

General Curriculum Report #235

UNIVERSITY OF IDAHO - REGISTRAR'S OFFICE

May 6, 2005

TO: MEMBERS OF THE UNIVERSITY OF IDAHO FACULTY

The items listed below, approved by the University Curriculum Committee, will be considered to have the necessary faculty approvals unless a petition requesting further consideration of specific items is signed by five faculty members and submitted to the chair of the Faculty Council within 14 calendar days after the date of circulation. If no petition is received within 14 days, the entire report will be submitted to the president for approval and transmittal to the regents, if regents action is required. If a petition is received, the items in the report for which further consideration is requested will be referred to the Faculty Council and the remainder of the report will move forward. On items referred to it, the council may: (1) affirm the action and report it to a meeting of the university faculty, (2) amend the action and report it to a meeting of the university faculty, or (3) rescind the action. *Note:* If a petition concerns courses or curricula in the College of Letters Arts and Social Sciences or in the College of Agricultural and Life Sciences, and is signed by five faculty members of the respective college, those items will be returned to the college concerned for further consideration.

Biological Sciences

1. Change the cooperative status of the following course [Effective: Summer 2006]

Biol **WS324 Comparative Vertebrate Anatomy** (4 cr). [WSU Biol 324](#). General vertebrate anatomy and evolutionary changes in organ systems. Two lec and two 3-hr labs a wk. Prereq: Biol 115 and 116.

2. Change the title of the following course [Effective: Summer 2006]

Biol **421 Advanced Evolutionary /Population Dynamics Biology** (3 cr). Macro and Micro evolutionary patterns and processes examined from molecular, ecological, and paleontological perspectives. Prereq: Biol 314 or For/Rnge/WLF 221. (Spring only).

3. Change the curricular requirements of **Biology** (B.A. or B.S.) [Effective: Summer 2006]

To graduate in this program, students must earn a minimum grade of C in Biol 115 and 116 and must have a minimum gpa of 2.40 in Biol 115, 116, 210, 212, and 213.

Required course work includes the university requirements (see regulation J-3), and the following major requirements (electives to be chosen in consultation with the departmental advisor).

Biol 115 Cells and the Evolution of Life (4 cr)
Biol 116 Organisms & Environments (4 cr)
Biol 210 Genetics (4 cr)
Biol 212 Molecular and Cellular Biology (4 cr)
Biol 213 Principles of Biological Structure and Function (4 cr)
Biol 314 Ecology and Population Biology (4 cr)
Biol 411 Senior Capstone (2 cr)
[Biol 421 Advanced Evolutionary Biology \(3 cr\)](#)
Chem 111 Principles of Chemistry I (4 cr)
Chem 112 Principles of Chemistry II (5 cr)
Chem 275/276 Carbon Compounds and Lab or Chem 277/278 Organic Chemistry and Lab (4 cr)
MMBB 380 Introductory Biochemistry or MMBB 300 Survey of Biochemistry (3-4 cr)
[Math 143 Pre-calculus Algebra and Analytic Geometry or higher \(3 cr\)](#)
[Math 160 Survey of Calculus or Math 170 Analytic Geometry and Calculus I \(4 cr\)](#)
Stat 251 Statistical Methods (3 cr)
Phys 111-112 General Physics I-II (8 cr)

NOTE: Students considering graduate school in biology are strongly encouraged to take Math 160, Chem 277/278, and MMBB 380.

[129](#) credits of approved electives from the following list are required (categories are intended only as a guide for student and advisor use):

4. Change the curricular requirements of **Biological Sciences Teaching Major** [Effective: Summer 2006]

Note: Math 143 is a prerequisite to required physics courses. [A grade of "D" in any of the required courses listed below will not count toward completion of the degree in either the 45-credit composite teaching major or the 24-credit composite teaching minor. To graduate in this program, students must earn a minimum grade of C in Biol 115 and 116 and must have a minimum gpa of 2.40 in Biol 115, 116, 210, 212, and 213.](#)

Special Methods sequence:

