General Curriculum Report #227

UNIVERSITY OF IDAHO - REGISTRAR'S OFFICE
October 10, 2003

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.

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AGRICULTURAL AND EXTENSION EDUCATION

1. Change the curricular requirements of **Agricultural Science and Technology (B.S.Ag.Tech.)** [**Effective**: Summer 2004]

Required course work includes the university requirements (see regulation J-3) and:
Acct 201 Introduction to Financial Accounting (3 cr)
AgEc 278 Farm and Agribusiness Management (4 cr)
AgEc 289 Agricultural Markets and Prices (3 cr)
AgEc 356 Agricultural and Rural Policy or AgEc 361 Farm and Natural Resource Appraisal (3 cr)
~~Biol 115 Cells and the Evolution of Life (4 cr)~~
~~Chem 101 Intro to Chemistry I or Chem 111 Principles of Chemistry (4 cr)~~
Comm 101 Fundamentals of Public Speaking (2 cr)
Engl 207 Persuasive Writing or Engl 209 Inquiry-Based Writing or Engl 313 Business Writing or Engl 317 Technical Writing (3 cr)
~~MMBB 154, 155 Intro Biology of Bacteria and Viruses or MMBB 250 General Microbiology (4-5 cr)~~
~~Phys 100 Fundamentals of Physics or Phys 111 General Physics I or Chem 112 Principles of Chemistry II (4 cr)~~
Stat 150 Intro to Statistics or Stat 251 Principles of Statistics (3 cr)
AgEc 300 or 400 level elective (3 cr)
One course from the following (3-4 cr):
Math 130 Finite Math (3 cr)
Math 143 Pre-calculus Algebra & Analytical Geometry (3 cr)
Math 160 Survey of Calculus (4 cr)
Math 170 Analytical Geometry & Calculus I (4 cr)
Computer applications course, or Idaho Technology Certification, or equivalent
Humanities and social sciences electives, including Econ 202 (14 cr)
Natural and applied science electives, which include Chem 101 or 111, and Biol 115 (16 cr)
Agricultural science and technology courses ~~chosen from at least three of the following areas (30 cr):~~ Includes both depth and breadth in technical agriculture instruction areas. Must include breadth across two technical agriculture instruction areas (9 cr. minimum per area) and depth in a third area (19 cr). Technical agriculture instruction areas include: agricultural education; agricultural systems management; animal and veterinary sciences; family and consumer sciences; food science and toxicology; microbiology, molecular biology and biochemistry; and plant, soils, and entomological sciences. Must include at least 30 hours in upper division classes. (37 cr)

~~**Agricultural Education** (minimum of two courses) (4-5 cr)~~
~~AgEd 306 Exploring International Agriculture (2 cr)~~
~~AgEd 359 Developing 4-H Youth Programs (2 cr)~~
~~AgEd 448 Principles and Practices of Extension Education (3 cr)~~
~~AgEd 450 Developing Leaders (2 cr)~~
~~AgEd 451 Communicating in Agriculture (2 cr)~~

~~**Agricultural Systems Management** (minimum of two courses) (5-6 cr)~~
~~ASM 305 Agricultural Machinery Systems (3 cr)~~
~~ASM 315 Irrigation Systems and Water Management (3 cr)*~~
~~ASM 331 Electric Power Systems for Agriculture (3 cr)~~
~~ASM 412 Agricultural Safety and Health (2 cr)~~

~~**Animal Science** (minimum of two courses, one 300-level and one 400-level) (6-7 cr)~~
~~AVS 330 Genetics of Farm Animals (3 cr)*~~
~~AVS 363 Animal Products for Human Consumption (3 cr)~~
~~AVS 371 Anatomy and Physiology (4 cr)~~
~~AVS 472 Dairy Cattle Management (3 cr)*~~
~~AVS 474 Beef Cattle Science (3 cr)*~~
~~AVS 476 Sheep Science (3 cr)*~~

~~AVS 478 Swine Production (3 cr)*~~
~~**Crop Production/Management** (minimum of three courses) (9 cr)~~
~~Ent 322 Economic Entomology (3 cr)~~
~~PlSc 338 Weed Control (3 cr)*~~
~~PlSc 405 Plant Pathology (3 cr)*~~
~~PlSc 407 Field Crop Production (3 cr)~~
~~Soil 438 Pesticides in the Environment (3 cr)*~~
~~Soil 446 Soil Fertility (1-3 cr, max 3)*~~
~~Additional agricultural science/technical electives (7 cr)~~
Electives to total 132 cr for the degree

