1967

Central Washington State College, General Catalog Issue

Central Washington University

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College Calendar 1967-1968

FALL QUARTER—1967

Last Day to File Transcripts and Application for Fall Quarter .................. Tuesday, August 1
Last Day to Pay Registration Pre-Payment ........................................... Tuesday, August 1
Reception for Students and Parents .................................................... Sunday, September 24
Registration for Graduates and Seniors ............................................. Monday, September 25
Registration for Juniors and Sophomores .......................................... Tuesday, September 26
Registration for Freshmen .................................................................. Wednesday, September 27
Instruction Begins .............................................................................. Thursday, September 28
Homecoming ........................................................................................ November 3-4
Thanksgiving Holidays ........................................................................ 1 p.m. Wednesday, November 22 to Monday, November 27
Opening Day of Final Examinations ...................................................... 8 a.m. Monday, December 11
Fall Quarter Closes .............................................................................. 5 p.m. Friday, December 15

WINTER QUARTER—1967-68

Last Day to File Transcripts and Application for Winter Quarter ............... Friday, December 1
Last Day to Pay Registration Pre-Payment ............................................. Wednesday, December 6
Registration for All Students ............................................................... Tuesday and Wednesday, January 2 and 3
Instruction Begins ................................................................................. Thursday, January 4
Class Schedules May be Changed .......................................................... Tuesday, January 9
Washington’s Birthday Holiday ............................................................ Thursday, February 22
Opening Date of Final Examinations ..................................................... 8 a.m. Monday, March 11
Winter Quarter Closes ........................................................................... 5 p.m. Friday, March 15

SPRING QUARTER—1968

Last Day to File Transcripts and Application for Spring Quarter ................ Friday, March 1
Last Day to Pay Registration Pre-Payment ............................................. Wednesday, March 6
Registration for All Students ............................................................... Monday and Tuesday, March 25 and 26
Instruction Begins ................................................................................. Wednesday, March 27
Class Schedules May be Changed .......................................................... Tuesday, April 2
Symposium ............................................................................................. April 18, 19, 20, 21
Memorial Day Holiday ......................................................................... Thursday, May 30
Opening Date of Final Examinations ..................................................... 8 a.m. Monday, June 3
Spring Quarter Closes ........................................................................... 5 p.m. Friday, June 7
Degree Candidate Grades Due ............................................................. 3 p.m. Friday, June 7
Commencement Exercises .................................................................... 10 a.m. Saturday, June 8

SUMMER QUARTER—1968

First Term

Last Day to File Transcripts and Application for Summer Quarter ............. Monday, June 3
Last Day to Pay Registration Pre-Payment ............................................. Wednesday, June 6
Registration for First and Second Term ................................................ Monday and Tuesday, June 17-18
Class Instruction Begins ........................................................................ Wednesday, June 19
Class Schedules May be Changed ......................................................... Friday, June 21
Independence Day ................................................................................ Thursday, July 4
First Term Closes ................................................................................ Thursday, July 18

Second Term

Instruction Begins ................................................................................ Friday, July 19
Second Term Closes ............................................................................. Friday, August 16
BOARD OF TRUSTEES

Joseph Panattoni, Chairman ........... Ellensburg
Mary Ellen Davis ................... Kirkland
Archie S. Wilson, Vice Chairman .... Richland
James D. Kendall .................. Moses Lake
Roy P. Wahle ................. ... Bellevue

ADMINISTRATION

President ................................ James Eugene Brooks, Ph.D.
Secretary to the President . .......... ... Mrs. Owen Paul
Director of Institutional Research ... Robert Bower Smawley, Ed.D.
Assistant to the President and Special Assistant Attorney General .. Thomas Killin Dalglish, LL.B.

Dean of Administration ................. Donald Henry Baeppler, Ph.D.
Director of Information ................ John Elliott Ludtka, M.S.
Assistant—Journalism, news ........... Douglas Alan Lang, B.A.
Assistant—Journalism, photography ... John Philip Foster, M.S.

Dean of Faculty ........................ Charles John McCann, Ph.D.
Dean of Arts and Sciences ............. Donald Frederick Warner, Ph.D.
Assistant Dean ........................ Bernard Loyal Martin, Ph.D.

Department Chairmen

Biological Sciences .................... Philip Conrad Dumas, Ph.D.
Chemistry ................................ Leonard Clinton Duncan, Ph. D.
Economics and Business Administration Lawrence Alonzo Danton, Ph.D.
English .................................. Keith Rinehart, Ph.D.
Foreign Languages ...................... Odette Golden, Ph.D.
Geography ............................. Martin Richard Kaatz, Ph.D.
History .................................. Walter Louis Berg, Ph.D.
Mathematics (acting) .................. Dale Robert Comstock, Ph.D.
Philosophy (acting) .................... John Grantham Utzinger, Ph.D.
Physics (acting) ........................ Elias Smith Murphy, Jr., 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 Wesley Crum, Ph.D.
Assistant Dean ........................ Donald Myron Schlesman, Ed.D.

Department Chairmen

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 ........................ Louise Agnes Tobin, M.S.
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: Edwin Frank Price, Ed.D.
Director of Research and Development: Maurice Leon Pettit, Ph.D.
Director, Community College Relations: John N. Terrey, Ed.D.
Director of Extension Services: David Paul Dillard, M.A.
Assistant: Derward Herbert Tozer, M.Ed.
Director of Libraries: George H. Fadenrecht, M.A.
Assistant Director of Libraries—Audiovisual (acting): William Dean Schmidt, M.A.
Registrar and Director of Admissions: Enos Edwin Underwood, M.Ed.
Associate Director of Admissions: Donald Lawrence Bridges, M.Ed.
Assistant Registrar: Robert Vance Davidson, M.Ed.
Admissions Officer: Patricia Anne Ross, B.A.
Credentials Supervisor: Adrian Lee Beamer, M.Ed.
Director of Athletics: Donald Everet Wise, Ed.D.
Chairman, Symposium and Visiting Professors: David Burt, M.A.

Dean of Students: Younger Theodore Witherspoon, Ph.D.
Assistant Dean of Students and Alumni Director: Jack Randolph Spithill, M.A.
Dean of Men: Donald Everet 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 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.

Business Manager: William Arthur Hansen, M.B.A.
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: Carroll Ross, B.A.
Budget Officer: Joseph Bares, M.B.A.
Budget Analyst: Vernon LaBay
Internal Auditor: Clarence Moncrief, B.A.
Director of Physical Plant: Paul Barton Bechel, 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.A.
Purchasing Agent: Donald Paul Jongeward
Campus Planner: Urban Allen Eberhart
Director of Data Processing: Richard Duane Chase
FACULTY

James Eugene Brooks, 1961 ........ President
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.

Norman Ilsley Adams, Jr. ........ Visiting Professor of Physics
(Fall quarter only)
A.B., Ph.D., Yale University.

Janis John Agars, 1964 ........ Assistant Professor of Art
B.A., University of Washington; M.F.A., Washington State University.

Imtiaz Uddin Ahmad, 1965 ........ Assistant Professor of Economics
B.A., M.A., Abgarh University (India).

James McKenzie Alexander III, 1965 .... Acting Chairman, Department of Political Science and Anthropology
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.Lib., 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.

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

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 ........ 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 E. Baldi, 1967 ........ Lecturer in Education, Hebeler Elementary School
B.A., Western Washington State College.

Robert Gene Bander, 1967 ........ Associate Professor of English
A.B., A.M., Ph.D., Stanford University.

William Wardell Barker, 1966 ........ Assistant Professor of Biology
B.S., Baldwin-Wallace College; M.S., University of Michigan; Ph.D., University of Washington.

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 ........ Associate 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

Eric Reed Beardsley, 1959 ........ Assistant Professor of Physical Education
B.A. (Ed.), Central Washington State College; M.S., Springfield College.

Paul Bartin Bechtel, 1957 ........ Director of Physical Plant
B.S., Montana State College.

Eduardo Alberto Beltran, 1966 ........ Instructor of Spanish
B.A., M.A., University of Illinois.

Robert Bowen Bennett, 1967 ........ Visiting Associate Professor of Physics
B.A., Willamette University; M.A., Ph.D., University of Oregon.

Robert Milton Benton, 1967 ........ Assistant Professor of English
B.A., Trinity University; B.D., McCormick Seminary; M.A., 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
10 Faculty

Kenneth Russell Berry, 1965 .......... Assistant Professor of Education
B.A., State College of Iowa; M.A., Ph.D., University of Iowa.

Gerard Joseph Berthold, 1967 .......... Lecturer in Economics and Business Administration
B.S. (Economics), University of Illinois.

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

Don M. Boileau, 1966 .......... Instructor of Public Speaking and Director of Forensics
A.B., Stanford University; M.A., University of Oregon.

Frances Kay Ralston Bovos, 1966 Assistant Professor of Home Economics and Education, Hebeler 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

Lonald Lawrence Bridges, 1965 .......... Associate Director of Admissions

Sidney Brooks, 1967 .......... Associate Professor of Physics
B.S., University of Pennsylvania; M.S., University of Michigan; Ph.D., Rutgers University.

Donald Gordon Brown, 1963 .......... Assistant Professor of Education and Supervisor of Student Teaching, Vancouver

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., Wichita State University.

Gerald Francis Brunner, 1963 .......... Assistant Professor of Technology and Industrial Education
B.A., M.A., San Jose State College.

Lloyd Laurel Buckles, 1957 .......... Comptroller
B.S., Iowa State University.

Peter Manning Burkholder, 1965 .......... Assistant Professor of Philosophy
B.A., Harvard University; Ph.D., Tulane University.

Kenneth Jerome Burns, 1965 .......... Instructor 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.

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.

Myrtle Victoria Carlson, 1958 .......... Assistant Professor of Home Economics
B.S., M.S., University of Washington.

Franklin Duane Carlson, 1967 .......... Assistant Professor of Education
B.A., M.A., State College of Iowa.

Robert Keith Carlton, 1964 .......... Assistant Professor of Education and Supervisor of Student Teaching, Wenatchee, Cashmere and Eastmont

Prabhat Chandra, 1967 .......... Visiting Associate Professor of Sociology
M.A., Lucknow University; Ph.D., Agra University (India).

Ernest Chan-Nui, 1967 .......... Assistant Professor of Education and Supervisor of Student Teaching, Wenatchee

Albin Bert Christianson, 1947 .......... Associate 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 (Idaho); 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., University of Washington.
Dale Robert Comstock, 1964 ....... Acting Chairman, Department of Mathematics and 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.

Mariam Lorraine Couch, 1967 .... Instructor in English
B.A., Drake University; M.A., University of Iowa.

Rodney Everett Converse, 1966 .... Assistant Professor of Sociology
A.B., Columbia University; M.S.W., University of Pittsburgh.

Richard John Lee Covington, 1967 .. Director of Hebeler 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, 1967.... Distinguished Visiting Professor of Music
(Ball Quarter Only)

John Wesley Crum, 1949 .. Dean of Education and Professor of Education
B.S., Seattle Pacific University; M.S., Ph.D., University of Washington.

Donald Wayne Cummings, 1960 .... Director, 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.

Ruth Olivia Dahlgren, 1965 ...... Documents Librarian and Assistant Professor of Librarianship
B.S., Minot State Teachers College (N.D.); A.M.L.S., University of Michigan.

Patricia S. Dalglish, 1967 ........ Instructor in Librarianship
A.B., Stanford University; M.L.S., University of California at Berkeley.

Thomas Dalglish, 1967 ........ Assistant to the President and Special Assistant Attorney General
A.B., Dartmouth College; LL.B., University of Michigan.

Lawrence Alonzo Danthon, 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

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.

Paul Dawson, 1966 ............ Assistant to the Director of the Office of Research and Development
B.A., M.S., Central Washington State College.

Mary-Lou Day, 1967 ....... Assistant Professor of Home Economics
B.S., Washington State University; M.S., University of Washington.

Dorothy Dean, 1928 .... Associate Professor of Chemistry
B.S., Montana State College; S.M., University of Chicago.

Raul Alfredo Del Piero, 1967 ....... Professor of Spanish
D.F.L., University of Buenos Aires; Ph.D., Harvard University.

John Wright DeMerchant, 1963 .... Assistant Professor of Music
B.A., M.A., University of Washington.

Anne Smith Denman, 1967 ....... Assistant Professor of Anthropology
B.A., Mount Holyoke College.

Clayton Charlton Denman, 1964 .... Assistant Professor of Anthropology
B.A., M.A., University of Washington.

Byron L. DeShaw, 1967 ....... Assistant Professor of Education and Supervisor of Student Teaching, Wenatchee

William Herbert Desmonde, 1966 .... Associate Professor of Philosophy
B.A., New York University; M.A., Ph.D., Columbia University.

Heinz Joachim Dill, 1966 ....... Assistant Professor of German
B.A., M.A., University of British Columbia.

Judith Rogers Dill, 1967 ....... Instructor in German
B.A., University of Rochester; M.A., University of Illinois.

David Paul Dillard, 1965 ........ Director of Extension Services
B.A., Eastern New Mexico University; M.A., The University of New Mexico.

Richard Tetsuwo Doi, 1965 ....... Associate Professor of Art
B.S. (Ed.), Northern Illinois University; M.A., University of California at Berkeley.

Pearl Daisy Maude Douc, 1964 ....... Assistant Professor of Home Economics
B.S., Agricultural and Technical College, Greensboro, N.C.; M.S., Oregon State University.
12 Faculty

Mary Ruth Douglas, 1966 .......... Assistant Professor of History
B.A., Houghton College; M.A., Radcliffe College; Ph.D., Harvard University.

Alan Rodney Drengson, 1967 .......... Assistant Professor of Philosophy
B.A., M.A., University of Washington.

Stanley Arthur Dudley, 1957 .......... Assistant Professor of Technology and Industrial Education

Philip Conrad Dumas, 1965 .......... Chairman, Department of Biological Sciences and Associate Professor of Biology
B.S., M.A., Oregon State University.

Leonard Clinton Duncan, 1965 .......... Chairman, Department of Chemistry and 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 .......... Assistant Professor of Speech and Drama
B.A., University of Washington; M.A., Northwestern University.

Betsy Jo Dupin, 1966 .......... Assistant Professor of Music

Ilda Marie Easterling, 1967 .......... Assistant Professor of French
B.A., M.A., University of Utah.

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.

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

Franklin Dale Elmore, 1965 .......... Associate Professor of Education, Director of Urban Center Project, Seattle, and Supervisor of Student Teaching
B.S., Northwest Missouri State College; M.S., Drake University; Ed.D., Nebraska University.

Clifford Albert Erickson, 1958 .......... Associate Professor of Education and Supervisor of Student Teaching, West Valley, Wapato and Sunnyside

Kenneth Al Erickson, 1963 .......... Associate Professor of Geography
B.S., M.A., University of Oregon; Ph.D., University of California at Berkeley.

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.

Betsy 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.

Steven Eugene Farkas, 1965 .......... Assistant Professor of Geology
B.S., M.S., University of Wisconsin.

Marie Magdalene Feldhusen, 1965 .......... Assistant Professor of Home Economics
B.S., University of Idaho; M.A., Teachers College, Columbia University.

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.

Lee Fisher, 1967 .......... Assistant Professor of Aerospace Education

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.
Dan Anthony Francisco, 1965........ Athletics Trainer and Assistant Professor of Physical Education
B.S., Northern Michigan University; M.S., H.S. Dir., Indiana University.

Gary Carlin Frederick, 1967...... Head Baseball Coach, Assistant Football Coach and Assistant Professor of Physical Education

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.......... Assistant Professor of Education and Supervisor of Student Teaching, Yakima
B.A., Washington State University; M.Ed., Oregon State University.

Gerald Elmer Gage, 1960............ Associate Professor of Psychology
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Robert Douglas Gaines, 1961........ Associate Professor of Chemistry
B.S., M.S., Ph.D., Montana State College.

Gordon Neale Galbraith, 1966...... Instructor in Economics

Ken Oakland Gamon, 1965........... Assistant Professor of Mathematics
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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.

Raymond George, 1967........... Acting Assistant Professor of Music
B.A., M.A., Fresno State College.

Donald Glenn Goetschius, 1957..... Associate Professor of Education
B.A., Morningside College (Iowa); 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.

Rafael Jesus Gonzalez, 1967......... Assistant Professor of English
B.A., Texas Western College of the University of Texas; M.A., University of Oregon.

Darwin Joseph Goodey, 1964........ Assistant Professor of Psychology
B.S., M.S., Utah State University.

David Howard Gorrie, 1963.......... Lecturer in Business Administration
B.A., LL.B., University of Washington.

Roger Frederick Gray, 1967.......... Lecturer in Education, Hebler Elementary School

Mary Grace Greene, 1945........... Associate Professor of Librarianship
A.B., Kansas Wesleyan University; M.A., Radcliffe College; B.S. in L.S., University of Denver.

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

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

Curtis Raymond Hahn, 1967.......... Lecturer in Safety Education and Physical Education
B.S., M.S., Indiana State University.

Helmi Shafik Habib, 1964............ 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.S., B.A., M.A., University of Washington.

Edward Chauncey Haines, 1938....... Associate Professor of Art
B.A.E., M.A.E., School of Art Institute of Chicago.

Daniel Hallstrom, 1967..... Lecturer in Education
A.B., Midland College (Nebraska); A.M., Colorado State University.

Mark Warren Halperin, 1966........ Lecturer in English
B.A., Bard College; M.F.A., University of Iowa
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Kenneth A. Hammond, 1967 .... Assistant Professor of Geography
B.A., Eastern Washington State College; M.S., Oregon State University.

William Arthur Hansen, 1966 .... Business Manager
B.A., Brigham Young University; M.B.A., University of Utah.

Virginia Pauline Harden, 1965 .... Associate Professor of Biology
B.S., Central State College (Okla.); M.S., University of Oklahoma; Ph.D., Kansas State University.

Robert James Harding, 1963 .... Assistant Professor of History
B.A., M.A., University of Wisconsin.

Marion Dolores Harless, 1965 .... Assistant Professor of Psychology
B.A., M.A., West Virginia University.

Kenneth K. Harsha, 1966 .... Assistant Professor of Business Education and Administrative Management
B.S. (Ed.), M.S., Kansas State Teachers College.

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.

Margaret Jeanne Healy, 1966 .... Lecturer in English
B.A., San Francisco State College; M.A., Utah State University.

Beverly Ann Heckart, 1967 .... Assistant Professor of History
B.A., Hood College; M.A., Washington University.

Raeburne Seeley Heimbeck, 1967 .... Director of Honors Program 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., Northwestern University; Ed.D., New York University.

John Maurice Herum, 1962 .... Assistant Professor of English
B.A., Carroll College.

Betty J. Hileman, 1967 .... 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.

Oris R. Hollar, 1965 .... Assistant Professor of Aerospace Studies
Captain USAF, B.S., Oregon State College.

Webster Franklin Hood, 1966 .... Assistant Professor of Philosophy

Robert Charles Hostetter, 1967 .... Assistant Professor of Education and Supervisor of Student Teaching, South Kitsap

Alexander Hamilton Howard, Jr., 1950 .... Professor of Education

Norman Selby Howell, 1945 .... Associate Professor of Speech and Drama

Robert Lyle Hovsky, 1963 .... Director of Staff Personnel
B.B.A., University of Miami.

Robert Lewis Hudson, 1967 .... Lecturer in Psychology
B.A., M.A., University of Arkansas.

Evelyn Hunter, 1965 .... Lecturer in Home Economics
B.S., University of Washington.

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

Everett Anthony Irish, 1956 .... 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.S., 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, N.Y.; 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. Lecturer in Librarianship
B.A., Central Washington State College; M.S. in 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

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.

Elizabeth Joiner, 1967. Assistant Professor of Political Science
A.B., Mount Holyoke College; M.A., University of Chicago.

Joseph Stanley Junell, 1965. Assistant Professor of Education and Supervisor of Student Teaching, Bellevue

Martin Richard Kaatz, 1952. Chairman, Department of Geography and Professor of Geography
A.B., A.M., Ph.D., University of Michigan.

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.

Edith Florence Kiser, 1951. Assistant Professor of Education

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

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.

Arthur Folk Ladd, 1951. Associate Professor of Physics
B.S., M.S., University of Idaho.

Walter L. LaDue, 1967. Acting Director of Speech and Hearing Clinic and Assistant Professor of Speech Pathology
B.A., Western Washington State College; M.S., University of Oregon.

Arolene Ann Laird, 1967. Lecturer in Education and Student Teacher Supervisor, Yakima
B.S., Eastern Oregon College.

Louise Fletcher Mason Lampman, 1967. Assistant Professor of Librarianship, Hebeler Elementary
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

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

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

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.

John Elliott Ludtka, 1963 .... Director of Information and Assistant Professor of Journalism
B.S., M.S., South Dakota State College.

Chandrakant Gokuldas Lutia, 1967 ... Assistant Professor of Economics & Business Administration
M.C., Nagpur University (India); M.A., Southern California University; Ph.D., International University at Zurich, Switzerland.

Evart Kay Lybbert, 1965 ....... Instructor in English
B.A., Central Washington State College; M.A., University of Washington.

Florence Smith Mac Donald, 1967 ... Assistant Professor of Librarianship
A.B., University of Washington; B.A., M.A. in Librarianship, University of Washington.

George Macinko, 1967 .......... Associate Professor of Geography
B.A., University of Idaho; M.A., Ph.D., University of Michigan.

Usha Ganesh Mahajani ......... Associate Professor of Political Science
B.A., University of Rajapurana; M.A., Smith College; Ph.D., The Johns Hopkins 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.

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. Massaggi, 1967 .......... Lecturer in Mathematics
A.B., University of Pacific; M.S., 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.

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.

Frances D McCall, 1965 ....... Instructor in Librarianship
B.S., Eastern Oregon College; M.A., University of Denver.

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. McCarr, 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. McInelly, 1966 .......... Staff Counselor in Counseling and Testing and Assistant Professor of Psychology
B.S., Utah State University; M.A., Ph.D., University of Wyoming.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
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<tr>
<td>Marion Louise McMahon, 1955</td>
<td>Assistant Professor of Home Economics</td>
<td>B.S., North Dakota State College; M.A., Montana State University.</td>
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<tr>
<td>Helen Margaret Michaelsen, 1937</td>
<td>Associate Professor of Home Economics</td>
<td>B.S., M.S., University of Washington.</td>
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<tr>
<td>Beth (Betty) Miller, 1967</td>
<td>Lecturer in Home Economics and Education</td>
<td>B.S., Brigham Young University.</td>
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<td>Dohn Alvin Miller, 1958</td>
<td>Professor of Special Education</td>
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<tr>
<td>Robert Stanford Miller, 1966</td>
<td>Director of Counseling and Testing Services and Associate Professor of Psychology</td>
<td>B.S. (Ed.), Kansas State Teachers College; M.Ed., Ed.D., University of Kansas.</td>
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<tr>
<td>Robert Curtis Mitchell, 1966</td>
<td>Associate Professor of Physics</td>
<td>B.S., New Mexico State University; M.S., University of Washington; Ph.D., New Mexico State University.</td>
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<td>Samuel Roop Mohler, 1943</td>
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<td>A.B., Manchester College; B.D., Yale University; M.A., University of Washington; Ph.D., University of Chicago.</td>
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<tr>
<td>Ronald W. Moore, 1967</td>
<td>Lecturer in Audiovisual Services</td>
<td>B.S., Abilene Christian College; M.Ed., East Texas State University.</td>
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<td>Wilma Lee Moore, 1962</td>
<td>Director of Women’s Section and Assistant Professor of Physical Education</td>
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<tr>
<td>Demetrius Moutsanides, 1963</td>
<td>Assistant Professor of Economics</td>
<td>B.A., M.A., University of Kansas.</td>
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<td>Betty Louise Moyle, 1967</td>
<td>Assistant Professor of Home Economics</td>
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<tr>
<td>Sidnie Davies Mundy, 1946</td>
<td>Associate Professor of English</td>
<td>B.A., Ripon College; M.A., University of Washington.</td>
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<tr>
<td>Donald Joseph Murphy, 1953</td>
<td>Professor of Education</td>
<td>B.A., Wisconsin State University; M.A., Ph.D., University of Iowa.</td>
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<tr>
<td>Elias Smith Murphy, Jr., 1965</td>
<td>Acting Chairman, Department of Physics and Associate Professor of Physics</td>
<td>B.S., Brigham Young University; M.S., Ph.D., Colorado State University.</td>
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<tr>
<td>Theodor Friedrich Naumann, 1959</td>
<td>Professor of Psychology</td>
<td>M.E., State College of Engineering, Essen, Germany; M.A., Oregon State University; Ph. D., University of Oregon.</td>
</tr>
<tr>
<td>Frank Brown Nelson, 1966</td>
<td>Assistant Professor of Psychology</td>
<td>B.A., Brigham Young University; M.S., Ph.D., University of Utah.</td>
</tr>
<tr>
<td>Richard Anthony Nevé, 1966</td>
<td>Dean of Graduate Studies and Professor of Biochemistry</td>
<td>B.S., Loyola University; M.S., University of San Francisco; Ph.D., University of Oregon.</td>
</tr>
<tr>
<td>Karl Robert Newman, 1967</td>
<td>Associate Professor of Geology</td>
<td>B.S., M.S., University of Michigan; Ph.D., University of Colorado.</td>
</tr>
<tr>
<td>Wilfrid Williams Newschwander, 1939</td>
<td>Professor of Chemistry</td>
<td>B.A., Whitman College; Ph.D., University of Washington.</td>
</tr>
<tr>
<td>Leo Dean Nicholson, 1964</td>
<td>Basketball Coach and Assistant Professor of Physical Education</td>
<td>B.A., M.Ed., Central Washington State College.</td>
</tr>
<tr>
<td>Melvin Leon Norris, 1965</td>
<td>Associate Professor of Education and Supervisor of Student Teaching, Lake Washington</td>
<td>B.S., M.Ed., Midwestern University; Ed.D., North Texas State University.</td>
</tr>
<tr>
<td>James Grant Nylander, 1957</td>
<td>Associate Professor of Physical Education</td>
<td>B.S., Bradley University; M.A., Ed.D., Colorado State College.</td>
</tr>
<tr>
<td>Elwyn Hope Odell, 1941</td>
<td>Director of Multidisciplinary Seminars and Professor of Political Science</td>
<td>A.B., Albion College; Ph.D., University of Southern California.</td>
</tr>
<tr>
<td>Virgil Jerome Olson, 1960</td>
<td>Chairman, Department of Sociology and Associate Professor of Sociology</td>
<td>B.A., M.A., Southern Methodist University; Ph.D., Washington State University.</td>
</tr>
<tr>
<td>Dolores Jean Osborn, 1965</td>
<td>Assistant Professor of Business Education and Administrative Management</td>
<td>B.S., Eastern Illinois University; M.A., Colorado State College.</td>
</tr>
</tbody>
</table>
18 Faculty

Patrick Reed O’Shaughnessy, 1964 ......... Assistant Professor of Business Administration

Benjamin Dean Owens, 1966 ......... Director of Placement
B.S., M.S., University of Oregon.

Biswaambhar Pahi, 1966 ............ Assistant Professor of Mathematics and Philosophy
B.A., Utkal University, India; M.A., Allahabad University, India; M.A., Ph.D., Yale University.

Robert Major Panerio, 1963 ....... Assistant Professor of Music

Christos John Papadopoulos, 1966 .... Instructor in Art
B.F.A., Michigan State University; 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.

Rameshwar Nath Paul, 1967 ....... Assistant Professor of Librarianship

John Maurice Pearson, 1964 ....... Assistant Professor of Physical Education
B.S., University of Idaho; M.A. (Ed.), Idaho State University.

Wiley Elbert Peeples, 1967 .... Staff Counselor in Counseling and Testing and Assistant Professor of Psychology

Maurice Leon Pettit, 1950 ......... Director of Research and Development and Professor of Education and Psychology

Albert Harold Pfenenroth, 1955 .... Chairman, Department of Physical Education and Associate Professor of Physical Education

Durward Aubrey Porter, 1965 ....... Lecturer in 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 ............ Assistant Dean of Graduate Studies and Associate Professor of Education

Sterling Judson Price, 1966 ........ Assistant Professor of Music
A.B., Georgetown College; M.A., Peabody College for Teachers.

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.

Reino Walter Randall, 1938 ........ Associate Professor of Art

Linwood Earl Reynolds, 1947 ....... Associate Professor of Physical Education
B.A., University of Montana; M.A., Stanford University.

Veda Reynolds, 1966 ............ Visiting Lecturer in Violin

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.

Beverly Joyce Richards, 1966 ....... Lecturer in Education, Hebeler Elementary School

Kent David Richards, 1966 ........ Assistant Professor of History
B.A., Knox College; M.S., Ph.D., University of Wisconsin.

Keith Rinehart, 1953 ............ Chairman, Department of English and Professor of English
B.A., M.A., University of Oregon; Ph.D., University of Wisconsin.

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.
John William Rolcik, 1965. Lecturer in Sociology

Diana Mary Roulo, 1966. Assistant Professor of Art
B.S., M.A., in Fine Arts, Eastern Michigan University.

George Russell Ross, 1949. Professor of Music
B.M., Morningside College; M.M., Northwestern University; D.M.Ed., Chicago Musical College.