EDTE 433 Secondary Science Methods I (3 cr)
EDTE 443 Secondary Science Methods Lab (1 cr)

A. 45-CREDIT COMPOSITE TEACHING MAJOR

Biol 115 Cells and the Evolution of Life (4 cr)
Biol 116 Organisms & Environments (4 cr)
Biol 210 Genetics (4 cr)

Biol 212 Molecular and Cellular Biology (4 cr)
Biol 213 Principles of Biological Structure and Function (4 cr)
Biol 314 Ecology and Population Biology (4 cr)
~~Biol 411 Senior Capstone (2 cr)~~
~~Biol 421 Advanced Evolutionary Biology (3 cr)~~
Chem 111 Principles of Chemistry or Chem 101 Introduction to Chemistry (4 cr)
Chem 275 Carbon Compounds or Chem 277 Organic Chemistry I (3 cr)
Phys 111-112 General Physics I-II (8 cr)
Electives (see list of electives for Biology major in Part 5) (43 cr)

Chemistry

1. Add the following courses [**Effective:** Summer 2006]

Chem **R413 Radiochemistry for Engineers** (2 cr). Primarily for engineers. Properties of nuclear particles, nuclear reactions, techniques of producing reactions, interaction of radiation with matter, and radiochemistry techniques. Prereq: perm. (Alt/yrs)

Chem **R516 Methods in Radiochemistry** (3 cr). Radiochemistry techniques and application of tracers to chemistry; fundamentals of radioactive decay; statistical relationships; interaction of radiation with matter; production of radioactive samples; chemistry of radioactive elements. Prereq: Chem 454, 455, or perm. (Alt/yrs)

2. Change the credits of the following course [**Effective:** Summer 2006]

Chem **491 (s) Research** (1-6 cr, max 612). Submission of a report of the research done for placement in the permanent dept files is required. Prereq: perm of dept.

Electrical and Computer Engineering

Change the cooperative status of the following course [**Effective:** Summer 2006]

ECE **ID579 Engineering Acoustics** (3 cr). See ME J413/J513.

Foreign Languages & Literatures

Designate the following courses as International and Humanities courses. [**Effective:** Summer 2005]

Arbc **ID101-ID102 Elementary Modern Standard Arabic I & II** (4 cr). *May be used as core credit in J-3-d.* WSU ForL 100-200. An elementary-level course designed to facilitate students' acquisition of basic proficiency in communication within culturally significant contexts. Students learn Modern Standard Arabic language skills in an environment integrating interactive video distance learning and classroom instruction. Alphabet and writing system, pronunciation, vocabulary, and functional grammar. Greater emphasis on oral and written expression in second semester. (101: fall only; 102: spring only)

FLEN **421 Women in Cinema: The International Scene** (3 cr). *May be used as core credit in J-3-d.* International, cross-cultural examination of genre, structure, and style of films by women directors. Recommended Preparation: an introductory course in film studies. (Fall, Alt/yrs)

Forest Products

Designate the following courses as Capstone courses. [**Effective:** Summer 2005]

ForP **490 Biomaterial Product and Process Development** (2 cr). *May be used as core credit in J-3-d.* Principles of product planning and development, concept testing, product-life cycle management, portfolio analysis, targeting and positioning, team management, and implementing product decisions as they apply to wood-based materials. Prereq: Econ 201 or 202, and perm. (Spring only)

ForP **491 Biomaterial Product and Process Development Lab** (1 cr). *May be used as core credit in J-3-d.* Lab to accompany ForP 490. One 3-hr lab per week. Prereq: Econ 201 or Econ 202, and perm. Coreq: ForP 490. (Spring only)

Geological Sciences

1. Add the following courses [**Effective:** Summer 2006]

Geol **ID&WS538 Orogenic Systems I** (3 cr). WSU Geol 538. Field-based course examines tectonic processes active in orogenic systems. Course work includes 1.5 hr lec/wk, one 2-week field trip, final research paper and presentation. Prereq: Geol 345.

