PART III

school of arts and sciences

Dean: Joseph P. Spulnik, Ph.D.

Associate Dean: William E. Shankweiler, Ph.D.

PHILOSOPHY
OBJECTIVES
ACTIVITIES
DEPARTMENTS

Art
Biology
Chemistry
Communication
English
Foreign Language
Geology
Home Economics
History
Mathematics
Music
Political Science
Physics, Engineering and Physical Science
Societal and Urban Studies
Theatre Arts
SCHOOL OF ARTS AND SCIENCES

Philosophy

The School believes that the purpose of men's lives is to know, to search, and to achieve, and that knowledge is necessary to the good life of free men. The School, therefore, provides an opportunity for each student to share in the accumulated experience of men of all times and places, hoping not only to lead each student to basic knowledge of the matter traditional to the School's major divisions of study, but also to stimulate students to exercise their own powers to range beyond the known — to dream a better possible human condition and devise ways of moving toward it.

To this end we hope to encourage students to be curious and wisely skeptical, learning that inquiry and intelligent doubt are often the first steps toward creation, achievement, and a fuller understanding of their own nature and potential.

Objectives

1. To offer programs of study leading to a baccalaureate degree in the Arts — Advertising Design, Art, Communication, English, History, Music, Political Science, Social Science, Social Work, Sociology, Theater Arts, and in the Sciences — Biology, Chemistry, Earth Science, Mathematics. Degrees available in the above areas, including the Secondary Education Options offered by all departments, include the Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts (in Art, Art Education, and Advertising Design), and Bachelor of Music (in Music Performance, Music Education, and Music Theory and Composition.)

2. To offer undergraduate programs in Engineering, Physics, Home Economics, Forestry, and Wildlife Management.

3. To offer elective and service courses for students majoring in other schools.

ACTIVITIES

The Cold-drill

The Department of English, in addition to offering a chance for students to improve their creative, literary skills by studying under producing authors in classes aimed to increase the student's critical and creative abilities, publishes each year a magazine designed to display the best efforts of both the faculty and student body of Boise State College.

Brisas

The Department of Foreign Languages, with the cooperation of the Spanish Club members and departmental students and faculty, publishes each year a Spanish-English magazine focusing on various social and educational areas of Hispanoamerica.

Performances, Exhibitions, Workshops

Membership in the various groups and organizations engaged in extracurricular activities is available to all students who qualify. These groups offer opportunities for growth and participation beyond curricular requirements. Students may participate in art exhibits in the Liberal Arts Building, Library, and Student Union gallery areas; extensive intramural and inter-collegiate offerings of the Department of Communication including Debate, Reader's Theatre, and productions of plays from both the classical and modern repertoires in the college's unique Subal theatre; and through the medium of student recitals, organizations, and ensembles of the Department of Music including Band, Orchestra, Choir, and Musical Theatre and Opera. Students may also join in an "American Heritage Tour" presented by the college each summer, as well as science fairs, environmental workshops, etc.
**REQUIREMENTS FOR ART MAJOR**

**Bachelor of Arts Degree**

**General Art, Art Education, Advertising Design**

<table>
<thead>
<tr>
<th>Section</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. General Art-Bachelor of Arts Program</td>
<td></td>
</tr>
<tr>
<td>1. General College and Basic Core Requirements</td>
<td>47-55</td>
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<td>2. Art Major Requirements</td>
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<tr>
<td>Painting</td>
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<td>Art History</td>
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<td>Printmaking</td>
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<td>Crafts</td>
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<td>Senior Seminar</td>
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<td>3. Electives</td>
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<tr>
<td>II. Art Education-Bachelor of Arts Program</td>
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<td>2. Art Major Requirements</td>
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<td>Sculpture</td>
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<td>Printmaking</td>
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<td>3. Education Requirements for State Certification</td>
<td>20-20</td>
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<tr>
<td>Audio-Visual Aids</td>
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<td>Foundations of Education</td>
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<td>Secondary School Methods</td>
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<td>Educational Psychology</td>
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<td>Art Methods in Secondary Schools</td>
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<tr>
<td>Secondary Student Teaching</td>
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<td>4. Electives</td>
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<tr>
<td>III. Advertising Design — Bachelor of Arts Program</td>
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<td>Watercolor</td>
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<td>Advertising Illustration</td>
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<td>Design</td>
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<tr>
<td>Lettering and Layout</td>
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<td>Art History</td>
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<td>Printmaking</td>
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**I. General Art — Bachelor of Fine Arts Degree — Drawing and Painting Emphasis**

<table>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>1. General College and Core Requirements</td>
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<td>Painting</td>
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<td>Art History</td>
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<td>Ceramics</td>
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<td>Sculpture</td>
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<tr>
<td>Crafts</td>
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<td>Design</td>
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<td>Lettering</td>
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<tr>
<td>Senior Seminar</td>
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<tr>
<td>3. Professional Electives</td>
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<td>4. Electives</td>
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</tbody>
</table>

Recommended professional electives in the Drawing and painting emphasis: Upper Division Literature, Introduction to Philosophy, Ethics, Foreign Language, Upper Division History.

**II. General Art — Bachelor of Fine Arts Degree — Sculpture and Ceramics Emphasis**

<table>
<thead>
<tr>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>1. General College and Basic Core Requirements</td>
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<td>2. Art Major Requirements</td>
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<td>Sculpture</td>
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<tr>
<td>Ceramics</td>
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<td>Art History</td>
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<tr>
<td>Painting</td>
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<td>Crafts</td>
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<tr>
<td>Design</td>
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<tr>
<td>Lettering</td>
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<tr>
<td>Senior Seminar</td>
</tr>
<tr>
<td>3. Professional Electives</td>
</tr>
<tr>
<td>4. Electives</td>
</tr>
</tbody>
</table>

Recommended professional electives in the Sculpture and ceramics emphasis: Geology, Introduction to Chemistry, Rocks and Minerals, Foreign Language, Upper Division History.

**III. Art Education — Bachelor of Fine Arts Degree — Drawing and Painting Emphasis**

<table>
<thead>
<tr>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>1. General College and Core Requirements</td>
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<td>2. Art Major Requirements</td>
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<tr>
<td>The art major requirements for the art education option are the same as those for the general art option in both areas of emphasis.</td>
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<td>2. Education Requirements for State Certification</td>
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<tr>
<td>Including Secondary Art Methods</td>
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<tr>
<td>Audio-Visual Aids</td>
</tr>
<tr>
<td>Foundations of Education</td>
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<tr>
<td>Secondary School Methods</td>
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<tr>
<td>Educational Psychology</td>
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<td>Art Methods in the Secondary Schools</td>
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<td>Secondary Student Teaching</td>
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<td>4. Professional Electives</td>
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### IV. Advertising Design — Bachelor of Fine Arts Degree

**Advertising Design Emphasis**

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<td>Art Major Requirements</td>
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<td>Painting</td>
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<td>Drawing</td>
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<td>Watercolor</td>
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<tr>
<td>Design</td>
<td>4</td>
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<tr>
<td>Sculpture, Ceramics or Crafts</td>
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<tr>
<td>Lettering and Layout</td>
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<td>Art History</td>
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<td>Creative Photo</td>
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<td>Printmaking</td>
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<td>Art Electives</td>
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<td>Advertising Illustration</td>
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<tr>
<td>Senior Seminar</td>
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</table>

| Professional Electives             | 29      |


### ART MAJOR

**Lower Division — All Degrees (Suggested Program)**

**I. General Art**

<table>
<thead>
<tr>
<th>Year</th>
<th>1ST SEM.</th>
<th>2ND SEM.</th>
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<tbody>
<tr>
<td>Freshman Year</td>
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<tr>
<td>Basic Design</td>
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<tr>
<td>Elementary Drawing</td>
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<tr>
<td>Elementary Painting</td>
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<td>Art History</td>
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<td>* Lettering and Layout</td>
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<td>English Composition</td>
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<td>History (Area II)</td>
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<table>
<thead>
<tr>
<th>Sophomore Year</th>
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<tr>
<td>Intermediate Drawing</td>
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<tr>
<td>Intermediate Painting</td>
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<td>2</td>
</tr>
<tr>
<td>Introduction to Music or Drama (Area I)</td>
<td>3</td>
<td>0</td>
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<tr>
<td>Social Science (Area II)</td>
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<tr>
<td>Lab Science or Mathematics (Area III)</td>
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<td>4</td>
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<tr>
<td>Electives</td>
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<td>16</td>
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</table>

**II. Art Education**

Freshman year (see General Art Freshman Year)

**Sophomore Year**

<table>
<thead>
<tr>
<th>1ST SEM.</th>
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<tbody>
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<td>Intermediate Drawing</td>
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<td>Intermediate Painting</td>
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<tr>
<td>Foundations of Education</td>
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<td>General Psychology</td>
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<tr>
<td>Introduction to Music or Drama</td>
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<tr>
<td>Lab Science or Mathematics (Area III Sequence)</td>
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<tr>
<td>Electives</td>
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**III. Advertising Design**

Freshman year (see General Art Freshman year)

<table>
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<th>1ST SEM.</th>
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<tbody>
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<td>Sophomore year</td>
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<td>Intermediate Drawing</td>
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<td>Intermediate Painting</td>
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<tr>
<td>Advertising Design</td>
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<tr>
<td>Introduction to Music or Drama</td>
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<td>Social Science</td>
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<td>Lab Science or Mathematics</td>
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<td>Electives</td>
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</table>

*Advertising Design Majors Only.*
COURSE OFFERINGS

AR ART

Lower Division

100 Basic Drawing and Painting for Non-Art Majors
   - 2 credits
   A one semester course with emphasis on media, techniques, and philosophy designed to acquaint the general college student with fundamental topics in drawing and painting. Four studio hours per week. Either semester.

101 Art History — 2 credits
   A historical survey of painting, sculpture and architecture from Pre-historic art to art of the Renaissance. First semester.

102 Art History — 2 credits
   A historical survey of painting, sculpture and architecture from the Renaissance to the present. Second semester.

103 Introduction to Art — 3 credits
   A one-semester course designed to acquaint the general college student with the aesthetics of painting, sculpture, architecture, and related art forms. Either semester.

105 Basic Design — 2 credits
   A two-dimensional theoretical and applied study of the structural organization underlying painting, commercial and industrial art, and related art forms. Four studio hours per week. (Limited enrollment 2nd semester.) Either semester.

106 Basic Design — 2 credits
   Theoretical and applied study of the structural organization underlying three dimensional art forms such as sculpture, architecture and ceramics. Four studio hours per week. Advisable to take AR 105 prior to AR 106. Second semester.

107 Lettering — 2 credits
   A study of lettering techniques and various alphabetical forms; emphasis upon modern styles, spacing and layout. Four studio hours per week. Either semester.