~~*Course requires additional prerequisites not listed.~~

2. Change the curricular requirements of **Agricultural Education (B.S.Ag.Ed.)** [**Effective**: Summer 2004]
Required course work includes the university requirements (see regulation J-3) and one of the following options:

A. Teaching Option

The following option is approved by the State Board of Professional-Technical Education for the preparation of high school agriculture instructors. Graduates who have completed at least 28 credits in agricultural education, and who meet the state certification requirements for a Standard Secondary Teaching Certificate, are eligible to teach secondary agricultural science and technology in Idaho. The Idaho teaching certificate transfers to most states in the US. In addition, government and business agencies and the Cooperative Extension System that seek persons with education in both agriculture and education provide employment opportunities for graduates of this curriculum.

AgEd 180 Introduction to Agricultural Education (1 cr)**….**
PTTE 461 Using Internet-Based Career Information in the Classroom (2 cr)
One course from the following (3-4 cr):
Math 130 Finite Math (3 cr)
Math 143 Pre-calculus Algebra & Analytical Geometry (3 cr)
Math 160 Survey of Calculus (4 cr)
Math 170 Analytical Geometry & Calculus I (4 cr)
Computer applications course or Idaho Technology Certification (3 cr)
Ag electives, which include a minimum of 6 cr in Ag Econ, 6 cr in Animal Sci, 6 cr in Plant Sci, 3 cr in Horticulture, and 4 cr in Soils (40 cr)
Natural and applied science electives, which include ~~4 cr in~~ Chem 101 or 111, and Biol 115 (16 cr)
Humanities and social science electives, which include Econ 202 and Psyc 101 (14 cr)
Electives to total 132 cr for the degree

B. Nonteaching Option

The non-teaching option is designed for students who desire a career in non-formal instruction, human resources development, and training in the food, fiber, and natural resource system. Graduates of this program will have a strong foundation in adult education, communications, and presentation and communications skills.

AgEd 451 Communicating in Agriculture (2 cr)
AgEd 498 Internship (max 10 cr)
Agricultural education electives chosen from the following (~~20~~ 8 cr):
AgEd 180 Introduction to Agricultural Education (1 cr)
AgEd 181 Introduction to Extension Education (1 cr)
AgEd 252 Developing Organizations (1 cr)
AgEd 253 Parliamentary Procedure (1 cr)
AgEd 306 Exploring International Agriculture (2 cr)
AgEd 448 Principles and Practices of Extension Education (3 cr)
AgEd 450 Developing Leaders (2 cr)
~~AgEd 451 Communicating in Agriculture (2 cr)~~
~~AgEd 452 Methods of Teaching Agriculture (3 cr)~~
~~AgEd 459 Coop Extension Practicum (max 9 cr) or 498 Internship (max 10 cr)~~
Advisor approved ~~A~~adult education electives ~~chosen from the following~~ (6 cr):
~~AdEd 418 Learning Styles (3 cr)~~
Advisor approved ~~C~~communications electives ~~chosen from the following~~ , which include at least one upper division course (6 cr)~~:~~
~~Comm 235 Organizational Communication (3 cr)~~
~~Comm 284 Experiences in Visual Thinking (3 cr)~~
~~Comm 332 Communication and the Small Group (3 cr)~~
~~Comm 333 Interviewing (3 cr)~~