Carroll Dean Ross, 1966. Chief Accountant
B.A. in Business Administration, University of Washington.

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.

Roy Frederick Ruebel, 1954. Professor of Education
B.S., Buena Vista College; M.A., Ed.D., University of Wyoming.

James Michael Sahlstrand, 1963. Lecturer in 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.

Ronald A. Saiet, 1967. Lecturer in Instructional Media
B.S., City College of New York; Ed.M., Harvard Graduate School of Education.

Emil Emanuel Samuelson, 1932. Professor of Psychology and Education
B.A., Milton College; M.A., Ph.D., University of Wisconsin.

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.

John Albert Schwenker, 1964. Assistant Professor of Education
B.S., University of Vermont; M.A., Montclair State College.

Howard B. Scott, 1967. Lecturer in Psychology

Roy Lyle Selavage, 1967. Assistant Professor of Psychology

Frank Q. Sessions, 1967. Professor of Sociology
B.S., Idaho State College; M.S., University of Idaho; Ph.D., University of Utah.

Jack Michael Sheridan, 1964. Assistant Professor of Education, Hebeler Elementary School

John Stanley Shragader, 1957. Professor of Science Education

John Louis Silva, 1962. Assistant Professor of Psychology
B.A., M.A., San Jose State College.

Robert Eugene Silver, 1966. Assistant Professor of Education and Director of Student Teaching, Bremerton

Jerry Mark Silverman, 1965. Assistant Professor of Political Science
B.A., Long Beach State College.

Robert Bower Smawley, 1966. Director of Institutional Research
B.S., Lock Haven College; M.S., Ed.D., University of Tennessee.

Donald King Smith, 1962. Associate Professor of Music
B.A., M.A., University of Washington; D.M.A., University of Southern California.

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.

George Lester Sogge, 1938. Associate Professor of Technology and Industrial Education
B.S., Stout State College; M.A., Ohio State University.

Ramona Lorraine Solberg, 1956. Associate Professor of Art
B.A., M.F.A., University of Wisconsin.

Stanley Alvin Sorensen, 1965. Assistant Professor of Physical Education

Larry Michel Sparks, 1967. Assistant Professor of Psychology
B.S., University of Washington.

Willard Charles Sperry, 1966. Assistant Professor of Physics
B.S., Stanford University; M.S., 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.

Edna May Spurgeon, 1939 .... Associate Professor of Art
B.A., M.A., State University of Iowa.

Charles Ira Staatsny, 1965 .... Assistant 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.

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.

Maxine Ruth Taylor, 1954 .... College Nurse
R.N., Immanuel Hospital School of Nursing.

John Naylor Terrey, 1967 .... Director of Community College Relations and Associate Professor of Higher Education

Gordon Robert Thomas, 1965 .... Assistant Professor of Russian
B.A., University of Washington; M.A., Ohio State University.

Louise Agnes Tobin, 1959 .... Chairman, Department of Home Economics and Associate Professor of Home Economics
B.S., University of Washington; M.S., Oregon State University.

Philip Tolin, 1967 ............ Lecturer in Psychology
B.S., University of Massachusetts; M.A., University of Iowa.

Donald Paul Tompkins, 1966 .... Assistant Professor of Art

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 Extension Services

Alva Edwin Treadwell, 1937 .... Associate Professor of Business Administration
B.A., M.A., Washington State University; Certified Public Accountant.

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.

Henry Alexander Turik, 1966 .... Assistant Professor of Physical Education
B.A., Central Washington State College; M.S., University of Illinois.

Enos Edwin Underwood, 1958 .... Registrar and Director of Admissions

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 .... Acting Chairman, Department of Philosophy and 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.

Emil Leopold Vernei, 1965 .... Head Reference Librarian and Associate Professor of Librarianship
Royal Hungarian J. Nador Polytechnic; Ph.D., Royal Hungarian F. Pazmany University; M.S.L.S., Columbia University.

Jared Verner, 1965 ............ Assistant 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 L. Waddle, 1967 .... Head Acquisitions Librarian and Assistant Professor of Librarianship

Barbara RoJean Walker, 1967 .... Reference Librarian and Instructor in Librarianship

Donald Frederick Warner, 1962 .... Dean of Arts and Sciences and Professor of History
B.A., M.A., University of Minnesota; Ph.D., Yale University.

Shirley Stewart Waugh, 1963 .... Assistant Professor of Librarianship
B.S., Washington State University; M.S. in Libr., University of Wisconsin.

Lilllian Louise Weathers, 1966 .... Assistant Professor of Education
B.S., M.S., Oregon College of Education; Ed.D., University of Oregon.

Constance Helen Weber, 1964 .... Assistant Professor of Art

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.

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. in Libr., 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.

Robert Yee, 1960 .... Director of Southeast Asian Program and Associate Professor of Political Science
B.A., M.A., Ph.D., University of Washington.

Thomas Yeh-Ran Yeh, 1965 .... Instructor in Librarianship
B.A., Soochow University; M.A., M.A.L.S., University of Minnesota.

Martha Parrot Young, 1965 .... Assistant Professor of Dance
B.A., University of California; M.A., University of Utah.

Max Darrell Zwanziger, 1967 .... Associate Professor of Psychology
B.A., State College of Iowa; M.A., University of Denver.

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 Music
B.A., Soochow University; M.A., M.A.L.S., University of Minnesota.

Mary Juanita Davies, 1927; Emeritus, 1965 .... Associate Professor of Music
B.M., M.M., Chicago Conservatory of Music.
Amanda K. Hebeler, 1924; Emeritus, 1960  
Professor of Education  
B.A., M.A., Teachers College, Columbia 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  

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.

Mary I. Simpson, 1929; Emeritus, 1963  
Associate Professor of Education  

Donald H. Thompson, 1929; Emeritus, 1962  
President Emeritus  
B.A., Whitman College; M.A., Stanford University.

Mildred White, 1951; Emeritus, 1958  
Assistant Professor of Education  

Henry J. Whitney, 1908; Emeritus, 1943  
Professor of Mathematics  
B.S., Northwestern University.

Ruth L. Woods, 1941; Emeritus, 1960  
Assistant Professor of Education  
General Information*

Central Washington State College, established by the State legislature in 1891, is governed by a board of trustees appointed by the Governor, and supported primarily by legislative appropriation. The College is fully accredited by the Northwest Association of Secondary and High Schools and the National Council for Accreditation of Teacher Education. It has also been approved by the United States Attorney General for non-quota immigrant students.

The College's undergraduate programs lead to two degrees, the Bachelor of Arts and the Bachelor of Arts in Education.

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

- Art
- Biology
- Botany
- Business Administration
- Chemistry
- Economics
- English
- French
- Geography
- Geology
- German
- Health and Physical Education
- History
- Home Economics
- Industrial Technology
- Mathematics
- Music
- Philosophy
- Physics
- Political Science
- Psychology
- Recreation
- Rhetoric and Public Address
- Social Science
- Sociology
- Theatre and Drama
- Zoology

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
- Earth Science
- Industrial Education
- Language Arts
- Physical Education
- Science
- Special Education
- Speech and Drama
- Science-Math
- Social Science
- Social Studies-
- Language Arts (Jr. High)

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

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

Non-degree programs:

- Commercial art (2)
- Secretarial (1 or 2)

The College's graduate programs lead to three 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
- English
- Music

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

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

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

- Biology
- Chemistry
- Psychology

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.
Facilities for Study

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 120,000 volumes including books, periodicals, newspapers, government publications (36,412), maps (5,925), and pamphlets, microfilm reels (1,200), and microprints (318). All materials are accessible to students on open shelves in or adjacent to comfortable reading areas.

- **Music and Arts Library**, including more than 7,000 phonograph records, art books, and prints. **Special Collections** of archives, maps, and the Herbert C. Fish Memorial Library of Pacific Northwest History.

- **Audiovisual materials**, including 2,525 motion picture films, 1,225 filmstrips, 64 sound filmstrips, 22 filmstrip series, 160 slide sets plus 1,500 American art slides, 330 phonodiscs, and 464 tapes. Representative teaching machines and programs are also available. All materials are available without cost to students in their instructional and research work at the College. (Catalog and additional information are available from the Assistant Director of Libraries—Audiovisual.)

- **Closed Circuit Television**, headquarters of television for educational purposes, 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.

Services

Counseling and Testing Services

In addition to the assistance given by advisers and the student personnel division, the staff of the Counseling and Testing Center is available to help students with their problems.

The college environment should help the student learn much about himself from examination of his various needs, interests and capabilities. In a democratic society built on a belief in the worth and dignity of each person, the individual student should evaluate himself and his relationship to the various parts of society in which he hopes to function. The Counseling and Testing Center's function is to provide opportunity for this self examination, and to assist students in resolving the problems of choice of major and career, of becoming more efficient scholars, and of learning to handle personal conflicts.

The Center also administers various testing programs, such as the Graduate Record Examination for admission to graduate school.

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 Council are the student committees, boards, and commissions.
which carry on specific activities of the Student Government Association.

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, and various club and organizational activities. At the time of registration, each student is presented with a membership card which entitles him to participate in all college functions sponsored by the Student Government Association.

Samuelson Union Bldg. (SUB) and Student Activities

The Samuelson Union serves as the center of all student activities. Facilities in the Union include a snack bar, formal lounge, reading room where newspapers and magazines are provided for all-campus use, games room featuring pool, table tennis, pinball machines and small games, ballroom in which dances are held Friday and Saturday nights, art gallery, seven conference rooms and a television room. The Union also houses the Student Government Association, the campus newspaper (Crier) and yearbook (Hyakem).

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

Student Health Service

The College maintains a complete health service. A fulltime registered nurse is available for consultation and health counseling. The campus physician, on campus daily, sees students by appointment.

Residence Hall Senate

Students, through elected officers, assume joint responsibility with college authorities for social and intellectual programs within the residence halls.

Student Organizations

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

Dean of Students’ Office

Most non-academic services for students are organized within the Office of the Dean of Students who is responsible for student programs, organizations, activities, and the residence hall program.

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.

Advanced placement without college credit is granted after the student successfully completes comprehensive examinations in the subject fields 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
Honors Program

The Honors Curriculum

No uniform curriculum is prescribed. Flexibility is encouraged so that the student may realize his own intellectual potential.

Freshman Pre-Honors Program

At the beginning of Fall quarter each year, a number of academically promising freshmen are invited to participate in Freshman Discussions. Students meet in small groups with various faculty members to discuss matters of mutual interest and concern. Some of these groups are organized by invitation within residence halls.

During the Winter quarter a number of academically promising freshmen are invited to participate in special inter-disciplinary weekend or one-day seminars. These seminars focus upon a central theme of current interest and involve the participation of 25 to 30 students and 5 to 10 faculty.

Early Spring quarter, on the basis of academic achievement and faculty recommendation, an official list of Pre-Honors Freshmen is prepared and these students are encouraged to apply to the Honors Committee for admission into the General Sophomore Honors Program.

The General Sophomore Honors Program

Sophomore Honor students are privileged to enroll in special inter-disciplinary seminars which are taught jointly by the faculty from different departments. These inter-disciplinary seminars take the place of certain general all-college requirements. Seminar topics have included the following: Developing Self Concepts; Man's Treatment of Non-Rational Knowledge; Literary Models of Teaching; a Comparative Approach to Form and Structure in Art and Music; Population Problems; and Religion and the Search for Meaning.

Students in the Sophomore Honors Program also may participate in non-credit weekend seminars.

Junior-Senior Departmental Honors Program

Junior-Senior Departmental honors programs have been established by the following departments: Art, Biology, Economics and Business, Chemistry, Education, English, Geography, History, Mathematics, Music, Political Science, Psychology, and Sociology.

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., as determined after consultation with the department faculty.

See also: Credit by Examination and Individual Study courses, page 30.

Upon Completion of the Program

Students completing the Honors Program graduate with departmental honors. Their graduation records include recommending letters from faculty closely associated with the Honors Program.

For Further Information

For further information on the Honors Program inquire at the Office of the Honors Director, 226 Shaw Memorial Hall.

Student Activity

In the Arts

Through student editorship with faculty advice, 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. Inscapce, 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, 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.

**Athletics**

The College intercollegiate athletic program provides students with an opportunity for wide participation. Teams represent Central in football, basketball, baseball, golf, track, swimming, wrestling, tennis, and cross-country.

Central is a member of the Evergreen Conference, the National Association of Intercollegiate Athletics (NAIA), and the National Collegiate Athletic Association (NCAA).

Each Saturday, the facilities of the Nicholson Pavilion are open to students and faculty for three hours of recreational activity in the Co-Rec program, sponsored and directed by the Recreation Club and the SGA.

The Men's Intramural Athletics motto is "A sport for everyone, everyone in a sport." Some of the activities offered are touch football, cross-country, table tennis, track and field, basketball, volleyball, badminton, wrestling, swimming, softball, tennis, and golf.

Women's Recreation provides participation in intramural and extramural activities including volleyball, field hockey, basketball, gymnastics, swimming, tennis, badminton, and dance.

**Distinguished Visiting Professor**

During the fall of 1956 the college established a Distinguished Visiting Professorship. Kenneth Burke, author and critic and member of the American Academy, held the first chair, offering a seminar in Interdisciplinary Studies and giving three public lectures.

During the fall of 1967, Paul Creston will offer an advanced seminar in Music Theory and Composition. Mr. Creston will also offer a series of three public lectures of general interest during October and November.

**Southeast Asia Program**

The college is developing a program to enable undergraduate students to supplement work in their major fields with courses in the politics, geography, history, art, economics, language, etc., of Southeast Asia, and to establish an undergraduate exchange program of students and staff between Central Washington State College and Thailand.

**Student Housing**

*Single Student Housing*

(See page 35 for rates)

Single freshmen and sophomore men and women students under twenty-one years of age not living with parents or relatives are required to live in college operated residence halls or organized student living groups except when other arrangements have been specifically approved by the Director of Auxiliary Services and 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). 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 35 for rates)

114 housing units are provided for married students. Application for an apartment may be obtained from the Director of Auxiliary Serv-
Financial Aids

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

Financial Aids To 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 students who qualify.

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 each year to be evaluated for the following year.

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
David Hertz Memorial Scholarship
Myron Davies Memorial Scholarship
Dennis Farrell Memorial Pre-Medicine Scholarship
Eastern Star Scholarship
Ellensburg Altrusa Scholarship
Ellensburg Coca-Cola Scholarships
Ellensburg Telephone Company Scholarship
History Scholarship
Hugh Hitchcock Scholarships
James and Minnie Louden Scholarship
Jennie Moore Hall Memorial Scholarship
John P. Munson Scholarships
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

Alumni Association
A payment of fifty cents each quarter entitles graduating students to Alumni membership for one year. Annual alumni fees are $3 per year or $25 for life membership. All graduates and former students of the College are eligible for regular membership in the Alumni Association.

Placement Service
The College maintains a Central Placement Service for the assistance of graduating students and alumni. Registration forms may be obtained upon request.
Admission Requirements

Students attending high school in Washington should apply to their high school principals or superintendents for 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 applications must be filed one month prior to the registration date given for the quarter the student plans to enroll.

A Registration Fee Pre-Payment of $35 must be submitted after the student receives his notice of admission.

1. High School Graduates

All applicants will be considered for admission on the basis of 3½ years of accredited high school work, provided the applicant graduates from high school prior to the opening of the college year following his provisional admission.

Residents of the State of Washington with a 2.5 grade average will be notified of admission eligibility upon receipt of their applications.

Residents of the State of Washington with a grade average of 2.24 and less will be given consideration for admission on the basis of the total available evidence upon the completion of the eighth semester and graduation from high school.

Non-residents of the State of Washington are eligible for admission with a 2.5 grade average or above in accredited high school work. Consideration will be given to non-resident applicants under 2.5 on the basis of total available evidence.

For Fall Quarter, students may apply any time after the close of the seventh semester. Be sure the Admissions Office, Central Washington State College, receives the following records: Application—obtained from principal or counselor, records—sent by high school, Washington Pre-College Test Data Sheet (College copy).

Every freshman entering the College is required to take grade prediction tests and pay a fee of $5. If he has taken these tests in high school and has paid the $5 fee at that time, he will not be required to pay again. His completed grade prediction sheet is his receipt.

For winter, spring, or summer quarter, apply any time up to thirty days prior to the opening of the desired quarter.

2. Those Who Have Not Graduated From High School

Mature individuals who have not completed a full four-year high school course may be admitted on probation by passing the General Educational Development Examinations.

3. 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 in so far 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 Junior (Community) Colleges. Credits earned in accredited junior colleges will be evaluated in accordance with the following provisions:

(1) Not more than 96 hours of work (including six in physical education) 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.

4. Veterans

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

5. 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. Address the Foreign Student Adviser, Dean of Women’s Office.

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, determine 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 Courses

Credit earned through extension meets the requirements for graduation; it does not meet the residence requirements. For further stipulations, relating to graduate study, see the Graduate Catalog. For information, address the Director of Extension Services.
Correspondence Courses

Correspondence courses are provided for those unable to take residence work. Correspondence credit meets the requirements for graduation; it does not meet the residence requirements. Students who plan to use correspondence credit toward graduation must complete all lessons and the final examination before beginning their final quarter of residence study. For further stipulations, relating to graduate study, see the Graduate Catalog. Address inquiries to the Director of Extension Services.

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 2/3 of a semester credit. A semester credit equals 1 1/2 quarter credits.

Student Load

The standard undergraduate load is fifteen 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:

<table>
<thead>
<tr>
<th>Cumulative G.P.A.</th>
<th>Maximum Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00 to 2.49</td>
<td>15 cr.</td>
</tr>
<tr>
<td>2.50 to 2.99</td>
<td>17 cr.</td>
</tr>
<tr>
<td>3.00 or above</td>
<td>19 cr.</td>
</tr>
</tbody>
</table>

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.

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.
32 Standards, Retention

Marking and Point System

A distinctly superior
B above average
C average
D substandard
E failing
S satisfactory
I incomplete—work must be completed before the end of the next quarter in residence; 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.

"Grade Points" are assigned to each mark as follows:
For each hour of "A", 4 quality points.
For each hour of "B", 3 quality points.
For each hour of "C", 2 quality points.
For each hour of "D", 1 quality point.
For each hour of "E", 0 quality points.
For each hour of "S", 0 quality points (until removed).

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, superior 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.
Requirements for Graduation

1. Graduation from a four-year accredited high school or its equivalent is required.
2. A total 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 fifteen credits per quarter.
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.

See page 38 for B.A.
See page 49 for B.A. in Education.

Credit Evaluation

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

Evaluations of credits are secured at the Registrar's Office. They 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.
Expenses*

Basic Fees

<table>
<thead>
<tr>
<th>Tuition (resident)**</th>
<th>$19.00</th>
<th>Board and Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>(non-resident)**</td>
<td>57.00</td>
<td>Residence Hall and Food Service fees range from $174 to $298 per quarter. Refer to next page for specific costs.</td>
</tr>
<tr>
<td>General Fee (resident)**</td>
<td>69.00</td>
<td></td>
</tr>
<tr>
<td>(non-resident)**</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Audit</th>
<th></th>
<th>Regular Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correspondence</td>
<td></td>
<td>$10.00 per credit</td>
</tr>
<tr>
<td>Extension</td>
<td></td>
<td>10.00 per credit</td>
</tr>
<tr>
<td>Special (under 6 credits)</td>
<td></td>
<td>10.00 per credit—minimum fee $20</td>
</tr>
<tr>
<td>Student Teaching outside Kittitas County</td>
<td></td>
<td>58.00, resident; $127.00, non-resident</td>
</tr>
</tbody>
</table>

| Industrial & Fine Arts Materials tickets | varies |
| Science Breakage and Materials tickets | varies |
| Flight training (paid to contract agency) | 17.00/hr. dual |
|                                              | 12.00/hr. solo |
| Cap and Gown                                  | B.A. 4.50 |
|                                              | M.A., M. Ed., M.S. 9.00 |
| 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 |
| Accident and Health Insurance                 | 22.60 year (has been contracted, up for renewal) |
| Testing (if not paid in high school)          | 5.00 |
| Personal costs, books and supplies (per quarter) | 100.00 approximate |
| +Parking (motor vehicles)                      | 9.00 academic year |

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. New or interrupted students will not receive a percentage of their $35 registration pre-payment in their basic fee refund. 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 motorbike with the college and pay the appropriate parking fee where 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

The 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 Those Who Live In Residence Halls

The Entire Academic Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Munro Hall</th>
<th>Other Residence Halls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Fall</td>
<td>$275.00</td>
<td>$284.00</td>
</tr>
<tr>
<td>Winter</td>
<td>212.00</td>
<td>235.00</td>
</tr>
<tr>
<td>Spring</td>
<td>174.00</td>
<td>192.00</td>
</tr>
<tr>
<td>Total Annual Charge</td>
<td>$643.00</td>
<td>$711.00</td>
</tr>
</tbody>
</table>

The charges for each quarter for those who live in Residence Halls only Winter and Spring Quarters or only Spring Quarter will be the amounts listed above for Winter Quarter.

There is an additional charge of $2 per week for those who do not have a roommate.

* (1) Kamola, Sue Lombard, Munson, Wilson, Moore, Anderson, and Kennedy Halls.
* (2) Stephens, Whitney, and Barto Halls.
* (3) Beck, Sparks, Meisner, Hitchcock, Davies, Quigley, North, Courson, and Muzzall Halls.

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

New Science Building
**PROGRAM OF STUDY**

A Summary of the Course Requirements

**BASIC AND BREADTH REQUIREMENTS**

*For Arts and Sciences Degree*

<table>
<thead>
<tr>
<th>Basic Requirements (12 credits)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101, 301 (6 credits)</td>
<td></td>
</tr>
<tr>
<td>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 &quot;D&quot; 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.)</td>
<td></td>
</tr>
<tr>
<td>Physical Education Activities (6 credits)</td>
<td></td>
</tr>
<tr>
<td>Breadth Requirements (50 credits)</td>
<td></td>
</tr>
<tr>
<td>(1) Each student must take at least 50 credits distributed among the three broad areas of knowledge. (Humanities, Social Sciences, and Natural Sciences).</td>
<td></td>
</tr>
<tr>
<td>(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.</td>
<td></td>
</tr>
<tr>
<td>(3) The 20-credit areas must include at least two disciplines.</td>
<td></td>
</tr>
<tr>
<td>(4) Each student must also choose at least one laboratory course in the biological or physical sciences.</td>
<td></td>
</tr>
</tbody>
</table>

*See page 37 for details.*

*For Teacher Education Degree*

<table>
<thead>
<tr>
<th>Basic Requirements (12 credits)</th>
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<tr>
<td>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 &quot;D&quot; 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.)</td>
<td></td>
</tr>
<tr>
<td>Physical Education Activities (6 credits)</td>
<td></td>
</tr>
<tr>
<td>Breadth Requirements (50 credits)</td>
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<td></td>
</tr>
<tr>
<td>(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.</td>
<td></td>
</tr>
<tr>
<td>(3) The 20-credit areas must include at least two disciplines.</td>
<td></td>
</tr>
<tr>
<td>(4) Each student must also choose at least one laboratory course in the biological or physical sciences.</td>
<td></td>
</tr>
</tbody>
</table>

**FIELDS OF SPECIALIZATION**

(Majors and Minors)

**B.A. in Arts and Sciences**

Students may choose one major and two minors or one major and one minor. Usual combinations of credits include 45-15-15 or 60-15. Majors and minors must total 75 credit hours. (See page 38)

**B.A. in Education**

ELEMENTARY teaching candidates may do work in three areas: (1) 30 credits chosen from a major field, (2) 20 credits from a minor field, and (3) a 20-credit professionalized subjects minor, or combine a 45-credit major with a 20-credit professionalized subjects minor.

SECONDARY teaching candidates must accumulate either a 60-credit plus major, or a 45-credit major coupled with a 20-credit minor, or two majors. (See page 49)

**ELECTIVE CREDITS**

A minimum of 192 credits is required for graduation. After general education requirements, majors, and minors have been totaled, students should fill necessary credits with elective courses.

**DEGREES**

Bachelor of Arts in Arts and Sciences Degree. | Bachelor of Arts in Education Degree.
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 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.

(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, 3 credits.

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.

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

<table>
<thead>
<tr>
<th>HUMANITIES</th>
<th>SOCIAL SCIENCES</th>
<th>NATURAL SCIENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Anthropology</td>
<td>Biological Sciences (Biology, Botany, Zoology)</td>
</tr>
<tr>
<td>Foreign Languages (French, German, Russian, Spanish)</td>
<td>Economics</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Humanities</td>
<td>Geography</td>
<td>Geology</td>
</tr>
<tr>
<td>Music</td>
<td>History</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Philosophy</td>
<td>Political Science</td>
<td>Physics</td>
</tr>
<tr>
<td>Speech and Drama</td>
<td>Psychology</td>
<td></td>
</tr>
<tr>
<td>Technology and Indus. Ed. or Art or Crafts</td>
<td>Sociology</td>
<td></td>
</tr>
</tbody>
</table>

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

*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.

*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

Students in the Arts and Sciences program must fulfill the general requirements for graduation, page 33, and the following specific course requirements: (I) Basic and Breadth requirements, (II) major and minor requirements in the field of his own choice and (III) electives to complete 192 quarter credits.

Basic and Breadth Requirements (62 credits)
A student must fulfill the Basic and Breadth requirements specified for all bachelor's degree candidates. See page 37 for details.

Majors and Minors

AEROSPACE STUDIES MINOR

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

ANTHROPOLOGY MINOR

Anthropology Minor (20 to 30 credits)  
Anthro. 107, General Anthropology ............. 4  
Anthro. 141, Introduction to Cultural Anthropology ............. 4  
Anthro. 160, Introduction to Archaeology or Anthro. 175, Introduction to Physical Anthropology ............. 4  
Electives in Anthropology to complete minor .................. 8-18  
20-30

ART MAJOR

Major (45 to 60 credits)  
Drawing: ............................................. 6  
Art 150, 250, Drawing .................................. 6  
Art 170, 270, Design .................................. 6  
Painting, elect two courses:  
Art 260, 261, Oil Painting  
Art 262, Water Color  
Sculpture: ............................................. 6  
Art 280, 281, Sculpture  
Print Making, elect one course:  
Art 285, Relief Print Making  
Art 287, Intaglio Print Making  
Art 385, Serigraphy  
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  
Elect from fields of painting, sculpture, print making .................. 3  
Electives from Art and/or Crafts .................. 4-19  
45-60

ART MINOR

Minor (15-30 credits)  
Art 150, Drawing .................. 3  
Art 170, Design .................. 3  
Art 260, Oil Painting or Art 280, Sculpture .................. 3  
Elect from art history area .................. 2-5  
Electives from Art to complete minor .................. 4-18  
15-30

BIOLOGY MAJOR

Major (60 credits)  
Bio. Sci. 102, General Biology .................. 5  
Bot. 161, 162, Botany .................. 10  
Zool. 151, 152, General Zoology .................. 10  
Bot. 263, Plant Taxonomy .................. 5  
Bot. 360, Plant Physiology or  
Zool. 372, General Physiology .................. 5  
Bio. Sci. 563, Genetics .................. 4  
Electives from Biological Science, Botany, Zoology and/or Paleontology from courses numbered 300 or above .................. 23-34  
60  
(Bio. Sci. 110, 111, 112, Biology may substitute for  
Bio. Sci. 102; Bot. 161, 162; Zool. 151, 152.)

BIOLOGY MINOR

Minor (18 to 30 credits)  
Bio. Sci. 102, General Biology .................. 5  
Zool. 151, General Zoology .................. 5  
Bot. 161, Bot. .................. 5  
Bot. 162, Botany, or Zool. 152, General Zoology .................. 5  
Elective in Biology or Paleontology to complete minor .................. 0-12  
18-30  
(Bio. Sci. 110, 111, 112, Biology may substitute for  
Bio. Sci. 102; Bot. 161, 162; Zool. 151, 152.)

BOTANY MAJOR

Major (48 to 60 credits)  
Bio. Sci. 102, General Biology and .................. 3  
Bot. 161, 162, Botany or .................. 10  
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 .................. 20-30  
48-60
BOTANY MINOR

Minor (18 to 30 credits)

- Bio. Sci. 102, General Biology and . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
Electives 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.
Guided electives from Crafts and/or Art 270, 385, 452, 457, 470, Home Economics 260, 460

18-30

DANCE MINOR

Minor (20 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.E. 130</td>
<td>Rhythms</td>
<td>1</td>
</tr>
<tr>
<td>P.E. 161</td>
<td>Intro. to Dance</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 201.1</td>
<td>Modern Dance I</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 201.2</td>
<td>Modern Dance II</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 201.3</td>
<td>Modern Dance III</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 301</td>
<td>Choreography</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>P.E. 30, 31, 32, 34</td>
<td>(1 credit each)</td>
<td>20</td>
</tr>
</tbody>
</table>

At least one quarter active membership in Orchesis.

