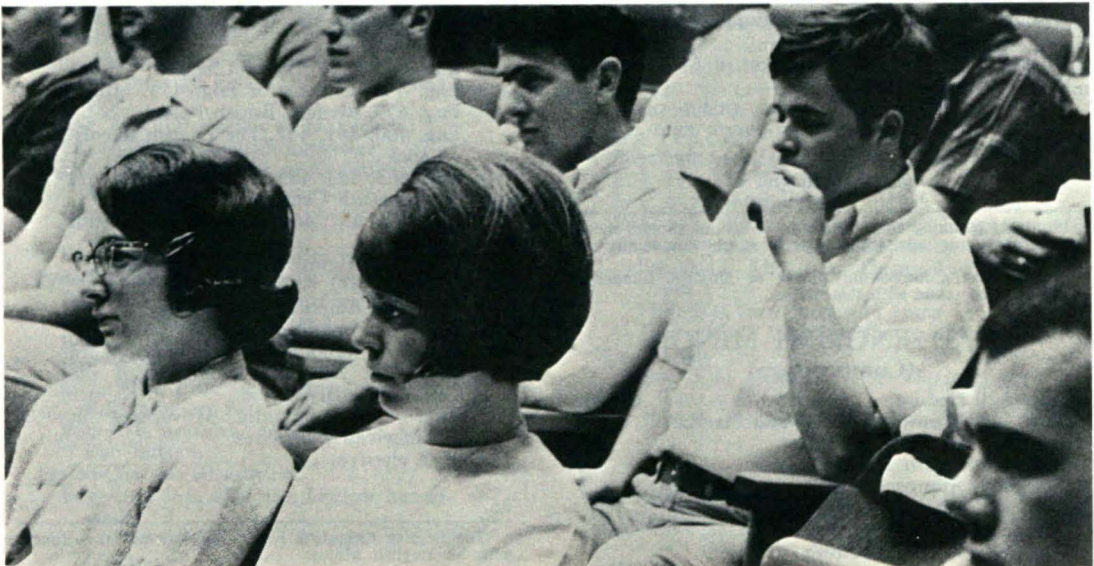
1. Summer neighborhood field experience. Acquaints students with sociological, psychological and environmental conditions effecting the lives of school age children in the urban center community. It lasts four and one-half weeks. (8 quarter credits.)
2. September classroom experience. Students are assigned to a classroom in an urban center school to become acquainted with (1) preparations necessary for beginning school in fall of the year (2) operations of the school (3) how to effectively begin classes in fall of the year and (4) classroom management responsibilities. The duration is the month of September. (4 quarter credits.)
3. Autumn quarter block of learning. This is classroom work, with appropriate laboratory experience, related to studying

growth and development of children, learning and evaluation, curriculum of schools, methods of teaching, materials needed in teaching and the culture of poverty. It is a three month experience which takes place in Seattle. (15 quarter credits.)

4. Student Teaching Experience. One-half of the group will be enrolled in student teaching during the winter quarter and one-half during the spring quarter. During each quarter the other one-half of the students will be on campus pursuing academic course work. (16 quarter credits.)

Program (43 credits)	<i>Credits</i>
Summer field experience	
Education 440, Workshop.....	4
Sociology 440, Workshop .....	4
Pre-Autumn experience	
Education 341, Classroom Management...	4
Autumn Quarter	
Psychology 309, Human Growth & Development .....	4
Psychology 310, Learning & Evaluation...	4
Education 314, Curriculum, Methods and Materials .....	4
Sociology 210, Culture and Poverty.....	3
Winter Quarter (½ the students)	
Education 442, Student Teaching.....	14
Education 445, Seminar in Student Teaching .....	2
Spring Quarter (½ the students)	
Education 442, Student Teaching.....	14
Education 445, Seminar in Student Teaching .....	2
	43

*A study in concentration*



# English ( and Journalism )

Professors: Anshutz, McCann, Rinehart, Zink.

Associate Professors: Canedo, Collins, Cummings, Mathewson, Mundy, Teets.

Assistant Professors: Benton, Blanton, Burt, Canzler, Foster (Journalism), Hagen, Herum, King, Lawrence, Lynch (Journalism), Toomey, Treder, Vifian.

Instructors: Couch, Cutler, Garrison, Halperin, Johnson, Lybbert.

Lecturers: Lions, Woolf.

English courses develop methods of understanding and appreciating literature and language. Instruction in English and American literature, writing, and linguistics leads to a Bachelor of Arts degree in Arts and Sciences or in Teacher Education. The student in this department may prepare himself to teach professionally in elementary, junior high, and high school and to pursue graduate study. The department also offers graduate instruction leading to the M.A. and M.Ed degrees.

A minor is offered in journalism leading to both teaching, or professional positions (see also Pre-professional Journalism program).

## (A/S) ENGLISH MAJOR<sup>1</sup>

It is recommended that an English major elect a minor in a foreign language.

Major (45 credits)	<i>Credits</i>
English Literature: At least two courses . . .	6
Eng. 347, 348, 349, The English Novel	
Eng. 447, Age of Chaucer	
Eng. 459, Modern British Poetry	
Eng. 460, 461, 462, The English Renaissance	
Eng. 463, 464, 465, The Restoration and Eighteenth Century	
Eng. 466, 467, 468, 469, The Nineteenth Century	
Eng. 351, 352, or 353, Shakespeare . . . . .	3
Eng. 448, Chaucer or Eng. 453, Milton . . .	3
American literature: At least two courses . .	6
Eng. 370, 371, 372, American Fiction	
Eng. 377, American Poetry I	
Eng. 477, American Poetry II	
Eng. 474, Colonial American Literature	
Eng. 475, American Literature of the Revolutionary Period	
Eng. 476, Romantic Movement in American Literature	
English electives: At least 15 credits of which must be taken from course numbered 300 and above . . . . .	27
	45

<sup>1</sup>Students planning to enter graduate school should check requirements for advanced degrees at the university of their choice.  
The English Composition minor or English Language minor may be taken with this major.

## (A/S) ENGLISH MINOR (Composition)

<sup>1</sup> Minor (20 credits)	<i>Credits</i>
Eng. 443, Rhetorical Theory and Practice . .	3
Sp. 340, Classical Rhetoric, or	
Sp. 342, Modern Rhetoric . . . . .	4
Eng. 445, Approaches to English Grammar	3
Ten credits from the following:	
Eng. 142, Short Story Writing	
Eng. 143, Verse Writing	

Eng. 342, Creative Writing	
Eng. 344, Advanced Composition	
Journ. 266, Newswriting	
Journ. 280, Advanced Reporting	
Eng. 440, Workshop (in composition or teaching composition)	
Eng. 496, 497, 498, Individual Study (one of the three) . . . . .	10
	20

<sup>1</sup>In the case of overlap between the English Composition Minor and the English Major, the duplicated courses will be replaced in the English Major with elective courses in English and American Literature. The English Composition minor or may be combined with the English Major.

## (A/S) ENGLISH MINOR (Literature)

<sup>1</sup> Minor (20 credits)	<i>Credits</i>
English Literature: At least two courses . . .	6
Eng. 347, 348, 349, The English Novel	
Eng. 351, 352, 353, Shakespeare	
Eng. 361, 362, 363, Drama of the English Renaissance	
Eng. 447, The Age of Chaucer	
Eng. 448, Chaucer or Eng. 453, Milton	
Eng. 459, Modern British Poetry	
Eng. 460, 461, 462, The English Renaissance	
Eng. 463, 464, 465, The Restoration and Eighteenth Century	
Eng. 466, 467, 468, 469, The Nineteenth Century	
American Literature: At least two courses . .	6
Eng. 370, 371, 372, American Fiction	
Eng. 377, American Poetry I	
Eng. 477, American Poetry II	
Eng. 474, Colonial American Literature	
Eng. 475, American Literature of the Revolutionary Period	
Eng. 476, Romantic Movement in American Literature . . . . .	8
English electives . . . . .	8
	20

<sup>1</sup>The English Literature Minor may not be taken together with an English Major.



(A/S) ENGLISH MINOR  
(Language)

<sup>1</sup> Minor (20 credits)	<i>Credits</i>
Eng. 240, Introduction to Linguistics . . . . .	3
Eng. 339, The English Language . . . . .	3
Eng. 445, Approaches to English Grammar	3
Eng. 442, History of the English Language	3
Choose 8 credits from the following:	
Eng. 443, Rhetorical Theory and Practice (3)	
Phil. 260, Introduction to Logic (3)	
Phil. 360, Introduction to Symbolic Logic (3)	
Psy. 373, Psychology of Thought and Language (4)	
Sp. 445, Psychology of Speech (4) . . . . .	8
	20

<sup>1</sup>In case of overlap between the English Language Minor and the English Major, the duplicated course will be replaced in the English Major with elective courses in English and American Literature. The English Language Minor may be taken with the English Major.

(T/Ed) ENGLISH MAJOR

Qualifies for teaching secondary English. To qualify for teaching in "block of time" programs, junior high school teachers should consider combining this with minors in both history and geography, or complete a Junior High School Broad Area Social Studies-Language Arts Major.

English majors will be required to demonstrate by written examination under the supervision of the Department of English their competence in English grammar and composition. These examinations should be taken no earlier than two quarters preceding student teaching.

Major (45 credits)	<i>Credits</i>
<sup>1</sup> Methods courses: At least one: . . . . .	3-4
Eng. 320, Children's Literature (3) or	
Eng. 428, Teaching Literature and Composition in the Secondary School (4)	
Eng. 344, Advanced Composition . . . . .	3
Eng. 492, Modern Literary Criticism . . . . .	3
Eng. 351, 352, 353, Shakespeare or . . . . .	6
Eng. 361, 362, 363, Drama of the English Renaissance (At least two quarters of one sequence)	
Language courses: At least two, one of which must be either Eng. 339 or Eng. 445: . . . . .	6
Eng. 240, Introduction to Linguistics	
<sup>2</sup> Eng. 339, The English Language	
Eng. 445, Approaches to English Grammar	
Eng. 442, The History of the English Language	
Eng. 443, Rhetorical Theory and Practice	
American Literature: At least two: . . . . .	6
Eng. 370, 371, 372, American Fiction	
Eng. 377, American Poetry I	
Eng. 477, American Poetry II	
Eng. 474, Colonial American Literature	
Eng. 475, American Literature of the Revolutionary Period	
Eng. 476, Romantic Movement in American Literature	
Period Courses: At least two: . . . . .	6
Eng. 460, 461, 462, The English Renaissance	
Eng. 463, 464, 465, Restoration and Eighteenth Century	

Eng. 466, 467, 468, 469, The Nineteenth Century	
English electives: At least three credits of which must be from courses numbered 300 and above . . . . .	11-12
	45

<sup>1</sup>Students planning to teach in grades 1-6 must take English 320; those planning to teach in grades 7-12 must take English 428.

<sup>2</sup>English 240 is prerequisite to English 339. Students desiring a more thorough background in English linguistics and syntax should elect these two courses.

(T/Ed) ENGLISH MINOR<sup>1</sup>  
(Composition)

English minors will be required to demonstrate by written examination under the supervision of the Department of English their competence in English grammar and composition. These examinations should be taken no earlier than two quarters preceding student teaching.

Minor (20 credits)	<i>Credits</i>
Eng. 443, Rhetorical Theory and Practice . .	3
Sp. 340, Classical Rhetoric, or	
Sp. 342, Modern Rhetoric . . . . .	4
Eng. 445, Approaches to English Grammar	3
Ten credits from the following: . . . . .	10
Eng. 142, Short Story Writing (3)	
Eng. 143, Verse Writing (3)	
Eng. 342, Creative Writing (3)	
Eng. 344, Advanced Composition (3)	
Journ. 266, Newswriting (3)	
Journ. 280, Advanced Reporting (3)	
Eng. 440, Workshop (in composition or teaching of composition) (1-6)	
Eng. 496, 497, 498, Individual Study (1-3)	
	20

<sup>1</sup>May be combined with English Major. In case of overlap between the English Composition Minor and the English Major, the duplicated courses will be replaced in the English Major with elective courses in English and American Literature.

(T/Ed) ENGLISH MINOR<sup>1</sup>  
(Language)

English minors will be required to demonstrate by written examination under the supervision of the Department of English their competence in English grammar and composition. These examinations should be taken no earlier than two quarters preceding student teaching.

Minor (20 credits)	<i>Credits</i>
Eng. 240, Introduction to Linguistics . . . . .	3
Eng. 339, The English Language . . . . .	3
Eng. 445, Approaches to English Grammar	3
Eng. 442, History of the English Language	3
Choose 8 credits from the following:	
Eng. 443, Rhetorical Theory and Practice (3)	
Phil. 260, Introduction to Logic (3)	
Phil. 360, Introduction to Symbolic Logic (3)	
Psy. 373, Psychology of Thought and Language (4)	
Sp. 445, Psychology of Speech (4) . . . . .	8
	20

<sup>1</sup>May be combined with English Major. In case of overlap between the English Language Minor and the English Major, the duplicated courses will be replaced in the English Major with the elective courses in English and American Literature.

(T/Ed) ENGLISH MINOR<sup>1</sup>  
(Literature)

English minors will be required to demonstrate by written examination under the supervision of the Department of English their competence in English grammar and composition. These examinations should be taken no earlier than two quarters preceding student teaching.

Minor (20 credits)	<i>Credits</i>
General Surveys: At least two quarters of one sequence: .....	6
Eng. 245, 246, 247, English Literature	
Eng. 274, 275, 276, American Literature	
Eng. 281, 282, 283, World Literature	
Poetry: At least one: .....	3
Eng. 106, Introduction to Poetry	
Eng. 459, Modern British Poetry	
Eng. 377, American Poetry I	
Eng. 477, American Poetry II	
Prose Fiction: At least one: .....	3
Eng. 105, Introduction to Fiction	
Eng. 347, 348, 349, The English Novel	
Eng. 384, The Short Story	
Eng. 370, 371, 372, American Fiction	
Eng. 485, The Continental Novel	
Elective in English: Major author or period course .....	8
	20

<sup>1</sup>May not be taken with English Major.

ENGLISH COURSES

**English Composition Clinic.** No credit. Required of every student receiving "D" in English 301 or formally referred to the clinic by any of his professors because of marked deficiencies in writing skills. Diagnosis of writing weaknesses and in-clinic practice designed to bring the student up to an acceptable level of writing proficiency.

**Eng. 100. English Composition.** No credit. (In terms of the student's load, this course should be considered the equivalent of a three-hour course.) Required of students who, on the basis of the placement test, show a need for review of the fundamentals of grammar and usage before taking 101. Only students assigned to it may register for this course.

**Eng. 101. English Composition.** 3 credits. Required of all students except those exempted on the basis of the English placement test. Practice in expository writing.

**Eng. 105. Introduction to Fiction.** 3 credits. Analysis and intensive reading of short stories and novels. Not a chronological or period study.

**Eng. 106. Introduction to Poetry.** 3 credits. Analysis and intensive reading of poems.

**Eng. 141. Classical Mythology.** 3 credits. The major classical myths, with emphasis on their use by English and American writers.

**Eng. 142. Short Story Writing.** 3 credits. (On instructor's recommendation, the course can be substituted for Eng. 101 as a requirement for graduation.)

**Eng. 143. Verse Writing.** 3 credits. Methods of verse writing with emphasis on traditional form.

**Eng. 150. The Bible as Literature.** 3 credits. The literary aspects of the Bible; the origin of the written texts; history of their translations; source of literary illusions; and some literary types.

**Eng. 201. English Composition.** 3 credits. Prerequisite, English 101 or exemption from 101; sophomore standing or enrollment in a specific pre-professional program that requires English 201 during the freshman year. Further practice in expository writing.

**Eng. 240. Introduction to Linguistics.** 3 credits. Background, developments, and relation to other fields of study, with special emphasis on phonology and morphology. Not open to students who have taken Eng. 340. **Introduction to Linguistics**, for credit.

**Eng. 245, 246, 247. Survey of English Literature.** 3 credits each quarter. A historical and critical survey of English literature from the beginning to the present.

**Eng. 274, 275, 276. Survey of American Literature.** 3 credits each quarter. A historical and critical survey of American literature from the beginning to the present.

**Eng. 281, 282, 283. Survey of World Literature.** 3 credits each quarter. A survey of Oriental and European literature. Selections from the writing of the Hebrews, Greeks, and Romans, and from the literature of the Middle Ages, Renaissance, and modern times.

**Eng. 301. English Composition.** 3 credits. Prerequisite, English 101 or exemption from Eng. 101; junior standing or enrollment in a specific program that requires English 301 prior to the junior year. Advanced work in expository writing. A student who receives a "D" in English 301 will be required to enroll in the English Composition Clinic; until he has satisfied the Clinic requirements, such a student will not be allowed to graduate.

**Eng. 320. Children's Literature.** 3 credits. The types of literature best suited to children of grades 1-6. Includes reading and evaluation of material from early folklore to present-day books for children.

**Eng. 339. The English Language.** 3 credits. Prerequisite, Eng. 240. The structure of modern English, with special emphasis on syntax.

- Eng. 342. Creative Writing.** 3 credits. Emphasis on the technique of the short story.
- Eng. 344. Advanced Composition.** 3 credits. Prerequisite, Eng. 301 or equivalent. Advanced work in writing. Expository writing is emphasized. Some attention is given to other forms and to the individual student's needs and interests.
- Eng. 347, 348, 349. The English Novel.** 3 credits each quarter. English novels of the eighteenth, nineteenth, and twentieth centuries.
- Eng. 351, 352, 353. Shakespeare.** 3 credits each quarter. This course may be substituted for the Eng. 361, 362, 363 **Drama of the English Renaissance** as a major and minor requirement. Credit will be given for only one course. However, if necessity warrants, the two quarter sequence may be met by the combination of Eng. 361 and **Shakespeare 352** or Eng. 363 and **Shakespeare 352**.
- Eng. 361, 362, 363. Drama of the English Renaissance.** 3 credits each quarter. This course may substitute for Eng. 351, 352, 353, **Shakespeare**, as a major and minor requirement. Credit will be given for only one course. However, if necessity warrants the two quarter sequence may be met by the combination of Eng. 361 and **Shakespeare 352** or Eng. 363 and **Shakespeare 352**.
- Eng. 370, 371, 372. American Fiction.** 3 credits each quarter. Major American fiction from 1840 to 1885, 1885 to 1917, and 1917 to the present.
- Eng. 377. American Poetry I.** 3 credits. The early Twentieth Century. Not open to students who have taken Eng. 477, **American Poetry II**, for credit.
- Eng. 384. The Short Story.** 3 credits. Extensive reading and analysis of short stories, including both older and modern writers.
- Eng. 428. Teaching Composition and Literature in the Secondary School.** 4 credits. Prerequisites, 24 credits in English including 3 credits in linguistics requirements but excluding the required composition sequence; exceptions will be made only for students enrolled in Junior High School Broad Area, Social Science and Language Arts majors. Current methods and materials suitable for teaching composition and literature in the secondary school. Philosophical considerations basic to the English curriculum.
- Eng. 440. Workshop.** 1 to 6 credits. The title of the workshop and the credit to be earned shall be determined at the time the workshop is approved. Designed to give an opportunity for individual and group study of problems in the teaching of English.
- Eng. 442. The History of the English Language.** 3 credits. Comparison of the structures of older English with modern: Analysis of language change.
- Eng. 443. Rhetorical Theory and Practice.** 3 credits. The history of the origins, recurrent types, theories, and problems of rhetoric.
- Eng. 445. Approaches to English Grammar.** 3 credits. Theories of language and their effect on teaching classroom grammar.
- Eng. 447. The Age of Chaucer.** 3 credits. Major English writers and major genres of Chaucer's time.
- Eng. 448. Chaucer.** 3 credits. Concentrates on the *Canterbury Tales* and *Troilus and Criseyde*.
- Eng. 453. Milton.** 3 credits. Especially *Paradise Lost*; some attention to other selected poems and prose.
- Eng. 459. Modern British Poetry.** 3 credits. Thomas Hardy to the present.
- Eng. 460, 461, 462. The English Renaissance.** 3 credits each quarter. The literature in its aesthetic, religious, and historical background, 1485-1660 (excluding Shakespearean drama).
- Eng. 463, 464, 465. The Restoration and Eighteenth Century.** 3 credits each quarter. The major poets and prose writers from 1660-1798. Emphasis on the works of Dryden, Swift, Pope, Addison and Steele, Johnson.
- Eng. 466, 467, 468, 469. The Nineteenth Century.** 3 credits each quarter. Romantic and Victorian writers, with particular emphasis on the major poets.
- Eng. 474. Colonial American Literature.** 3 credits. Puritan, Quaker, Anglican and other writings from the beginning to 1765, including such writers as Bradford, Bradstreet, Sewall, Byrd, Taylor, Mather, Edwards, and Woolman.
- Eng. 475. American Literature of the Revolutionary Period.** 3 credits. The rationalists and pre-romantics of the years 1765-1812, including such writers as Franklin, de Crevecoeur, Paine, Freneau, Tyler, Brackenridge, and Brown.
- Eng. 476. The Romantic Movement in American Literature.** 3 credits. The romantic and transcendental movements, 1812-1860, including Irving, Bryant, Cooper, Poe, Emerson, Thoreau, Hawthorne, Melville, and Longfellow.
- Eng. 477. American Poetry II.** 3 credits. From early Twentieth Century to the present.

Not open to students who have taken Eng. 377, *American Poetry*, for credit.

**Eng. 479. Restoration and Eighteenth Century Drama.** 3 credits. A survey of the principal comedies and tragedies of the period 1660-1800, emphasizing Restoration and late Eighteenth Century comedies. (Eng. 479 and Sp. 479 are the same course. Students may not receive credit in both.)

**Eng. 480. Twentieth Century Literature.** 3 credits. American and English.

**Eng. 485. The Continental Novel.** 3 credits. Outstanding European novels, except English.

**Eng. 491. Literary Criticism.** 3 credits. The major critical works from the Greeks to recent times.

**Eng. 492. Modern Literary Criticism.** 3 credits. Literary criticism since 1900.

**Eng. 496, 497, 498. Individual Study.** 1 to 3 credits each course. Open to advanced students with the consent of the instructor and the department chairman.

**Eng. 499. English Seminar.** 3 credits. Directed reading, group study, discussions, and reports on a special topic or area of study announced in the Class Schedule.

**Eng. 501. Research in English.** 4 credits.

**Eng. 541. 1.2.3.4.5.6.7.8.9. Studies in the English Language.** 4 credits each. Under different titles, as announced in the Class Schedule, Studies in the English Language may be repeated for additional credit.

**Eng. 545. 1.2.3.4.5.6.7.8.9. Proseminar in English Literature.** 4 credits each. Under different titles as announced in the Class Schedule, the Proseminar in English Literature may be repeated for additional credit.

**Eng. 550. Institute.** 9 credits.

**Eng. 575. 1.2.3.4.5.6.7.8.9. Proseminar in American Literature.** 4 credits each. Under different titles as announced in the Class Schedule, the Proseminar in American Literature may be repeated for additional credit.

**Eng. 591. 1.2.3. Literary Criticism.** 4 credits each.

**Eng. 596. 1.2.3. Individual Study.** 1 to 4 credits each.

**Eng. 599. 1.2.3. English Graduate Seminar.** 4 credits each. Under different seminar titles, as announced in the Class Schedule, the Graduate Seminar may be repeated for additional credit.

**Eng. 600. Thesis.** 6 credits.

**(A/S) JOURNALISM MINOR**

<sup>1</sup>Minor (15 to 30 credits) Credits  
 Journ. 260, Journalism ..... 2

Journ. 262, 263, 264, Practical Journalism.	1-3
Journ. 266, Newswriting .....	3
Journ. 267, Editing .....	3
Journ. 280, Advanced Reporting.....	3
Journ. 360, Feature Writing and Editorial Writing .....	2
Journ. 364, News Photography .....	2
Electives chosen from following courses to complete the minor: Journ. 269, 270, 271, 369; Eng. 342, 344; Pol. Sci. 242, 244 .....	1-14
	17-30

<sup>1</sup>Journ. 369 is recommended.

**(T/Ed) JOURNALISM MINOR**

Minor (20 credits) <span style="float:right">Credits</span>	
Journ. 260, Journalism .....	2
Journ. 262, 263, 264, Practical Journalism.	1-3
Journ. 266, Newswriting .....	3
Journ. 280, Advanced Reporting .....	3
Journ. 267, Editing .....	3
Journ. 360, Feature Writing and Editorial Writing .....	2
Journ. 365, High School Publications.....	3
Electives chosen from the following courses in Journalism to complete the minor: Journ. 269, 270, 271, 364, 369.....	1-3
	20

**JOURNALISM COURSES**

- Journ. 260. Journalism.** 2 credits. Introduction to mass communications: newspaper, radio, television, motion pictures, books, and magazines.
- Journ. 262, 263, 264. Practical Journalism.** 1 credit each quarter. Work on the college newspaper.
- Journ. 266. Newswriting.** 3 credits. News values, methods of collecting and writing news.
- Journ. 267. Editing.** 3 credits. Editing copy, writing headlines, planning page layouts, and proofreading.
- Journ. 269, 270, 271. Yearbook Procedures.** 1 credit each quarter. Work on the college annual.
- Journ. 280. Advanced Reporting.** 3 credits. Broadened experiences and practices in news reporting, interviewing, news gathering. Live campus and community assignments.
- Journ. 360. Feature Writing and Editorial Writing.** 2 credits. Techniques of feature writing; study of editorial page and techniques of editorial writing.
- Journ. 364. News Photography.** 2 credits. Photo reporting with still camera. Special work involving live coverage of news events. Darkroom techniques applied.
- Journ. 365. High School Publications.** 3 credits. The newspaper and the yearbook.

Journ. 366, 367, 368. **Advanced Editing.** 1 credit each quarter. Open only to editors of the *Campus Crier* and *Hyakem*.

Journ. 369. **The Press and Society.** 3 credits. Problems, criticism, objectives, duties, philosophy, and future of the press in America.

## FINE ARTS

### (T/Ed) FINE ARTS MAJOR

(Elementary Teachers)

(See also Art, Music)

Open to elementary school teachers only. May not be used for 30-credit area in a Three Area Program (30-20-20), but may be used for 30 credits from outside majors required by Special Education and Early Childhood Education majors. For secondary teaching, expand and convert to one of the other major patterns.

Major (45 credits)	<i>Credits</i>
Art 150, Drawing .....	3
Art 170, Design .....	3
Art 260, Oil Painting, or Art 262, Water color .....	3
Art 280, Sculpture or Art 285, Printmaking, or Crafts 262, Pottery, or Crafts 244, Metal, or H. Ec. 260, Weaving.....	2-3
Electives from Art History.....	3
Art 430, Art in the Elementary School....	3
Electives from art, crafts, and home economics .....	3-4
Mus. 144, Theory I .....	3
Mus. 145, Theory II .....	3
Mus. 146, Theory III .....	3
Mus. 154A, 155A, Class Instr. Piano.....	2
Mus. 154B, 155B, or 156B, Class Instr. Voice .....	2
Mus. 270, or 272, or 274 .....	3
Mus. 321, Music Education in Elementary School .....	3
Mus. 327, Song Lit. for the Elem. Grades..	2
Mus. 341, Conducting I .....	3
	45

## Foreign Languages

Associate Professor: Golden.

Assistant Professors: Carne, Easterling, Lipskey, Schneider, Thomas, Wachs.

Instructors: Beltran.

Lecturers: Valdespino, Prouty.

The Department offers majors and minors in French, German, and Spanish and minors in Russian in both Arts and Sciences and Teacher Education. Course offerings provide (1) an introduction to the nature of language as a facet of culture; (2) an acquaintance with the literatures of the aforementioned languages; and (3) proficiency in the speaking, comprehension and writing of French, German, Russian and Spanish. A fully equipped language laboratory provides practice in speaking and understanding through the use of tapes and recordings, prepared by native speakers.

### (A/S) FRENCH MAJOR

Major (45 credits)	<i>Credits</i>
Fr. 251, 252, Second Year French.....	10
Fr. 253, Introduction to French Literature.	5
Fr. 351, 352, 353, Survey of French Literature .....	9
<sup>1</sup> Elect two courses from Fr. 461, 462, 463, Advanced Conversation and Composition	4
Electives from French courses numbered above 353 .....	17
	45

<sup>1</sup>French 261, 262, 263 and French 361, 362, 363 may also be required as prerequisites.

### (A/S) FRENCH MINOR

Minor (21 credits)	<i>Credits</i>
Fr. 251, 252, Second Year French.....	10
Fr. 253, Introduction to French Literature.	5
Electives from Fr. 351, 352, 353, Survey of French Literature .....	6
	21

### (T/Ed) FRENCH MAJOR

Qualifies for teaching elementary or secondary French, providing students demonstrate oral-aural

competence in an examination administered by the Department of Foreign Languages during the first three weeks of the quarter preceding student teaching.

Major (45 credits)	<i>Credits</i>
Fr. 251, 252, Second Year French.....	10
Fr. 253, Introduction to French Literature.	5
Fr. 351, 352, 353, Survey of French Literature .....	9
Fr. 441, French Grammar for Teachers....	3
Elect 2 courses from Fr. 461, 462, 463, Advanced Conversation and Composition	4
Electives from French, courses numbered above 253 and Foreign Language Ed. 328	14
	45

### (T/Ed) FRENCH MINOR

Qualifies for teaching French in elementary schools, providing students demonstrate oral-aural competence in an examination administered by the Department of Foreign Languages during the first three weeks of the quarter preceding student teaching.

Minor (21 credits)	<i>Credits</i>
Fr. 251, 252, Second Year French.....	10
Fr. 253, Introduction to French Literature..	5
Fr. 361, 362, 363, Intermediate Conversation and Composition .....	6
	21

**FRENCH COURSES**

- Fr. 151, 152, 153. **First Year French.** 5 credits each quarter. Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language.
- Fr. 251, 252. **Second Year French.** 5 credits each quarter. Courses must be taken in sequence. Prerequisite, Fr. 153 or equivalent. Graduated readings in modern French prose with discussions conducted in French. Thorough review of French grammar.
- Fr. 253. **Introduction to French Literature.** 5 credits. Prerequisite, Fr. 252. Transition between reading for content at the intermediate level and the critical reading ability required for more advanced courses in French literature. Introduction to problems of style, genre, and aesthetics.
- Fr. 261, 262, 263. **Elementary Conversation and Composition.** 2 credits each quarter. Courses must be taken in sequence. Prerequisite, Fr. 153 or equivalent. Fr. 261, 262, 263 should be taken concurrently with Fr. 251, 252, 253, respectively.
- Fr. 351, 352, 353. **Survey of French Literature.** 3 credits each quarter. Prerequisite, Fr. 253 or equivalent. Readings, lectures, and discussions in French of literary masterpieces from the Middle Ages to the present.
- Fr. 361, 362, 363. **Intermediate Conversation and Composition.** 2 credits each quarter. Courses must be taken in sequence. Prerequisite, 263 or equivalent. Scheduled so that they may be taken concurrently with Fr. 351, 352, 353, respectively.
- Fr. 371. **17th Century French Literature.** 5 credits. Prerequisite, Fr. 352 or equivalent. Intensive study of the French theater and of the non-dramatic writings of the French Classical Period.
- Fr. 375. **18th Century French Literature.** 5 credits. Prerequisite, Fr. 352 or equivalent. The Enlightenment, with particular emphasis on Montesquieu, Diderot, Voltaire, and Rousseau.
- Fr. 426. **Medieval French Literature.** 5 credits. Prerequisite, Fr. 351. The "chanson de geste", courtly literature, the "fabliau", Villon.
- Fr. 427. **French Renaissance Literature.** 4 credits. Prerequisite, Fr. 351 or equivalent. Montaigne, Rabelais, poets of the Pléiade, others.
- Fr. 430. **French Romanticism.** 3 credits. Prerequisite, Fr. 353 or equivalent. Poetry, plays and novels of the period from 1800-1850.

- Fr. 435. **French Realism and Naturalism.** 5 credits. Prerequisite, Fr. 353 or equivalent. The novel from Balzac and Stendhal through Zola; realistic drama from Augier to the Theatre Libre.
- Fr. 441. **French Grammar for Teachers.** 3 credits. Prerequisite, 2 years of college French or equivalent. Intensive drill and study of grammatical problems commonly occurring in classroom teaching. Not applicable to major or minor in Arts and Sciences.
- Fr. 450. **Contemporary French Novel.** 5 credits. Prerequisite, Fr. 353 or equivalent. From Proust to Camus.
- Fr. 452. **Contemporary Theater.** 5 credits. Prerequisite, Fr. 353 or equivalent. French theater from the Theatre Libre to the present. Works of Maeterlinck, Claudel, Giraudoux, Sartre, Anouilh, Ionesco.
- Fr. 455. **French Poetry of the 19th and 20th Centuries.** 3 credits. Prerequisite, Fr. 353 or equivalent. Parnassian poetry. Symbolism Surrealism.
- Fr. 461, 462, 463. **Advanced Conversation and Composition.** 2 credits each quarter. Prerequisite for Fr. 461, Fr. 363 or equivalent.
- Fr. 480. **The "Avant-garde" Literature of France.** 4 credits. Prerequisite, Fr. 353 or equivalent. The Novel of Protest; the Theater of the Absurd. From 1950 to the present.
- Fr. 482. **Oral Readings.** 3 credits. Prerequisite, two years of college French or permission of instructor. Intensive practice of typical French patterns of intonation, articulation, stress and pronunciation. Interpretive readings of selected plays, poems and descriptive and narrative prose.
- Fr. 485. **Moralists and Essayists from the Renaissance to the Present.** 4 credits. Prerequisite, Fr. 351, 352, 353, or permission of the instructor. Lectures, readings and class discussion of French social critics, including Montaigne, La Fontaine, La Rochefoucauld, Voltaire, Rousseau, Gide, Camus.
- Fr. 496, 497, 498. **Individual Study.** 2 credits each course. Prerequisite, Fr. 351, 352, 353 or equivalent and permission of the instructor and of the department chairman. Advanced individual study for majors. Specific topics to be covered will be determined at time of scheduling.

**(A/S) GERMAN MAJOR**

<sup>1</sup> Major (45 credits)	<i>Credits</i>
Germ. 251, 252, 253, Second Year German	15
Germ. 353, Introduction to the German	
<i>Novelle</i> .....	3
Germ. 357, Goethe: Faust, Part I .....	3

Germ. 457, Contemporary German Drama	3
<sup>1</sup> Elect two courses from Germ. 461, 462, 463, Advanced Conversation and Composition	4
Electives from German courses numbered above 353	17
	45

<sup>1</sup>German 153, or equivalent, prerequisite to German 251.  
<sup>2</sup>German 261, 262, 263 and German 361, 362, 363 may also be required as prerequisites.

**(A/S) GERMAN MINOR**

Minor (21 credits)	<i>Credits</i>
Germ. 251, 252, 253, Second Year German	15
Electives from Germ. 351, 352, Introduction to the Classical Period, and Germ. 353, Introduction to the German <i>Novelle</i> . . .	6
	21

**(T/Ed) GERMAN MAJOR**

Qualifies for teaching elementary or secondary German, providing students demonstrate oral-aural competence in an examination administered by the Department of Foreign Languages during the first three weeks of the quarter preceding student teaching.

Major (45 credits)	<i>Credits</i>
Germ. 251, 252, 253, Second Year German	15
Germ. 353, Introduction to the German <i>Novelle</i> . . . . .	3
Elect 2 courses from Germ. 461, 462, 463, Advanced Conversation and Composition	4
Germ. 357, Goethe: <i>Faust</i> , Part I . . . . .	3
Germ. 441, German Grammar for Teachers	3
Germ. 457, Contemporary German Drama	3
Electives from German courses numbered above 253 and Foreign Language Ed. 328	14
	45

**(T/Ed) GERMAN MINOR**

Qualifies for teaching German in elementary schools, providing students demonstrate oral-aural competence in an examination administered by the Department of Foreign Languages during the first three weeks of the quarter preceding student teaching.

Minor (21 credits)	<i>Credits</i>
Germ. 251, 252, 253, Second Year German	15
Germ. 361, 362, 363, Intermediate Conversation and Composition . . . . .	6
	21

**GERMAN COURSES**

**Germ. 151, 152, 153. First Year German.** 5 credits each quarter. Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language.

**Germ. 251, 252, 253. Second Year German.** 5 credits each quarter. Courses must be taken in sequence. Prerequisite, Germ. 153 or equivalent. Graduated readings in modern German prose with discussion conducted in German. Thorough review of German grammar.

**Germ. 261, 262, 263. Elementary Conversation and Composition.** 2 credits each quarter. Courses must be taken in sequence. Prerequisite, Germ. 153 or equivalent. Germ. 261, 262, 263 should be taken concurrently with Germ. 251, 252, 253 respectively.

**Germ. 270. Scientific German.** 3 credits. Prerequisite, Germ. 252 or equivalent. Readings in German in various scientific fields.

**Germ. 351, 352. Introduction to the Classical Period.** 3 credits per quarter. Prerequisite, Germ. 253 or equivalent. Readings, lectures, and discussions in German of some of the principal dramatic works of Lessing, Goethe, and Schiller.

**Germ. 353. Introduction to the German *Novelle*.** 3 credits. Prerequisite, Germ. 253 or equivalent; readings, lectures and discussions in German of several outstanding nineteenth and twentieth century German *Novelle*.

**Germ. 357. Goethe: *Faust*, Part I.** 3 credits. Prerequisite, Germ. 253 or equivalent.

**Germ. 361, 362, 363. Intermediate Conversation and Composition.** 2 credits each quarter. Courses must be taken in sequence. Prerequisite, Germ. 263 or equivalent. Scheduled so that they may be taken concurrently with Germ. 351, 352, 353, respectively.

**Germ. 430. German Romanticism.** 3 credits. Prerequisite, Germ. 353 or permission. German literature during the Romantic period: 1770-1830. The works of Holderlin, Novalis, Hoffman, von Kleist, Clemens, Brentano, von Eichendorff.

**Germ. 432. German Lyric Poetry.** 3 credits. Prerequisite, Germ. 353 or permission. Poetry of Goethe, Schiller, Uhland, Heine, Lenau, von Liliencron, George, Rilke, Spitteler, etc.

**Germ. 441. German Grammar for Teachers.** 3 credits. Prerequisite, 2 years of college German or equivalent. Intensive drill and study of grammatical problems commonly occurring in classroom teaching. Will not count toward the major or minor in Arts and Sciences.

**Germ. 448. Goethe: *Faust*, Part II.** 3 credits. Prerequisite, Germ. 357 or permission.

**Germ. 451. The German Novel of the 19th Century.** 3 credits. Prerequisite, Germ. 353 or permission. From Goethe to Fontane.

**Germ. 452. The German Novel of the 20th Century.** 3 credits. Prerequisite, Germ. 353 or permission. From Thomas Mann to Grass.