~~Jamm 425 Feature Article Writing (3 cr)~~
~~Jamm 428 Environmental Journalism (3 cr)~~
Business and accounting electives chosen from the following (6 cr):
Acct 201 Introduction to Financial Accounting (3 cr)
Bus 311 Introduction to Management (3 cr)
Bus 321 Marketing (3 cr)
BLaw 265 Legal Environment of Business (3 cr)
Comm 101 Fundamentals of Public Speaking (2 cr)
Comm 431 Professional Presentation Techniques (3 cr)
Engl 313 Business Writing (3 cr)
One course from the following (3-4 cr):
Math 130 Finite Math (3 cr)
Math 143 Pre-calculus Algebra & Analytical Geometry (3 cr)
Math 160 Survey of Calculus (4 cr)
Math 170 Analytical Geometry & Calculus I (4 cr)
Computer applications course, or Idaho Technology Certification, or equivalent (3 cr)
Natural and applied science electives, which include Chem 101 or 111, and Biol 115 (16 cr)
Humanities and social science electives (14 cr)
Technical subject matter courses ~~(including courses from any of the following instruction areas: agriculture, agricultural economics, agricultural systems management, animal and veterinary science, family and consumer sciences; plant, soil, and entomological sciences; food science and toxicology).~~ must include breadth across four technical agriculture instruction areas (6 cr. minimum per area) and depth in one or two areas (6-12 additional credits per area). Technical agriculture instruction areas include: agricultural economics and rural sociology; agricultural systems management; animal and veterinary sciences; plant, soils, and entomological sciences; and food science and toxicology. A maximum of 8 cr of foreign language can be completed in lieu of 8 credits of technical subject matter courses with departmental approval. (36 cr)
Electives to total 128 cr for the degree

BIOLOGICAL AND AGRICULTURAL ENGINEERING

Change the number, prerequisite and class meeting information of the following course [**Effective**: Summer 2004]
ASM ~~320~~**430** **Water and Wastewater Operations Management** (3 cr) (ASM 320) Concepts for drinking water operations, including basic chemistry, sampling, basic water treatment methods such as softening, taste and odor control, etc. Some demonstrations, review of math. Concepts of waste water treatment, including basic treatment plant components, sampling, disinfection, chemical and biological processes. Introduction to State certification process. Prereq: Chem 101 or Chem 111, and Math 143 or Math 160. (Spring only)

BIOLOGICAL SCIENCES

1. Drop the following courses [**Effective**: Summer 2004]
   - Bot **500 Master's Research and Thesis** (cr arr)
     Recommended Equivalent: Biol 500
   - Bot **501** (s) **Seminar** (cr arr)
     Recommended Substitution:
   - Bot **502** (s) **Directed Study** (cr arr)
     Recommended Substitution:
   - Bot **503** (s) **Workshop** (cr arr)
     Recommended Substitution:
   - Bot **504** (s) **Special Topics** (cr arr)
     Recommended Substitution:
   - Bot **WS505 Experimental Methods in Plant Physiology** (3 cr) WSU Bot 504
     Recommended Equivalent: Biol 519
   - Bot **510 Techniques of Plant Tissue Culture** (3 cr)
     Recommended Substitution:
   - Bot **WS511 Plant Cell Biology** (3 cr) WSU Bot 511
     Recommended Equivalent: Biol 511
   - Bot **512 Plant Growth Substances** (3 cr)
     Recommended Equivalent: Biol 512
   - Bot **515 Mineral Nutrition** (3 cr)
     Recommended Substitution:
   - Bot **WS518 Photosynthesis, Photorespiration, and Plant Productivity** (3 cr) WSU Bot 518
     Recommended Equivalent: Biol 518
   - Bot **535 Plant Geography** (3 cr)