30-50

ECONOMICS MAJOR

Major (50 to 60 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 251</td>
<td>Principles of Economics I</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 252</td>
<td>Principles of Economics II</td>
<td>4</td>
</tr>
<tr>
<td>Bus. Ad. 246</td>
<td>Business and Economic Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ad. 251</td>
<td>Principles of Accounting I</td>
<td>5</td>
</tr>
<tr>
<td>Bus. Ad. 346</td>
<td>Advanced Business and Economics Statistics</td>
<td>5</td>
</tr>
<tr>
<td>Hist. 348</td>
<td>Economic History of the United States</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 351</td>
<td>Intermediate Price Theory</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 470</td>
<td>Money and Banking</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 480</td>
<td>Public Finance</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 488</td>
<td>National Income Analysis</td>
<td>4</td>
</tr>
<tr>
<td>Electives in Economics or Bus. Ad.</td>
<td>8-18</td>
<td>50-60</td>
</tr>
</tbody>
</table>

ECONOMICS MINOR I

Minor (15 to 30 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 251</td>
<td>Principles of Economics I</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 252</td>
<td>Principles of Economics II</td>
<td>4</td>
</tr>
<tr>
<td>Electives in upper division Economics courses or Hist. 348</td>
<td>7-22</td>
<td>15-30</td>
</tr>
</tbody>
</table>

ECONOMICS MINOR II

(For Business Administration Majors)

Minor (20 to 30 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 351</td>
<td>Intermediate Price Theory</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 355</td>
<td>Economics of Labor</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 470</td>
<td>Money and Banking</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 480</td>
<td>Public Finance</td>
<td>5</td>
</tr>
<tr>
<td>Electives in upper division Economics courses or History 348</td>
<td>1-11</td>
<td>20-30</td>
</tr>
</tbody>
</table>

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

EDUCATION MINOR

Minor (15 to 30 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed. 307</td>
<td>Introduction to Education</td>
<td>4</td>
</tr>
<tr>
<td>Psy. 309</td>
<td>Human Growth and Development</td>
<td>4</td>
</tr>
<tr>
<td>Psy. 310</td>
<td>Learning and Evaluation</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>3-18</td>
</tr>
</tbody>
</table>

EDUCATION (School Psychologist) MINOR

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed. 307</td>
<td>Introduction to Education</td>
<td>4</td>
</tr>
<tr>
<td>Psy. 340</td>
<td>Teaching Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 425</td>
<td>Case Studies in Psychology</td>
<td>2</td>
</tr>
<tr>
<td>Ed. 446</td>
<td>Directed Observation</td>
<td>3</td>
</tr>
<tr>
<td>Ed. 490</td>
<td>Seminar in Education Problems</td>
<td>4</td>
</tr>
</tbody>
</table>

ENGLISH MAJOR

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

Major (45 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 347</td>
<td>English Literature: At least two courses</td>
<td>6</td>
</tr>
<tr>
<td>Eng. 348</td>
<td>The English Novel</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 447</td>
<td>Age of Chaucer</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 459</td>
<td>Modern British Poetry</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 460</td>
<td>The English Renaissance</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 464</td>
<td>The Restoration and Eighteenth Century</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 466</td>
<td>Nineteenth Century</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 351</td>
<td>Shakespeare</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 448</td>
<td>Chaucer or Eng. 453, Milton</td>
<td>3</td>
</tr>
<tr>
<td>American literature: At least two courses</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Eng. 370</td>
<td>American Fiction</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 377</td>
<td>American Poetry I</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 477</td>
<td>American Poetry II</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 474</td>
<td>Colonial American Literature</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 475</td>
<td>American Literature of the Revolutionary Period</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 476</td>
<td>Romantic Movement in American Literature</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>English electives: At least 15 credits of which must be taken from course numbered 300 and above</td>
<td>27</td>
</tr>
</tbody>
</table>

*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.
### ENGLISH COMPOSITION MINOR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 443, Rhetorical Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 343, Classical Rhetoric</td>
<td>4</td>
</tr>
<tr>
<td>Eng. 439, Approaches to Grammar</td>
<td>3</td>
</tr>
</tbody>
</table>

Ten credits from the following:

- Eng. 142, Short Story Writing
- Eng. 143, Verse Writing
- Eng. 342, Creative Writing
- Eng. 440, Workshop (in composition or teaching composition)
- Eng. 496, 497, 498, Individual Study (one of the three)

**Total Credits: 20**

*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 may be combined with the English Major.*

### ENGLISH LANGUAGE MINOR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 240, Introduction to Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 339, The English Language</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 445, Approaches to English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 442, History of the English Language</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose 8 credits from the following:

- Eng. 443, Rhetorical Theory and Practice (3)
- Phil. 260, Introduction to Logic (3)
- Phil. 460, Introduction to Symbolic Logic (3)
- Psy. 373, Psychology of Thinking and Language (4)
- Sp. 445, Psychology of Speech (4)

**Total Credits: 20**

*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.*

### ENGLISH LITERATURE MINOR

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

**Total Credits: 20**

*The English Literature Minor may not be taken together with an English Major.*

### FRENCH MAJOR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fr. 251, 252, Second Year French</td>
<td>10</td>
</tr>
<tr>
<td>Fr. 253, Introduction to French Literature</td>
<td>5</td>
</tr>
<tr>
<td>Fr. 351, 352, 353, Survey of French Literature</td>
<td>9</td>
</tr>
<tr>
<td>Fr. 361, 362, 363, Intermediate Conversation and Composition</td>
<td>6</td>
</tr>
<tr>
<td>Electives from French courses numbered above 253</td>
<td>15</td>
</tr>
</tbody>
</table>

**Total Credits: 45**

### FRENCH MINOR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fr. 251, 252, Second Year French</td>
<td>10</td>
</tr>
<tr>
<td>Fr. 253, Introduction to French Literature</td>
<td>5</td>
</tr>
<tr>
<td>Electives from Fr. 351, 352, 353, Survey of French Literature</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credits: 21**

### GEOGRAPHY MAJOR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geog. 100, World Geography</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 107, Physical Geography</td>
<td>4</td>
</tr>
<tr>
<td>Geog. 108, Introduction to Cultural Geography</td>
<td></td>
</tr>
<tr>
<td>Geog. 245, Economic Geography</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 352, Geography of Anglo-America, or Geog. 371, Geography of Europe</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 384, Cartography</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 386, Geomorphology</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 388, Climatology</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 481, Urban Geography</td>
<td>5</td>
</tr>
<tr>
<td>Electives from Geography</td>
<td>3-7</td>
</tr>
<tr>
<td>Electives from Social Sciences, Sciences, or Mathematics as approved by Geography adviser</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits: 45-60**

### GEOGRAPHY MINOR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geog. 100, World Geography</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 107, Physical Geography</td>
<td>4</td>
</tr>
<tr>
<td>Geog. 245, Economic Geography</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 386, Geomorphology or Geog. 388, Climatology</td>
<td>3</td>
</tr>
<tr>
<td>Any regional course or any combination of regional courses</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Credits: 20-22**
GEOLGY MAJOR

Major (45 to 60 credits)

Geol. 145, Physical Geology ......... 5
Geol. 146, Historical Geology ......... 5
Geol. 245, Rocks and Rockforming Minerals ......... 4
Geol. 247, Minerals ......... 4
Geol. 347, Paleontology ......... 4
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, 447, 449, 455, 465, 470, 475, 496, and 497

Majors are encouraged to complete:
Geol. 450, Stratigraphy ......... 4
Geol. 245, Rocks and Rockforming Minerals ......... 4

45-60

GEOLGY MINOR

Minor (15 to 30 credits)

Geol. 145, Physical Geology ......... 5
Geol. 146, Historical Geology ......... 5
Geol. 245, Rocks and Rockforming Minerals ......... 4
Electives in Geology to complete minor ......... 1-16

15-30

GERMAN MAJOR

Major (45 credits)

Ger. 251, 252, 253, Second Year German ......... 15
Ger. 353, Introduction to the German Novel ......... 3
Ger. 361, 362, 363, Intermediate Conversation and Composition ......... 6
Ger. 357, Goethe: Faust, Part I ......... 3
Ger. 457, Contemporary German Drama ......... 3
Electives from German courses numbered above 253 ......... 15

45

GERMAN MINOR

Minor (21 credits)

Ger. 251, 252, 253, Second Year German ......... 15
Electives from Ger. 351, 352, Introduction to the Classical Period, and Ger. 355, Introduction to the German Novel ......... 6

21

HEALTH AND PHYSICAL EDUCATION MAJOR

Major (45 credits)

H. Ed. 207, Introduction to Health Education ......... 3
H. Ed. 243, First Aid, or P.E. 348, Athletic Training ......... 2

20

H. Ed. 321, Methods and Materials in Health ......... 3
H. Ed. 349, Anatomy and Kinesiology ......... 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 (Second 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 ......... 5
P.E. 458, Measurement in Physical Education ......... 3
P.E. 480, Organization and Administration of Health and Physical Education ......... 3
*P.E. Activities ......... 3
P.E. 130, 131, 138 ......... 45

HISTORY MAJOR

Major (60 credits)

Hist. 143, 144, History of the United States ......... 10
Hist. 152, 153, 154, Western Civilization ......... 15
Hist. 481, Understanding History ......... 3
Five hours from the following courses: ......... 5
Hist. 485, European Intellectual and Cultural History: 1500-1815 ......... 5
Hist. 486, European Intellectual and Cultural History Since 1815 ......... 5
Hist. 455, Intellectual History of the United States
Guided upper division electives with a minimum of ten hours each in American and European areas ......... 27
(Note: For this purpose Canada and Latin America are considered part of the American area.) ......... 60

*Reading knowledge in one foreign language is required for the Arts and Sciences Major.

HISTORY MINOR

Minor (20 to 30 credits)

Hist. 143, 144, History of the United States or Hist. 153, 154, Western Civilization ......... 10
Upper division electives ......... 10-20

20-30

HOME ECONOMICS MAJOR

Major (45 to 60 credits)

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. 394, Modern Family Finance ......... 3
Family or 295, Courtship and Marriage ......... 3

(Continued on next page)
**HOME ECONOMICS MAJOR—Continued**

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

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**INDUSTRIAL TECHNOLOGY MAJOR**

**Group I:**
- T-IE 165, Engineering Drawing I ....................... 4
- T-IE 165, Engineering Drawing II ..................... 4
- Math 165, College Algebra ................................ 4
- T-IE 255, General Metals .................................. 5
- T-IE 269, Basic Electricity ................................ 4
- Elect from T-IE 270 or 357 ............................ 3

**Group II:**
- T-IE 356, Sheet Metal ..................................... 3
- T-IE 455, Welding and Forging ........................... 3
- T-IE 357, Welding and Forging II ...................... 3
- Elective courses, which may be added to the above include Lib. 145, Lib. 445, Lib. 390 and Lib 485.

**Group III:**
- T-IE 374, Basic Electronics ............................. 4
- T-IE 474, Intermediate Electronics .................... 4
- T-IE 498, Individual Study in Electronics ............. 2

**Group IV:**
- Bus. Ad. 335, Principles of Production .................. 4
- Bus. Ad. 381, Personnel Management or Econ. 355, Economics of Labor .... 4
- Bus. Ad. 433, Production Management ................. 4
- Bus. Ad. 380, Management ................................ 4

**LIBRARY SCIENCE MINOR**

**Minor (23 credits)**
- Lib. 307, The School Library Professional and Its Literature .... 3
- Ed. 316, Instructional Aids: Utilization .................. 3
- Lib. 318, School Reference Work ......................... 3
- Lib. 350, Selection of Library Materials ............... 3
- Lib. 360, Cataloging and Classification ................. 3
- Ed. 450, Instructional Aids: Production ................ 3
- Lib. 470, School Library Administration ................. 3

**Mathematics Major**

**Major (60 credits)**
- Math. 171.1, 171.2, Introductory Calculus .............. 8
- Math. 271.1, 271.2, 271.3, Calculus ................... 12
- Math. 261.1, 261.2, Foundations of Mathematics ........ 8
- Math. 261.3, Linear Algebra ................................ 4

**(Continued on next page)**
**MATHMATICS MAJOR—Continued**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 461.1, 461.2, 461.3, Abstract Algebra</td>
<td>9</td>
</tr>
<tr>
<td>Math. 471.1, 471.2, 471.3, Advanced Analysis</td>
<td>9</td>
</tr>
<tr>
<td>Electives in upper division Mathematics by advisement</td>
<td>10</td>
</tr>
</tbody>
</table>

**MATHMATICS MINOR**

<table>
<thead>
<tr>
<th>Minor (20 to 30 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 171.1, 171.2, Introductory Calculus</td>
<td>8</td>
</tr>
<tr>
<td>Math. 261.1, 261.2, Foundations of Mathematics</td>
<td>8</td>
</tr>
<tr>
<td>Math. 261.3, Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>Electives in Mathematics at 200 level or above by advisement</td>
<td>0-10</td>
</tr>
</tbody>
</table>

20-30

**MUSIC MAJOR**

<table>
<thead>
<tr>
<th>Major (60 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 144, Theory I</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 145, Theory II</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 146, Theory III</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 244, Theory IV</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 245, Theory V</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

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 144 fall quarter of freshman year. Students with proficiency in piano will enroll in Music 144 fall quarter of freshman year.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 246, Theory VI</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 270, Music History I</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 272, Music History II</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 274, Music History III</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 340, Form Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 341, Conducting I</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 343, Counterpoint I</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 443, Counterpoint II</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 495, Senior Project</td>
<td>2</td>
</tr>
<tr>
<td>Electives in Music, Guided upper division electives with a minimum of 6 hours in Music History and/or Literature</td>
<td>19</td>
</tr>
</tbody>
</table>

**MUSIC MINOR**

<table>
<thead>
<tr>
<th>Minor (20 to 30 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 144, Theory I</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 145, Theory II</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 146, Theory III</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 270, Music History I</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 272, Music History II</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 341, Conducting I</td>
<td>3</td>
</tr>
<tr>
<td>Electives in Music</td>
<td>2-12</td>
</tr>
</tbody>
</table>

20-30

**PHILOSOPHY MAJOR**

<table>
<thead>
<tr>
<th>Major (40 to 55 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil. 207, Introduction to Philosophy</td>
<td>5</td>
</tr>
<tr>
<td>Phil. 260, Introduction to Logic</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 345, Ethics</td>
<td>5</td>
</tr>
<tr>
<td>Phil. 352, History of Western Philosophy I</td>
<td>4</td>
</tr>
<tr>
<td>Phil. 353, History of Western Philosophy II</td>
<td>4</td>
</tr>
<tr>
<td>Phil. 354, History of Western Philosophy III</td>
<td>4</td>
</tr>
<tr>
<td>Phil. 355, Contemporary Thought</td>
<td>4</td>
</tr>
<tr>
<td>Phil. 499, Seminar in Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Electives in Philosophy</td>
<td>8-23</td>
</tr>
</tbody>
</table>

40-55

(Students planning to do graduate work in Philosophy are expected to include Phil. 498 in their electives.)

**PHILOSOPHY MINOR**

<table>
<thead>
<tr>
<th>Minor (20 to 28 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil. 207, Introduction to Philosophy</td>
<td>5</td>
</tr>
<tr>
<td>Phil. 260, Introduction to Logic</td>
<td>3</td>
</tr>
<tr>
<td>Electives from Philosophy</td>
<td>12-20</td>
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</tbody>
</table>

20-28

**PHYSICAL EDUCATION MINOR**

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>H. Ed. 245, First Aid or P.E. 348, Athletic Training</td>
<td>2</td>
</tr>
<tr>
<td>P.E. 207, Introduction to Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 324, Physical Education Activities for the Elementary School</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(See Health and Physical Education Major).</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.E. 332, Theory and Practice in Dance (Elementary level) or P.E. 327, Theory and Practice in Dance (Secondary level)</td>
</tr>
<tr>
<td>'P.E. Methods (Select from P.E. 330, 331, 336, 337, 339, Women may select P.E. 326)</td>
</tr>
<tr>
<td>'P.E. Activities</td>
</tr>
<tr>
<td>P.E. 130, 131, 138</td>
</tr>
<tr>
<td>Electives</td>
</tr>
</tbody>
</table>

**PHYSICAL SCIENCE MINOR**

<table>
<thead>
<tr>
<th>Minor (15 to 30 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 161, Elementary College Chemistry or 171 General Chemistry</td>
<td>4-5</td>
</tr>
<tr>
<td>Physics 161, Elementary Physics</td>
<td>5</td>
</tr>
<tr>
<td>Electives in Physical Science to complete minor</td>
<td>6-21</td>
</tr>
</tbody>
</table>

15-30
PHYSICS MAJOR

Major (60 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

*Majors are encouraged to become proficient in one foreign language and to complete a general chemistry sequence.

PHYSICS MINOR

Minor (20 to 30 credits)

Physics 181, 182, 183, 281, 282 .................................................. 20
Electives from Physics 283, 351, 352, 381, 382, 384, 385 ......................... 0–10

20–30

POLITICAL SCIENCE MAJOR

Major (45 to 60 credits)

Required ................................................................. 9
P.S. 145, Modern Government
P.S. 244, American Government
American: At least one course ................................................... 3–5
P.S. 348, Contemporary Political Parties
P.S. 353, The Legislative Process
Comparative: At least one course .............................................. 4
P.S. 375, Comp. Pol. Systems: Asia
P.S. 378, Comp. Pol. Sys.: Western Europe
P.S. 379, Comp. Pol. Sys.: Soviet Area
P.S. 475, Communism in Developing Areas
International: At least one course ............................................. 3–5
P.S. 376, International Organization
P.S. 384, International Politics
P.S. 474, International Law
P.S. 485, American Political Thought
Electives in Political Science ............................................. 0–10

45–60

POLITICAL SCIENCE MINOR

Minor (20 to 30 credits)

Required ................................................................. 9
P.S. 145, Modern Government
P.S. 244, American Government
Comparative: At least one course .............................................. 4
P.S. 375, Comp. Pol. Systems: Asia
P.S. 378, Comp. Pol. Sys.: Western Europe
P.S. 379, Comp. Pol. Sys.: Soviet Area
P.S. 476, Comp. Pol. Sys.: Developing Areas
International: At least one course ............................................. 3–5
P.S. 376, International Organization
P.S. 384, International Politics
P.S. 475, Communism in Developing Areas
P.S. 485, International Relations: Far East and S.E. Asia
Theory: At least one course ..................................................... 4
P.S. 461, Political Theory I
P.S. 462, Political Theory II
P.S. 463, Political Theory III
P.S. 465, American Political Thought
Electives in Political Science ............................................. 0–10

20–30

PRE-DENTISTRY MAJOR

Major (45 to 47 credits)

Chem. 161, 162, 163, Elementary College Chemistry or 171, 172, General Chemistry and 251, Quantitative Analysis ..... 12–15
Chem. 361, 362, Organic Chemistry ............................................... 10
Zool. 151, 152, General Zoology ................................................ 10
Zool. 348, General Vertebrate Embryology ........................................ 5
Math. 163, College Algebra .......................................................... 4
Art 280, Sculpture ................................................................. 3

45–47

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.
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
- Psy. 309, Human Growth and Development
- Psy. 362, Elementary Statistics
- Psy. 346, Social Psychology
- Psy. 444, Tests and Measurements
- Psy. 450, Experimental Psychology of Perception
- Psy. 451, Experimental Psychology of Motivation
- Psy. 452, Experimental Psychology of Learning
- Psy. 461, History and Systems of Psychology
- Psy. 499, Seminar in Psychology
- Electives in Psychology

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
- Electives in Psychology

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
- Psy. 445, Clinical and Counseling Psychology
- Psy. 449, Abnormal Psychology
- Electives in Psychology

The following supporting courses are required for all Arts and Sciences Psychology Majors (A, B, and C above):

- Phil. 260, Introduction to Logic
- Zool. 270, Human Physiology

PSYCHOLOGY MINOR

<table>
<thead>
<tr>
<th>Minor (15 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psy. 346, Social Psychology</td>
<td>4</td>
</tr>
<tr>
<td>Psy. 205, Psychology of Adjustment</td>
<td>5</td>
</tr>
<tr>
<td>Guided electives from the following:</td>
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</tr>
<tr>
<td>Psy 456, Personnel Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 362, Elementary Statistics</td>
<td>4</td>
</tr>
<tr>
<td>Psy. 309, Human Growth Development</td>
<td>4</td>
</tr>
<tr>
<td>Psy. 471, Vocational Development Theory</td>
<td>4</td>
</tr>
</tbody>
</table>

RADIO AND TELEVISION MINOR

<table>
<thead>
<tr>
<th>Minor (15 to 30 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sp. 141, Voice and Articulation</td>
<td>2</td>
</tr>
<tr>
<td>R-TV 207, Introduction to Radio and Television Broadcasting</td>
<td>3</td>
</tr>
<tr>
<td>R-TV 215, Elementary Radio and Television Production</td>
<td>3</td>
</tr>
<tr>
<td>R-TV 315, Advanced Radio and Television Production</td>
<td>3</td>
</tr>
<tr>
<td>R-TV 409, Radio and Television Project</td>
<td>1</td>
</tr>
<tr>
<td>R-TV 450, Radio and Television in Today's World</td>
<td>3</td>
</tr>
<tr>
<td>Electives to complete minor shall be selected in consultation with department chairman</td>
<td>0-15</td>
</tr>
</tbody>
</table>

RECREATION MAJOR

<table>
<thead>
<tr>
<th>Major (45 to 60 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rec. 207, Introduction to Recreation</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ad. 251, Principles of Accounting</td>
<td>5</td>
</tr>
<tr>
<td>P.E. 327, Theory and Practice in Rhythms</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 346, Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 360, The Community</td>
<td>2</td>
</tr>
<tr>
<td>Sp. 272, Children's Drama</td>
<td>4</td>
</tr>
<tr>
<td>Art 425, Arts and Crafts, Intermediate or Art 325, Arts and Crafts, Primary</td>
<td>3</td>
</tr>
<tr>
<td>Rec. 442, Field Work in Recreation</td>
<td>5</td>
</tr>
<tr>
<td>Rec. 321, Methods and Materials in Recreation</td>
<td>5</td>
</tr>
<tr>
<td>Rec. 480 Administration of Recreation</td>
<td>5</td>
</tr>
<tr>
<td>Rec. 481, Public Relations in Health, Physical Education, and Recreation</td>
<td>2</td>
</tr>
<tr>
<td>Electives to be chosen with guidelines from the following:</td>
<td>4</td>
</tr>
<tr>
<td>Sp. 141, Voice and Articulation</td>
<td>2</td>
</tr>
<tr>
<td>Crafts 242, Wood</td>
<td>3</td>
</tr>
<tr>
<td>Crafts 244, Metal</td>
<td>3</td>
</tr>
<tr>
<td>Crafts 262, Pottery</td>
<td>3</td>
</tr>
<tr>
<td>Art 290, Photography</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 326, Music in the Classroom</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 334, Physical Education Activities for the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>Crafts 347, Jewelry</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 352, Sports Officiating for Women</td>
<td>2</td>
</tr>
<tr>
<td>Art 390, Photography</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 450, Group Discussion</td>
<td>3</td>
</tr>
<tr>
<td>Rec. 249, Camp Leadership</td>
<td>3</td>
</tr>
<tr>
<td>Rec. 335, Playground Leadership</td>
<td>3</td>
</tr>
<tr>
<td>Rec. 449, School Camping</td>
<td>3</td>
</tr>
<tr>
<td>Rec. 450, Outdoor Recreation</td>
<td>2</td>
</tr>
</tbody>
</table>

Credits 45
RECREATION MINOR

Minor (20 credits) 
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:
Rec. 321, Methods and Materials in Recreation .............. 3
Rec. 207, Introduction to Recreation ............ 3
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:
Rec. 249, Camp Leadership .................. 3
Rec. 460, School Recreation .................. 2
Rec. 480, Administration of Recreation .............. 5
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 Women .................. 2
Mus. 326, Music in the Classroom .................. 3
Soc. 360, The Community .................. 2
Psy. 346, Social Psychology .................. 3
Sp. 272, Children's Drama .................. 3
Electives from lower-division courses.
Electives to complete minor selected from:
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 Women .................. 2
Mus. 326, Music in the Classroom .................. 3
Soc. 360, The Community .................. 2
Psy. 346, Social Psychology .................. 3
Sp. 272, Children's Drama .................. 3
Electives from lower-division courses.
Summer Recreation Leadership experience (Rec. 442) is desirable.

RHETORIC AND PUBLIC ADDRESS MAJOR

Major (45 credits) 
Sp. 201, Public Speaking: Practice and Criticism .................. 3
Sp. 250, Argumentation .................. 3
Sp. 251, Discussion or Sp. 252, Debate .................. 3
Sp. 343, Classical Rhetoric .................. 4
Sp. 344, Modern Rhetoric .................. 4
Sp. 345, Advanced Public Speaking .................. 3
Sp. 350, Persuasion .................. 3
Sp. 441, Speech Criticism .................. 4
Sp. 455, Psychology of Speech .................. 4
Sp. 496, Individual Study .................. 2
Electives chosen to develop a unified course of study ............. 12
45

RHETORIC AND PUBLIC ADDRESS MINOR

Minor (20 credits) 
Sp. 201, Public Speaking: Practice and Criticism .................. 3
Sp. 250, Argumentation .................. 3
Sp. 345, Advanced Public Speaking .................. 3
Electives selected from upper-division courses 
Speech courses .................. 11
20

SOCIAL SCIENCE MAJOR

Major (45 to 60 credits) 
Anthro. 107, General Anthropology, or Soc. 107, Principles of Sociology ....... 4
Soc. 145, Social Problems or Soc. 450, Contemporary Social Theory ........... 5
Electives chosen from:
Electives chosen from lower-division courses.

Arts and Sciences

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:
Economics, Geography, History or Sociology ........... 16-31
45-60

SOCIOLGY MAJOR

Major (45 to 60 credits) 
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. 331 .................. 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 ........... 5
Psy. 453, Theories of Personality ........... 5
Geog. 481, Urban Geography ........... 5
Hist. 455, Intellectual Hist. of the U.S. ........... 5
Hist. 485, European Intellectual and Cultural Hist: 1500-1815 or Hist. 486, European Intellectual and Cultural Hist. Since 1815 ........... 5
45-60

SOCIOLGY MINOR

Minor (15 to 30 credits) 
Soc. 107, Principles of Sociology ........... 4
Soc. 145, Social Problems ........... 5
Electives in Sociology to complete a minor ........... 6-21
15-30

SPANISH MAJOR

Major (45 credits) 
Span. 251, 252, 253, Second Year Spanish ........... 15
Span. 351, 352, 353, Survey of Spanish Literature ........... 9
Span. 361, 362, 363, Intermediate Conversation and Composition ........... 6
Electives from Spanish courses numbered above 255 ........... 15
45

SPANISH MINOR

Minor (21 credits) 
Span. 251, 252, 253, Second Year Spanish ........... 15
Electives from Span. 351, 352, 353, Survey of Spanish Literature ........... 6
21
SPEECH PATHOLOGY AND AUDIOLOGY MAJOR

**Major (45 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sp. 277</td>
<td>Introduction to Speech Correction</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 282</td>
<td>Introduction to American Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 290</td>
<td>Anatomy of the Speech and Hearing Mechanisms</td>
<td>4</td>
</tr>
<tr>
<td>Sp. 364</td>
<td>Stuttering</td>
<td>4</td>
</tr>
<tr>
<td>Sp. 365</td>
<td>Audiology</td>
<td>4</td>
</tr>
<tr>
<td>Sp. 376</td>
<td>Articulation</td>
<td>4</td>
</tr>
<tr>
<td>Sp. 388</td>
<td>Clinical Practicum</td>
<td>2</td>
</tr>
<tr>
<td>Sp. 389</td>
<td>Clinical Practicum</td>
<td>2</td>
</tr>
<tr>
<td>Sp. 467</td>
<td>Audiometry</td>
<td>4</td>
</tr>
<tr>
<td>Sp. 491</td>
<td>Diagnostic Methods</td>
<td>4</td>
</tr>
</tbody>
</table>

Electives to be chosen from the following courses: Sp. 445, 455, 460, 465, 471, 480, 381, 499, 362, 420. Total: 11

45

THEATRE AND DRAMA MAJOR

**Major (50 to 51 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sp. 105</td>
<td>Intro. to Theatre Arts</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 107</td>
<td>Intro. to Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 363.1, 363.2, 363.3</td>
<td>History of Theatre</td>
<td>9</td>
</tr>
<tr>
<td>Eng. 351, 352, 353</td>
<td>Shakespeare of the English Renaissance</td>
<td>9</td>
</tr>
<tr>
<td>Eng. 361, 362, 363, Drama of the English Renaissance</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Sp. 371</td>
<td>Greek and Roman Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 470</td>
<td>Recent Plays</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 474</td>
<td>Modern British Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 266</td>
<td>Play Production</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 267</td>
<td>Stagecraft</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 268</td>
<td>Stage Lighting and Makeup</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 290</td>
<td>Basic Acting</td>
<td>3</td>
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<tr>
<td>Sp. 309</td>
<td>Advanced Acting</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 429</td>
<td>Advanced Directing</td>
<td>3</td>
</tr>
<tr>
<td>Art 150</td>
<td>Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art 354</td>
<td>Costume Design</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 243</td>
<td>Oral Reading</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 272</td>
<td>Children's Drama</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 346</td>
<td>Aesthetics</td>
<td>3</td>
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<tr>
<td>Hum. 150</td>
<td>Intro. to the Film</td>
<td>2</td>
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<tr>
<td>Eng. 491</td>
<td>Literary Criticism</td>
<td>3</td>
</tr>
</tbody>
</table>

GROUP I

GROUP II

GROUP III

GROUP IV

GROUP V

Required: 12

50-51 Total

THEATRE AND DRAMA MINOR

**Minor (21 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Sp. 105</td>
<td>Intro. to Theatre Arts</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 107</td>
<td>Intro. to Drama</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 351, 352, 353</td>
<td>Shakespeare, English Renaissance</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 361, 362, 363</td>
<td>Drama of the English Renaissance</td>
<td>9</td>
</tr>
<tr>
<td>Sp. 371</td>
<td>Greek and Roman Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 373</td>
<td>American Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 376</td>
<td>Restoration and 18th Century Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 470</td>
<td>Recent Plays</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 474</td>
<td>Modern British Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 475</td>
<td>Cont. European Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 363.1, 363.2, 363.3</td>
<td>History of Theatre</td>
<td>3</td>
</tr>
</tbody>
</table>

21

ZOOLOGY MAJOR

**Major (48 to 60 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>General Biology and</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 151, 152</td>
<td>General Zoology or</td>
<td>10</td>
</tr>
<tr>
<td>Bio. Sci. 110, 111, 112</td>
<td>Biology</td>
<td>12</td>
</tr>
<tr>
<td>Zool. 348</td>
<td>General Vertebrate Embryology</td>
<td>5</td>
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<tr>
<td>Zool. 351</td>
<td>Comparative Anatomy of the Chordates</td>
<td>4</td>
</tr>
<tr>
<td>*Zool. 372</td>
<td>General Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Sp. 102</td>
<td>Intro. to Theatre Arts</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 345</td>
<td>Ornithology</td>
<td>4</td>
</tr>
<tr>
<td>Zool. 472</td>
<td>Natural History of the Vertebrates; or Zool. 473, 475</td>
<td>4</td>
</tr>
<tr>
<td>Zool. 435, Mammarylogy; or Zool. 437, Ichthyology; or Zool. 436, Herpetology</td>
<td>4-5</td>
<td></td>
</tr>
<tr>
<td>Zool. 361, Advanced Invertebrate Zoology; or Zool. 380, Parasitology; or Zool. 381, Protozoology</td>
<td>4-5</td>
<td></td>
</tr>
<tr>
<td>Electives from any Biological or Physical Science or Mathematics area</td>
<td>0-15</td>
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</table>

48-60

*Prerequisite, Organic Chemistry.