**Germ. 456. German Drama of the 19th Century.** 3 credits. Prerequisite, Germ. 353 or

permission. The German Theater from the end of Romanticism to Naturalism: Kleist, Grillparzer, Hebbel.

**Germ. 457. Contemporary German Drama.** 3 credits. Prerequisite, Germ. 353 or permission. Analysis of the structural elements of the expressionistic drama and of the works of Brecht, Durrenmatt, Frisch.

**Germ. 461, 462, 463. Advanced Conversation and Composition.** 2 credits. Prerequisite, Germ. 363 or equivalent.

**Germ. 469. History of the German Language.** 5 credits. Prerequisite, Germ. 253 or permission. From early Germanic to the present.

**Germ. 496, 497, 498. Individual Study.** 2 credits each course. Prerequisite, Germ. 351, 352, 353 or equivalent and permission of the instructor and of the department chairman. Advanced individual study for majors. Specific topics to be covered will be determined at time of scheduling.

**(A/S) RUSSIAN MINOR**

Minor (19-23 credits)	<i>Credits</i>
Russ. 251, 252, 253, Second Year Russian.	15
Electives from Russ. 331, 332, 333, 334, Survey of Russian Literature.....	4-8
	<hr/> 19-23

**(T/Ed) RUSSIAN MINOR**

Qualifies for teaching Russian in elementary schools, providing students demonstrate oral-aural competence in an examination administered by the Department of Foreign Languages during the first three weeks of the quarter preceding student teaching.

Minor (21 credits)	<i>Credits</i>
Russ. 251, 252, 253, Second Year Russian.	15
Russ. 361, 362, 363, Intermediate Conversation and Composition .....	6
	<hr/> 21

**RUSSIAN COURSES**

**Russ. 151, 152, 153. First Year Russian.** 5 credits each quarter. Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Firm foundation in the basic structural principles of the language.

**Russ. 160. Scientific Russian.** 5 credits. No prerequisite. Basic Russian grammar. Elementary readings in various scientific fields. Not applicable to the major or minor in Russian.

**Russ. 251, 252, 253. Second Year Russian.** 5 credits each quarter. Courses must be taken in sequence. Prerequisite, Russ. 153 or equivalent. Graduated readings in Russian liter-

ature with discussions conducted in Russian. Thorough review of Russian grammar.

**Russ. 254. Russian Culture and Civilization.** 5 credits. Prerequisite, Russ. 252 or permission. Russia's material wealth; a survey of literature, art, music, history and philosophy. Lectures and discussions conducted in Russian.

**Russ. 261, 262, 263. Elementary Conversation and Composition.** 2 credits each quarter. Courses must be taken in sequence. Prerequisite to Russ. 261, Russ. 153 or equivalent. Russ. 261, 262, 263 should be taken concurrently with Russ. 251, 252, 253, respectively.

**Russ. 331. 19th Century Russian Literature I.** 4 credits. Prerequisite, Russ. 253 or equivalent. Pushkin, Lermontov, Gogol, Goncharov, and others.

**Russ. 332. 19th Century Russian Literature II.** 4 credits. Prerequisite, Russ. 253 or equivalent. Dostoevskij, Turgenev, Chekhov and others.

**Russ. 333. 20th Century Russian Literature I: Pre-Soviet Period.** 4 credits. Prerequisite, Russ. 253. Symbolists, Acmeists, Futurists. Russian Formalism.

**Russ. 334. 20th Century Russian Literature II: Soviet Period.** 4 credits. Prerequisite, Russ. 253. Principal literary works from the Revolution to the present: Utopian novel Socialist Realism, The Thaw, Emigré literature.

**Russ. 361, 362, 363. Intermediate Conversation and Composition.** 2 credits each quarter. Courses must be taken in sequence. Prerequisite to Russ. 361, Russ. 263 or equivalent. Scheduled so that they may be taken concurrently with Russ. 331, 332, 333, respectively.

**Russ. 455. Russian Poetry of the 19th and 20th Centuries.** 3 credits. Prerequisite, 8 hours of 300-level Russian literature or equivalent. Detailed analysis of the works of Zhukovskij, Fet, Tjutchev, Majakovskij, and Evtushenko.

**(A/S) SPANISH MAJOR**

Major (45 credits)	<i>Credits</i>
Span. 251, 252, 253, Second Year Spanish	15
Span. 351, 352, 353, Survey of Spanish Literature .....	9
Span. 451, 452, 453, Survey of Spanish-American Literature .....	9
Elect two courses from Span. 461, 462, 463, Advanced Conversation and Composition	4
Electives from Spanish courses numbered above 353 .....	8
	<hr/> 45



**(A/S) SPANISH MINOR**

Minor (21 credits)	<i>Credits</i>
Span. 251, 252, 253, Second Year Spanish	15
Electives from Span. 351, 352, 353, Survey of Spanish Literature . . . . .	6
	21

**(T/Ed) SPANISH MAJOR**

Qualifies for teaching elementary or secondary Spanish in schools, providing students demonstrate oral-aural competence in an examination administered by the Department of Foreign Languages during the first three weeks of the quarter preceding student teaching.

Major (45 credits)	<i>Credits</i>
Span. 251, 252, 253, Second Year Spanish	15
Span. 351, 352, 353, Survey of Spanish Literature . . . . .	9
Span. 451, 452, 453, Survey of Spanish-American Literature . . . . .	9
Span. 441, Spanish Grammar for Teachers	3
Elect two courses from Span. 461, 462, 463, Advanced Conversation and Composition	4
Electives from Spanish courses numbered above 253 and Foreign Language Ed. 328	5
	45

**(T/Ed) SPANISH MINOR**

Qualifies for teaching Spanish in elementary schools, providing students demonstrate oral-aural competence in an examination administered by the Department of Foreign Languages during the first three weeks of the quarter preceding student teaching.

Minor (21 credits)	<i>Credits</i>
Span. 251, 252, 253, Second Year Spanish	15
Span. 361, 362, 363, Intermediate Conversation and Composition . . . . .	6
	21

**SPANISH COURSES**

- Span. 151, 152, 153. First Year Spanish.** 5 credits each quarter. Courses must be taken in sequence. Conversational approach with intensive oral-aural drill. Firm foundation in basic structural principles of the language.
- Span. 251, 252, 253. Second Year Spanish.** 5 credits each quarter. Courses must be taken in sequence. Prerequisite to Span. 251, Span. 153 or equivalent. Graduated readings in modern Spanish prose with discussions conducted in Spanish. Thorough review of Spanish grammar.
- Span. 261, 262, 263. Elementary Conversation and Composition.** 2 credits each quarter. Courses must be taken in sequence. Prerequisite to Span. 261, Span. 153 or equivalent. Span. 261, 262, 263 should be taken concurrently with Span. 251, 252, 253, respectively.
- Span. 351, 352, 353. Survey of Spanish Literature.** 3 credits each quarter. Prerequisite to Span. 351, Span. 253 or equivalent. Read-

ings, lectures and discussions in Spanish of literary masterpieces from the Middle Ages to the present.

- Span. 361, 362, 363. Intermediate Conversation and Composition.** 2 credits each quarter. Courses must be taken in sequence. Prerequisite, Span. 263 or equivalent. Scheduled so that they may be taken concurrently with Span. 351, 352, 353, respectively.
- Span. 426. Medieval Spanish Literature.** 4 credits. Prerequisite, Span. 351 or equivalent. Epic poetry, the "mester de clerecia", Alfonso el Sabio, Don Juan Manuel, Theater.
- Span. 427. Spanish Renaissance Literature.** 4 credits. Prerequisite, Span. 351 or equivalent. Lyric poetry, chronicles of the Indies, theater, novel, literature of Mysticism.
- Span. 430. Spanish Romanticism.** 3 credits. Prerequisite, Span. 353 or equivalent. Lyric poetry and theater of first half of the 19th century.
- Span. 435. Realism and Naturalism.** 5 credits. Prerequisite, Span. 353 or equivalent. Novels, short stories, and essays of Alarcon, Valera, Galdos, Pardo Bazan and others.
- Span. 441. Spanish Grammar for Teachers.** 3 credits. Prerequisite, 2 years of college Spanish or equivalent. Intensive drill, consideration of available reference materials and study of grammatical problems commonly occurring in classroom teaching. Does not count toward major or minor in Arts and Sciences.
- Span. 448. Cervantes.** 3 credits. Prerequisite, Span. 352 or permission of the instructor. Intensive study of Don Quijote and the *Novelas Ejemplares*.
- Span. 450. The Drama of the Golden Age.** 3 credits. Prerequisite, Span. 352 or permission of the instructor. *Comedias* and *entremeses* from Cervantes to Calderon.
- Span. 451, 452, 453. Survey of Spanish-American Literature.** 3 credits each quarter. Prerequisite, Span. 353 or permission of the instructor. An introduction to Spanish-American Literature from Colonial times to the present. Detailed reading and analysis of authors from Bernal Diaz del Castillo to Pablo Neruda.
- Span. 455. The Generation of 1898.** 3 credits. Prerequisite, Span. 353 or permission of the instructor. Representative works of Valle-Inclan, Azorin, Baroja, Unamuno, Machado, and Benavente.
- Span. 457. The Modernista Movement in Spanish-American Literature.** 3 credits.

- Prose and poetry from 1880-1920. Prerequisite, Span. 353 or permission of instructor.
- Span. 458. **The Contemporary Spanish-American Novel.** 3 credits. Prerequisite, Span. 353 or permission of the instructor.
- Span. 459. **Contemporary Spanish-American Poetry.** 3 credits. Prerequisite, Span. 353 or permission of the instructor.
- Span. 461, 462, 463. **Advanced Conversation and Composition.** 2 credits each quarter. Prerequisite, Span. 363 or equivalent.
- Span. 496, 497, 498. **Individual Study.** 2 credits each quarter. Prerequisite, Span. 351, 352, 353, or equivalent and permission of the instructor and of the department chairman. Advanced individual study for majors. Specific topics to be covered will be determined at the time of scheduling.

**FOREIGN LANGUAGE COURSES**

- For. Lang. Ed. 328. **Methods and Materials for the Teaching of Modern Foreign Languages.** 3 credits. Prerequisite, two years of college work in the foreign language in question.
- For. Lang. Ed. 420. **Special Problems in the Teaching of Modern Foreign Languages.** 3 credits. Units on French, German, Russian and Spanish, according to needs of students enrolled. Laboratory work with foreign language classes.
- For. Lang. 401. **Introduction to Romance Linguistics.** 3 credits. Prerequisite, equivalent of two years of college study of a Romance language. Descriptive analysis of the phonological, morphological and syntactical languages.

# Geography

Professors: Funderburk, Kaatz, Macinko.  
 Assistant Professors: Andress, Eberhart, Hammond, Jakubek, Speth.  
 Lecturer: Figy.

Geography's traditional concern with the inter-relatedness of the natural and man-made environments and their differences from place to place provides important insights into many of the complexities and problems facing mankind today.

The programs stress flexibility in the selection of course sequences for majors and encourages study in related departments amongst the social and natural sciences. The department is an active participant in the college's Resource Planning Center and Southeast Asia Institute.

**(A/S) GEOGRAPHY MAJOR**

Major (45 to 60 credits)	<i>Credits</i>
Geog. 100, World Geography . . . . .	5
Geog. 107, Physical Geography . . . . .	4
Geog. 108, Introduction to Cultural Geography . . . . .	3
Geog. 245, Economic Geography . . . . .	5
Geog. 352, Geography of Anglo-America, or Geog. 371, Geography of Europe . . . . .	5
Geog. 384, Cartography . . . . .	5
Geog. 386, Geomorphology . . . . .	3
Geog. 388, Climatology . . . . .	3
Geog. 481, Urban Geography . . . . .	5
Electives from Geography . . . . .	3-7
Electives from Social Sciences, Sciences, or Mathematics as approved by Geography adviser . . . . .	4-15
	45-60

Any regional course or any combination of regional courses . . . . . 5  
 20-22

**(T/Ed) GEOGRAPHY MAJOR**

Senior high school teachers must accompany this with a major in history or some other field in which a major portion of a full-time teaching assignment can be expected. Qualifies for teaching both geography and the second major field. Junior high school teachers must combine this with minors in both History and English for "block of time" assignments. For elementary school teaching, see page —.

Major (45 credits)	<i>Credits</i>
Geog. 100, World Geography . . . . .	5
Geog. 107, Introduction to Physical Geography . . . . .	4
Geog. 108, Introduction to Cultural Geography . . . . .	3
Geog. 245, Economic Geography . . . . .	5
Geog. 386, Geomorphology, or Geog. 388, Climatology . . . . .	3
Geog. 421, Practical Aids in Teaching Geography . . . . .	2
Regional Geography at 300 level or above . . . . .	10
Systematic Geography at 300 level or above . . . . .	8
Electives at 300 level or above as approved by geography advisor . . . . .	5
	45

**(A/S) GEOGRAPHY MINOR**

Minor (20 to 22 credits)	<i>Credits</i>
Geog. 100, World Geography (5 credits), or Geog. 108, Introduction to Cultural Geography (3 credits) . . . . .	3-5
Geog. 107, Physical Geography . . . . .	4
Geog. 245, Economic Geography . . . . .	5
Geog. 386, Geomorphology or Geog. 388, Climatology . . . . .	3

**(T/Ed) GEOGRAPHY MINOR**

Minor (20-22 credits )	<i>Credits</i>
Geog. 100, World Geography (5 credits), or Geog. 108, Introduction to Cultural Geography (3 credits) . . . . .	3-5
Geog. 107, Introduction to Physical Geogra- phy . . . . .	4
Geog. 245, Economic Geography . . . . .	5
Geog. 386, Geomorphology or Geog. 388, Climatology . . . . .	3
Any regional course or any combination of regional courses . . . . .	5
	20-22

**GEOGRAPHY COURSES**

- Geog. 100. World Geography.** 5 credits. Elements forming the environments of men; their uses; natural and man-made changes.
- \*Geog. 107. Introduction to Physical Geography.** 4 credits. The complex of land-forms, climate, vegetation, and soils which characterize man's natural environment. (Not open to students who have taken Geog. 347 or 348.)
- \*Geog. 108. Introduction to Cultural Geography.** 3 credits. Man as an agent of change on the earth; involving domestication of plants and animals, settlement forms, and land utilization.
- \*Geog. 245. Economic Geography.** 5 credits. Prerequisite, sophomore standing or Geog. 100. The distribution of man's economic activities and the principal commodities of world commerce.
- Geog. 255. Geography of the Pacific Northwest.** 3 credits. Topography, climate and economic resources of the Pacific Northwest; the distribution and economic activities of the people.
- Geog. 295. Seminar.** 3 credits. For sophomores and advanced freshmen who combine academic excellence with an interest in exploring geographic literature. Emphasis is on independent study, careful writing, and skill in oral communication. Admission is by invitation of geography faculty.
- Geog. 337. Middle America.** 3 credits. The physical and human geography of Mexico, Central America, and islands of the Caribbean.
- \*Geog. 345. Industrial Geography.** 3 credits. Prerequisite, Geog. 245 or consent of instructor. The locational patterns of manufacturing. Location theory is introduced and applied.
- \*Geog. 346. Political Geography.** 3 credits. The spatial structure of political units. The effect of political, economic, social and earth resource factors on the areas, shapes, and

boundaries of these units, and on the distribution of populations and institutions.

- \*Geog. 350. Conservation of Natural Resources.** 3 credits. The meaning of resources and conservation; the spectre of population growth and its future implications to land management public control, and environmental quality; former and current attitudes regarding the use of resources; conservation thought and activities in the United States.
- Geog. 352. Geography of Anglo-America.** 5 credits. The major geographic regions of Anglo-America (Alaska, Canada, United States).
- Geog. 365. Geography of Africa.** 5 credits. Land, people, diverse geographical and political areas of Africa.
- Geog. 371. Geography of Europe.** 5 credits. The geographical and political units. Useful in the interpretation of European history.
- Geog. 380. Geography of Hot, Wet Lands.** 3 credits. The climate, vegetation, soils, resources, etc. of the wet tropics; the distribution of people and their economic activities. Emphasizes representative regions and the significance of the tropical lands in world affairs.
- \*Geog. 384. Introductory Cartography.** 5 credits. Elementary map construction. Map projections, grids, scales, lettering symbolization, and map compilation and use. Three lecture periods and four hours of laboratory a week.
- \*Geog. 386. Geomorphology.** 3 credits. Prerequisites, introductory physical geography or geology or permission of instructor. (Not open to students who have taken Geography 347.) The earth's landforms; analysis of topographic maps as a key to landform recognition. Two lectures and two hours of laboratory a week. Field trips.
- \*Geog. 388. Climatology.** 3 credits. Prerequisite, Geog. 107 or instructor's permission. (Not open to students who have taken Geog. 348.) The earth's climates, methods of classification, the relation of natural features and climate, man and climate, and the problem of climatic change.
- \*Geog. 405. Advanced Cartography.** 5 credits. Prerequisite, Geog. 384, or consent of instructor. Map design and methods of reproduction, economic maps and diagrams, terrain representation, history of cartography. Three lecture periods and four hours of laboratory a week.
- \*Geog. 408. Advanced Cultural Geography.** 3 credits. Prerequisite, Geog. 108 or consent

- of instructor. Understanding of cultural processes in the adaptation to and modification of natural environments by human societies.
- \*Geog. 410. Interpretation of Aerial Photographs.** 3 credits. Prerequisite, Geog. 384 or consent of instructor. Two lectures and two hours of laboratory a week.
- Geog. 415. Geography of Oceania.** 3 credits. Geographic description and analysis of Australia, New Zealand and the Melanesian, Micronesian and Polynesian Islands of the Pacific.
- \*Geog. 421. Practical Aids in Teaching Geography.** 2 credits. Prerequisite, ten credits in geography. Materials and methods appropriate to teaching geography in public schools.
- \*Geog. 425. Field Methods in Geography.** 5 credits. A field research course surveying the techniques of observation and the collection of data, and the interpretation of the gathered physical, economic and cultural information. (Geog. 384 recommended.)
- \*Geog. 445. Natural Resources Policy.** 4 credits. Development and significance of policies affecting resource management. Impact on land use. Changing roles of private and public enterprise and the various levels of government.
- \*Geog. 446. Land Use in the United States.** 3 credits. Prerequisite, Geog. 107 or instructor's consent. The initial assessment and subsequent settlement of the various regions of the U.S. Changing patterns of land use accompanying changes in culture and technology.
- Geog. 470. Geography of South America.** 3 credits. The physical and cultural aspects of the various South American states and their consequences in the present landscape.
- Geog. 472. Geography of the Soviet Union.** 3 credits. The physical aspects of the Soviet Union (topography, climate, vegetation, resources, etc.) together with the distribution and activities of the Russian peoples.
- Geog. 474. Geography of China.** 4 credits. Lectures on the geographic regions of China.
- Geog. 475. Geography of Asia.** 5 credits. The natural and cultural landscapes and the activities of man in the various geographic and political areas which comprise non-Soviet Asia.
- Geog. 480. Geography of the Polar Regions.** 3 credits. The climate, vegetation, soils, and resources of the Arctic and Antarctic regions together with an analysis of the distribution of people and their economic activities.
- \*Geog. 481. Urban Geography.** 5 credits. Prerequisite, Geog. 245 or consent of instructor. The spatial and size distribution of cities in terms of their historical development and major functions. Analysis of the internal structure of cities and the results of urban growth.
- Geog. 484. Geography of Southeast Asia.** 2 credits. Physical and cultural aspects of the southeast Asian mainland and adjacent archipelagos.
- \*Geog. 490. History of Geographic Thought.** 3 credits. An intellectual history of the geographic discipline with emphasis on American thought and its European antecedents.
- \*Geog. 491. Geographic Methodology.** 3 credits. Prerequisite, 15 hours of geography or consent of the instructor.
- \*Geog. 494. Seminar—Problems in Resource Allocation.** 3 credits. Prerequisite, permission of instructor. Selected current problems in resource allocation. Two lectures and two hours of laboratory a week. Field trips.
- Geog. 495. Research Seminar in Geography.** 2 credits. An opportunity for the superior student to conduct supervised research in one of the fields of geography. Students may register only at the invitation of the geography faculty.
- Geog. 496. Individual Study.** 2 credits. For students who have had several courses in geography. The readings will be done in an area chosen by the student and approved by the instructor.
- Geog. 546. Water Resource Development Seminar.** 3 credits. Objectives and institutions for water resource development. Current trends and implications for associated resources.
- Geog. 595. Seminar—Research in Geography.** 3 credits. Prerequisite, a minor in geography.

---

\*Indicates systematic courses. Courses without asterisk are either regional courses, research or individual study.

# Geology

Associate Professor: Newman.

Assistant Professors: Farkas, Ringe.

Geology is the science of the earth. The geologist is concerned with the nature of the earth's surface and its interior, the materials of which the earth is composed, the earth's history, and the natural processes by which the earth achieved its present constitution and by which it continues to evolve.

Geology is the application of biology, chemistry, mathematics, and physics to a study of the earth. A student who majors in Geology should have an understanding of the principles of those disciplines in order to function effectively in his major field.

## (A/S) GEOLOGY MAJOR

Major (45 to 60 credits)	Credits
Geol. 145, Physical Geology .....	5
Geol. 146, Historical Geology .....	5
Geol. 245, Rocks and Rock-forming Minerals .....	4
Geol. 247, Minerals .....	4
Bio. Sci. 347, Paleontology .....	5
Geol. 355, Field Geology .....	4
Geol. 360, Structural Geology .....	4
Geol. 450, Stratigraphy .....	4
Geol. 460, Sedimentation .....	4
Electives chosen from: .....	6-21
Geog. 386	
Geol. 255, 350, 465, 470, 475, 496, and 497	
Bio. Sci. 447, 449, 455	

---

46-60

Majors are encouraged to complete:  
 Chem. 181, 182.  
 Math 171.1, 171.2.  
 Phys. 161, 162, 163.

## (A/S) GEOLOGY MINOR

Minor (15 to 30 credits)	Credits
Geol. 145, Physical Geology .....	5
Geol. 146, Historical Geology .....	5
Geol. 245, Rocks and Rock-forming Minerals .....	4
Electives in Geology to complete minor .....	1-16

---

15-30

## (T/Ed) GEOLOGY MINOR

Minor (21 or 22 credits)	Credits
Geol. 145, Physical Geology .....	5
Geol. 146, Historical Geology .....	5
Geol. 245, Rocks and Rock-forming Minerals .....	4
Geol. 247, Minerals (4), or Bio. Sci. 347, Paleontology (5) .....	4 or 5
Sci. Ed. 322, Science Education in the Elementary School .....	3

---

21 or 22

## GEOLOGY COURSES

**Geol. 145. Physical Geology.** 5 credits. An introduction emphasizing the origin, nature, and continually changing features of the

earth's crust. Three lectures and three hours of laboratory a week.

**Geol. 146. Historical Geology.** 5 credits. Prerequisite, Geol. 145. An introduction to the history of the earth as revealed by rocks and fossils. Three lectures and 4 hours of laboratory a week.

**Geol. 245. Rocks and Rock-forming Minerals.** 4 credits. Prerequisite, high school or college chemistry latter may be taken concurrently. The common rock-forming minerals and rocks; their natures, origins, and occurrences. Two lectures and three hours of laboratory a week.

**Geol. 247. Minerals.** 4 credits. Prerequisite, high school or college chemistry (latter may be taken concurrently). The internal and external features of minerals; their origins, occurrences and uses. Two lectures and four hours of laboratory a week.

**Geol. 255. Geologic Map Interpretation.** 2 credits. Prerequisite, permission. The structural, stratigraphic, and historical interpretations of geological maps.

**Geol. 345. Principles of Geology.** 5 credits. The earth sciences, their historical development; principles underlying natural geological processes; the rock and fossil history of the earth. (Offered summer only.)

**Geol. 350. Washington Geology.** 3 credits.

**Geol. 355. Field Geology.** 4 credits. Prerequisite, permission of the instructor. Methods of geological field investigations; use of field instruments and making of geologic maps. Two hours lecture, four hours laboratory arranged.

**Geol. 360. Structural Geology.** 4 credits. Prerequisite, Geol. 146. The origin, interpretation, and mapping of major and minor geologic structures. Three lectures and two hours of laboratory a week.

**Geol. 450. Stratigraphy.** 4 credits. Physical and biological characteristics of stratified rocks. Principles of correlation, determination of geologic age and facies relationships. Three hours lecture, one 3-hour lab.

**Geol. 460. Sedimentation.** 4 credits. Prerequisites, Geol. 245 and 247. The sedimentary rock cycle and its products, rock weathering and soils. Two lectures and four hours of laboratory a week.

**Geol. 465. Mineral Deposits.** 4 credits. Prerequisites, Geol. 245 and 247. Occurrence, properties, classification, and utilization of metalliferous and non-metalliferous deposits. Two lectures and four hours of laboratory a week.

**Geol. 470. Optical Mineralogy.** 5 credits. Prerequisite, Geol. 247. Theory and use of the polarizing microscope in the study of crystalline substances. Two lectures and six hours of laboratory a week.

**Geol. 475. Petrography.** 5 credits. Prerequisite, Geol. 470. The mineralogy, texture, and genesis of rocks. Two lectures and six hours of laboratory a week.

**Geol. 496, 497. Individual Study.** 2 to 4 credits, each course. Open to advanced students with the consent of the staff member in charge.

**(T/Ed) EARTH SCIENCE MAJOR**

Senior and junior high school teachers must accompany this with another endorsable area.

Major (45 credits)	<i>Credits</i>
Geog. 107, Introduction to Physical Geography .....	4
Geog. 386, Geomorphology .....	3
Geog. 388, Climatology .....	3
Geol. 145, Physical Geology .....	5
Geol. 146, Historical Geology .....	5
Geol. 245, Rocks and Rock-forming Minerals, or Geol. 247, Minerals .....	4
Bio. Sci. 347 (5), Paleontology, or Geology 450 (4), Stratigraphy .....	4 or 5
Geol. 350, Washington Geology .....	3
Physics 331, Astronomy I: The Solar System	4
Physics 332, Astronomy II: Stars and Galaxies .....	4
Sci. Ed. 324, Science Education in the Secondary Schools .....	3
Approved Geology Electives .....	2-3
	45

**(T/Ed) EARTH SCIENCE MINOR**

Minor (21 credits)	<i>Credits</i>
Geog. 388, Climatology .....	3
Geol. 145, Physical Geology .....	5
Geol. 146, Historical Geology .....	5
Geol. 245, Rocks and Rock-forming Minerals, or Geol. 247, Minerals .....	4
Physics 331, Astronomy I: The Solar System	4
	21

For minimum endorsement for earth science teaching in junior or senior high school add: Geog. 386, either Bio. Sci. 347 or Geol. 450, and Sci. Ed. 324.

**Health and P. E.**  
(See P.E.)

# History

Professors: Mohler, Rodine.

Associate Professors: Berg, Glauert, LeRoy, Lowther, Smith.

Assistant Professors: Barnes, Brennan, Empey, Heckart, Kramar, Langley, Priori, Richards, Walterman.

The Department offers courses leading to the degrees of bachelor of arts, bachelor of arts in education, and master of education in history. Students who anticipate enrolling in a graduate school should acquire a reading knowledge of at least one foreign language, preferably French or German. Majors who desire to graduate with honors should consult the Faculty of History honors director on the special requirements.

**(A/S) HISTORY MAJOR**

<sup>1</sup> Major (60 credits)	<i>Credits</i>
Hist. 143, 144, History of the United States	10
Hist. 152, 153, 154, Western Civilization	15
Hist. 481, Understanding History .....	5
Five hours from the following courses: ...	5
Hist. 485, European Intellectual and Cultural History: 1500-1815	
Hist. 486, European Intellectual and Cultural History Since 1815	

Hist. 455, Intellectual History of the United States	
Guided upper division electives with a minimum of ten hours each in American and European areas .....	25
(Note: For this purpose Canada and Latin America are considered part of the American area.)	
	60

<sup>1</sup>Reading knowledge in one foreign language is required for the Arts and Sciences Major.

**(A/S) HISTORY MINOR**

Minor (20 to 30 credits)	<i>Credits</i>
Hist. 143, 144, History of the United States or	
Hist. 153, 154, Western Civilization . . . . .	10
Upper division electives . . . . .	10-20
	20-30

**(T/Ed) HISTORY MAJOR**

Qualifies for teaching history in secondary schools. To qualify for teaching in "block of time" programs, junior high school teachers must combine this with minors in both English (composition or language) and geography. For elementary school teaching, see page —.

Major (45 credits)	<i>Credits</i>
History 143, 144, History of the United States . . . . .	10
Select from following: . . . . .	10
History 152, 153, 154, Western Civilization	
History 421, Methods and Materials in History—Secondary or Soc. Sci. 420, Methods and Materials in Social Sciences—Elementary . . . . .	2-3
At least one from the following: . . . . .	3-5
History 445, The American Colonial Mind	
History 455, Intellectual History of the United States	
History 481, Understanding History	
History 388, Economic History of Europe Since 1760	
History 485, European Intellectual and Cultural History: 1500-1815	
History 486, European Intellectual and Cultural History, since 1815	
Electives from upper division history courses, five credits of which must be in European history . . . . .	17-20
	45

NOTE: For this purpose, Africa and Asia are considered part of the European area.

**(T/Ed) HISTORY MINOR**

Does not qualify for teaching history on the secondary level.

Minor (20 credits)	<i>Credits</i>
History 153, 154, Western Civilization . . . . .	10
Upper division electives . . . . .	10
	20

**HISTORY COURSES**

- Hist. 143. United States History to 1865.** 5 credits. The Colonial, Revolutionary, and National periods.
- Hist. 144. United States History Since 1865.** 5 credits. Reconstruction, industrial America, and 20th Century urban America.
- Hist. 152. Western Civilization to 1500.** 5 credits. Origins and development from pre-Hellenic cultures to the 15th Century, classical and medieval political, social, and

economic institutions, and their religious and intellectual backgrounds.

- Hist. 153. Western Civilization: 1500-1815.** 5 credits. Political, social, economic and cultural survey.
- Hist. 154. Western Civilization Since 1815.** 5 credits. Political, social, economic, and cultural survey.
- Hist. 201. History and Government of Washington.** 3 credits. Prerequisite, sophomore standing. Exploration and settlement; subsequent political, economic, and social history; state government.
- Hist. 230. English History: 1066 to the present.** 5 credits. Survey of political, constitutional, economic, and religious development; growth and loss of Empire.
- Hist. 302. Ancient Near East and Greece.** 5 credits. Mesopotamian, Egyptian, Hellenic and Hellenistic civilizations from their earliest beginnings to the breakup of the Alexandrian Empire.
- Hist. 303. History of Rome. 500 B.C.-500 A.D.** 5 credits. Beginning, city-state, republican period; world empire; decline.
- Hist. 310. Introduction to History of Science.** 5 credits. The role of natural philosophy and science in the development of civilization from ancient Greece to the 20th century.
- Hist. 315. The Moslem World.** 5 credits. The origin and spread of Islam, the rise of Moslem states and their political and cultural influences on the European nations.
- Hist. 331. Colonial Africa.** 5 credits. Earliest African civilizations, coming of the Europeans; colonization.
- Hist. 332. Independent Africa.** 5 credits. Impact of white rule; creation of free states. Policies, world influences, nationalist ideals.
- Hist. 335. The Rise of India.** 5 credits. Ancient and medieval empires, coming of the European, British role—Indian and Pakistanian states, 20th century problems.
- Hist. 340.1. Colonial America: 17th Century.** 5 credits. Foundations of the Anglo-American colonies and their development to about 1700.
- Hist. 340.2. Colonial America: 18th Century.** 5 credits. Growth and development of the Anglo-American settlement, 1700-1763.
- Hist. 340.3. The American Revolution.** 5 credits. Background, nature, and consequences, 1750-1789.

## 102 History Courses

- Hist. 341. The United States: Early National Period, 1789-1844.** 5 credits.
- Hist. 348. Economic History of the United States.** 5 credits. Economic factors in national development; European background to the present. Same as Econ. 348.
- Hist. 349. Selected American Biographies.** 5 credits. Americans who contributed to statecraft, economic life, or social progress.
- Hist. 365. The British Empire and Commonwealth.** 5 credits. Colonial expansion and administration from the American Revolution to the present; the development of dominion status and commonwealth relations.
- Hist. 369. History of Canada.** 5 credits. Exploration, French period, fur trade and colonization; the half century of conflict; British colony; Dominion status.
- Hist. 371. Medieval History: 500-1300.** 5 credits.
- Hist. 373. English Constitutional History.** 5 credits. Anglo-Saxon origins, the Norman period, the legal, administrative, and parliamentary development; the limitation of royal power, the rise of the cabinet system, and the democratization of the Constitution.
- Hist. 385. Modern Asia.** 5 credits. The Far East from ca. 1850 to the present; adjustment by the various Oriental civilizations to Westernization.
- Hist. 388. Economic History of Europe Since 1760.** 5 credits. The Industrial Revolution in Great Britain and on the Continent, its resultant effects, the rise of trade unionism, socialism, anarchism, imperialism, economics and war in the twentieth century. Same as Econ. 388.
- Hist. 389. Modern European Labor Movements.** 5 credits.
- Hist. 390. The Latin American Colonies.** 5 credits.
- Hist. 391. The South American Republics.** 5 credits. Beginning with the wars for independence, the development of the republics is traced in the nineteenth and 20th centuries.
- Hist. 421. Methods and Materials in History—Secondary.** 2 credits.
- Hist. 425. Renaissance and Reformation.** 5 credits.
- Hist. 430.1. Tudor-Stuart England.** 5 credits.
- Hist. 430.2. Britain in the Eighteenth and Nineteenth Centuries.** 5 credits.
- Hist. 430.3. Britain in the Twentieth Century.** 5 credits.
- Hist. 442. Urban and Industrial America: 1877-1900.** 5 credits.
- Hist. 443. The West in American History.** 5 credits. Exploration, territorial acquisition, patterns of settlement, economic development, and the influence of the frontier on American institutions.
- Hist. 444. The Civil War and Reconstruction.** 5 credits.
- Hist. 445. The American Colonial Mind.** 3 credits. Eighteenth century ideas; colonial American thought.
- Hist. 450.1. 20th Century U.S.: 1898-1933.** 5 credits. Imperialism, Progressivism, World War I and aftermath, Republican "normalcy" and depression.
- Hist. 450.2. 20th Century U.S.: 1933 to the Present.** 5 credits. The New Deal and its implications; World War II, domestic and foreign post-war problems.
- Hist. 455. Intellectual History of the United States.** 5 credits. American minds; impact of ideas and attitudes on American society.
- Hist. 457. Europe Under the Old Regime, 1648-1789.** 5 credits.
- Hist. 458. The French Revolution and Napoleon.** 5 credits.
- Hist. 463. American Diplomatic History: Pre-1900.** 5 credits. Prerequisite, consent of the instructor. Basic principles of foreign policy from Colonial origins through the Spanish-American War.
- Hist. 464. American Diplomatic History: Post-1900.** 5 credits. Prerequisite, consent of instructor. From the Spanish-American War to the present.
- Hist. 465.1. The Habsburg Empire, 1806-1867.** 5 credits. A political, social, and economic history of the Habsburg Empire with emphasis on the special problems arising from its multi-national character.
- Hist. 465.2. The Dual Monarchy, 1867-1918.** 5 credits. Continuation of Hist. 465.1, stressing the centrifugal forces which would ultimately disintegrate the Monarchy.
- Hist. 467. Diplomatic History of Europe: 1815-1914.** 5 credits.
- Hist. 473. Russia to the Twentieth Century: 1862-1905.** 5 credits. The political, social, economic, and cultural development from the founding of the Russian state to the Russo-Japanese War.
- Hist. 474. Twentieth Century Russia.** 5 credits. The political, social, economic and cultural development from the Revolution of 1905 to the present.



- Hist. 475. **History of Modern France.** 5 credits. France and its problems from the end of the Napoleonic Era to the present.
- Hist. 477. **Modern Germany.** 5 credits. A political, diplomatic, economic, intellectual, and ideological study of Germany from the end of the Napoleonic Era to the present.
- Hist. 479. **Europe in the Twentieth Century.** 5 credits. Events and movements which led to two world wars; changes in governmental structure in the cycles of war and peace.
- Hist. 480. **The World Since 1945.** 5 credits.
- Hist. 481. **Understanding History.** 5 credits. Introduction to the nature of history and to the way historians reason.
- Hist. 485. **European Intellectual and Cul-**

- tural History: 1500-1815.** 5 credits. Main movements in European thought, expression, and belief in their political and social setting.
- Hist. 486. **European Intellectual and Cultural History Since 1815.** 5 credits. European thought and expression in relation to political, social, economic development of the nineteenth and twentieth centuries.
- Hist. 490. **Mexico and the Caribbean in the 20th Century.** 5 credits.
- Hist. 496, 497. **Individual Study.** 2 credits each course. Prerequisites, junior standing, twenty hours of history, and a minimum grade point average of 3.0.
- Hist. 501. **Historiography.** 5 credits.
- Hist. 505. **Research Seminar in History.** 5 credits.

## Home Economics

Associate Professors: Baker, Michaelsen, Tobin.

Assistant Professors: Bovos, Carlson, Day, Evers, Kadlec, McMahon, Miller, Moyle, Rothgarn, Trout, Ware, Wippel.

Lecturers: Kulik, Rogers.

The Department offers programs of study leading to a Bachelor of Arts or Masters in Education or a Bachelor of Arts Degree. Home Economics curricula are designed to provide a liberal education to enable students to meet the needs of family and community living. Programs may be planned to provide preparation for teaching careers in preschool, elementary, secondary, and adult education. The Department of Home Economics Education is approved by the State Board for Vocational Education for the preparation of teachers of homemaking who desire to teach in approved vocational home economics programs.

### (A/S) HOME ECONOMICS MAJOR

Major (45 to 60 credits)	<i>Credits</i>
H. Ec. 107, Introduction .....	1
Family Economics-Home Management .....	6
H. Ec. 270, Theory of Home Management .....	3
H. Ec. 381, Family Finance .....	3
Family Relations—Child Development .....	6
H. Ec. 290, Child Care .....	3
H. Ec. 394, Modern Problems of Family or 295, Courtship and Marriage .....	3
Food and Nutrition .....	8
H. Ec. 185, Food Preparation for the Family .....	5
H. Ec. 200, General Nutrition .....	3
Housing and Home Furnishings .....	7
H. Ec. 275, Housing and Society or 377, Family Housing .....	3
H. Ec. 365, Home Furnishings .....	4
Textiles and Clothing .....	7
H. Ec. 150, Clothing Construction .....	3
H. Ec. 155, Textiles .....	4
*Electives .....	10-25
	45-60

### (A/S) HOME ECONOMICS MINOR

Minor (15 to 30 credits)	<i>Credits</i>
Family Economics-Home Management .....	3
H. Ec. 270, Theory of Home Management .....	3
Family Relations-Child Development .....	6
H. Ec. 290, Child Care .....	3
H. Ec. 394, Modern Problems of Family or 295, Courtship and Marriage .....	3
Food and Nutrition .....	3 to 5
H. Ec. 185, Food Preparation for the Family or .....	5
H. Ec. 200, General Nutrition .....	3
Textiles and Clothing .....	3 to 4
H. Ec. 150, Clothing Construction or .....	3
H. Ec. 155, Textiles .....	4
Electives .....	0-12
	15 to 30

### (T/Ed) HOME ECONOMICS MAJOR (BROAD AREA)

Qualifies for teaching Junior or Senior high home economics in state approved vocational programs. For elementary school teaching, see page —.