108 Lettering and Layout — 2 credits
   A study of lettering techniques used in advertising design, for advertising design majors. Four studio hours per week. Advisable to take AR 107 prior to AR 108. Second semester.

111 Drawing — 2 credits
   Applied study of perspective, form, light and shade, and composition. Four studio hours per week. Limited enrollment second semester. Either semester.

112 Drawing — 2 credits
   Introduction to the human figure. Four studio hours per week. Advisable to take AR 111 prior to AR 112. Second semester.

113 Painting — 2 credits
   Emphasis on the techniques of transparent and opaque water base media. Four studio hours per week. Limited enrollment second semester. Either semester.

114 Painting — 2 credits
   Emphasis on the techniques of opaque and transparent water base media. Four studio hours per week. Advisable to take AR 113 prior to AR 114. Second semester.

115 Landscape Painting — 3 credits
   Various styles and techniques in landscape painting in oil, watercolor and related media. Field trips. Six studio hours per week (semester basis). First summer session.

116 Landscape Painting — 3 credits
   (Description same as 115 above.) Second summer session.
building, decoration, glazing and firing. Limited enrollment. Six studio hours per week. Advisable to take AR 225 prior to AR 226. Second semester.

231 Sculpture — 3 credits
Work in a variety of three dimensional materials, with emphasis on the techniques of carving, modeling and casting. Six studio hours per week. Advisable to take AR 105 or AR 106 prior to AR 231. First semester.

232 Sculpture — 3 credits
Continued work in a variety of three dimensional materials, with emphasis on the techniques of carving, modeling and casting. Six studio hours per week. Advisable to take AR 231 prior to AR 232. Second semester.

251 Introduction to Creative Photography — 2 credits
An aesthetic approach to the basic photographic skills of camera operation, film development, and enlarging of negatives. All work is in black and white. Two hours lecture and two hours laboratory work per week. Adjustable camera required. Either semester.

Upper Division

301 Nineteenth Century Art History — 3 credits
An in-depth study of important artists and movements in Europe and the United States; from neoclassicism in France to social commentary in America. First semester.

302 Twentieth Century Art History — 3 credits
An in-depth study of important artists and movements in Europe, Mexico and the United States; from Fauvism in France to trends in contemporary American art. Second semester.

303 Advertising Design — 3 credits
Design and preparation of art for reproduction, techniques and studio practices. Six studio hours per week. Advisable to take AR 203 and 204 prior to AR 303. First semester.

304 Advertising Design — 3 credits
Design and preparation of art for reproduction, techniques and studio practices. Six studio hours per week. Advisable to take AR 303 prior to AR 304. Second semester.

305 Visual Design — 3 credits
Advanced exploration of two-dimensional and three-dimensional design, continuing with problems in line, form, color, texture, and space. Six studio hours per week. Advisable to take AR 105 and 106 prior to AR 305. First semester.

306 Visual Design — 3 credits
Advanced exploration of two-dimensional and three-dimensional design, continuing with problems in line, form, color, texture, and space. Six studio hours per week. Advisable to take AR 305 prior to AR 306. Second semester.

309 Introduction to Printmaking — 3 credits
Introduction to the processes of woodcut, lithography and etching. Advisable to take AR 105-106, AR 111-112, prior to AR 309. First semester.

310 Printmaking — 3 credits
Further concentration in two of the following four areas: woodcut, lithography, etching, serigraphy. Six studio hours per week. Advisable to take AR 309 prior to AR 310. Second semester.

311 Drawing — 3 credits
Advanced life drawing in various media. Six studio hours per week. Advisable to take AR 111, AR 112, AR 211, AR 212 prior to AR 311. First semester.

312 Drawing — 3 credits
Advanced life drawing in various media, with emphasis on personal creative approaches. Six studio hours per week. Advisable to take 311 prior to AR 312. Second semester.

315 Painting — 3 credits
Creative work in representational or non-representational areas in oil and related media. Six studio hours per week. Advisable to take AR 113-114, AR 215-216 prior to AR 315. First semester.

316 Painting — 3 credits
Continued study in representational or non-representational areas in oil and related media. Six studio hours per week. Advisable to take AR 315 prior to AR 316. Second semester.

317 Painting-Watercolor — 3 credits
Advanced work in opaque and transparent media with emphasis on experimental techniques. Six studio hours per week. Advisable to take AR 217 and AR 218 prior to AR 317. First semester.

318 Painting-Watercolor — 3 credits
Advanced work in opaque and transparent media with emphasis on experimental techniques. Six studio hours per week. Advisable to take AR 317 prior to AR 318. Second semester.

321 Elementary School Art Methods — 3 credits
For students expecting to teach in the elementary schools. This course is especially designed to help prospective teachers construct outlines of courses for creative art activities in the elementary grades. Progressive methods and materials conducive to free and spontaneous expression are stressed. Two lecture and four studio hours per week. Either semester.

325 Ceramics — 3 credits
Advanced study in the materials of ceramics, with emphasis on the exploration of clays, glazes, and firing as it applies to the creative artist or teacher. Six studio hours per week. Advisable to take AR 225 and 226 prior to AR 325. Individual instruction will be given. First semester.

326 Ceramics — 3 credits
Advanced study in the materials of ceramics, with emphasis on personal, creative approaches. Six studio hours per week. Advisable to take AR 325 prior to AR 326. Individual instruction will be given. Second semester.

327 Ceramics — 3 credits
Advanced study in the material and methods of the sculptor with emphasis upon welded steel and metal casting. Six studio hours per week. Advisable to take AR 231 and AR 232 prior to AR 327. First semester.

332 Sculpture — 3 credits
Advanced study in the material and methods of the sculptor, with emphasis in personal, creative approaches. Six studio hours per week. Advisable to take AR 325 prior to AR 326. Individual instruction will be given. Second semester.

334 Creative Photography — 3 credits
Advanced study of photographic techniques, emphasis on the creative approach to picture taking and printing. Two hour lecture and four studio hours per week. Adjustable camera required. Advisable to take AR 321 prior to AR 334. First semester.

342 Creative Photography — 3 credits
Advanced study of photographic techniques with emphasis on personal creative approaches. Two hour lecture and four studio hours per week. Adjustable camera required. Advisable to take AR 341 prior to AR 342.

351 Secondary School Art Methods — 3 credits
Art education on the junior high school and senior high school levels. Three hours lecture per week. First semester.

361-362 Advertising Illustration — 2 credits
Advanced study emphasizing techniques and methodology of illustrating finished art for ads. Fundamental approaches to story, product, fashion and decorative illustration with emphasis on building a portfolio. Four studio hours per week. Prerequisite: AR 203-204. Each semester.
371 Contemporary American Art — 3 credits
A survey of the major artistic trends of the 20th century that lead to the assumption of leadership in the visual arts by the United States. Beginning with the armory show, 1913, to the 1960’s. Advisable to take AR 101-102 prior to AR 371. Each semester.

409 Printmaking — 3 credits
Concentrated work in one of the following areas: Woodcut and wood engraving, etching and metal engraving, black and white and color lithography, collograph. Six hours studio per week. Advisable to take AR 309 and AR 310 prior to AR 409. Each semester.

411, 412 Life Drawing — 2 credits
An advanced life drawing class with emphasis on a classical anatomical study of the human figure. Four studio hours per week. Prerequisite: AR 111, 112, AR 211 and consent of instructor. Either semester.

415 Painting — 3 credits
Preparation for graduate study in opaque or transparent media. Six studio hours per week. Advisable to take AR 316 prior to AR 415. First semester.

416 Painting — 3 credits
Continued preparation for graduate study in opaque or transparent media. Six hours studio per week. Advisable to take AR 415 prior to AR 416. Second semester.

417 Painting-Watercolor — 3 credits
Advanced study in selected watercolor media. Six studio hours per week. Advisable to take AR 317 and AR 318 prior to AR 417. First semester.

418 Painting-Watercolor — 3 credits
Advanced study in selected watercolor media. Six studio hours per week. Advisable to take AR 317 and AR 318 prior to AR 431. First semester.

425 Ceramics — 3 credits
Continued study in the materials of ceramics, with emphasis on the exploration of clays, glazes, and firing as it applies to the creative artist or teacher. Six studio hours per week. Advisable to take AR 325 and AR 326 prior to AR 425. Individual instruction will be given. First semester.

426 Ceramics — 3 credits
Continued study in the materials of ceramics, with emphasis on the personal, creative approaches. Six studio hours per week. Advisable to take AR 325 and AR 326 prior to AR 426. Individual instruction will be given. Second semester.

431 Sculpture — 3 credits
Continued study in the material and methods of the sculptor with emphasis on welded steel and metal casting. Six studio hours per week. Advisable to take AR 331 and AR 332 prior to AR 431. First semester.

432 Sculpture — 3 credits
Continued study in the material and methods of the sculptor, with emphasis in personal, creative approaches. Six studio hours per week. Advisable to take AR 331 and AR 332 prior to AR 432. Second semester.

498 Senior Seminar — 2 credits
Required reading, and written and oral reports, relative to the senior art majors’ area of interest within the visual arts. First semester.

DEPARTMENT OF BIOLOGY
Dr. Donald J. Obee, Chairman
Professors: Fritchman, Obee
Associate Professors: Baker, Fuller, Papenfuss, Wyllie
Assistant Professors: Belknap, Kelley
Instructors: Colby, Kelleher

REQUIREMENTS FOR BIOLOGY MAJOR
I. BACHELOR OF SCIENCE OPTION
1. General College and Baccalaureate Degree Requirements see pages 33-35.
2. Major Requirements

   CREDITS
   A. Biology .................................. 45
      1. Advanced General Biology ............ 10
      2. Biology—any two courses ............. 6-9
         Bacteriology .......................... 5
         Evolution ............................ 3 or 4
         Genetics ............................. 3 or 4
      3. Physiology—one course ............... 4
         Plant Physiology ..................... 4
         Mammalian Physiology ............... 4
      4. Invertebrate Zoology—one course .... 4
         Entomology ........................... 4
         Invertebrate Zoology ................. 4
      5. Natural History—two courses ........ 8
         Systematic Botany .................... 4
         Vertebrate Natural History .......... 4

   B. Chemistry ................................ 16
      1. General Chemistry ................... 10
      2. Elementary Organic Chemistry ...... 6
   C. Mathematics ........................... 10
      1. Mathematics 115-116 ................ 10
   3. Recommended Electives ............... 25
      1. Introduction to Biophysics ...
      2. Earth Sciences
      3. Chemistry
      4. Language

   6. Morphology—two courses, plant and animal .......................... 7-8
      Comparative Anatomy .................. 4
      Plant Anatomy ........................ 3
      Plant Morphology .................... 4
      Vertebrate Histology ................. 4
      Vertebrate Embryology ................ 4
   7. Biology Seminar—1 semester ........ 1
   8. Biology electives to total 45 credits: Any of the above courses or
      Cytology, Mammalogy, Microtechnique, Ornithology, Parasitology or Ichthyology.