ZOOLOGY MINOR

**Minor (18 to 30 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>General Biology and</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 151, 152</td>
<td>General Zoology or</td>
<td>10</td>
</tr>
<tr>
<td>Bio. Sci. 110, 111, 112</td>
<td>Biology</td>
<td>12</td>
</tr>
<tr>
<td>Electives in Zoology to complete minor</td>
<td>5-18</td>
<td></td>
</tr>
</tbody>
</table>

18-30
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.

Admission

1. Students preparing to teach (B.A. in Ed.) make application for admission to the professional teacher education program during their sophomore year. (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 handwritten 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:

   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 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 professional 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 and 442 will be either "S" or "E".

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 program 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.

4. 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.

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 (1) select courses required rather than electives.
   b. a minimum g.p.a. of 2.25 in major area and 2.00 in minor area.
   c. if major is divided into discrete sections, balance the work taken between the various sections.
   d. 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.

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 Education 443, Student Teaching in a Remedial Class, 5 credits. Applications for student teaching during the summer session should be made to the Director of Student Teaching prior to May 1. (Education 338, Remedial Reading, is a prerequisite to Ed. 443, Student Teaching in a Remedial Class, or may be taken concurrently with Ed. 443).

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.

B.A. In Education Degree Program

Students in the Teacher Education program must fulfill the general requirements for graduation, page 33, and the following specific course requirements: (I) basic and breadth requirements (II) professional education sequence, (III) areas of concentration including major and minor requirements in the fields of his own choice, and (IV) 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 37 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, etc.) and, (2) those desiring endorsement to teach or are recommended for teaching 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 a biological science and a laboratory course in a physical science.
Professional Education Sequence

Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 307</td>
<td>Introduction to Education</td>
<td>4</td>
</tr>
<tr>
<td>Psychology 309</td>
<td>Human Growth and Development</td>
<td>4</td>
</tr>
<tr>
<td>Psychology 310</td>
<td>Learning and Evaluation</td>
<td>4</td>
</tr>
<tr>
<td>Education 314</td>
<td>Curriculum, Methods and Materials</td>
<td>4</td>
</tr>
<tr>
<td>Education 341</td>
<td>Classroom Management (September)</td>
<td>4</td>
</tr>
</tbody>
</table>

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 and Education 442 will be either "S" or "E".

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 ELEMENTARY SCHOOL TWENTY CREDIT 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 requirement 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 CREDIT (OR SIXTY or more CREDIT BROAD AREA MAJOR), (b) A TWENTY CREDIT MINOR, AND (c) 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 thirty-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 Sciences 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 discreet sections, balance the work taken between the various sections.
d. Special instructions for 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, including 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 cr.
Music and Physical Education—45 cr.

Similarly, special education possibilities may exist for majors in French and Spanish, student teaching assignments with Chairman of the Department of Foreign Languages, the Foreign Language Educator, and the Assistant Dean of Education about the possibilities in these fields.

It is not necessary for these majors to be accompanied by a professionalized subject minor for the multi-level endorsement. However, if persons taking these majors wish to prepare for endorsement 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

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

Speech Pathology and Audiology (Therapy)—45 cr.

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, Junior High School Social Science-Language Arts, 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 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
Areas of Concentration

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 . 45 or more credits

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 "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

Art—Broad Area—65 cr. (Comb. Elem.-Sec.)

*Art—45 cr.

(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.)

Business Education—Broad Area—60 cr.

Business Education, Plan I—45 cr.

Business Education, Plan II—45 cr.

Chemistry—45 cr.

(Principal 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 cr.

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

Economics—45 cr.

(Secondary teachers must combine this with a major in history or some other field in which a full-time assignment can be expected. Junior high school 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 cr.

(See major listing for special endorsement regulations.)

*Fine Arts for Elementary Teachers Only—45 cr.

(May not be used for 30-credit area.)

French—45 cr.

Geography—45 cr.

(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 cr.

Health and Physical Education—45

(Comb. Elem.-Sec.)

**Health and P.E. for Elementary Teachers Only—45 cr.

(May not be used for 30-credit area.)

*History—45 cr.

(See major listings for special endorsement regulations.)

Home Economics—Broad Area—66 cr.

(Vocational.)

Home Economics—45 cr.

Junior High Social Science—Language Arts—Broad Area—64 cr.

*Language Arts—Broad Area—65 cr.

**Language Arts for Elementary Teachers Only—45 cr.

(May not be used for 30-credit area.)

Music—Broad Area—64 cr. (Comb. Elem.-Sec.)

*Music (Elementary Teachers Only)—45 cr.

(This should be accompanied by a minor from "recommended" group in English, social science or science for endorsement for teaching in regular or self-contained elementary school classrooms.)

Physical Science (Chemistry-Physics) Broad Area—64-66 cr.

(See major listing for endorsement regulations.)

Physics—45 cr.

(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 major listing for endorsement regulations.)

Political Studies—45 cr.

(Senior high school teachers must accompany this with a major in history or some other field in which a full-time assignment can be expected. Junior high school teachers should see major listing for endorsement regulations.)

*Science—Broad Area—65 cr.

*Social Science—Broad Area—60 cr.

**Social Science for Elementary Teachers Only—45 cr.

(May not be used for 30-credit area.)

Sociology—45 cr.

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

Spanish—45 cr.
Speech and Drama—45 cr.
(It is recommended that secondary teachers accompany this with a second major, preferably English.)
Technology and Industrial Education—45 cr.

School Service Personnel Majors
Psychology—45 cr.
(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 (Comb. Elem.-Sec.) (Speech Therapy)—45 cr.
Special Education—45 cr.
(Secondary teachers must accompany this with a second major. Elementary teachers must accompany this with a minimum of 30 credits from a highly recommended major plus a professionalized subjects minor. For endorsement at both levels, teachers must accompany this with second major and the professionalized subjects minor.)

MINOR FIELDS ........... 20 credits
Elementary School Professionalized Subjects Minor 19 cr. (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 cr.
*Biology—20 cr.
Botany—20 cr.
Business Education, Plan I—20 cr.
Business Education, Plan II—21 cr.
Business Education, Plan III—20 cr.
Chemistry—20 cr.
Crafts—20 cr.
Drama—20 cr. (Elementary Only)
Drama—20 cr. (Secondary Only)
Earth Science—21 cr.
Economics—20 cr.
*English Composition—20 cr.
*English Language—20 cr.
*English Literature—20 cr.
French—21 cr.
*Geography—20 cr.
Geology—21 cr.
German—21 cr.
Health Education—20 cr.
*History—20 cr.
Home Economics—20 cr.
Journalism—20 cr.
*Mathematics—20 cr.
Music—20 cr.
Physical Education—20 cr.

*Physical Science—20 cr.
Physics—20 cr.
Political Science—20 cr.
*Science—Elementary—20 cr.
Sociology—20 cr.
Spanish—21 cr.
Speech—20 cr. (Elementary Only)
Speech—20 cr. (Secondary Only)
Technology and Industrial Education—20 cr.

Supporting and/or Background Minors
Anthropology—20 cr.
Philosophy—20 cr.
Psychology—19 cr.
Radio and Television—20 cr.
Recreation and Outdoor Education—20 cr.

School Service Personnel Minors
Instructional Materials—19 to 20 cr.
Psychology—19 cr.
School Librarianship (See Instructional Materials)
Special Education—20 cr.

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 the Graduate Catalog for Requirements for the Standard Teaching Certificate.)

**Fifth Year of Study**

**For The 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 one of the following objectives of the fifth year:

a. To strengthen areas of weakness discovered during the first year of teaching.

b. To develop a specialization of not less than 20 credits. The specialization may be earned independent of or in conjunction with an advanced degree. It should be planned in conference with the appropriate department chairman and the Assistant Dean of Education.

c. To fulfill institutional requirements by taking:

   (1) Fifteen credits in subject matter area(s) related to teaching field(s) and/or major. A major must be completed by the end of the fifth year.

   (2) Seven and one-half credits from the following list of professional courses:

   - Ed. 316, Instructional Aids: Utilization
   - Ed. 362, Educational and Psychological Statistics
   - Ed. 417, Radio and TV in Classrooms
   - Ed. 447, Classroom Teaching Problems
   - Ed. 450, Instructional Aids: 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 Improvement
   - Ed. 562, Evaluation of the School Program
   - Ed. 570, Education 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.

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.

### Majors and Minors in Teacher Education Program

**ANTHROPOLOGY MINOR**

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro. 107, General Anthropology</td>
<td>4</td>
</tr>
<tr>
<td>Anthro. 141, Introduction to Cultural Anthropology</td>
<td>4</td>
</tr>
<tr>
<td>Anthro. 160, Introduction to Archaeology or Anthro. 175, Introduction to Physical Anthropology</td>
<td>4</td>
</tr>
<tr>
<td>Anthro. 441, Comparative Ethnology</td>
<td>4</td>
</tr>
<tr>
<td>Anthro. 454, Cultural Change</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

### ART (BROAD AREA) MAJOR

Qualifies for teaching art, both elementary and secondary.

<table>
<thead>
<tr>
<th>Major (65 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing</td>
<td>6</td>
</tr>
<tr>
<td>Art 150, 250, Drawing</td>
<td>6</td>
</tr>
<tr>
<td>Design</td>
<td>6</td>
</tr>
<tr>
<td>Art 170, 270, Design</td>
<td>6</td>
</tr>
<tr>
<td>Painting (elect 9 hours from the following):</td>
<td>9</td>
</tr>
<tr>
<td>Art 260, 261, Oil Painting</td>
<td></td>
</tr>
<tr>
<td>Art 262, 263, Water Color</td>
<td></td>
</tr>
<tr>
<td>Printmaking (elect 6 hours from the following):</td>
<td></td>
</tr>
<tr>
<td>Art 285, Printmaking</td>
<td></td>
</tr>
<tr>
<td>Art 287, Intaglio Printmaking</td>
<td></td>
</tr>
<tr>
<td>Art 385, Serigraphy</td>
<td></td>
</tr>
<tr>
<td>Art 387, Intaglio Printmaking</td>
<td></td>
</tr>
<tr>
<td>Art 485, Advanced Serigraphy</td>
<td></td>
</tr>
<tr>
<td>Sculpture</td>
<td>6</td>
</tr>
<tr>
<td>Art 280, 281, Sculpture</td>
<td></td>
</tr>
<tr>
<td>Select 8-10 hours from the following at least two fields:</td>
<td>8-10</td>
</tr>
<tr>
<td>Jewelry (Crafts 347, 447)</td>
<td></td>
</tr>
<tr>
<td>Pottery (Crafts 262, 362, 462)</td>
<td></td>
</tr>
<tr>
<td>Metal (Crafts 244, 344)</td>
<td></td>
</tr>
<tr>
<td>Wood (Crafts 242, 342)</td>
<td></td>
</tr>
<tr>
<td>Leather (Crafts 245)</td>
<td></td>
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<tr>
<td>Plastics and Glass (Crafts 243, 343)</td>
<td></td>
</tr>
<tr>
<td>Enameling (Crafts 349)</td>
<td></td>
</tr>
<tr>
<td>Photography (Art 290, 390)</td>
<td></td>
</tr>
<tr>
<td>Art History and Seminar</td>
<td>11</td>
</tr>
<tr>
<td>Art 348, Ancient and Medieval Art</td>
<td></td>
</tr>
<tr>
<td>Art 448, Renaissance through Nineteenth Century Art</td>
<td></td>
</tr>
<tr>
<td>Art 451, Contemporary Art</td>
<td></td>
</tr>
<tr>
<td>Art 499, Art Seminar</td>
<td></td>
</tr>
<tr>
<td>Art Education</td>
<td>9</td>
</tr>
<tr>
<td>Art 432, Art in the High School, 3 cr. (required) with 6 hours elected from the following:</td>
<td></td>
</tr>
<tr>
<td>Art 325, Arts and Crafts Primary</td>
<td></td>
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<tr>
<td>Art 425, Arts and Crafts Intermediate</td>
<td></td>
</tr>
<tr>
<td>Art 430, Art in the Elementary School</td>
<td></td>
</tr>
<tr>
<td>Art 431, Art in the Junior High School</td>
<td></td>
</tr>
<tr>
<td>Elect courses from the various above categories to complete the major.</td>
<td>2-4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>65</strong></td>
</tr>
</tbody>
</table>

### ART MAJOR

Qualifies for teaching art, either or both elementary or secondary, depending upon special methods courses (430, 431, 432) completed.

<table>
<thead>
<tr>
<th>Major (45 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing</td>
<td>6</td>
</tr>
<tr>
<td>Art 150, 250, Drawing</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>6</td>
</tr>
<tr>
<td>Art 170, 270, Design</td>
<td></td>
</tr>
<tr>
<td>Painting, elect two courses:</td>
<td>6</td>
</tr>
<tr>
<td>Art 260, 261, Oil Painting</td>
<td></td>
</tr>
<tr>
<td>Art 262, Water Color</td>
<td></td>
</tr>
<tr>
<td>Sculpture</td>
<td>6</td>
</tr>
<tr>
<td>Art 280, 281, Sculpture</td>
<td></td>
</tr>
<tr>
<td>Printmaking, elect one:</td>
<td>3</td>
</tr>
<tr>
<td>Art 285, Printmaking</td>
<td></td>
</tr>
<tr>
<td>Art 287, Intaglio Printmaking</td>
<td></td>
</tr>
<tr>
<td>Art 385, Serigraphy</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>

(Continued on next page)
Teacher Education

(Art Major—Continued)

Art Education, elect one at appropriate level: ........................................... 3
Art 430, Art in the Elementary School ......................................................... 3
Art 431, Art in the Junior High School .......................................................... 3
Art History and Seminar .............................................................................. 11
Art 348, Ancient and Medieval Art .............................................................. 3
Art 448, Renaissance Through Nineteenth Century Art ............................... 3
Art 451, Contemporary Art ............................................................................ 3
Art 499, Art Seminar ...................................................................................... 4
Electives from art or crafts ................................................................. 4

ART MINOR

Minor (20 credits) Credits
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 ............................................................ 2-3
Art 425, Arts and Crafts, Intermediate .................................................... 2-3
Art 430, Art in the Elementary School ....................................................... 3
Art 431, Art in the Junior High School ....................................................... 3
Art 432, Art in the High School .................................................................. 3
Elect from art history ................................................................................ 2-3
Add electives in art or crafts ................................................................. 2-3

20

BIOLOGY MAJOR

Qualifies for high school biology. For junior high school science, see Science Major. For elementary school, see Page 54.

Major (45 credits) Credits
Bio. Sci. 102, General Biology and ... ......................................................... 3
Botany 161, 162, Botany and Zoology 151, 152, General Zoology .......... 20
(Bio. Sci. 110, 111, 112, Biology, may be substituted for the above 13 credits) ... (12)
Botany 263, Plant Taxonomy .................................................................. 5
Zool. 372, General Physiology or Bot. 360, Plant Physiology .............. 5
Sci. Ed. 324, Science Education in the Secondary Schools ................. 3
Bio. Sci. 365, Genetics .............................................................................. 4
Electives from Biology or Paleontology ........................................... 5-16

45

*Prerequisite: Biological Science 102 (may be taken concurrently).

BIOLOGY MINOR

To qualify for elementary school teaching, add Sci. Ed. 322. For endorsement, minimal level, for high school biology, the following are required in addition to courses specified above: Sci. Ed. 324; Zool. 152; Bot. 162; Zool. 372; a field course in biology. Students completing the minor are exempt from Bio. Sci. 103.

Minor (20 credits) Credits
Bio. Sci. 102, General Biology and ... ......................................................... 3
Bot. 161, Botany and Zool. 151, General Zoology .................................. 10
(Bio. Sci. 110, 111, 112, Biology, may be substituted for above 13 credits) ... (12)
Electives in Biology ................................................................................. 7-8

20

*Prerequisite: Bio. Sci. 102 (may be taken concurrently).

BOTANY MINOR

May not be used in combination with a Biology Major.

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

20

BUSINESS EDUCATION (BROAD AREA) MAJOR

Qualifies for teaching secondary business education. For elementary, see Page 54.

Endorsement for student teaching requires a minimum g.p.a. in each of the basic skill areas (typing, 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.

Major (60 credits) 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 ............. 12-13
Bus. Ed. 271, Office Machines ............................................................... 3
Bus. Ed. 278, Office Practice ................................................................. 3
Bus. Ed. 285, Business Communications ........................................... 3
Bus. Ed. 321, Methods in Business Education ...................................... 5
Bus. Ed. 371, Office Management .......................................................... 3
Bus. Ed. 373, Practical Duplicating Techniques ................................... 3
Bus. Ed. 375, Consumer Education ....................................................... 3
Bus. Admr. 251, 252, Principles of Accounting I, II ........................... 10
Elect from the following courses, including at least 2 areas ............... 9-10
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. 369, Market Bric-stopting .................................................. 4
Bus. Admr. 370, Business Finance ......................................................... 4
Bus. Admr. 474, Investments for Beginners ......................................... 2
Econ. 351, Intermediate Price Theory .................................................. 3
Econ. 470, Money and Banking ............................................................. 5

(Continued on next page)
### BUSINESS EDUCATION MAJOR—PLAN I.

Qualifies for teaching secondary business education. For elementary, see Page 54.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus. Ed. 151, 152, and 153, or 152, 153, and 254, Typewriting</td>
<td>6</td>
</tr>
<tr>
<td>Bus. Ed. 161, 162, and 163, or 162, 163, and 264, Shorthand</td>
<td>12-13</td>
</tr>
<tr>
<td>Bus. Ed. 278, Office Practice</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 321, Methods in Business Education</td>
<td>5</td>
</tr>
<tr>
<td>Bus. Ed. 375, Consumer Education</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 371, Office Management I, II</td>
<td>10</td>
</tr>
<tr>
<td>Elect from the following courses:</td>
<td>2-3</td>
</tr>
<tr>
<td>Bus. Ed. 270, Operation of Dictating Machines</td>
<td>1</td>
</tr>
<tr>
<td>Bus. Ed. 371, Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 373, Practical Duplicating Techniques</td>
<td>2</td>
</tr>
<tr>
<td>Bus. Ed. 392, Records Management</td>
<td>3</td>
</tr>
<tr>
<td>Journ. 365, High School Publications</td>
<td>3</td>
</tr>
<tr>
<td>Math. 150, Elementary Computer Programing</td>
<td>3</td>
</tr>
<tr>
<td>Math. 163, College Algebra</td>
<td>4</td>
</tr>
</tbody>
</table>

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

### BUSINESS EDUCATION MAJOR—PLAN II. (Without Shorthand)

Qualifies for teaching business education subjects, except shorthand, at secondary school levels. For elementary school teaching, see Page 54.

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus. Ed. 151, 152, and 153, or 152, 153, and 254, Typewriting</td>
<td>6</td>
</tr>
<tr>
<td>Bus. Ed. 271, Typewriting</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 278, Office Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

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

### BUSINESS EDUCATION MINOR—PLAN I.

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus. Ed. 151, 152 and 153, or 152, 153, and 254, Typewriting</td>
<td>6</td>
</tr>
<tr>
<td>Bus. Ed. 321, Methods in Business Education</td>
<td>5</td>
</tr>
<tr>
<td>Elect from the following courses:</td>
<td>5</td>
</tr>
<tr>
<td>Bus. Ed. 146, Accounting for Secretaries, or Bus. Admr. 251, Principles of Accounting I</td>
<td>5</td>
</tr>
<tr>
<td>Bus. Ed. 271, Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 278, Office Practice</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 285, Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 373, Practical Duplicating Techniques</td>
<td>2</td>
</tr>
<tr>
<td>Bus. Ed. 392, Records Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 375, Consumer Education</td>
<td>3</td>
</tr>
</tbody>
</table>

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

Minor (20 credits) Credits

Bus. Admr. 251, 252, Principles of Accounting I, II .................. 10
Elect from the following: .......................... 5

Bus. Ed. 151, Elementary Typewriting .......................... 2
Bus. Ed. 152, Intermediate Typewriting ............... 2
Bus. Ed. 153, Advanced Typewriting ................................. 2
Bus. Ed. 254, Vocational Typewriting .......................... 2
Bus. Ed. 271, Office Machines .......................... 3

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

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 54.

Major (45 credits) Credits

Chem. 161, 162, 163, Elementary College Chemistry, or 171, 172, General Chemistry .......................... 10 or 12
Chem. 251, Quantitative Analysis .......................... 5
Chem. 361, 362, Organic Chemistry .......................... 10
Chem. 381, 382, 383, Physical Chemistry .......................... 9
Sci. Ed. 324, Science Education in the Secondary School .......................... 3
Electives in Chemistry, Mathematics or Physics from courses above 300 by advisement .......................... 6-8

CHEMISTRY MINOR

Minor (20 credits) Credits

Chem. 161, 162, 163, Elementary College Chemistry, or 171, 172, General Chemistry .......................... 10-12
Electives in Chemistry .......................... 8-10

For endorsement, minimum level, for high school chemistry, include in addition to courses listed above, Sci. Ed. 324; Chem. 251, 362. Chem. 383 is recommended but not required.

CRAFTS MINOR

Minor (20 credits) Credits

Elect from Crafts 242, Wood and Crafts .......................... 2-3
Crafts 262, Pottery .......................... 3
Crafts 347, Jewelry .......................... 3
Elect from Crafts, 200, 243, 242, 244, 245, 246, 342, 344, 346, 349, 362, 447, 462, and H. Ed. 260, 460 .......................... 11-12

DRAMA MINOR—ELEMENTARY

Minor (20 credits) Credits

Sp. 266, Play Production .......................... 3
Sp. 269, Basic Acting .......................... 3
Sp. 272, Children’s Drama .......................... 3
Sp. 362, Practice in Creative Dramatics .......................... 3
Sp. 367, Stage Craft .......................... 3
Sp. 420, Teaching Speech in the Elementary School .......................... 3
Electives chosen from Speech, Drama or P.E. 327 .......................... 2

DRAMA MINOR—SECONDARY

Minor (20 credits) Credits

Sp. 107, Introduction to Drama .......................... 3
Sp. 266, Play Production .......................... 3
Sp. 267, Stage Craft .......................... 3
Sp. 429, Advanced Directing .......................... 3
Sp. 496, Independent Study or Course Substitution .......................... 2

EARTH SCIENCE MAJOR

Major (45 credits) Credits

Geog. 107, Introduction to Physical Geography .......................... 4
Geog. 386, Geomorphology .......................... 3
Geog. 388, Climatology .......................... 3
Geol. 145, Historical Geology .......................... 5
Geol. 245, Rocks and Rock-forming Minerals, or Geol. 247, Minerals .......................... 4
Geol. 347, Paleontology, or Geology 450, Stratigraphy .......................... 4 or 5
Geol. 350, Washington Geology I: The Solar System .......................... 4
Phys. 331, Astronomy I: The Solar System .......................... 4
Phys. 332, Astronomy II: Stars and Galaxies .......................... 4
Sci. Ed. 324, Science Education in the Secondary School .......................... 3
Approved Geology Electives .......................... 2-3

45
### Earth Science Minor

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geog. 388, Climatology</td>
<td>3</td>
</tr>
<tr>
<td>Geol. 145, Physical Geology</td>
<td>5</td>
</tr>
<tr>
<td>Geol. 146, Historical Geology</td>
<td>5</td>
</tr>
<tr>
<td>Geol. 245, Rocks and Rock-forming Minerals</td>
<td>4</td>
</tr>
<tr>
<td>Physics 331, Astronomy I: The Solar System</td>
<td>4</td>
</tr>
</tbody>
</table>

For minimum endorsement for earth science teaching in junior or senior high school add: Geog. 386, either Geol. 247 or Geol. 450, and Sci. Ed. 324.

### 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 54.

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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 251, Principles of Economics I</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 252, Principles of Economics II</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 470, Money and Banking</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 480, Public Finance and Taxation</td>
<td>5</td>
</tr>
<tr>
<td>Bus. Admr. 251, Principles of Accounting II</td>
<td>5</td>
</tr>
<tr>
<td>Hist. 348, Economic History of the United States</td>
<td>5</td>
</tr>
<tr>
<td>Soc. Sci. 420 or 421, Methods and Materials in the Social Sciences—Elementary or Secondary or Hist. 421, Methods and Materials in History—Secondary</td>
<td>2–3</td>
</tr>
<tr>
<td>Electives (Five hours from history, geography or political science; upper division electives—ten hours in economics or business administration)</td>
<td>15</td>
</tr>
</tbody>
</table>

**Total:** 45

### Economics Minor

#### Minor (20-23 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 251, Principles of Economics I</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 252, Principles of Economics II</td>
<td>4</td>
</tr>
<tr>
<td>Select from:</td>
<td>12-15</td>
</tr>
<tr>
<td>Econ. 345, Current Issues in Economics</td>
<td>2</td>
</tr>
<tr>
<td>Econ. 253, Economics of Labor</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 356, Comparative Economic System</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 470, Money and Banking</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 480, Public Finance and Taxation</td>
<td>5</td>
</tr>
<tr>
<td>Hist. 348, Economic History of the United States</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total:** 20–23

### 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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 320, Children's Literature</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 428, Teaching Literature and Composition in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 344, Advanced Composition</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 492, Modern Literary Criticism</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 531, 332, 333, Shakespeare or</td>
<td>6</td>
</tr>
<tr>
<td>Eng. 361, 362, 363, Drama of the English Renaissance</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total:** 19

(Continued on next page)
ENGLISH LANGUAGE MINOR

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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 240, Introduction to Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 339, The English Language</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 443, Approaches to English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 442, History of the English Language</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 443, Rhetorical Theory and Practice</td>
<td>(3)</td>
</tr>
<tr>
<td>Phil. 260, Introduction to Logic</td>
<td>(3)</td>
</tr>
<tr>
<td>Phil. 460, Introduction to Symbolic Logic</td>
<td></td>
</tr>
<tr>
<td>Psy. 373, Psychology of Thought and Language</td>
<td>(4)</td>
</tr>
<tr>
<td>Sp. 445, Psychology of Speech</td>
<td>(4)</td>
</tr>
</tbody>
</table>

*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.