Recommended Equivalent: Biol 535
- Bot **WS537 Field Ecology** (2 cr) WSU Bot 463/563
  Recommended Equivalent: Biol 537
- Bot **539 Physiological Ecology** (3 cr)
  Recommended Equivalent: Biol 539
- Bot **540 Advanced Plant Taxonomy** (3 cr)
  Recommended Substitution:
- Bot **556 Advanced Plant Molecular Biology** (3 cr)
  Recommended Equivalent: Biol 557
- Bot **WS575 Basidiomycetes** (3 cr) WSU Pl P 522
  Recommended Equivalent: Biol 575
- Bot **WS576 Ascomycetes and Fungi Imperfecti** (3 cr) WSU Pl P 523
  Recommended Equivalent: Biol 576
- Bot **WS577 Lower Fungi** (2 cr) WSU Pl P 524
  Recommended Substitution:
- Bot **WS580 Protein Targeting in Plant Cells** (3 cr) WSU Pl Ph 580
  Recommended Equivalent: Biol 580
- Bot **599 Research** (cr arr)
  Recommended Substitution:
- Bot **600 Doctoral Research and Dissertation** (cr arr)
  Recommended Equivalent: Biol 600
- Zool **486 Marine Invertebrate Communities** (1 cr)
  Recommended Substitution:
- Zool **500 Master's Research and Thesis** (cr arr)
  Recommended Equivalent: Biol 500
- Zool **501** (s) **Seminar** (cr arr)
  Recommended Substitution:
- Zool **502** (s) **Directed Study** (cr arr)
  Recommended Substitution:
- Zool **503** (s) **Workshop** (cr arr)
  Recommended Substitution:
- Zool **504** (s) **Special Topics** (cr arr)
  Recommended Substitution:
- Zool **ID505 Generation, Degeneration, and Regeneration in Nervous System** (2 cr) WSU Zool 506
  Recommended Equivalent: Biol 509
- Zool **507 Readings in Neurobiology** (1 cr, max arr)
  Recommended Equivalent: Biol 514
- Zool **WS510 Domestic and Exotic Animal Behavior** (2 cr) WSU V M 510/Neuro 526
  Recommended Equivalent: Biol 520
- Zool **512 Environmental Physiology** (3-4 cr)
  Recommended Substitution:
- Zool **513 Comparative Animal Physiology** (3 cr)
  Recommended Substitution:
- Zool **WS515 Advanced Neuroanatomy** (4 cr) WSU Neuro/V An 513
  Recommended Equivalent: Biol 516
- Zool **WS528 Behavioral Mechanisms in Physiology** (3 cr) WSU Neuro/V Ph 528
  Recommended Equivalent: Biol 528
- Zool **WS529 Cellular and Molecular Neurobiology** (4 cr) WSU Neuro/V Ph 529
  Recommended Equivalent: Biol 529
- Zool **WS530 General and Comparative Neurophysiology** (4 cr) WSU Neuro 530
  Recommended Equivalent: Biol 530
- Zool **532 Raptor Ecology** (2 cr)
  Recommended Substitution:
- Zool **WS534 Advanced Neurophysiology** (3 cr) WSU Neuro/V Ph 534
  Recommended Equivalent: Biol 534
- Zool **WS537 Physiology and Biochemistry of Neuropeptides** (3 cr) WSU Neuro/V Ph 537
  Recommended Equivalent: Biol 538
- Zool **538 Animal Geography** (2 cr)
  Recommended Substitution:
- Zool **WS543 Ion Channels** (3 cr) WSU Neuro 543
  Recommended Equivalent: Biol 543
- Zool **WS544 Neurobiology of Drug Abuse** (3 cr) WSU Neuro 544

Recommended Substitution:

- Zool **WS558 Molecular and Cellular Reproduction** (3 cr) WSU GenCB 558
  Recommended Equivalent: Biol 559
- Zool **WS564 Brain-Endocrine Interactions** (3 cr) WSU Neuro/V Ph 564
  Recommended Equivalent: Biol 564
- Zool **599 Research** (cr arr)
  Recommended Substitution:
- Zool **600 Doctoral Research and Dissertation** (cr arr)
  Recommended Equivalent: Biol 600