   CREDITS
   48
II. SECONDARY EDUCATION OPTION

1. General College and Baccalaureate Degree Requirements see pages 33-35 32

2. Major Requirements:
   A. Biology 40
      The same as for Biology Major except that the student will take one course from Biology Area 6 above.
   B. Chemistry 16
      The same as for a Biology Major
   C. Mathematics 115-116 10

3. Recommended Electives 10-12
   The same as for a Biology Major

4. Education Requirements 20
   Foundations of Education
   Educational Psychology
   Secondary School Methods
   Secondary Student Teaching
   Education Electives

BIOLOGY MAJOR
Bachelor of Science
(Suggested Program)

FRESHMAN YEAR:
1ST SEM.  2ND SEM.
English Composition 3 3
General Chemistry 5 5
Mathematics 3 3
Area I Electives 3 3

16 16
1ST SEM.  2ND SEM.

SOPHOMORE YEAR:
Advanced General Biology 5 5
Elementary Organic Chemistry 3 3
Area I Electives 3 3
Area II Electives 3 3
Unspecified Electives 3 3

17 17
1ST SEM.  2ND SEM.

JUNIOR YEAR:
Biology Electives 10 10
Other Electives 6 6

16 16
1ST SEM.  2ND SEM.

SENIOR YEAR:
Biology Seminar 1
Biology Electives 7 7
Other Electives 7 8

15 15

BIOLOGY MAJOR
SECONDARY EDUCATION OPTION
Bachelor of Science
(Suggested Program)

FRESHMAN YEAR:
1ST SEM.  2ND SEM.
English Composition 3 3
General Chemistry 5 5
Mathematics 3 3
Area I Electives 3 3

16 16
1ST SEM.  2ND SEM.

SOPHOMORE YEAR:
Advanced General Biology 5 5
Elementary Organic Chemistry 3 3
Area I Electives 3 3
Area II Electives 3 3
General Psychology 3
Elective 3

17 17
1ST SEM.  2ND SEM.

JUNIOR YEAR:
Vertebrate Natural History 4
Foundations of Education 3
Biology Electives 4 7-8
Systematic Botany 4
Electives 3 4-6

17 18
1ST SEM.  2ND SEM.

SENIOR YEAR:
Biology Electives 11-12
Biology Seminar 1
Other Electives 3
Educational Psychology 3
Secondary Teaching Methods 3
Audio-Visual Aids 2
Student Teaching 6

15-16 14
49
SCHOOL OF ARTS & SCIENCES
Department of Biology

ENVIRONMENTAL HEALTH

The environmental health scientist is concerned with the study and determination of the effects of environmental factors, singly and in the aggregate, upon the health of man. The need for such a program is evident when one considers the increasing demand for trained personnel in such areas as environmental pollution prevention, food inspection, and teaching. Environmental Health experts are employed by Federal, State, and Local agencies, private industry, and teaching institutions. Currently, there are vacancies at all levels in Idaho and surrounding states.

REQUIREMENTS FOR ENVIRONMENTAL HEALTH MAJOR

Bachelor of Science

A. General Requirements (8 credits)
   English Composition ........................................... 6
   Physical Education Activities .................................. 2
B. Area I Requirements (12 credits)
   Electives .................................................................. 12
C. Area II Requirements (12 credits)
   Psychology .................................................................. 3
   Sociology .................................................................. 3
   Electives .................................................................. 6
D. Science Requirements (69 credits)
   General Chemistry .................................................. 10
   Elementary Organic Chemistry .................................. 6
   Math 115 and Math 116 .............................................. 10
   General Physics ...................................................... 8
   Advanced General Biology ........................................ 10
   General Bacteriology ............................................... 5
   Entomology ................................................................ 4
   Pathogenic Bacteriology .......................................... 4
   Food Microbiology ................................................. 4
   Bioecology ................................................................ 4
   Mammalian Physiology .......................................... 4
E. Public Health Requirements (19 credits)
   Environmental Sanitation ......................................... 6
   Public Health Field Training ..................................... 8
   Public Health Administration ................................... 2
   Man and His Environment ....................................... 3
F. Electives (15 credits)
   Suggested Electives
   Principles of Data Processing
   Principles of Economics
   Speech
   State and Local Government
   Federal Government
   General Parasitology

ENVIRONMENTAL HEALTH

Bachelor of Science

(Fuggested Program)

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<td>Mammalian Physiology</td>
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<td>Public Health Administration</td>
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<td>Bioecology</td>
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<td>Introduction to Sociology</td>
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FORESTRY AND WILDLIFE MANAGEMENT

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<td>Principles of Economics</td>
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<td>Technical Drawing</td>
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<td>Plane Surveying</td>
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</table>
MEDICAL TECHNOLOGY MAJOR
Bachelor of Science Program

There is a definite demand for Registered Medical Technologists in hospitals, clinics, physicians' offices, medical schools and research laboratories. There is now a four-year curriculum which consists of three years of college training during which period 96 semester hours of study are completed. The fourth year, the student is eligible to take the examination for registration as a Medical Technologist and receive the Bachelor of Science degree.

REQUIREMENTS FOR MEDICAL TECHNOLOGY MAJOR

1. Six hours of English Composition ............................... 6
2. Completion of the basic core requirements:
   A. Humanities Group 1 ........................................ 12
   B. Social Sciences Group 2 .................................... 12
3. Laboratory Sciences and Mathematics:
   A. Required Courses: ........................................... 43-45
      1. One-year sequence in each of the following:
         General Chemistry ................................. 10
         Advanced General Biology ......................... 10
         Organic Chemistry .................................. 6
      2. One semester of:
         Freshman Mathematics ................................ 5
         Bacteriology ........................................... 5
         Analytical Chemistry or Biochemistry ............ 4 or 5
         Mammalian Physiology ............................... 4
   B. Electives to be selected from the following: ....... 19-20
      Biology or Zoology (select at least two courses from the following):
      Comparative Anatomy .................................... 4
      Vertebrate Embryology ................................... 4
      Vertebrate Histology .................................... 4
      Cytology .................................................. 4
      Microtechnique .......................................... 3
      General Genetics ........................................ 3-4
      Parasitology ............................................. 3
      Intro to Biophysics ......................................
      Area I and II .............................................
4. One year of clinical training .................................. 32

PRE-DENTAL HYGIENE CURRICULUM

This curriculum is designed for women students interested in a professional career in dental hygiene. This particular program is designed for students planning to enroll in the dental hygiene program as sophomore or junior students at Idaho State University. The dental hygiene curriculum leads to either a Bachelor of Science or Bachelor of Arts Degree in Dental Hygiene. Those students who plan to enroll at schools other than Idaho State University are advised to pattern their pre-dental hygiene curriculum after that of the specific school to which they expect to transfer.

The Bachelor's Degree in dental hygiene qualifies the graduate for specialized services in public health, school health, administration and education of dental hygienists, as well as training and licensing to give important dental services under the supervision of a dentist.
# REQUIREMENTS FOR PRE-DENTAL, PRE-MEDICAL STUDIES MAJOR

**I. Biology Option**

1. **General College and Baccalaureate Degree**
   - Requirements to include: 30
   - General Psychology: 3
   - General Biology: 21-22
   - Advanced General Biology: 10
   - General Bacteriology: 8
   - Comparative Anatomy: 4
   - Vertebrate Embryology: 4
   - General Genetics: 3-4
   - Vertebrate Histology: 4
   - Advanced General Biology: 10
   - General Bacteriology: 9
   - Comparative Anatomy: 4
   - Vertebrate Embryology: 4
   - General Genetics: 3-4

2. **Biology Requirements**
   - Advanced General Biology: 10
   - General Bacteriology: 5
   - Comparative Anatomy: 4
   - Vertebrate Embryology: 4
   - General Genetics: 3-4
   - Vertebrate Histology: 4
   - Advanced General Biology: 10
   - General Bacteriology: 9
   - Comparative Anatomy: 4
   - Vertebrate Embryology: 4
   - General Genetics: 3-4

3. **Chemistry Requirements**
   - General Chemistry: 10
   - Organic Chemistry: 10
   - Analytical Chemistry: 5
   - Physical Chemistry: 8
   - Instrumental Analysis: 4
   - General Physics: 8
   - Analytical Chemistry: 5
   - Comparative Anatomy: 4
   - Vertebrate Embryology: 4
   - General Genetics: 3-4

4. **Physics and Mathematics**
   - General Physics: 8
   - Mathematics sequence: 10
   - Total for areas 1-4: 107-110
   - Electives Needed: 18-21

**II. Chemistry Option**

1. **General College and Baccalaureate Degree**
   - Requirements to include: 30
   - General Psychology: 3
   - General Biology: 20-21
   - Advanced General Biology: 10
   - General Bacteriology: 8
   - Comparative Anatomy: 4
   - Vertebrate Embryology: 4
   - General Genetics: 3-4
   - Vertebrate Histology: 4

2. **Biology Requirements**
   - Advanced General Biology: 10
   - General Bacteriology: 5
   - Comparative Anatomy: 4
   - Vertebrate Embryology: 4
   - General Genetics: 3-4
   - Vertebrate Histology: 4
   - Advanced General Biology: 10
   - General Bacteriology: 9
   - Comparative Anatomy: 4
   - Vertebrate Embryology: 4
   - General Genetics: 3-4

3. **Chemistry Requirements**
   - General Chemistry: 10
   - Organic Chemistry: 10
   - Analytical Chemistry: 5
   - Physical Chemistry: 8
   - Instrumental Analysis: 4
   - General Physics: 8
   - Analytical Chemistry: 5
   - Comparative Anatomy: 4
   - Vertebrate Embryology: 4
   - General Genetics: 3-4

4. **Physics and Mathematics**
   - General Physics: 8
   - Mathematics sequence: 10
   - Total for Areas 1-4: 118-119
   - Electives: 9-10

---

**BIOLOGY OPTION**

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<td>Advanced General Biology</td>
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<td>Organic Chemistry</td>
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<td>General Physics</td>
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**CHEMISTRY OPTION**

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COURSE OFFERINGS

B BIOLOGY

Lower Division

100 Concepts of Biology — 4 credits
An introductory course for non-majors planning to take only one semester of Biology. A survey of the plant and animal kingdoms with emphasis on topics such as evolution, genetics, and ecology and their application to such current problems as pollution, over population and eugenics. May not be used to form a sequence with either B-101 or B-102. Each semester.

101-102 General Biology — 4 credits
A general one year introduction into the study of plant and animal life, with an interpretation of the principles of morphology, physiology, ecology, embryology, and genetics as represented by both types of organisms. Emphasis on the above principles is placed on their relationship to man. This course is recommended for those students taking only a single course in biological sciences. Three lectures and one 2-hour laboratory period per week. Each semester.