Geol **ID&WS539 Orogenic Systems II** (3 cr). WSU Geol 539. Field-based course examines tectonic processes active in orogenic systems. Course work includes 1.5 hr lec/wk, one 2-week field trip, final research paper and presentation. Prereq: Geol 345.

2. Change the cooperative status of the following course [**Effective:** Summer 2006]

Geol ~~ID-J418~~/~~ID-J518~~ **Geomicrobiology** (3 cr). Same as Hydr J418/J518. [WSU Geol 418/518](#). Explore the interactions of microorganisms with the environment, particularly soil-rock-water interactions, and how microorganisms are important to our understanding of geological and hydrological processes. Topics include ground water microbiology, subsurface microbiology and the microbiology of extreme environments. Additional work required for graduate credit. (Spring only)

3. Change the credits and description of the following course [**Effective:** Summer 2006]

Geol **345 Structural Geology** (3-4 cr). ~~Investigation of Deformed rocks; mechanics of brittle and continuum failure, stress and strain relations, recognition, characterization, description, classification, and genesis of folded and fractured rocks. Geology majors must enroll for 4 credits. Two~~ [Three hours](#) of lecture and one 2-hr lab a wk; ~~two~~ [one 21-day field trips \(geology majors must take five 1-day field trips offered on a year by year basis\)](#). Prereq: one semester high-school trigonometry or Math 144, Geol 101 or 111, and Phys 111 or 211. [\(Spring only\)](#)

4. Change the prerequisites of the following course [**Effective:** Summer 2006]

Hydr **569 Contaminant Hydrogeology** (3 cr). Characteristics of contaminant migration in ground water systems including analysis of field problems. Prereq: Geol 309, [or Hydr 409/509](#), or Math 175.

5. Change the curricular requirements of **Geological Sciences** (B.S.) [**Effective:** Summer 2006]

Required course work includes the university requirements (see regulation J-3) and:

Chem 111 Principles of Chemistry I (4 cr)
 Chem 112 Principles of Chemistry II (5 cr)
 Engl 317 Technical Writing (3 cr)
 Geog 385 GIS Primer (3 cr)
 Geol 101 or 111 Physical Geology (4 cr)
 Geol 102 Historical Geology (4 cr)
 Geol 249 Mineralogy and Optical Mineralogy (4 cr)
 Geol 290 Field Geology I (3 cr)
 Geol 324 Principles of Stratigraphy and Sedimentation (4 cr)
 Geol 326 Igneous and Metamorphic Petrology (4 cr)
 Geol 345 Structural Geology (3-4 cr)
 Geol 422 Principles of Geophysics (3 cr)
 Geol 423 Principles of Geochemistry (3 cr)
 Geol 490 Field Geology II (3 cr)

And the completion of one of the following options and electives approved by the advisor to total 128 credits for the degree.

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Hydrogeology Option

Geol 309 Groundwater or Hydr 409 Quantitative Hydrogeology (3 cr)
 Geol 410 Techniques of Groundwater Study (3 cr)
 Math 170 Analytic Geometry and Calculus I (4 cr)
 Math 175 Analytic Geometry and Calculus II (4 cr)
 Stat 251 Statistical Methods or 301 Probability and Statistics (3 cr)
 Phys 211-212 Engineering Physics I-II (8 cr)
 Hydrogeology electives chosen from the following, including at least 6 credits in Hydr courses (18 cr):
[BAE 341 Environmental Hydrology](#) or BAE 351 Hydrology (3 cr)
 CE 421 Engineering Hydrology (3 cr)
 ChE 470 Hazardous Waste Management (3 cr)
 Engr 210 Engineering Statics and Engr 335 Engr Fluid Mechanics (6 cr)
[Geog 385 GIS Primer \(3 cr\)](#)
 Geol 578 Advanced Geochemistry of Natural Waters (3 cr)
 Hydr 409/509 Quantitative Hydrogeology (3 cr)
 Hydr 412 Environmental Hydrogeology (3 cr)
[Hydr 413 Applied Hydrogeologic Concepts \(3 cr\)](#)
[Hydr 414/514 Ground Water-Surface Water Interaction \(3 cr\)](#)
[Hydr 418/518 Geomicrobiology \(3 cr\)](#)
 Hydr 464/564 The Geochemistry of Natural Waters (3 cr)
 Hydr 468 Aquifer Test Design and Analysis (3 cr)
 Hydr 496 Hydrogeology Senior Thesis (3 cr)
 Hydr 576 Fundamentals of Modeling Hydrogeologic Systems (3 cr)
 Hydr 577 Computer Applications in Geohydrology (3 cr)
 Math 275 Analytic Geometry and Calculus III (3 cr)
 Math 310 Ordinary Differential Equations (3 cr)
 Soil 205, 206 The Soil Ecosystem and Lab and Soil 415 Soil Physics (7 cr)
 Stat 428 Geostatistics (3 cr)