ENGLISH LITERATURE MINOR

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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Surveys: At least two quarters of one sequence</td>
<td>6</td>
</tr>
<tr>
<td>Eng. 245, 246, 247, English Literature</td>
<td></td>
</tr>
<tr>
<td>Eng. 274, 275, 276, American Literature</td>
<td></td>
</tr>
<tr>
<td>Eng. 281, 282, 283, World Literature</td>
<td></td>
</tr>
<tr>
<td>Poetry: At least one</td>
<td></td>
</tr>
<tr>
<td>Eng. 106, Introduction to Poetry</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 439, Modern British Poetry</td>
<td></td>
</tr>
<tr>
<td>Eng. 377, American Poetry I</td>
<td></td>
</tr>
<tr>
<td>Eng. 477, American Poetry II</td>
<td></td>
</tr>
<tr>
<td>Prose Fiction: At least one</td>
<td></td>
</tr>
<tr>
<td>Eng. 105, Introduction to Fiction</td>
<td></td>
</tr>
<tr>
<td>Eng. 347, 348, 349, The English Novel</td>
<td></td>
</tr>
<tr>
<td>Eng. 384, The Short Story</td>
<td></td>
</tr>
<tr>
<td>Eng. 370, 371, 372, American Fiction</td>
<td></td>
</tr>
<tr>
<td>Eng. 485, The Continental Novel</td>
<td></td>
</tr>
<tr>
<td>Elective in English: Major author or period course</td>
<td>8</td>
</tr>
</tbody>
</table>

*May not be taken with English Major.

FINE ARTS MAJOR FOR ELEMENTARY TEACHERS

Open to elementary school teachers only. May not be used for 30-credit area. For secondary teaching expand and convert to one of the other major patterns.

Major (45 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 150, Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art 170, Design</td>
<td>3</td>
</tr>
<tr>
<td>Art 260, Oil Painting, or Art 262, Watercolor</td>
<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
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. For elementary school regular or self-contained classroom teaching, see Page 54.

Major (45 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fr. 251, 252, Second Year French</td>
<td>10</td>
</tr>
<tr>
<td>Fr. 253, Introduction to French Literature</td>
<td>5</td>
</tr>
<tr>
<td>Fr. 351, 352, 353, Survey of French Literature</td>
<td>9</td>
</tr>
<tr>
<td>Elect 2 courses from Fr. 361, 362, 363</td>
<td>4</td>
</tr>
<tr>
<td>Electives from French, courses numbered above 253</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>45</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fr. 251, 252, Second Year French</td>
<td>10</td>
</tr>
<tr>
<td>Fr. 253, Introduction to French Literature</td>
<td>5</td>
</tr>
<tr>
<td>Fr. 361, 362, 363, Intermediate Conversation and Composition</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>21</td>
</tr>
</tbody>
</table>

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 54.

Major (45 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geog. 100, World Geography</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 107, Physical Geography</td>
<td>4</td>
</tr>
<tr>
<td>Geog. 108, Introduction to Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 245, Economic Geography</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 386, Geomorphology, or Geography</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 388, Climatology</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 352, Geography of Anglo-America, or Geog. 371, Geography of Europe</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 421, Practical Aids in Teaching Geography, or Social Science 420, or Social Science 421, Methods and Materials in the Social Sciences, Elementary or Secondary</td>
<td>2-3</td>
</tr>
<tr>
<td>Electives from the following:</td>
<td>8</td>
</tr>
<tr>
<td>Geog. 343, Industrial Geography</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 346, Political Geography</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 350, Conservation of Natural Resources</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 384, Introductory Cartography</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 410, Interpretation of Aerial Photographs</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 425, Field Methods in Geography</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 481, Urban Geography</td>
<td>3</td>
</tr>
<tr>
<td>Electives from regional Geography Courses</td>
<td>5</td>
</tr>
<tr>
<td>Electives from social sciences, sciences, or mathematics, as approved by geography adviser</td>
<td>5</td>
</tr>
</tbody>
</table>

GEOLOGY MINOR
Minor (21 or 22 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geol. 145, Physical Geology</td>
<td>5</td>
</tr>
<tr>
<td>Geol. 146, Historical Geology</td>
<td>5</td>
</tr>
<tr>
<td>Geol. 245, Rocks and Rock-forming Minerals</td>
<td>4</td>
</tr>
<tr>
<td>Geol. 247, Minerals or 347 Paleontology</td>
<td>4 or 5</td>
</tr>
<tr>
<td>Sci. Ed. 322, Science Education in the Elementary School</td>
<td>3</td>
</tr>
</tbody>
</table>

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. For elementary school, regular or self-contained classroom teaching, see Page 54.

Major (45 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ger. 251, 252, 253, Second Year German</td>
<td>15</td>
</tr>
<tr>
<td>Ger. 353, Introduction to the German Novelle</td>
<td>3</td>
</tr>
</tbody>
</table>

(Continued on next page)
### 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)**

<table>
<thead>
<tr>
<th>Course(s)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ger. 357, Goethe: Faust, Part I</td>
<td>3</td>
</tr>
<tr>
<td>Ger. 457, Contemporary German Drama</td>
<td>3</td>
</tr>
<tr>
<td>Electives from German courses numbered above 253</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>

### HEALTH AND PHYSICAL EDUCATION MAJOR

**Elementary Teachers**

Open only to elementary school teachers. May not be used for 30-credit area. For secondary teaching expand and convert to the regular Health and Physical Education major.

**Major (45 credits)**

<table>
<thead>
<tr>
<th>Course(s)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Ed. 100, Health Education (Unless exempt from H. Ed. 100 or H. Ed. 200)</td>
<td>0-3</td>
</tr>
<tr>
<td>H. Ed. 207, Introduction to School Health</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 245, First Aid</td>
<td>2</td>
</tr>
<tr>
<td>H. Ed. 349, Anatomy and Kinesiology</td>
<td>5</td>
</tr>
<tr>
<td>H. Ed. 330, Nutrition Act. in Elem. School</td>
<td>1</td>
</tr>
<tr>
<td>P.E. Activities</td>
<td>6</td>
</tr>
<tr>
<td>One credit in each of the following: P.E. 131, 138, 122W, 124W, 64, 70, 130, 127W or (129M), 134</td>
<td></td>
</tr>
<tr>
<td>P.E. Activities</td>
<td>5</td>
</tr>
<tr>
<td>P.E. Methods</td>
<td>5</td>
</tr>
<tr>
<td>One credit in each of the following: P.E. 330c, 331j, 337a, 338b, and 339b.</td>
<td></td>
</tr>
<tr>
<td>P.E. 332, Rhythms in Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 334, P.E. Activities in Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 471, Philosophy of Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>Rec. 207, Introduction to Recreation</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 270, Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Electives from the following:</td>
<td>5-8</td>
</tr>
<tr>
<td>H. Ed. 321, Methods and Materials in H. Ed.</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 450, Physiology of Exercise</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 470, School and Community Health</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 207, Introduction to P.E.</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 361, P.E. for Handicapped Children</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 460, Safety in P.E. and Athletics</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 480, Admin. in Health and P.E.</td>
<td>3</td>
</tr>
<tr>
<td>Safety Education 437, General Safety Education</td>
<td>3</td>
</tr>
<tr>
<td>Rec. 249, Camp Leadership</td>
<td>3</td>
</tr>
<tr>
<td>P.E. 330d, 331a, 331c 331h, 336c, 336f, 336h, 337c, 338a, 339a, 339g and 339h</td>
<td>1 cr. each</td>
</tr>
<tr>
<td>H. Ed. 200, General Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 205, or Pscy. 295, Courtship and Marriage (Family Relations)</td>
<td>3</td>
</tr>
<tr>
<td>Rec. 335, Program Leadership</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>

### HEALTH EDUCATION MINOR

**Minor (20 credits)**

<table>
<thead>
<tr>
<th>Course(s)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Ed. 207, Introduction to School Health</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 245, First Aid</td>
<td>2</td>
</tr>
<tr>
<td>Zool. 270, Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 349, Anatomy and Kinesiology</td>
<td>5</td>
</tr>
<tr>
<td>H. Ed. 321, Methods and Materials in Health</td>
<td>3</td>
</tr>
<tr>
<td>Electives in Health</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

---

*Other P.E. Activities shall be taken from the major or minor offerings in the yearly course schedule.*
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 54.

Major (45 credits)

| History 143, 144, History of the United States | 10 |
| History 152, 153, 154, Western Civilization | 15 |
| History 421, Methods and Materials in History—Secondary or Soc. Sci. 420, Methods and Materials in the Social Sciences—Elementary | 2-3 |
| At least one from the following: | 3-5 |
| History 443, The American Colonial Mind | |
| History 455, Intellectual History of the United States | |
| History 481, Understanding History | |
| History 388, Economics History of Europe Since 1760 | |
| History 446, 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 | 12-15 |

45

HISTORY MINOR
Does not qualify for teaching history on the secondary level.

Minor (20 credits)

| History 153, 154, Western Civilization | 10 |
| Upper division electives | 10 |

20

HOME ECONOMICS BROAD AREA MAJOR
Qualifies for teaching secondary home economics for elementary school teaching, see Page 54.

Major (66 credits)

| H. Ec. 107, Introduction to Home Economics | 1 |
| 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 | 3 |
| 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, Family and Service | 3 |
| 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 | 3 |
| H. Ec. 200, General Nutrition | 3 |

66

Teacher Education

| 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 Service or | 3 |
| 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. 273, 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 |

45

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 54.

Major (45 credits)

| 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. 273, Housing and Society or | 3 |
| 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 |
| H. Ec. 250, Flat Pattern Design | 3 |

7

*Select electives to bring total to 45 credits from any Home Economics courses for which the student has met the prerequisites.
**HOME ECONOMICS MINOR**

Minor (20 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Ec. 270</td>
<td>Theory of Home Management</td>
<td>3</td>
</tr>
<tr>
<td>Lib. 340</td>
<td>Home Economics-Home Management</td>
<td>3</td>
</tr>
<tr>
<td>H. Ec. 290</td>
<td>Child Care or</td>
<td>3</td>
</tr>
<tr>
<td>H. Ec. 295</td>
<td>Courtship and Marriage or</td>
<td>3</td>
</tr>
<tr>
<td>H. Ec. 394</td>
<td>Modern Problems of the Family</td>
<td>3</td>
</tr>
</tbody>
</table>

Food and Nutrition

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Ec. 185</td>
<td>Food Preparation for the Family</td>
<td>5</td>
</tr>
<tr>
<td>H. Ec. 200</td>
<td>General Nutrition</td>
<td>5</td>
</tr>
<tr>
<td>H. Ec. 150</td>
<td>Clothing Construction or</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Textiles and Clothing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Ec. 153</td>
<td>Textiles</td>
<td>4</td>
</tr>
</tbody>
</table>

Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lib. 420</td>
<td>Reading Materials for Adolescents</td>
<td>3</td>
</tr>
</tbody>
</table>

**INDUSTRIAL EDUCATION MINOR**

Minor (Secondary) (20-21 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-IE 165</td>
<td>Engineering Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>T-IE 250</td>
<td>Woodworking</td>
<td>5</td>
</tr>
<tr>
<td>T-IE 255</td>
<td>General Metals</td>
<td>5</td>
</tr>
<tr>
<td>T-IE 269</td>
<td>Basic Electricity</td>
<td>5</td>
</tr>
<tr>
<td>Elect from T-IE 356, 270 or 430</td>
<td>2-3</td>
<td></td>
</tr>
</tbody>
</table>

20-21

**INDUSTRIAL EDUCATION BROAD AREA MAJOR**

Qualifies for teaching secondary industrial education. For elementary school teaching, see Page 55.

Major (63-65 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-IE 165</td>
<td>Engineering Drawing I</td>
<td>4</td>
</tr>
<tr>
<td>T-IE 250</td>
<td>Woodworking</td>
<td>5</td>
</tr>
<tr>
<td>T-IE 255</td>
<td>General Metals</td>
<td>5</td>
</tr>
<tr>
<td>T-IE 269</td>
<td>Basic Electricity</td>
<td>5</td>
</tr>
<tr>
<td>T-IE 270</td>
<td>Power Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>T-IE 357</td>
<td>Welding and Forging</td>
<td>4</td>
</tr>
<tr>
<td>T-IE 450</td>
<td>Industrial Education</td>
<td>4</td>
</tr>
<tr>
<td>Physics 102</td>
<td>Physics and Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>Math. 163</td>
<td>College Algebra</td>
<td>5</td>
</tr>
<tr>
<td>T-IE 375</td>
<td>Industrial Arts Design</td>
<td>3</td>
</tr>
<tr>
<td>T-IE 433</td>
<td>Industrial Education Laboratory Planning</td>
<td>2</td>
</tr>
<tr>
<td>Econ. 244</td>
<td>Introduction to Economics or</td>
<td>5</td>
</tr>
<tr>
<td>Geog. 245</td>
<td>Economic Geography</td>
<td>5</td>
</tr>
</tbody>
</table>

Area of Concentration: (Select one group) 9-11

Group I—Woodworking

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-IE 448</td>
<td>General and Wood Finishing</td>
<td>2</td>
</tr>
<tr>
<td>T-IE 450</td>
<td>Advanced Furniture Construction</td>
<td>5</td>
</tr>
<tr>
<td>T-IE 371</td>
<td>Shop and Tool Maintenance</td>
<td>2</td>
</tr>
</tbody>
</table>

Group II—Metals

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-IE 356</td>
<td>Sheet Metal</td>
<td>3</td>
</tr>
<tr>
<td>T-IE 455</td>
<td>General Metals II</td>
<td>5</td>
</tr>
<tr>
<td>T-IE 497</td>
<td>Individual Study</td>
<td>2</td>
</tr>
</tbody>
</table>

**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 Education in 1960.

Minor (20 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lib. 307</td>
<td>School Library Profession and its Literature</td>
<td>3</td>
</tr>
<tr>
<td>Lib. 316</td>
<td>Instructional Aids: Utilization</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 320</td>
<td>Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>Lib. 420</td>
<td>Reading Materials for Adolescents</td>
<td>3</td>
</tr>
<tr>
<td>Lib. 350</td>
<td>Selection of School Library Materials</td>
<td>3</td>
</tr>
<tr>
<td>Lib. 318</td>
<td>Library Resources and Services</td>
<td>3</td>
</tr>
<tr>
<td>Lib. 360</td>
<td>Cataloging and Classification</td>
<td>3</td>
</tr>
</tbody>
</table>

Related Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sp. 243</td>
<td>Oral Reading</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 272</td>
<td>Children’s Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 362</td>
<td>Practice in Creative Dramatics</td>
<td>2</td>
</tr>
</tbody>
</table>

**JOURNALISM MINOR**

Minor (20 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journ. 260</td>
<td>Journalism</td>
<td>2</td>
</tr>
<tr>
<td>Journ. 262</td>
<td>Journalism II</td>
<td>3</td>
</tr>
<tr>
<td>Journ. 263</td>
<td>Journalism III</td>
<td>3</td>
</tr>
<tr>
<td>Journ. 280</td>
<td>Advanced Reporting</td>
<td>3</td>
</tr>
<tr>
<td>Journ. 267</td>
<td>Editing</td>
<td>3</td>
</tr>
<tr>
<td>Journ. 360</td>
<td>Feature Writing and Editorial Writing</td>
<td>2</td>
</tr>
<tr>
<td>Journ. 365</td>
<td>High School Publications</td>
<td>1</td>
</tr>
</tbody>
</table>

Electives chosen from the following courses in Journalism to complete the minor:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journ. 269</td>
<td>270, 271, 364, 369</td>
<td>20</td>
</tr>
</tbody>
</table>

**JUNIOR HIGH SCHOOL BROAD AREA 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 54.

(Continued on next page)
(SOCIAL STUDIES—LANGUAGE ARTS MAJOR—Continued)

Students completing this major are required to
demonstrate by written examination under the super­
vision of the Department of English their competence
in English grammar and composition. These exam­
inations should be taken no earlier than two quarters
preceding student teaching assignment.

Major (64-65 credits)

**The Junior High School Area (3 credits)**

- Psy. 447, Psychology of Adolescence 3

**The Language Arts Area (30-31 credits)**

- Ed. 423, Reading Problems in the Sec­
  ondary School or Ed. 424, Develop­
  mental Reading in the Content Fields 3
- Eng. 106, Introduction to Poetry 3
- Eng. 274, 275, or 276, American Literature 3
- Eng. 364, The Short Story 3
- Eng. 428, Teaching composition and Literature in the Secondary School 4
- Eng. 370, 371, or 372, American Fiction 3
- Sp. 243, Oral Reading 3
- Sp. 424, Teaching Speech in the Secondary School or
  Sp. 420, Teaching Speech in the Elementary
  School 3
- Lib. 145, Use of Library Resources or
  Lib. 245, Understanding and Application of
  Library Resources 3

**Electives in English:**

- Journalism: Lib. 245, Use of Library Resources 3
- Prose Fiction: Eng. 245, 246, 247, American Fiction 3
- Poetry: Eng. 442, The History of the English Language 3

**The Social Science Area (31 credits)**

- Students should elect Geog. 100 and either
  Sociol. 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
- Sociol. 241, Methods and Materials in the
  Social Sciences, Secondary or Hist.
  421, Methods and Materials in History,
  Secondary 2
- Geog. 243, Economic Geography 3
- Geog. 352, Geography of Anglo­
  America 5

**Electives at least 9 hours from the following:**

- Econ. 244, Principles of Economics 5
- Econ. 251, and 252, Economics of
  Production and Distribution 8
- Pol. Sci. 244, American Government 5
- Pol. Sci. 466, Current Issues of Dem­
  ocracy 3
- Sociol. 107, Principles of Sociology 4
- Sociol. 145, Social Problems 5
- Sociol. 360, The Community 2
- Geog. 350, Conservation of Natural Resources 3
- Geog. 371, Geography of Europe 5
- Geog. 472, Geography of USSR 3
- Geog. 475, Geography of Asia 5

64-65

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**LANGUAGE ARTS BROAD AREA MAJOR**

Qualifies for teaching secondary English and/or
Language Arts. For elementary teaching, see Page 54.

**Major (65 credits)**

**Credits**

| English | 
|---|---|---|---|---|---|
| Eng. 245, 246, 247, Survey of English Literature (two quarters) | 6 |
| Eng. 274, 275, 276, Survey of American Literature (two quarters) | 6 |
| Eng. 442, History of English Language | 3 |
| Eng. 351, 352, 353, Shakespeare (two quarters) or Eng. 361, 362, 363, Drama of English Renaissance | 6 |
| Eng. 428, Teaching of Literature and Composition in Secondary School | 4 |
| Eng. 445, Approaches to English Grammar | 3 |
| Period Courses (At least one): | 3 |
| Eng. 460, 461, 462, The English Renaissance | 3 |
| Eng. 463, 464, 465, Restoration and the Eighteenth Century | 3 |
| Eng. 466, 467, 468, 469, The Nineteenth Century | 3 |
| Prose Fiction (At least one): | 3 |
| Eng. 103, Introduction to Fiction | 3 |
| Eng. 347, 348, 349, The English Novel | 3 |
| Eng. 384, The Short Story | 3 |
| Eng. 370, 371, 372, American Fiction | 3 |
| Poetry (At least one): | 3 |
| Eng. 106, Introduction to Poetry | 3 |
| Eng. 459, Modern British Poetry | 3 |
| Eng. 377, American Poetry I | 3 |
| Eng. 477, American Poetry II | 3 |

**Speech**

- Sp. 243, Oral Reading 3
- Sp. 244, Advanced Public Speaking 3
- Sp. 266, Theory of Play Production 3
- Sp. 428, Teaching of Speech in secondary School 3
- Sp. 450, Group Discussion and Debate 3

**Journalism**

- Journ. 266, Newswriting 3
- Journ. 365, High School Publications 3

**Reading**

- Ed. 424, Reading in Content Fields or Ed. 423, Reading Problems in the Secondary School 3

**Electives in English:**

- Journalism; Lib. 245, Use of Library Resources; Speech; Drama; Radio and TV 4

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Students completing this major, are required to
demonstrate, by written examination under the super­
vision of the Department of English, their competence
in English grammar and composition. These exam­
inations should be taken no earlier than two quarters
preceding student teaching.

**LANGUAGE ARTS MAJOR—ELEMENTARY**

Open only to elementary school teachers. May not
be used for 30-credit area. 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 super­
**Teacher Education**

(LANGUAGE ARTS MAJOR—Continued) vision 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.

<table>
<thead>
<tr>
<th>Major (45 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 320, Children's Literature</td>
<td>3</td>
</tr>
<tr>
<td>Ed. 322, Teaching of Reading</td>
<td>3</td>
</tr>
<tr>
<td>Ed. 420, Teaching Procedures in Language Arts</td>
<td>4</td>
</tr>
<tr>
<td>Eng. 106, Introduction to Poetry</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 141, Classical Mythology or Eng. 150, The Bible as Literature</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 445, Approaches to English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 446, Oral Reading of Children's Literature or Sp. 243, Oral Reading</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 272, Children's Drama</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 142, or Eng. 143, or Eng. 344</td>
<td>3</td>
</tr>
</tbody>
</table>

General Surveys:

- At least two quarters of one sequence...
- Eng. 274, 275, 276, Sur. of Amer. Lit.
- Eng. 281, 282, 284, World Lit.

Electives:

- Remaining 11 hours from upper division English courses

**LIBRARY SCIENCE MINOR**

See Instructional Materials Minor

**MATHEMATICS MAJOR**

Qualifies for teaching secondary mathematics. For elementary teaching, see Page 54.

<table>
<thead>
<tr>
<th>Major (45 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 171.1, 171.2, Introductory Calculus</td>
<td>8</td>
</tr>
<tr>
<td>Math. 261.1, 261.2, Foundations of Mathematics</td>
<td>8</td>
</tr>
<tr>
<td>Math. 261.3, Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>Math. 324, Methods and Materials in Mathematics—Secondary</td>
<td>3</td>
</tr>
<tr>
<td>Math. 455.1, Geometry</td>
<td>3</td>
</tr>
<tr>
<td>Math. 461.1, Abstract Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Electives from Math. numbered 200 or above by advisement</td>
<td>16</td>
</tr>
</tbody>
</table>

**MATH-SCIENCE MAJOR—ELEMENTARY**

(See Science-Math. Major, Page 71)

**MUSIC BROAD AREA MAJOR**

Elementary and Secondary

Qualifies for teaching elementary, junior high and senior high music. For teaching in regular or self-contained elementary school classrooms, see Page 54.

<table>
<thead>
<tr>
<th>Major (64 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 144, Theory I</td>
<td>3</td>
</tr>
<tr>
<td>Music 145, Theory II</td>
<td>3</td>
</tr>
<tr>
<td>Music 146, Theory III</td>
<td>3</td>
</tr>
<tr>
<td>Music 154A, 155A, or 156A, Class Instruction, Piano</td>
<td>1</td>
</tr>
<tr>
<td>Music 154B, or 156B, Class Instruction, Voice</td>
<td>2</td>
</tr>
<tr>
<td>Music 154C, 155C, or 156C, Class Instruction, Strings</td>
<td>2</td>
</tr>
<tr>
<td>Music 154D, 155D, or 156D, Class Instruction, Woodwinds</td>
<td>1</td>
</tr>
<tr>
<td>Music 154E, 155E, or 156E, Class Instruction, Brass</td>
<td>1</td>
</tr>
<tr>
<td>Music 154F, 155F, or 156F, Class Instruction, Percussion</td>
<td>1</td>
</tr>
<tr>
<td>Music 244, Theory IV</td>
<td>1</td>
</tr>
<tr>
<td>Music 246, Theory VI</td>
<td>3</td>
</tr>
<tr>
<td>Music 270, Music History I</td>
<td>3</td>
</tr>
<tr>
<td>Music 272, Music History II</td>
<td>3</td>
</tr>
<tr>
<td>Music 274, Music History III</td>
<td>3</td>
</tr>
<tr>
<td>Music 321, Music Education for the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>Music 323, Choral Music Education</td>
<td>3</td>
</tr>
<tr>
<td>Music 325, Instrumental Music Education</td>
<td>3</td>
</tr>
<tr>
<td>Music 340, Form Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Music 341, Conducting I</td>
<td>3</td>
</tr>
<tr>
<td>Music 342, Conducting II</td>
<td>3</td>
</tr>
<tr>
<td>Music 343, Counterpoint</td>
<td>3</td>
</tr>
<tr>
<td>Music 424, General Music in the Junior High School</td>
<td>2</td>
</tr>
</tbody>
</table>

**MUSIC MAJOR—ELEMENTARY**

Qualifies for teaching music at elementary school level. For teaching in regular or self-contained elementary school classrooms, see Page 54.

<table>
<thead>
<tr>
<th>Major (45 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 144, Theory I</td>
<td>3</td>
</tr>
<tr>
<td>Music 145, Theory II</td>
<td>3</td>
</tr>
<tr>
<td>Music 146, Theory III</td>
<td>3</td>
</tr>
<tr>
<td>Music 154B, 155B, or 156B, Class Instruction, Voice</td>
<td>2</td>
</tr>
<tr>
<td>Music 164A, 165A, 166A, Private Instruction, Piano</td>
<td>3</td>
</tr>
<tr>
<td>Music 244, Theory IV</td>
<td>3</td>
</tr>
</tbody>
</table>

(Continued on next page)

---

1. For junior high endorsement, include Math. 324, for minimum level high school endorsement, include Math. 455.1, 461.1.
2. Physics Majors may complete the Mathematics Minor by completing the alternate courses. However, note the Mathematics required for secondary endorsement.
### PHYSICAL SCIENCE MINOR

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 144, Theory I.</td>
<td>3</td>
</tr>
<tr>
<td>Music 145, Theory II.</td>
<td>3</td>
</tr>
<tr>
<td>Music 146, Theory III.</td>
<td>3</td>
</tr>
<tr>
<td>Music 154A, Class Instruction, Piano</td>
<td>1</td>
</tr>
<tr>
<td>Music 154B, Class Instruction, Voice</td>
<td>1</td>
</tr>
<tr>
<td>Music 270, 272, or 274, Music History I, II, III</td>
<td>3</td>
</tr>
<tr>
<td>Music 321, Music Education in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>Music 341, Conducting I</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Credits:** 20

### PHYSICAL EDUCATION MINOR

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Ed. 245, First Aid, or 348, Athletic Training</td>
<td>2</td>
</tr>
<tr>
<td>P. E. 207, Introduction to Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>P. E. 334, Physical Education Activities for the Elementary School or P. E. 335, Physical Education Methods for the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>P. E. 332, Theory and Practice in Dance (Elementary Level) or P. E. 327, Theory and Practice in Dance (Secondary Level)</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education Methods</td>
<td>3</td>
</tr>
<tr>
<td>(Select from P. E. 330, 331, 335, 337, 339. Women may select P. E. 326)</td>
<td></td>
</tr>
<tr>
<td>*Physical Education Activities</td>
<td>3</td>
</tr>
<tr>
<td>P. E. 130, 131, 138 (3 credits)</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits:** 20

*Other P. E. activities shall be selected from the major and minor offerings in the yearly course schedule.

### PHYSICS MAJOR

<table>
<thead>
<tr>
<th>Minor (45 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 181, 182, 183, 281, 282, 283, General Physics</td>
<td>24</td>
</tr>
<tr>
<td>Physics 351, 352, Mechanics</td>
<td>8</td>
</tr>
<tr>
<td>Physics 381, 382, Electricity and Magnetism</td>
<td>8</td>
</tr>
<tr>
<td>Physics 384, 385, Junior Physics Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Science Ed. 324, Science Education in the Secondary Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits:** 45

### PHYSICS MINOR

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 181, 182, 183, 281, 282, General Physics</td>
<td>20</td>
</tr>
</tbody>
</table>

**Total Credits:** 20
Teacher Education

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 teaching 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)

P.S. 145, Modern Government - Introduction to Political Science........ 4
P.S. 244, American Government ........................................ 5
Hist. 143, History of the United States I .......................... 5
Hist. 144, History of the United States II ............................ 5
P.S. 246, State and Local Government and Administration ............ 3
P.S. 374, Modern World Problems or
P.S. 384, American Political Parties .................................. 5
P.S. 398, Comparative Government or
P.S. 375, Government of Asia ........................................... 4
P.S. 488, Modern Political Philosophies or
P.S. 468, Current Issues of American Democracy .................... 4
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 ....................... 4-5

45

POLITICAL SCIENCE MINOR

Minor (20 credits)

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. 488, Modern Political Philosophies, or
Pol. Sci. 242, Public Opinion and Propaganda ............ 2 or 3
Electives in Political Science ............ 3 or 4

20

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 specialists, or even clinical psychologists through Arts 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 54.

Major (45 credits)

Required courses:
Psyc. 100, General Psychology ............ 4
Psyc. 200, 201, Advanced General Psychology 2 quarters. ......... 6
Psyc. 205, Psychology of Adjustment .......... 5
Psyc. 346, Social Psychology ............ 4
Ed. 358, Introduction to Guidance ............ 3
Psyc. 362, Elementary Statistics .......... 4
Psyc. 461, History and Systems of Psychology .......... 5
Psyc. 444, Tests and Measurements .......... 4
One laboratory course from the following:
Psyc. 450, Experimental Psychology of Perception ............ 4
Psyc. 451, Experimental Psychology of Motivation .......... 4
Psyc. 452, Experimental Psychology of Learning ............ 4
Electives 6-10
For students anticipating secondary teaching
Psychology of Adolescence and Seminar (quarter devoted to Teaching Psychology) is recommended.

45

Psychology Minor

(30-Hour Three-Area Specialization students should take the courses from the Psychology Major).