203-204 Advanced General Biology — 5 credits
A general introduction to plant and animal life designed for biology majors and pre-professional students in medicine, dentistry, medical technology, forestry and others. Modern concepts of the chemical properties and physiological activities of organisms are emphasized. Plants are considered in the Fall semester; animals in the Spring. Three lectures and two three-hour laboratories per week. Prerequisite: General Chemistry, C-111-112; Introduction to Chemistry, C-101-102 or Introduction to Physical Sciences, PS 101-102. A concurrent course in Organic Chemistry is recommended. Each semester.

205 Microbiology — 3 credits
Designed for pre-nursing and Home Ec. students. A study of microorganisms causing infectious diseases and contamination of foods. Principles of sterilization and disinfection are included along with examination of food, water, blood, milk, and excreta. Two lectures and two one-hour laboratory periods per week. First semester.

Upper Division

303 General Bacteriology — 5 credits
A general survey of the field of bacteriology, designed for students in the general science courses and as a foundation for advanced work in the subject. Three lectures and two 3-hour laboratory periods a week. Prerequisite: Advanced General Biology and Elementary Organic Chemistry. First semester.

310 Pathogenic Bacteriology — 4 credits
A course emphasizing the cultural, biochemical and morphological characteristics of the more important species of disease-producing bacteria. Two lectures and two three-hour laboratory periods per week. Prerequisite: General Bacteriology. Second semester.

343 Genetics — Lecture — 3 credits
A study of the principles of genetics as they relate to living organisms. Prerequisite: one year of General Biology, or one year of Advanced General Biology or equivalent. Second semester.

344 Genetics Laboratory — 1 credit
A practical course in the techniques of growing and analyzing genetical material. The laboratory work will include exercises in culturing of Drosophila, and other animal and plant materials. Results of experimental work will be analyzed and reports submitted. Prerequisite: concurrent or prior enrollment in Genetics Lecture. Second semester.

365 Cytology — 4 credits
This course is a study of prokaryotic and eukaryotic cells, their specializations, and the structure, function, and variations in their cellular organelles; the mechanism of mitosis, meiosis; chromosomal aberrations; the interactions of nucleus and cytoplasm; and cytological methods. Three 1-hour lectures and one 3-hour lab. Prerequisite: Advanced General Biology. Alternates with Microtechniques, Z-361, and is offered on odd-numbered years. First semester.

401 Organic Evolution — 3 credits
History of the development of the theory of evolution. A detailed treatment of the genetic evidence supporting the theory as derived from both plant and animal examples. A discussion of the evidence for vertebrate evolution including that for man. Prerequisite: one year of college biology or equivalent. Genetics recommended. Alternates with Parasitology. Second semester, odd numbered years.

410 Food Microbiology — 4 credits
A course concerned with those species of micro-organisms of economic importance to food and fermentation industries as they relate to problems of food poisoning and food-borne infections, pollution, spoilage, spoilage control and sanitation. Two lectures and two three-hour laboratory periods per week. Prerequisite: General Bacteriology. First semester.

412 General Parasitology — 3 credits
A general study of parasitism including the parasites of man. Lectures devoted to a phylogenetic survey of the parasitic animal groups. Laboratory provides experience in examination of host animals, detection and identification of major locally occurring parasitic groups. Two lectures and one three-hour laboratory per week. Offered alternate years with Organic Evolution. Prerequisite: Advanced General Biology or consent of instructor. Second semester, even numbered years.

423 Bioecology — 3 credits
A survey of the physical factors of the environment and the biological interrelationships of organisms and their effect on the mode of life and distribution of plants and animals. Three lectures per week. Prerequisite: Advanced General Biology or consent of instructor. First semester.

424 Bioecology Laboratory — 1 credit
Field investigations into the broad areas of aquatic and terrestrial eco-systems. Study of population and community dynamics, structures, fluctuations, etc. Prerequisite: Advanced General Biology or consent of instructor and Systematic Botany. Weekend field trips will be taken. Concurrent or prior enrollment in Bioecology. First semester.

498, 499 Biology Seminar — 1 credit
A review of pertinent literature on selected topics. Restricted to senior biology majors. Each semester.

BT BOTANY

Lower Division

201 Systematic Botany — 4 credits
A laboratory field and lecture course. The various systems of classification, and the use of keys and manuals are employed in identifying collected specimens of local flora. Two lectures and two 2-hour laboratory periods per week or equivalent field trips. Prerequisite: First Semester Advanced General Biology or consent of instructor. Second semester.
SCHOOL OF ARTS & SCIENCES
Department of Biology

Upper Division

302 Plant Anatomy — 3 credits
This course is designed to acquaint the student with the internal structure of plant tissues, tissue systems and organs from a developmental standpoint. The study will be limited to the higher plants with emphasis on the Angio-sperms. Two lectures and two 2-hour labs. Prerequisite: Advanced General Biology or consent of instructor. Alternates with Plant Morphology. Second semester, odd numbered years.

311 Plant Morphology — 4 credits
The student will become familiar with differences in the embryology, development, physiology, anatomy and reproductive cycle of the various plant taxa. Three one-hour lectures, two two-hour labs per week. Prerequisites: Advanced General Biology. Organic Chemistry recommended. Alternates with Plant Anatomy. Second semester, even numbered years.

401 Plant Physiology — 4 credits
Plant physiology will emphasize the physical and chemical processes of plant body functions. It includes a study of cellular tissue and organ functions, the mineral requirements of the plant, its metabolism, water uptake, photosynthesis, compounds synthesized by plants and a brief discussion of soil chemistry. Prerequisite: Advanced General Biology and Elementary Organic Chemistry. General Physics and Plant Anatomy are recommended. First semester.

Lower Division

EH ENVIRONMENTAL HEALTH

200 Man and His Environment — 3 credits
A course designed to reveal the impact of man on his environment with emphasis on the biological, economic and social factors involved, with the aim of preparing the students to be sensitive to the significant issues and factors involved in environmental decision making. Three lecture-discussion periods per week. Each semester.

301-302 Environmental Sanitation — 3 credits
First semester - A critical review of federal, state, and city ordinances affecting food processing and handling. Second semester - Areas of special community sanitation problems concerning such as waste disposal, insect and rodent control, industrial hygiene, and radiological sanitation, etc. Each semester.

350 Public Health Field Training — 8 credits
Study of actual public health problems, code, compliance, recording procedures, degrading procedure, etc. Prerequisite: Environmental Sanitation. Summer.

401 Public Health Administration — 2 credits
Organization, administration and functions of the various health agencies. Prerequisite: Environmental Sanitation. First semester.

FS FORESTRY

101 General Forestry — 2 credits
A general survey of the entire field of forestry, the history and social importance of forestry, timber management and propagation of the important trees of the U.S. Two lectures per week. Second semester.

Z ZOOLOGY

Lower Division

107 Human Physiology and Anatomy — 5 credits
For students in Home Economics, Pre-Nursing and Physical Education. Designed to give a general knowledge of the more important physiological problems and of the anatomical structure and functions of the human body.
Three lectures and two two-hour laboratory periods per week. Not open for credit to students who have completed Advanced General Biology. Each semester.

Upper Division

301 Comparative Anatomy — 4 credits
Dissection and study of representative types of vertebrates, together with lectures and discussions of general vertebrate anatomy with special reference to the evolution of the various organ systems. Two lectures and two 3-hour laboratory periods per week. Prerequisite: Advanced General Biology or consent of instructor. First semester.

305 Entomology — 4 credits
A study of the biology of insects with emphasis on their ecology, classification, morphology, physiology, and control. The course includes exercises in collecting and identification of local species. Two lectures and two 3-hour laboratory periods per week. Prerequisite: Advanced General Biology or consent of instructor sometime during the academic year which precedes their enrollment in this course in order that they may commence their collecting of specimens during the more productive summer months. First Semester.

307 Invertebrate Zoology — 4 credits
Morphology, phylogeny and natural history of the marine invertebrate animals and terrestrial arthropods exclusive of the insects. Two lectures and two three-hour laboratories per week. Prerequisite: Advanced General Biology or consent of instructor. Second semester.

341 Ornithology — 3 credits
A lecture, laboratory and field course dealing with the classification, structure, identification, distribution and behavior of birds. Two lectures and one two-hour laboratory period each week. Prerequisite: Natural History of the Vertebrates. Alternates with Mammalogy and is thus offered on even numbered years. Second semester.

351 Vertebrate Embryology — 4 credits
An analysis of the development of vertebrates with special emphasis on the experimental approach to morpho-genesis in lecture and classical descriptive embryology in the laboratory. Two lectures and two three-hour laboratories per week. Prerequisite: Advanced General Biology or consent of instructor. Second semester.

355 Natural History of the Vertebrates — 4 credits
A lecture, laboratory and field course dealing with the identification, morphology, life cycle and habitat of fish, amphibians, reptiles, birds and mammals. Special emphasis is placed on local forms. Two lectures and two three-hour laboratory periods per week, plus two weekend field trips. Prerequisite: One year of college biology, or equivalent. First semester.

361 Microtechnique — 3 credits
A study of the theory and practical application of procedures involving fixation, staining, preparation of paraffin sections and whole mounts, and histochromic techniques. One hour lecture and two 3-hour laboratory periods. Prerequisite: Advanced General Biology or consent of instructor. Alternates with Cytology, B-365, and is offered on even numbered years. First semester.

400 Vertebrate Histology — 4 credits
A course dealing with the microscopic anatomy of cells, tissues, and organ systems of vertebrates with major emphasis
401 Mammalian Physiology — 4 credits
Lectures and laboratory exercises in animal physiology dealing with the basic physiological functions of cells, tissues, and organ systems of vertebrate animals. Prerequisite: Advanced General Biology and Elementary Organic Chemistry. Three lectures and one 3-hour laboratory period per week. Second semester.

411 Ichthyology — 4 credits
The taxonomic, morphological, physiological, ecological, and economic aspects of the fishes. Three one-hour lectures and one three-hour laboratory per week. Prerequisite: Natural History of the Vertebrates. First semester.

421 Mammalogy — 3 credits
A lecture, laboratory and field course dealing with the classification, identification, structure, distribution, and life habits of mammals. Two lectures and one two-hour laboratory period per week. Prerequisite: Natural History of the Vertebrates or consent of instructor. Alternates with Ornithology and is offered on odd numbered years. Second semester.
## CHEMISTRY MAJOR

### Liberal Arts (Suggested Program)

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## Course Offerings

### C CHEMISTRY

#### Lower Division

**100 Concepts of Chemistry — 4 credits**
- A descriptive, non-mathematical course designed to acquaint students with the science of chemistry and chemistry's relationship to other fields of study and to modern life. This course cannot serve as a prerequisite to any other Chemistry course, nor will it serve a part of a Chemistry sequence. Students who have received credit for C-102 or C112 may not receive credit for C-100. Three lectures and one 3-hour laboratory per week. Each semester.