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Health, Physical Education, Recreation, and Dance

Designate the following course as an International course. [**Effective:** Summer 2005]

H&S 316 **Community & Global Health** (2 cr). *May be used as core credit in J-3-d.* Analysis of major public health problems and issues, including environmental health issues, as they affect communities locally, regionally, nationally, and globally. Introduction to agencies, facilities, programs, and careers in community health and health care. Prereq: H&S 150. (Spring only)

History

Designate the following courses as International and Social Science courses. [Effective: Summer 2005]

Hist 485 **Chinese Social and Cultural History** (3 cr). *May be used as core credit in J-3-d.* Survey of Chinese culture and traditions during the first millennium.

Hist J481/J581 **America's Wars in Asia** (3 cr). *May be used as core credit in J-3-d.* Focus on the three wars the United States fought in Asia between 1941 and 1975—the Pacific Theatre of World War II, the Korean War, and the Vietnam War. Emphasis on military, diplomatic, political, and cultural developments. Perspectives from all sides explored. Additional work required for graduate credit. Recommended preparation: Hist 111 and 112. (Alt/yrs)

Hist J430/J530 **U.S. Diplomatic History** (3 cr). *May be used as core credit in J-3-d.* World power through war and the quest for peace, 1898 to present.

International Studies

Designate the following course as International and Social Science courses. [Effective: Summer 2005]

IS 310 **Model United Nations – Fall** (3 cr, max 12) *May be used as core credit in J-3-d.* Overview of principle UN agencies and current UN activities; emphasis on written and oral presentations through resolution and position paper writing, negotiations, and Model UN simulations. (Fall only).

Law

Change the credits of the following course [Effective: Summer 2006]

Law 914 (s) **Dispute Resolution** (1 cr, max 34). As part of the Northwest Institute for Dispute Resolution, the College offers one or two courses each year that examine discreet areas of dispute resolution.

Mathematics

1. Change the description of the following course [Effective: Summer 2006]

Math 376 **Discrete Mathematics II** (3 cr). Selected topics from discrete mathematics such as graph theory, modeling, and optimization. *Recommended for computer science majors.* Prereq: Math 176 or perm. (Spring, Alt/yrs)

Rationale: To inform the Computer Science majors that this course is relevant for their program.

Assessment: To better identify the targeted student group.

2. Change the title, credits, and description, and grading mode of the following course [Effective: Summer 2006]

Math 455 **Applied Actuarial Science II** (01 cr). *Review of probability theory in preparation for Actuarial Exam 1. Risk problems on the actuarial exam. Graded P/F.* Prereq: Math 451. (Spring only)

Assessment: Give students credit for what they have learned. This course helps prepare our students for the first exam of the Society of Actuaries.

3. Change the number, title, recommended preparation, prerequisites, and class meeting information of the following course [Effective: Summer 2006]

Math ~~346~~476 **Applied Combinatorics** (3 cr). (~~Math 346~~) Elementary counting methods, generating functions, recurrence relations, Polya's enumeration, enumeration of graphs, trees, searching, combinatorial algorithms. Recommended Preparation: Math 176, or 215, or 376. Prereq: Math 175 and 330. (~~Spring~~Fall, Alt/yrs)

4. Change the curricular requirements of **Mathematics (B.S.)** [Effective: Summer 2006]

Required course work includes the university requirements (see regulation J-3) and:

Basic courses:

Math 170 Analytic Geometry and Calculus I (4 cr)
 Math 175 Analytic Geometry and Calculus II (4 cr)
 Math 275 Analytic Geometry and Calculus III (3 cr)
 Math 330 Linear Algebra (3cr)

And one of the following options:

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C. Applied - Computation Option

The emphasis is on the mathematics related to computer science and technology. With a major or minor in computer sciences this is a good preparation for work in the computer industry.