2. Add the following courses [**Effective**: Summer 2004]
   - Biol **ID509 Generation, Degeneration, and Regeneration in the Nervous System** (2 cr) (Zool 505) WSU Biol 509.
   - Biol **WS511 Plant Cell Biology** (3 cr) (Bot 511) WSU Zool 506.
   - Biol **512 Plant Growth Substances** (3 cr) (Bot 512) Hormonal regulation of physiological processes. Two lec and one 2-hr disc a wk. Prereq: Biol 311 and organic chemistry. (Alt/yrs)
     Enforce the prerequisites: No
   - Biol **514 Readings in Neurobiology** (1 cr, max arr) (Zool 507) Discussion of current neurobiology literature. Prereq or Coreq: Biol 461/561, 509 or MedS 532.
     Enforce the prerequisites: No
   - Biol **WS516 Advanced Nueroanatomy** (4 cr) (Zool 515) WSU Neuro/V An 513.
   - Biol **WS518 Photosynthesis, Photorespiration, and Plant Productivity** (3 cr) (Bot 518) WSU Biol 518.
   - Biol **WS519 Experimental Methods in Plant Physiology** (3 cr) (Bot 505) WSU Biol 504.
   - Biol **WS520 Domestic and Exotic Animal Behavior** (2 cr) (Zool 510) WSU V M 510 / Neuro 526.
   - Biol **WS528 Behavioral Mechanisms in Physiology** (3 cr) (Zool 528) WSU Neuro/V Ph 528.
   - Biol **WS529 Cellular and Molecular Neurobiology** (4 cr) (Zool 529) WSU Neuro/V Ph 529.
   - Biol **WS530 General and Comparative Neurophysiology** (4 cr) (Zool 530) WSU Neuro 530.
   - Biol **WS534 Advanced Neurophysiology** (3 cr) (Zool 534) WSU Neuro/V Ph 534.
   - Biol **535 Plant Geography** (3 cr) (Bot 535) Spatial relations of plants and plant communities as determined by intrinsic factors such as genetics and evolution, and extrinsic factors such as physiography, geography, climate, and climatic change; mechanisms of distribution, discontinuity patterns. One 3-day field trip. Prereq: Biol 431 or perm. (Alt/yrs)
     Enforce the prerequisites: No
   - Biol **WS537 Field Ecology** (2 cr) (Bot 537) WSU Biol 537.
   - Biol **WS538 Physiology and Biochemistry of Neuropeptides** (3 cr) (Zool 537) WSU Neuro/V Ph 537.
   - Biol **539 Physiological Ecology** (3 cr) (Bot 539) Physiological adaptations to various environmental and habitat conditions and their ecological consequences. Two lec and one 3-hr lab a wk. Recommended prereq: Biol 311. Prereq: Biol 431.
     Enforce the prerequisites: No
   - Biol **WS543 Ion Channels** (3 cr) (Zool 543) WSU Neuro 543.
   - Biol **557 Advanced Plant Molecular Biology** (3 cr) (Bot 556) Molecular biology of plant organelles: structure of chloroplast and mitochondrial genomes and their replication; transcription, translation, and regulation of organelle genes and their interaction with nuclear genomes; genetic engineering of plant organelles-herbicide resistance, cytoplasmic male sterility. Prereq: One semester of biochemistry and/or genetics
     Enforce the prerequisites: No
   - Biol **WS559 Molecular and Cellular Reproduction** (3 cr) (Zool 558) WSU GenCB 558. Prereq: AVS 452 or Biol 450/550.
     Enforce the prerequisites: No
   - Biol **WS564 Brain-Endocrine Interactions** (3 cr) (Zool 564) WSU Neuro/V Ph 564.
   - Biol **WS575 Basidiomycetes** (3 cr) (Bot 575) WSU PI P 522.
   - Biol **WS576 Ascomycetes and Fungi Imperfecti** (3 cr) (Bot 576) WSU PI P 523.
   - Biol **WS580 Protein Targeting in Plant Cells** (3 cr) (Bot 580) WSU PI Ph 580.

3. Designate the following course as a core Capstone course [**Effective**: Summer 2004]
   Biol **411 Senior Capstone** (2 cr) *May be used as core credit in J-3-d.* Application of biological principles and information to the analysis of societal and philosophical issues. Prereq: Biol 210, 212, 213, 214, and Sr standing. (Spring only).

BUSINESS

Change the cooperative status of the following course [**Effective**: Summer 2004]

Econ **ID&WS510 Advanced Microeconomics** (3 cr) Same as AgEc 510. WSU Ag Ec and Econ ~~501~~508. Theory of consumer behavior, theory of production behavior, theory of imperfect competition, capital theory, and welfare economics. Prereq or coreq: Econ/AgEc 409/509 or equiv, or perm.

CHEMICAL ENGINEERING

Change the curricular requirements of **Chemical Engineering (B.S.Ch.E.)** [**Effective**: Summer 2004]

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

ChE 110 Introduction to Chemical Engineering (1 cr)**....**
Computer science elective in a programming language (2 cr)
Economics elective (3 cr)
~~Engineering electives (3 cr)~~
Humanities and social sciences electives (12 cr)
Communication electives (2 cr)
Mathematics electives (3 cr)
Technical electives (~~3~~ 6 cr)

CIVIL ENGINEERING

1. Change the grading of the following course [**Effective**: Summer 2004]
   CE **115 Introduction to Civil Engineering** (2 cr). ~~Graded P/F.~~ Introduction to engineering design process and analysis techniques including problem solving skills, development of software use skills, graphical analysis, data analysis, economic decision making, documentation skills, and use of structured programming concepts in designing personal applications. Prereq: major in civil engineering.