Major (66 credits)	<i>Credits</i>
H. Ec. 107, Introduction to Home Economics .....	1

\*Select electives to bring total to at least 45 credits from any Home Economics courses for which the student has met the prerequisites.

Family Economics—Home Management . . .	11
H. Ec. 270, Theory of Home Management . . . . .	3
H. Ec. 381, Family Finance . . . . .	3
H. Ec. 470, Home Management Laboratory . . . . .	5
Family Relations—Child Development . . .	12
H. Ec. 290, Child Care . . . . .	3
H. Ec. 394, Modern Problems of the Family, or H. Ec. 295, Courtship and Marriage . . . . .	3
H. Ec. 490, Nursery School, or H. Ec. 491, Laboratory Experience with Infants . . . . .	3
H. Ec. 433, Methods and Curriculum in Family Life Education . . . . .	3
Food and Nutrition . . . . .	14-15
H. Ec. 185, Food Preparation for the Family . . . . .	5
H. Ec. 200, General Nutrition . . . . .	3
H. Ec. 245, General Nutrition Laboratory . . . . .	1
H. Ec. 385, Family Meal Planning and Service . . . . .	3
H. Ec. 445, Problems in Human Nutrition or . . . . .	2
H. Ec. 447, Nutrition and Society or H. Ec. 485, Experimental Foods I . . . . .	2
Home Economics Education . . . . .	6
H. Ec. 320, Methods in Home Economics . . . . .	3
H. Ec. 421, Methods in Adult Education in H. Ec. . . . .	2
H. Ec. 499, Seminar in Home Economics Education . . . . .	1
Housing and Home Furnishing . . . . .	10
H. Ec. 156, Creativity in the Home . . . . .	3
H. Ec. 275, Housing and Society or H. Ec. 377, Family Housing . . . . .	3
H. Ec. 365, Home Furnishings . . . . .	4
Textiles and Clothing . . . . .	12
H. Ec. 125, Clothing Selection . . . . .	2
H. Ec. 150, Clothing Construction . . . . .	3
H. Ec. 155, Textiles . . . . .	4
H. Ec. 250, Flat Pattern Design . . . . .	3

66

**(T/Ed) HOME ECONOMICS MAJOR**

Qualifies for teaching home economics in junior and/or senior high schools without state approved vocational programs. For elementary school teaching, see page 43.

Major (45 credits)	<i>Credits</i>
H. Ec. 107, Introduction to Home Economics . . . . .	1
Family Economics—Home Management . . .	6
H. Ec. 270, Theory of Home Management . . . . .	3
H. Ec. 381, Family Finance . . . . .	3
Family Relations—Child Development . . .	6
H. Ec. 290, Child Care . . . . .	3
H. Ec. 394, Modern Problems of the Family . . . . .	3
Food and Nutrition . . . . .	8
H. Ec. 185, Food Preparation for Family . . . . .	5
H. Ec. 200, General Nutrition . . . . .	3
Home Economics Education . . . . .	3
H. Ec. 320, Methods in Home Economics . . . . .	3
Housing and Home Furnishings . . . . .	7

H. Ec. 275, Housing and Society or H. Ec. 377, Housing for the Family . . . . .	3
H. Ec. 365, Home Furnishings . . . . .	4
Textiles and Clothing . . . . .	7
H. Ec. 150, Clothing and Construction . . . . .	3
H. Ec. 155, Textiles . . . . .	4
*Electives . . . . .	7
	<hr/> 45

\*Select electives to bring total to 45 credits from any Home Economics courses for which the student has met the prerequisites.

**(T/Ed) HOME ECONOMICS MINOR**

Minor (20 credits)	<i>Credits</i>
Family Economics—Home Management . . .	3
H. Ec. 270, Theory of Home Management . . . . .	3
Family Relations—Child Development . . .	3
H. Ec. 290, Child Care or H. Ec. 295, Courtship and Marriage or H. Ec. 394, Modern Problems of the Family . . . . .	3
Food and Nutrition . . . . .	8
H. Ec. 185, Food Preparation for the Family . . . . .	5
H. Ec. 200, General Nutrition . . . . .	3
Textiles and Clothing . . . . .	3-4
H. Ec. 150, Clothing Construction . . . . .	3
or H. Ec. 155, Textiles . . . . .	4
Electives . . . . .	2-3
	<hr/> 20

**HOME ECONOMICS COURSES**

- H. Ec. 107. Introduction to Home Economics.** 1 credit. Orientation. Founding and development of home economics as a field of knowledge. Requirements for the opportunities in educational and professional fields.
- H. Ec. 125. Clothing Selection.** 2 credits. Principles of clothing selection applicable to various figure types and for different economic levels. One hour lecture and two hours of laboratory per week.
- H. Ec. 150. Clothing Construction.** 3 credits. Fundamentals of clothing construction and fitting. Use and alteration of commercial patterns. Construction of garments using fabrics made of different fibers. Selection, operation, and care of sewing and pressing equipment. Six hours of laboratory per week.
- H. Ec. 155. Textiles.** 4 credits. Identification, uses and care of textile fabrics. Influence of fiber, finish, and construction on quality and cost. Identification tests. Two lectures and four hours of laboratory per week.
- H. Ec. 156. Creativity in the Home.** 3 credits. Prerequisite, Art 100 or 101, or permission of instructor. Development of creative thinking and expression through the process of planning the living environment.

- H. Ec. 185. Food Preparation for the Family.** 5 credits. Selection and preparation, principles involved. Nutritive value and cost. Two lectures and six hours of laboratory per week.
- H. Ec. 200. General Nutrition.** 3 credits. Fundamental principles and their application to human nutrition.
- H. Ec. 245. Nutrition Laboratory.** 1 credit. Two hours of laboratory per week. Required of all home economics majors.
- H. Ec. 250. Flat Pattern Design.** 3 credits. Prerequisites, H. Ec. 125 and 150. Principles of flat pattern designing; alterations and modifications of a commercial pattern. Advanced techniques in construction of a wool garment. Six hours of laboratory per week.
- H. Ec. 260. Weaving.** 2 credits. Prerequisite recommended, Art. 170. Color, design, interpretation of drafts in weaving. Pattern and texture weaving. Four hours of laboratory per week.
- H. Ec. 270. Theory of Home Management.** 3 credits. Use of family resources to achieve individual and family goals.
- H. Ec. 275. Housing and Society.** 3 credits. Prerequisite, Econ. 244 or Soc. 107 or Psy. 100. Public and mobile housing, housing of the elderly, urban renewal, and city planning.
- H. Ec. 290. Child Care.** 3 credits. Prerequisite, Psy. 100. Developmental needs of the infant and young child and how their needs can be met in the family. Three lectures and one hour of observation per week.
- H. Ec. 294. Family Development.** 3 credits. Patterns of family interaction and the developmental tasks of individuals and the group as the family moves through the successive stages of the family life cycle.
- H. Ec. 295. Courtship and Marriage.** 3 credits. Preparation for marriage. Contribution of dating, courtship, and engagement periods to successful marriage. Role of personality, financial, religious and sex adjustments, and emotional maturity. Reproduction, parenthood and family crises. (Home Ec. 295 and Psy. 295 are the same course. Students may not receive credit in both.)
- H. Ec. 320. Methods in Home Economics Education.** 3 credits. Prerequisites, Ed. 314 and 40 credits in Home Economics. Organization, materials, and procedures in teaching home economics on the secondary level.
- H. Ec. 330. Nutrition Activities in the Elementary School.** 1 credit. Prerequisite, H. Ec. 200. Methods and materials for teaching nutrition in the elementary grades.
- H. Ec. 349. Family Clothing.** 2 credits. Needs, interests, and problems of family members as related to clothing; psychological, sociological and economic aspects. One lecture and two laboratory hours per week.
- H. Ec. 365. Home Furnishings.** 4 credits. Prerequisite, Art 170 or H. Ec. 156; H. Ec. 150 or permission of instructor. Application of principles and elements of design to selection and arrangement. Individual projects. Two lectures and four laboratory hours per week.
- H. Ec. 376. Household Equipment.** 3 credits. Principles of selection, operation, care, and arrangement of small utensils, appliances, and major equipment. Two lectures and two hours of laboratory per week.
- H. Ec. 377. Family Housing.** 3 credits. Investigation of factors affecting housing selection and utilization based on characteristics of families and communities.
- H. Ec. 381. Family Finance.** 3 credits. Prerequisite, Econ. 244. Consumer aids and protection; records, budgets, and uses of money.
- H. Ec. 385. Family Meal Planning and Service.** 3 credits. Prerequisites, H. Ec. 185, 200. Preparation, service and cost. Selection, use, and care of table appointments. One lecture, four hours of laboratory per week.
- H. Ec. 386. Food Selection for the Family.** 3 credits. Prerequisite, H. Ec. 185. Comparative costs as related to quality, grade and family preferences. Care and storage of food in the home. Two lectures, two hours of laboratory per week.
- H. Ec. 391. Consumer Buying of Household Goods.** 3 credits. Prerequisites, H. Ec. 155, 185, or permission of instructor. Equipment, textiles, clothing, and food. Consumer protection, information, and aids; labeling. Consumer decisions, how consumption affects the market.
- H. Ec. 394. Modern Problems of the Family.** 3 credits. Prerequisite, H. Ec. 294. Problems that are the normal outcome from the growth in interaction of individuals in families as they meet the situations resulting from the developmental tasks as the family moves through its life cycle.
- H. Ec. 415. Principles of Draping.** 4 credits. Prerequisites, H. Ec. 150, 155, 156, and 250 or equivalent. Clothing designing by the draping method. Recognition of historical, national, and peasant influences. Application of construction techniques and completion of a garment. One hour lecture and six hours laboratory.

- H. Ec. 421. **Methods in Adult Education in Home Economics.** 2 credits. Prerequisite, H. Ec. 320. Participation in organizing and teaching adult groups.
- H. Ec. 422. **Evaluation in Home Economics Education.** 3 credits. Prerequisite, H. Ec. 320, and teaching experience or permission of department chairman.
- H. Ec. 430. **Homemaking for the Handicapped.** 3 credits. Prerequisites, H. Ec. 200, 270, 376, or permission of instructor. Personal and family problems of adjusting to homemaking activities for the handicapped, chronically ill or aged. Applying work simplifications to essential household activities. Adjusting low incomes to physical needs.
- H. Ec. 433. **Family Life Education.** 3 credits. Prerequisites, H. Ec. 294 and Ed. 314. The broad objectives, trends, methods and materials of instruction on various grade levels of teaching and methods of gaining community acceptance and cooperation in family life education programs. (H. Ec. 433 and Ed. 433 are the same course. Students may not receive credit in both.)
- H. Ec. 440. **Workshop.** 1-6 credits. Prerequisite, senior or graduate standing and 3-5 credits in the area for which the workshop is planned for home economics majors. Non-majors, permission from the chairman of department. The amount of credit to be earned and the specific topic is determined at the time the workshop is approved for scheduling. The topic is appended to the course number, as follows:  
 FE&HM—Family Economics and Home Management  
 F&N—Food and Nutrition  
 FR&CD—Family Relations and Child Development  
 HEE—Home Economics Education  
 H&HF—Housing and Home Furnishings  
 T&C—Textiles and Clothing
- H. Ec. 445. **Problems in Human Nutrition.** 2 credits. Prerequisite, H. Ec. 200. Historical development of nutrition. Nutritional status in U.S. food habits. Some current national and international problems in nutrition.
- H. Ec. 447. **Nutrition and Society.** 3 credits. Prerequisite, H. Ec. 200. Roles of food in shaping human destiny. Nutrients needed to sustain life and growth. Behavior and motivation related to level of nutrition. Society's responsibilities and organizations for meeting mankind's nutritional needs.
- H. Ec. 450. **Tailoring.** 3 credits. Prerequisites, H. Ec. 150 and 250. Custom tailoring techniques, selection of materials and construction of suit or coat. Six hours of laboratory per week.
- H. Ec. 455. **New Developments in Textiles.** 3 credits. Two lectures and two hours laboratory per week.
- H. Ec. 460. **Advanced Weaving.** 3 credits. Prerequisite, H. Ec. 260 or permission. Advanced loom techniques, creative work with material. Four laboratory hours per week.
- H. Ec. 470. **Home Management Laboratory.** 5 credits. Prerequisites, H. Ec. 200, 270, 376, 385, and 3rd quarter junior or senior standing. Students in a family size group reside in the home management house. Participation in activities of managing and living in a home. Studying, observing, and caring for an infant. Seminars and individual conferences with advisor. Advance application and reservation required.
- H. Ec. 485. **Experimental Foods I.** 2 credits. Prerequisite, H. Ec. 185 and at least 5 hours of chemistry. Physical and chemical basis of food preparation. Group experiments illustrating results of variation in ingredients and manipulative practices. Four hours of laboratory per week.
- H. Ec. 487. **Experimental Foods II.** 2 credits. Prerequisites, H. Ec. 185 and 485. Scientific principles of food experimentation. Designing, testing, and evaluating studies. Four hours of laboratory per week.
- H. Ec. 490. **Nursery School.** 3 credits. Prerequisites, H. Ec. 200 and 290 or Psychology 309. Developing insight into child behavior through participation in nursery school and observation of children in the kindergarten. Application and reservation required at the home economics office prior to enrollment in classes. Two lectures and four laboratory hours per week.
- H. Ec. 491. **Laboratory Experience With Infants.** 3 credits. Prerequisites, H. Ec. 200, Psy. 100, H. Ec. 290 or Psy. 309. Guided observation and experiences with infants. Application and reservation required in Home Economics office prior to enrollment in class. Two lectures and two laboratory hours per week.
- H. Ec. 492. **Child Care and Family Dynamics.** 3 credits. Prerequisite, H. Ec. 290 or Psy. 309. The influence of family patterns and interaction on infant and child development; current research.
- H. Ec. 496, 497, 498. **Individual Study.** 1-6 credits each. For students who desire to take more individual study than the regular courses provided or who wish to pursue

- work in areas not provided by regular courses.
- H. Ec. 499. Seminar in Home Economics Education.** 1 credit. Planned home experiences, problems of first year teacher. Home economics department budget. Vocational reports. Textbook evaluation.
- \*H. Ec. 520. Supervision in Vocational Home Economics Education.** 2 credits. Prerequisite, a completed major and undergraduate degree in Home Economic education and experience in teaching Home Economics.
- \*H. Ec. 521. Problems in Curriculum Development in Home Economics Education.** 2 credits. Prerequisite, a completed major and undergraduate degree in home economics education and experience in teaching home economics.
- \*H. Ec. 522. Survey of Literature in Home Economics Education.** 2 credits. Prerequisite, graduate student in home economics or permission of chairman of the department.
- \*H. Ec. 530. Demonstration Techniques.** 3 credits. Prerequisites, H. Ec. 155, 270, 376, 385, completion of undergraduate major in Home Economics, or permission of instructor. One lecture and four laboratories a week.
- \*H. Ec. 536. Advanced Home Furnishing.** 5 credits. Prerequisites, H. Ec. 156, 365, 377, completion of undergraduate major in Home Economics, or permission from instructor. Two hours lecture and six hours laboratory a week.
- \*H. Ec. 550. Recent Developments in Clothing Construction Techniques and Methods of Teaching.** 2 credits. Prerequisite, completed undergraduate major and experience in teaching home economics, desirable to have completed a Bishop workshop. Four laboratory hours per week.
- \*H. Ec. 551. Social Implications of Clothing.** 2 credits. Prerequisites, completed undergraduate major in Home Economics.
- \*H. Ec. 555. Original Design.** 5 credits. Prerequisites, H. Ec. 150, 155, 156, 250, and Art 170, completion of undergraduate major in Home Economics, or permission of instructor. Two hours of lecture and six hours of laboratory a week.
- \*H. Ec. 575. History of Housing and Furnishing.** 3 credits. Prerequisites, H. Ec. 275, 365, 377, completion of undergraduate major in Home Economics, or permission of instructor.
- \*H. Ec. 581. Advanced Family Finance.** 2 credits. Prerequisites, H. Ec. 270, 381.
- \*H. Ec. 587. Gourmet Cooking.** 3 credits. Prerequisites, H. Ec. 185, 200, 385 or 386, completion of undergraduate major in Home Economics, or permission of instructor. Two hour lecture and four hours laboratory a week.
- \*H. Ec. 590. Research in Family Relations.** 3 credits. Prerequisites, H. Ec. 294 and 394.
- \*H. Ec. 595. Problems of the Aging.** 2 credits. Prerequisites, H. Ec. 294 and 394.
- \*H. Ec. 596, 597, 598. Individual Study.** 1-6 credits each. For graduate students who desire to take more individual study than the regular courses provide or who wish to pursue work in areas not provided by regular courses.
- \*H. Ec. 599. Seminar in Home Economics Education.** 1-3 credits. Prerequisites, completed broad area major in Home Economics and teaching experience.

## Honors

(See Honors program, page 29.)

**Honors 101, 102, 200, 201, 202. General Honors Program Series.** 10 credits each quarter, to be taken consecutively over the winter and spring quarters of the freshman year and the fall, winter, and spring quarters of the sophomore year. Individual work under tutorial supervision in Humanities, Social Sciences, and Natural Sciences; participation in a student-led seminar. Satisfies the entire General Education Breadth requirement. Prerequisite, acceptance into the General Honors Program.

## Humanities

**Hum. 150. Introduction to the Film.** 2 credits. Aesthetic and technical aspects of experimental, documentary and theatrical films. Readings, film viewings, and extensive analysis. Special fee to cover cost of film rentals: \$5.00.

**Hum. 499. Series.** 4 credits per quarter. An experimental program in multi-disciplinary studies. A variety of seminar topics is offered each year. Enrollment by invitation of the faculty. Make application and receive information in Political Science Department.

### (T/Ed) LANGUAGE ARTS MAJOR (Elementary Teachers Only)

Open only to elementary school teachers. May not be used for 30-credit area in a Three Area Program (30-20-20), but may be used for 30 credits from outside majors required by Special Education and

\*Prerequisite for enrollment in 500 courses is the completion of an undergraduate major in Home Economics or the permission of the instructor.

Early Childhood Education majors. For secondary teaching, expand and convert to one of the other major patterns.

Persons completing this major will be required to demonstrate by written examination under the supervision of the Department of English, their competence in English grammar and composition. These examinations should be taken no earlier than two quarters preceding student teaching.

Major (45 credits)	<i>Credits</i>
Eng. 320, Children's Literature.....	3
Eng. 105, Introduction to Fiction.....	3
Eng. 106, Introduction to Poetry.....	3
Eng. 141, Classical Mythology	
or	
Eng. 150, The Bible as Literature.....	3
Eng. 142, Short Story Writing	
or	
Eng. 143, Verse Writing	
or	
Eng. 344, Advanced Composition.....	3
General Surveys:	
At least two quarters of one sequence. . .	6
Eng. 245, 246, 247, Sur. of English Lit.	
Eng. 274, 275, 276, Sur. of Amer. Lit.	
Eng. 281, 282, 283, Sur. of World Lit.	
Language Courses: At least two courses. . .	6
Eng. 240, Introduction to Linguistics	
Eng. 339, The English Language	
Eng. 442, History of the English Language	
Eng. 443, Rhetorical Theory and Practice	
Eng. 445, Approaches to English Grammar	

Sp. 243, Interpretive Reading	
or	
Sp. 446, Oral Interpretation of Children's Literature .....	4-5
Sp. 312, Children's Drama .....	4
Electives:	
Remaining electives from upper division	
English courses .....	9-10
	45

- Industrial Arts,**
- Industrial Education**  
(See Technology and Industrial Education)
- Instructional Material**  
(See Education)
- Journalism**  
(See English)
- Library Science**  
(See Education)

## Mathematics

Professor: Dean.

Associate Professors: Comstock, Eberly, Lister, Martin, Robinson.

Assistant Professors: Applebee, Cutlip, Gamon, Pahi.

Lecturer: Massagli.

Mathematics is the subject "which draws necessary conclusions" (Pierce, 1870). The typical mathematician (pure or applied) makes definitions and postulates and then traces out their logical consequences. This "mathematical method" can be applied to any object of thought, including thought itself.

A broad program is offered in the department to develop this method in directions which will prepare students in the various branches of science and technology as well as along paths which will produce mathematicians and mathematics teachers.

Outstanding students are encouraged to participate in a departmental honors program leading to a degree with honors. A computer facility is available for research and instructional use. An M.S. in mathematics and an M.Ed. with specialization in mathematics is offered.

### (A/S) MATHEMATICS MAJOR

Major (60 credits)	<i>Credits</i>	
Math. 171.1, 171.2, Introductory Calculus	8	Math. 461.1, 461.2, 461.3, Abstract Algebra .....
Math. 271.1, 271.2, 271.3, Calculus. . . .	12	Math. 471.1, 471.2, 471.3, Advanced Analysis .....
Math. 261.1, 261.2, Foundations of Mathematics .....	8	Electives in upper division Mathematics by advisement .....
Math. 261.3, Linear Algebra.....	4	10
		60

**(A/S) MATHEMATICS MINOR**

Minor (20 to 30 credits)	<i>Credits</i>
Math. 171.1, 171.2, Introductory Calculus.	8
Math. 261.1, 261.2, Foundations of Mathematics	8
Math. 261.3, Linear Algebra	4
Electives in Mathematics at 200 level or above by advisement	0-10
	20-30

**(T/Ed) MATHEMATICS MAJOR**

Qualifies for teaching of secondary mathematics. For elementary teaching, see page 136.

Major (45 credits)	<i>Credits</i>
Math. 171.1, 171.2, Introductory Calculus	8
Math. 261.1, 261.2, Foundations of Mathematics	8
Math. 261.3, Linear Algebra	4
Math. 324, Methods and Materials in Mathematics—Secondary	3
Math. 455.1, Principles of Geometry	3
Math. 461.1, Abstract Algebra	3
Electives from Math. numbered 200 or above by advisement	16
	45

**(T/Ed) MATHEMATICS MINOR**

<sup>1</sup> Minor (20 credits)	<i>Credits</i>
Math. 171.1, 171.2, Introductory Calculus	8
<sup>2</sup> Math. 261.1, 261.2, Foundations of Mathematics (or Math. 271.1, 271.2, Calculus)	8
<sup>2</sup> Math. 261.3, Linear Algebra (or Math. 271.3, Calculus)	4
	20

<sup>1</sup>For junior high endorsement, include Math. 324, for minimum level high school endorsement, include Math. 455.1, 461.1.

<sup>2</sup>Physics Majors may complete the Mathematics Minor by completing the alternate courses. However, note the Mathematics required for secondary endorsement.

**MATHEMATICS COURSES**

- Math. 145. Fundamentals of Algebra.** No credit. In terms of the student's load, equate to a five hours course.) For students with a deficiency in high school algebra.
- Math. 147. Geometry.** No credit. (In terms of the student's load equate to a five hour course.) High school geometry.
- Math. 150. Elementary Computer Programming.** 3 credits. Prerequisite, Math. 145 or equivalent. Programming and coding of problems for automatic digital computers including the IBM 1620. Laboratory experience on the computer. Two lectures and two hours of laboratory a week.
- Math. 163. College Algebra.** 5 credits. Prerequisite, Math. 145 or equivalent. Number systems, functions, equations, inequalities, induction, matrices and determinants. Three lectures and two recitation sessions a week.
- Math. 164.1, 164.2. Introduction to Mathematics.** 4 credits each course. Concepts of

mathematics; introduction for the elementary school teacher.

- Math. 164.3. Introduction to Mathematics.** 4 credits. Concepts of mathematics emphasizing appreciation and respect for logical reasoning and precise definitions; a general course for non-mathematicians.
- Math. 165. Trigonometry.** 3 credits. Prerequisite, either one year of high school algebra or Math. 145 and either one year of high school geometry or Math. 147, or permission. Functions of acute angles, functions of any angle, identities, trigonometric equations.
- Math. 171.1, 171.2. Introductory Calculus.** 4 credits each course. Prerequisite, trigonometry and 1½ years of high school algebra or Math. 163 and/or Math. 165 or permission. Techniques and applications of differentiation and integration of algebraic and trigonometric functions and related analytical geometry.
- Math. 199.1, 199.2, 199.3. Freshmen Honors.** 1 credit each course. Prerequisite, permission of instructor. Additional mathematical topics for honors students.
- Math. 261.1, 261.2. Foundations of Mathematics.** 4 credits each course. Prerequisites, Math. 171.2 and permission. Fundamental concepts and principles of mathematics, including set theory, logic, relations and functions.
- Math. 261.3. Linear Algebra.** 4 credits. Prerequisites, Math. 171.2 or permission. Matrices, determinants, vector spaces, linear transformations, and linear equations.
- Math. 271.1, 271.2, 271.3. Calculus.** 4 credits each course. Prerequisite, Math. 171.2 or permission. Elements of differential and integral calculus.
- Math. 299.1, 299.2, 299.3. Sophomore Honors.** 1 credit each course. Prerequisite, permission of instructor. Additional mathematical topics for honors students.
- Math. 311. Statistical Techniques.** 3 credits. Prerequisite, Math. 163 or permission. Basic techniques of statistics; statistical inference, including tests of hypotheses, "t" F, and Chi-square distributions.
- Math. 324. Methods and Materials in Mathematics—Secondary.** 3 credits.
- Math. 356. Introduction to Topology.** 3 credits. Prerequisite, Math. 261.2. Elementary topology, examination of metric spaces and continuity.
- Math. 376.1, 376.2, 376.3. Applied Differential Equations.** 3 credits each course. Pre-

## 110 Mathematics Courses

- requisite, Math. 271.3 or permission. Ordinary and partial differential equations integrated with vector calculus with applications to engineering and physical science.
- Math. 380. Principles of Digital Computers and Programming.** 3 credits. Prerequisites, Math. 150, 271.2. Digital computers, scientific programming and operation. Laboratory experience. Two lectures and two hours of laboratory a week.
- Math. 399.1, 399.2, 399.3. Junior Honors.** 1 credit each course. Prerequisite, permission of instructor. Additional mathematical topics for honors students.
- Math. 411.1, 411.2, 411.3. Theory of Statistics.** 3 credits each course. Prerequisite, Math. 271.3 or permission. Mathematical development of probability theory, various discrete and continuous distribution generating functions, moments, regression, variance, correlation, and statistical inference.
- Math. 422.1, 422.2. Modern Programs in Mathematics.** 3 credits each course. Prerequisite, junior standing or permission. New programs in secondary school mathematics. (Offered summers only.)
- Math. 430. Introduction to Theory of Numbers.** 3 credits. Prerequisite, two years of college mathematics or permission. Euclidean Logarithm, fundamental theorem of arithmetic, congruences, diophantine equations, primitive roots and indices and quadratic reciprocity. Recommended for mathematics teachers and as an elective for arts and science.
- Math. 455.1, 455.2, 455.3. Principles of Geometry.** 3 credits each course. Prerequisite, Math. 261.2. Geometry as a logical system; postulational system; projective and non-Euclidean geometries.
- Math. 461.1, 461.2, 461.3. Abstract Algebra.** 3 credits each course. Prerequisite, Math. 261.2. Algebraic structures such as groupoids, groups, rings and fields.
- Math. 468.1. Logic.** 3 credits. Prerequisites, Math. 261.1 or Phil. 360 or permission. Propositional calculus and quantification theory. (Same as Phil. 468.1. Students may not receive credit for both.)
- Math. 468.2. Formalized Theories.** 3 credits. Prerequisites Math. 261.1, 261.2, 468.1 or Phil. 360, Math. 261.2, Phil. 468.1 or permission. Formalized arithmetic as a first order theory. (Same as Phil. 468.2. Students may not receive credit for both.)
- Math. 468.3. Computability.** 3 credits. Prerequisites, Math. 261.1, 261.2 or Phil. 360, Math. 261.2 or permission. Some equivalent concepts of computability and introduction to recursive functions. (Same as Phil. 468.3. Students may not receive credit for both.)
- Math. 471.1, 471.2, 471.3. Advanced Analysis.** 3 credits each course. Prerequisites, Math. 261.2, 271.3. Further development of properties of the calculus.
- Math. 481.1, 481.2, 481.3. Numerical Analysis.** 3 credits each course. Prerequisites, Math. 271.3, 380 for Math. 481.1, Math. 376.2 for Math. 481.3. Finite differences, difference equations, interpolation, numerical differentiation and integration, algebraic computation, numerical solution of differential equations.
- Math. 495.1, 495.2, 495.3. Problems Seminar.** 1 to 3 credits each course. Prerequisite, permission.
- Math. 496, 497. Individual Study.** 2 to 4 credits, each course. Open to advanced students with consent of the staff members in charge.
- Math. 498.1, 498.2, 498.3. Seminar.** 1 to 3 credits each course. Prerequisite, permission. Selected topics in mathematics.
- Math. 499.1. Senior Honors.** 1 credit. Prerequisite, permission of department. Survey of literature and choice of thesis topic.
- Math. 499.2. Senior Honors.** 1 credit. Prerequisite, Math. 499.1 and permission of instructor. Partial completion of thesis.
- Math. 499.3. Senior Honors.** 2 credits. Prerequisite, Math. 499.2. Completion of thesis and examination on undergraduate mathematics.
- Math. 551.1, 551.2, 551.3. Topology.** 3 credits each course. Prerequisite, Math. 461.3 or equivalent.
- Math. 561.1, 561.2, 561.3. Modern Algebra.** 3 credits each course. Prerequisite, Math. 461.3 or equivalent and permission.
- Math. 571.1, 571.2, 571.3. Theory of Analytic Functions.** 3 credits each course. Prerequisite, Math. 471.3.
- Math. 576.1, 576.2, 576.3. Theory of Real Variables.** 3 credits each course. Prerequisite, Math. 471.3 or equivalent and permission.
- Math. 598.1, 598.2, 598.3. Graduate Seminar.** 1 to 3 credits each course. Prerequisite, permission.
- Math. 599.1, 599.2, 599.3. Problem Seminar.** 1 to 3 credits each course. Prerequisite, permission.
- Math. 600. Thesis.** 1 to 6 credits. Prerequisite, graduate standing.



# Math-Science Major-Elementary

(See Science-Math. Major, page 136.)

## Music

Professors: Bird, Christianson, Creston, Hertz, Ross, Smith.

Associate Professors: Eickhoff, Haruda.

Assistant Professors: Brummett, Davis, DeMerchant, Doersch, Dupin, Fuller, Jensen, Karol, Leavitt, Panerio, Rowley, Wheeler.

The Department offers undergraduate curricula leading to the Bachelor of Arts and Bachelor of Education degrees and graduate work leading to the Master of Arts and Master of Education degrees.

Training in the development of aural and analytical powers, orientation in the historical aspects of music, and various performance skills are offered through the Arts and Education degrees.

The preparation of professional musicians for careers as performers, teachers, and scholars is a primary concern, although the curriculum serves as part of the program of liberal education for all students.

### (A/S) MUSIC MAJOR

<sup>1</sup> Major (60 credits)	<i>Credits</i>
<sup>2</sup> Mus. 144, Theory I .....	3
Mus. 145, Theory II .....	3
Mus. 146, Theory III .....	3
Mus. 244, Theory IV .....	3
Mus. 245, Theory V .....	3
Mus. 246, Theory VI .....	3
Mus. 270, Music History I .....	3
Mus. 272, Music History II .....	3
Mus. 274, Music History III .....	3
Mus. 340, Form Analysis .....	3
Mus. 341, Conducting I .....	3
Mus. 343, Counterpoint I .....	3
Mus. 443, Counterpoint II .....	3
<sup>3</sup> Mus. 495, Senior Project .....	2
<sup>4</sup> Electives in Music, Guided upper division electives with a minimum of 6 hours in Music History and/or Literature .....	19
	60

<sup>1</sup>All candidates for the degree must be able to demonstrate, by audition, adequate piano ability (ability to play simple accompaniments at sight). It is recommended that students who are planning to enter a graduate school should complete two years of either French or German.

<sup>2</sup>Because an understanding of the piano keyboard is most essential in the study of theory, a proficiency piano examination will be given to all entering music majors. Students not meeting this requirement will enroll in Music 154A fall quarter of freshman year. Students with proficiency in piano will enroll in Music 144 fall quarter of freshman year.

<sup>3</sup>Students are required as a senior project, to present a recital, a composition, or a research project.

<sup>4</sup>Students will elect music courses in their major area of interest:

- a. Performance—at least 12 credits in his performance medium.
- b. History and Literature.
- c. Theory and Composition "or"
- d. General—courses selected from a, b, c, above with advisement.

### (A/S) MUSIC MINOR

Minor (20 to 30 credits)	<i>Credits</i>
Mus. 144, Theory I .....	3
Mus. 145, Theory II .....	3

Mus. 146, Theory III .....	3
Mus. 270, Music History I .....	3
Mus. 272, Music History II .....	3
Mus. 341, Conducting I .....	3
Electives in Music .....	2-12
	20-30

### (T/Ed) MUSIC MAJOR (BROAD AREA)

Qualifies for teaching elementary, junior high and senior high music. For teaching in regular or self-contained elementary school classrooms, see page —.

Major (64 credits)	<i>Credits</i>
<sup>1</sup> Mus. 144, Theory I .....	3
Mus. 145, Theory II .....	3
Mus. 146, Theory III .....	3
<sup>2</sup> Mus. 154A, 155A, 156A, Class Instruction, Piano .....	1
Mus. 154B, 155B, or 156B, Class Instruction, Voice .....	2
Mus. 154C, 155C, 156C, Class Instruction, Strings .....	2
Mus. 154D, 155D, or 156D, Class Instruction, Woodwinds .....	1
Mus. 154E, 155E, or 156E, Class Instruction, Brass .....	1
Mus. 154G, 155G, or 156G, Class Instruction, Percussion .....	1
Mus. 244, Theory IV .....	3
Mus. 245, Theory V .....	3
Mus. 246, Theory VI .....	3
Mus. 270, Music History I .....	3
Mus. 272, Music History II .....	3
Mus. 274, Music History III .....	3
Mus. 321, Music Education for the Elementary School .....	3
Mus. 323, Choral Music Education .....	3
Mus. 325, Instrumental Music Education .....	3
Mus. 340, Form Analysis .....	3
Mus. 341, Conducting I .....	3
Mus. 342, Conducting II .....	3
Mus. 343, Counterpoint .....	3

Mus. 424, General Music in the Junior High School .....	2
Applied Music—Major Field .....	6
	64

<sup>1</sup>Because public school music teachers need to know the piano keyboard, a proficiency piano examination will be given to all entering music majors. Students not meeting this requirement will enroll in Music 154A fall quarter and continue in class instruction in piano until this requirement has been met, and enroll in Music 144 either in winter quarter of freshman year or fall quarter of sophomore year. Students with proficiency in piano will enroll in Music 144 fall quarter of freshman year.

<sup>2</sup>Private Instruction may be substituted for Class Instruction.

**(T/Ed) MUSIC MAJOR  
(ELEMENTARY)**

Qualifies for teaching music at elementary school level. For teaching in regular or self-contained elementary school classrooms this should be accompanied by a minor from "recommended" group in English, social science, or science.

Major (45 credits)	<i>Credits</i>
<sup>1</sup> Mus. 144, Theory I .....	3
Mus. 145, Theory II .....	3
Mus. 146, Theory III .....	3
<sup>2</sup> Mus. 154B, or 156B, Class Instruction, Voice .....	2
Mus. 164A, 165A, 166A, Private Instruction, Piano .....	3
Mus. 244, Theory IV .....	3
Mus. 245, Theory V .....	3
Mus. 246, Theory VI .....	3
Mus. 270, Music History I .....	3
Mus. 272, Music History II .....	3
Mus. 274, Music History III .....	3
Mus. 321, Music Education for the Elementary School .....	3
Mus. 327, Song Literature for Elementary Grades .....	2
Mus. 340, Form Analysis .....	3
Mus. 341, Conducting I .....	3
Mus. 424, General Music in the Junior High School .....	2
	45

<sup>1</sup>Because the public school music teacher needs to know the piano keyboard a proficiency piano examination will be given to all entering music majors. Students not meeting this requirement will enroll in Music 154A fall quarter and continue in class instruction in piano until this requirement has been met, and enroll in Music 144 either in winter quarter of freshman year or fall quarter of sophomore year. Students with proficiency in piano will enroll in Music 144 fall quarter of freshman year.

<sup>2</sup>Private Instruction may be substituted for Class Instruction.

**(T/Ed) MUSIC MINOR**

Minor (20 credits)	<i>Credits</i>
Mus. 144, Theory I .....	3
Mus. 145, Theory II .....	3
Music 146, Theory III .....	3
Mus. 154A, Class Instruction, Piano .....	1
Mus. 154B, Class Instruction, Voice .....	1
Mus. 270, 272, or 274, Music History I, II, III .....	3
Mus. 321, Music Education in the Elementary School .....	3
Mus. 341, Conducting I .....	3
	20

**MUSIC COURSES**

A music major must be a member of one of the performing organizations throughout his four undergraduate years. A maximum of 12 quarter credits in music and physical education activities combined may be applied on the 192 credits for the B.A. degree. Course numbers for the performing organizations are preceded by the symbol ①.

**Mus. 100.1. Introduction to Music—Symphonic.** 3 credits. Forms and styles from the 17th century to the present.

**Mus. 100.2. Introduction to Music—Vocal.** 3 credits. Basic musical concepts as related to vocal compositions, including operas.

**Mus. 100.3. Introduction to Music—Contemporary.** 3 credits. All phases of twentieth century music.

**Mus. 100.4. Introduction to Music—Fundamentals.** 3 credits. Rhythmic, melodic, harmonic and other structural aspects of music; illustrations from various kinds of epochs.

**Mus. 144. Theory I.** 3 credits. Prerequisite, basic knowledge of piano which will be determined by a special examination before registration. Rudiment of music: notation scales, intervals, rhythmic and melodic dictation, triads and their inversions.

**Mus. 145. Theory II.** 3 credits. Prerequisite, Mus. 144. Triads and the dominant seventh chord with their harmonic functions through writing, analysis, and correlated keyboard and ear training drills; harmonization of melodies, figured bass and original exercises.