Minor (19 credits)

Psyc. 205, Psychology of Adjustment .......... 5
Ed. 358, Introduction to Guidance .......... 3
Select twelve hours from the following: .... 11
Psyc. 350, Emotional Growth of Children ............ 3
Psyc. 295, Courtship and Marriage .......... 3
Psyc. 346, Social Psychology ............ 4
Psyc. 362, Elementary Statistics .......... 4
Psyc. 447, Psychology of Adolescence .......... 3

19
RADIO AND TELEVISION MINOR

Minor (20 credits)            Credits
Sp. 201, Public Speaking or   3
Sp. 243, Oral Reading      ...... 3
Sp. 282, Phonetics.         3
R-TV 207, Intro. to Radio and TV Broadcast. 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

Total: 20

This minor is acceptable only for secondary teachers.

RECREATION AND OUTDOOR EDUCATION MINOR

Minor (20 credits)        Credits
Rec. 207, Introduction to Recreation. .. 3
Rec. 321, Methods and Materials in Recreation. 5
Rec. 400, Recreation. 2
Rec. 480, Administration or Recreation or 5
349, 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. 449, School Camping. 3
Rec. 489, School Camping for the Classroom Teaching. 2
Sp. 272, Children's Drama. 3
Art 425, Arts and Crafts. Intermediate. 3
P.E. 334, Physical Education Activities for the Elementary School. 3
Teacher Preparation Program. 3
P.E. 352, Sports Officiating for Women. 2
P.E. 353, Sports Officiating for Men. 2
Mus. 326, Music in the Classroom. 3
Soc. 360, The Community. 4
Psy. 346, Social Psychology. 3
Rec. 355, Playground Leadership. 3
Rec. 450, Outdoor Recreation. 2
Rec. 249, Camp Leadership. 3

Total: 20

SCIENCE (BROAD AREA) MAJOR

Qualifies for junior high science teaching. For senior high science teaching see additional work outlined in footnotes to qualify for specific fields. For elementary teaching, see Page 54.

Major (65 credits)        Credits
Bio. Sci. 102, General Biology and .... 3
*Bot. 161, 162, Botany and Zool. 151, 152, 20
General Zoology. 20
(Bio. Sci. 110, 111, 112, Biology may be substituted for above 23 credits). (12)
Physics 161, 162, 163, Elem. Physics* or 181, 182, 183, General Physics. (12 or 15
Chem. 161, Elementary College Chemistry, 4-5
or 171, General Chemistry. 3
Geol. 350, Washington Geology. 3

Total: 65

Science majors may earn minimum-level senior high endorsement by suitable choice of electives, as follows:

For Biol., include Bot. 360 or Zool. 372 and 3-credit course.
For Chemistry, include Chem. 162, 163 (or 172) 251 and 361, 362.
For Earth Science, substitute Geog. 386 for Geol. 350, and include Geog. 388; Geol. 145, 146, 245 or 247, 347 or 450; and Physics 331.
For Physics, include *Physics 281, 282, 283.
For Mathematics, see Mathematics Major and/or Mathematics Minor.

1Prerequisite, Bio. Sci. 102 (may be taken concurrently).
2Prerequisites, three semesters of high school algebra or Math. 163, and one semester of high school trigonometry or Math. 165.
3Prerequisites, Physics 181, 182, 183.

1SCIENCE-MATHEMATICS MAJOR—ELEMENTARY

Open only to elementary school teachers. May not be used for 30-credit area. For secondary teaching, expand and convert to one of the other major patterns.

Major (45 credits)        Credits
Science (to be approved by Department of Mathematics) 6
Ed. 323, Teaching of Arithmetic. 3
Geol. 145 and Chem. 161 or Physics 161 or 3-11
(Physics 101, 102, 103) 9-11
Bot. 161, Botany. 5
Zool. 151, General Zoology. 5
Sci. Ed. 322, Sci. Ed. in Elementary School. 3
Electives. 12-14
One of the following options:
Chem. 161, 163, 360. 13
Bot. 162, Zool. 152, Field Course. 15
Geol. 146, Physics 331. 9
Math. 163, 163.1, 171.1. 12
Physics 162, 163, 341. 14

Total: 45

Students electing this major need not take Bio. Sci. 103.

SCIENCE MINOR—ELEMENTARY

Minor (20 credits):        Credits
A Physical Science laboratory. 4 or 5
* A Biological Science laboratory. 4 or 5
Sci. Ed. 322, Science Education in Elementary School. 3
Elective from Science or Science Education 7 or 9

1Prerequisite, Bio. Sci. 102 (may be taken concurrently).

SOCIAL SCIENCE BROAD AREA MAJOR

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 54.

(Continued on next page)
SOCIAL SCIENCE MAJOR—Continued

(SOCIAL SCIENCE MAJOR—Continued)

Major (60 credits) Credits
Hist. 143, 144, History of the United States I and II ........................................ 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


SOCIAL SCIENCE MAJOR—ELEMENTARY

Open only to elementary school teachers. May not be used for 30-credit area. For secondary teaching expand and convert to one of the other major patterns.

Major (45 credits) Credits
Hist. 143, 144, History of the United States I and II ........................................ 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


SOCIOLOGY MAJOR

Secondary teachers must accompany this with a major in history or some other field in which a full-time assignment can be expected. Endorsement will be for teaching sociology and the second field.

Major (45 credits) Credits
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. 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
Complete one of the following: ......................... 3-4
Math. 311 ........................................ 4
Ed. 362 ........................................ 4
Bus. Ad. 246 ........................................ 3
Electives in sociology ........................................ 14-16


SOCIOLOGY MINOR

Minor (20 credits) Credits
Soc. 107, Principles of Sociology .......................... 4
Soc. 145, Social Problems ........................................ 5
Electives in sociology to complete a minor ........................................ 11


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. For elementary school, regular or self-contained classroom teaching, see Page 54.

Major (45 credits) Credits
Span. 251, 252, 253, Second Year Spanish ................. 15
Span. 351, 352, 353, Survey of Spanish Literature ........................................ 9
Elect two courses from Spanish 361, 362, 363 ....... 4
Electives from Spanish courses numbered above 253 ........................................ 17


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)

Spec. Ed. 343, Education Exceptional Children ........................................ 3
Spec. Ed. 413, Education Exceptional Children ........................................ 3
Spec. Ed. 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, Educating 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


SPECIAL EDUCATION MAJOR

Secondary teachers must accompany this with a second major. Elementary teachers must accompany this with a minimum of 30 credits from a highly recommended major plus a professionalized subject minor. For endorsement at both levels, teacher must accompany this with second major and the professionalized subjects minor.

Major (45 credits) Credits
Sp. 277, Introduction to Speech Correction ........................................ 3
Spec. Ed. 343, Education Exceptional Children ........................................ 3
Spec. Ed. 413, Psychology and Education of the Mentally Retarded ........................................ 4
Spec. Ed. 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, Educating 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

(Continued on next page)
### SPECIAL EDUCATION MINOR

**SPECIAL EDUCATION MINOR—REMEDIAL EDUCATION**

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spec. Ed. 421, Principles of Remedial Education</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 422, Diagnostic Techniques in Remedial Education</td>
<td>4</td>
</tr>
<tr>
<td>Spec. Ed. 428, Remedial Reading</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 429, Remedial Arithmetic</td>
<td>2</td>
</tr>
<tr>
<td>Spec. Ed. 430, Remedial Math</td>
<td>2</td>
</tr>
<tr>
<td>Spec. Ed. 433, Educating Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 437, Psychology and Education of the Mentally Handicapped</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 457, Psychology of Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 460, Counseling Parents of Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 448, Student Teaching in Special Education</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 490, Seminar in Special Education Problems</td>
<td>4</td>
</tr>
</tbody>
</table>

**SPECIAL EDUCATION MINOR—MENTALLY RETARDED CHILDREN**

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spec. Ed. 434, Educating Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 457, Psychology of Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 413, Psychology and Education of the Mentally Retarded</td>
<td>4</td>
</tr>
<tr>
<td>Spec. Ed. 460, Counseling Parents of Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 490, Seminar in Special Educational Problems</td>
<td>3</td>
</tr>
<tr>
<td>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)</td>
<td>3-4</td>
</tr>
</tbody>
</table>

**SPECIAL EDUCATION MINOR—EMOTIONALLY DISTURBED**

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spec. Ed. 434, Educating Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 457, Psychology of Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>Spec. Ed. 415, Behavior Problems, Causes and Treatments</td>
<td>4</td>
</tr>
<tr>
<td>Spec. Ed. 416, Education of Disturbed and Conduct-Problem Children</td>
<td>4</td>
</tr>
<tr>
<td>Spec. Ed. 467, Maladjusted Children</td>
<td>3</td>
</tr>
<tr>
<td>Guided Electives in Special Education (must include Spec. Ed. 448.0 unless it is taken in lieu of part of Ed. 442)</td>
<td>3</td>
</tr>
</tbody>
</table>

### SPEECH AND DRAMA MAJOR

**SPEECH AND DRAMA MAJOR (See also Drama Minor)**

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 55.

<table>
<thead>
<tr>
<th>Major (45 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sp. 105, Introduction to Theatre Arts</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 107, Introduction to Drama</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 243, Oral Reading</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 250, Argumentation</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 277, Introduction to Speech Correction</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 243, Classical Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 363.1, 363.2, 363.3, History of Theatre</td>
<td>6</td>
</tr>
<tr>
<td>Sp. 441, Speech Criticism</td>
<td>4</td>
</tr>
<tr>
<td>R-TV 215, Elementary Radio-TV Production</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 420, or 428, Teaching Speech in the Elementary School, Teaching Speech in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>Approved electives in Speech and Drama</td>
<td>10</td>
</tr>
</tbody>
</table>

| Total | 45 |

### SPEECH MINOR—ELEMENTARY

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sp. 201, Public Speaking or</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 253, Exposition</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 272, Creative Dramatics</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 277, Intro. to Speech Correction</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 282, Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 420, Teaching Speech in the Elem. School</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 243, Oral Reading or</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 446, Oral Reading of Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>Speech Electives</td>
<td>2</td>
</tr>
</tbody>
</table>

| Total | 20 |

### SPEECH MINOR—SECONDARY

<table>
<thead>
<tr>
<th>Minor (20 credits)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sp. 243, Oral Reading or</td>
<td>3</td>
</tr>
<tr>
<td>R-TV 215, Elem. Radio-TV Production</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 244, Advanced Public Speaking or</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 250, Argumentation or</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 251, Discussion or</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 252, Debate</td>
<td>3</td>
</tr>
</tbody>
</table>

| Total | 6 |

(Continued on next page)
Teacher Education

(SPEECH MINOR—Continued)
Sp. 328, Methods: Secondary School Teaching ............................ 3
Electives from upper division Speech courses ............................. 8

20

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) Credits
Sp. 277, Introduction to Speech Correction 3
Sp. 282, Introduction to American Phonetics 3
Sp. 290, Anatomy of the Speech and Hearing Mechanisms 4
Sp. 265, 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. 470, Voice Disorders ......................................... 4
Sp. 480, Aphasia .................................................. 2
Sp. 499, Advanced Anatomy and Neurology of Speech ........... 4

38

70 clock hours of clinical practice will be required per course (388, 389, 390).

ZOOLOGY MINOR

Minor (20 credits):
Bio. Sci. 102, General Biology and 3
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.

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 or three years before entering a professional school, university or college.

The programs described are not to be considered as required in every case. They represent 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

Credits
Bio. Sci. 102 .................................................. 3
Bot. 161 ..................................................... 5
Chem. 151, 152, or Chem. 171, 172 .......................... 8 or 10
Eng. 101, 201 ............................................... 6
Math. 163 .................................................... 4
Zool. 151 ..................................................... 5
Soc. Sci. Elective ............................................ 5
P.E. Activity ................................................ 3
Electives ..................................................... 8-10

49

*Prerequisite, Bot. 161 (may be taken concurrently).

*Prerequisite, Biol. Sci. 102 (may be taken concurrently).

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.

(Continued on next page)
COMMERCIAL ART

This is the 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

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 244</td>
</tr>
<tr>
<td>Eng. 101, 201, 301</td>
</tr>
<tr>
<td>H. Ed. 100</td>
</tr>
<tr>
<td>Math. 163, 165, 171,11</td>
</tr>
<tr>
<td>Physics 161</td>
</tr>
<tr>
<td>Soc. 107</td>
</tr>
<tr>
<td>Electives (suggest Art 290)</td>
</tr>
<tr>
<td>P. E. Activity</td>
</tr>
</tbody>
</table>

50

SECOND YEAR

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electives (suggest Art 290)</td>
</tr>
<tr>
<td>Eng. 101, English Composition</td>
</tr>
<tr>
<td>Art 262, Water Color</td>
</tr>
<tr>
<td>Art 251, Figures Drawing and Composition</td>
</tr>
<tr>
<td>Art 240, Design</td>
</tr>
<tr>
<td>Art 271, Layout and Design</td>
</tr>
<tr>
<td>Art 260, Oil Painting</td>
</tr>
<tr>
<td>Art 277, Lettering</td>
</tr>
<tr>
<td>Art 250, Drawing</td>
</tr>
<tr>
<td>Eng. 101, English Composition</td>
</tr>
<tr>
<td>P. E. Activity (1 credit course)</td>
</tr>
<tr>
<td>Electives (suggest Art 290)</td>
</tr>
</tbody>
</table>

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.

PRE-ARCHITECTURE—Continued

FIRST YEAR

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 144, Theory I</td>
</tr>
<tr>
<td>Mus. 164A, Applied Music, Piano</td>
</tr>
<tr>
<td>Mus. 164B, C, D, E, F, or G, Applied Music</td>
</tr>
<tr>
<td>P. E. Activity</td>
</tr>
<tr>
<td>Electives</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 145, Theory II</td>
</tr>
<tr>
<td>Mus. 165A, Applied Music, Piano</td>
</tr>
<tr>
<td>Mus. 166B, C, D, E, F, or G, Applied Music</td>
</tr>
<tr>
<td>P. E. Activity</td>
</tr>
<tr>
<td>Electives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 146, Theory III</td>
</tr>
<tr>
<td>Mus. 166A, Applied Music Piano</td>
</tr>
<tr>
<td>Mus. 166B, C, D, E, F, or G, Applied Music</td>
</tr>
<tr>
<td>P. E. Activity</td>
</tr>
<tr>
<td>Electives</td>
</tr>
</tbody>
</table>

SECOND YEAR

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 244, Theory IV</td>
</tr>
<tr>
<td>Mus. 144, Theory I</td>
</tr>
<tr>
<td>Mus. 264A, Applied Music, Piano</td>
</tr>
<tr>
<td>Mus. 264B, C, D, E, F, or G, Applied Music</td>
</tr>
<tr>
<td>P. E. Activity</td>
</tr>
<tr>
<td>Electives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 245, Theory V</td>
</tr>
<tr>
<td>Mus. 272, Music History II</td>
</tr>
<tr>
<td>Mus. 265A, Applied Music, Piano</td>
</tr>
<tr>
<td>Mus. 265B, C, D, E, F, or G, Applied Music</td>
</tr>
<tr>
<td>P. E. Activity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 246, Theory VI</td>
</tr>
<tr>
<td>Mus. 274, Music History III</td>
</tr>
<tr>
<td>Mus. 266A, Applied Music Piano</td>
</tr>
<tr>
<td>Mus. 266B, C, D, E, F, or G, Applied Music</td>
</tr>
<tr>
<td>P. E. Activity</td>
</tr>
<tr>
<td>Electives</td>
</tr>
</tbody>
</table>

1 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, he will receive a half-hour lesson each week and his credit will be 1 credit hour. The minor subject will receive one half-hour lesson per week and 1 credit hour.

2 Electives may be chosen from the following courses:

Eng. 101, 201, 301  Fr. 151, 152, 153
Hist. 341, 343  H. Ed. 200
Physics 101  Soc. 107
Geog. 100  Art 100
H. Ed. 100  Bio. Sci. 102
Sp. 141, 201  Psy. 309
Hist. 143

Pre-Professional 75
PRE-PROFESSIONAL

PRE-DENTAL HYGIENE

The first two years of the program is 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 cooperation with the University of Washington School of Dentistry. Students completing the two years of work satisfactorily may enter the University as juniors.

FIRST YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101</td>
<td>3</td>
</tr>
<tr>
<td>Bio. Sci. 102</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 161 or 171, 162 or 172</td>
<td>8 or 10</td>
</tr>
<tr>
<td>Eng. 101, 201</td>
<td>6</td>
</tr>
<tr>
<td>Psy. 100</td>
<td>4</td>
</tr>
<tr>
<td>Soc. 107</td>
<td>4</td>
</tr>
<tr>
<td>Sp. 141</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 151, 152</td>
<td>10</td>
</tr>
<tr>
<td>Electives</td>
<td>7-9</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
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</tbody>
</table>

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro. 107</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 360</td>
<td>4</td>
</tr>
<tr>
<td>Eng. 105, 106, 301</td>
<td>9</td>
</tr>
<tr>
<td>Hist. 144</td>
<td>5</td>
</tr>
<tr>
<td>Physics 161</td>
<td>5</td>
</tr>
<tr>
<td>Sp. 201</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>18</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
</tbody>
</table>

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 second 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 a first year of professional dental education counted toward 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.

FIRST YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 161, 162, 163, or 171, 172, elective</td>
<td>10-12</td>
</tr>
<tr>
<td>Eng. 101</td>
<td>3</td>
</tr>
<tr>
<td>Math. 163</td>
<td>4</td>
</tr>
<tr>
<td>Psy. 100</td>
<td>4</td>
</tr>
<tr>
<td>Soc. 107</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>17-19</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
</tbody>
</table>

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 251, 361, 362</td>
<td>15</td>
</tr>
<tr>
<td>Eng. 201</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 151, 152</td>
<td>10</td>
</tr>
<tr>
<td>Electives</td>
<td>15</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
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</table>

THIRD YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 100, 280</td>
<td>6</td>
</tr>
<tr>
<td>Bio. Sci. 250</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 301</td>
<td>3</td>
</tr>
<tr>
<td>Physics 161, 162, 163</td>
<td>15</td>
</tr>
<tr>
<td>Sp. 201</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 348</td>
<td>5</td>
</tr>
<tr>
<td>Electives</td>
<td>13</td>
</tr>
</tbody>
</table>

PRE-ENGINEERING

The course requirements in engineering vary 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 147, 181, 182, 183</td>
<td>15</td>
</tr>
<tr>
<td>Math. 171.1, 271.2, 271.1</td>
<td>12</td>
</tr>
<tr>
<td>T-IE 165, 365</td>
<td>6</td>
</tr>
<tr>
<td>Eng. 101</td>
<td>3</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>9</td>
</tr>
</tbody>
</table>

(Continued on next page)
PRE-ENGINEERING—Continued

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 281, 282, 283</td>
<td>12</td>
</tr>
<tr>
<td>Math. 271.2, 271.3</td>
<td>8</td>
</tr>
<tr>
<td>Chem. 161, 162, 163 or 171, 172</td>
<td>8-12</td>
</tr>
<tr>
<td>Econ. 244</td>
<td>5</td>
</tr>
<tr>
<td>Eng. 201</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>8-10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>48</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>3</td>
</tr>
<tr>
<td>Bot. 161, 162, 263</td>
<td>15</td>
</tr>
<tr>
<td>Chem. 161, 162, or 171, 172</td>
<td>8-10</td>
</tr>
<tr>
<td>Eng. 101, 201</td>
<td>6</td>
</tr>
<tr>
<td>T-IB 165</td>
<td>3</td>
</tr>
<tr>
<td>Math. 165</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>5-7</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>48</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101, English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Journ. 260, Journalism</td>
<td>3</td>
</tr>
<tr>
<td>Journ. 262, Practical Journalism</td>
<td>1</td>
</tr>
<tr>
<td>Social Science Electives*</td>
<td>5</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>1</td>
</tr>
<tr>
<td>Journ. 266, Newswriting</td>
<td>2</td>
</tr>
<tr>
<td>Electives*</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15-17</td>
</tr>
</tbody>
</table>

**Winter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journ. 263, Practical Journalism</td>
<td>1</td>
</tr>
<tr>
<td>Social Science Electives*</td>
<td>5</td>
</tr>
<tr>
<td>Journ. 280, Advanced Reporting</td>
<td>3</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>1</td>
</tr>
<tr>
<td>Electives*</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

**Spring**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journ. 264, Practical Journalism</td>
<td>1</td>
</tr>
<tr>
<td>Journ. 267, Editing</td>
<td>3</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>1</td>
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<tr>
<td>Electives*</td>
<td>5</td>
</tr>
<tr>
<td>Social Science Electives*</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

*Selected in consultation with adviser.

SECOND YEAR

**Fall**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 201, English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Electives*</td>
<td>5</td>
</tr>
<tr>
<td>Journ. 360, Feature Writing and Editorial Writing</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science or Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>1</td>
</tr>
<tr>
<td>Electives*</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
</tr>
</tbody>
</table>

**Winter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 301, English Composition</td>
<td>3</td>
</tr>
<tr>
<td>English or American Literature (two courses)</td>
<td>6</td>
</tr>
<tr>
<td>Laboratory Science or Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>1</td>
</tr>
<tr>
<td>Electives*</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
</tr>
</tbody>
</table>

**Spring**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Science Electives*</td>
<td>5</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>1</td>
</tr>
<tr>
<td>Course(s) in English or American Literature</td>
<td>3 to 5</td>
</tr>
<tr>
<td>Journ. 364, News Photography</td>
<td>2</td>
</tr>
<tr>
<td>Speech 201, Public Speaking: Practice and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16-18</td>
</tr>
</tbody>
</table>

*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

(Continued on next page)
(PRE-LAW—Continued)

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.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 143, 144</td>
<td>10</td>
</tr>
<tr>
<td>Econ. 251, 252</td>
<td>8</td>
</tr>
<tr>
<td>Gen. Ed.</td>
<td>3</td>
</tr>
<tr>
<td>Pol. Sci. 244</td>
<td>5</td>
</tr>
<tr>
<td>Psych. 100</td>
<td>4</td>
</tr>
<tr>
<td>P.E. Activities</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECOND YEAR</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil. 207, 345</td>
<td>10</td>
</tr>
<tr>
<td>Eng. 201</td>
<td>3</td>
</tr>
<tr>
<td>Pol. Sci. 378</td>
<td>5</td>
</tr>
<tr>
<td>Soc. 107 or Pol. Sci. 145</td>
<td>4</td>
</tr>
<tr>
<td>Sp. 201</td>
<td>5</td>
</tr>
<tr>
<td>Hist. 302, 303</td>
<td>6</td>
</tr>
<tr>
<td>Physics 101 or Bio. Sci. 102</td>
<td>3-5</td>
</tr>
<tr>
<td>Geog. 100</td>
<td>5</td>
</tr>
<tr>
<td>Electives</td>
<td>6-7</td>
</tr>
<tr>
<td>P.E. Activities</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
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<table>
<thead>
<tr>
<th>THIRD YEAR</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus. Ad. 251</td>
<td>5</td>
</tr>
<tr>
<td>H. Ed. 100</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 301</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4-5</td>
</tr>
<tr>
<td>Pol. Sci. 480, 481</td>
<td>6</td>
</tr>
<tr>
<td>Gen. Ed.</td>
<td>5</td>
</tr>
<tr>
<td>H. Ec. 200</td>
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</tr>
<tr>
<td>Electives</td>
<td>20-21</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
</tr>
</tbody>
</table>

*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 of 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 admitted 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.

(Continued on next page)
SUGGESTED THREE-YEAR PROGRAM

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>Biol. Sci. 102</td>
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<tr>
<td>Chem. 161, 162, 163 or 171, 172, Elective</td>
<td>10-12</td>
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<td>Eng. 101</td>
<td>3</td>
</tr>
<tr>
<td>Math. 165</td>
<td>4</td>
</tr>
<tr>
<td>General Education</td>
<td>13-15</td>
</tr>
<tr>
<td>Zool. 151, 152</td>
<td>10</td>
</tr>
<tr>
<td>P.E. Activities</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>48</td>
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**SECOND YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Bot. 161, 162, 263</td>
<td>15</td>
</tr>
<tr>
<td>Chem. 251, 360</td>
<td>10*</td>
</tr>
<tr>
<td>Eng. 201</td>
<td>3</td>
</tr>
<tr>
<td>General Education</td>
<td>15</td>
</tr>
<tr>
<td>P.E. Activities</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 201</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>49</td>
</tr>
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</table>

**THIRD YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 250</td>
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</tr>
<tr>
<td>Bio. Sci. 365</td>
<td>4</td>
</tr>
<tr>
<td>Bio. Sci. 370</td>
<td>5</td>
</tr>
<tr>
<td>Eng. 301</td>
<td>3</td>
</tr>
<tr>
<td>Physics 161, 162, 163</td>
<td>15</td>
</tr>
<tr>
<td>Zool. 372</td>
<td>5</td>
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<tr>
<td>General Education</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>49</td>
</tr>
</tbody>
</table>

*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 Admission 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 of 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 minor. 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 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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 161, 162, 163, or 171, 172, Elective</td>
<td>12</td>
</tr>
<tr>
<td>Eng. 101</td>
<td>3</td>
</tr>
<tr>
<td>Math. 163</td>
<td>4</td>
</tr>
<tr>
<td>*Zool. 151, 152</td>
<td>10</td>
</tr>
<tr>
<td>General Education</td>
<td>16</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>51</td>
</tr>
</tbody>
</table>

*Prerequisite, Bio. Sci. 102, may be taken concurrently.

**SECOND YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>17</td>
</tr>
<tr>
<td>Chem. 251, 361, 362</td>
<td>15</td>
</tr>
<tr>
<td>Eng. 201</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 348, 351, 352</td>
<td>13</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>51</td>
</tr>
</tbody>
</table>

(Continued on next page)
<p>The pre-professional 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 first 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.</p>

### FIRST YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 161, 162</td>
<td>8</td>
</tr>
<tr>
<td>Eng. 101, 201, 301</td>
<td>9</td>
</tr>
<tr>
<td>H. Ed. 100</td>
<td>4</td>
</tr>
<tr>
<td>Soc. 107</td>
<td>4</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 100, Introduction to Art.</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 101, English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 100, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 100, Health Essentials</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 151, General Zoology</td>
<td>5</td>
</tr>
<tr>
<td>Zool. 152, General Zoology</td>
<td>5</td>
</tr>
<tr>
<td>Zool. 272, Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Art 150, Drawing</td>
<td>2</td>
</tr>
<tr>
<td>Crafts 142, Crafts—Wood and Plastics</td>
<td>3</td>
</tr>
<tr>
<td>Crafts 144, Crafts—Metal and Leather</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 260, Weaving</td>
<td>2</td>
</tr>
</tbody>
</table>

### THIRD YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 301</td>
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</tr>
<tr>
<td>General Education</td>
<td>12</td>
</tr>
<tr>
<td>Physics 161, 162, 163</td>
<td>15</td>
</tr>
<tr>
<td>Bio. Sci. 365 or Elective from any Science or Mathematics area</td>
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</tbody>
</table>

**Credits:** 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 38, including the following pre-medical courses which are generally required for admission to medical school:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 161, 162, 163 or 171, 172</td>
<td>12 or 10</td>
</tr>
<tr>
<td>*Math. 163</td>
<td>4</td>
</tr>
<tr>
<td>Physics 161, 162, 163</td>
<td>15</td>
</tr>
<tr>
<td>Zool. 151, 152</td>
<td>10</td>
</tr>
<tr>
<td>Zool. 348, 351, 352</td>
<td>15</td>
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</tbody>
</table>

*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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 107</td>
<td>4</td>
</tr>
<tr>
<td>Math. 171.1, 171.2, 271.1</td>
<td>12</td>
</tr>
<tr>
<td>Physics 181, 182, 183</td>
<td>12</td>
</tr>
<tr>
<td>Electives</td>
<td>14</td>
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<tr>
<td>P.E. Activity</td>
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**Credits:** 48

**SECOND YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Eng. 201</td>
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<tr>
<td>Geog. 388</td>
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<tr>
<td>Math. 271.2, 271.3</td>
<td>8</td>
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<tr>
<td>Physics 281, 282, 283, 337</td>
<td>16</td>
</tr>
<tr>
<td>Electives</td>
<td>15</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
</tbody>
</table>

**Credits:** 48

### PRE-NURSING

The pre-nursing student may take at least one year at the College. The student should consult the pre-nursing adviser before selecting courses. A fifth year of clinical work is required under this program.