2. Change the co-requisite of the following course [**Effective**: Summer 2004]
   CE **372 Fundamentals of Transportation Engineering** (4 cr). Intro to planning, design, and operation of highway and traffic, public transportation, and airport systems. Three lec and one 3-hr lab a wk; periodic field data collection and one or two field trips. Prereq: Stat 301 and CE 211. Coreq: Engl 317.

COMPUTER SCIENCE

1. Add the following course [**Effective**: Summer 2004]
   CS **J415/J515 Computational Biology: Sequence Analysis** (3 cr) Design and analyze algorithms that address the computational problems posed by biological sequence data, such as DNA or protein sequences. Topics may include: comparing sequences (from genes to genomes), database searching, multiple sequence alignment, phylogenetic inferencing, gene discovery and annotation, and genome assembly. Additional class presentation and/or paper required for graduate credit. Prereq: Knowledge of high level programming language, basic probability theory, basic molecular biology, or perm.
   Enforce the prerequisites: No

2. Change the title of the following course [**Effective**: Summer 2004]
   CS **590 ~~Theory of Computation~~** Computability and Complexity (3 cr) Various models of computation, such as Turing machines, recursive functions, and register machines; relative strengths and weaknesses of these models, with particular attention to uncomputability results; computational complexity as a natural outcome of restrictions to these models. Prereq: CS 490.

ENVIRONMENTAL SCIENCE

Designate the following course as a core Capstone course [**Effective**: Summer 2004]
EnvS **497** (s) **Senior Research and Thesis** (3 cr) *May be used as core credit in J-3-d.* Open only to majors in environmental science. Preparation of proposal, poster, formal presentation and written thesis based on research conducted with a faculty member. Research addresses an environmental problem using laboratory, field, or library techniques. Prereq: Sr standing. Prereq or coreq: Engl 317 or equiv. (Spring only).

FAMILY AND CONSUMER SCIENCES

Add the following course [**Effective**: Summer 2004]

FCS **101 Education Assistant** (1 cr) Classroom training for education assistant and placement with a mentor teacher for a minimum of 5 hours weekly during the academic year. Dual enrollment course, offered as a FCS secondary occupational program, available in secondary Professional-Technical FCS programs. Secondary FCS students will have, at minimum, one pre-requisite course in child development prior to acceptance in the Education Assistant Program. For dual-enrollment high school students only.

FOOD SCIENCE AND TOXICOLOGY

1. Add the following courses [**Effective**: Summer 2004]
   - FST **230 Food Chemical Safety** (3 cr) Examines the sources of chemical and microbiological risk which foods may pose and helps students discover how scientific principles have been used to ensure the safety of our food supply through testing and processing. (Fall only, alt/yrs)
   - FST **240 Introduction to Food Processing** (3 cr) Training in food processing and unit operations at the introductory level. After completing this course, the students will be able to recognize and identify basic food science concepts and terminology used by professionals in the nutrition, foods, foodservice and food science fields; understand the multiple technologies used in the preservation of food; understand the concepts related to unit operations; and understand basic processing flow for various commodities such as milk, meat, fats and oils, and cereal grains. (Spring only, alt/yrs)

2. Change the curricular requirements of **Food Science (B.S.F.S.)** [**Effective**: Summer 2004]
   Required course work includes the university requirements (see regulation J-3) and:
   ASM 240 Computer Applications in Biological Systems (3 cr)
   Biol 115 Cells and the Evolution of Life (4 cr)
   Chem 111 Principles of Chemistry I (4 cr)
   Chem 112 Principles of Chemistry II (5 cr)
   Comm 101 Fundamentals of Public Speaking (2 cr)
   ~~Econ 202 Principles of Economics (3 cr)~~
   Engl 317 Technical Writing (3 cr)
   FCS 205 Concepts in Human Nutrition (3 cr)
   FST 170 Food: Science and Practice (3 cr)
   FST 220 Food Safety and Quality (3 cr)
   FST 303 Food Processing (3 cr)
   FST 400 Seminar (1 cr)
   FST 416, 417 Food Microbiology and Lab (4 cr)
   FST 433, 434 Agricultural Processing Systems and Lab (4 cr)
   FST 460, 461 Food Chemistry and Lab (4 cr)
   FST 462 Food Analysis (4 cr)
   FST 470 Advanced Food Technology (3 cr)
   FST 489 Food Product Development (3 cr)
   MMBB 250 General Microbiology (5 cr)
   Phys 111, 111L General Physics I and Lab (4 cr)
   Stat 251 Principles of Statistics (3 cr)
   Two courses chosen from Math 160, 161, 170, and 175 (7-8 cr)