**Mus. 146. Theory III.** 3 credits. Prerequisite, Mus. 145. Tonic, dominant, and subdominant chord functions and nonharmonic tones through writing, analysis, and correlated keyboard and ear training drills; harmonization of melodies, figured bass and original exercises.

**Mus. 147, 148, 149. Chamber Groups.** 1 credit each. Literature and performance to develop technique, independence and sensitivity. For brass, woodwind, strings, and voice, under direction of staff specialists in these areas. Two hours laboratory per week.

**Mus. 154, 155, 156. Vocal and Instrumental Class Instruction.** 1 credit each. For freshmen and sophomores. Beginning: voice, instruments of the orchestra, or piano. In piano and voice, the number indicates the level of proficiency. Includes class pedagogy. The letter following the number indicates

the type of work for which credit is given. Two hours laboratory per week.

- |            |               |
|------------|---------------|
| A. Piano   | D. Woodwind   |
| B. Voice   | E. Brass      |
| C. Strings | G. Percussion |

**Mus. 164, 165, 166. Applied Music.** 1 or 2 credits each. Private instruction. The letter following the number indicates the type of work for which credit is given. Two hours laboratory per week.

- |             |               |
|-------------|---------------|
| A. Piano    | E. Brass      |
| B. Voice    | F. Organ      |
| C. Strings  | G. Percussion |
| D. Woodwind |               |

①**Mus. 167, 168, 169. Choir.** 1 credit each. Open to all students interested in singing. Selected voices chosen from entire choir membership by audition for concert choir. Five hours rehearsal per week plus all scheduled rehearsals and performances.

①**Mus. 167M, 168M, 169M. Men's Glee Club.** 1 credit each. Open to all men interested in singing. Three hours rehearsal per week plus all scheduled rehearsals and performances.

①**Mus. 167W, 168W, 169W. Women's Glee Club.** 1 credit each. Open to all women interested in singing. Three hours rehearsal per week plus all scheduled rehearsals and performances.

①**Mus. 177, 178, 179. Orchestra.** 1 credit each. Open to all students proficient on orchestral instruments by permission of director. Four hours rehearsal per week plus all scheduled rehearsals and performances.

①**Mus. 187, 188, 189. Band.** 1 credit each. Open to all students. Five hours rehearsal per week plus all scheduled rehearsals and performances.

**Mus. 244. Theory IV.** 3 credits. Prerequisite, Mus. 146. Secondary triads and seventh chords, simple modulation through writings, analysis, and correlated keyboard and ear training drills; harmonization of melodies, figured bass and original exercises.

**Mus. 245. Theory V.** 3 credits. Prerequisite, Mus. 244. Modulation to remote keys, use of diminished seventh chord, and use of chromatic chords through writing, analysis, and correlated keyboard and ear training drills; harmonization of melodies, figured bass and original exercises.

**Mus. 246. Theory VI.** 3 credits. Prerequisite, Mus. 245. Continuation of chromatic chords, modulation through chromatic chords; some contemporary practices through writing, analysis, and correlated keyboard and ear training

drills; harmonization of melodies, figured bass and original exercises.

**Mus. 247, 248, 249. Chamber Groups.** 1 credit each. For sophomores. See Mus. 147, 148, 149 for description.

**Mus. 261, 262, 263. Opera Performance.** 1 credit each. For advanced vocal students, study leading to performance. Two hours laboratory per week.

**Mus. 264, 265, 266. Applied Music.** 1 or 2 credits each. For sophomores. See Mus. 164, 165, 166 for description.

①**Mus. 267, 268, 269. Choir.** 1 credit each. For sophomores. See Mus. 167, 168, 169 for description.

**Mus. 267M, 268M, 269M. Men's Glee Club.** 1 credit each. For sophomores. See Mus. 167M, 168M, 169M for description.

**Mus. 267W, 268W, 269W. Women's Glee Club.** 1 credit each. For sophomores. See Music 167W, 168W, 169W for description.

**Mus. 270. Music History I.** 3 credits. Prerequisite, Mus. 164. Forms, styles, and composers to 1600.

**Mus. 272. Music History II.** 3 credits. Prerequisite, Mus. 146. Forms, styles, and composers from 1600 to 1825.

**Mus. 274. Music History III.** 3 credits. Prerequisite, Mus. 146. Forms, styles and composers from 1825 to the present.

**Mus. 277, 278, 279. Orchestra.** 1 credit each. For sophomores. See Mus. 177, 178, 179 for description.

**Mus. 287, 288, 289. Band.** 1 credit each. See Mus. 187, 188, 189 for description.

**Mus. 321. Music Education for the Elementary School.** 3 credits. Prerequisite, Mus. 146, and suitable skill in piano and voice. Materials and methods, evaluation of basic texts, observation in the Hebel Elementary School.

**Mus. 323. Choral Music Education.** 3 credits. Prerequisite, suitable conducting and performance skill in piano and voice. Philosophy and psychology of music education through methods and materials, observation of teachers in the rehearsal, individual research.

**Mus. 324. Elementary Piano for the Classroom Teacher.** 1 credit. From simple melodies to chording.

**Mus. 325. Instrumental Music Education.** 3 credits. Prerequisite, suitable conducting and performance skill in piano or instrument. Philosophy and psychology of music education through methods and materials; obser-

- vation of teachers in the rehearsal, individual research.
- Mus. 326. Music in the Classroom.** 3 credits. For the general classroom teacher. (Not for music majors or minors.) Techniques used in helping children to develop musically through singing, rhythmic activities, creative activities, listening, and playing instruments.
- Mus. 327. Song Literature for Elementary Grades.** 2 credits. Repertoire of best songs for children, experience in their presentation.
- Mus. 328. Choral for the Instrumentalist.** 2 credits. A practical presentation of the choral techniques, aids, and methods for the non-choral music major. (Summer quarter 1968, only.)
- Mus. 340. Form Analysis.** 3 credits. Prerequisite, Music 246. From the phrase to the sonata.
- Mus. 341. Conducting I.** 3 credits. Prerequisite, Mus. 146. Open to music majors and minors only. Fundamental principles of baton technique, practical experience in conducting, choral literature.
- Mus. 342. Conducting II.** 3 credits. Prerequisite, Mus. 341. A continuation of Mus. 341, conducting literature of junior-senior high school level for band and orchestra.
- Mus. 343. Counterpoint I.** 3 credits. Prerequisite, Mus. 246. Independent melodic line, harmonic background, motive structure and two-part counterpoint as practiced by the composers of the 18th and 19th centuries. Written exercises and analysis.
- Mus. 347, 348, 349. Chamber Groups.** 1 credit. For juniors. See Mus. 147, 148, 149 for description.
- Mus. 350. Ear Training and Sight-Singing.** 2 credits. Prerequisite, Mus. 146. Development of tone feeling through both harmonic and melodic dictation. Recognition and analysis of modulation by both ear and sight. May be taken with Mus. 244, 245, 246.
- Mus. 354, 355, 356. Vocal and Instrumental Class Instruction.** 1 credit each. For juniors and seniors. See Mus. 154, 155, 156 for description.
- Mus. 364, 365, 366. Applied Music.** 1 or 2 credits each. For juniors. See Music 164, 165, 166 for description.
- Mus. 367, 368, 369. Choir.** 1 credit each. For juniors. See Mus. 167, 168, 169 for description.
- Mus. 367M, 368M, 369M. Men's Glee Club.** 1 credit each. For juniors. See Mus. 167M, 168M, 169M for description.
- Mus. 367W, 368W, 369W. Women's Glee Club.** 1 credit each. For juniors. See Mus. 167W, 168W, 169W for description.
- Mus. 377, 378, 379. Orchestra.** 1 credit each. For juniors. See Mus. 177, 178, 179 for description.
- Mus. 387, 388, 389. Band.** 1 credit each. For juniors. See Mus. 187, 188, 189 for description.
- Mus. 418, 419, 420. Piano Pedagogy.** 1 credit each. Fundamental piano techniques, teaching materials and methods. Student teaching experience with individual children. Two hours laboratory per week.
- Mus. 421. Observation of Music Teaching.** 1 credit. Open to all interested students.
- Mus. 423. Rhythms for the Elementary School.** 3 credits. Prerequisite, Mus. 321. Experience in expressing rhythm and form of music in bodily movement and upon rhythmic instruments. Analysis of rhythmic approach used in basic music texts and on recordings. Outside reading on principles and methods of rhythmic activities for children including Dalcroze.
- Mus. 424. General Music in the Junior High School.** 2 credits. Prerequisite, Mus. 321 and 323, or permission of instructor. New materials and methods.
- Mus. 425, 426, 427. Methods of Teaching Individual Lessons.** 1 credit each. Prerequisite, permission of instructor. Fundamental pedagogy. Two laboratory hours per week.
- |            |               |
|------------|---------------|
| A. Piano   | D. Woodwind   |
| B. Voice   | E. Brass      |
| C. Strings | G. Percussion |
- Mus. 430. Diction in Singing Foreign Languages.** 3 credits. Prerequisite, permission of instructor. Italian, French, and German.
- Mus. 440. Workshop—; or—Clinic.** 1 to 6 credits.
- Mus. 441. Keyboard and Harmony and Improvisation.** 3 credits. Keyboard experience; formal and free harmonization of melodies, pianistic style and four-part vocal style; 7ths, augmented 11ths and color chords.
- Mus. 443. Counterpoint II.** 3 credits. Prerequisite, Mus. 343. (Continuation of Music 343). Three and four parts, imitation and sequence. Written exercises and analysis.
- Mus. 444. Canon and Fugue.** 3 credits. Prerequisite, Mus. 443. Invertible counterpoint, canonic devices, and fugal procedures. Written exercises and analysis.
- Mus. 446. The Madrigal Choir.** 3 credits. Technical elements, problems of style, cor-

- rect singing of the 16th and 17th century sacred and secular choral music, the madrigal.
- Mus. 447, 448, 449. Chamber Groups.** 1 credit each. For seniors. See Mus. 147, 148, 149 for description.
- Mus. 450. Literature of Bach.** 3 credits. Prerequisites, Mus. 270, 272, 274, 340, and 343. Analysis and performance.
- Mus. 452. Literature of Beethoven.** 3 credits. Prerequisites, Mus. 270, 272, 274, 340, and 343. Analysis and performance.
- Mus. 458. Survey of Solo Vocal Literature.** 3 credits. Prerequisite, permission of instructor. All periods, performance or listening. Background, stylistic traits and performance concepts of the Art Song.
- Mus. 464, 465, 466. Applied Music.** 1 or 2 credits each. For seniors. See Mus. 164, 165, 166 for description.
- Mus. 467, 468, 469. Choir.** 1 credit each. For seniors. See Mus. 167, 168, 169 for description.
- Mus. 467M, 468M, 469M. Men's Glee Club.** 1 credit each. For seniors. See Mus. 167M, 168M, 169M, for description.
- Mus. 471. History of Orchestral Music.** 3 credits. Prerequisites, Mus. 270, 272, 274. Forms and styles from the 17th to 20th centuries.
- Mus. 472. Orchestration I.** 3 credits. Prerequisites, Mus. 246, 340, and 343. Arranging for band and orchestra; range, tonal color, ensembles of various combinations.
- Mus. 474. Modern Literature Analysis.** 3 credits. Prerequisites, Mus. 270, 272, 274, 340, and 343.
- Mus. 475. History of Chamber Music.** 3 credits. Prerequisites, Mus. 270, 272, 274. Forms and styles from the late 16th century to the present.
- Mus. 476. History of Choral Music.** 3 credits. Prerequisites, Mus. 270, 272, 274. Forms and styles from medieval to modern.
- Mus. 477, 478, 479. Orchestra.** 1 credit each. For seniors. See Mus. 177, 178, 179 for description.
- Mus. 480. Reed Making for Double Reed Instruments.** 1 credit.
- Mus. 481. Instrument Repair.** 1 credit. Reed, woodwind, string and percussion, minor repairs.
- Mus. 482. Instrumental Administration Techniques.** 3 credits. For instrumental directors of all levels in the public schools. New materials, tone production, intonation, interpretation, conducting techniques, group organization. Special sessions on the marching band.
- Mus. 483. Composition I.** 3 credits. Prerequisites, Mus. 246, 340, and 343. Original composition in representative styles and forms for various instrumental and vocal combinations.
- Mus. 484. Band Arranging I.** 3 credits. Prerequisites, Mus. 246, 340, 343. For public school band directors; full band orchestration, small bands, including marching groups.
- Mus. 485. The Marching Band.** 3 credits. Drilling and preparing suitable music, formations for all sizes.
- Mus. 486. Stage Band Arranging.** 3 credits. Prerequisite, Mus. 343. General Principles; full stage band, various sections and smaller instrumental groups.
- Mus. 487, 488, 489. Band.** 1 credit each. For seniors. See Mus. 187, 188, 189 for description.
- Mus. 490. Harmonic Analysis.** 3 credits. Prerequisites, Mus. 246, 340, 343. Survey of all harmonic forms, analysis of harmonic content.
- Mus. 491. Choral Interpretation and Techniques.** 3 credits. For choral directors of all levels in the public schools and churches. New materials, voice production, intonation, interpretation, conducting techniques, diction.
- Mus. 492. Choral Composition and Arranging I.** 3 credits. Prerequisites, Mus. 246, 340, 343. Practical part writing for the church and public school choral director; structure, texture, and styles; class performance.
- Mus. 494. Elements of Music.** 3 credits. Prerequisite, Mus. 246. Rhythm, melody, harmony, form and related aspects of music; their use and development from primitive to modern times.
- Mus. 495. Senior Project.** 2 credits. Students are required, as a senior project, to present a recital, composition, or piece of research.
- Mus. 496, 497, 498. Individual Study.** 2 credits each. Open to advanced and/or honor students with consent of staff member in charge and chairman of department.
- Mus. 499. Seminar in Music Education.** 1 to 4 credits.
- Mus. 499. Seminar in Music Composition and Theory.** 3 credits. Prerequisite, permission of department.
- Mus. 520. Methods of Teaching Theory.** 3 credits. Prerequisite, permission of instructor.

- Mus. 521. **Methods of Musical Research.** 3 credits.
- Mus. 525. **Administration of College Music Departments.** 3 credits.
- Mus. 530. **Early Keyboard Music Through 1750.** 3 credits. Prerequisite, permission of instructor. Open to pianists and organists.
- Mus. 533. **Chamber Music Performance.** 3 credits. Prerequisite, permission of instructor. A performance class of chamber music with piano.
- Mus. 535. **Techniques of Musical Analysis.** 3 credits.
- Mus. 541. **Conducting III—Choral.** 3 credits. Prerequisites, Mus. 342 and 491.
- Mus. 545. **Modern Counterpoint.** 3 credits. Prerequisites, Mus. 246 and 443.
- Mus. 546. **Advanced Madrigal Choir.** 3 credits. Prerequisite, Mus. 446.
- Mus. 547, 548, 549. **Chamber Groups.** 1 credit each. Prerequisite, graduate student, permission of instructor. Strings, woodwinds, brass, voice, and piano. Two laboratory hours each week.
- Mus. 551. **Accompaniment and Song.** 2 credits. Prerequisite, permission of instructor. Performance class open to accompanists and singers.
- Mus. 554D. **Advanced Technique Class—Woodwind.** 1 credit. For students whose major instrument is not woodwind.
- Mus. 554E. **Advanced Technique Class—Brass.** 1 credit. Summer only. Prerequisite, one section of Music 154E or equivalent. For students whose major instrument is not brass.
- Mus. 560. **Psychology and Guidance in Music Education.** 3 credits. Open to superintendents, principals, supervisors, music teachers and others who deal with music in the public school program.
- Mus. 561. **Opera Workshop.** 2 credits. Prerequisite, permission of instructor.
- Mus. 562. **Trends in Music Education.** 3 credits.
- Mus. 564, 565, 566. **Applied Music.** 1 or 2 credits each. For graduates. See Mus. 164, 165, 166 for description.
- Mus. 567, 568, 569. **Choir.** 1 credit each. For graduates. See Mus. 167, 168, 169 for description.
- Mus. 567M, 568M, 569M. **Men's Glee Club.** 1 credit each. For graduates. See Mus. 167M, 168M, 169M for description.
- Mus. 567W, 568W, 569W. **Women's Glee Club.** 1 credit each. For graduates. See Mus. 167W, 168W, 169W for description.
- Mus. 570. **History of Vocal Art.** 3 credits. Prerequisite, permission of instructor.
- Mus. 573. **History of Opera.** 3 credits. Prerequisites, Music 270, 272, 274.
- Mus. 577, 578, 579. **Orchestra.** 1 credit each. For graduates. See Mus. 177, 178, 179 for description.
- Mus. 580. **Orchestration II.** 3 credits. Prerequisite, Orchestration I. Large instrumental groups.
- Mus. 583. **Composition II.** 3 credits. Prerequisite, Composition I. Larger forms for solo voice or instrument, chamber ensembles.
- Mus. 584. **Composition III.** 3 credits. Prerequisite, Composition II. Larger forms for chamber ensembles, orchestra and chorus.
- Mus. 585. **Band Arranging II.** 3 credits. Prerequisite, Mus. 484.
- Mus. 587, 588, 589. **Band.** 1 credit each. For graduates. See Mus. 187, 188, 189 for description.
- Mus. 590. **Supervision of Public School Music.** 3 credits. Prerequisite, B.A. degree with major in Music Education.
- Mus. 592. **Advanced Choral Composition and Arranging.** 3 credits. Prerequisite, Mus. 492.
- Mus. 596. **Individual Study.** 1 to 6 credits.
- Mus. 599. **Seminar in the History of Music.** 3 credits. Announcement of specific content will be in class schedule.
- Mus. 600. **Thesis.** 1-6 credits. In fulfilling the requirements for the Master of Arts degree in Music, the candidate, under advisement of a committee of three members of the music faculty, has three options.
1. A thesis demonstrating the candidate's ability to do scholarly and significant research in the field of music.
  2. A recital with a covering paper.
  3. An original composition with a covering paper.

# Philosophy

Associate Professors: Keller, Utzinger.

Assistant Professors: Bachrach, Burkholder, Hood, Pahi.

Instructor: Rosenholm.

The original meaning of the word philosophy is "the love of wisdom." As such it represents not a body of doctrines to be learned but an ongoing process of critical and speculative inquiry into questions which represent man's deepest concerns, such as the meaning of human existence, the nature of reality, the justifications of human knowledge, and the search for the grounds of human conduct.

The programs offered by the Department of Philosophy are designed to fulfill three main objectives. 1. To acquaint the general education student with the basic questions which have concerned philosophers over the past twenty-five hundred years and to give them some skills and methods for developing their own answers to these questions. 2. To offer service courses for students in other disciplines such as the social sciences, history, speech, science, etc. 3. To prepare students who elect philosophy as their major subject for graduate study in this discipline.

## (A/S) PHILOSOPHY MAJOR

Major (40 to 55 credits)	Credits
Phil. 207, Introduction to Philosophy. . . . .	5
Phil. 260, Introduction to Logic. . . . .	3
Phil. 345, Ethics . . . . .	5
Phil. 352, History of Western Philosophy I	4
Phil. 353, History of Western Philosophy II	4
Phil. 354, History of Western Philosophy	4
III . . . . .	4
Phil. 355, Contemporary Thought . . . . .	4
Phil. 499, Seminar in Philosophy. . . . .	3
Electives in Philosophy . . . . .	8-23
	40-55

(Students planning to do graduate work in Philosophy are expected to include Phil. 498 in their electives.)

## (A/S) PHILOSOPHY MINOR

Minor (20 to 28 credits)	Credits
Phil. 207, Introduction to Logic. . . . .	5
Phil. 260, Introduction to Logic. . . . .	3
Electives from Philosophy. . . . .	12-20
	20-28

## (T/Ed) PHILOSOPHY MINOR

Minor (20 credits)	Credits
Phil. 207, Introduction to Philosophy. . . . .	5
Phil. 260, Introduction to Logic. . . . .	3
Electives in Philosophy to complete the minor . . . . .	12
	20

81—SWSC—2260 . . . . .

## PHILOSOPHY COURSES

**Phil. 207. Introduction to Philosophy.** 5 credits.

**Phil. 260. Introduction to Logic.** 3 credits.

**Phil. 301. Indian Philosophy.** 4 credits.  
Prerequisite, Phil. 207 or consent of instructor.

**Phil. 345. Ethics.** 5 credits. Man as moral agent, nature of moral decision; ethical theories; their relevance to moral practice.

**Phil. 346. Aesthetics.** 5 credits. Aesthetic object and its qualities, the aesthetic experience, and evaluation of works of art.

**Phil. 350. Philosophy of Religion.** 5 credits. Fundamental assumptions and issues in religious activity and thought; types of religious philosophy.

**Phil. 352. History of Western Philosophy I.** 4 credits. Prerequisite, Phil. 207. Origins; through Plato, Aristotle, Plotinus, Augustine and Aquinas.

**Phil. 353. History of Western Philosophy II.** 4 credits. Prerequisite, Phil. 207. A study of some of the influential philosophies of the seventeenth and eighteenth centuries; Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume and Kant.

**Phil. 354. History of Western Philosophy III.** 4 credits. Prerequisite, Phil. 353. Nineteenth, early twentieth century. Hegel, Schopenhauer, Comte, J. S. Mill, Engels, Nietzsche, Kierkegaard and Bergson.

**Phil. 355. Contemporary Thought.** 4 credits. Twentieth century; James, Russell, Whitehead, Dewey, Ayer, Sartre and Jaspers.

**Phil. 356. American Philosophy.** 4 credits. Prerequisite, at least one course in philosophy or permission of the instructor. History from colonial period to the present. Readings in Jonathan Edwards, the St. Louis Hegelians, Chauncey Wright, C. S. Peirce, Josiah Royce, George Santayana, John Dewey, A. O. Lovejoy, W. V. Quine, and others.

**Phil. 357. Contemporary Analytic Philosophy.** 4 credits. Prerequisite, Phil. 355 or consent of instructor. Moore, Wittgenstein, Ryle and Austin, and other contributors to philosophical analysis of ordinary language.

**Phil. 358. Existentialism.** 4 credits. Prerequisite,

## 118 Philosophy Courses

- sites, Phil. 354 or 383 or consent of instructor. Leading existentialists such as Kierkegaard, Nietzsche, Heidegger, Jaspers and Sartre.
- Phil. 360. Introduction to Symbolic Logic.** 3 credits. Prerequisite, Phil. 260 or consent of instructor. Methods and techniques; the propositional calculus, truth table techniques, various methods of proof and introduction to some of the higher order functional calculi.
- Phil. 361. Theory of Knowledge.** 4 credits. Prerequisites, at least two courses in philosophy or permission of the instructor. Epistemic value, perception and the physical world, a prior knowledge, meaning, analytic and synthetic statements. Truth and related topics.
- Phil. 362. Continental Rationalism.** 4 credits. Prerequisite, one course in Philosophy. A historical and critical study of the philosophies of Descartes, Spinoza, and Leibniz.
- Phil. 363. British Empiricism.** 4 credits. Prerequisite, one course in philosophy. An historical and critical study of the philosophies of Locke, Berkeley, and Hume.
- Phil. 380. Plato.** 4 credits. Prerequisite, Phil. 352.
- Phil. 382. Aristotle.** 4 credits. Prerequisite, Phil. 352.
- Phil. 383. Kant.** 4 credits. Prerequisite, Phil. 353. In addition Phil. 352 is recommended but not required.
- Phil. 450. Philosophy of History.** 4 credits. Nature of historical inquiry. Also, representative speculative interpretations of history.
- Phil. 465. Advanced Ethics.** 4 credits. Prerequisite, Phil. 345 or consent of instructor. An analytic study of selected topics in contemporary ethical theory, such as ethical disagreement, moral truth, value concepts, patterns of moral reasoning, and uses of normative sentences.
- Phil. 467. Philosophy of Education.** 3 credits. Various Philosophic viewpoints which lead to an understanding of the educational enterprise. Certain philosophic issues such as the nature and fundamental aims of education constitute the foil for analysis. (Same as Ed. 467.)
- Phil. 468.1. Logic.** 3 credits. Prerequisites, Math. 261.1 or Phil. 360 or permission. Propositional calculus and quantification theory. (Same as Math. 468.1.)
- Phil. 468.2. Formalized Theories.** 3 credits. Prerequisites, Math. 261.1, 261.2, 468.1 or Phil. 360, Math. 261.2, Phil. 468.1 or permission. Formalized arithmetic as a first order theory. (Same as Math. 468.2.)
- Phil. 468.3. Computability.** 3 credits. Prerequisites, Math. 261.1, 261.2 or Phil. 360, or permission. Some equivalent concepts of computability and introduction to recursive functions. (Same as Math. 468.3.)
- Phil. 480. Philosophy of Science.** 5 credits. Prerequisites, Phil. 207, senior standing and a science or philosophy minor. Open to qualified juniors by consent of the instructor. Nature and function of basic assumptions, logic of scientific explanation; issues peculiar to given sciences, interrelations among several.
- Phil. 481. Philosophy of the Social Sciences.** 4 credits. Prerequisites, senior standing and a major in philosophy (including logic), or a major in one of the social sciences and a course in logic, or consent of instructor. (Same as Sociology 481.) A critical study of basic assumptions, distinctive methods and explanations, and value and normative considerations in the social sciences.
- Phil. 493. Undergraduate Thesis.** 2-2 credits. Prerequisites, advanced standing and consent of instructor. To be taken in two consecutive quarters. Credit granted at the conclusion of the second quarter.
- Phil. 496. Individual Study.** 3 to 6 credits. Prerequisite, g.p.a. of 3.0 in philosophy and a cumulative g.p.a. of 3.0 plus approval of the instructor and chairman of the department.
- Phil. 499.1, 499.2, 499.3. Seminar in Philosophy.** 3 credits, each course. Prerequisite, philosophy major or by consent of the instructor.



# Physical Education

Associate Professors: Hileman, Irish, Irving, McAfee, Nylander, Poffenroth, Putnam, Reynolds.

Assistant Professors: Arlt, Beamer, Beardsley, Royungs, Frederick, Gregson, Hahn, Hutton, Johns, Killorn, McCabe, Moore, Nicholson, Parry, Pearson, Purser, Smith, Sorenson.

Lecturer: Taylor.

The Department of Physical Education has many functions. In addition to professional preparation in health, physical education and recreation the Department enables students to develop skills in physical activities that will enable them to promote their personal physical fitness, maintain health, build morale, and establish an interest in future recreational activities.

## (A/S) PHYSICAL EDUCATION MINOR

	<i>Credits</i>
<sup>1</sup> Minor (17-20 credits)	
H. Ed. 245, First Aid or P.E. 348, Athletic Training .....	2
P.E. 207, Introduction to Physical Education .....	3
P.E. 334, Physical Education Activities for the Elementary School .....	3
P.E. 332, Theory and Practice in Dance (Elementary level) or P.E. 327, Theory and Practice in Dance (Secondary level) .....	3
<sup>2</sup> P.E. Methods (Select from P.E. 330, 331, 336, 337, 339, Women may select P.E. 326 .....	3
<sup>3</sup> P.E. Activities .....	3
P.E. 130, 131, 138	
Electives .....	0-3
	17-20

<sup>1</sup>(See Health and Physical Education Major.)  
<sup>2</sup>Prerequisite: Activity courses in that sport or permission of the instructor.  
<sup>3</sup>Other Physical Education activities shall be selected from the major and minor offerings in the yearly course schedule.

## (A/S) HEALTH AND PHYSICAL EDUCATION MAJOR

	<i>Credits</i>
<sup>1</sup> Major (45 credits)	
H. Ed. 207, Introduction to Health Education .....	3
H. Ed. 245, First Aid, or P.E. 348, Athletic Training .....	2
H. Ed. 321, Methods and Materials in Health .....	3
H. Ed. 349, Anatomy and Kinesiology....	5
H. Ed. 450, Physiology of Exercise.....	3
Zool. 270, Human Physiology.....	3
P.E. 207, Introduction to Physical Education .....	3
P.E. 332, Theory and Practice in Dance (Elem. level) or P.E. 327, Theory and Practice in Dance (Secondary level)....	3
P.E. 334, Physical Education Activities for the Elementary School .....	3
P.E. 335, Physical Education Methods for the Secondary School .....	3
P.E. 330, 331, 336, 337, 338, 339 (five of the six) .....	5
P.E. 458, Measurement in Physical Education .....	3

P.E. 480, Administration in Health and Physical Education .....	3
<sup>*</sup> P.E. Activities .....	3
P.E. 130, 131, 138	
	45

<sup>\*</sup>Other Physical Education Activities shall be selected from the major and minor offerings in the yearly course schedule.  
<sup>1</sup>(See Physical Education Minor.)

## (T/Ed) HEALTH EDUCATION MINOR

(See also Physical Education Minor.)

Minor (20 credits)	<i>Credits</i>
H. Ed. 207, Introduction to School Health	3
H. Ed. 245, First Aid .....	2
Zool. 270, Human Physiology .....	3
H. Ed. 349, Anatomy and Kinesiology....	5
H. Ed. 321, Methods and Materials in Health .....	3
Electives in Health.....	4
	20

## (A/S) DANCE MINOR

Minor (20 credits)	<i>Credits</i>
P.E. 130, Rhythms .....	1
P.E. 161, Intro. to Dance .....	2
P.E. 201.1, Modern Dance I .....	3
P.E. 201.2, Modern Dance II .....	3
P.E. 201.3, Modern Dance III.....	3
P.E. 301, Choreography .....	3
Electives to be chosen from the following:	5
	20
P.E. 30, 31, 32, 34 (1 credit each)	
Art 170, Design .....	3
P.E. 202.1, 202.2, 202.3, Teaching Technique of Soc. Dance Forms I, II, III (2 each)	
P.E. 327, Theory/Pract. of Dance (Sec.) .....	3
P.E. 332, Theory/Pract. of Dance (Elem.) .....	3
Speech 266, Theory of Play Production.	3
Speech 268, Stage Design and Lighting.	4
Speech 269, Basic Acting .....	3
At least one quarter active membership in Orchestis.	

**(T/Ed) PHYSICAL EDUCATION MINOR**

Minor (20 credits)	<i>Credits</i>
H. Ed. 245, First Aid, or 348, Athletic Training .....	2
P.E. 207, Introduction to Physical Education .....	3
P.E. 334, Physical Education Activities for the Elementary School or P.E. 335, Physical Education Methods for the Secondary School .....	3
P.E. 332, Theory and Practice in Dance (Elementary Level) or P.E. 327, Theory and Practice in Dance (Secondary Level) ...	3
Physical Education Methods .....	3
(Select from P.E. 330, 331, 336, 337, 339. Women may select P.E. 326.)	
*Physical Education Activities .....	3
P.E. 130, 131, 138 .....	3
Electives .....	3
	20

\*Other P.E. activities shall be selected from the major and minor offerings in the yearly course schedule.

**(T/Ed) HEALTH AND PHYSICAL EDUCATION MAJOR ELEMENTARY AND SECONDARY (MEN AND WOMEN)**

Qualifies for teaching health and physical education at elementary, junior high and senior high levels. For elementary school teaching in regular or self-contained classrooms, see page —.

Major (45 credits)	<i>Credits</i>
H. Ed. 207, Introduction to Health Education .....	3
H. Ed. 245, First Aid or P.E. 348, Athletic Training .....	2
H. Ed. 321, Methods and Materials in Health .....	3
H. Ed. 450, Physiology of Exercise .....	3
H. Ed. 349, Anatomy and Kinesiology ...	5
Zool. 270, Human Physiology .....	3
P.E. 207, Introduction to Physical Education .....	3
P.E. 334, Physical Education Activities for the Elementary School .....	3
P.E. 335, Physical Education Methods for the Secondary School .....	3
P.E. 330, 331, 336, 337, 338, 339 (five out of the six) .....	5
Physical Education 332, Theory and Practice in Dance (Elementary Level) or Physical Education 327, Theory and Practice in Dance (Secondary Level) ...	3
Physical Education 458, Measurement in Physical Education .....	3
P.E. 480, Administration in Health and Physical Education .....	3
*Physical Education Activities .....	3
P.E. 130, P.E. 131, P.E. 138 (3 credits)	
	45

\*Other P.E. Activities shall be taken from the major or minor offerings in the yearly course schedule.

**(T/Ed) HEALTH AND PHYSICAL EDUCATION MAJOR ELEMENTARY TEACHERS**

Open only to elementary school teachers. May not be used for 30-credit area in a Three-Area Program (30-20-20), but may be used for 30 credits from outside majors required by Special Education and Early Childhood Education majors. For secondary teaching expand and convert to the regular Health and Physical Education major.

Major (45 credits)	<i>Credits</i>
H. Ed. 100, Health Education (Unless exempt from H. Ed. 100 or H. Ed. 200) ..	0-3
H. Ed. 207, Introduction to School Health	3
H. Ed. 245, First Aid .....	2
H. Ed. 349, Anatomy and Kinesiology ...	5
H. Ec. 330, Nutrition Act. in Elem School	1
P.E. Activities .....	6
One credit in six of the following: P.E. 131, 138, 122W, 124W, 64, 70, 130, 127W or (129M), 134.	
P.E. Methods .....	5
One credit in each of the following: P.E. 330c, 331j, 337a, 338b, and 339b.	
P.E. 332, Rhythms in Elementary School ..	3
P.E. 334, P.E. Activities in Elementary School .....	3
P.E. 471, Philosophy of Elementary School P.E. ....	3
Rec. 207, Introduction to Recreation .....	3
Zool. 270, Human Physiology .....	3
Electives from the following: .....	5-8
H. Ed. 321, Methods and Materials in H. Ed. ....	3
H. Ed. 450, Physiology of Exercise. ....	3
H. Ed. 470, School and Community Health .....	3
P.E. 207, Introduction to P.E. ....	3
P.E. 361, P.E. for Handicapped Children .....	3
P.E. 460, Safety in P.E. and Athletics .....	3
P.E. 480, Admin. in Health and P.E. ....	3
Safety Education 437, General Safety Education .....	3
Rec. 249, Camp Leadership .....	3
P.E. 330d, 331a, 331c, 331h, 336e, 336f, 336h, 337c, 338a, 339a	1 cr. each
H. Ec. 200, General Nutrition .....	3
H. Ec. 295, or Psys. 295, Courtship and Marriage (Family Relations) ..	3
Rec. 335, Program Leadership .....	3
	45

**HEALTH EDUCATION COURSES**

- H. Ed. 100. Health Essentials.** 3 credits. The principles and practices of healthful living; personal and community health.
- H. Ed. 207. Introduction to School Health.** 3 credits. Philosophy, legal requirements, school health programs.
- H. Ed. 245. First Aid.** 2 credits. The Standard Red Cross First Aid Course for which certificates may be granted.

\***H. Ed. 321. Methods and Materials in**

\*Required of all men and women majors as a prerequisite for student teaching in health and physical education.

**Health Education.** 3 credits. Prerequisites, H. Ed. 100, H. Ed. 207.

**H. Ed. 345. Advanced First Aid.** 2 credits. Prerequisite, H. Ed. 345. Provides for the renewal of Advanced Red Cross First Aid Certificates, or may be taken by students who have completed the Standard Red Cross Course.

**H. Ed. 349. Anatomy and Kinesiology.** 5 credits. Prerequisite, Zool. 270. Gross anatomical structure; relationship of the skeletal and muscular systems at rest and in motion.

**H. Ed. 440. Workshop.** 1-6 credits. Topics in health education, including work sessions, lectures and demonstrations.

**H. Ed. 450. Physiology of Exercise.** 3 credits. Prerequisites, Zool. 270 and H. Ed. 349. Applies present physiological knowledge to the development of physical fitness and skills.

**H. Ed. 470. School and Community Health.** 3 credits. Problems, programs.

**H. Ed. 499. Seminar in Health Education and Safety Education.** 2 credits.

**H. Ed. 518. Health Education in Elementary Schools.** 3 credits.

**H. Ed. 525. Health Education in Secondary Schools.** 3 credits.

**H. Ed. 560. Applied Physiology for Teachers.** 3 credits.

**H. Ed. 580. Administration and Supervision of Health and Safety Education.** 3 credits. Prerequisites, H. Ed. 321, P.E. 460, or equivalent.

**H. Ed. 596. Individual Study.** 1-6 credits.

## PHYSICAL EDUCATION COURSES

### I. ACTIVITIES

Take one activity in each of the following categories: dance; team sport; individual, dual, or aquatic sport, one per quarter. (P.E. majors or minors may take more than one per quarter.) Regular students are allowed one activity per quarter.

Required uniform: For women, navy blue shorts with white cotton blouse, with leotard for modern dance. For men: blue trunks and navy reversible T shirts.

"M" or "W" indicates whether classes are limited to men and women. Even numbers indicate beginning classes; odd numbers indicate advanced classes.

### FUNDAMENTAL SKILLS

One credit (meets twice weekly)

**P.E. 2. Basic Skills.** Fundamentals of good

movement and application to daily situations and games.

**P.E. 4M or 4W. Adapted Activities.** Physical and motor fitness.

**P.E. 6. Conditioning Exercises.** Muscular coordination, posture, and motor skills.

**P.E. 7. Weight Training.** Various weight training techniques.

### TEAM SPORTS

One credit (meets twice weekly)

**P.E. 10M. Baseball**

**P.E. 12. Basketball** (men or women)

**P.E. 14W. Field Hockey**

**P.E. 16M. Flagball**

**P.E. 18. Soccer**

**P.E. 20. Softball** (men or women)

**P.E. 22. Speedball**

**P.E. 24M. Touch Football**

**P.E. 26. Volleyball** (men or women)

**P.E. 28M. Field Sports**

**P.E. 28W. Field Sports**

### RHYTHMS

One credit (meets twice weekly)

**P.E. 30. Dance I (Introduction).** Fundamental body movement, control, basic dance techniques and beginning composition.

**P.E. 31. Dance II (Composition).** Principles of composition as related to dance; opportunity to create original dances. Prerequisite, Dance I.

**P.E. 32. International Dance.** Foreign, old and new; American Square, couple and round.

**P.E. 34. Social Dance for Beginners.**

### AQUATICS

One credit (meets twice weekly, except P.E. 45).

**P.E. 42. Swimming for Beginners.** Prerequisite, must be a non-swimmer.

**P.E. 43. Swimming for Intermediates.** Prerequisite, must be able to swim 50 feet.

**P.E. 44. Recreational Swimming.**

**P.E. 45. Life Saving.** Prerequisites, (1) standing front dive (2) swim 440 yards continuously using several standard strokes, (3) surface dive. Opportunity for earning senior life saving certificate. Meets three days a week.

**P.E. 47. Advanced Swimming.** Prerequisite, ability to swim 220 yards continuously, employing at least three strokes. Refinement of standard strokes and dives.