**101-102 Introduction to Chemistry — 4 credits**
- This course is designed for those students whose curriculum does not require an intensive study of chemistry. The course deals with fundamental principles of chemistry. First semester — atomic and molecular structure, states of matter, general reactions, and solutions. Second semester — ionization, equilibrium, redox, electrochemistry and an introduction to Organic Chemistry. The second semester also includes introductory, semi-micro, qualitative analysis. Three lectures and one 3-hour laboratory period per week. Each semester.

**111-112 General Chemistry — 5 credits**
- A thorough study of the fundamentals and principles of chemistry involving their application to various elements. The second semester includes qualitative analysis on the semi-micro scale. This course is designed for those students whose curriculum requires a considerable knowledge of chemistry. Three lectures and two 3-hour laboratory periods per week. Recitations are included in the laboratory sessions. Prerequisite: high school chemistry. Each semester.

**207-208 Elementary Organic Chemistry — 3 credits**
- An introductory course covering the fundamental principles and applications of organic chemistry. Designed for those students who do not require an intensive study of chemistry. Two lectures and one 3-hour laboratory per week. Prerequisite: Chemistry C-102 or C-112. Each semester.

**211 Analytical Chemistry — 5 credits**
- Quantitative application of mass and volume relationships and of chemical equilibria to gravimetric and volumetric analysis. Three lectures and two 3-hour laboratory periods per week. Prerequisite: General Chemistry C-112. Each semester.

### Upper Division

**317-318 Organic Chemistry Lecture — 3 credits**
- A comprehensive study of organic compounds with emphasis on reaction mechanisms and synthesis.
- Designed to fulfill the requirements of Chemistry majors, Chemical engineers, and professional and preprofessional students. Three lectures per week. Prerequisite: General Chemistry C-112. Each semester.
319-320 Organic Chemistry Laboratory — 2 credits
The first semester will cover the basic lab techniques used in Organic Chemistry and organic preparations. The second semester will deal with the interpretation of spectra and qualitative analysis. Two three-hour labs per week. Prerequisite: Chemistry 217-218 or concurrent enrollment. Each semester.

321-322 Physical Chemistry — 4 credits
A study of chemical thermodynamics, reaction kinetics, phase equilibria, electrochemistry, absorption, molecular structure, and quantum theory. Three lectures and one 3-hour lab per week. Prerequisite: General Chemistry C-112, General Physics PH-102 or Physics PH-221, and Calculus and Analytic Geometry M-206 or equivalent. Each semester.

341, 342 Glassblowing — 1 credit
Chemistry 341 is designed to acquaint the student with the basic techniques of scientific glassblowing. Practice in end to end joints, T-seals, ring seals, flaring, rounded ends and bulbs. Chemistry 342 is designed to give the student practical experience in the above techniques by the construction of more complicated apparatus such as distillation equipment. One three-hour lab per week. Prerequisite: Junior standing. Each semester.

402-402 Advanced Inorganic Chemistry — 2 credits
The first semester will cover atomic and molecular structure, periodic properties, acid-base properties and the chemistry of the elements. The second semester includes chemical bonding, complex ions, coordination compounds, nonaqueous solutions and nuclear reactions. Two lectures per week. Prerequisite: two years of college chemistry. Each semester.

411 Instrumental Analysis — 4 credits
Theory and practice of the more common instrumental methods of analysis, laboratory experience with commercial instruments. Two lectures and two three-hour labs per week. Prerequisite: Analytical Chemistry C-311. Second semester.

417, 418 Chemical Preparations — Organic — 1 credit
A course designed to give students practical experience in the preparation of Organic compounds. The student will be assigned a number of compounds to prepare. May be taken either in one semester for 2 credits or in two semesters for 1 credit each semester. Prerequisite: Organic Chemistry C-218 and Senior standing. Offered on demand.

421, 422 Chemical Preparations — Inorganic — 1 credit
A course designed to give students practical experience in the preparation of inorganic compounds. The student will be asked to prepare a number of compounds. May be taken either in one semester for 2 credits or in two semesters for 1 credit each semester. Prerequisite: Physical Chemistry C-321 and C-322 and Senior standing. Offered on demand.

431 Introduction to Biochemistry — 3 credits
A study of the chemistry of biologically important compounds, and an introduction to metabolism. Three lectures per week. Prerequisite: C-208 or C-218. Second semester.

432 Biochemistry Laboratory — 1 credit
Identification, isolation, and reaction of biologically important compounds. One 3-hour laboratory per week. Prerequisite: C-431 or concurrent enrollment. Second semester.

498, 499 Chemistry Seminar — 1 credit
Group discussions of individual reports on selected topics in the various fields of Chemistry. Prerequisite: Chemistry Major and Senior standing. Each semester.

* Certain courses cover somewhat similar subject matter, and credit cannot be granted for both courses. Credits for C-101, 102 will not be allowed if credit is given in C-111, 112. Credits for C-207, 208 will not be allowed if credit is given in C-317, 318.

* A hyphen between course numbers indicates that the first numbered course is a prerequisite to the second numbered course, a comma between course numbers indicates either course may be taken independently of the other.
SCHOOL OF ARTS & SCIENCES
Department of Communications

MASS COMMUNICATION EMPHASIS:

1. General College Requirements ............................... 14
2. Departmental Core Requirements ......................... 14
3. Suggested Courses, as follows:
   A. CM-171-172 Mass Communication: Concepts and Perspectives 6
   CM-271-272 Journalistic Communication Theory and Practice 6
   Departmental Electives ................................ 14

Total 40

SECONDARY EDUCATION EMPHASIS:

1. General College Requirements ............................... 14
2. Departmental Core Requirements ......................... 14
3. Suggested Courses, as follows:
   A. CM-241 Oral Interpretation ............................ 3
   CM-401 Methods of Teaching Communication Arts .......... 3
   B. CM-112 Argument and Debate
   CM-113 Competitive Speech
   CM-121 Voice and Diction
   CM-131 Listening
   CM-231 Speech Construction and Delivery
   CM-312 Applied Speech Communication
   CM-451 Communication Practicum
   C. CM-251 Discussion Methods
   CM-307 Interviewing ................................... 2 or 3
   CM-431 Small Group Process ............................ 9
   D. CM-321 History of Rhetorical Theories
   CM-331 History of Public Address ....................... 3
   CM-332 Contemporary American Address ................. 3
   E. CM-171 Mass Communications: Concepts and Perspectives
   CM-271 Journalistic Communication: Theory and Practice
   CM-341 NonVerbal Communication ....................... 6
   CM-351 Socio-Cultural Communication ................... 3
   CM 412 Persuasion ................................ 3

Total 40-41

Course Offerings

CM COMMUNICATION

Lower Division

102 Professional Speech Communication — 2 credits
A course designed especially for two-year preprofessional curricula. Theory and principles involved in oral communication situations in the professional world: interviews, conferences, group process, and public speaking. Each semester.

111 Fundamentals of Speech-Communication — 3 credits
Fundamental principles of public speaking: audience analysis; interest and attention factors; listening, selection and organization of speech material; delivery. Practice in preparation and delivery of extemporaneous speeches. Students may not earn credits in this course and in Professional Speech Communication CM-102. Each semester.

112 Argumentation and Debate — 3 credits
Introduction to Argumentation and Debate and the role of each in a free society. Preparation for and participation in phrasing and analyzing propositions; briefing and presenting evidence; studying persuasion, refutation, fallacies of argument. Either semester.

113 Competitive Speaking — 3 credits
A concentrated study of and practice in intercollegiate contest speaking; for example: expository, persuasive, oratorical, interpretive and extemporaneous speaking. Either semester.

114 Intercolloquiate Debate — 1 credit
Preparation for and participation in competitive debate using the current intercollegiate debate topic. Prerequisite: CM-112 or permission of the instructor. Each semester.

121 Voice and Diction — 3 credits

131 Listening — 3 credits
Theory and practice of man’s most used communication skill. Analysis of variables as they promote or impede the process of listening. Each semester.

171-172 Mass Communication: Concepts and Perspectives — 3 credits
A survey of communication theory as related to current practice of the mass media. Emphasis is placed on the examination of the consumer of mass communication. Not to be taken concurrently with CM 271-272. CM 171-Fall semester. CM 172- Spring semester.

201 Methods of Inquiry — 3 credits
Introduction to methods of inquiry used in communication research, emphasizing their value and utility.

221 Communication Process — 3 credits
An introduction to and analysis of the process and problems in Communication. Emphasis upon contributions from speech and related disciplines. Each semester.

231 Speech Construction and Delivery — 3 credits
The theory and practice of speech construction. Application to specific audience situations. Delivery of manuscript speeches. Practice in various mass media. First semester.

241 Oral Interpretation — 3 credits
Practice in reading prose, poetry, and drama to help the student determine the logical and emotional meaning of a selection and project that meaning to his listeners. A portion of the time is spent in voice development. Either semester.

251 Discussion Methods — 3 credits
Study and practice in small group interaction, includes theory and concepts of planning and performing, social climate and group decision-making. Second semester.

271-272 Journalistic Communication: Theory and Practice — 3 credits
An experiential based study of journalistic theory and practice. Emphasis is placed on the production of mass media content, through closed circuit radio and television productions and laboratory publications. Not to be taken concurrently with Communication 171-172. CM 271- Fall semester. CM 272- Spring semester.

273-274 Reporting and News Writing — 3 credits
Fundamentals of reporting, from techniques of interviewing and fact-gathering through the construction of the news story. Emphasis will be placed on accuracy, conciseness and clarity in writing. Includes study of elements of newspaper styles — usage, grammar, punctuation, capitalization — and the use of copyreading symbols. Prerequisite: CM 171 or 172 or consent of instructor, and ability to use typewriter. Each semester.

275 Supervision of School Publications — 2 credits
For prospective teachers who plan to be advisers of school newspapers and yearbooks, a study of fundamentals in writing, layout and management of scholastic publications. Spring semester.

Upper Division

307 Interviewing — 2 credits
An examination of the theory upon which communication behavior in dyadic situations is based. Practical experience in
various types of interviews as confronted in business, in education, and in the professions. Spring semester.

311 Speech-Communication for Teachers — 3 credits
A course to improve prospective teachers' command of the communication processes used in effective teaching: emphasis on situations that confront teachers, instruction in phonetic analysis of American English speech sounds, assistance in self-improvement through the mastery of speech methods. Each semester.

312 Applied Speech Communication — 3 credits
An application of basic principles of speech communication to real life situations involving current community problems and issues. Prerequisite CM 111 or 102 or consent of instructor. Spring semester.

314 Intercollegiate Debate — 1 credit
Preparation for and participation in competitive debate using the current intercollegiate debate topic. Prerequisite: CM-114 or permission of the instructor. Each semester.