   And one of the following emphasis areas:

   I. Processing Emphasis
   Chem 275 Carbon Compounds (3 cr)
   Chem 276 Carbon Compounds Lab (1 cr)
   MMBB 300 Survey of Biochemistry (3 cr)
   Select 12 credits from the following:
   AVS 463 Advances in Meat Science (3 cr)
   FST 304 Cereal Products (2 cr)
   FST 230 Food Chemical Safety (3 cr)
   FST 363 Animal Products for Human Consumption (3 cr)
   FST 398 Internship (~~cr arr~~1-4 cr, max 4)
   FST 429 Dairy Products (4 cr)
   FST 464 Food Toxicology (3 cr)
   FST 465 Wine Microbiology and Processing (3 cr)
   FST 499 Directed Study (1-4 cr, max 4)
   ~~PlSc WS360 World Agricultural Systems (3 cr)~~
   PlSc 490 Potato Science (3 cr)

   II. Business Emphasis
   Chem 275 Carbon Compounds (3 cr)

Chem 276 Carbon Compounds Lab (1 cr)
MMBB 300 Survey of Biochemistry (3 cr)
Select 12 credits from the following:
Acct 201 Intro to Financial Accounting (3 cr)
Acct 202 Intro to Managerial Accounting (3 cr)
Acct 205 Fundamental of Accounting (4 cr)
Bus 301 Financial Management (3 cr)
Bus 311 Introduction to Management (3 cr)
Bus 321 Marketing (3 cr)
Bus 350 Management Information Systems (3 cr)
Bus 370 Production/Operations Management (3 cr)
Econ 202 Principles of Economics or Econ 272 Foundations of Economic Analysis (3-4 cr)
FST 398 Internship (1-4 cr, max 4)

III. Science Emphasis

Chem 277 Organic Chemistry I (3 cr)
Chem 278 Organic Chemistry I: Lab (1 cr)
MMBB 380 Introductory Biochemistry (4 cr)
Select 11 credits from the following:
Chem 253 Quantitative Analysis (5 cr)
Chem 302, 303 Principles of Physical Chemistry & Lab (4 cr)
FST 398 Internship (1-4 cr, max 4)
FST 464 Food Toxicology (3 cr)
FST 465 Wine Microbiology and Processing (3 cr)
FST 499 Directed Study (~~3-4 cr~~1-4 cr, max 4)
Gene 314 General Genetics (3 cr)
MMBB 382 Introductory Biochemistry Laboratory (~~1~~ 2 cr)
MMBB 412 Pathogenic Microbiology (3 cr)
MMBB 420 Epidemiology (3 cr)
MMBB 425 Microbial Ecology (3 cr)
MMBB 440 Advanced Laboratory Techniques (4 cr)
MMBB 460 Microbial Physiology (3 cr)

IV. Nutrition Emphasis

Chem 275 Carbon Compounds (3 cr)
Chem 276 Carbon Compounds Lab (1 cr)
~~MMBB 380 Introductory Biochemistry (4 cr)~~
MMBB 300 Survey of Biochemistry (3 cr)
Select ~~11~~12 credits from the following:
FCS 270 Intermediate Foods (3 cr)
FCS 384 Quantity Food Production and Equipment (3 cr)
FCS 387 Food Systems Management (3 cr)
FCS 405 Eating Disorders (2 cr)
FCS 305 Nutrition Related to Fitness and Sport (3 cr)
FST 230 Food Chemical Safety (3 cr)
FST 398 Internship (1-4 cr, max 4)
FST 499 Directed Study (1-4 cr, max 4)

Electives to total 128 credits for the degree

FOREIGN LANGUAGES AND LITERATURES

Change the curricular requirements of German Teaching Major [**Effective**: Summer 2004]
Basic language courses taken in high school or elsewhere may be evaluated for college equivalences as part of this teaching major and minor. Consult the Department of Foreign Languages and Literatures for policies on earning credit for vertically-related courses.