### FIRST YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 100, Introduction to Art.</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 101, English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 100, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 100, Health Essentials</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 151, General Zoology</td>
<td>5</td>
</tr>
<tr>
<td>Zool. 152, General Zoology</td>
<td>5</td>
</tr>
<tr>
<td>Zool. 272, Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Art 150, Drawing</td>
<td>2</td>
</tr>
<tr>
<td>Crafts 142, Crafts—Wood and Plastics</td>
<td>3</td>
</tr>
<tr>
<td>Crafts 144, Crafts—Metal and Leather</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 260, Weaving</td>
<td>2</td>
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<tr>
<td>P.E. Activity (1 credit courses)</td>
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</table>

**Credits:** 48-51

(Continued on next page)
(PRE-THERAPY—Continued)

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Eng. 201, English Composition</td>
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<tr>
<td>Eng. 301, English Composition</td>
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</tr>
<tr>
<td>Sp. 201, Public Speaking: Practice and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 244, Advanced Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Physics 161, Elementary Physics</td>
<td>5</td>
</tr>
<tr>
<td>Physics 162, Elementary Physics</td>
<td>5</td>
</tr>
<tr>
<td>Soc. 107, Principles of Sociology</td>
<td>4</td>
</tr>
<tr>
<td>Psy. 309, Human Growth and Development</td>
<td>4</td>
</tr>
<tr>
<td>TIE 250, Woodworking</td>
<td>5</td>
</tr>
<tr>
<td>Crafts 262, Pottery</td>
<td>3</td>
</tr>
<tr>
<td>Art 325, Arts and Crafts, Primary</td>
<td>3</td>
</tr>
<tr>
<td>Art. 425, Arts and Crafts, Intermediate</td>
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</tr>
<tr>
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<tr>
<td>Electives to complete schedule</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
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<tr>
<td>Chem. 161, 162, 163; or 171, 172 Elective</td>
<td>10-12</td>
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</tr>
<tr>
<td>H. Ed. 200</td>
<td>3</td>
</tr>
<tr>
<td>Math. 163, 165</td>
<td>10</td>
</tr>
<tr>
<td>&quot;Zool. 151, 152</td>
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</tr>
<tr>
<td>P.E. Activity</td>
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</table>

48

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 244</td>
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<td>Eng. 201, 301</td>
<td>6</td>
</tr>
<tr>
<td>Physics 161, 162, 163</td>
<td>15</td>
</tr>
<tr>
<td>Psy. 100</td>
<td>4</td>
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<td>Soc. 107</td>
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<td>Sp. 201</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 270</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>3</td>
</tr>
<tr>
<td>Bot. 161</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 161, 162, 163; or 171, 172 Elective</td>
<td>10-12</td>
</tr>
<tr>
<td>Eng. 101, 201</td>
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</tr>
<tr>
<td>Math. 163</td>
<td>4</td>
</tr>
<tr>
<td>&quot;Zool. 151, 152</td>
<td>10</td>
</tr>
<tr>
<td>Electives</td>
<td>5-7</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
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</tbody>
</table>

48

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ. 370</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 361, 362, 363 or 365</td>
<td>15</td>
</tr>
<tr>
<td>Eng. 301</td>
<td>3</td>
</tr>
<tr>
<td>Math. 165</td>
<td>3</td>
</tr>
<tr>
<td>Physics 161, 162, 163</td>
<td>12</td>
</tr>
<tr>
<td>Electives</td>
<td>7</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
</tbody>
</table>

48

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 101, 201</td>
<td>6</td>
</tr>
<tr>
<td>Physics 161, 162, 163</td>
<td>15</td>
</tr>
<tr>
<td>Psy. 100</td>
<td>4</td>
</tr>
<tr>
<td>&quot;Zool. 151, 152, 270</td>
<td>13</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
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<tr>
<td>P.E. Activity</td>
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</tbody>
</table>

49

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Chem. 161, 162</td>
<td>8</td>
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<tr>
<td>Eng. 301</td>
<td>3</td>
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<tr>
<td>H. Ed. 245, 450</td>
<td>3</td>
</tr>
<tr>
<td>H. Ed. 349</td>
<td>5</td>
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<tr>
<td>Psy. 309, 205</td>
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<tr>
<td>Sp. 201</td>
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<td>Electives</td>
<td>15</td>
</tr>
<tr>
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<td>3</td>
</tr>
</tbody>
</table>

51

*Prerequisite, Bio. Sci. 102, may be taken concurrently.
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.

**PRE-PUBLIC HEALTH AND PREVENTIVE MEDICINE**

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Bio. Sci. 102</td>
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</tr>
<tr>
<td>Chem. 161 or 171, 162 or 172; or Elective 8 or 14</td>
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<tr>
<td>Eng. 101, 201</td>
<td>6</td>
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<tr>
<td>Math. 163, 165</td>
<td>7</td>
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<tr>
<td>Psy. 100</td>
<td>4</td>
</tr>
<tr>
<td>Zool. 151, 152</td>
<td>10</td>
</tr>
<tr>
<td>Electives</td>
<td>6-12</td>
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<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>49-51</strong></td>
</tr>
</tbody>
</table>

**SECOND YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Bio. Sci. 370</td>
<td>5</td>
</tr>
<tr>
<td>Eng. 301</td>
<td>3</td>
</tr>
<tr>
<td>Physics 161, 162, 163</td>
<td>15</td>
</tr>
<tr>
<td>Soc. 107</td>
<td>4</td>
</tr>
<tr>
<td>Sp. 201</td>
<td>3</td>
</tr>
<tr>
<td>Zool. 270</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>13</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>49</strong></td>
</tr>
</tbody>
</table>

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1. Prerequisite, Bio. Sci. 102, may be taken concurrently.
2. Electives should be selected on the basis of chosen area of specialization.

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**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 program 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.

**ONE-YEAR PROGRAM**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101</td>
<td>3</td>
</tr>
<tr>
<td>Bus Ed. 161 or 162</td>
<td>4-5</td>
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<td>Bus. Ed. 162 or 163</td>
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<td>Bus. Ed. 163 or 264</td>
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<td>Bus. Ed. 151 or 152</td>
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<tr>
<td>Bus. Ed. 152 or 153</td>
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<tr>
<td>Bus. Ed. 153 or 254</td>
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<tr>
<td>Bus. Ed. 146 or Bus. Ad. 251</td>
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<tr>
<td>Bus. Ed. 278</td>
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<tr>
<td>Bus. Ed. 271</td>
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<tr>
<td>Bus. Ed. 285</td>
<td>3</td>
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<tr>
<td>Bus. Ed. 378</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 373 or 272</td>
<td>2-5</td>
</tr>
<tr>
<td>P.E. Activities</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>43-47</strong></td>
</tr>
</tbody>
</table>

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**TWO-YEAR PROGRAM**

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 101</td>
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<tr>
<td>Bus. Ed. 271</td>
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</tr>
<tr>
<td>Bus. Ad. 146</td>
<td>5</td>
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<tr>
<td>Bus Ed. 151, 152, and 153 or 254 (three of four)</td>
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</tr>
<tr>
<td>Bus. Ed. 285</td>
<td>3</td>
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<tr>
<td>Geog. 245</td>
<td>5</td>
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<tr>
<td>Soc. 107</td>
<td>4</td>
</tr>
<tr>
<td>Psy. 100</td>
<td>4</td>
</tr>
<tr>
<td>Econ. 244</td>
<td>5</td>
</tr>
<tr>
<td>P.E. Activities</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>47</strong></td>
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</tbody>
</table>

**SECOND YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 201</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 161, 162, and 163 or 264 (three of the four)</td>
<td>12-13</td>
</tr>
<tr>
<td>Bus. Ad. 241</td>
<td>5</td>
</tr>
<tr>
<td>Bus. Ed. 278</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ad. 341</td>
<td>5</td>
</tr>
<tr>
<td>Bus. Ed. 378</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 373</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 272</td>
<td>3</td>
</tr>
<tr>
<td>Sp. 201</td>
<td>3</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>44-45</strong></td>
</tr>
</tbody>
</table>

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2. Students who have had typing in high school should take Bus. Ed. 152.
3. Students who have had shorthand in high school should take Bus. Ed. 162.

**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 recom
mended that the following courses be included as part of the major, minor, or elective courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 145, Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>Psy. 205, Psychology of Adjustment or Psy. 309, Human Growth and Development</td>
<td>4 or 5</td>
</tr>
<tr>
<td>Pol. Sci. 244, American Government</td>
<td>5</td>
</tr>
<tr>
<td>Econ. 244, Introduction to Economics</td>
<td>5</td>
</tr>
<tr>
<td>Zool. 270, Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>Home Ec. 270, Home Management</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 348, Marriage and Family</td>
<td>5</td>
</tr>
<tr>
<td>Soc. 355, Culture and Personality</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 455, Collective Behavior</td>
<td>5</td>
</tr>
</tbody>
</table>

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*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.

Aerospace Studies

Central Washington State College offers a continuing two-year Air Force Reserve Officer Training Corps Program. 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.

PRE-VETERINARY

Veterinary Medicine is a six-year program. The first year of work may be taken at the College.

FIRST YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. Sci. 102</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 161, 162, 163</td>
<td>12</td>
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<tr>
<td>Eng. 101, 201, 301</td>
<td>9</td>
</tr>
<tr>
<td>Zool. 151, 152</td>
<td>10</td>
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<tr>
<td>Electives</td>
<td>10-14</td>
</tr>
<tr>
<td>P.E. Activity</td>
<td>3</td>
</tr>
</tbody>
</table>

47-51

*Prerequisite, Bio. Sci. 102, may be taken concurrently.
Course Descriptions

Aerospace Studies

Aerospace Studies 250. Six-Week Field Training. 4 credits. 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. The course should be taken between the sophomore and junior years. 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—Private Pilot Training. 0 credits. (Those desiring credit may register for Aviation 371, 372, and 373, 1 credit each, Flight Laboratory Courses listed under aviation courses.) In conjunction with the Professional Officer courses, all cadets who have qualified and contracted to pursue Air Force Pilot training after graduation will receive approximately thirty-five hours of private pilot training at government expense. This flying training (which is conducted at the Ellensburg Airport during the cadet's unscheduled class time), may qualify the cadet for a private pilot's license before the completion of his senior year.

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 programs, 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 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 Airmanship. 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.

Anthropology

Anthr. 107. General Anthropology. 4 credits. Methods and concepts used by anthropology in the study of the physical and cultural development of mankind.

Anthr. 141. Introduction to Cultural Anthropology. 4 credits. Ethnological theory and comparative survey of selected cultures.

Anthr. 160. Introduction to Archaeology. 4 credits. Objectives and methods of archaeology and its contribution toward understanding cultural growth and development.

Anthr. 175. Introduction to Physical Anthropology. 4 credits. Man's place among the primate forms, fossil man, evolutionary theory, and racial differentiation.


Anthr. 344. Ethnology of Asia. 4 credits. Peoples and cultures of Asia, including Malaysia.

Anthr. 347. Indian Cultures of North America. 4 credits. Aboriginal and present day American Indian cultures.

Anthr. 348. Methods of Archaeology. 4 credits. Basic field course in the gathering and analyzing of archaeological data.

Anthr. 361. Old World Prehistory. 4 credits. The cultural development of Old World pre-
history from the earliest Stone Age to the Iron Age.


Anthr. 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.

Anthr. 377. Theories of Race. 2 credits. Theories concerning similarities and differences among modern populations.

Anthr. 441. Comparative Ethnology. 4 credits. A comparative survey of selected cultures, both historical and contemporary.


Anthr. 447. Religion of Primitive Societies. 4 credits. An analysis of religion, cosmology and world view.

Anthr. 448. Non-Western Political and Economic Organization. 4 credits. Comparative analysis of the political and economic organization of selected non-Western societies, such as those found in tribal and pre-literature societies. (Anthr. 448 and Pol. Sci. 448 are the same course. Students may not receive credit in both.)

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


Anthr. 457. Applied Anthropology. 4 credits. Theory and method applied to the control of cultural change in the areas of technical aid, education and agriculture.

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

Anthr. 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

Art 100. Introduction to Art. 3 credits. Graphic and plastic arts, emphasizing the study of painting, print, sculpture, and architecture.

Art 101. Art Today. 3 credits. Minor arts and industrial design, their function in man's environment.

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 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 251. Figure Drawing and Composition. 2 credits. Prerequisite, Art 150. The figure from memory and theory as well as from the model. Four 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.

1The 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.
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, and 250 or 251. Chief emphasis upon relief print. Six hours of studio per week.

Art 287. Intaglio Printmaking. 3 credits. Prerequisite, Art 150, 170, 250 or 251. Techniques of etching, engraving and dry-point 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 321. Mural Design. 2 credits. Prerequisite, Art 170, 260. Various processes and materials used in mural design including survey of contemporary murals. Four hours of studio per week.

Art 325. Arts and Crafts, Primary. 3 credits. Prerequisite, Art 100 or 101. 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 followed by 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 354. Costume Design. 3 credits. The execution of fashion designs of play clothes, sportswear, the formal attire as well as the history of costume. Six hours of studio per week.

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 and executed for plate printing. Ten hours of studio per week.

Art 373. Interior Design. 3 credits. Prerequisite, Art 100 or 101, 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 and 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. Collograph. 3 credits. Prerequisite, Art 170 and 250 or 251. Studio work in original plate-making and plate-printing. Expe-
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, and 250 or 251. Chief emphasis upon relief print. Six hours of studio per week.

Art 287. Intaglio Printmaking. 3 credits. Prerequisite, Art 150, 170, 250 or 251. 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 321. Mural Design. 2 credits. Prerequisite, Art 170, 260. Various processes and materials used in mural design including survey of contemporary murals. Four hours of studio per week.

Art 325. Arts and Crafts, Primary. 3 credits. Prerequisite, Art 100 or 101. 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.

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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 265, with emphasis upon development of individual direction. Gouache and mixed media are introduced. Six hours of studio per week.

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Art 385. Serigraphy. 3 credits. Prerequisite, Art 150 and 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. Collograph. 3 credits. Prerequisite, Art 170 and 250 or 251. Studio work in original plate-making and plate-printing. Expe-
rimentation with various materials and techniques of collograph 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 or 101. 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 101 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 preadolescent 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. Prerequisite, Art 150, 250. Advanced study with various media and continued attention to form and composition. 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 present. 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. 2 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 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. Continued study in design with 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. Advanced problems in serigraphy; the use of silk screen as an expressive printmaking medium. Six hours of studio per week.

Art 486. Advanced Collograph. 3 credits. Prerequisite, Art 386. Continuation of Art
Art 386, with emphasis on refinement of print-making 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. Prerequisite, Art 390. Development of the art 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 tours 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 all planned study sessions during the tour, to make an adequate record of the art studied, and to submit a report 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. Advanced Studies in Painting. 2-5 credits. 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. Advanced Studies in Sculpture. 2-5 credits. Prerequisite Art 480 or equivalent.

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 595. Seminar in Aesthetics and Criticism. 3 credits.

Art 596, 597, 598. Individual Study. 2 credits each.

Art 599. Seminar in Art Education. 2 credits.

Art 600. Thesis. 3 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 of acceptable professional standard accompanied by a type-written text, illustrated, and adequately discussing the creative work. Candidates selecting the creative thesis may choose any one of the following fields: painting, graphic art, design, sculpture, jewelry, pottery, photography.

Aviation

Av. 351. Introduction to Aviation. 2 credits. Covers that portion of the FAA written examination for a Private 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 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.

1The 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.
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 examinations, 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 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 flight 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.

Biological Science

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 (may be taken concurrently). Experience in working with plant and animal materials; assigned readings appropriate to the organisms studied. Four hours laboratory a week.

Bio. Sci. 110, 111, 112, Biology. 4 credits each course. Bio. Sci. 110 is a prerequisite to either Bio. Sci. 111 or 112. First quarter: cellular structures and functions including cellular reproduction and genetics; second quarter: functional morphogenesis; third quarter: ecological phylogeny of plants and animals. 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. 347 and Geol. 347 are the same course. Students may not receive credit in both.)

Bio. Sci. 365. Genetics. 4 credits. Prerequisite, Bio. Sci. 102. 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. 102, and Chem. 162 or 172. 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)

Bio. Sci. 447. Invertebrate Paleontology. 5 credits. Prerequisite, Zool. 152. Invertebrate animals of past geologic ages. Three lectures and four hours of laboratory a week. (Same as Geol. 447)

Bio. Sci. 449. Paleobotany. 5 credits. Prerequisite, Bot. 162. 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. (Same as Geol. 449)

Bio. Sci. 470. Ecology. 5 credits. Prerequisite, Bot. 263 and Zool. 152, or permission. Interrelationships of plants and animals with their environment. Three lectures and four hours of laboratory, including field work, a week. This is a field course.

Bio. Sci. 480. Limnology. 5 credits. Prerequisite, Chem. 162 or 172; and Bot. 162 or Zool. 152; 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. Prerequisites, Bio. Sci. 365 and Bot. 360 or Zool. 372. Recent advances in evolution in a variety of fields in biological science. Three lectures 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. 596, 597. Individual Study. 2 to 4 credits each course. Prerequisite: Consent 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.

Botany

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, Botany 161 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 lab a week. A field course.

Bot. 250. Economic Botany. 3 credits. Prerequisite, Bot. 161 or permission of instructor. Plants useful to man, their origin, breeding, propagation, cultivation, processing and utilization.

Bot. 263. Plant Taxonomy. 5 credits. Prerequisite, Bot. 161. An introductory course in
Botany, Business Administration

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, Botany 162. 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, Bot. 161 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, Bot. 161. 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. Prerequisite, Bot. 161 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, Bot. 161 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. Agrostology. 3 credits. Prerequisite, Bot. 263. A systematic study of grasses and grass-like plants. Two 3-hour laboratories a week.


Bot. 460. Plant Pathology. 3 credits. Prerequisite, Bot. 162. 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. 102. 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, Bot. 162. The morphological diversity that occurs among the fungi. Three lectures and two hours of laboratory a week.

Bot. 464. Fresh-Water Algae. 4 credits. Prerequisite, 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.

Business Administration

Bus. Admr. 241. Business Law. 5 credits. Introduction to law, its origins and development; formation and performance of contracts; fraud, mistake, duress and undue in-
fluence; 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. 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. 352. Cost Accounting. 5 credits. Economics of cost accounting; industrial analysis, production control through costs; types of cost systems; burden application.


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. 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. 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. 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. 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. 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. 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.

Business Education

Bus. Ed. 142. Typewriting for Personal Use. 2 credits. Introduction to touch typing 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. Elementary Typewriting. 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.

Bus. Ed. 152. Intermediate Typewriting. 2 credits. Speed, accuracy; introduction of office typewriting problems. Five hours per week of laboratory activity interspersed with lectures and demonstrations.


Bus. Ed. 161. Shorthand—Beginning, 5 credits. The fundamental theory and principles of Gregg shorthand. May not be taken for college credit by students with one year or more of high school shorthand, but can be audited.


Bus. Ed. 264. Shorthand—Transcription. 4 credits. Prerequisite, Bus. Ed. 163. 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 activity interspersed with lectures and demonstration.

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. 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 Techniques. 2 credits. New improvements, latest techniques in color and sketch duplicating, publication of school newspapers, programs, bulletins, etc.

Bus. Ed. 375. Consumer Education. 3 credits. Buymanship, choice making, money management, insurance, investments, shelter, personal legal aspects, and taxes.

Bus. Ed. 378. Advanced Office Practice. 3 credits. Professional secretarial training for a student with typewriting and transcription skills.

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 Short-hand and Transcription. 3 credits. Provision is made for the construction of teaching and/or resource units.


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. 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. 524. The High School Business Education Program. 3 credits.


Bus. Ed. 580. Seminar in Business Education. 3 credits.

Bus. Ed. 595. Research in Business Education. 3 credits.

Chemistry

Chem. 101, 102. Chemistry. 4 credits each course. Introductory, for the non-scientist. Three lectures and one two-hour laboratory a week.

Chem. 161, 162, 163. Elementary College Chemistry. 4 credits each course. Prerequisite, high school algebra. Atomic structure of metals and non-metals. Chemical equilibrium and qualitative analysis in the third quarter. Two lectures, a laboratory section, and a quiz section weekly.

Chem. 171, 172. General Chemistry. 5 credits each course. Prerequisites, high school chemistry and high school algebra or permission. For science majors and the better prepared student. Second quarter: chemical equilibrium and qualitative analysis. Three lectures, a laboratory section, and a quiz section weekly.

Chem. 245. Glassblowing. 1 credit. Techniques of glass blowing and manipulation.

Chem. 251, 252. Quantitative Analysis. 5 credits, each course. Prerequisite, Chem. 163 or 172. Volumetric and gravimetric procedure; colorimetric and other special techniques. Two lectures and six hours of laboratory a week.

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. 251 and Math. 171.2. Selected groups of the Periodic Table, relationship between atomic and molecular structures and typical reaction of group members, and coordination chemistry. Three lectures a week.

Chem. 360. Elementary Organic Chemistry. 5 credits. Prerequisite, 8 credits in college chemistry. Restricted to Biology majors in the Teacher Education Program, to Home Economics majors in either Teacher Education or Arts and Sciences, and laboratory technicians and nurses. Three lectures and four hours of laboratory a week.

Chem. 361, 362, 363. Organic Chemistry. 5 credits, each course. Prerequisite, Chemistry 163 or 172. A systematic coverage of the carbon compounds. For chemistry majors and other students requiring a strong background in the field. Three lectures, a quiz section, and four hours of laboratory a week.

Chem. 364. Physiological Chemistry. 5 credits. Prerequisites, Chem. 360 or equivalent. Physiological activity involving the biochemistry of carbohydrates, lipids, proteins and tissues, respiration, and end products of metabolism. Three lectures and four hours laboratory a week.
Chem. 365. Biological Chemistry. 5 credits. Prerequisite, Chem. 360 or Chem. 362, or 363. The metabolic pathways involving carbohydrates, fats, proteins, and other biologically important substances, classical and modern techniques for investigation of biochemical systems. Three lectures and four hours of laboratory a week.

Chem. 381, 382, 383. Physical Chemistry. 3 credits each course. Prerequisite, Chem. 251 and Math. 171.2. Basic chemical principles; laws of gases; liquids and solutions; chemical thermodynamics and equilibria; electrochemistry; kinetics, spectroscopy and molecular structure; surface chemistry; nuclear chemistry. Three lectures a week.

Chem. 445. Modern Methods of Chemical Analysis. 5 credits. Modern trends in qualitative and quantitative analysis. Colorimetric and chromatographic procedures; isolation and purification of chemical compounds; qualitative identification and quantitative measurement. Two lectures and six hours laboratory a week.

Chem. 452. Instrumental Analysis. 4 credits. Prerequisites, Chem. 251 and 383, and Physics 163. Advanced work in physical measurements as applied to analytical problems. One lecture and nine hours laboratory a week.

Chem. 454. Introduction to Spectroscopy. 3 credits. Prerequisites, previous or concurrent enrollment in Chem. 363 and 383. Elucidation of molecular structure through ultraviolet Ramon, infrared and nuclear magnetic spectroscopy. Three lectures a week.

Chem. 461, 462. Theoretical Organic Chemistry. 3 credits each course. Prerequisite, Chem. 363 and 383. Organic chemical theory and interpretation of the properties and reactions of organic compounds.

Chem. 463. Qualitative Organic Chemistry. 3 credits. Prerequisite, Chem. 363. The systematic identification of organic compounds. One lecture and six hours of laboratory 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 a week.

Chem. 470. Radiochemistry. 5 credits. Prerequisites, Chem. 383 or permission. Principles of radiochemistry, including illustrative laboratory experiences; tracer studies; using radioisotopes. Two lectures and nine hours of laboratory a week.

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. 481, 482, 483. Intermediate Physical Chemistry. 3 credits each course. Prerequisites, Chem. 363 and 383; Physics 163 and Math. 271.3 (The latter may be taken concurrently). Quantum chemistry, statistical mechanics, statistical and classical thermodynamics. Two lectures, a quiz section, and three hours of laboratory a week.

Chem. 486. Electrochemistry. 3 credits. Prerequisite, Chem. 383. Theory and practical applications. Three lectures a week.

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

Chem. 500, 501, 502. Advanced Biochemistry. 4 credits each course. Prerequisite for Chem. 500, Chem. 365 or permission. Courses must be taken in sequence.


Chem. 550. Theoretical Instrumental Analysis. 3 credits. Prerequisite, Chem. 452.

Chem. 561. Physical Organic Chemistry. 3 credits. Prerequisites, Chem. 462 and Chem. 482.

Chem. 570.1, 570.2. Advanced Inorganic Chemistry. 3 credits each course. Prerequisites, Chem. 350 and Chem. 482.

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.

Crafts

Crafts 200. Introduction to Crafts. 3 credits. An exploratory course in crafts, using wood, metal, plastics, glass, leather, and fabrics. Six hours of studio per week.

Crafts 242. Wood. 3 credits. Prerequisite, Crafts 200. Designing and making craft arti-
Crafts 243. Plastics and Glass. 3 credits. Prerequisite, Crafts 200. 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, Crafts 200. Designing and constructing articles in metal, involving hand and machine work, appreciation and technical skills. Six hours of studio per week.

Crafts 245. Leather. 3 credits. Prerequisite, Crafts 200. 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, Crafts 200. Designing in fabrics with emphasis placed upon surface treatment. Six hours of studio per week.

Crafts 262. 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 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

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. Prerequisites, 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.

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 economic 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.

Econ. 444. Economic Education. 3 credits. The inclusion of economic institutions in the public school program.


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 decisions, research and development expenditures, programming 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.

Education

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. Prerequisites, 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. 316. Instructional Aids: Utilization. 5 credits. Prerequisite, Ed. 307. Instructional materials, equipment, and special techniques for selection, procurement, presentation, and evaluation. Opportunity is given for laboratory practice.

Ed. 319. Cursive and Manuscript Writing. 1 credit. Sociological, physiological and psychological 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.

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 adminis-
trative activities which support the instructional program. Laboratory experiences will be offered.

Ed. 345. Contemporary Movements. 3 credits. The various plans and types of school organizations and the philosophies behind these plans: The Dalton Plan, the Winnetka Plan, the core curriculum, the ungraded elementary school and others.

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).

Ed. 410. Teaching Nursery School and Kindergarten. 3 credits. Prerequisite, Ed. 314. Procedures, desirable equipment, materials, and curriculum.

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. (Same as Psy. 416).

Ed. 417. Radio and Television in the Classroom. 2 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. 426. Studies and Problems in Reading. 3 credits. For experienced teachers.

Ed. 427. Modern Arithmetic Program. (Primary.) 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. Ee. 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 problem 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, acceptable scores on the Teacher Education Entrance tests, 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. 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.

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. 316. Electrical, electronic, magnetic, optical, and mechanical aspects of audiovisual equipment.

Ed. 450. Instructional Aides: Production. 3 credits. Prerequisite, Ed. 316. The problems and techniques of local production of instructional aids 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. 464. Community Youth Programs. 3 credits. Mobilization and coordination of community resources.

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 correlational 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. 4 credits. Prerequisite, Ed. 358, and recommended prerequisite of Psy. 444. Methods of studying occupations, including sources of information concerning employment conditions, training facilities, job requirements, and occupational trends. Theories of occupational choice related to theories of counseling (Ed. 471 and Psy. 471 are the same course. Students may not receive credit in both.)

Ed. 476. School and Community. 3 credits. For classroom teachers, principals, administrators and lay leaders. Developing and maintaining effective public relations 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. 3 credits. Required of all M. Ed. degree candidates.

Ed. 508. Comparative Education. 3 credits.

Ed. 516. Instructional Aids: Advanced Theory and Practice. 3 credits. Prerequisite Ed. 316.

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 Hebeler Elementary School. Consult Chairmain 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. 316, 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. 553. Program of Curriculum Improvement. 3 credits.

Ed. 554. Administration of the Pupil Personnel Program. 3 credits. Prerequisite, Ed. 358 or consent of department chairman.

Ed. 559. E., I, or SC, Practicum in Counseling. 4-12 credits. Prerequisite, Departmental approval. Not less than four credits may be taken in any single quarter. Twelve credits must be completed under the two-year programs. In registering for this course, indicate the level of assignment (E, Elementary; I, Institutional; or SC, Secondary-College.)

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. 579. Elementary School Principal. 5 credits. Prerequisite, one year of teaching experience.

Ed. 580. Junior High 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 the 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. 586. School Building Maintenance. 2 credits.
Education, English 103

Ed. 587. Educational Administration. 5 credits. Prerequisite, one year of teaching experience.
Ed. 588. Federal, State and County Education. 3 credits.
Ed. 589. School Plant Planning. 5 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.

English

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. 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. Backgrounds, 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. 351 and Shakespeare 352 or Eng. 352 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. 351 and Shakespeare 352 or Eng. 352 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. 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 beginnings to 1765, including such writers as Bradford, Bradford, 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, Frenau, 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. 472, 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. 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. 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.

Foreign Language

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.

French

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 for 251, 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, French 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 for 261, 155 or equivalent. French 261, 262, 263 should be taken concurrently with French 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 for 361, 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, French 352 or equivalent. Intensive study of the French theater and of the non-dramatic writing 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: 353 or equivalent. Parnassian poetry, Symbolism, Surrealism.

Fr. 461, 462, 463. Advanced Conversation and Composition. 2 credits each quarter. Prerequisite for French 461, 363 or equivalent.

Fr. 480. The "Avant-garde" Literature of France. 4 credits. Prerequisite, French 353 or equivalent. The Novel of Protest; the Theater of the Absurd. From 1950 to the present.

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.

Geography

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 landforms, climate, vegetation, and soils which characterize man's natural environment. (not open to students who have taken Geography 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. 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.

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. 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. 444. Geography Behind the News. 2 credits. Selected current events reviewed in terms of their geographic background; the selection, reliability, and availability of up-to-date geographic information.


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. 2 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 distributions 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. Summer only. 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. 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. 595. Seminar—Research in Geography. 3 credits. Prerequisite, a minor in geography.

Geology

Geol. 145. Physical Geology. 5 credits. An introduction emphasizing the origin, nature, and continually changing features of the earth's crust. Three lectures and four hours of laboratory a week.