321 History of Rhetorical Theories — 3 credits
A study of the major rhetoricians from the classics of Aristotle, Plato, Sophists, Quintilian through Medieval-Renaissance and Modern, (Blair, Campbell, Whately) to contemporary theories of oral discourse. Either semester.

331 History of Public Address — 3 credits
A study of great addresses throughout history. An evaluation of the address, the spokesman, the historical context in which they spoke, their ideas and the effect of their advocacy on society. Fall semester.

332 Contemporary American Address — 3 credits
A continuation of Public Address covering the United States in the years 1960 to present. Spring semester.

341 Non-Verbal Communication — 2 credits
An examination of the function of non-verbal language codes in Communication. An analysis of space, time, color, form, and vocal language codes inherent in all areas of human communicative interaction. Emphasis on individual projects demonstrating non-verbal communication. Fall semester.

351 Socio-Cultural Communication — 3 credits
An analysis of societal and cultural influences on effective inter-personal Communication. A critical examination of specific communication problems and suggested correctives related to the function of society and culture. Alternate years.

361 Organizational Communication — 3 credits
The application of Communication theory and methodology to the study of Communication within the formal organization. Theories and problems of human Communication within and between organizations. Fall semester.

371 Copyreading and Editing — 3 credits
Techniques of reading newspaper copy; the use of proper copyreading symbols; laboratory work in editing and rewriting copy for publication. Prerequisite: CM 273 or 274 Fall semester.

372 Journalistic Communication Practicum — 1-4 credits
Designed for students who seek professional experience and professional careers. The course offers students training with professionals in the community. Prerequisite: Consent of the instructor. May be repeated for a total of 4 hours. Each semester.

375 Student Publications Techniques — 2 credits
A survey of techniques of writing, editing, layout, and design. Students without formal training or experience in Journalism will develop skills in newspaper production both by classwork and by work on the student newspaper. Students will meet in regular class and lab sessions under the supervision of the instructor. Each semester.

376 Yearbook Techniques — 1 credit
Techniques of layout planning, picture sizing, and writing copy for yearbooks. Recommended for members of the Les Bos staff and for students preparing to be publications advisors. Not intended for production of a yearbook. Spring semester.

401 Methods of Teaching Communication Arts — 3 credits
Analysis and planning of curriculum for speech-communication and drama. Instructional materials and methods of teaching speech and drama. Attention to classroom instruction techniques, development of behavioral objectives, forensics program management and play production. Spring semester.

412 Persuasion — 3 credits
Theories of human motivation as operative in individuals and groups: the role of evidence, reasoning, and ethical proof; the analysis of persuasive materials. Spring semester.

421 Theories of Communication — 3 credits
A critical evaluation of theories in the field of Communication. An examination of the interrelationships of definitions, models and theory. Analysis of related theories of communication Anthropological, mass media, social-psychological. Fall semester.

431 Small Group Process — 3 credits
An advanced study of specific variables and theories affecting the communicative interaction of small groups. Focus upon small group behavior in terms of variables that affect group process: structure, interaction, transaction, roles, norms, and cohesiveness. Fall semester.

451 Communication Practicum — 1-4 credits
Directed study emphasizing the practical application of skills and theory relevant to human communication. An opportunity to focus on areas of special interest to the student. Prerequisite Senior standing. May be repeated for a total of 4 credits.

471 Radio-TV News Writing — 2 credits
Practice writing of radio-tv news, including timing and arrangement of material, adding script to film, techniques for condensing stories . . . deciding the importance of story material. Preparation of "headlines," five and ten minute broadcasts. Prerequisite: Reporting and Newswriting CM 273-274. Fall semester.

478 Public Relations — 3 credits

498 Communication Seminar — 2 credits
A study of speech-communication problems together with presentation of paper(s) based on research into problems. Prerequisite: Senior standing. Each semester.
DEPARTMENT OF ENGLISH

Dr. Charles G. Davis, Chairman

Professors: Chatterton

Associate Professors: Beckwith, Davis, Wallace (E.), Woodworth

Assistant Professors: Boyer, Burmaster, Burns, Cocotis, Hijiya, Leahy, Maguire, McGuire, Peek, Sanderson, Selander, Townsend, Warner, Wilbanks, Willis

Instructors: Hansen, Hart, Nickerson, Renton, Trusky, Weitman

REQUIREMENTS OF ENGLISH MAJORS

Bachelor of Arts Degree

I. Completion of general college requirements for Bachelor of Arts. See Pages 33-35.

II. English major requirements

A. Required courses for all majors

1. Survey of British Literature
2. History of Literary Criticism
3. Shakespeare
4. Pre-1800 British Literature
5. Post-1800 British or American Literature
6. Introduction to Language Studies
7. Senior Seminar

B. Required courses in English Options

1. Liberal Arts Option
   a. Competence in a Foreign Language Equivalent to that gained by 2 years of college instruction.
   b. History of the English Language
   c. English Electives, of which 3 must be American Literature credits. (The American Literature may be lower division)

2. Secondary Education Option
   d. Applied English Linguistics
   e. Oral Interpretation
   f. Teaching English Composition
   g. English Electives, of which 3 must be American Literature credits. (The American Literature may be lower division)
   h. Professional courses required by the department and which count toward certification

Grand Total:
1) Liberal Arts Option — 50 credits, plus a foreign language
2) Secondary Education Option — 50 credits, plus required professional courses. (See Part V for required Professional Education courses.)
Course Offerings

E ENGLISH

Students who transfer from other schools with qualifying scores on objective tests, equivalent to those administered to Boise State College freshmen, will be required to take only the essay section of the placement tests. See requirements below for Remedial and Advanced Placement in English composition.

Nine credits of creative writing may be counted toward fulfillment of the major requirement.

Lower Division

010 Developmental Writing — Non Credit
The fundamentals of grammar, composition and reading required of students with the ACT Group 1 Probability scores of below 20 or students whose first writing in E-101 is deficient. For students wishing basic review. Each semester.

101 English Composition — 3 credits
Basic skills in writing, including use of supportive materials, source references, basic patterns or organization, and standard usage. Prerequisite: ACT score 20 or S in Developmental Writing. Each semester.

102 English Composition — 3 credits
Practice in expository writing based on analysis and interpretation of imaginative literature. Study of basic literary terms and methods, and of the relationship between literature and human experience. Prerequisite: E-101 or consent of Department Chairman. Each semester.

120 English as a Second Language — 3 credits
Basic skills in American English pronunciation, sentence structure, composition and reading for foreign students with TOEFL scores (or equivalent) of 500 or below. Practice in speaking & listening to current American English; reading and vocabulary development; elementary principles of English Composition. Prerequisites: Admission to college, recommendation of Foreign Student Advisor and consent of instructor. Credit not applicable toward requirements for graduation.

121 English as a Second Language — 3 credits
Continuation of E-120 with special emphasis on vocabulary development, reading and development of skill in written English. For foreign students with TOEFL scores (or equivalent) of 500-550. Prerequisites: Admission to College, recommendation of Foreign Student Advisor and consent of instructor. Credit not applicable toward requirements for graduation.

122 Composition and Reading for Foreign Students — 3 credits
Practice in college level reading and composition; development of special vocabulary skills related to students individual needs; advanced English sentence structure. For Foreign Students with TOEFL of 551-575. Prerequisites: Admission to college, recommendation of Foreign Student Advisor and consent of instructor. The sequence E-122-123 satisfies the E-101 requirement for foreign students.

123 Advanced English Composition for Foreign Students — 3 credits
Study of and practice in the principles of formal and informal written English; principles of the essay and research paper; continuation of vocabulary development and mastery of the more complex types of English structure. Prerequisites: Admission to college, recommendation of Foreign Student Advisor and consent of instructor. The sequence E-122-123 satisfied the E-101 requirement for foreign students.

201 Advanced Expository Composition — 3 credits
An advanced writing course for students who wish to develop skills beyond those acquired in English Composition. Students examine specimens of professional writing as well as criticizing the work of other students. Extensive writing practice stressing organization, clarity and effectiveness. Each semester.

205 Creative Writing — Poetry — 3 credits
Prerequisite: instructor’s consent based on evaluation of student’s original work. Fall semester.

206 Creative Writing — Fiction — 3 credits
Short story or playwriting. Prerequisite: instructor’s consent based on evaluation of student’s original work. Spring semester.

230 Western World Literature — 3 credits
Homer through Dante. Prerequisite: E-102. Fall semester.

235 Western World Literature — 3 credits
Renaissance to Present. Prerequisite: E-102. Spring semester.

240 Survey of British Literature to 1790 — 3 credits
Prerequisite: E-102. Fall semester.

260 Survey of British Literature: 1790 to Present — 3 credits
Prerequisite: E-102. Spring semester.

270 Survey of American Literature — 4 credits
A survey of American literature from the Colonial writers to the modern writers. Prerequisite: E-102. Each semester.

Upper Division

301 Teaching English Composition — 3 credits
Methods and techniques for teaching English composition in secondary schools, with emphasis on individualization of instruction, student-centered activity, creativity, and integration of composition into all the other aspects of the total English program. Limited to teachers, students with a secondary option and a major or minor in English, or consent of the department. Prerequisites: Upper Division standing, and LI 305, introduction to Language Studies, or inservice teacher. Either semester.

305 Advanced Poetry Composition — 3 credits
Prerequisite: instructor’s consent based on evaluation of student’s original work. Spring semester.

306 Advanced Fiction Composition — 3 credits
Short story or playwriting. Prerequisite: instructor’s consent based on evaluation of student’s original work. Fall semester.

320 Non-British Western World Drama — 3 credits
Aeschylus through Racine. Prerequisite: junior standing and E-102 or consent of the Department Chairman. Either semester.

336 Nineteenth-Century Continental Literature — 3 credits
Prerequisite: Junior standing and E-102 or consent of Department Chairman. Fall semester, alternate years.

338 Twentieth-Century Continental Literature — 3 credits
Prerequisite: Junior standing and E-102 or consent of Department Chairman. Spring semester, alternate years.

340 Chaucer — 3 credits
A detailed study of the poetic works of Geoffrey Chaucer. Prerequisite: E-240. Fall semester, alternate years.

341 Medieval Non-Dramatic Literature — 3 credits
A detailed study of epic and romance genres in translation without concern for national limitations. Prerequisite: E-240 and junior standing. Either semester, alternate years. Not offered 1972-73.

345 Shakespeare: Tragedies and Histories — 3 credits
A study of representative Shakespearean Tragedies and Histories. Prerequisite: E-240. Spring semester.
DEPARTMENT OF ARTS & SCIENCES
Department of English

346 Shakespeare: Comedies and Romances — 3 credits
A study of representative Shakespearean Comedies and Romances. Prerequisite: E-240. Fall semester.

347 Spenser — 3 credits
Prerequisite: Junior standing and E-240 or consent of Department Chairman. A study of the Faerie Queene and minor works. Either semester, alternate years. Not offered 1972-73.