**VARSITY SPORTS**

One credit (three hours activity per day plus all regularly scheduled meetings and game seasons)

- P.E. 85M. Wrestling
- P.E. 87M. Swimming
- P.E. 89M. Baseball
- P.E. 91M. Basketball
- P.E. 93M. Football
- P.E. 95M. Golf
- P.E. 97M. Tennis
- P.E. 99M. Track and Field

**INDIVIDUAL AND DUAL SPORTS**

One credit (meets twice a week)

- ①P.E. 50. Archery
- ②P.E. 52. Badminton
- ③P.E. 54. Bowling
  - P.E. 58M. Cross Country
  - P.E. 60. Fencing
- ④P.E. 62. Golf for Beginners
- ④P.E. 63. Golf for Advanced
  - P.E. 64. Recreational Games
- ⑤P.E. 66. Skiing
- ⑤P.E. 67. Advanced Skiing
  - P.E. 68. Tennis for Beginners
  - P.E. 69. Tennis for Advanced
  - P.E. 70. Tumbling
  - P.E. 72M. Wrestling
  - P.E. 74. Apparatus

---

①Students required to replace broken or lost arrows.  
 ②Shuttle cocks must be supplied by the student.  
 ③Bowling carries a fee of \$5.50 payable at the alley.  
 ④Clubs are furnished. Students furnish golf balls.  
 ⑤All equipment must be furnished by the student.

**ACTIVITIES FOR PHYSICAL EDUCATION MAJORS AND MINORS**

One credit (meets twice weekly)

- P.E. 121W. Field Sports for Women
- P.E. 121M. Field Sports for Men
- P.E. 122W. Softball-Archery for Women
- P.E. 124W. Formal Activities and Body Mechanics for Women
- P.E. 125M. Softball-Archery-Bowling for Men
- P.E. 127W. Volleyball-Basketball for Women
- P.E. 129M. Volleyball-Recreational Games for Men
- P.E. 130. Rhythms and patterns of dance forms. Fundamental movements, basic steps.
- P.E. 131. Aquatics
- P.E. 134. Badminton-Tennis
- P.E. 135M. Wrestling-Basketball for Men
- P.E. 137M. Track-Golf for Men
- P.E. 138. Gymnastics
- P.E. 139W. Track and Field for Women

**II. PHYSICAL EDUCATION**

- P.E. 161. Introduction to Dance. 2 credits. Philosophy and concepts of dance. A discussion course.
- P.E. 201.1. Modern Dance I. 3 credits. Course to be taken consecutively. Six hours laboratory in dance theory and technique per week.
- P.E. 201.2. Modern Dance II. 3 credits. Courses to be taken consecutively. Six hours laboratory in dance theory and technique per week.
- P.E. 201.3. Modern Dance III. 3 credits. Course to be taken consecutively. Six hours laboratory in dance theory and techniques per week.
- P.E. 202.1. Teaching of Social Science Dance Forms I. 2 credits. Prerequisite, P.E. 130. Development of advanced skills. Theory and practice of teaching techniques. Experience in organizing and presenting programs.
- P.E. 202.2. Teaching of Social (Folk) Dance Forms II. 2 credits. Prerequisite, P.E. 130. Development of advanced skills. Theory and practice of teaching techniques. Experience in organizing and presenting programs.
- P.E. 202.3. Teaching of Social (Square) Dance Forms III. 2 credits. Prerequisite, P.E. 130. Development of advanced skills. Theory and practice of teaching techniques. Experience in organizing and presenting programs.
- P.E. 207. Introduction to Physical Education. 3 credits. History, basic philosophy, and modern developments.
- P.E. 246. The Athletic Program. 3 credits. History and objectives; administration. Relation to education.
- P.E. 301. Choreography. 3 credits. Study and directed practice in individual and group dance composition. Presentation of student works in an informal production. Meets twice weekly for two hours plus rehearsals.
- P.E. 320. Aquatic Instructor. 2 credits. Prerequisite, P.E. 45 or current life saving certificate, and 18 years of age. Review of skills; methods of instruction. One lecture period and two laboratory periods with an additional period of practice in swimming instruction each week. Students satisfactorily passing the Red Cross Test will receive Red Cross Water Safety Instructor's Certificate.
- P.E. 321. Football Coaching. 2 credits. History, organization, methods of instruction.
- P.E. 322. Wrestling Coaching. 2 credits. Organization, methods of instruction.

- P.E. 323. **Basketball Coaching.** 2 credits. Organization, methods of instruction.
- P.E. 324. **Track Coaching.** 2 credits. Organization, methods of instruction.
- P.E. 325. **Baseball Coaching.** 2 credits. Organization, methods of instruction.
- P.E. 326. **Theory and Practice in Sports for Women.** 3 credits. Prerequisite, basic skills, team sports, or permission of instructor. Methods and materials for junior and senior high school.
- P.E. 327. **Theory and Practice in Dance (Secondary Level).** 3 credits. Prerequisite, P.E. 32 and 34, or P.E. 130; or the instructor's permission.
- P.E. 330. **Methods and Materials for Formal Activities.** 1 credit. Prerequisite, competence in the activities included in each specific area to be determined by participation in activity classes or successful completion of tests. Demonstration, direction, diagnosis, testing. Practical experience provided. Meets two days a week plus one additional hour.
- |                    |                           |
|--------------------|---------------------------|
| a. Weight Training | c. Basic Skills           |
| b. Body Mechanics  | d. Conditioning Exercises |
- P.E. 331. **Methods and Materials in Individual Sports.** 1 credit. See P.E. 330 for explanation.
- |              |                       |
|--------------|-----------------------|
| a. Archery   | f. Fencing            |
| b. Bowling   | g. Track and Field    |
| c. Badminton | h. Wrestling          |
| d. Golf      | i. Recreational Games |
| e. Tennis    |                       |
- P.E. 332. **Theory and Practice in Dance (Elementary and Intermediate Level).** 3 credits. Prerequisite, P.E. 130, or instructor's permission.
- P.E. 333. **Swim Coaching.** 3 credits. Organization, methods of instruction.
- P.E. 334. **Physical Education Activities for the Elementary School.** 3 credits. Prerequisites (men) international dance, basic skills, or instructor's permission; (women), basic skills, team sports, international dance, or instructor's permission.
- P.E. 335. **Physical Education Methods for Secondary School.** 3 credits.
- P.E. 336. **Methods and Materials for Teaching Team Sports.** 1 credit. See P.E. 330 for explanation.
- |                              |                   |
|------------------------------|-------------------|
| a. Baseball                  | e. Softball       |
| b. Basketball                | f. Soccer         |
| c. Field Hockey (women only) | g. Touch Football |
| d. Football                  | h. Volleyball     |
- P.E. 337. **Methods and Materials for Teaching Aquatics.** 1 credit. See P.E. 330 for explanation.
- |             |                |
|-------------|----------------|
| a. Swimming | c. Lifesaving  |
| b. Diving   | d. Water Games |
- P.E. 338. **Methods and Materials for Teaching Rhythms.** 1 credit. See P.E. 330 for explanation.
- |                   |                   |
|-------------------|-------------------|
| a. Social Dancing | c. Modern Dancing |
| b. Folk Dancing   |                   |
- P.E. 339. **Methods and Materials for Teaching Gymnastics.** 1 credit. See P.E. 330 for explanation.
- |              |               |
|--------------|---------------|
| a. Apparatus | c. Trampoline |
| b. Tumbling  |               |
- P.E. 348. **Athletic Training.** 2 credits. Prevention, treatment, and rehabilitation.
- P.E. 352. **Sports Officiating for Women.** 2 credits.
- P.E. 353. **Sports Officiating for Men.** 3 credits.
- P.E. 361. **Physical Education for Handicapped Children.** 3 credits. Philosophy, equipment and facilities, reference materials, examination techniques, fundamental anatomical and pathological considerations. Corrective exercises.
- P.E. 423W. **Coaching Women's Basketball.** 3 credits. Prerequisite, P.E. 326 or permission.
- P.E. 440. **Workshop Clinic.** 1 to 6 credits.
- P.E. 442. **Field Work in Physical Education.** 1-5 credits. Class to be arranged by college supervisor.
- P.E. 443. **The Intramural Program.** 2 credits. Purpose, organization, and administration.
- P.E. 444. **Management of Equipment.** 3 credits.
- P.E. 445. **Physical Education Facilities.** 3 credits.
- P.E. 448. **Advanced Athletic Training.** 3 credits. For those with experience in coaching, physical education, recreation, and athletic training.
- P.E. 450. **Sports Education.** 5 credits. Lectures on team sports first term; individual sports second term. Two and one-half credits may be earned each term.
- P.E. 458. **Measurement in Physical Education.** 3 credits.
- P.E. 460. **Safety in Physical Education and Athletics.** 3 credits. Incidence and types of accidents, prevention.

- P.E. 466. Supervision and Evaluation of Program Planning. 3 credits.
- P.E. 470. Trends in Modern Physical Education. 3 credits.
- P.E. 471. Philosophy of Elementary School Physical Education. 3 credits.
- P.E. 480. Administration in Health and Physical Education. 3 credits. Prerequisite, P.E. 207.
- P.E. 481. Public Relations in Health, Physical Education and Recreation. 2 credits.
- P.E. 499A. Seminar in Athletics. 2 credits.
- P.E. 499P. Seminar in Physical Education. 2 credits.
- P.E. 521. Advanced Football Methods. 3 credits.
- P.E. 523. Advanced Basketball Coaching. 3 credits.
- P.E. 524. Advanced Track Coaching. 3 credits. Prerequisite, track coaching experience or permission of instructor.
- P.E. 525. Advanced Baseball Coaching. 3 credits.
- P.E. 526. Advanced Methods in Women's Team Sports. 3 credits.
- P.E. 558. Methods in Research in Health and Physical Education. 3 credits. Prerequisite, Ed. 362, or P.E. 548, and Ed. 507.
- P.E. 559. Analysis of Motion. 3 credits. Prerequisite, P.E. 450 or equivalent.
- P.E. 561. Dance in Education. 3 credits. Prerequisite, P.E. 327 or equivalent.
- P.E. 581. Advanced Administration of Physical Education in High School and Colleges. 3 credits. Prerequisite, P.E. 480 or equivalent.
- P.E. 596. Individual Study. 1 to 6 credits. Approval of the chairman of the department is necessary before registration.
- P.E. 599. Seminar in Philosophy and Literature in Physical Education. 3 credits.

**(A/S) RECREATION MAJOR**

Major (45 to 60 credits)	<i>Credits</i>
Rec. 207, Introduction to Recreation.....	3
H. Ed. 245, First Aid .....	2
Bus. Ad. 251, Principles of Accounting I..	5
P.E. 327, Theory and Practice in Rhythms.	3
Psy. 346, Social Psychology.....	4
Soc. 360, The Community .....	3
Sp. 312, Creative Dramatics.....	4
Art 425, Arts and Crafts, Intermediate or Art 325, Arts and Crafts, Primary.....	3
Rec. 442, Field Work in Recreation (1-5)	5
Rec. 321, Methods and Materials in Recreation .....	5
Rec. 480, Administration of Recreation...	5
P.E. 481, Public Relations in Health, Physical Education, and Recreation.....	2

Electives to be chosen with guidance from the following: ..... 1-16

Sp. 141, Voice and Articulation... 3	3
Crafts 242, Wood .....	3
Crafts 244, Metal .....	3
Crafts 262, Pottery .....	3
Art 290, Photography .....	3
Mus. 326, Music in the Classroom. 3	3
P.E. 334, Physical Education Activities for the Elementary School.....	3
Crafts 347, Jewelry .....	3
P.E. 352, Sports Officiating for Women .....	2
Art 390, Photography .....	3
Sp. 251, Discussion .....	4
Rec. 249, Camp Leadership .....	3
Rec. 335, Playground Leadership ..	3
Rec. 449, School Camping .....	3
Rec. 450, Outdoor Recreation ....	2

45-60

**(A/S) RECREATION MINOR**

Minor (20 credits)	<i>Credits</i>
Rec. 207, Introduction to Recreation.....	3
Rec. 321, Methods and Materials in Recreation .....	5
Rec. 335, Playground Leadership or P.E. 344, Physical Education for the Elementary School .....	3
H. Ed. 245, First Aid .....	2
Art 425, Arts and Crafts, Intermediate or Art 325, Arts and Crafts, Primary.....	3
Electives to complete minor selected from:	4
Rec. 249, Camp Leadership .....	3
Rec. 460, School Recreation .....	2
Rec. 480, Administration of Recreation .....	5
P.E. Activities .....	2
P.E. 352, Sports Officiating for Women .....	2
P.E. 353, Sports Officiating for Men	3
Mus. 326, Music in the Classroom. 3	3
Soc. 360, The Community.....	3
Psy. 346, Social Psychology.....	4
Sp. 312, Creative Dramatics.....	4

20

Summer Recreation Leadership experience (Rec. 442) is desirable.

**(T/Ed) RECREATION AND OUTDOOR EDUCATION MINOR**

Minor (20 credits)	<i>Credits</i>
Rec. 207, Introduction to Recreation.....	3
Rec. 321, Methods and Materials in Recreation .....	5
Rec. 460, School Recreation .....	2
Rec. 480, Administration of Recreation or 449, School Camping (3 credits) and 489, School Camping for the Classroom Teaching (2 credits) .....	5
Electives from the following: .....	5
H. Ed. 245, First Aid.....	2
Rec. 489, School Camping for the Classroom Teaching .....	2
Sp. 312, Creative Dramatics .....	4
Art 425, Arts and Crafts, Intermediate .....	3
P.E. 334, Physical Education Activities for the Elementary School... 3	3

Teacher Education Program:

P.E. 352, Sports Officiating for Women .....	2
P.E. 353, Sports Officiating for Men .....	3
Mus. 326, Music in the Classroom .....	3
Soc. 360, The Community .....	3
Psy. 346, Social Psychology .....	4
Rec. 355, Playground Leadership .....	3
Rec. 450, Outdoor Recreation .....	2
Rec. 249, Camp Leadership .....	3

20

**RECREATION COURSES**

- Rec. 207. **Introduction to Recreation.** 3 credits. History, basic philosophy, modern developments.
- Rec. 249. **Camp Leadership.** 3 credits. Modern trends, their relationship to education; qualifications and responsibilities of the counselor.
- Rec. 321. **Methods and Materials in Recreation.** 5 credits. Prerequisite, Rec. 207.
- Rec. 335. **Playground Leadership.** 3 credits. Techniques, program planning and organization, operational methods.
- Rec. 442. **Field Work in Recreation.** 1-5 credits. For Recreation majors and minors only. Arranged with faculty supervisor.
- Rec. 449. **School Camping.** 3 credits. Prerequisite, Rec. 249. Open only to seniors or graduate students. Programing and administering, planning and operating.
- Rec. 450. **Outdoor Recreation.** 2 credits. Development on the national level, its implications for the Northwest.
- Rec. 460. **The School Recreation Program.** 2 credits. Organizing, maintaining; individual projects.
- Rec. 470. **Modern Trends in Recreation.** 3 credits.
- Rec. 480. **Administration of Recreation.** 5 credits. Prerequisites, Rec. 207 and Rec. 321. Field trips and recreation consultants scheduled.

- Rec. 489. **School Camping for the Classroom Teacher.** 2 credits. Includes observations and a special project.
- Rec. 499. **Seminar in Recreation.** 2 credits.
- Rec. 571. **Modern Trends in Outdoor Education.** 3 credits.
- Rec. 596. **Individual Study.** 1-6 credits. Prerequisite, approval of the chairman of the department.

**(T/Ed) DRIVER AND TRAFFIC SAFETY EDUCATION MINOR**

Minor (20 credits)	<i>Credits</i>
Safety Ed. 437, General Safety Education ..	3
Safety Ed. 455, Driver and Traffic Safety Ed. I .....	3
Safety Ed. 456, Driver and Traffic Safety Ed. II .....	3
Safety Ed. 457, Highway Safety Traffic Control .....	3
Safety Ed. 461, Organization of Supervision in Traffic Safety Education .....	3
H. Ed. 245, First Aid .....	2
Psych. 447, Psychology of Adolescence .....	3

20

**SAFETY EDUCATION COURSES**

- Safety Ed. 437. **General Safety Education.** 3 credits. The social problem, accident prevention, development of safety skills, habits, and attitudes.
- Safety Ed. 440. **Workshop.** 1-6 credits.
- Safety Ed. 455. **Driver and Traffic Safety Education I.** 3 credits.
- Safety Ed. 456. **Driver and Traffic Safety Education II.** 3 credits. Prerequisite, Safety Ed. 455 or equivalent and experience.
- Safety Ed. 457. **Highway Safety Traffic Control.** 3 credits.
- Safety Ed. 461. **Organization and Supervision in Traffic Safety Education.** 3 credits. Prerequisites, Safety Ed. 455 and 456. Organization, administration, supervision and operation of driver and safety education programs in the public schools.

*The fairer sex in action*



# Physics

Associate Professors: Bennett, Johnson, Ladd, Mitchell, Murphy.

Assistant Professors: Gore, Sperry, Wagner.

The study of physics gives the student an understanding of the physical world and of the basic relationships which exist between many natural processes. A program of study in physics may vary depending on the goal which a student sets. The goal may simply be to gain a measure of understanding and appreciation of man's physical environment or the goal may be vocational in nature.

Undergraduate physics programs which have vocational motivation may lead to high school teaching, employment in industry, or preparation for graduate study in physics or in related sciences such as astronomy, meteorology, etc.

Students planning for a career in senior high physics teaching should consider preparation in chemistry or mathematics to insure adequate preparation for a normal full-time teaching assignment.

Students wishing to major in physics should have a strong background in mathematics and should accompany their physics major with a mathematics minor.

Students planning to go on to graduate school should complete a 60 credit physics major. They should also acquire a reading knowledge of one foreign language during their undergraduate career.

## (A/S) PHYSICS MAJOR<sup>1</sup>

Major (60 credits)	Credits
Physics 181, 182, 183, 281, 282, 283, General Physics .....	24
Physics 351, 352, Mechanics .....	8
Physics 381, 382, Electricity and Magnetism .....	8
Physics 363, Physical Optics.....	4
Physics 384, 385, 386, Junior Physics Laboratory .....	3
Physics 454, Thermodynamics and Statistical Mechanics .....	4
Physics 471, Quantum Mechanics.....	4
Physics 484, 485, Senior Physics Laboratory .....	2
Physics 441, Solid State Phys. or Physics 455, Atomic and Nuclear Physics.....	3
	60

<sup>1</sup>Majors are encouraged to become proficient in one modern foreign language and to complete a general chemistry sequence.

## (A/S) PHYSICS MINOR

Minor (20 to 30 credits)	Credits
Physics 181, 182, 183, 281, 282.....	20
Electives from Physics 283, 351, 352, 381, 382, 384, 385 .....	0-10
	20-30

## (T/Ed) PHYSICS MAJOR

Qualifies for senior high physics teaching. Persons must accompany this with a mathematics minor and should consider preparation in chemistry in order to assure adequate preparation for normal full-time assignment. For junior high teaching, see Science Major. For elementary teaching, see Page 54.

Major (45 credits)	Credits
Physics 181, 182, 183, 281, 282, 283, General Physics .....	24
Physics 351, 352, Mechanics .....	8
Physics 381, 382, Electricity and Magnetism .....	8
Physics 384, 385, Junior Physics Laboratory .....	2
Science Ed. 324, Science Education in the Secondary Schools .....	3
	45

## (T/Ed) PHYSICS MINOR

Minor (20 credits)	Credits
Physics 181, 182, 183, 281, 282, General Physics .....	20
	20

For minimum endorsement for physics teaching in high school take Sci. Ed. 324, and Physics 283. Students taking this minor must also take Mathematics 171.1, 171.2 in order to meet prerequisites.

## (A/S) PHYSICAL SCIENCE MINOR

Minor (15 to 30 credits)	Credits
Chem. 181, General Chemistry.....	4
Physics 161, Elementary Physics.....	5
Electives in Physical Science to complete minor .....	6-21
	15-30

## (T/Ed) PHYSICAL SCIENCE (CHEMISTRY-PHYSICS) MAJOR (BROAD AREA)

Qualifies for high school chemistry and physics at minimum level (consider accompanying this with a mathematics minor). For junior high school science teaching, see Science Major or add the other specific courses required in the Science Major. For elementary school teaching, see page —.

Major (66 credits)	Credits
Chem. 181, 181.1, 182, 182.1, 183, General Chemistry .....	12
Chem. 251, Quantitative Analysis.....	5
Chem. 361, 361.1, 362, 362.1, Organic Chemistry .....	10
Physics 181, 182, 183, 281, 282, 283, General Physics .....	24
Sci. Ed. 324, Science Education in the Secondary Schools .....	3
Math. 171.1, 171.2, 271.1 .....	12
	66



(T/Ed) PHYSICAL SCIENCE  
MINOR

Minor (20 credits)	<i>Credits</i>
Chem. 181, 181.1, General Chemistry . . . . .	5
Two courses from Physics 161, 162, 163, Elementary Physics . . . . .	10
Sci. Ed. 322, Science Education in the Ele- mentary School . . . . .	3
Electives in Chemistry, Physics, or Mathe- matics . . . . .	2
	20

PHYSICS COURSES

- Physics 101, 102. Introduction to Physics.** 4 credits each course. Introductory, for the non-scientist. Three lectures and one two-hour laboratory a week.
- Physics 103. General Physical Science.** 3 credits. Prerequisite, Physics 101. Topics in astronomy, geology, and meteorology. Two lectures and one two-hour laboratory a week.
- Physics 147. Statics.** 3 credits. Prerequisite, Physics 181. Freshman mathematics to be taken concurrently. Continuation of physics problems for pre-engineers. Not applicable to physics majors or minors. Three lectures a week.
- Physics 161, 162, 163. Elementary Physics.** 5 credits each course. Prerequisites, 3 semesters of high school algebra or Math. 163, and 1 semester of high school trigonometry or Math. 165; or permission from the instructor. This sequence is not applicable to physics majors. Basic concepts in heat, light, sound, electricity, magnetism, mechanics, and atomic physics. Three lectures, a quiz section, and 3 hours of laboratory a week.
- Physics 181, 182, 183. General Physics.** 4 credits each course. Prerequisite, concurrent registration (or prior completion) in Math. 171.1 for 182 and in Math. 171.2 for 183. The first year of a two-year sequence designed for Physics majors and minors. Four lectures a week in 181, 3 lectures and one three-hour laboratory a week in 182 and 183.
- Physics 281, 282, 283. General Physics.** 4 credits each course. Prerequisite, Physics 183. A continuation of Physics 181, 182, 183. Three lectures and one three-hour laboratory a week.
- Physics 324. Methods and Materials in Teaching Physics.** 3 credits. Prerequisites, Physics 283 or Physics 341. One lecture and two, two-hour laboratories a week.
- Physics 331. Astronomy I: Solar System.** 4 credits. Sun, planets, satellites, comets, and meteorites, and their motions. Three lectures and two hours of observation a week.

- Physics 332. Astronomy II: Stars and Galaxies.** 4 credits. Physics of stars, stellar distances, and magnitudes, variable stars, novae, nebulae, galaxies, and cosmology. Three lectures and two hours of observation a week.
- Physics 337. Meteorology and Oceanography.** 4 credits. Three lectures and one two-hour laboratory a week.
- Physics 341. Modern Physics.** 4 credits. Prerequisites, Physics 161, 162, 163. Introduction to atomic, nuclear, solid state, relativity. Three lectures and one three-hour laboratory a week.
- Physics 351, 352. Mechanics.** 4 credits each course. Prerequisite, Physics 263 or 283 and Math. 271.3. Four lectures a week.
- Physics 363. Physical Optics.** 4 credits. Prerequisite, Physics 382. Four lectures a week.
- Physics 371. Physical Measurements.** 4 credits. Prerequisites, Physics 161, 162, 163. Tools and techniques in contemporary research. Emphasis on electrical measurements and optics. Two lectures and four hours of laboratory a week.
- Physics 381, 382. Electricity and Magnetism.** 4 credits each course. Prerequisite, Physics 263 or 283 and Math. 271.3. Four lectures a week.
- Physics 384, 385, 386. Junior Physics Laboratory.** 1 credit each course. Prerequisite, concurrent registration (or prior completion) in Physics 381, 382, 383. One three-hour laboratory a week.
- Physics 395. Impact of Science on Society.** 4 credits. Historical, philosophical and sociological. (Identical with Bio. Sci. 395; students may receive credit under only one listing.) Four lectures a week.
- Physics 401. Concepts of Classical Physics.** 3 credits. Prerequisite, open only to secondary school teachers. (Offered in summer only.)
- Physics 402. Concepts of Modern Physics.** 3 credits. Prerequisite, open only to secondary school teachers. (Offered in summer only.)
- Physics 403. Experiments in Modern Physics.** 2 credits. Prerequisite, open only to secondary school teachers. (Offered in summer only.)
- Physics 441, 442. Solid State Physics.** 3 credits each course. Prerequisite, Physics 471. Three lectures a week.
- Physics 454. Thermodynamics and Statistical Mechanics.** 4 credits. Prerequisites, Physics 352 and Math. 376.3. Four lectures a week.

- Physics 455, 456. Atomic and Nuclear Physics. 3 credits each course. Prerequisite, Physics 471. Three lectures a week.
- Physics 471. Quantum Mechanics. 4 credits. Prerequisites, Physics 352 and Math. 376.3. Four lectures a week.
- Physics 481, 482, 483. Mathematical Physics. 3 credits each course. Prerequisites, Physics 352 and 363.
- Physics 484, 485. Senior Physics Laboratory. 1 credit each course. Prerequisites, Physics 384, 385, 386. One three-hour laboratory a week.
- Physics 496, 497, 498. Individual Study. 2-4 credits each course.
- Physics 499.1, 499.2, 499.3. General Physics Seminar. 1 credit each course. Prerequisite, Senior standing in Physics.
- Physics 501, 502. Advanced Mechanics. 4 credits each course.

- Physics 505, 506. Electricity and Magnetism. 4 credits each course.
- Physics 511, 512. Quantum Mechanics. 4 credits each course. Prerequisites, Physics 501 and 505.
- Physics 516. Statistical Mechanics. 4 credits. Prerequisite, Physics 511.
- Physics 531. Theoretical Nuclear Physics. 3 credits. Prerequisite, Physics 512 (or concurrent registration).
- Physics 596, 597, 598. Individual Study. 2 to 4 credits each course. The amount of credit shall be entered upon the card at the time of registration. Open to graduate students with the consent of the staff member in charge.
- Physics 599.1, 599.2, 599.3. General Physics Seminar. 1 credit each course.
- Physics 600. Thesis. 1 to 6 credits. Prerequisite, permission of staff member in charge.

## Political Science

Professor: Odell.

Associate Professors: Mahajani, Stastny, Yee.

Instructor: Stockwell.

Lecturer: Legg.

The Department provides an opportunity for majors and minors in the field to become knowledgeable about the general subject matter of political science, and offers courses that will provide depth in the area of the student's special interest.

The Department also offers a pre-law program for students who plan to enter the legal profession.

### (A/S) POLITICAL SCIENCE MAJOR

Major (45 to 60 credits)	<i>Credits</i>
Required .....	9
Pol. Sci. 145, Modern Government (4)	
Pol. Sci. 244, American Government (5)	
American: At least one course.....	3-5
Pol. Sci. 348, Contemporary Political Parties (5)	
Pol. Sci. 353, The Legislative Process (3)	
Comparative: At least one course.....	4
Pol. Sci. 375, Comp. Pol. Systems: Asia (4)	
Pol. Sci. 378, Comp. Pol. Systems: Western Europe (4)	
Pol. Sci. 379, Comp. Pol. Systems: Soviet Area (4)	
Pol. Sci. 476, Comp. Pol. Systems: Developing Areas (4)	
International: At least one course.....	3-5
Pol. Sci. 376, International Organization (4)	

Pol. Sci. 384, International Politics (5)	
Pol. Sci. 474, International Law (3)	
Pol. Sci. 475, Communism in the Developing Areas (4)	
Pol. Sci. 485, Int'l Relations: Far East and Southeast Asia (4)	
Theory: At least one course.....	4
Pol. Sci. 461, Political Theory I (4)	
Pol. Sci. 462, Political Theory II (4)	
Pol. Sci. 463, Political Theory III (4)	
Pol. Sci. 465, American Political Thought (4)	
Law: At least one course.....	3-4
Pol. Sci. 350, Introduction to Public Law (4)	
Pol. Sci. 480, Intro. to Constitutional Law (3)	
Pol. Sci. 481, Constitution and Human Rights (4)	
Electives in Political Science.....	19-34

**(A/S) POLITICAL SCIENCE  
MINOR**

Minor (20 to 30 credits)	<i>Credits</i>
Required: . . . . .	9
Pol. Sci. 145, Modern Government (4)	
Pol. Sci. 244, American Government (5)	
Comparative: At least one course. . . . .	4
Pol. Sci. 375, Comp. Pol. Systems: Asia (4)	
Pol. Sci. 378, Comp. Pol. Systems: Western Europe	
Pol. Sci. 379, Comp. Pol. Systems: Soviet Area	
Pol. Sci. 476, Comp. Pol. Systems: Developing Areas	
International: At least one course. . . . .	3-5
Pol. Sci. 376, International Organization (4)	
Pol. Sci. 384, International Politics (5)	
Pol. Sci. 474, International Law (3)	
Pol. Sci. 475, Communism in Developing Areas (4)	
Pol. Sci. 485, International Relations: Far East and Southeast Asia (4)	
Theory: At least one course. . . . .	4
Pol. Sci. 461, Political Theory I	
Pol. Sci. 462, Political Theory II	
Pol. Sci. 463, Political Theory III	
Pol. Sci. 465, American Political Thought	
Elective in Political Science. . . . .	0-10
	20-30

**(T/Ed) POLITICAL SCIENCE  
MAJOR**

Senior high school teachers must accompany this major with a major in history or some other field in which a full-time assignment can be expected. To qualify for teaching in "block of time" programs, junior high school teachers must accompany it with minors in English and Geography.

Major (45 credits)	<i>Credits</i>
Pol. Sci. 145, Modern Government—Introduction to Political Science . . . . .	4
Pol. Sci. 244, American Government. . . . .	5
Hist. 143, History of the United States I. . . . .	5
Hist. 144, History of the United States II. . . . .	5
Pol. Sci. 246, State and Local Government	3
Pol. Sci. 374, Modern World Problems or Pol. Sci. 384, International Politics. . . . .	5
Pol. Sci. 348, Contemporary American Political Parties . . . . .	5
Pol. Sci. 378, Comparative Political Systems: Western Europe or	
Pol. Sci. 375, Comparative Political Systems: Asia . . . . .	4
Pol. Sci. 466, Current Issues of American Democracy . . . . .	3
Soc. Sci. 421, Methods and Materials in the Soc. Sci.—Secondary or	
Hist. 421, Methods and Materials in History—Secondary . . . . .	2
Electives from upper division political science . . . . .	4
	45

**(T/Ed) POLITICAL SCIENCE  
MINOR**

Minor (20 credits)	<i>Credits</i>
Pol. Sci. 145, Modern Government. . . . .	4
Pol. Sci. 244, American Government. . . . .	5
Pol. Sci. 374, Modern World Problems or Pol. Sci. 384, International Politics. . . . .	5
Pol. Sci. 342, Public Opinion and Propaganda . . . . .	2
Electives in Political Science. . . . .	4
	20

**POLITICAL SCIENCE COURSES**

- Pol. Sci. 145. Modern Government.** 4 credits. Basic terminology, authoritarian and democratic ideologies, nature of modern governmental institutions, role of the State in the modern world.
- Pol. Sci. 244. American Government.** 5 credits. Origin and development of the United States government; structure, political behavior, organizations and processes; rights and duties of citizens.
- Pol. Sci. 246. State and Local Government.** 3 credits. Structure, functions and procedures of state and local government.
- Pol. Sci. 321. The United Nations in the School Program.** 3 credits. Organization and structure of the United Nations and its specialized agencies. Course materials, organization of teaching projects.
- Pol. Sci. 342. Public Opinion and Propaganda.** 2 credits. Techniques of public opinion measurement and of propaganda. Types of propaganda, domestic and foreign.
- Pol. Sci. 345. Government, Science and Technology.** 2 credits. Impact of science on government in American society; threat to civilian control of the military, impact of the defense program and government subsidies upon education and the economy; role of the scientist in public policy-making.
- Pol. Sci. 348. Contemporary American Political Parties.** 5 credits. Party organization and activities; nomination and campaign methods; theories and functions of the party system; party responsibility.
- Pol. Sci. 350. Introduction to Public Law.** 4 credits. Legal bases and structure of governmental organization; fundamental doctrines and principles of constitutional, international and administrative law.
- Pol. Sci. 352. Public Administration.** 3 credits. Structure and organization, fiscal and personnel management, regulatory agencies, forms of action, the nature of bureaucracy.
- Pol. Sci. 353. The Legislative Process.** 3 credits. The Congress of the United States,

## 130 Political Science Courses

drafting of bills, legislative leadership, the committee system, relation to executive and judicial branches, pressure groups.

- Pol. Sci. 374. Modern World Problems.** 5 credits. An examination, with appropriate background material, of such current critical issues as organization for world peace, the problems of disarmament, international economic cooperation, the conflict between democracy and communism, and contemporary nationalism.
- Pol. Sci. 375. Comparative Political Systems: Asia.** 4 credits. Evolution, patterns, and comparative analyses.
- Pol. Sci. 376. International Organization.** 4 credits. Background, concepts, structure and functions of international organization.
- Pol. Sci. 378. Comparative Political Systems: Western Europe.** 4 credits. Evolution, patterns, and comparative analyses.
- Pol. Sci. 379. Comparative Political Systems: Soviet Area.** 4 credits. Evolution, patterns and comparative analyses.
- Pol. Sci. 384. International Politics.** 5 credits. Conditions and principles governing the contemporary nation-state system.
- Pol. Sci. 385. The Political Development of International Communism.** 4 credits. International Communist movement, with special emphasis on post-W.W. II period in Eastern Europe. Recommended to precede Pol. Sci. 475.
- Pol. Sci. 423. Communism and the School Curriculum.** 2 credits. Primarily for teachers. Communist, ideology and tactics; methods and materials, community relations.
- Pol. Sci. 441, 442, 443. Senior Seminars on American National Government.** 2 credits, each course. Prerequisite, senior standing or consent of the instructor.
- Pol. Sci. 444. Political Campaigns and Elections.** 3 credits. National nominating convention, post-convention campaign, elections.
- Pol. Sci. 448. Non-Western Political and Economic Organization.** 4 credits. See Anthro. 448 for description. (Students may not receive credit in both.)
- Pol. Sci. 461. Political Theory I.** 4 credits. Plato to Machiavelli.
- Pol. Sci. 462. Political Theory II.** 4 credits. Hobbes to Marx.
- Pol. Sci. 463. Political Theory III.** 4 credits. Marx to the present.
- Pol. Sci. 465. American Political Thought.** 4 credits. Colonial period to present.
- Pol. Sci. 466. Current Issues of American Democracy.** 3 credits. Means of securing peaceful change, problems of federalism, the nature and limits of fundamental freedoms.
- Pol. Sci. 470, 471, 472. Senior Seminar in International Politics.** 2 credits each. Prerequisite, senior standing or consent of the instructor.
- Pol. Sci. 474. International Law.** 3 credits.
- Pol. Sci. 475. Communism in the Developing Areas.** 4 credits. Emphasis on Asia. Recommended to follow Pol. Sci. 385.
- Pol. Sci. 476. Comparative Political Systems: Developing Areas.** 4 credits. Evolution, patterns, and comparative analyses of political independence in post-colonial areas.
- Pol. Sci. 480. Introduction to Constitutional Law.** 3 credits. Role of the Supreme Court in shaping governmental structure of the United States.
- Pol. Sci. 481. The Constitution and Human Rights.** 3 credits. Role of the United States Supreme Court in the development of political and social rights.
- Pol. Sci. 484. Government and Politics of Southeast Asia.** 2 credits. Summers only. Evolution of governmental forms and domestic politics of the states of Southeast Asia.
- Pol. Sci. 485. International Relations in the Far East and Southeast Asia.** 4 credits. Impact of the Western powers in Asia; relation of Asia to world politics.
- Pol. Sci. 496, 497, 498. Individual Study.** 2 to 4 credits. The amount of credit shall be entered upon the card at the time of registration. Open to advanced students with the consent of the staff member in charge.

# Psychology

Professors: Jacobsen, Naumann, Pettit, Stinson.

Associate Professors: Condit, Gage, Levell, Miller, Rich, Robinson, Shupe, Zwanziger.

Assistant Professors: Collins, DeVietti, Goodey, McNelly, Nelson, Peebles, Putoff, Scott, Selvage,  
Silva, Sparks, Stewart, Street, Tolin.

Lecturer: Spithill.

The Department emphasizes both teaching and research. Undergraduate students can earn a major or minor in psychology in either the Arts and Sciences or the Teacher Education program.

Graduate students can earn either a Master of Science or a Master of Education degree. The M.S. degree emphasizes the two specialties of General Experimental Psychology and Counseling Psychology. The M.Ed. degree emphasizes the two specialties of School Counseling and School Psychology.

## (A/S) PSYCHOLOGY MAJOR

The psychology major in Arts and Sciences prepares students to enter professional training in graduate schools of psychology. Such additional training leads to college teaching and research in psychology, employment in business personnel or industrial psychology or clinical psychology. For those not pursuing graduate work, the psychology major in Arts and Sciences serves as a Liberal Arts undergraduate major to enter the many positions requiring a general college background as well as those positions specifically requiring background in the behavioral sciences.

A. Psychology (Pre-Research and College Teaching)  
—For students anticipating graduate training leading to research or college teaching:

Psy. 200, 201, Advanced General Psychology .....	6
Psy. 309, Human Growth and Development .....	4
Psy. 362, Elementary Statistics .....	4
Psy. 346, Social Psychology .....	4
Psy. 444, Tests and Measurements .....	4
Psy. 450, Experimental Psychology of Perception .....	4
Psy. 451, Experimental Psychology of Motivation .....	4
Psy. 452, Experimental Psychology of Learning .....	4
Psy. 461, History and Systems of Psychology .....	5
Psy. 499, Seminar in Psychology (1-6 credits) .....	2
Electives in Psychology .....	4-19

45-60

B. Psychology (Pre-Industrial and Business)—Students anticipating graduate training leading to employment in business, personnel and industrial psychology take in addition to requirements listed under Part A:

Psy. 456, Personnel Psychology .....	3
Electives in Psychology .....	1-16

45-60

C. Psychology (Pre-Clinical)—For students anticipating entry into the graduate program in Clinical Psychology take in addition to requirements listed under Part A:

Psy. 205, Psychology of Adjustment .....	5
--	---

Psy. 445, Clinical and Counseling Psychology .....	5
Psy. 449, Abnormal Psychology .....	4
Electives in Psychology .....	0-5

55-60

The following supporting courses are required for all Arts and Sciences Psychology Majors (A, B, and C above):

Phil. 260, Introduction to Logic .....	3
Zool. 270, Human Physiology .....	3

## (A/S) PSYCHOLOGY MINOR

Minor (15 credits)	<i>Credits</i>
Psy. 346, Social Psychology .....	4
Psy. 205, Psychology of Adjustment .....	5
Guided electives from the following: .....	6
Psy. 456, Personnel Psychology .....	3
Psy. 362, Elementary Statistics .....	4
Psy. 309, Human Growth Development .....	4
Psy. 471, Vocational Development Theory .....	3

15

## (T/Ed) PSYCHOLOGY MAJOR

This major begins the pre-professional training for (1) school counseling; (2) teaching psychology, study habits, mental health, personality development, personal adjustment and other such courses in grades appropriate to the subjects; (3) diagnostic and remedial teaching; (4) school psychology; and (5) for the implementing of teaching skills of the two required minor subject matter areas, or additional major, by gaining an increased understanding of pupil motivation, learning perception and evaluation. Additional years in graduate study are ordinarily required for placement in positions requiring psychology skills. (See Master's degree specializations in School Psychology and School Counseling and General Experimental in the *Graduate Catalog*.)