Geol. 146. Historical Geology. 5 credits. An introduction to the history of the earth as revealed by rocks and fossils. Three lectures and four 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 four 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. 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. A field course. (Same as Bio. Sci. 347.)

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. Prerequisites, Geol. 145 and 146. The origin, interpretation, and mapping of major and minor geologic structures. Three lectures and two hours of laboratory a week.

Geol. 447. Invertebrate Paleontology. 5 credits. Prerequisite, Zool. 152. Invertebrate animals of past geologic ages. Three lectures and four hours of laboratory a week. (Same as Bio. Sci. 447.)

Geol. 449. Paleobotany. 5 credits. Prerequisite, Bot. 162. The history of plant life on earth with particular emphasis on the Pacific coast region; its fossil leaves and woods. Three lectures and four hours of laboratory a week. A field course. (Same as Bio. Sci. 449.)

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. 455. Paleoclimatology. 4 credits. Prerequisite, Geol. 388. Climates of the past. Four hours of lecture a week.

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.

German

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 for 251, Germ. 153 or equivalent. Graduated readings in modern German prose with discussions 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 for 261, 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; reading, 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 for 361, 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. 355 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. 450. The German Novel of the 19th and 20th Centuries. 5 credits. Prerequisite, Germ. 353 or permission. The German novel since 1830; Gotthelf, Keller, Store, Meyer, Thomas Mann, Hesse, Kafka, Bergengruen, Böll.

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. Prerequisites for Germ. 461, 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.
Health Education

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 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. 450. Physiology of Exercise. 3 credits. Prerequisite, 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.

History

Hist. 143. United States History to 1865. 5 credits. The colonial, revolutionary, and national periods, embracing political, social and cultural development.

Hist. 144. The 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 from the Renaissance through the Napoleonic Wars.

Hist. 154. Western Civilization Since 1815. 5 credits. Political, social, economic, and cultural development; its influence from the Congress of Vienna to the Thermonuclear Age.

Hist. 201. The History and Government of Washington. 3 credits. Prerequisite, sophomore standing. Exploration and settlement; subsequent political, economic, and social history; state government.

Hist. 302. The Ancient Near East and Greece. 3 credits, Mesopotamian, Egyptian, Hellenic and Hellenistic civilizations from their earliest beginnings to the breakup of the Alexandrian Empire.


Hist. 310. Introduction to History of Science. 5 credits. Prerequisites, high school algebra and geometry, 5 hours of history, and junior standing; or consent of instructor. The role of natural philosophy and science in the development of civilization, from ancient Greece to the 20th century. Topics discussed will be chosen mostly from the physical sciences, but will also include biological evolution and relations between religion and science.

Hist. 331. Colonial Africa. 3 credits. Earliest African civilizations, coming of the Europeans; colonization.

Hist. 332. Independent Africa. 3 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 Pakistani states, 20th century problems.

Hist. 346. The West in American History. 5 credits. Exploration, patterns of settlement,
the fur trade, agriculture, political organization, territorial acquisition, and the influence of the frontier on American institutions.

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. 351. Selected American Biographies: Pre-Civil War. 3 credits. Americans who contributed to statecraft, economic life or social progress.

Hist. 352. Selected American Biographies: Post-Civil War. 3 credits. Americans who contributed to statecraft, economic life or social progress.


Hist. 356. 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. 361. Survey of English History: The Tudor-Stuart Period. 3 credits. Feudalism to dynastic monarchy; growth and decline of Royal absolutism; religious, controversies, economic evolution, and the development of parliamentary power.

Hist. 362. Survey of English History: 1715 to the Present. 3 credits. The emergence of parliament, growth of parties, social and intellectual currents, and the industrial revolution.

Hist. 369. History of Canada. 5 credits. First explorers; French period, fur trade and colonization; the half century of conflict; British colony, Dominion, and member of the British Commonwealth.

Hist. 371. Medieval History. 5 credits. From the breakup of the Roman empire to the sixteenth century; political, economic, social, and religious thought and institutions.

Hist. 373. English Constitutional History. 5 credits. The 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. 374. Renaissance and Reformation. 3 credits. The effects of religious and philosophical thought; voyages and discoveries; cultural developments and the split of Western Christendom.

Hist. 375. The French Revolution. 3 credits. Conditions prior to 1789; the course of the Revolution from 1789 to 1799; internal adjustments; the international implications; early years of the Napoleonic era.

Hist. 385. Modern Asia. 5 credits. The Far East from ca. 1850 to the present; adjustment by the various Oriental civilizations to massive Westernization.

Hist. 388. Economic History of Europe Since 1760. 5 credits. Covers 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 Econ. 388.

Hist. 391. The South American Republics. 5 credits. Covers the Spanish and Portuguese period with stress on the period since the Wars of Independence. Attention placed upon historical factors which contribute to a better understanding of the present social, economic, and political life of the southern republics.

Hist. 393. Mexico and the Caribbean Area Since 1900. 3 credits. Recent developments, social and economic problems and plans and programs to solve them; contemporary materials used to analyze trends.

Hist. 421. Methods and Materials in History—Secondary. 2 credits.

Hist. 444. The Civil War and Reconstruction. 5 credits. Social, political, and economic backgrounds; life behind the lines; problems of reconstruction; consequences.


Hist. 446. Colonial American Institutions. 5 credits. Home and family life; churches and religious observance; self-government; industries, finance, trade, and commerce; social customs and regulations; colonial schools and education.

Hist. 447. The American Revolution. 3 credits. Background, nature, and consequences; 1750-1789.

Hist. 455. Intellectual History of the United States. 5 credits. American minds; impact of ideas and attitudes on American society.

Hist. 463. American Diplomatic History: Pre-1900. 3 credits. Prerequisite, ten hours of American History or consent of the in-
Instructor. Evolution and development of basic principles of foreign policy from the Colonial Period through the Spanish-American War.

Hist. 464. American Diplomatic History: Post-1900. 3 credits. Prerequisite, ten hours of American History or consent of instructor. From the Spanish-American War to the present; implications and consequences of world-wide responsibilities.

Hist. 465.1. The Habsburg Empire, 1806-1867. 4 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. 4 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. International relations from the Congress of Vienna to the beginning of World War I; the Congress System, national unification movements, imperialism and global diplomacy, and the origins of World War I.

Hist. 470. The Moslem World. 3 credits. The origin and spread of Islam, the rise of Moslem states and their political and cultural influences on the European nations, from the time of Mohammed to the present.

Hist. 473. Russia to the Twentieth Century: 1862-1905. 3 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 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. 478. The British Empire and Commonwealth. 3 credits. Colonial expansion and administration from the American Revolution to the present; the development of dominion status and commonwealth relations.

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. 3 credits.

Hist. 481. Understanding History. 3 credits. Introduction to the nature of history and to the way historians reason.

Hist. 485. European Intellectual and Cultural 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. 496, 497. Individual Study. 2 credits each course. Prerequisite, junior standing, twenty hours of history, and a minimum grade point average of 3.0.

Hist. 501. Historiography. 3 credits.

Hist. 505. Research Seminar in History. 3-5 credits.

Home Economics

H. Ec. 107. Introduction to Home Economics. 1 credit. Orientation. Founding and development of home economics as a field of knowledge. Requirements for and 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. 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. 245. Nutrition Laboratory. 1 credit. Two hours of laboratory per week. Required of all home economic 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. 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. Contributions 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. 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 and 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
Home Economics

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. Prerequisites, 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, Home 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. (Home 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. 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. 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. 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 four 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 provide or who wish to pursue work in areas not provided by regular courses.


*H. Ec. 520. Supervision in Vocational Home Economics Education. 2 credits. Prerequisite, a completed major and undergraduate degree in Home Economics 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 or chairman of the department.

*H. Ec. 530. Demonstration Techniques. 3 credits. Prerequisites, H. Ec. 155, 270, 376, 385, completion of undergraduate 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. 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. 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 Courses**

Honors 200, 201, 202. General Honors Seminar. 2 credits each quarter. Prerequisite, admittance to the General Honors program. Required reading seminars to be taken each quarter of the sophomore year by students in the General Honors program. Directed interdisciplinary study.

**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. An experimental program in multi-disciplinary studies. En-
enrollment by invitation of faculty. Make application and receive information in political Science Department. 4 credits.

Hum. 499A. (Fall quarter) Ethical Relativism.

Hum. 499B. (Winter quarter) Ways of Knowing and Experience.

Hum. 499C-D. (Winter and Spring quarters) Students must enroll both quarters. Impact of Science on Human Identity.

Hum. 499E. Creativity.

**Journalism**

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. 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. 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.


**Library Science**

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, especially in elementary and junior high school libraries. 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 books and non-book materials found in public schools, including basic understanding of the 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.

Mathematics

Math. 145. Fundamentals of Algebra. No credit. (In terms of the student's load, equate to a five hour 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. 4 credits. Prerequisite, Math. 145 or permission. Number systems, logic, mathematical induction, polynomials, determinants and matrices.

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 11/2 years of high school algebra or Math. 165 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. Prerequisites, Math. 271.3 or permission. Ordinary and partial differential equations integrated with vector calculus with applications to engineering and physical science.


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 distributions 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 (may be taken concurrently) or permission. Geometry as a logical system; postulational system; projective and non-Euclidean geometries.

Math. 461.1, 462.2, 461.3. Abstract Algebra. 3 credits each course. Prerequisite, Math. 261.2 (May be taken concurrently.) Algebraic structures such as groupoids, groups, rings and fields.

Math. 471.1, 471.2, 471.3. Advanced Analysis. 3 credits each course. Prerequisites, Math. 261.2 (may be taken concurrently), 271.3. Further development of properties of the calculus.


Math. 495.1, 495.2, 495.3. Problem Seminar. 1 to 3 credits each course. Prerequisite, permission.

Math. 496, 497. Individual Study. 2 to 4 credits, each course. Open to advanced student with consent of the staff member 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. Prerequisites, Math. 461.3 or equivalent.

Math. 561.1, 561.2, 561.3. Modern Algebra. 3 credits each course. Prerequisites, 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. 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. 3 to 6 credits. Prerequisite, graduate standing.

Music

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 opera.

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. Rudiments 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, string, 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 fresh-
men and sophomores. Beginning; voice, instru-
ments of the orchestra, or piano. 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

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 sched-
uled rehearsals and performances.

1 credit each. Open to all men interested in
singing. Three hours rehearsal per week plus
all scheduled rehearsals and performances.

Mus. 167W, 168W, 169W. Women's Glee
Club. 1 credit each. Open to all women in-
terested in singing. Three hours rehearsal
per week plus all scheduled rehearsals and
performances.

Mus. 177, 178, 179. Orchestra. 1 credit each.
Open to all students proficient on orchestral
instruments. Four hours rehearsal per week
plus all scheduled rehearsals and perfor-
manences.

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 chro-
matic 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 Music 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.

Mus. 267, 268, 269. Choir. 1 credit each. For
sophomores. See Mus. 167, 168, 169 for de-
scription.

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 for description.

Mus. 270. Music History I. 3 credits. Prereq-
usite, Mus. 146. Forms, styles, and compos-
ers to 1600.

Mus. 272. Music History II. 3 credits. Pre-
requisite, Mus. 146. Forms, styles, and com-
posers from 1600 to 1825.

Mus. 274. Music History III. 3 credits. Pre-
requisite, Mus. 146. Forms, styles and com-
posers from 1825 to the present.

Mus. 277, 278, 279. Orchestra. 1 credit each.
For sophomores. See Music 177, 178, and
179 for description.

Mus. 287, 288, 289. Band. 1 credit each. See
Music 187 for description.

Mus. 321. Music Education for the Element-
ary School. 3 credits. Prerequisite, Mus.
146, and suitable skill in piano and voice.
Materials and methods, evaluation of basic
texts, observation in the Hebeler Elementary
School.

Mus. 323. Choral Music Education. 3 credits.
Prerequisite, Mus. 321, and suitable conduct-
ing and performance skill in piano and
voice. Philosophy and psychology of music
education through methods and materials,
observation of teachers in the rehearsal, indi-
vidual research.
Mus. 324. Elementary Piano for the Classroom Teacher. 1 credit. From simple melodies to chording.

Mus. 325. Instrumental Music Education. 3 credits. Prerequisite, Mus. 321 and suitable conducting and performance skill in piano or instrument. Philosophy and psychology of music education through methods and materials; observation 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. 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 Music 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 each. 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 Music 244, 245, 246.

Mus. 354, 355, 356. Vocal and Instrumental Class Instruction. 1 credit each. For junior and seniors. See Music 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 Music 167, 168, 169 for description.


Mus. 367W, 368W, 369W. Women's Glee Club. 1 credit each. For juniors. See Music 167W for description.

Mus. 377, 378, 379. Orchestra. 1 credit each. For juniors. See Music 177, 178, 179 for description.

Mus. 387, 388, 389. Band. 1 credit each. For juniors. See Music 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, Music 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. Prerequisites, 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 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
Mus. 443. Three and four parts, imitation and sequence. Written exercises and analysis.

Mus. 444. Canon and Gugue. 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, correct 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. 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. Prerequisite, Mus. 270, 272, 274. Forms and styles from the late 16th century to the present.

Mus. 476. History of Choral Music. 3 credits. Prerequisite, 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, and 343. For public school band directors; full band orchestration, small bands, including marching groups.

Mus. 485. The Marching Band. 3 credits. Drumming 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, dictation.

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. Fall, 1967 only, Mr. Paul Creston.

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. 542 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 Music 167W 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. 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

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. 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. Prerequisites, 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, Introduction to Logic 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 priori knowledge, meaning, analytic and synthetic statements. Truth and related topics.
Phil. 362. Continental Rationalism. 4 credits. A historical and critical study of the philosophies of Descartes, Spinoza, and Leibniz. Prerequisite one course in Philosophy.
Phil. 363. British Empiricism. 4 credits. An historical and critical study of the philosophies of Locke, Berkeley, and Hume. Prerequisite one course in philosophy.
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. 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. Prerequisite Phil. 345 or consent of instructor.
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. 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. (Same as Sociology 481.) A critical study of basic assumptions, distinctive methods and explanations, and value and normative considerations in the social sciences. Prerequisite, 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.

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

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 or women. Even numbers indicate beginning classes; odd numbers indicate advanced classes.

FUNDAMENTAL SKILLS

One credit (meets twice weekly)


P.E. 4M or 4W. Adapted Activities. Physical and motor fitness.


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. 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 sessions)
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)
®P.E. 50. Archery
®P.E. 52. Badminton
®P.E. 54. Bowling
P.E. 58M. Cross Country
P.E. 60. Fencing
®P.E. 62. Golf for Beginners
®P.E. 63. Golf for Advanced
P.E. 64 Recreational Games
®P.E. 66 Skiing
®P.E. 67. Advanced Skiing
P.E. 68. Tennis for Beginners
P.E. 69. Tennis for Advanced
P.E. 70. Tumbling
P.E. 72. Wrestling
P.E. 74. Apparatus

*Students required to replace broken or lost arrows.
*Shuttle cocks must be supplied by the student.
*Bowling carries a fee of $5.50 payable at the alley.
*Clubs are furnished. Students furnish golf balls.
*All 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

Physical Education

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. Course 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 technique per week.
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.
126 Physical Education

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. 324. Track 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. 328. Methods in Physical Education for Men. 3 credits. For the junior and senior high school.

P.E. 329. Methods in Physical Education for Men. 3 credits.

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


a. Archery f. Fencing
b. Bowling g. Track and Field
c. Badminton h. Wrestling
d. Golf i. Recreational
e. Tennis Games

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.


a. Baseball e. Softball
b. Basketball f. Soccer
c. Field Hockey g. Touch Football
(women only) h. Volleyball
d. Football

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


a. Social Dancing b. Folk Dancing
c. Modern Dancing


a. Apparatus c. Trampoline
b. Tumbling

P.E. 348. Athletic Training. 2 credits. Prevention, treatment, and rehabilitation.

P.E. 348W. Athletic Training for Women. 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. 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 of Research in Health and Physical Education. 3 credits. Prerequisites, 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. Prerequisites, P.E. 327 or equivalent.
P.E. 581. Advanced Administration of Physical Education in High School and Colleges. 3 credits. Prerequisites, 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.

Physics

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 two 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 and 344. 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 cosmogony. 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. Prerequisite, Physics 161, 162, 163. Introduction to atomic, nuclear, solid state, relativity. Four lectures a week.

Physics 344. Modern Physics Laboratory. 2 credits. Prerequisite, Physics 341. Two three-hour laboratory periods a week.

Physics 351, 352. Mechanics. 4 credits each course. Prerequisite, Physics 265 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 265 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, 363. 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 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. Prerequisite, 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. Prerequisite, 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. Prerequisite, 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. 3 or 6 credits. Prerequisite, permission of staff member in charge.

Political Science

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. 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, 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. 376. International Organization. 4 credits. Background, concepts, structure and functions of international organization.

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. 496. Individual Study. 2 credits. Prerequisite, junior standing and twenty hours of political science.

Psychology

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. Prerequisite, Psy. 100 and Phil. 207, or consent 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. 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. Prerequisite, Psy. 362 and Psy. 346 or permission of the instructor.


Psy. 362. Elementary Statistics. 4 credits. Introduction to statistical techniques in education and psychology. (Also listed as Ed. 362.)

Psy. 373. Psychology of Thought & 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. Prerequisite, 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. 420. Psychology of Reading. 5 credits. Prerequisite, senior standing. Principles of learning and readiness, perception, psychological and physiological aspects of reading.

Psy. 444. Tests and Measurements. 4 credits. Three lectures and two laboratories. Prerequisite, 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. 447. Psychology of Adolescence. 3 credits. Prerequisite, Psy. 309. Organization of personality during the years of adolescence, guidance and control, education and vocational choice and adjustment.

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. Prerequisite, 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 and 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. Prerequisite, 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. 4 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 instructor.

Psy. 478. Experimental Physiological Psychology. 4 credits. Three lectures and one two-hour laboratory. Prerequisites, Psy. 378, Psy. 477, Zool. 372, or consent of instructor. Problems, methods, and techniques of neuropsychology 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. Prerequisites, g.p.a. of 3.0 or above in Psychology and accumulative g.p.a. of 3.0 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. 559. 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 in school settings approved by the college.

Psy. 560. Theory and Practice of Counseling. 5 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. Prerequisites, 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. 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. 6 credits.

Recreation

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. 450. Outdoor Recreation. 2 credits. Development on the national level, its implications for the Northwest.
Recreation, Science Education

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. Prerequisite, 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.

Russian

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 for 251, 153 or equivalent. Graduated readings in Russian literature with discussions conducted in Russian. Thorough review of Russian grammar.

Russ. 254. Russian Culture and Civilization. 5 credits. Prerequisite, Russian 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 for 261, 153 or equivalent. Russian 261, 362, 263 should be taken concurrently with Russian 251, 252, 253, respectively.

Russ. 331. 19th Century Russian Literature I. 4 credits. Prerequisite, Russian 253 or equivalent. Pushkin, Lermontov, Gogol', Goncharov, and others.

Russ. 332. 19th Century Russian Literature II. 4 credits. Prerequisite, Russian 331 or equivalent. Dostoevskij, Turgenev, Chekhov and others.

Russ. 333. 20th Century Russian Literature I: Pre-Soviet Period. 4 credits. Prerequisite, Russian 332 or equivalent. Symbolists, Acmeists, Futurists. Russian Formalism.

Russ. 334. 20th Century Russian Literature II: Soviet Period. 4 credits. Prerequisite, Russian 333 or equivalent. 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 for Russian 361, Russian 263 or equivalent. Scheduled so that they may be taken concurrently with Russian 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.

Safety Education

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.

Science Education

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. 440C0E 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. Open to advanced students with the consent of the staff member in charge.

Social Science


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.

Sociology

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. 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, social psychological features of group life, and the empirical study of primary 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. 348. Marriage and Families. 5 credits. Marriage as a social institution, courtship and family interaction.

Soc. 350. Social Theory I. 4 credits. Philosophic antecedents of sociological theory.

Soc. 355. Culture and Personality. 3 credits. Personality as a function of cultural organization in a number of different societies.

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. Major theories of social change and "progress"; adjustment of society to external and internal forces.

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. 415. Urban Sociology. 4 credits. The city as an urban community, its social organization and institutions.

Soc. 445. Social Stratification. 3 credits. 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. 455. Collective Behavior. 5 credits. Crowds, mobs, public, mass society, social movements.
Soc. 465. Methods of Social Research. 3 credits.

Soc. 470. Contemporary Social Thought. 4 credits. Prerequisite, 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. (double listing with philosophy department).

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.

Spanish

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 for 251, 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 for 261, 153 or equivalent. Spanish 261, 262, 263 should be taken concurrently with Spanish 251, 252, 253, respectively.

Span. 351, 352, 353. Survey of Spanish Literature. 3 credits each quarter. Prerequisite, Spanish 253 or equivalent. Readings, 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 for 361 is 263 or equivalent. Scheduled so that they may be taken concurrently with Spanish 351, 352, 353, respectively.

Span. 426. Medieval Spanish Literature. 4 credits. Prerequisite, Spanish 351 or equivalent. Epic poetry, the "mester de clerecia", Alfonso el Sabio, Don Juan Manuel, Theater.

Span. 427. Spanish Renaissance Literature. 4 credits. Prerequisite, Spanish 351 or equivalent. Lyric poetry, chronicles of the Indies, the theater, the novel, the literature of Mysticism.

Span. 430. Spanish Romanticism. 3 credits. Prerequisite, Spanish 353 or equivalent. Lyric poetry and the theater of the first half of the 19th century.

Span. 435. Realism and Naturalism. 5 credits. Prerequisite, Spanish 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. Will not count towards 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: Spanish 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. 461, 462, 463. Advanced Conversation and Composition. 2 credits each quarter. Prerequisite for 461, 363 or equivalent.

Span. 496, 497, 498. Individual Study. 2 credits each quarter. Prerequisite Spanish 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.
Special Education

Spec. Ed. 307. Introduction to Special Education. 2 credits. Emotionally disturbed, socially maladjusted, disadvantaged, mentally retarded, gifted and talented, physical 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. 414. Curriculum and Problems of Instruction for the Mentally Handicapped. 4 credits. Methods, materials, curriculum development, management of classrooms for educable and trainable mentally deficient children at all levels. Three hours lecture, two hours laboratory per week.


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 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 Workshop. 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. Pre-
requisite, permission of 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 Remedia and Learning Disorders.
448.4 The Disadvantaged.
448.5 Physically Handicapped.
448.6 Gifted and Talented.

Spec. Ed. 457. Psychology of Exceptional Children. 3 credits. Prerequisite, Spec. Ed. 345 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, orthopedically and neurologically handicapped. (Also listed as Psy. 463.)

Spec. Ed. 467. Maladjusted Children. 3 credits. Prerequisite, Psy. 205 or Spec. Ed. 457 or consent of Psychology Department. Characteristics and treatment. (Also listed as Psy. 467.)


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 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.

Speech and Drama

General


Sp. 243. Oral Reading. 3 credits.


Sp. 420. Teaching Speech in the Elementary School. 3 credits.

Sp. 428. Teaching Speech in the Secondary School. 3 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 Reading of Children's Literature. 3 credits. Analysis, techniques; for classroom teachers, children's librarians, and others who read aloud to children.

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. 501. 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. 6 credits.

Radio and Television

R-TV 207. Introduction to Radio and Tele-
vision 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. Prerequisite, R-TV 215, Speech 282 or consent of instructor. Basic techniques in newscasting, sportscasting, music announcing, foreign pronunciation, interpretation, and commercial delivery in radio and television. 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 extended 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. Planning and production of radio and television programs.

R-TV. 420, 421, 422. Practical Television. 2 credits each quarter. Procedures for setting up and 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, extemporaneous, impromptu, and oral interpretation. Meetings once a week, plus scheduled activities.

Sp. 201. Public Speaking: Practice and Criticism. 3 credits. Prerequisite, Sophomore standing, except that Freshman may enroll by permission of Department Chairman. Practice in selection, organization, and presentation. Attention given to theory and practice of speech criticism.

Sp. 250. Argumentation. 3 credits. Analysis and criticism of reasoned discourse.

Sp. 251. Discussion. 3 credits. Principles and techniques of the several forms of public discussion.

Sp. 252. Debate. 3 credits. Theory and practice of debate as a decision making process.

Sp. 253. Exposition. 3 credits. Theory, practice, and criticism as applied to essentially informative speeches.


Sp. 341. Medieval and Renaissance Rhetoric. 4 credits. 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. Rhetorical theory, practice and criticism from Whately to the present.

Sp. 345. Advanced Public Speaking. 3 credits. Prerequisite, Sp. 201. Beyond Sp. 201, longer speeches, greater variety.

Sp. 350. Persuasion. 3 credits. Prerequisite, permission of instructor. Role of persuasion in society, elements of human motivation, techniques and appeals of the persuader, social bases.

Sp. 441. Speech Criticism. 4 credits. Theory and methodology in the description, analysis, and evaluation of rhetorical discourse.

Speech Pathology and Audiology

Sp. 176, 177, 178. Corrective Practice. One credit per quarter. Remedial work for college students who need help with individual speech problems.


Sp. 290. Anatomy of the Speech and Hearing Mechanisms. 4 credits. Prerequisite or
Speech Pathology

Sp. 364. Stuttering Theory and Therapy. 4 credits. Prerequisite, Sp. 277 and 290. Stuttering behavior, causes and developmental factors, therapy.

Sp. 365. Audiology. 4 credits. Prerequisite, Sp. 277 and 290. Hearing mechanism, psychophysics of sound, common pathologies.


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. Prerequisite, 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, learning principles which underlie therapy in speech and hearing.


Sp. 460. Childhood Language Disorders. 4 credits. Normal and delayed development of language skills in children; childhood aphasia. Diagnosis and remedial procedures.


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. 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 Audimetry. 4 credits.

Theatre and Drama

Sp. 105. Introduction to Theatre Art. 3 credits.

Sp. 107. Introduction to Drama. 3 credits. Elements, form, and content; analysis of plays representing major eras, countries, types, and styles.

Sp. 266. Play Production. 3 credits. Basic directing; also acting, stage scenery, lighting, costume, and properties.

Sp. 267. Stagecraft. 3 credits. Required participation in production of college play. Construction, painting and handling of scenery, lights, costumes. Meet four hours per week.

Sp. 268. Stage Lighting and Makeup. 3 credits. Production of college plays.

Sp. 269. Basic Acting. 3 credits. Theory and practice of character projection in improvisation and formal scenes.


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. 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.
140 Theatre and Drama

Sp. 429. Advanced Directing. 3 credits. Pre-requisite, Sp. 266.

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. Modern 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.)

Technology and Industrial Education

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 woodworking; 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 opera-
tions in sheet metal 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, oxy-acetylene 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, revolutions, 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 430. Industrial Education. 4 credits. Problems and methods in teaching industrial education. Selection and preparation of course materials, courses of study, unit and lesson plans, and several types of instruction sheets. Four lectures per week.

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. Prerequisite, 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 space 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 lectures and four hours of laboratory per week.

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 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. Prerequisite, T-IE 357, 455. One lecture or two hours of laboratory per week per credit.

T-IE. 599. Seminar in Industrial Education. 3 credits.

**Zoology**

Zool. 151, 152. General Zoology. 5 credits. Each course. Prerequisite, Biol. 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. 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. 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, Zool. 152. 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 Zool. 152; 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. Advanced Invertebrate Zoology. 5 credits. Prerequisite, Zool. 152. Morphology, phylogeny, physiology, and embryology of the invertebrate phyla, exclusive of parasitic forms. Two lectures and six hours of laboratory a week. A field course.

Zool. 362. General Entomology. 3 credits. Prerequisite, Zool. 152 or permission. Insect biology, life history, behavior and taxonomy. Two lectures and two hours of laboratory a week. A field course.

Zool. 372. General Physiology. 5 credits. Prerequisite, Zool. 152 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, Zool. 152. 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, Zool. 152. Free-living and parasitic protozoans; classification, morphology, physiology and ecology. Laboratory includes protozoan collection, culture and taxonomy. Two lectures and four hours of lab a week.


Zool. 436. Herpetology. 4 credits. Prerequisite: one year of zoology. Classification, distribution, and natural history of amphibians
and reptiles. Three lectures and one 3 hour lab per week.

Zool. 437. Ichthyology. 4 credits. Prerequisite: one year of zoology. Classification, distribution, and natural history of fishes. Three lectures and one 3 hour lab per week.

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, 10 hours of zoology.

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, Zool. 152. 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. Prerequisite, Zool. 152 or Botany 161. 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. Animal behavior. Three lectures and two hours of laboratory a 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. 548. Experimental Embryology. 5 credits. Prerequisite, Zool 348 and Chem. 360 or 362. Two lectures and six hours laboratory a week.

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.
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. For detailed description of Arts and Science Majors and Minors—see page ... For detailed description of Education Major and Minors—see page 57.

Record courses in your Major, Minor, Pre-Professional or Teacher Education areas after you have completed them.

Nicholson Pavilion
Record courses in your Major, Minor, Pre-Professional or Teacher Education areas after you have completed them.

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CREDIT SUMMARY
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Transfer Credits From Other Institutions

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