348 Renaissance Non-Dramatic Literature — 3 credits
A study of non-dramatic Renaissance Literature prior to 1603. Prerequisite: E-240. Either semester, alternate years.

349 Renaissance British Drama: Non-Shakespearian — 3 credits
Prerequisite: Junior standing and E-240 or consent of Department Chairman. Spring semester, alternate years. Not offered 1972-73.

350 Earlier Seventeenth Century Non-Dramatic Literature — 3 credits
A study of the poetry and prose written by English authors such as Donne, Jonson, Bacon, Burton, and Marvell, who flourished during the first sixty years of the 17th century. Prerequisite E-240. Either semester, alternate years.

351 Milton — 3 credits

352 Dryden, Pope and Their British Contemporaries — 3 credits
Prerequisite: Junior standing and E-240 or consent of Department Chairman. Fall semester, alternate years.

353 Swift, Johnson and Their British Contemporaries — 3 credits
Prerequisite: Junior standing and E-240 or consent of Department Chairman. Spring semester, alternate years.

359 British Novel: Beginnings through Scott — 3 credits
Prerequisite: Junior standing and E-240 or consent of Department Chairman. Fall semester.

360 British Romantic Poetry — 3 credits
Prerequisite: Junior standing and E-240 or consent of Department Chairman. A study of selected poetry and some prose of the Romantics from Wordsworth through Byron. Fall semester.

365 Victorian Poetry — 3 credits
Tennyson, Browning and contemporaries. Prerequisite: Junior standing and E-240 or consent of Department Chairman. Spring semester, alternate years. Not offered 1972-73.

366 Victorian Prose — 3 credits
A study of important non-fiction prose works written during the Victorian period. Prerequisite: E-240 and junior standing. Spring semester, alternate years.

369 British Novel: Austen through Hardy — 3 credits
Prerequisite: Junior standing and E-240 or consent of Department Chairman. Spring semester.

377 American Renaissance — 3 credits
Emerson, Hawthorne, and contemporaries. Prerequisite: Junior standing and E-240 or consent of Department Chairman. Either semester.

378 American Realism — 3 credits
Twain, James, and contemporaries. Prerequisite: Junior standing and E-270 or consent of Department Chairman. Either semester.

381 Methods of Teaching Secondary School English — 3 credits
Study of traditional and modern theories and methods of teaching composition, language and literature at the secondary level. Prerequisite: Introduction to Language Studies LI 305. Fall semester.

384 Literature of the American West — 3 credits
Prerequisite: Junior standing and E-270 or consent of Department Chairman. Either semester.

385 Twentieth-Century Anglo-American Fiction — 3 credits
Prerequisite: Junior standing and one semester of E-260 or E-270 or consent of Department Chairman. Either semester.

387 Twentieth-Century Anglo-American Poetry — 3 credits
Prerequisite: Junior standing and one semester of E-260 or E-270 or consent of Department Chairman. Either semester.

389 Twentieth-Century Anglo-American Drama — 3 credits
Prerequisites: Junior standing and one semester of E-260 or E-270 or consent of Department Chairman. Either semester.

390 Folklore — 3 credits
Study of what folklore is, its written and oral traditions, its different genres, and the analogues — or variants related to different genres. Prerequisite: E-102 and junior standing or consent of Department Chairman. Either semester.

393 History of Literary Criticism — 3 credits
A survey of critical approaches to literature from Plato to the twentieth century. Prerequisite: Junior standing and a literature survey or consent of the Department Chairman. Fall semester.

394 Methods and Theories of Literary Criticism — 3 credits
Prerequisite: E-393 and Junior standing or consent of Department Chairman. A detailed study and application of major critical methods and theories. Spring semester.

498 Senior Seminar — 2 credits
Required of all senior English majors. Prerequisite: Senior standing in English or consent of Department Chairman. Spring semester.

HU HUMANITIES

207-208 Introduction to Humanities — 3 credits
Definitions and redefinitions of culture: man's pursuit of meaning in literature, art, music, and drama. The origins, limits, and uses of the creative arts. The exploration of self, society, and the world through illusion. The humanities and the scientific imagination. "High" culture and "mass" culture. Each semester.

LI LINGUISTICS

305 Introduction to Language Studies — 3 credits
A general survey of contemporary language study as it is carried on in the fields of linguistics, anthropology, semantics, psychology, and communication theory. Fall semester.

307 Applied English Linguistics — 3 credits
Application of linguistic theory and concepts to the teaching of English grammar and composition. Analysis of specific problems of structure encountered in instruction. Examination of texts and materials, reports on pertinent articles in professional journals, and demonstrations. For teachers or prospective teachers of secondary schools. Prerequisite: LI-305 or consent of Department Chairman. Spring semester.

309 History of the English Language — 3 credits
A study of the periods in the development of English: Indo-European and Germanic backgrounds; development of writing; internal and social forces of change; dialects of English. Concentrated work with written documents in English language history. Prerequisite: LI-305 or consent of Department Chairman. Spring semester.
SCHOOL OF ARTS & SCIENCES
Department of Foreign Languages

DEPARTMENT OF FOREIGN LANGUAGES

Chairman

Associate Professors: deNeufville, Valverde
Instructor: Rodriguez
Special Lecturers: Herbert, Torbet

REQUIREMENT FOR A FOREIGN LANGUAGE TEACHING MINOR

In order to be recommended by the Department of Foreign Languages to teach a foreign language, the student must have completed a minimum of 6 hours of upper division literature and 6 hours of upper division conversation and composition in that language, and 3 hours of an upper division course in methods of teaching foreign languages.

FL FOREIGN LANGUAGE

310 Methods of Teaching Foreign Languages — 3 credits
A lecture-discussion course intended for prospective and in-service language teachers. Various aspects of language teaching are considered, including classroom techniques, problems, audio-visual materials, and testing. Outside reading and a notebook required. Prerequisite: a minimum of two years of the same foreign language, or in-service teaching. Spring semester.

G GERMAN

Lower Division

101-102 Elementary German — 4 credits
This course is designed to develop the beginning student's abilities in understanding, speaking, reading, and writing German. Required laboratory practice (1 hour/week) develops pronunciation and listening skills. Classes meet 4 times a week. Students may not enroll in 101 for credit if they have had more than one year of high school German, or equivalent. With permission of the instructors, it is possible for a student enrolled in 102 and who lacks adequate preparation to drop back to 101. Each semester.

201-202 Intermediate German — 4 credits
A continuation of the 101-102 sequence, designed to further develop language skills, both written and oral. Classes are conducted in German. Some outside reading may be required. One hour per week of laboratory practice is required. Class meets four times a week. Prerequisite: 102 or equivalent. Each semester.

Upper Division

301-302 Survey of German Literature — 3 credits
An introduction to the major writers and trends of the German literary tradition. Selections and complete works of poetry, fiction, theatre, and essay are studied. In the first semester, the Middle Ages through the 18th century are covered; in the second semester, the 19th and 20th centuries. Classes conducted mostly in German. Prerequisite: G 201-202 or demonstrated proficiency. Meets the literature requirement for the baccalaureate degrees. Each semester.

303-304 German Conversation and Composition — 3 credits
Intended to further stimulate clarity, simplicity, and precision in oral and written German, and to lay the foundations for literary studies. Class conducted entirely in German. Prerequisite: G 201-202 or demonstrated proficiency. Each semester.

S SPANISH

Lower Division

101-102 Elementary Spanish — 4 credits
This course is designed to develop the beginning student's abilities in understanding, speaking, reading, and writing Spanish. Required laboratory practice (1 hour/week) develops pronunciation and listening skills. Classes meet 4 times a week. Students may not enroll in 101 for credit if they have had more
SCHOOL OF ARTS & SCIENCES
Department of Geology

than one year of high school Spanish or equivalent. With permis-
sion of the instructors, it is possible for a student enrolled in 102 and who lacks adequate preparation to drop back to 101. Each semester.

201-202 Intermediate Spanish — 4 credits
A continuation of the 101-102 sequence, designed to further develop language skills, both written and oral. Classes are conducted in Spanish. Some outside reading may be required. One hour per week of laboratory practice is required. Class meets four times a week. Prerequisite: 102 or equivalent. Each semester.

Upper Division

301-302 Survey of Spanish Literature — 3 credits
A historical survey of the Spanish literature from the early Middle Ages to modern times. Reading and interpretation of major literary as well as socio-cultural trends, with assigned oral and written reports; development of powers of interpretation, critical insight. Lectures and class participation are in Spanish. Prerequisite: Intermediate Spanish S-201 and S-202. Meets the literature requirement for baccalaureate degrees. Each semester.

303-304 Spanish Conversation and Composition — 3 credits
Intended to further stimulate clarity, simplicity, and precision in oral and written Spanish. Classes conducted entirely in Spanish. Prerequisite: S 201-202 or demonstrated proficiency. Each semester.

DEPARTMENT OF GEOLOGY

Dr. Kenneth Hollenbaugh, Chairman
Professors: Warner
Associate Professors: Hollenbaugh, Wilson (M)
Assistant Professors: Nichols, Spinosa

The Department of Geology provides two degree programs in geology and non-degree course offerings in geography. The curriculum leading to the Bachelor of Science degree in Geology is designed for those students who plan a career in applied geology or who plan to attend graduate school. The more generalized curriculum leading to the Bachelor of Science degree in Earth Science Education is designed to prepare the student to teach earth science in secondary school and to meet the teacher certification requirements of the state of Idaho.

In addition to the courses formally offered in both curricula, a student may receive credit for courses given under the heading of Special Topics or for Independent Study as explained on page 31. Any one of the following Special Topics may be offered either semester in response to sufficient student demand: biostratigraphy, geochemistry, glacial and Pleistocene geology, mining geology, petroleum geology, regional geology, and regional field study and report writing.

It is strongly recommended that high school students who plan to enter the geology or earth science curriculum include chemistry, physics, and as much mathematics as is available to them, in their high school program.