Students who major in psychology in the teacher education program ordinarily begin their careers by gaining some classroom teaching experience, and counselors often continue to do some part-time teaching. Courses are arranged so that students desiring to do advanced graduate study to become school psychologists, school counselors, remedial education specialists, or even clinical psychologists through Arts

# 132 Psychology Courses

and Science Graduate Schools, have an appropriate background to begin graduate school.

Secondary teachers must accompany this with a second major in which the major portion of full-time teaching assignment can be expected. Qualifies for teaching both psychology and the second major field. For elementary teaching see page 43.

Major (45 credits)	<i>Credits</i>
Required courses:	
Psy. 100, General Psychology . . . . .	4
Psy. 200, 201, Advanced General Psychology, 2 quarters . . . . .	6
Psy. 205, Psychology of Adjustment . . . . .	5
Psy. 346, Social Psychology . . . . .	4
Ed. 358, Introduction to Guidance . . . . .	3
Psy. 362, Elementary Statistics . . . . .	4
Psy. 461, History and Systems of Psychology . . . . .	5
Psy. 444, Tests and Measurements . . . . .	4
One laboratory course from the following:	4
Psy. 450, Experimental Psychology of Perception . . . . .	4
Psy. 451, Experimental Psychology of Motivation . . . . .	4
Psy. 452, Experimental Psychology of Learning . . . . .	4
Electives . . . . .	6
For students anticipating secondary teaching Psychology of Adolescence and Seminar (quarter devoted to Teaching Psychology) is recommended.	45

## (T/Ed) PSYCHOLOGY MINOR

(30-Hour Three-Area Specialization students should take the courses from the Psychology Major.)

Minor (19 credits)	<i>Credits</i>
Psy. 205, Psychology of Adjustment . . . . .	5
Ed. 358, Introduction to Guidance . . . . .	3
Select eleven hours from the following: . . . . .	11
Psy. 350, Emotional Growth of Children . . . . .	3
Psy. 295, Courtship and Marriage . . . . .	3
Psy. 346, Social Psychology . . . . .	4
Psy. 362, Elementary Statistics . . . . .	4
Psy. 447, Psychology of Adolescence . . . . .	3

19

## PSYCHOLOGY COURSES

- Psy. 100. General Psychology.** 4 credits. An introduction to the science of behavior.
- Psy. 200, 201. Advanced General Psychology.** 3 credits each. Prerequisite, Psy. 100. Research methods, principal concepts, and issues.
- Psy. 205. Psychology of Adjustment.** 5 credits. Prerequisite, Psy. 100. Personality, mental health, and treatment.
- Psy. 295. Courtship and Marriage.** 3 credits. The concerns of youth as they move toward involvement in establishing families and homes of their own. (Also listed as H. Ec. 295.)
- Psy. 305. Existential Psychology.** 3 credits. Prerequisites, Psy. 100 and Phil. 207, or con-

sent of instructor. Survey comparison with other theoretical orientations.

- Psy. 309. Human Growth and Development.** 4 credits. Three lectures and two laboratories. Prerequisite for Arts and Science students, permission of instructor; for Education students, Ed. 307 and admission to the teacher education program with Psy. 100 recommended. The physical, mental, emotional and social development of children and youth.
- Psy. 310. Learning and Evaluation.** 4 credits. Meets daily. Prerequisites, Ed. 307 and Psy. 309. Theories and process of human learning, and measurement of behavior changes associated with learning.
- Psy. 346. Social Psychology.** 4 credits. Meets daily. Prerequisite, Psy. 100. The effects of human institutions upon group and individual behavior; the reciprocal effects of the individual on society. Interactions of individuals, groups, and societies.
- Psy. 347. Methods of Attitude and Opinion Measurement.** 4 credits. Three lectures and one two-hour laboratory. Prerequisites, Psy. 362 and 346 or permission of the instructor.
- Psy. 350. Emotional Growth of Children.** 3 credits. Prerequisite, Psy. 309. Emotional development as related to personality and social growth.
- Psy. 362. Elementary Statistics.** 4 credits. Introduction to statistical techniques in education and psychology. (Also listed as Ed. 362.)
- Psy. 373. Psychology of Thought and Language.** 4 credits. Prerequisite, Psy. 100. Review of current research and theories. Symbolic, processes, concept formation, problem solving, language development.
- Psy. 378. Physiological Psychology.** 4 credits. Prerequisites, Psy. 201 and Zool. 270. Neurology and physiology of perception, emotion, learning, motivation and behavior disorders.
- Psy. 416. Programmed Learning.** 3 credits. Prerequisite, Psy. 310. Historical developments underlying psychological principles; program types, development, evaluation, and utilization; socio-philosophical issues; research trends. (Also listed as Ed. 416.)
- Psy. 425. Psychology of Reading.** 3 credits. Prerequisite, senior standing. Principles of learning and readiness, perception, psychological and physiological aspects of reading. (Also listed as Ed. 425.)
- Psy. 444. Tests and Measurements.** 4 credits. Three lectures and two laboratories. Pre-

- requisite, Psy./Ed. 362. Group Psychological and educational tests, theory and practice.
- Psy. 445. Clinical and Counseling Psychology.** 5 credits. Prerequisite, senior standing. History, current trends, fields of employment, professional ethics, methods of psychological diagnosis and treatment, the clinical team approach and its function.
- Psy. 446. Experimental Personality and Social Psychology.** 4 credits. Prerequisites, Psy. 346 and Psy. 362. Research methods, theories, and review of selected topics in personality and social experimentation. Three lectures and two laboratory sessions.
- Psy. 447. Psychology of Adolescence.** 3 credits. Prerequisite, 309. Organization of personality during the years of adolescence, guidance and control, education and vocational choice and adjustment.
- Psy. 449. Abnormal Psychology.** 4 credits. Meets daily. Prerequisites, Psy. 309 and Psy. 205. Symptoms, causes, and treatment of psychoneurosis, psychosis, and general mental deficiency.
- Psy. 450. Experimental Psychology of Perception.** 4 credits. Three lectures and one two-hour laboratory. Prerequisite, Psy./Ed. 362 with Zool. 270 recommended. Research, theoretical models, psychological mechanisms, social determinants of the direction and efficiency of behavior.
- Psy. 451. Experimental Psychology of Motivation.** 4 credits. Three lectures and one two-hour laboratory. Prerequisite, Psy./Ed. 362 with Zool. 270 recommended. Research, theoretical models, psychological mechanisms, social determinants of the direction and efficiency of behavior.
- Psy. 452. Experimental Psychology of Learning.** 4 credits. Three lectures and one two-hour laboratory. Prerequisites, Psy./Ed. 362 with Zool. 270 recommended. Descriptions and conditions of learning.
- Psy. 453. Theories of Personality.** 5 credits. Prerequisite, Psy. 452 or consent of instructor. Contribution of various approaches to personality theory. Postulates and relevant research literature for several current personality theories.
- Psy. 455. Case Studies in Psychology.** 2 credits. Prerequisite: If in teacher education, the student must be enrolled as a major or minor in psychology and have a minimum of 10 hours completed. If in Arts and Science, the student must be enrolled as a major in psychology and a minor in education and have completed 10 hours of psychology.
- Psy. 456. Personnel Psychology.** 3 credits. The contributions of psychology to personnel problems in labor, industry, government, education, and the armed forces.
- Psy. 457. Psychology of Exceptional Children.** 3 credits. Prerequisite, Sp. Ed. 343 or consent of instructor. Psychological characteristics, methods of adjustment adaptation of exceptional children. The effects of such children on peers, family, and teachers. (Also listed as Sp. Ed. 457.)
- Psy. 458. Clerkship in Psychology.** 2 credits. Prerequisite, must be enrolled as a major in Psychology and have 25 hours completed. Practical experience in different areas within psychology.
- Psy. 460. Counseling Parents of Exceptional Children.** 3 credits. Prerequisites, Ed. 343 and Psy./Sp. Ed. 457 or consent of instructor. Techniques and resources for working with parents who have handicapped or specially talented children. (Also listed as Spec. Ed. 460.)
- Psy. 461. History and Systems of Psychology.** 5 credits. Prerequisite, Psy. 450 or Psy. 451 or Psy. 452. Experimental and theoretical background, introduction to major contemporary points of view.
- Psy. 463. Special Diagnostic Techniques.** 3 credits. Prerequisite, Psy. 205 or consent of instructor. Evaluation procedures and assessment devices for use with exceptional children. (Also listed as Sp. Ed. 463.)
- Psy. 467. Maladjusted Children.** 3 credits. Prerequisites, Psy./Sp. Ed. 457 and Psy. 205 or consent of instructor. Discovery and treatment of the severe socially maladjusted child; the home, school, and community in relation to the child's mental health; relevant resources and research. (Also listed as Spec. Ed. 467.)
- Psy. 469. Advanced Psychological and Educational Statistics.** 4 credits. Prerequisite, Psy./Ed. 362. Inferential aspects of statistics are emphasized. Application of tests of significance and correlation techniques to research problems; the design of experiments. (Also listed as Ed. 469.)
- Psy. 471. Vocational Development Theory.** 3 credits. Prerequisite, Ed. 358 with Psy. 444 recommended. Theories of occupational choice, career patterning, and methods of studying occupations and occupational information are examined in relation to counseling. (Also listed as Ed. 471.)
- Psy. 473. Experimental Psychology of Thinking.** 4 credits. Prerequisite, Psy. 362. Three lectures and one two-hour laboratory.

- Concept formation, cognitive styles, intelligence and its measurement, creativity, and artificial intelligence.
- Psy. 475. Instrumentation of Psychology.** 2 credits. One lecture and one two-hour laboratory. Prerequisite, one course in experimental psychology. Design, construction, and calibration of apparatus for presentation of stimuli and recording of responses.
- Psy. 476. Comparative Psychology.** 4 credits. Three lectures and one two-hour laboratory. Prerequisites, Psy. 201 and Zool. 152 or consent of instructor. Invertebrates and vertebrates; laboratory and field observation.
- Psy. 477. Neurological Basis of Behavior.** 4 credits. Prerequisite, Psy. 378 or consent of department chairman.
- Psy. 478. Experimental Physiological Psychology.** 4 credits. Three lectures and one two-hour laboratory. Prerequisites, Psy. 378, Psy. 477, Zool. 372 or consent of department chairman. Problems, methods, and techniques of neuro-psychology and the physiology of human and infrahuman behavior patterns.
- Psy. 487. Group Processes and Leadership.** 3 credits. The role of group processes in improving human relations in group situations. Group leadership in interpersonal relations, climate making, role playing and group discussions. (Also listed as Ed. 487.)
- Psy. 488. Group Dynamics and the Individual.** 3 credits. Prerequisite, Psy./Ed. 487 or consent of instructor. A human interaction laboratory to facilitate the development of self-insight, understanding of the basis of interpersonal operations in groups and the acquisition of skills in diagnosing individual group and organizational behavior. (Also listed as Ed. 488.)
- Psy. 495. Undergraduate Honors Thesis.** 4 to 6 credits. Psychology Honors students only. Each honors candidate will have a three-member committee from the Department of Psychology appointed to supervise the selection of a research problem, the conduct of inquiry, course substitutions, etc. Upon recommendation of the committee, the Honors Thesis will be substituted for other required course(s) in psychology.
- Psy. 496. Individual Study.** 2-6 credits. Prerequisite, g.p.a. of 3.0 or above in Psychology and accumulative g.p.a. of 3 or above, and the approval of the instructor and the Chairman of the Department.
- Psy. 499. Seminar in Psychology.** 1-6 credits. The investigation and discussion of psychological issues of common interest to the group enrolled.
- Psy. 552. Human Growth and Development, Advanced.** 3 credits. Prerequisite, Psy. 309 or consent of instructor. Emphasis on theories and research methodology.
- Psy. 558. Practicum in School Psychology.** 1-15 credits. Prerequisite, department approval. Taken until a total of 15 credits have been earned. Individually arranged on campus and approved in school settings.
- Psy. 559.1. E, I, or S.C., Practicum in Counseling.** 2 credits. To be taken concurrently with Psy. 560. Prerequisite, consent of department chairman. Introduction to the practice of counseling. Observations, role playing, and analysis of interview behaviors. In registering for this course, indicate the level of assignment (E, Elementary; I, Institutional; or SC, Secondary-College). (Also listed as Ed. 559.1)
- Psy. 559.2, E, I, or S.C. Practicum in Counseling.** 4 credits. Prerequisites, Psy. 560 and Ed./Psy. 559.1. In registering for this course, indicate the level of assignment. (E, Elementary; I, Institutional; or SC, Secondary-College.) (Also listed as Ed. 559.2)
- Psy. 560. Theories of Counseling.** 4 credits. Prerequisite, Psy. 453.
- Psy. 561. Group Counseling.** 3 credits.
- Psy. 562. Theories of Learning.** 5 credits. Prerequisite, Psy. 452 or consent of instructor.
- Psy. 563. Theories of Perception.** 4 credits. Prerequisite, Psy. 450 or consent of instructor.
- Psy. 564. Individual Testing: Child.** 5 credits. Prerequisites, Psy. 205, Psy./Ed. 362; and Psy. 444.
- Psy. 565. Individual Testing: Adolescent and Adult.** 5 credits. Prerequisites, Psy. 205, Psy./Ed. 362, and Psy. 444.
- Psy. 566. Personality Assessment.** 5 credits. Prerequisite, Psy. 444, Psy. 453, Psy. 564, and Psy. 565.
- Psy. 567. Theories of Motivation.** 4 credits. Prerequisite, Psy. 451 or Psy. 452.
- Psy. 568, 569. Experimental Design.** A two quarter sequence; 3 credits each quarter. Prerequisite, Psy. 469.
- Psy. 571. Family Counseling.** 3 credits. Prerequisite, Psy./Ed. 487 and consent of instructor.
- Psy. 583.1, 583.2, 583.3. Supervised Field Experience in School Psychology.** 1 credit each quarter. Prerequisite, graduate in School Psychology.



- Psy. 584.1, 584.2, 584.3. Supervised Field Experience in Counseling. 1 credit each quarter. Prerequisite, all course work for M.Ed. or all work except Psy. 600 and at least half-time employment as counselor.
- Psy. 590.1, 590.2, 590.3. Current Issues in Psychology. 3 credits each quarter.
- Psy. 595. Seminar in Psychopathology. 1-3 credits. Prerequisite, approval of department chairman. Major disorders are reviewed and discussed from various theoretical views, including biological, psychoanalytical and learning theories.
- Psy. 596. Individual Study. 1-6 credits. Prerequisite, approval of Department Chairman.
- Psy. 598.1, 598.2, 598.3. Seminar in Counseling and School Psychology. 1 credit each quarter. Prerequisite, departmental approval.
- Psy. 599.1, 599.2, 599.3. Seminar in Psychology. 1 credit each quarter.
- Psy. 600. Thesis. 1 to 6 credits.

## Radio-Television

(See Speech and Drama)

## Recreation

(See Physical Education)

## Rhetoric and

## Public Address

(See Speech and Drama)

## Safety Education

(See Physical Education)

# Science

### (T/Ed) SCIENCE MAJOR (BROAD AREA)

Qualifies for junior high science teaching. For senior high science teaching see additional work outlined to qualify for specific fields. For elementary teaching see page —.

Major (65 credits)	<i>Credits</i>
Bio. Sci. 110, 111, 112, Biology.....	12
<sup>1</sup> Physics 161, 162, 163, Elementary Physics or Physics 181, 182, 183, General Physics .....	12 or 15
Chem. 101 and 101.1, Survey of General Chemistry or Chem. 181 and 181.1, General Chemistry .....	5
Geol. 350 or 145 .....	3 or 5
Sci. Ed. 324, Science Education in the Secondary Schools .....	3
Electives from Science or Mathematics (see below) .....	25 to 30
	65

Science majors may earn minimum-level endorsement by suitable choice of electives as follows:  
 For Biology—include Bot. 360 or Zool. 372 and Bio. Sci. 370, Bio. Sci. 365, Bio. Sci. 470.  
 For Chemistry—include Chem. 103, 103.1 (or 185) and 251, 362.  
<sup>2</sup>For Physics—include Physics 281, 282, 283.  
 For Mathematics see Mathematics Major and/or Mathematics Minor.

<sup>1</sup>Prerequisites, three semesters of high school algebra or Math. 163, and one semester of high school trigonometry or Math. 165.  
<sup>2</sup>Prerequisites, Physics 181, 182, 183.

### (T/Ed) SCIENCE MINOR ELEMENTARY

Minor (20 credits)	<i>Credits</i>
A Physical Science with laboratory.....	4 or 5
A Biological Science with laboratory.....	4 or 5
Sci. Ed. 322, Science Education in Elementary School .....	3
Elective from Science or Science Education .....	7 or 9
	20

### SCIENCE EDUCATION COURSES

- Sci. Ed. 322. Science Education in the Elementary School. 3 credits. Techniques, selection of materials and appropriate subject materials and appropriate subject matter for the various grade levels, demonstrations and experiments for use in classroom science teaching.
- Sci. Ed. 324. Science Education in the Secondary Schools. 3 credits. Information, techniques and materials appropriate for teaching science at the secondary level; demonstration and experiments for use in teaching.
- Sci. Ed. 424. Methods and Materials in Teaching Biology. 4 credits. Prerequisite, 30 credits in biology and Sci. Ed. 324 or permission. Emphasis on new approaches in teaching biology. Two lectures and four hours of laboratory a week.

- Sci. Ed. 440. **Workshop.** 1-6 credits.
- Sci. Ed. 440COE **Workshop. Conservation and Outdoor Education.** 5 credits. Summer only. See summer session catalog.
- Sci. Ed. 442, 443. **Laboratory Experience in Teaching Science.** 2 credits each course. Prerequisite, 15 credits in the science involved, and permission.
- Sci. Ed. 496, 497. **Individual Study.** 2-4 credits each course. Open to advanced students with the consent of the staff members in charge.

**(T/Ed) SCIENCE-MATHEMATICS MAJOR (ELEMENTARY)**

Open only to elementary school teachers. May not be used for 30-credit area in a Three-Area Program (30-20-20), but may be used for 30 credits from outside majors required by Special Education and Early Childhood Education majors. For secondary

teaching, expand and convert to one of the other major patterns.

	<i>Credits</i>
Major (45 credits)	
Math. 164.1 and Math. 164.2, Introduction to Mathematics .....	8
Geol. 145, Physical Geology and either Chem. 101 and 101.1, Elementary College Chemistry or Physics 161, Elementary Physics	
or	
Physics 101, 102, Introduction to Physics and Physics 103, General Physical Science	10-11
Bio. Sci. 110, 111, 112, Biology or Bio. Sci. 104, Bot. 211, Zool. 211.....	12-14
Sci. Ed. 322, Science Education in the Elementary Schools .....	3
Electives .....	9-12
One of the following options:	
Mathematics .....	9-12
Bio. Sci., Bot., and/or Zool....	9-12
Geology and Astronomy.....	9-12
Chemistry .....	9-12
Physics .....	9-12
	45

## Social Science

**(A/S) SOCIAL SCIENCE MAJOR**

	<i>Credits</i>
Major (45 to 60 credits)	
Anthro. 107, General Anthropology, or Soc. 107, Principles of Sociology .....	4
Soc. 145, Social Problems or Soc. 450, Social Theory II .....	4-5
Econ. 244, Introduction to Economics.....	5
Pol. Sci. 244, American Government.....	5
Pol. Sci. 384, International Politics.....	5
Hist. 348, Economic History of the United States .....	5
Electives chosen from Business Education, Economics, Geography, History or Sociology .....	16-31
	45-60

**(T/Ed) SOCIAL STUDIES-LANGUAGE ARTS MAJOR**

Qualifies for teaching social studies and language arts (English) in junior high schools. For senior high teaching the area to be taught (either English or History) must be expanded to a major level. For elementary teaching, see page —.

Students completing this major are required to demonstrate by written examination under the supervision of the Department of English their competence in English grammar and composition. These examinations should be taken no earlier than two quarters preceding the student teaching assignment.

	<i>Credits</i>
Major (65 credits)	
The Junior High School Area (3 credits)	
Psy. 447, Psychology of Adolescence and Guidance .....	3
The Language Arts Area (29 credits)	
Eng. 105, Introduction to Fiction.....	3
Eng. 106, Introduction to Poetry.....	3
Eng. 344, Advanced Composition.....	3
Eng. 445, Approaches to English Grammar	3
Eng. 428, Teaching Composition and Litera-	

ture in the Secondary School	
or	
Ed. 420, Teaching the Language Arts.....	4
Ed. 423, Reading Problems in the Secondary School	
or	
Ed. 424, Reading in the Contents Field...	3
Lib. 420, Reading Materials for Adolescents	3
Sp. 243, Interpretive Reading .....	4
Sp. 420, Teaching Speech in the Elementary School	
Electives from language arts (English, Speech, Journalism) .....	3
The Social Science Area (22 credits)	
(Students should elect Geog. 100 and either Soc. 107, Anthro. 107, or Pol. Sci. 145 in General Education.)	
Hist. 143 and 144, History of the United States .....	10
Hist. 154, Western Civilization III....	5
Hist. 421, Methods and Materials in History, Secondary .....	2
Geog. 245, Economic Geography or Geog. 352, Geography of Anglo-America .....	5
Elect at least 9 hours from the following:	11
Econ. 244, Principles of Economics. 5	
Econ. 251 and 252, Principles of Economics .....	8
Pol. Sci. 244, American Government 5	
Pol. Sci. 466, Current Issues of American Democracy .....	3
Soc. 107, Principles of Sociology..	4
Soc. 145, Social Problems.....	5
Soc. 360, The Community.....	3
Geog. 350, Conservation of Natural Resources .....	3
Geog. 371, Geography of Europe..	5
Geog. 472, Geography of the Soviet Union .....	3
Geog. 475, Geography of Asia....	5
	65

**(T/Ed) SOCIAL SCIENCE MAJOR  
(BROAD AREA)**

Qualifies for secondary social science teaching. Junior high teachers should accompany this with an English major or minor to prepare for teaching in "block of time" programs. For elementary teaching, see page —.

Major (60 credits)	<i>Credits</i>
Hist. 143, 144, History of the United States	10
Hist. 153, 154, Western Civilization . . . .	10
Soc. 107, Principles of Sociology, or Anthropology 107, General Anthropology . .	4
Pol. Sci. 244, American Government . . . . .	5
Econ. 244, Introduction to Economics, or 445, Current Economics . . . . .	3 or 5
Geog. 352, Geography of Anglo America . .	5
Soc. Sci. 421, Methods and Materials in the Social Sciences—Secondary or Hist. 421, Methods and Materials in History—Secondary . . . . .	2
Electives in upper division courses in at least two areas . . . . .	20-22
	60

**(T/Ed) SOCIAL SCIENCE MAJOR  
(ELEMENTARY)**

Open only to elementary school teachers. May not be used for 30-credit area in a Three-Area Program (30-20-20), but may be used for 30 credits from outside majors required by Special Education and Early Childhood Education majors. For secondary teaching, expand and convert to one of the other major patterns.

Major (45 credits)	<i>Credits</i>
Hist. 143, 144, History of the United States	10
Hist. 153, 154, Western Civilization . . . . .	10

Soc. 107, Principles of Sociology, or Anthropology 107, General Anthropology . .	4
Geog. 245, Economic Geography . . . . .	5
Geog. 350, Conservation of Natural Resources . . . . .	3
Econ. 244, Introduction to Economics . . .	5
Pol. Sci. 244, American Government . . . .	5
Soc. Sci. 420, Methods and Materials in the Social Sciences—Elementary . . . . .	3
	45

**SOCIAL SCIENCE COURSES**

- Soc. Sci. 420. Methods and Materials in the Social Sciences—Elementary. 3 credits.
- Soc. Sci. 421. Methods and Materials in the Social Sciences—Secondary. 2 credits. Prior completion of Ed. 314 recommended.
- Soc. Sci. 521. Social Science Methods and Materials. 2 credits. Prerequisite, B.A. degree with graduate guided electives in the social sciences and consent of Department Chairman. For experienced teachers.

**Social Studies-  
Language Art Junior  
High Broad Area**

(See Language Arts)

**Sociology**

Professor: Sessions.

Associate Professors: Hawkins, Olson, Peterson.

Assistant Professors: Benson, Converse.

Lecturer: Rolcik.

The Sociology Department, through its curriculum, advising, and special events provides the following general functions for the college: A contribution to liberal education, preparation for graduate training in Sociology, and general preparation for the helping services.

**(T/Ed) SOCIOLOGY MAJOR**

Secondary teachers must accompany this with a major in some other field in which a full-time teaching assignment can be expected. Endorsement will be for teaching sociology and the second field.

Major (45 credits)	<i>Credits</i>
Anthro. 107, General Anthropology . . . . .	4
Soc. 107, Principles of Sociology . . . . .	4
Soc. 145, Social Problems . . . . .	5
Soc. 350, Social Theory I . . . . .	4
Soc. 450, Social Theory II . . . . .	4
Soc. 355, Culture and Personality . . . . .	3
Soc. 425, Sociology of Education . . . . .	4
Complete one of the following: . . . . .	3-4

Math. 311 . . . . .	3
Ed. 362 . . . . .	4
Bus. Ad. 246 . . . . .	3
Electives in sociology . . . . .	13-14
	45

**(T/Ed) SOCIOLOGY MINOR**

Minor (20 credits)	<i>Credits</i>
Soc. 107, Principles of Sociology . . . . .	4
Soc. 145, Social Problems . . . . .	5
Electives in sociology . . . . .	11
	20

**(A/S) SOCIOLOGY MAJOR**

Major (45 to 60 credits)	<i>Credits</i>	
Anthro. 107, General Anthropology.....	4	
Soc. 107, Principles of Sociology.....	4	
Soc. 145, Social Problems.....	5	
Soc. 350, Social Theory I.....	4	
Soc. 355, Culture and Personality.....	3	
Soc. 450, Social Theory II.....	4	
Soc. 465, Methods of Social Research.....	3	
Complete one of the following:.....	3-4	
Math. 311.....	3	
Ed. 362.....	4	
Bus. Ad. 246.....	3	
Electives from Sociology.....	10	
Electives to be chosen with guidance from the following:.....	5-19	
Phil. 207, Intro. to Philosophy....	5	
Phil. 260, Intro. to Logic.....	3	
Psy. 453, Theories of Personality..	5	
Geog. 481, Urban Geography.....	5	
Hist. 486, European Intellectual and Cultural Hist. Since 1815.....	5	
German 251, 252, 253, or French 251, 252, 253.....	5	
	45-60	

**(A/S) SOCIOLOGY MINOR**

Minor (15 to 30 credits)	<i>Credits</i>	
Soc. 107, Principles of Sociology.....	4	
Soc. 145, Social Problems.....	5	
Electives in Sociology to complete a minor	6-21	
	15-30	

**SOCIOLOGY COURSES**

- Soc. 107. **Principles of Sociology.** 4 credits.
- Soc. 145. **Social Problems.** 5 credits. Social and personal disorganization; crime and delinquency, racial conflict, family disorganization, mental and physical deficiencies.
- Soc. 210. **Culture of Poverty.** 3 credits. The culture associated with poverty in contemporary U.S., its place in the wider society.
- Soc. 250. **Industrial Sociology.** 5 credits. Organization of work in modern society, its effects upon human activity.
- Soc. 260. **Social Interaction.** 5 credits. Face-to-face contact, communication and social psychological features of groups.
- Soc. 265. **Minority Groups.** 3 credits. Racial, religious, ethnic, and other minority groups as subcultural solutions to human problems.
- Soc. 270. **Social Organization.** 5 credits. Attempts by human societies to regulate and organize behavior; a study of the variety and nature of organizational forms.
- Soc. 346. **Crime and Delinquency in the United States.** 5 credits. Prerequisite, Soc. 107. Nature, extent, forces in causation, trends, factors, and means of punishment and treatment of crime and delinquency.

- Soc. 348. **Marriage and Families.** 5 credits. Marriage as a social institution, courtship and family interaction.
- Soc. 350. **Social Theory I.** 4 credits. Sociology in the 19th and early 20th centuries.
- Soc. 355. **Culture and Personality.** 3 credits. Personality as a function of cultural organization in a number of different societies. (Same as Anthro. 355. Students may not receive credit in both.)
- Soc. 360. **The Community.** 3 credits. Various types of human communities, historical and contemporary.
- Soc. 367. **Sociology of Religion.** 3 credits. The social organization of religious experience in small and large societies and the relationship of religious beliefs to human life.
- Soc. 370. **Social Change.** 5 credits. Social processes, institutional development and revolutions.
- Soc. 380. **Demography and Ecology.** 5 credits. Relationship of birth rate, death rate, and population size to society; social organization in its spatial context.
- Soc. 400. **Social Institutions.** 5 credits. Origins, developments, and dynamics.
- Soc. 415. **Urban Sociology.** 4 credits. The city as an urban community, its social organization and institutions.
- Soc. 425. **Sociology of Education.** 4 credits. Impact of culture on schools. Examination of contemporary social trends and relationships among church, school, government and to provide a standard sociological course reflecting the contributions of sociology to the area of education in its broadest sense.
- Soc. 440. **Workshop.** 1 to 6 credits.
- Soc. 445. **Social Stratification.** 3 credits. Prerequisite, Soc. 107. Major theories of class, status, and power; empirical studies in social class stratification.
- Soc. 448. **Political Sociology.** 4 credits. Social bases of political behavior, effects of power upon society, organization of politics in groups.
- Soc. 450. **Social Theory II.** 4 credits. Prerequisite, Soc. 350. The concepts of major contemporary sociologists of the recent past.
- Soc. 455. **Collective Behavior.** 5 credits. Crowds, mobs, public, mass society, social movements.
- Soc. 465. **Methods of Social Research.** 3 credits. Prerequisites, Soc. 107 plus 10 additional credits in Sociology or permission of the instructor.
- Soc. 470. **Contemporary Social Thought.**

4 credits. Prerequisites, Soc. 450 or permission of instructor. Prospects for sociological theory.

**Soc. 475. Communication and Human Relations.** 3 credits. Effects of human relationships on communication characteristics, and vice-versa, including cultural and social factors.

**Soc. 481. Philosophy of the Social Sciences.** 4 credits. Same as Phil. 481. Students may not receive credit in both.

**Soc. 495. Research Seminar in Sociology.** 2 credits. Prerequisite, by invitation.

**Soc. 496. Individual Study.** 2-3 credits. Prerequisite, ten hours or more in sociology.

## Southeast Asian Studies

This Program offers an opportunity to supplement the regular departmental major through an interdisciplinary area study. By choosing elective courses totaling at least 20 credit hours from those listed in the Program, the student will graduate, not only with the requisite major and minors, but also with certification of having completed the Southeast Asian Studies Program. Beginning with the academic year 1969-1970, the Program will include special seminars and lectures.

Students interested in the Program should consult the Director.\*

Anthro. 344, Ethnology of Asia . . . . .	4
Anthro. 448 (Pol. Sci. 448), Non-Western Political and Economic Organization . . .	4
Art 459, Art of Southeast Asia . . . . .	2

Econ. 484, Economic Development . . . . .	4
Geog. 484, Geography of Southeast Asia . .	2
Geog. 475, Geography of Asia . . . . .	5
Pol. Sci. 475, Communism in Developing Areas . . . . .	4
Pol. Sci. 485, International Relations in the Far East and Southeast Asia . . . . .	4

---

\*Dr. Robert Yee, Southeast Asian Studies Program Director, is on leave of absence until June, 1969. Inquire at the Office of the Assistant Dean of Arts and Sciences.

## Special Education

(See Education)

# Speech and Drama

Professor: Ericson.

Associate Professors: Dunnington, Egan, Evans, Howell.

Assistant Professors: Garrett, Hoglin, LaDue, Leinaweaver, Lewis, Porter, Smith, Wensley.

Lecturers: Johnson, Splett.

Courses in the Department of Speech and Drama are designed to give intensive instruction in three major related fields: Rhetoric and Public Address, Speech Pathology and Audiology, and Theatre and Drama. A minor program is offered in Radio and Television. Emphasis is placed both on professional skills and on liberal arts instruction.

Rhetorical studies include both the study of rhetorical theory and the study of public speaking. The former, rhetoric, deals with principles of verbal analysis and expression; public address deals with rhetorical discourse as social behavior. The courses prepare students for careers in professions requiring the ability to organize, substantiate, and express ideas effectively. Studies in rhetoric and public address are grounded in the central humanistic tradition of liberal education.

The primary purpose of the Speech Pathology and Audiology Program is to prepare students for clinical speech and public school speech correction positions. The program is devised to offer the student sufficient academic work and clinical experiences to enable him to perform his skills with competence. Opportunities are presented to the student to elect courses from supportive areas in preparation for meeting the requirements for the Certificate of Clinical Competence of the American Speech and Hearing Association.

The Theatre and Drama program is planned to provide students with academic courses in the theatre arts and practice and performance in acting and dramatic production. Students are prepared for careers as teachers and performers in the theatre.

## (A/S) THEATRE AND DRAMA MAJOR

Major (50 to 51 credits)	<i>Credits</i>		
Sp. 105, Intro. to Theatre Art... 3	} GROUP I		
Sp. 107, Intro. to Dramatic Lit... 3		6 Required	
Sp. 363.1, 363.2, 363.3, History of Theatre . . . . . 9	} GROUP II		
Eng. 351, 352, 353, Shakespeare or Eng. 361, 362, 363, Drama of the English Renaissance . . . . . 9		6 Required	
Sp. 371, Greek and Roman Drama 3	} GROUP III		
Sp. 373, American Drama . . . . . 3		6	
Sp. 470, Recent Plays . . . . . 3	} GROUP IV		
Sp. 474, British Drama . . . . . 3		9	
Sp. 475, Cont. European Drama . . 3	} Required		
Sp. or Eng. 479, Restoration and 18th Century Drama . . . . . 3		6	
Sp. 266, Theory of Play Production 3	} GROUP V		
Sp. 267, Stagecraft . . . . . 4		12	
Sp. 268, Stage Design and Lighting . . . . . 4		} Required	
Sp. 269, Basic Acting . . . . . 3			3
Sp. 369, Advanced Acting . . . . . 3	} GROUP VI		
Sp. 429, Advanced Directing . . . 3		} Required	
Art 150, Drawing . . . . . 3			} 11-12
Art 354, Costume Design . . . . . 3		} Required	
Sp. 243, Interpretive Reading . . . 4			
Sp. 312, Creative Dramatics . . . . 4		} 2	
Phil. 346, Aesthetics . . . . . 5	} 3		
Hum. 150, Intro. to the Film . . . 2			
Eng. 491, Literary Criticism . . . . 3			

50-51 Total

## (A/S) THEATRE AND DRAMA MINOR

Minor (21 credits)	<i>Credits</i>
Sp. 105, Intro. to Theatre Art . . . . . 3	} Required
Sp. 107, Intro. to Dramatic Literature . . . . . 3	
Eng. 351, 352, 353, Shakespeare or Eng. 361, 362, 363, Drama of the English Renaissance . . . . . 6	} (Required)
Sp. 371, Greek and Roman Drama or Sp. 373, American Drama or Sp. 479, Restoration and 18th Century Drama or Sp. 470, Recent Plays or Sp. 474, British Drama or Sp. 475, Cont. European Drama . . . . . 6	
Sp. 363.1, 363.2, 363.3 History of Theatre . . . . . 6	} (Required)
	21

## (A/S) RHETORIC AND PUBLIC ADDRESS MAJOR

Major (60 credits)	<i>Credits</i>
Sp. 101, Great Speakers and Issues . . . . . 4	} 4
Sp. 201, Public Speaking: Practice & Criticism . . . . . 4	
Sp. 202, Independent Reading . . . . . 3	} 4
Sp. 250, Argumentation . . . . . 4	
Sp. 251 or 252 or 253, Discussion, or Debate, or Exposition . . . . . 4	} 4
Sp. 340, Classical Rhetoric . . . . . 4	
Sp. 341 or 342, Medieval and Renaissance Rhetoric, or Modern Rhetoric . . . . . 4	} 4
Sp. 345, Advanced Public Speaking . . . . . 4	

Sp. 350, Persuasion .....	4
Sp. 441, Speech Criticism.....	5
Sp. 451, Greek and Roman Public Address	5
Sp. 452, British Public Address, or	
Sp. 453, American Public Address.....	5
Sp. 497, Seminar .....	4
Electives which may be taken outside the Department to develop a unified course of study .....	6-8
<hr/>	
	60-62

**(A/S) RHETORIC AND PUBLIC ADDRESS MINOR**

Minor (20 credits)	<i>Credits</i>
Sp. 201, Public Speaking: Practice and Criticism .....	4
Sp. 250, Argumentation .....	4
Sp. 340, Classical Rhetoric .....	4
Electives as approved .....	8
<hr/>	
	20

**(A/S) RADIO AND TELEVISION MINOR**

Minor (15 to 30 credits)	<i>Credits</i>
Sp. 141, Voice and Articulation.....	3
R-TV 207, Introduction to Radio and Television Broadcasting .....	3
R-TV 215, Elementary Radio and Television Production .....	3
R-TV 315, Advanced Radio and Television Production .....	3
R-TV 409, Radio and Television Project..	1
R-TV 450, Radio and Television in Today's World .....	3
Electives to complete minor shall be selected in consultation with department chairman	0-14
<hr/>	
	16-30

**(T/Ed) RADIO AND TELEVISION MINOR**

Minor (21 credits)	<i>Credits</i>
Sp. 201, Public Speaking <i>or</i>	
Sp. 243, Interpretive Reading.....	4
Sp. 282, Phonetics .....	3
R-TV 207, Intro. to Radio and TV Broadcasting .....	3
R-TV 215, Elementary Radio and TV Production .....	3
R-TV 314, Radio and TV Announcing....	3
R-TV 315, Advanced Radio and TV Production .....	3
R-TV 409, Radio and TV Project.....	1
R-TV 410, Radio and TV Project.....	1
<hr/>	
	21

This minor is acceptable only for secondary teachers.