Math courses:

- Math 176 Discrete Mathematics (3 cr)
- [Math 385 Theory of Computation \(3 cr\)](#)
- Math 395 Analysis of Algorithms (3 cr)
- Math 432 Numerical Linear Algebra or 426 Discrete Optimization (3 cr)
- Math 433 Numerical Analysis (3 cr)

Two additional math courses numbered 400-499 (6 cr)

At least ~~three~~two courses from the following, incl at least one course numbered 346 or above (96 cr):

[Math 310 Ordinary Differential Equations \(3 cr\)](#)

Math 326 Linear Programming (3 cr)

Math 346 Applied Combinatorics (3 cr)

Math 376 Discrete Mathematics II (3 cr)

[Math 385 Theory of Computation \(3 cr\)](#)

Stat 301 Probability and Statistics (3 cr)

Supporting courses:

CS 112 Introduction to Problem Solving and Programming or CS 120 Computer Science I (3-4 cr)

CS 121 Computer Science II (3 cr)

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E. Applied - Actuarial Science Option

This curriculum provides the necessary background to become an actuary and work in the insurance industry.

Math courses:

- Math 310 Ordinary Differential Equations (3 cr)
- Math 451 Probability Theory (3 cr)
- Math 452 Mathematical Statistics (3 cr)
- Math 455 Applied Actuarial Science II (0 cr)
- Three math courses numbered above 400, excluding Math 513-519 (9 cr)

Supporting courses:

Acct 201-202 Introduction to Accounting (6 cr)

Bus 301 Financial Management (3 cr)

Bus 364 Insurance (3 cr)

CS 112 Introduction to Problem Solving and Programming or CS 120 Computer Science I (3-4 cr)

Econ 201, 202 Principles of Economics (6 cr)

Stat 401 Statistical Analysis (3 cr)

Stat 423 Beginning SAS Programming (1 cr)

At least one course selected from the following (3 cr):

[Bus 332 Quantitative Methods in Business \(3 cr\)](#)

[Bus 302 Intermediate Financial Management \(3 cr\)](#)

Bus 405 Portfolio Management (3 cr)

Econ 351 Intermediate Macroeconomic Analysis (3 cr)

Econ 352 Intermediate Microeconomic Analysis (3 cr)

One course selected from the following (3-4 cr):

Stat 301 Probability and Statistics (recommended) (3 cr)

Stat 251 Statistical Methods (3 cr)

Stat 271 Statistical Inference and Decision Analysis (4 cr)

One course selected from the following (3 cr):

Econ 353 Quantitative Economics and Forecasting (3 cr)

Stat 433 Econometrics (3 cr)

Stat 550 Regression (3 cr)

Stat 525 Econometrics (3 cr)

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Mechanical Engineering

Change the cooperative status of the following course [**Effective:** Summer 2006]

ME **J413/ID-J513 Engineering Acoustics** (3 cr). [WSU ME 523](#). ME 513 same as ECE 579. Fundamentals of acoustics including wave theory; transmission through layers, generation and reception; low frequency models; application to sound measurement, transducers, loudspeaker cabinet design, and nondestructive testing; acoustic design project reqd. Additional projects/assignments reqd for grad cr. Prereq: Engr 240 or ECE 212, and Math 310, or ME 313.

ME **ID513 Engineering Acoustics** (3 cr). See ME J413/J513.

Physics

1. Add the following courses [**Effective:** Summer 2006]

Phys **R510 Radiation Shielding and Design Concepts** (3 cr). Prereq: Basic differential and integral calculus, and perm.