REQUIREMENTS FOR GEOLOGY MAJOR

Bachelor of Science

I. Geology Major:

1. General College and Baccalaureate Degree Requirements. See pages 33-35 for Graduation Requirements.

2. Major Requirements

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<tr>
<th>Credits</th>
<th>A. Geology</th>
<th>Physical Geology</th>
<th>Historical Geology</th>
<th>Mineralogy</th>
<th>Petrology</th>
<th>Sedimentology</th>
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B. Introduction to Chemistry

C. General Physics

D. Mathematics through M 112

E. Technical Drawing unless waiver is obtained from department chairman

F. Recommended electives

II. Earth Science Education Major:

1. General College and Baccalaureate Degree Requirements. See pages 26-28 for Graduation Requirements.

2. Major Requirements

<table>
<thead>
<tr>
<th>Credits</th>
<th>A. Geology</th>
<th>Physical Geology</th>
<th>Historical Geology</th>
<th>Introduction to Ocean Geology</th>
<th>Meteorology</th>
<th>Geology Seminar</th>
<th>Geomorphology</th>
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</table>

B. Introduction to Chemistry

C. General Physics or General Biology

D. Mathematics through M 112

E. Astronomy

F. Recommended Electives

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<th>Credits</th>
<th>Geology</th>
<th>Foreign Language</th>
<th>Mathematics</th>
<th>Communications</th>
<th>Life Science</th>
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3. Education Requirements

The following are required for Secondary Teaching Certification in Idaho:

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<tr>
<th>Credits</th>
<th>Foundations of Education</th>
<th>Educational Psychology</th>
<th>Secondary School Methods</th>
<th>Secondary Student Teaching</th>
<th>Education Electives</th>
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# GEOLOGY MAJOR
(Suggested Program)

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# EARTH SCIENCE EDUCATION MAJOR
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# Degree Requirements
- Upper Division Geology
- Degree Requirements
- Upper Division Electives
- Geomorphology
- Electives

# Senior Year (Earth Science Education Major)

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# Upper Division Electives
- Geomorphology
- Electives
- Audio Visual Aids
Course Offerings

GO GEOLOGY

Lower Division

100 Fundamentals of Geology — 4 credits
An introduction to the principles of physical and historical geology. Topics include weathering, erosion, glaciation, volcanism, earthquakes, the study of rocks, minerals, and maps, the origin of the earth, and its physical and biological development. Open to all students except those with previous credit in geology, geology or earth science majors, and those non-science majors who plan an 8-hour sequence in geology. Three lectures and 1 three-hour lab per week. Each semester.

101 Physical Geology — 4 credits
A study of the origin and development of the earth's materials, land forms, internal structures, and the physical processes acting on and in the earth that produce continuous change. Topics include weathering, erosion, glaciation, volcanism, metamorphism and igneous activity, mountain building, earthquakes, and the origin of continents, ocean basins, and landscapes. The laboratory provides instruction and practice in the identification of rocks and minerals, and the use of topographic and geologic maps. Three lectures and one three-hour laboratory per week. Field trips required. Each semester.

103 Historical Geology — 4 credits
A study of the origin and progressive development of the earth and evolution of plants and animals. The geologic history of the earth is treated in considerable detail. Prehistoric life and fossil study as well as field trips to fossil beds are included in the laboratory work. Three lectures and one three-hour laboratory per week. Prerequisite: Physical Geology. Each semester.

105 Rocks and Minerals — 3 credits
A systematic study of rocks and minerals, with emphasis on physical characteristics and methods of identification. Field trips and laboratory session are a part of the course for those taking the class for credit. Prerequisite: High school chemistry or permission of the instructor. Either semester.

201 Introduction to Ocean Geology — 3 credits
A general study of the physiography, the structures, and the sediments of the ocean floor and the geologic processes and environments represented thereby. Methods and instruments of ocean floor investigation are also studied. Two one-hour lectures per week. Prerequisite: Historical Geology. Second semester.

213 Introduction to Meteorology — 3 credits
An introduction to the study of weather phenomena in terms of origin, distribution, and classification. Instruments and research methods are also investigated. Prerequisite: Historical Geology. Three one-hour lectures. Second semester.

221 Mineralogy — 4 credits
A study of genesis, distribution and classification of minerals. This includes some crystallographic, optical, and chemical methods. Laboratory work consists of mineral analysis and observation by the use of microscopes, chemicals, and models. Three one-hour lectures and one three-hour laboratory per week. Prerequisite: Historical Geology and College Chemistry or concurrent registration in College Chemistry. First semester.

222 Petrology — 4 credits
Study of igneous, sedimentary, and metamorphic rocks with emphasis on physical and chemical conditions controlling the origin, occurrence, and association of the various rock types. Field relationships, identification of rocks in hand specimen, and an introduction to microscopic analysis. Three one-hour lectures and one three-hour lab per week as well as two all-day Saturday field trips. Prerequisite: Mineralogy. Second semester.

250 Principles of Paleontology — 3 credits
A course designed for non-geology majors, especially those planning to teach in the biological sciences. The course provides an overview of the various fields of paleontology. Evolution, taxonomy, and descriptions of important fossil groups will be stressed. Laboratory periods will be used to study small collections of the more important phyla and to introduce the student to simple museum techniques of fossil preparation and display. A term paper or project is required. Two one-hour lectures and one three-hour laboratory per week. Prerequisites: Any introductory course in geology, biology, zoology, or botany or consent of the instructor. Either semester.

311 Sedimentology — 4 credits
A study of the classification of sedimentary rocks and all processes involved in their genesis. Major headings are weathering, erosion, transportation, deposition and digenesis. Geologic environments of each process and each rock type are studied. Laboratory work consists of mineral, chemical and other analyses of sedimentary rocks and of a study of the methods and instruments used in statistical treatment of sediments for mapping and research purposes. Three one-hour lectures and one three-hour laboratory per week. Prerequisite: Mineralogy. First semester.

312 Stratigraphy — 4 credits
The study of sedimentary strata with chronology as its special aim. Emphasis is placed on genetic environments, natural sequences of formations and facies, and correlation techniques. The classification and dating of sedimentary units is the end result. Three one-hour lectures and one three-hour laboratory per week. Prerequisite: Sedimentology. Second semester.

313 Geomorphology — 3 credits
A study of the external physiographic features of the earth's surface such as mountains, valleys, beaches, and rivers and the processes by which they are formed and changed. Laboratory work consists of map studies and field investigations. Two lectures and one three-hour laboratory per week. Prerequisite: Historical Geology. First semester.

314 Structural Geology — 4 credits
A study of the physical nature of rocks, the origin, description, classification, and interpretation of deformed structures of the earth's crust, and the principal theories of deformation and orogeny. Lab problems in recognition and analysis of geologic structures, the geometry of faults and folds, construction of maps and cross sections, and the use of aerial photos. Field trip. Three lectures and one three-hour lab per week. Prerequisite: Historical Geology and College Algebra and Trig. First semester.

321 Optical Mineralogy — 4 credits
The theory and application of the polarizing microscope to the examination of minerals. An introduction to the general theory of crystal optics and the application of the polarizing microscope to qualitative and quantitative mineral examination. Laboratory experience in the preparation of materials for optical study and diagnostic techniques for mineral identification. A systematic survey of the optical properties of minerals. Prerequisite: GO 222. Fall semester.

322 Petrography — 4 credits
An introduction to the study of rocks in thin section by means of the polarizing microscope. The interpretation of the origin and history of igneous, metamorphic, and sedimentary rocks based primarily on features observed in this section. A systematic survey of the major rock types with emphasis on textures, mineralogy and classification. Prerequisite: GO 321. Spring semester.
351, 352 Invertebrate Paleontology — 3 credits
A course designed for geology majors and majors in related disciplines. It is a study of the invertebrate phyla with special emphasis on hard-part morphology, ontogeny, phylogeny, paleoecology, taxonomy and biostratigraphic usefulness of the geologically more important groups. Laboratory work consists of study of representative fossils from standard collections. Additional laboratory work involves preparation, handling and study techniques of fossils which the student collects during the several field trips. These one-hour lectures and one three-hour laboratory per week. Field trip required. Prerequisites: Historical Geology or Advanced General Biology. Each semester.

403 Engineering Geology — 3 credits
Application of geology to engineering projects. Aspects of geology include selected principles from structural geology, petrology, geomorphology, photogeology, geohydrology and soil mechanics. These principles arc applied to construction and maintenance of transportation routes, dams, canals, bridges, building foundations and tunnels. Case histories of major projects are studied. Two lectures and one three-hour laboratory per week. Field trips. Prerequisites: Historical Geology or Advanced General Biology. Each semester.

412 Groundwater Geology — 3 credits
A study of the origin of water found beneath the earth's surface and the geologic conditions which permit the movement, work, and accumulation of water in subsurface materials. Emphasis is placed on structural, sedimentational, and stratigraphic conditions most conducive to the formation of ground water reservoirs. Three one-hour lectures per week. Prerequisite: Structural Geology and stratigraphy or permission of instructor. Second semester.

421 Ore Deposits — 3 credits
The genesis, structure, mineral associations and classification of economic deposits of minerals. Discussion of modern theories of ore deposition, origin and migration of ore-bearing fluids, and the processes of alteration, secondary enrichment, paragenesis, and zoning. Consideration is given to the controls or ore occurrence and to the economics of exploration, development, and use of ores. Three lectures per week. Field trip required. Prerequisites: Mineralogy and Structural Geology. Second semester.

480 Field Geology — 4 credits
Application of geologic principles and currently used field techniques to the solution of field problems. Work includes measurement and correlation of stratigraphic sections, plane table mapping, geologic mapping on aerial photographs and on topographic maps, and special field techniques for igneous, sedimentary and metamorphic terrains. Instruction will be by appropriate specialized geologists. A formal report of professional quality is required. One lecture and three, three-hour labs. Field work on most weekends is required. Prerequisites: Senior standing and permission of Geology Department Chairman. Second semester.

498, 499 Geology Seminar — 1 credit
Research project based on field and/or literature studies. Fundamentals of geologic report preparation and oral presentations. Prerequisite: Geology major or Earth Science Education major. Either semester.

GG GEOGRAPHY

101 Introduction to Geography — 3 credits
A comprehensive survey of various environments of man in a study of world patterns and major regions with emphasis on the utilization of globes, interpretation and construction of maps. The course introduces basic concepts and techniques used in geography, utilization of natural resources, distribution of population and outstanding problems of each region. Both semesters.

DEPARTMENT OF HISTORY

Dr. Warren Vinz, Chairman
Professors: Caylor, Lovin
Associate Professors: Barrett, Gould, Ourada, Vinz
Assistant Professors: Bryant, Fletcher, Seward, Sims, Sylvester, Tozer
Instructors: Ligget

REQUIREMENTS FOR HISTORY MAJOR

Bachelor of Arts Program

I. Liberal Arts Option
   1. General College requirements to include:

   Federal Government
   Foreign Language or equivalent (a minimum of) 3
   8

   2. History requirements:
      A. Lower Division Courses
         History of Western Civilization
         United States History
         Study and Methods of History
         Electives
      B. Upper Division Courses (a minimum of 25
         American History Elective
         Study and Methods of History
         Electives
         28-36

   II. Secondary Education Option
      1. General College requirements to include:
         Federal Government
         3

   2. History requirements:
      A. Lower division courses
         History of Western Civilization
         U.S. History
         15
      B. Upper Division Courses (a minimum of 25
         American History Elective
         Study and Methods of History
         2
      C. Educational requirements for State Certification
         for Secondary Education
         20
      4. Electives
         18

III. History Minor Option
   1. Completion of the following courses:
      U.S. History
      Federal Government
      History of Western Civilization
      History or Political Science Electives
      Upper Division American History Elective
      21