**(A/S) SPEECH PATHOLOGY AND AUDIOLOGY MAJOR**

Major (45 credits)	<i>Credits</i>
Sp. 277, Introduction to Speech Correction	3
Sp. 282, Phonetics .....	3
Sp. 290, Anatomy of the Speech and Hearing Mechanisms .....	4
Sp. 364, Stuttering .....	4

Sp. 365, Audiology .....	4
Sp. 376, Articulation .....	4
Sp. 388, Clinical Practicum .....	2
Sp. 389, Clinical Practicum .....	2
Sp. 467, Audiometry .....	4
Sp. 491, Diagnostic Methods .....	4
Electives to be chosen from the following courses: Sp. 362, 381, 420, 445, 455, 460, 465, 471, 480, 499.....	11
<hr/>	
	45

**(T/Ed) SPEECH PATHOLOGY AND AUDIOLOGY MAJOR (SPEECH THERAPY)**

**ELEMENTARY AND SECONDARY**

Qualifies for speech pathology and audiology (therapy) work at both elementary and secondary levels. For endorsement to do regular classroom teaching at either level, student must qualify in another area.

Major (45 credits)	<i>Credits</i>
Sp. 277, Introduction to Speech Correction	3
Sp. 282, Phonetics .....	3
Sp. 290, Anatomy of the Speech and Hearing Mechanisms .....	4
Sp. 365, Audiology .....	4
Sp. 376, Articulation .....	4
Sp. 364, Stuttering .....	4
Sp. 467, Audiometry .....	4
Sp. 491, Diagnostic Methods .....	4
*Sp. 388, 389, Clinical Practice.....	4
Elect from the following: (11 credits)...	11
Sp. 381, Cleft Palate .....	2
Sp. 445, Psychology of Speech....	4
Sp. 455, Rehabilitation of Hard of Hearing .....	4
Sp. 460, Childhood Language Disorders .....	4
Sp. 465, Hearing and Communications .....	4
Sp. 471, Voice Disorders .....	4
Sp. 480, Aphasia .....	3
Sp. 499, Advanced Anatomy and Neurology of Speech.....	4
<hr/>	
	45

\*70 clock hours of clinical practice will be required per course (388, 389, 390).

**(T/Ed) SPEECH AND DRAMA MAJOR**

**ELEMENTARY OR JUNIOR HIGH**

Major (45 credits)	<i>Credits</i>
Sp. 105 or 266, Introduction to Theatre or Theory of Play Production.....	3
Sp. 201, Public Speaking: Practice and Criticism .....	4
Sp. 243, Interpretive Reading .....	4
Sp. 277, Introduction to Speech Correction	3
Sp. 312, Creative Dramatics .....	4
Sp. 362, Practice in Creative Dramatics....	4
Sp. 420, Teaching Speech in the Elementary School .....	3
Sp. 429 or 445, Directing or Psychology of Speech .....	3 or 4
Sp. 446, Oral Interpretation of Children's Literature .....	5

Sp. 472, Children's Theatre .....	4
Electives from among the following recom- mended courses: .....	7 or 8
Sp. 251, Discussion; Sp. 253, Exposit- tion; Sp. 269, Acting; Sp. 270, Costume and Makeup; Sp. 282, Phonetics. ....	45

**(T/Ed) SPEECH AND DRAMA  
MAJOR  
SECONDARY ONLY**

Secondary teachers should accompany this with a major or minor that will prepare them to teach in a related field (e.g. English).

For elementary teaching, see page —.

Major (45 credits)	<i>Credits</i>
Sp. 105 or 107, Intro. to Drama or Intro. to Theatre .....	3
Sp. 201, Public Speaking: Practice and Criticism .....	4
Sp. 243, Interpretive Reading .....	3
Sp. 251 or 252, Discussion or Debate.....	4
Sp. 277, Intro. to Speech Correction .....	3
R-TV 215, Elementary Radio-TV Produc- tion .....	3
Sp. 428, Teaching Speech and Drama in the Secondary Schools .....	5
Approved upper division electives in Speech and Drama .....	20
	45

(All majors who expect to be endorsed for job placement in areas which involve speech or drama activity must have a record of practical participation.)

**(T/Ed) DRAMA MINOR  
ELEMENTARY OR JUNIOR HIGH**

Minor (20 credits)	<i>Credits</i>
Sp. 266 or 367, Play Production or Stage- craft .....	4
Sp. 269, Basic Acting .....	3
Sp. 312, Creative Dramatics .....	4
Sp. 362, Practice in Creative Dramatics... ..	4
Sp. 420, Teaching Speech in the Element- ary School .....	3
Speech Electives .....	2
	20

**(T/Ed) SPEECH MINOR  
ELEMENTARY OR JUNIOR HIGH**

Minor (19 credits)	<i>Credits</i>
Sp. 201, Public Speaking: Practice and Criticism .....	4
Sp. 251 or 253, Discussion or Exposition.. ..	4
Sp. 277, Introduction to Speech Correction ..	3
Sp. 420, Teaching Speech in the Element- ary School .....	3
Sp. 446, Oral Interpretation of Children's Literature .....	5
	19

**(T/Ed) SPEECH MINOR  
SECONDARY**

Minor (20 credits)	<i>Credits</i>
Sp. 243, Interpretive Reading or R-TV 215, Elem. Radio-TV Production... ..	3-4

Sp. 345, Advanced Public Speaking or 250, Argumentation or 251, Discussion or 252, Debate .....	4
Sp. 428, Methods: Secondary School Teach- ing .....	5
Electives from upper division Speech courses .....	7-8
	20

**(T/Ed) DRAMA MINOR  
SECONDARY**

Minor (22 credits)	<i>Credits</i>
Sp. 107, Introduction to Dramatic Litera- ture .....	3
Sp. 266, Theory of Play Production.....	3
Sp. 363.1, 363.2, 363.3, History of The- atre (3 credits each).....	9
Sp. 267, Stagecraft .....	4
Sp. 429, Advanced Directing .....	3
	22

Senior high and junior high must accompany this with another endorsable area.

**SPEECH AND DRAMA COURSES  
General**

- Sp. 141. **Voice and Articulation.** 3 credits.  
Factors operative in producing voice for speech: areas, structures and their functions. Individual attention given to subclinical problems in voice and articulation.
- Sp. 243. **Interpretive Reading.** 4 credits.
- Sp. 282. **Phonetics.** 3 credits. American-English speech sounds. The use of the International Phonetic Alphabet.
- Sp. 420. **Teaching Speech in Elementary School.** 3 credits.
- Sp. 428. **Teaching Speech in the Secondary School.** 5 credits. Prerequisite, twenty credits in Speech and Drama, and the approval of the instructor.
- Sp. 440. **Workshop.** 1-6 credits.
- Sp. 443. **Advanced Oral Interpretation.** 3 credits. Analysis and reading of prose, poetry, and drama to project the logical and emotional meaning to an audience.
- Sp. 445. **Psychology of Speech.** 4 credits. Principles of psychology underlying therapy in speech and hearing; psychological factors in speech development. The relation of speech to personality development.
- Sp. 446. **Oral Interpretation of Children's Literature.** 5 credits. Story telling, oral reading and choral reading emphasis. Analysis, techniques; for classroom teachers, librarians, and others.
- Sp. 478. **Speech Correction and Classroom Teaching.** 3 credits. The nature of speech correction work and the demands it makes upon the classroom teacher.



- Sp. 496. **Individual Study.** 2 credits. Prerequisite, sufficient background in speech, drama, or speech and hearing to enable the student to carry on an individual project.
- Sp. 507. **Introduction to Graduate Study.** 3 credits.
- Sp. 596. **Individual Study.** 2-4 credits. May be repeated for credit to a maximum of twelve hours. Prerequisite, graduate status, consent of faculty member in charge.
- Sp. 600. **Thesis.** 1 to 6 credits.

## RADIO AND TELEVISION

- R-TV 207. **Introduction to Radio and Television Broadcasting.** 3 credits. History, growth, social and educational aspects; laws and policies, station and network organization, programming, the listener, standards of criticism, and comparison of broadcasting systems.
- R-TV 215. **Elementary Radio and Television Production.** 3 credits. Sources of materials, editing, microphone practice, critical evaluation.
- R-TV 310, 311, 312. **Practical Radio.** One credit each course. Experience in the college radio station.
- R-TV 314. **Radio and Television Announcing.** 3 credits. Prerequisites, R-TV 215, Speech 282 or consent of instructor. Basic techniques in radio and television announcing. Includes work in improving speech and operating broadcast equipment.
- R-TV 315. **Advanced Radio and Television Production.** 3 credits. Prerequisite, R-TV 215. Planning, writing, and production of documentary and dramatic programs; acting techniques and problems of direction. Three hours of lecture and three hours of laboratory per week.
- R-TV 409, 410, 411. **Radio and Television Project.** 1 credit for each quarter. Program planning and actual production.
- R-TV 420, 421, 422. **Practical Television.** 2 credits each quarter. Procedures for televising with closed circuit equipment. Techniques of camera operation and audio control engineering.
- R-TV 440. **Workshop.** 1-6 credits.
- R-TV 450. **Radio and Television in Today's World.** 3 credits. Role of the broadcast media, impact on the individual, the family, and other social institutions. Areas of responsibility.

## RHETORIC AND PUBLIC ADDRESS

- Sp. 100, 200, 300, 400. **Intercollegiate Forensics.** 1-2 credits. Open to all students who wish to participate in intercollegiate competition. Events include debate, oratory, extempore, impromptu, and oral interpretation. Meetings once a week, plus scheduled activities.
- Sp. 101. **Great Speakers and Issues.** 4 credits. Discussion and analysis of significant speeches from Classical, British and American public addresses.
- Sp. 201. **Public Speaking: Practice and Criticism.** 4 credits. Practice in selection, organization, and presentation. Attention also given to theory and practice of speech criticism.
- Sp. 202. **Independent Reading.** 3 credits. Prerequisite, Sp. 101 and 201. Historical, philosophical, and descriptive materials in the field of Rhetoric and Public Address.
- Sp. 250. **Argumentation.** 4 credits. Prerequisite, Sp. 201. Analysis, description and criticism of reasoned discourse.
- Sp. 251. **Discussion.** 4 credits. Principles and techniques of the several forms of public discussion.
- Sp. 252. **Debate.** 4 credits. Theory and practice of debate as a decision making process.
- Sp. 253. **Exposition.** 4 credits. Theory, practice, and criticism as applied to essentially informative speeches.
- Sp. 340. **Classical Rhetoric.** 4 credits. Rhetorical theory and practice from the the Greeks to Augustine.
- Sp. 341. **Medieval and Renaissance Rhetoric.** 4 credits. Prerequisite, Sp. 340. Rhetorical theory and practice from the time of St. Augustine to the beginning of the eighteenth century. Lectures, discussions, reading, and reports.
- Sp. 342. **Modern Rhetoric.** 4 credits. Prerequisite, Sp. 340. Rhetorical theory, practice and criticism from Renaissance to the present.
- Sp. 345. **Advanced Public Speaking.** 4 credits. Prerequisite, Sp. 201. Beyond Sp. 201, longer speeches, greater variety.
- Sp. 350. **Persuasion.** 4 credits. Prerequisites, Sp. 201 and 250. Role of persuasion in society, elements of human motivation, techniques and appeals of the persuader.
- Sp. 441. **Speech Criticism.** 5 credits. Theory and methodology in the description, analysis, and evaluation of rhetorical discourse.

- Sp. 451. **Greek and Roman Public Address.** 5 credits. Prerequisite, Sp. 441. Public address from the Greek democracy through the Patriotic Fathers.
- Sp. 452. **British Public Address.** 5 credits. Prerequisite, Sp. 441. The major speeches in Britain (1700-present) which reflect the fundamental historical issues and the work of significant British orators.
- Sp. 453. **American Public Address.** 5 credits. Prerequisite, Sp. 441. Public address and its impact on American history from the colonial time to the present.
- Sp. 497. **Seminar in Rhetoric and Public Address.** 4 credits. Open to advanced students.

### SPEECH PATHOLOGY AND AUDIOLOGY

- Sp. 176, 177, 178. **Corrective Practice.** One credit each quarter. Remedial work for college students who need help with individual speech problems.
- Sp. 277. **Introduction to Speech Correction.** 3 credits. Nature and cause of speech and hearing disorders.
- Sp. 290. **Anatomy of the Speech and Hearing Mechanisms.** 4 credits. Prerequisite or corequisite, Sp. 277. Basic anatomical processes.
- Sp. 364. **Stuttering Theory and Therapy.** 4 credits. Prerequisites, Sp. 277 and 290. Stuttering behavior, causes and developmental factors, therapy.
- Sp. 365. **Audiology.** 4 credits. Prerequisites, Sp. 277 and 290. Hearing mechanism, psychophysics of sound, common pathologies.
- Sp. 376. **Articulation.** 4 credits. Prerequisites, Sp. 277, 282, 290. Normal development of skills, factors, related to faculty development, problems of testing and therapy.
- Sp. 381. **The Cleft Palate.** 2 credits. Associated physiological, emotional, and speech disturbances; causes, techniques of correction (surgery or prosthetic), articulatory and voice problems.
- Sp. 388, 389, 390. **Clinical Practicum.** 2 credits each quarter. Prerequisites, Sp. 277, 282, and one of the following: Sp. 364, 365, or 376 plus permission of the instructor. Working with clinical cases under staff supervision. Requires approximately 6 hours of clinical activity per week.
- Sp. 445. **Psychology of Speech.** 4 credits. Psychological factors in speech development, relation of speech to personality development, relation of speech to personality development, learning principles which underlie therapy in speech and hearing.
- Sp. 455. **Rehabilitation of the Hard of Hearing.** 4 credits. Prerequisites, Sp. 365, 467. Auditory training, hearing aid evaluation, speech reading.
- Sp. 460. **Childhood Language Disorders.** 4 credits. Normal and delayed development of language skills in children; childhood aphasia. Diagnosis and remedial procedures.
- Sp. 465. **Hearing and Communication.** 4 credits. Psychophysical aspects.
- Sp. 467. **Audiometry.** 4 credits. Prerequisite, Sp. 365. Clinical methods for measuring auditory ability. Instrumentation for clinical and experimental procedures, practice in administering standard hearing tests.
- Sp. 471. **Voice Disorders.** 4 credits. Prerequisite, Permission of instructor. Functional and organic voice problems, including the laryngectomized; methods of therapy.
- Sp. 480. **Therapy for Aphasia.** 3 credits. Prerequisite, Sp. 277. Causes and manifestations of symbolic disorders; testing, therapy.
- Sp. 491. **Diagnostic Methods.** 4 credits. Prerequisite, four credits in Clinical Practicum or consent of instructor. Theory and practice in diagnostic testing.
- Sp. 492. **Seminar in Organic Speech Problems.** 4 credits. Prerequisite, 4 credits in Clinical Practicum. Cerebral palsy and other areas of needs and interest as expressed by participants; Exploration and discussion of the anatomical and neurological bases, the diagnosis and therapy for speech problems associated with the specific organic disorders.
- Sp. 499. **Advanced Anatomy and Neurology of Speech.** 4 credits. Prerequisite, permission of instructor.
- Sp. 555. **Psycholinguistics.** 4 credits.
- Sp. 563. **Seminar in Stuttering.** 4 credits.
- Sp. 567.1. **Seminar in Audiology.** 4 credits.
- Sp. 567.2. **Seminar in Audiometry.** 4 credits.
- Sp. 588.1, 588.2, 588.3. **Clinical Practicum.**

### THEATRE AND DRAMA

- Sp. 105. **Introduction to Theatre Art.** 3 credits.
- Sp. 107. **Introduction to Dramatic Literature.** 3 credits. Elements, form, and content; analysis of plays representing major eras, countries, types, and styles.
- Sp. 266. **Theory of Play Production.** 3 credits. The personnel, techniques, equipment, and materials of play production.
- Sp. 267. **Stagecraft.** 4 credits. Construction,

- painting and handling of scenery. Class meets 4 hours a week, two days for two hours each day. In addition, a minimum of 2 hours of production work per week is required outside of class.
- Sp. 268. **Stage Design and Lighting.** 4 credits. The function, equipment and materials of theatrical lighting. Fundamentals of scenic design.
- Sp. 269. **Basic Acting.** 3 credits. Theory and practice of character projection in improvisation and formal scenes.
- Sp. 270. **Theatre Makeup and Costuming.** 4 credits. The functions, history, techniques, and materials of these theatrical arts. In addition to the regular class meetings, participation in production work is required.
- Sp. 312. **Creative Dramatics.** 4 credits. Materials and techniques in creative dramatics. Lecture, reading, observation.
- Sp. 329. **Directing.** 3 credits. Basic theories and fundamentals of play direction.
- Sp. 362. **Practice in Creative Dramatics.** 4 credits. Prerequisite, Sp. 312. Application of principles and practices of creative dramatics. Guidance session emphasis.
- Sp. 363.1. **History of Theatre.** 3 credits. From primitive origins through the Elizabethan Era.
- Sp. 363.2. **History of Theatre.** 3 credits. From the Italian Renaissance through the Eighteenth Century.
- Sp. 363.3. **History of Theatre.** 3 credits. From 1800 to present.
- Sp. 369. **Advanced Acting.** 3 credits. Prerequisite, Sp. 269 and/or consent of instructor.
- Sp. 371. **Greek and Roman Drama.** 3 credits. Major playwrights and plays related to historical and social trends.
- Sp. 373. **American Drama.** 3 credits. Major works; economic, sociological and academic influences on the playwrights.
- Sp. 410. **Play Writing.** 4 credits. Fundamentals and practice in dramatic writing techniques and styles.
- Sp. 429. **Advanced Directing.** 3 credits. Prerequisite, Sp. 329.
- Sp. 444. **Oral Interpretation of Shakespeare.** 4 credits. Character and dialogue analysis of Shakespeare's plays; practice in reading blank verse aloud. Required performance.
- Sp. 470. **Recent Plays.** 3 credits. Since World War II.
- Sp. 473. **Children's Theatre.** 3 credits. Literature of children's theatre: plays of fantasy, legendary and real heroes, and modern realism considerations in play selection and in production with a child cast and with an adult cast in producing theatre for children. Lecture, readings, laboratory.
- Sp. 474. **British Drama.** 3 credits. Major works from 1800 to the present.
- Sp. 475. **Continental European Drama.** 3 credits. The major plays and playwrights from German Romanticism to the present.
- Sp. 479. **Restoration and Eighteenth Century Drama.** 3 credits. Principal tragedies and comedies, 1660-1800. (Eng. 479 and Sp. 479 are the same course. Students may not receive credit for both.)
- Sp. 498. **Seminar in Theatre and Drama.** 2-4 credits. Problem analysis, research, and discussion.



# Technology and Industrial Education

Associate Professors: Bakke, Frye, Sogge.

Assistant Professors: Brunner, Dudley.

The curricula of the Department falls into two general categories: Industrial Technology and Industrial Education.

The four-year Industrial Technology curriculum prepares students for employment in technical positions in industry. The major requires an emphasis in applied mathematics and science together with the necessary technical courses to prepare students for a wide variety of positions such as design and testing, industrial production, management, and supervisory functions. The technician works as a member of an engineering team or management staff. The curriculum leads to a B.A. with major in Industrial Technology.

The Industrial Education curriculum leads to the degree of Bachelor of Arts in Education for those planning to teach Industrial Education in junior and senior high schools; or those who are, or plan to become, teachers in either a community college or other trade and industrial or technical programs and who, in addition to State requirements, need or desire a college degree.

## <sup>1</sup>(T/Ed) VOCATIONAL-TECHNICAL TRADE AND INDUSTRIAL MAJOR

Qualifies for teaching vocational reimbursable programs in the senior high school and community college. Candidates must possess a background of industrial experience.

Major (45 credits)	Credits
T-IE 430, Industrial Education . . . . .	3
T-IE 431, Selection and Development of Instructional Materials . . . . .	3
T-IE 432, Analysis Techniques . . . . .	3
T-IE 433, Shop Planning and Organization . . . . .	3
T-IE 491, Evaluation in Industrial Education . . . . .	3
<sup>2</sup> Credit for trade experience . . . . .	0 to 45
Electives from Technology and Industrial Education . . . . .	0 to 30
T-IE 165, Engineering Drawing I . . . . .	4
T-IE 255, General Metals . . . . .	5
T-IE 269, Basic Electricity . . . . .	5
T-IE 375, Industrial Design . . . . .	3
T-IE 380, History and Philosophy of Industrial Education . . . . .	3
T-IE 492, Industrial Safety . . . . .	3
Other electives as approved by chairman . . . . .	0 to 7

45

<sup>1</sup>This curriculum is designed for individuals with a background of industrial experience who are, or plan to become, teachers in Reimbursable Trade and Industrial or Technical programs. The individual who successfully completes this curriculum will receive a Bachelor of Arts in Education degree with a major in Vocational-Technical Teacher Education. General education (basic and breadth requirements), the professional education sequence, and major and minor requirements for this curriculum are the same as those required for other teacher education students, if the candidate wishes to receive a Provisional Teaching Certificate valid in the secondary schools of Washington. However, the full 45-credit major must be completed. It may not be used as a thirty-credit area, or a minor. If a candidate does not wish to receive a Provisional Teaching Certificate valid for secondary school teaching, he should substitute the following for the regular professional education sequence:

Student Teaching—0 to 12 credits

(Those who present evidence of at least one year of

highly successful teaching experience will be exempt from all or part of the student teaching requirement.)  
Professional Education and Related Courses—20 to 22 credits

Ed. 415. Instructional Media, Utilization, 5 credits.

Ed. 431. Intercultural Education, 3 credits; or Soc.

250. Industrial Sociology, 5 credits.

Sp. 201. Public Speaking; Practice and Criticism, 4 credits.

Ed. 462. Construction and Use of Classroom Tests, 2 credits.

Ed. 467. Philosophy of Education, 3 credits; or Phil.

467. Philosophy of Education, 3 credits.

Ed. 595. Community-Junior College, 3 credits.

Substitutions for some of the above may be selected with the consent of the chairman of the Department of Technology and Industrial Education when a person's background or other factors indicate that such substitutions would be appropriate.

Education 358, 362, 416, 438, 450, 468, 471, 476, 487, 488, 492.

Psychology 309, 310, 362, 416, 444, 447, 456, 471.

Sociology 210, 265.

<sup>2</sup>Under certain conditions, college credit will be granted for experience in industry. In all cases, a careful evaluation will be made of the appropriateness of such experience to fulfill degree requirements and vocational objectives. An examination will be arranged as follows:

A. An advisory examination committee will be established to include the State Department of Vocational Education, employers in the occupation, employees in the occupation, and Central Washington State College. The examination will be conducted within the state where convenient for all parties and may include oral, written and performance sections.

B. Written examinations will be held at Central Washington State College and filed in the Department of Technology and Industrial Education.

C. Upon satisfactory completion of written examinations, the advisory committee will be convened for an oral and performance examination. All reasonable expenses for the examination will be borne by the student.

D. The examinations committee will recommend the amount of credit to be awarded for industrial experience to a maximum of forty-five (45) quarter credits. Credits will be placed upon the individual's transcript upon completion of all other degree requirements.

Students must provide evidence of acceptable trade, industrial, or technical experience; or credentials which indicate that the candidate is qualified to teach or supervise vocational classes in the State of Washington or in his respective state, under the provisions of the State Plan for Vocational Education. Such credentials should be obtained from the candidate's State Department of Vocational Education and signed by the appropriate state officer.

<sup>2</sup>Credit for industrial experience will be granted only after completion of all other requirements for the degree and on the basis of committee recommendations.

**<sup>1</sup>(A/S) INDUSTRIAL TECHNOLOGY MAJOR**

Major (49-75 credits)	<i>Credits</i>
T-IE 165, Engineering Drawing I.....	4
Math. 163, College Algebra.....	5
Math. 165, Trigonometry.....	3
T-IE 255, General Metals.....	5
T-IE, 269, Basic Electricity.....	5
Physics 161, Elementary Physics.....	5
Chem. 181 and 181.1, General Chemistry.	5
T-IE 375, Industrial Design.....	3
T-IE 357, Welding and Forging.....	4
Math. 150, Elementary Computer Program- ming.....	3
Elect three (3) upper division hours in In- dustrial Ed. ....	3
Select from:.....	4 to 14
Bus. Ad. 251, Accounting.....	5
Econ. 251, Principles of Econom- ics I.....	4
Geog. 245, Economic Geography... ..	5
For more extensive major select one (1) group:	
Group I:	
T-IE 356, Sheet Metal.....	3
T-IE 455, General Metals II.....	5
Upper division electives.....	2-5
Group II:	
T-IE 365, Engineering Drawing II.....	4
T-IE 446, Architectural Drawing.....	4
T-IE 465, Descriptive Geometry.....	3
Group III:	
T-IE 374, Basic Electronics.....	4
T-IE 474, Intermediate Electronics....	4
T-IE 496, Individual Study in Electronics	2
Group IV:	
Bus. Ad. 335, Principles of Production..	4
Bus. Ad. 381, Personnel Management (4) or Econ. 355, Economics of Labor (5).....	4-5
Bus. Ad. 435, Production Management..	4
Bus. Ad. 380, Management Decision Making.....	5

49-75

<sup>1</sup>Students may not earn more than 75 credits toward graduation.

**(A/S) INDUSTRIAL TECHNOLOGY MINOR**

Minor (15-30 credits)	<i>Credits</i>
T-IE 165, Engineering Drawing I.....	4
T-IE 357, Welding and Forging.....	4
Math. 163, College Algebra.....	5
T-IE 255, General Metals.....	5
T-IE 269, Basic Electricity.....	5
Elect from T-IE 270 or 375.....	3-4

26-27

**TEACHER EDUCATION MAJOR  
(T/Ed) INDUSTRIAL EDUCATION MAJOR  
(BROAD AREA)**

Qualifies for teaching secondary industrial educa-  
tion. For Elementary school teaching, see page —.

Major (63-65 credits)	<i>Credits</i>
T-IE 165, Engineering Drawing I.....	4
T-IE 250, Woodworking.....	5
T-IE 255, General Metals.....	5
T-IE 269, Basic Electricity.....	5
T-IE 270, Power Mechanics.....	4

T-IE 357, Welding and Forging.....	4
T-IE 430, Industrial Education.....	3
Physics 101, Introduction to Physics.....	4
Chem. 101 and 101.1, Survey of General Chemistry.....	5
Math. 163, College Algebra.....	5
T-IE 375, Industrial Arts Design.....	3
T-IE 433, Industrial Education Laboratory Planning.....	2
Econ. 244, Introduction to Economics or Geog. 245, Economic Geography.....	5
Area of Concentration: (Select one group)	9-11
Group I—Woodworking:	
T-IE 448, General and Wood Fin- ishing.....	2
T-IE 450, Advanced Furniture Con- struction.....	5
T-IE 371, Shop and Tool Mainte- nance.....	2
Group II—Metals:	
T-IE 356, Sheet Metal.....	3
T-IE 455, General Metals II.....	5
T-IE 497, Individual Study.....	2
Group III—Drafting:	
T-IE 365, Engineering Drawing II. 4	
T-IE 466, Architectural Drawing.. 4	
T-IE 465, Descriptive Geometry... 3	
Group IV—Electronics:	
T-IE 374, Basic Electronics.....	4
T-IE 474, Intermediate Electronics. 4	
Elect from Math. 165 (3), Math. 171.1 (4), Physics 163 (5) or T-IE 496 (2).....	2-5
Group V—General list:	
Select from at least three of the above groups (I through IV).....	10-11

63-65

**(T/Ed) INDUSTRIAL EDUCATION MAJOR**

Qualifies for teaching secondary industrial educa-  
tion. For elementary school teaching, see page —.

Major (45 credits)	<i>Credits</i>
Crafts.....	6
Select from Crafts 242, 243, 244, 245, 262, 347, 348.	
Art 170, Design.....	3
T-IE 165, Engineering Drawing I.....	4
T-IE 250, Woodworking.....	5
T-IE 255, General Metals.....	5
T-IE 269, Basic Electricity.....	5
T-IE 357, Welding and Forging.....	4
T-IE 375, Industrial Design.....	3
T-IE 430, Industrial Education.....	3
Electives from T-IE and/or Physics 162, Math. 163, Geology 247, Chemistry 181 and 181.1, Geography 245, Art 150....	7

45

**(T/Ed) INDUSTRIAL EDUCATION MINOR  
SECONDARY**

Minor (22-23 credits)	<i>Credits</i>
T-IE 165, Engineering Drawing I.....	4
T-IE 250, Woodworking.....	5
T-IE 255, General Metals.....	5
T-IE 269, Basic Electricity.....	5
Elect from T-IE 356 (3), 270 (4), or 430 (3).....	3-4

22-23

## TECHNOLOGY AND INDUSTRIAL EDUCATION COURSES

- T-IE 165. Engineering Drawing I.** 4 credits. Fundamentals of orthographic projection, isometric drawing, and applied geometry, lettering, and drawing reproduction. Two lectures and four hours of laboratory per week.
- T-IE 250. Woodworking.** 5 credits. Prerequisite, T-IE 165. Beginning woodwork; fundamental tool operation, simple construction principles, design, and finishing. Three lectures and four hours of laboratory per week.
- T-IE 255. General Metals.** 5 credits. Prerequisite, T-IE 165. Introduction to metals. Importance in modern society. Theory and practice in bench work and machine shop. Three lectures and four hours of laboratory per week.
- T-IE 269. Basic Electricity.** 5 credits. Fundamental principles of electricity, Ohms law in DC and AC circuits. Three lectures and four hours of laboratory per week.
- T-IE 270. Power Mechanics.** 4 credits. Basic theory of the internal combustion engine. Principles of operation, maintenance, repair of various types of engines. Two lectures and four hours of laboratory per week.
- T-IE 356. Sheet Metal.** 3 credits. Layout and fundamental machine and hand tool operations in sheet metal and construction. Triangulation, parallel and radial development. One lecture and four hours of laboratory per week.
- T-IE 357. Welding and Forging.** 4 credits. Theory and practice in arc welding, oxyacetylene welding and cutting, and the fundamentals of hand forging. Two lectures and four hours of laboratory per week.
- T-IE 365. Engineering Drawing II.** 4 credits. Prerequisite, T-IE 165. Advanced working drawings, sections, auxiliary projection, revolution, gears and cams, threads and fasteners, and technical illustrations. Two lectures and four hours of laboratory per week.
- T-IE 371. Shop and Tool Maintenance.** 2 credits. Maintenance and repair of shop equipment. Two lectures and one hour of laboratory per week.
- T-IE 374. Basic Electronics.** 4 credits. Prerequisite, T-IE 269 or Physics 162. Components and basic electronic circuits, the vacuum tube. Two lectures and four hours of laboratory per week.
- T-IE 375. Industrial Design.** 3 credits. Principles of design as related to materials and construction methods, and their application to industrial problems. Three lectures per week.
- T-IE 380. History and Philosophy of Industrial Education.** 3 credits. The evolution, development and present status of industrial education in the public schools. Three hours of lecture per week.
- T-IE 390. Basic American Industries.** 3 credits. Basic concepts of industries continuous, repetitive and intermittent process manufacturing: primary and secondary wood, metal, electrical and other industries. Organization, operation, and trends in American industries.
- T-IE 430. Industrial Education.** 3 credits. Problems and methods in teaching industrial education.
- T-IE 431. Selection and Development of Instructional Materials.** 3 credits. Selection and preparation of course material: courses of study, unit and lesson plans, instruction sheets.
- T-IE 432. Analysis Techniques.** 3 credits. The analysis of jobs and trades to determine the related technical information and skill needed for the purpose of determining content materials for a course of study.
- T-IE 433. Industrial Education Laboratory Planning.** 2 credits. Two lectures per week.
- T-IE 440. Workshop.** 1-6 credits.
- T-IE 448. General and Wood Finishing.** 2 credits. Identification and methods of applying various finishes and finishing products to woods and other materials. Two lectures and one hour of laboratory per week.
- T-IE 450. Advanced Furniture Construction.** 5 credits. Prerequisite, T-IE 250. This course continues the work offered in T-IE 250. Design and construction of contemporary furniture. Individual problems. Two lectures and six hours of laboratory per week.
- T-IE 455. General Metals II.** 5 credits. Prerequisite, T-IE 255. Advanced work on the foundation of T-IE 255. Individual problems in design and construction. Two lectures and six hours of laboratory per week.
- T-IE 465. Descriptive Geometry.** 3 credits. Prerequisites, T-IE 165 and Math. 163. Theory and problems on projection of points, lines, planes, solids and concurrent noncoplanar forces. Graphic and theoretical solutions of plane problems encountered in industry. Two hours lecture and two hours of laboratory per week.
- T-IE 466. Architectural Drawing.** 4 credits. Prerequisite, T-IE 165. A beginning course

combining architectural graphics and small home design. Models, working drawings, elevations, sections, details, analysis and materials of construction. Two lectures and four hours of laboratory per week.

**T-IE 474. Intermediate Electronics.** 4 credits. Prerequisite, T-IE 374. Oscillators, heterodyne detection, super-heterodyne receivers and transistors. Two and four hours of laboratory per week.

**T-IE 491. Evaluation in Industrial Education.** 3 credits. Classification, characteristics, and uses of tests, quality scales and project rating scales designed for industrial education.

**T-IE 492. Industrial Safety.** 3 credits. Philosophy and principles of accident prevention in industrial education. Tort liabilities in school shop accidents.

**T-IE 496, 497, 498. Individual Study.** 2 credits each. Prerequisite, approval of the instructor and chairman of the department. Unit courses for advanced or graduate students.

**T-IE 531. Administration and Supervision of Industrial Education.** 3 credits. Administration and supervision of local, district, state and national programs of industrial education.

**T-IE 550. Advanced Studies in Woodworking.** 2 to 5 credits. Prerequisite, T-IE 450. One lecture or two hours of laboratory per week per credit.

**T-IE 555. Advanced Studies in Metalwork.** 2-5 credits. Prerequisites, T-IE 357, 455. One lecture or two hours of laboratory per week per credit.

**T-IE 599. Seminar in Industrial Education.** 3 credits.

## Theatre-Drama

(See Speech and Drama)

## Zoology

(See Biological Sciences)

# Pre-Professional Programs

These programs are planned for two groups of students—those who wish one or two years of college work prior to entering an occupation and those who wish to do pre-professional work for one, two, three or four years before entering a professional school, university or college.

The programs described are not to be considered as required in every case. They repre-

sent patterns that generally agree with the requirements of many professional schools. Since there are many variations in the requirements of the professional schools, the student should after consulting the catalog of the institution from which he expects to earn a degree, select courses required by that institution.

### PRE-AGRICULTURE

The following courses are generally required of Pre-Agriculture students. Students who complete these courses should have no difficulty in completing a major in agriculture in three years at a college of agriculture.

#### FIRST YEAR

	<i>Credits</i>
Bio. Sci. 102.....	3
<sup>1</sup> Bot. 161.....	5
Chem. 181, 181.1, 182, 182.1.....	10
Eng. 101, 201.....	6
Math. 163.....	5
<sup>1</sup> Zool. 151.....	5
Soc. Sci. Elective.....	5
P.E. Activity.....	3
Electives.....	7
	49

### PRE-ARCHITECTURE

Architecture is a five-year program. The courses listed below will meet specific requirements for one year of work at one institution. Check these with the requirements of the school of your choice.

#### FIRST YEAR

	<i>Credits</i>
Econ. 244.....	5
Eng. 101, 201, 301.....	9
H. Ed. 100.....	3
Math. 163, 165, 171.1.....	12
Physics 161.....	5
Soc. 107.....	4
Electives (suggest Art 290).....	9
P.E. Activity.....	3

<sup>1</sup>Prerequisite, Bio. Sci. 102 (may be taken concurrently).

**COMMERCIAL ART**

This is suggested list of courses indicated by years for students interested in an intensive commercial art program. The specific schedule by terms should be developed through advisement. The list provides a thorough preparation in art fundamentals for those who wish to enter the commercial art field at the end of two years of study.

**FIRST YEAR**

	<i>Credits</i>
Art 100, Introduction to Art, Art Today . . .	3
Art 150, Drawing . . . . .	3
Art 170, Design . . . . .	3
Art 260, Oil Painting . . . . .	3
Art 270, Design . . . . .	3
Art 271, Layout and Design . . . . .	5
Art 277, Lettering . . . . .	3
Art 250, Drawing . . . . .	3
Art 377, Advanced Lettering . . . . .	2
Eng. 101, English Composition . . . . .	3
P.E. Activity (1 credit courses) . . . . .	3
Electives (suggest Art 290) . . . . .	15
	51

**SECOND YEAR**

	<i>Credits</i>
Art 262, Water Color . . . . .	3
Art 280, Sculpture . . . . .	3
Art 285, Print Making . . . . .	3
Art 371, Advanced Layout and Design . . . .	5
Art 372, Production Techniques in Advertising Art . . . . .	5
Art 373, Interior Design . . . . .	3
Art 385, Serigraphy . . . . .	3
Art 450, Advanced Drawing . . . . .	2
Elect from History of Art area . . . . .	6
Eng. 201, English Composition . . . . .	3
P.E. Activity (1 credit courses) . . . . .	3
Electives . . . . .	12
	51

**PRE-CONSERVATORY MUSIC**

This program is designed to provide the opportunity for the music student to do intensive work in the field of his choice. The satisfactory completion of this program should make it possible for the student to continue his study in a conservatory of music.