Phys **R517 Radiation Dosimetry Instrumentation** (3 cr). Radiation detection methods; stats, instrumentation, and close determination; emphasis on radiation protection.

Phys **R518 Radiation Biology** (3 cr). Mechanisms and patterns of energy disposition by ionizing radiation in biological systems.

Phys **R519 Radiation Physiology** (3 cr). Selected topics from human physiology and methods of internal dosimetry. Prereq: Radiation biology and calculus.

2. Activate the following dormant courses [**Effective:** Summer 2006]

Phys **R585-R586 Fundamental Reactor Kinetics** (3 cr). Complex plane transformations, transfer functions for various systems, derivation of reactor kinetics equations; analysis of nuclear feedback systems; statistical control theory applied to nuclear systems. Prereq: perm.

Phys **R587 Reactor Physics for Engineers** (3 cr). Review of nuclear physics, nuclear fission, chain reaction, and reactor theory. Prereq: Math 310 or equivalent.

3. Change the curricular requirements of **Physics** (B.A. or B.S.) [**Effective:** Summer 2006]

Required course work includes the university requirements (see regulation J-3), the general requirements for either the B.A. or B.S. degree, and:

Chem 111 Principles of Chemistry I (4 cr)
Chem 112 Principles of Chemistry II (5 cr)
Math 170 Analytic Geometry and Calculus I (4 cr)
Math 175 Analytic Geometry and Calculus II (4 cr)
Math 275 Analytic Geometry and Calculus III (3 cr)
Phys 200 Physics Seminar (21 cr)
Phys 211 Engineering Physics I (4 cr)
Phys 212 Engineering Physics II (4 cr)
Phys 213 Engineering Physics III (4 cr)
Phys 305 Modern Physics (3 cr)
Phys 321-322 Analytical Mechanics (6 cr)
Phys 341-342 Electromagnetic Fields I-II (6 cr)
Phys 351 Introductory Quantum Mechanics I (3 cr)
Phys 371 Mathematical Physics (3 cr)
Mathematics (upper-division) (6 cr)

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FOR THE FACULTY'S INFORMATION

Correction to General Curriculum Report 234:

Changes to Cooperative Courses Approved Since Last General Curriculum Report:

(ID = taught only at UI; WS = taught only at WSU, LC = taught only at LCSC; ID&WS = can be taught at both UI & WSU; ID&LC = can be taught at both UI & LCSC)

Add the following cooperative courses [**Effective:** Summer 2006]

FST **WSJ422/J522 Sensory Evaluation of Food and Wine** (4 cr). WSU FSHN 422/522. Theory, principles and application of sensory evaluation techniques to evaluate appearance, aroma, flavor and texture of foods and wine. Additional projects/assignments required for graduate credit. Prereq: Stat 251 or permission. (Alt/yrs)

FST **WS522 Sensory Evaluation of Food and Wine** (4 cr). See FST J422/J522.

Other Informational Changes:

1. Add the following course and designate it as a Social Science course. [**Effective:** Summer 2005]

CORE 119 Sports and American Society (4 cr). *May be used as core credit in J-3-d.* According to one observer, sports are the "standard-bearer for American values." With the disciplines of ethics, sociology, history, literature, film, political science, physical education, and cultural studies as lenses, this course explores sports as a fundamental aspect of American society. The course will explore sports and gender, race, class, ethnicity, consumerism, and media among other subjects. Course materials include essays, documentary and feature films, short fiction and poetry, and historical, legal, and sociological studies.

2. Add the following course and designate it as a Humanities course. [**Effective:** Summer 2005]

CORE 169 Sports and American Society (3 cr). *May be used as core credit in J-3-d.* According to one observer, sports are the "standard-bearer for American values." With the disciplines of ethics, sociology, history, literature, film, political science, physical education, and cultural studies as lenses, this course explores sports as a fundamental aspect of American society. The course will explore sports and gender, race, class, ethnicity, consumerism, and media among other subjects. Course materials include essays, documentary and feature films, short fiction and poetry, and historical, legal, and sociological studies.