**FIRST YEAR**

*Fall*

	<i>Credits</i>
Mus. 144, Theory I . . . . .	3
<sup>1</sup> Mus. 164A, Applied Music, Piano . . . . .	1-2
<sup>1</sup> Mus. 164B, C, D, E, F, or G, Applied Music . . . . .	1-2
P.E. Activity . . . . .	1
<sup>2</sup> Electives . . . . .	8-10
	14-18

*Winter*

	<i>Credits</i>
Mus. 145, Theory II . . . . .	3
<sup>1</sup> Mus. 165A, Applied Music, Piano . . . . .	1-2

<sup>1</sup> Mus. 166B, C, D, E, F, or G, Applied Music . . . . .	1-2
Psy. 100 . . . . .	4
P.E. Activity . . . . .	1
<sup>2</sup> Electives . . . . .	4-6
	14-18

*Spring*

	<i>Credits</i>
Mus. 146, Theory III . . . . .	3
<sup>1</sup> Mus. 166A, Applied Music Piano . . . . .	1-2
<sup>1</sup> Mus. 166B, C, D, E, F, or G, Applied Music . . . . .	1-2
P.E. Activity . . . . .	1
<sup>2</sup> Electives . . . . .	8-10
	14-18

**SECOND YEAR**

*Fall*

	<i>Credits</i>
Mus. 244, Theory IV . . . . .	3
Mus. 270, Music History I . . . . .	3
<sup>1</sup> Mus. 264A, Applied Music, Piano . . . . .	1-2
<sup>1</sup> Mus. 264B, C, D, E, F, or G, Applied Music . . . . .	1-2
P.E. Activity . . . . .	5-7
	14-18

*Winter*

	<i>Credits</i>
Mus. 245, Theory V . . . . .	3
Mus. 272, Music History II . . . . .	3
<sup>1</sup> Mus. 265A, Applied Music, Piano . . . . .	1-2
<sup>1</sup> Mus. 265B, C, D, E, F, or G, Applied Music . . . . .	1-2
P.E. Activity . . . . .	5-7
	14-18

*Spring*

	<i>Credits</i>
Mus. 246, Theory VI . . . . .	3
Mus. 274, Music History III . . . . .	3
<sup>1</sup> Mus. 266A, Applied Music, Piano . . . . .	1-2
<sup>1</sup> Mus. 266B, C, D, E, F, or G, Applied Music . . . . .	1-2
P.E. Activity . . . . .	1
<sup>2</sup> Electives . . . . .	2-4
	12-16

<sup>1</sup>A student must choose a major and minor applied subject. If his major is piano, he will choose his minor from (b) voice, (c) strings, (d) woodwind, (e) brass, (f) organ, or (g) percussion. If his major is other than piano, he must choose piano as his minor. In his major subjects, the student will receive two half-hour lessons per week and his credit will be two credit hours. The minor subject will receive one half-hour lesson per week and 1 credit hour.

<sup>2</sup>Electives may be chosen from the following courses:  
 Eng. 101, 201, 301                      Fr. 151, 152, 153  
 Mus. 341, 343                              H. Ec 200  
 Physics 101                                Soc. 107  
 Geog. 100                                 Art 100  
 H. Ed. 100                                Bio. Sci. 102  
 Sp. 141, 201                               Psy. 309  
 Hist. 143

**PRE-DENTAL HYGIENE**

The first two years of the program in preparation for Dental Hygienists are devoted to general education. The purpose of the program is to train students to render dental health service in private dental offices or in the field of public health. This program has been developed in co-



operation with the University of Washington School of Dentistry. Students completing the two years of work satisfactorily may enter the University as juniors.

FIRST YEAR

	<i>Credits</i>
Art 100 .....	3
Bio. Sci. 110, 111, 112.....	12
Chem. 101, 101.1 or 181, 181.1, 102, 102.2 or 181, 181.1 .....	10
Eng. 101, 201.....	6
Psy. 100 .....	4
Soc. 107 .....	4
Sp. 141 .....	3
Electives .....	7-9
P.E. Activity .....	3

52

SECOND YEAR

	<i>Credits</i>
Anthro. 107 .....	4
Chem. 360 .....	4
Eng. 105, 106, 301.....	9
Hist. 144 .....	5
Physics 161 .....	5
Sp. 201 .....	4
Electives .....	17
P.E. Activity .....	3

51

PRE-DENTISTRY

Students completing the three-year pre-dental curriculum shown below with a good record should find themselves in an excellent position for consideration for admission to dental school. A limited number of dental school applicants are still admitted at the end of two years of pre-professional training; students wishing to attempt this accelerated program will need to take Physics 161, 162, 163 in place of elective credits of the school year curriculum. This adjustment involves moderate overloads in fall and winter.

It is also possible for the pre-dental student to arrange for a Bachelor of Arts degree from Central Washington State College. Completion of the three-year program gives him a major in pre-dentistry and a Physical Science minor; in addition he will need to select his electives so as to meet the college's General Education requirements, as indicated in the footnotes below. If then admitted to dental school, the student arranges with the registrar at the college, before leaving, to have his first year of professional dental education counted towards the Bachelor of Arts degree here. The first year of dental school must be completed and the bachelor's degree received from the college within five years from the completion of the three-year pre-dental curriculum, or the degree program is subject to review by the Committee on Graduation.

(A/S) PRE-DENTISTRY MAJOR

<sup>1</sup> Major (46 to 49 credits) <span style="float: right;"><i>Credits</i></span>	
Chem. 100, 101.1, 102, 102.2, 103, 103.3, Elementary College Chemistry or 181, 181.1, 182, 182.2, 183, General Chem- istry and 251, Quantitative Analysis....	12-15
Chem. 361, 362, Organic Chemistry.....	10
Bio. Sci. 110, 111, 112, Biology.....	12
Zool. 348, General Vertebrate Embryology	5
Math. 163, College Algebra.....	4
Art 280, Sculpture .....	3
<hr/> 46-49	

<sup>1</sup>Physics 161, 162, 163 are ordinarily taken with this major. See also the pre-dental curriculum listed in the Pre-Professional section.

FIRST YEAR

	<i>Credits</i>
Chem. 101, 101.1, 102.2, 103, 103.3 or 181, 181.1, 182, 182.2, 183, 185, elec- tive .....	15
Eng. 101 .....	3
Math. 163 .....	5
Psy. 100 .....	4
Soc. 107 .....	4
<sup>1</sup> Electives .....	14
P.E. Activity .....	3

48

SECOND YEAR

	<i>Credits</i>
Bio. Sci. 110, 111, 112.....	12
Chem. 251, 361, 362.....	15
Eng. 201 .....	3
<sup>1</sup> Electives .....	16
P.E. Activity .....	3

49

THIRD YEAR

	<i>Credits</i>
Art 100, 280 .....	6
Bio. Sci. 250 .....	3
Eng. 301 .....	3
Physics 161, 162, 163.....	15
Sp. 201 .....	4
Zool. 348 .....	5
Zool. 351, 352 .....	8
<sup>1</sup> Electives .....	4

48

<sup>1</sup>Pre-dental students planning to take the Bachelor of Arts degree following a year of professional dental training will need to meet the general education requirements of this catalog.

PRE-ENGINEERING

This course requirement in engineering varies considerably for different fields of engineering and for various colleges of engineering. In general a student who follows this two-year program at CWSC will require three years of additional work at a college of engineering to complete the degree requirements.

**FIRST YEAR**

	<i>Credits</i>
Physics 147, 181, 182, 183.....	15
Math. 171.1, 171.2, 271.1 .....	12
T-IE 165, 365 .....	8
Eng. 101 .....	3
P.E. Activity .....	3
Electives* .....	9
	50

**SECOND YEAR**

	<i>Credits</i>
Physics 281, 282, 283 .....	12
Math. 271.2, 271.3 .....	8
Chem. 181, 181.1, 182, 182.1, 183.....	14
Econ. 244 .....	5
Eng. 201 .....	3
Electives .....	6
	48

\*For students who plan only one year at Central a chemistry sequence should be elected.

**PRE-FORESTRY**

Forestry is a four-year program. Students planning to complete this program should transfer to another institution at the end of the first year.

**FIRST YEAR**

	<i>Credits</i>
Bio. Sci. 110, 111, 112.....	12
Bot. 263 .....	5
Chem. 101, 101.1, 102, 102.2 or 181, 181.1, 182, 182.2 .....	8
Eng. 101, 201 .....	6
T-IE 165 .....	3
Math. 165 .....	3
Electives .....	8
P.E. Activity .....	3
	48

**PRE-PROFESSIONAL HOME ECONOMICS**

Students wishing to work toward meeting the requirements of a Home Economics major in a special area other than Home Economics Education will work out programs to meet individual need with assistance from an adviser in the Home Economics department.

**PRE-JOURNALISM**

Journalism is a four-year program. The first two years of work may be taken at Central Washington State College. Students who successfully complete the following two-year program may transfer to accredited schools of journalism and mass communications to complete their work.

**FIRST YEAR**

*Fall*

	<i>Credits</i>
Eng. 101, English Composition.....	3
Journ. 260, Journalism .....	2
Journ. 262, Practical Journalism.....	1
Social Science Electives* .....	5
P.E. Activity .....	1
Journ. 266, Newswriting .....	3
Electives* .....	2
	17

*Winter*

	<i>Credits</i>
Journ. 263, Practical Journalism .....	1
Social Science Electives* .....	5
Journ. 280, Advanced Reporting .....	3
P.E. Activity .....	1
Electives* .....	5
	15

*Spring*

	<i>Credits</i>
Journ. 264, Practical Journalism.....	1
Journ. 267, Editing .....	3
P.E. Activity .....	1
Electives* .....	6
Social Science electives* .....	5
	16

\*Selected in consultation with adviser.

**SECOND YEAR**

*Fall*

	<i>Credits</i>
Eng. 201, English Composition.....	3
Social Science Electives* .....	3
Journ. 364, News Photography.....	2
Laboratory Science or Mathematics.....	5
P.E. Activity .....	1
Electives* .....	2
	16

*Winter*

	<i>Credits</i>
Eng. 301, English Composition .....	3
English or American Literature .....	6
Laboratory Science or Mathematics.....	5
P.E. Activity .....	1
Electives* .....	2
	16

*Spring*

	<i>Credits</i>
Social Science Electives* .....	5
P.E. Activity .....	1
Course(s) in English or American Literature .....	3 to 5
Journ. 360, Feature Writing and Editorial Writing .....	2
Speech 201, Public Speaking: Practice and Criticism .....	4
Electives* .....	1
	16-18

\*Selected in consultation with adviser.

**PRE-LAW**

The pre-law program at the college is either a three- or four-year course. The three-year program is for students who plan to enter a law school after three years of pre-law college work. Such students must maintain a 2.5 or higher grade point average during the three-year pre-law program. If a student is admitted to a law school at the conclusion of this third year of pre-law, he may request that his first year of law education be counted toward the Bachelor of Arts degree in the Arts and Sciences at Central Washington State College. Such students will need to make arrangements with the Registrar at the college by the end of their third year of pre-law. If this plan is followed, the student will need to complete during his three-year pre-law program, the General Education requirements, a major, and one minor for the Bachelor of Arts degree in the Arts and Sciences. The requirement for a second minor will be waived upon the successful completion of one year of work in a law school. If a student following this plan does not complete this first year of law school and receive the Bachelor of Arts degree from the College within five years from the completion of the three-year pre-law program, the degree program is subject to review by the Committee on Graduation. If possible, the student should include in his three years of work at the college, the pre-law courses listed below.

The four-year program is for students who plan to take a Bachelor of Arts degree at the college and then enter a law school without any further pre-law work. Normally, such students will be able to complete the Bachelor of Law degree after three years of study in a law school (seven years of college). It is suggested that students following the four-year plan complete the pre-law course listed below.

Credits earned in any accredited law school may be used in this program.

**(A/S) PRE-LAW MAJOR**

There is no special pre-law major. However, students usually follow the regular four-year Arts and Sciences program with a major and two minors. It is recommended that pre-law students take the courses recommended in the pre-law program in the Pre-Professional section of this catalog.

A student may complete the three-year pre-law program outlined in the Pre-Professional section of this catalog, complete one major and one minor, successfully complete one year (at least 45 quarter credits) of work in an accredited law school and receive a Bachelor of Arts degree from Central. However, law schools generally require the bachelor's degree for admittance.

Both the three-year and the four-year pre-law programs require careful planning with the pre-law adviser.

**FIRST YEAR**

	<i>Credits</i>
Eng. 101 .....	3
Hist. 143, 144 .....	10
Econ. 251, 252 .....	8
Pol. Sci. 244 .....	5
Psy. 100 .....	4
P.E. Activities .....	3
<sup>1</sup> Electives .....	15
	48

**SECOND YEAR**

	<i>Credits</i>
Phil. 207, 345 .....	10
Eng. 201 .....	3
Pol. Sci. 378 .....	4
Soc. 107 or Pol. Sci. 145 .....	4
Sp. 201 .....	4
Hist. 302, 303 .....	10
Physics 101 or Bio. Sci. 102 .....	3-4
Geog. 100 .....	5
P.E. Activities .....	3
	47-48

**THIRD YEAR**

	<i>Credits</i>
Bus. Ad. 251 .....	5
H. Ed. 100 .....	3
Eng. 301 .....	3
Laboratory Science .....	4-5
Pol. Sci. 480, 481 .....	6
H. Ec. 200 .....	3
<sup>1</sup> Electives .....	25-26
	50

<sup>1</sup>Electives may be used to complete major and minor.

**MEDICAL TECHNOLOGY**

The course in medical technology is designed to prepare students as technicians for laboratories of hospitals, clinics, and research centers. The program consists of three years of approved college work in sciences and general education followed by at least one year of approved hospital training. The standards for this program are maintained through the Board of Schools of Medical Technology which functions in association with the American Medical Association.

A prescribed three-year college curriculum, followed by a calendar year of study at an accredited school of medical technology may prepare the student to meet the certification requirements of the Registry of Medical Technologists as well as the requirements for the Bachelor of Arts degree at the college with a major in Biology and a minor in Chemistry.

A student who completes the basic requirements for a major in Biology, a minor in either Chemistry or Physical Science, the General Education program required for a Bachelor of Arts degree, three years (at least 144 quarter credits) of college work, a minimum of three quarters (at least forty-five quarter credits) of course work in residence at the college, and is ad-

mitted to an accredited school of medical technology may arrange with the Registrar at the college to have the medical technology work applied toward the completion of the requirements in the Biology major and the Bachelor of Arts degree. The medical technology program must be successfully completed and an evaluative report must be received from the school of medical technology before the Bachelor of Arts degree will be granted. The degree must be applied for and received within five years from the completion of the three-year pre-medical technology program. Credit for the medical technology study will be granted only at the time of the issuance of the Bachelor's degree.

**Suggested Three-Year Program**

**FIRST YEAR**

	<i>Credits</i>
Bio. Sci. 110, 111, 112.....	12
Chem. 101, 101.1, 102, 102.2, 103, 103.3 or 181, 181.1, 182, 182.2, 183, 185....	15
Eng. 101 .....	3
Math. 163 .....	5
P.E. Activities .....	3
Electives .....	10
	48

**SECOND YEAR**

	<i>Credits</i>
Bot. 263 .....	5
Chem. 251, 360 .....	*10
Eng. 201 .....	3
Electives .....	24
P.E. Activities .....	3
Sp. 201 .....	4
	49

**THIRD YEAR**

	<i>Credits</i>
Bio. Sci. 250 .....	3
Bio. Sci. 365 .....	4
Bio. Sci. 370 .....	5
Eng. 301 .....	3
Physics 161, 162, 163.....	15
Zool. 372 .....	5
Electives .....	14
	49

\*NOTE: Program must include not less than 24 credit quarter credits of chemistry.

**PRE-MEDICINE**

Although most medical schools prefer students to have four years of pre-professional training, the course outlined below completes requirements in three years for two reasons. First, a few students may wish to try for admission after three years. Second, the Association of American Medical Colleges now recommends that candidates take the Medical College

Admissions Test in May of the academic year preceding their last year of pre-medical training. It is therefore desirable that they complete requirements by that time.

Many students will still wish to spread both the required courses and the electives over four years. Courses which have been starred (\*) may thus be delayed without probable prejudice to preparation for the Admissions Test. Most medical schools recommend that elective courses be selected largely from Foreign Language (required by a few), the Humanities, and the Social Sciences in preference to much additional concentration in science. However, there is a growing tendency to require or recommend greater concentration in Mathematics than formerly. A few schools require or recommend Physical Chemistry, and several advise Genetics and Physiology. Students should consult the **ADMISSION REQUIREMENTS OF AMERICAN MEDICAL COLLEGES** for specific requirements for the various medical schools.

A student completing the four-year program at the College will receive the Bachelor of Arts degree upon the completion of a major (any one of his choice) and one or two minors. The choice of major in the four-year program is open to the student's individual preference since admission to medical school involves completion of required pre-medical courses in addition to, or as a part of, one's major and minor. Students will find that in meeting pre-medical admissions requirements they will at the same time complete minor requirements in Chemistry, Physical Science and Zoology.

A student anticipating admission to medical school at the conclusion of a three-year program, and wishing to receive the Bachelor of Arts degree from the college, must elect a Zoology major (45 hours) and minors in Chemistry and Physical Science. If admitted to medical school at the conclusion of the three-year program outlined below, a student may request that his first year of professional education complete the Bachelor of Arts degree at the college with a major in Zoology and minors in Chemistry and Physics. Other majors and minors may be elected, but in these cases, students should realize that at least ten quarters of work will be required at the college. Students will need to make arrangements with the Registrar at the college by the beginning of their first year of medical school and receive the Bachelor's degree from the college within five years of the completion of the three-year pre-medical program, or the degree program is subject to review by the Committee on Graduation.

FIRST YEAR

	<i>Credits</i>
Bio. Sci. 110, 111, 112 .....	12
Chem. 101, 101.1, 102, 102.2, 103, 103.3 or 181, 181.1, 182, 182.2, 183, 185....	15
Eng. 101 .....	3
Math. 163 .....	5
P.E. Activity .....	3
Electives .....	15
	53

SECOND YEAR

	<i>Credits</i>
Chem. 251, 361, 362 .....	15
Eng. 201 .....	3
Zool. 348, 351, 352 .....	13
P.E. Activity .....	3
Electives .....	17
	51

THIRD YEAR

	<i>Credits</i>
Eng. 301 .....	3
Physics 161, 162, 163 .....	15
Zool. 372 and 380 .....	10
Electives from Bio. Sci. 470, Ecology; Zool. 345, Ornithology; Zool. 435, Mammal- ogy; Zool. 472, Natural History of the Vertebrates .....	5
Bio. Sci. 365 or Elective from any Science or Mathematics area .....	4
Electives .....	12
	49

Students completing the four-year program at the College should plan programs according to the Arts and Sciences Bachelor of Arts Degree program as described in the catalog, beginning, page —, including the following pre-medical courses which are generally required for admission to medical school:

	<i>Credits</i>
Bio. Sci. 110, 111, 112.....	12
Chem. 101, 101.1, 102, 102.2, 103, 103.3 or 181, 181.1, 182, 182.2, 183, 185....	15
*Math 163 .....	5
Physics 161, 162, 163 .....	15
Zool. 348, 351, 352 .....	13

\*Additional mathematics to include Math. 171.1 is strongly recommended.

PRE-METEOROLOGY

The student who follows this program should expect to spend three full years in completing degree requirements after transferring to another school.

FIRST YEAR

	<i>Credits</i>
Eng. 101 .....	3
Geog. 107 .....	4
Math. 171.1, 171.2, 271.1 .....	12
Physics 181, 182, 183 .....	12
Electives .....	14
P.E. Activity .....	3
	48

SECOND YEAR

	<i>Credits</i>
Eng. 201 .....	3
Geog. 388 .....	3
Math. 271.2, 271.3 .....	8
Physics 281, 282, 283, 337 .....	16
Electives .....	15
P.E. Activity .....	3
	48

PRE-NURSING

The pre-nursing student may take at least one year at the College. The student should then transfer for further training to an institution granting a degree in nursing. The following program meets the requirements for the one year at the School of Nursing at the University of Washington. Students wishing to transfer to another school of nursing should consult the pre-nursing adviser.

FIRST YEAR

	<i>Credits</i>
Chem. 181, 181.1, 182, 182.1 .....	10
Eng. 101, 201, 301 .....	9
H. Ed. 100 .....	3
Psy. 100 .....	4
Soc. 107 .....	4
<sup>1</sup> Electives .....	15
P.E. Activity .....	3
	48

<sup>1</sup>Electives may be chosen from many different courses on the freshman level. It is best to select from the Social Sciences or Humanities (As Art, History, Home Economics, Literature, Music, Psychology, Geography, Sociology, etc.). For transfer to certain schools, Zool. 151. Bio. Sci. 102 is a prerequisite for Zool. 151.

PRE-OCCUPATIONAL THERAPY

Occupational therapy is a profession for the treatment of the physically and mentally ill and injured. Qualified professional workers are employed in general, orthopedic, and psychiatric hospitals, community workshops, schools and hospitals for handicapped children and adults, including the crippled, war-injured, blind, deaf, feebleminded and tubercular.

Occupational therapy requires a five-year training program. The first four years of prescribed work are taken in the Arts, Physical and Biological Sciences, and professional courses. A fifth year of clinical work is required under this program.

The program described below includes the courses generally required during the first two years of study. Students who intend to qualify as occupational therapists should consult the catalog of an institution which grants the degree in occupational therapy.

FIRST YEAR

	<i>Credits</i>
Art 100, Introduction to Art .....	3
Eng. 101, English Composition .....	3
Psy. 100, General Psychology .....	4
H. Ed. 100, Health Essentials .....	3
Zool. 151, General Zoology .....	5
Zool. 152, General Zoology .....	5
Zool. 270, Human Physiology .....	3
Art 150, Drawing .....	3
Crafts 242, Crafts—Wood and Plastics....	3
Crafts 244, Crafts—Metal and Leather....	3
H. Ec. 260, Weaving .....	2
P.E. Activity (1 credit courses) .....	3
Electives to complete schedule .....	8-11

48-51

SECOND YEAR

	<i>Credits</i>
Eng. 201, English Composition .....	3
Eng. 301, English Composition .....	3
Sp. 201, Public Speaking: Practice and Criticism .....	4
Sp. 345, Advanced Public Speaking .....	3
Physics 161, Elementary Physics .....	5
Physics 162, Elementary Physics .....	5
Soc. 107, Principles of Sociology .....	4
Psy. 309, Human Growth and Develop- ment .....	4
T-IE 250, Woodworking .....	5
Crafts 262, Pottery .....	3
Art 325, Arts and Crafts, Primary .....	3
Art 425, Arts and Crafts, Intermediate....	3
P.E. Activity (1 credit courses) .....	3
Electives to complete schedule .....	1-3

48-51

PRE-OPTOMETRY

Optometric training requires five years of which the first two may be completed at the college. The curriculum outlined below is typical, but students should check with the institution to which they will transfer and vary the courses as necessary.

FIRST YEAR

	<i>Credits</i>
Bio. Sci. 102 .....	3
Chem. 181, 181.1, 182, 182.1, 183.....	14
Eng. 101 .....	3
H. Ed. 100 .....	3
Math. 163, 165 .....	8
<sup>1</sup> Zool. 151, 152 .....	10
Electives .....	4
P.E. Activity .....	3

48

<sup>1</sup>Prerequisite, Bio. Sci. 102, may be taken concurrently.

SECOND YEAR

	<i>Credits</i>
Econ. 244 .....	5
Eng. 201, 301 .....	6
Physics 161, 162, 163 .....	15
Psy. 100 .....	4
Soc. 107 .....	4
Sp. 201 .....	4
Zool. 270 .....	3
Electives .....	5
P.E. Activity .....	3

49

PRE-PHARMACY

Two years of pre-professional work may be completed at the college before a student enrolls in a college of pharmacy. To receive a degree in Pharmacy a student must complete a minimum of three years of work in a college of pharmacy in addition to the courses listed below.

FIRST YEAR

	<i>Credits</i>
Bio. Sci. 102 .....	3
<sup>1</sup> Bot. 161 .....	5
Chem. 181, 181.1, 182, 182.1, 183.....	14
Eng. 101, 201 .....	6
Math. 163 .....	5
<sup>1</sup> Zool. 151, 152 .....	10
Electives .....	2
P.E. Activity .....	3

48

SECOND YEAR

	<i>Credits</i>
<sup>1</sup> Bio. Sci. 370 .....	5
Chem. 361, 362, 363 or 365 .....	9
Chem. 361.1, 362.1, 363.1 or 365.1.....	6
Eng. 301 .....	3
Math. 165 .....	3
Physics 161, 162, 163 .....	15
Electives .....	4
P.E. Activity .....	3

48

<sup>1</sup>Prerequisite, Bio. Sci. 102, may be taken concurrently.

PRE-PHYSICAL THERAPY

Physical therapy is the treatment of disability, injury and/or disease by non-medical means comprising the use of massage, exercise, and the physical, chemical and other properties of heat, light, water and electricity (X-rays, radio-activity, and electro-surgery excluded).

Prerequisite for specialization in physical therapy call for two or three years of college or university study including work in physical and biological sciences. The following curriculum will serve as a basic foundation to prepare students for further specialized work in this field. Students who intend to qualify as physical therapists should consult the catalog of an institution which grants the degree or offers advanced work in physical therapy.

FIRST YEAR

	<i>Credits</i>
Bio. Sci. 102 .....	3
Eng. 101, 201 .....	6
Physics 161, 162, 163 .....	15
Psy. 100 .....	4
<sup>1</sup> Zool. 151, 152, 270 .....	13
Electives .....	5
P.E. Activity .....	3

49

SECOND YEAR

	<i>Credits</i>
Chem. 181, 181.1, 182, 182.1 .....	10
Eng. 301 .....	3
H. Ed. 245, 450 .....	5
H. Ed. 349 .....	5
Psy. 309, 205 .....	9
Sp. 201 .....	4
Electives .....	12
P.E. Activity .....	3
	51

<sup>1</sup>Prerequisite, Bio. Sci. 102, may be taken concurrently.

PRE-PUBLIC HEALTH AND PREVENTIVE MEDICINE

Preparation for professional work in preventive medicine and public health includes a basic curriculum in science and general education beyond which the student may choose an option in Biometry, Environmental Health, or Public Health.

The first two years of this program may be completed at this institution. Students following this pre-professional program should select electives in accordance with their option or area of specialization beyond the basic courses specified in the two-year program.

FIRST YEAR

	<i>Credits</i>
Bio. Sci. 110, 111, 112 .....	12
Chem. 101, 101.1 or 181, 181.1; 102, 102.2 or 182, 182.2 or Elective .....	8 or 14
Eng. 101, 201 .....	6
Math. 163, 165 .....	8
Psy. 100 .....	4
Electives .....	5-11
P.E. Activity .....	3
	48-50

SECOND YEAR

	<i>Credits</i>
Bio. Sci. 370 .....	5
Eng. 301 .....	3
Physics 161, 162, 163 .....	15
Soc. 107 .....	4
Sp. 201 .....	4
Zool. 270 .....	3
<sup>1</sup> Electives .....	12
P.E. Activity .....	3
	49

<sup>1</sup>Electives should be selected on basis of chosen area of specialization.

- I. Biometry  
Math. 171.1, 171.2, 271.1, 271.2, 311; Bio. Sci. 365
- II. Environmental Health  
Chem. 251, 361, 362, 365; Math. 271.1, 271.2, 271.3; Bus. Adm. 341; Econ. 244.
- III. Public Health  
H. Ec. 200, 295; H. Ed. 245; Psy. 309; Anthro. 141.

SECRETARIAL

A complete course of study for students who wish to prepare for clerical, stenographic, and secretarial positions is offered in either a one-year or a two-year program. The one-year pro-

gram is available to those students who may find it impossible to remain for two years or who wish a refresher course. The two-year program is recommended for those who wish to combine the development of employable skills with the acquisition of a general education which should be a part of the background of a college-trained secretary. A certificate of completion will be awarded to those individuals who complete the two-year secretarial program.

ONE-YEAR PROGRAM

	<i>Credits</i>
Eng. 101 .....	3
<sup>1</sup> Bus. Ed. 161, 162, 163, 264 or 162, 163, 264 .....	13-18
<sup>2</sup> Bus. Ed. 151, 152, 153, 254 or 152, 153, 254 .....	6-8
<sup>3</sup> Bus. Ed. 146 .....	5
Bus. Ed. 275 .....	4
Bus. Ed. 376 .....	4
Bus. Ed. 377 .....	4
Bus. Ed. 271 .....	3
Bus. Ed. 285 .....	3
P.E. Activities .....	3
	48-55

TWO-YEAR PROGRAM

FIRST YEAR

	<i>Credits</i>
Eng. 101 .....	3
<sup>1</sup> Bus. Ed. 161, 162, 163 or 162, 163, 264...	13
<sup>2</sup> Bus. Ed. 151, 152, 153 or 152, 153, 254...	6
<sup>3</sup> Bus. Ed. 146 .....	5
Bus. Ed. 271 .....	3
Bus. Ed. 285 .....	3
Bus. Ed. 275 .....	4
Soc. 107 .....	4
Psy. 100 .....	4
P.E. Activities .....	3
	48

SECOND YEAR

	<i>Credits</i>
Eng. 201 .....	3
Bus. Ed. 376 .....	4
Bus. Ed. 377 .....	4
<sup>4</sup> Bus. Ed. 254 .....	2
<sup>1</sup> Bus. Ed. 264 .....	5
Bus. Ed. 371 .....	3
Bus. Ed. 346 .....	5
Econ. 244 .....	5
Geog. 245 .....	5
Bus. Ad. 241 .....	5
Sp. 201 .....	4
P.E. Activities .....	3
	48

<sup>1</sup>Students with shorthand in high school should start with 162 or take examination.

<sup>2</sup>Students with typewriting in high school should take 152 or examination.

<sup>3</sup>Students desiring competency in accounting should take Bus. Adm. 151 and 152.

<sup>4</sup>Students with high school shorthand and/or typewriting or waiver by examination should elect from Bus. Ed. 270, 272, 392 or 375, Math. 163 or Bus. Adm. 341.

**PRE-SOCIAL WORK**

The social work curriculum is ordinarily a six-year program leading to the degree of Master of Social Work. The student may take the four-year program at the College leading to a Bachelor's degree with a major in either Sociology or Social Science. At the completion of the undergraduate program, he may then enter a graduate school of social work for the two-year professional program.

In the undergraduate program it is recommended that the following courses be included as part of the major, minor, or elective courses:

	<i>Credits</i>
Bio. Sci. 102 .....	3
Soc. 145, Social Problems .....	5
Psy. 205, Psychology of Adjustment or ...	5
Psy. 309, Human Growth and Development	4
Pol. Sci. 244, American Government.....	5
Econ. 244, Introduction to Economics.....	5
Zool. 270, Human Physiology .....	3
Home Ec. 270, Home Management.....	3

Soc. 348, Marriage and Family .....	5
Soc. 355, Culture and Personality .....	3
Soc. 455, Collective Behavior .....	5
	41-42

<sup>1</sup>The choice is for pre-social work majors not in teacher education; those in teacher education are required to take psychology as part of the education sequence.

**PRE-VETERINARY**

Veterinary Medicine is a six-year program. The first year of work may be taken at the college.

**FIRST YEAR**

	<i>Credits</i>
Bio. Sci. 110, 111, 112 .....	12
Chem. 101, 101.1, 102, 102.2, 103, 103.3 or 181, 181.1, 182, 182.2, 183, 185.....	15
Eng. 101, 201, 301 .....	9
Electives .....	10-14
P.E. Activity .....	3
	49-53



# KEEP YOUR RECORDS

Mr.  
Mrs.  
Miss

.....  
Last

.....  
First

.....  
Initial or Maiden Name

Permanent Student ID Number.....

Permanent Home Address.....

Instructions: The following pages are provided for you to keep an accurate quarter by quarter record of your academic progress at Central Washington State College. You should be aware that you are responsible for your own academic program requirements which are contained in this catalog. Faculty are assigned as advisers to all first year freshmen and transfer students to assist them with their academic programming. All other students are encouraged to work closely with appropriate academic departments and faculty with their course planning. You should retain copies of your transcripts and all quarterly grade reports with this catalog for easy future reference.

Record courses in your Major, Minor, Pre-Professional or Teacher Education areas after you have completed them.











# Index

## A

	Page
Accident Insurance, Students	32
Accreditation	23
Administration (Office) Management	63
Administrative Officers	7
Admission Requirements	30
Advanced Placement	29
Aerospace Studies	49
Aerospace Studies Program	49
AFROTC	28
Alumni Association	25
Anthropology	51
Apartment Rentals	24
Application for Graduation	37
Art	53
Arts & Sciences Program, Bachelor of Arts Degree	39
Athletics	26
Audiovisual Services	23
Auditing courses	35
Aviation courses	49
Aviation Flight-Training Fees	32

## B

Bachelor of Arts (B.A.) in Arts & Science Degree	39
Bachelor of Arts (B.A.) in Education Degree	39
Bachelor of Arts in Education Degree, Special Requirements for	39
Basic and Breadth Requirements for Graduation	38
Biological Science Courses	58
Biology	58
Board and Room	33
Board of Trustees	7
Books and Supplies	32
Botany	59
Bouillon Library	23
Business Administration and Economics	62
Business Education and Administrative Management	63

## C

Calculator Center	23
Calendar, College	6
Cap and Gown Fee	32
Catalog Limitation	35
Certificate Fee	32
Certificates and Degrees in Teacher Education	40
Change of Schedule Fee	32
Chemistry	67
Class Attendance	35
Classification of Students	36
Closed-Circuit Television	23
College Calendar	6
Commencement	37
Commercial Art, Pre-Professional	150
Computer Center	23
Continuing Education	28
Correspondence Courses	28
Counseling and Testing	25
Course Load	35
Courses, Numbering of	36
Crafts	69
Credit by Examination	34
Credit, Definition	35
Credit Evaluation	37

## D

Dance	121
Debate	26
Degree Fee	32
Department Chairmen, Academic	7
Description of Courses	49
Distinguished Visiting Professor Program	26
Drama	140

## E

Early Childhood Education, courses	84
Earth Science	75
Economics	70
Education	76
Education Program	See Teacher Education Program
Education (School Psychologist)	77
Elementary School Professionalized Subjects	76
Emeritus Faculty	21
Employment, Part-Time	33
Endorsement of Beginning Teachers, Standard for	47
English	86
Expenses	32
Extension Courses	34

## F

	Page
Faculty 1968-69	9
Fees	32
Fees, Part-Time Student	32
Fee, Special Student	32
Fifth Year of Study for the Standard Teaching Certificate	47
Financial Aid to Students	33
Fine Arts	91
Foreign Students, Admission	31
Foreign Language, courses	91
French	91

## G

Geography	96
Geology	99
German	92
Grades System	35
Graduate Study Program	(See Graduate Catalog)
Graduation Certificate and Placement Fees	32
Graduation Requirements	37

## H

Health and Physical Education	120
Health Education	120
Health Fee	32
Health Service, Student	24
Hebeler Elementary School	23
High School Graduates (Admission)	30
History	100
Home Economics	103
Honors, courses	107
Honors Program	29
Housing	24
Humanities, courses	107

## I

Individual Study Courses	34
Industrial and Fine Arts Materials Tickets	32
Industrial Education	108
Industrial Technology	146
Instructional Materials Program	108
Intramurals	26

## J

Journalism (See also Pre-Professional Program)	90
Junior High School Broad-Area, Social Studies Language Arts	137

## L

Language Arts, Broad Area-Education	43
Language Arts, Elementary Teacher	45
Library	23
Library Science	108
Load, Student	35
Loans, Student	33

## M

Majors, offered	22
Marking and Point System	36
Married Student Housing	24
Master's Degrees	22
Materials Tickets	32
Mathematics	108
Math-Science Major, Elementary Teacher	111
Medical Technology, Pre-Professional	153
Meteorology, Pre-Professional	155
Music	111

## N

Numbering of Courses	36
----------------------	----

## O

Off-Campus Housing	24
--------------------	----

## P

Part-Time Employment	33
Part-Time Student Fees	32
Personal Costs	32
Philosophy	117

	<i>Page</i>
Physical Education .....	119
Physical Science .....	135
Physics .....	126
Placement, Advanced .....	29
Placement Fee .....	32
Placement Service .....	24
Political Science .....	128
Pre-Agriculture .....	149
Pre-Architecture .....	149
Pre-Conservatory Music .....	150
Pre-Dental Hygiene .....	150
Pre-Dentistry .....	150
Pre-Dentistry, Major .....	150
Pre-Engineering .....	150
Pre-Forestry .....	152
Pre-Home Economics .....	152
Pre-Journalism .....	152
Pre-Law .....	153
Pre-Law, Major .....	153
Pre-Medicine .....	154
Pre-Nursing .....	155
Pre-Occupational Therapy .....	155
Pre-Optometry .....	156
Pre-Payment Fee .....	33
Pre-Pharmacy .....	156
Pre-Physical Therapy .....	156
Pre-Public Health and Preventive Medicine .....	157
Pre-Social Work .....	158
Pre-Veterinary .....	158
Professional Courses, Required Sequence .....	43
Professionalized Subjects, Education .....	46
Provisional Certificate .....	40
Psychology .....	131
Publications, Student .....	26
 <b>Q</b> 	
Quarter Credit .....	35
 <b>R</b> 	
Radio and Television .....	135
Radio Station KCWS .....	26
Recreation .....	135
Recreation and Outdoor Education .....	124
Refunds .....	32
Refunds, Basic Fee .....	32
Registration and Grades .....	33
Registration Procedures .....	33
Requirements for Graduation .....	37
Reserve Officers Training Corps Program (AFROTC) .....	28
Resident Hall Senate .....	25
Retention Policy .....	36
Rhetoric and Public Address .....	135
Room and Board .....	33
Russian, courses .....	94
 <b>S</b> 	
Safety Education, courses .....	135
Samuelson Union Building .....	26
Scholarships .....	34
Scholarship Standards .....	36
Science Breakage and Materials Tickets .....	32
Science (Broad Area), Education .....	135
Science Education, courses .....	135
Science-Math (Elementary Teachers) .....	43
Secretarial, Pre-Professional .....	157
Social Science .....	136

	<i>Page</i>
Sociology .....	137
Southeast Asia Program .....	139
Spanish .....	94
Special Collections in Library .....	23
Special Education .....	139
Special Student Fees .....	32
Speech .....	See Rhetoric and Public Address
Speech and Drama .....	140
Speech Clinic .....	23
Speech Pathology and Audiology .....	141
Standards for Endorsement for Beginning Teachers .....	47
Student Accident Insurance .....	32
Student Benefit Fee .....	32
Student Counseling Program .....	25
Student Government Association .....	25
Student Health Service .....	24
Student Housing .....	24
Student Loans .....	33
Student Organizations .....	25
Student Publications .....	26
Student Teaching .....	41
Student Teaching Outside Kittitas County Fee .....	32
Superior Students, Opportunities for .....	29
 <b>T</b> 	
Tape Learning Laboratory .....	23
Teacher Education Program:	
Admission to .....	40
Area of Concentration .....	43
Basic and Breadth Requirements for Graduation .....	38
Degrees and Certificates in Teacher Education .....	40
Fifth Year .....	47
Graduation Requirements, Basic and Breadth .....	38
Major Fields .....	44
Minor Fields .....	46
Professional Education Sequence .....	41
Required Sequence of Professional Courses .....	41
Student Teaching .....	41
Student Teaching Assignment .....	42
Student Teaching Summer Session .....	42
Teacher Education, Program .....	40
Teaching Certificates .....	40
Technology and Industrial Education .....	146
Testing Fee .....	32
Theatre and Drama .....	140
Thesis and Research Paper Binding Fee .....	32
Transcript Fee .....	32
Transfer Students (Admission) .....	30
Tuition .....	32
 <b>U</b> 	
Undergraduate, Scholarship Standards .....	36
Urban Center Teaching Program .....	27
 <b>V</b> 	
Veterans (Admissions) .....	31
 <b>W</b> 	
Withdrawal from Course Fee .....	32
 <b>Z</b> 	
Zoology .....	149