A. 45-CREDIT GERMAN TEACHING MAJOR

Engl 441 Introduction to Study of Language (3 cr)
FLEN 323 or 324 German Literature in Translation (3 cr)
Germ 101 Elementary German I (4 cr)
Germ 102 Elementary German II (4 cr)
Germ 201 Intermediate German I (4 cr)
Germ 202 Intermediate German II (4 cr)
Germ 301 Advanced German Grammar (3 cr)

Germ 302 Advanced German Speaking and Writing (3 cr)
~~Germ 325-326 German Culture and Institutions (6 cr)~~
~~Germ 327-328 Survey of German Literature (3-6 cr)~~
~~Germ 420 Topics in German Culture and Literature (3 cr)~~
Germ 304 20th Century German Culture and Society (3 cr)
Germ 305 Germany in the New Europe or Germ 306 Introduction to German Literature (3 cr)
Approved upper division German electives (including at least one 400-level course) to total 45 credits in the teaching major.

In addition to the above teaching major requirements, the following special methods sequence is also required:
EDTE 437 Secondary Foreign Language Methods I (3 cr)
EDTE 447 Secondary Foreign Language Methods II (1 cr)

GEOGRAPHY

Change the curricular requirements of **Geography (B.S.)** [**Effective**: Summer 2004]
B. Regional Analysis and Development Option

This option is designed to prepare students for employment opportunities in business and industry and also in the field of planning at the regional or community scale. It emphasizes the locational aspects of economic activity and economic decision making. Students will gain an understanding of geographical patterns of markets, transactions and trade, transportation, production and consumption, industrial processing, and other aspects of the spatial economy. With this option, most students can go on to complete master's degrees in business administration or geography or move directly into a growing area of employment for the business oriented geographer.

Bus 321 Marketing (3 cr)**….**
12 credits from the following:
~~AgEc 332 Economics of Agricultural Development (3 cr)~~
AgEc 451 Land and Natural Resource Economics (3 cr)
Bus 425 Retail Distribution Management (3 cr)
Econ 385 Environmental Economics (3 cr)
Econ 415 Market Structure and Governmental Policy (3 cr)
Econ 446 International Economics (3 cr)
Geog 350 Geography of Development (3-4 cr)
Geog 360 Population Dynamics and Distribution (3-4 cr)
Geog 409 Rural Development (3 cr)

GEOLOGICAL SCIENCES

1. Change the credits, description and prerequisites of the following course [**Effective**: Summer 2004]
Geol **324 Principles of Stratigraphy and Sedimentation** (~~3~~-4 cr) Description and identification of sedimentary rocks; organization and correlation of layered rocks in all scales, including factors controlling their distribution; cycles in sedimentation and stratigraphy; sequence stratigraphy and basin dynamics. ~~Geology majors must enroll for 4 credits.~~ Two lec and two 2-hr labs a wk;~~ one 4-day field trip~~two 1-day field trips; optional 7-day field trip. Prereq: Geol 102.

2. Change the title, description and prerequisites of the following course [**Effective**: Summer 2004]
Geol **ID-J476/ID-J576 Mineral Deposits &** **Exploration Methods** (3 cr) Same as GeoE J476/J576. ~~Design of mineral exploration programs and~~ Characteristics of metallic and nonmetallic economic mineral deposits and design of mineral exploration programs through integration and evaluation of geological, geochemical, and geophysical exploration techniques. Graduate credit requires an additional independent project and demonstration through exam work and papers of a more in-depth understanding of the material. One 10-day field trip. Prereq~~ or coreq~~: Geol~~ 475 or 470~~ 249 and 345.

3. Add the following course [**Effective**: Summer 2004]
Hydr **496 Hydrogeology Senior Thesis** (3 cr) Completion of original research and report. Course is taken over two semesters; first semester is graded IP until completion of second semester. Prereq: Geol 309 or Hydr 409/509 and Geol 410.
Enforce the prerequisites: Yes

4. Change the curricular requirements of **Geological Sciences (B.S.)** [**Effective**: Summer 2004]
B. Hydrogeology Option

Geol 309 Groundwater or Hydr ~~463 Hydrogeology~~ 409 Quantitative Hydrogeology (3 cr)
Geol 410 Techniques of Groundwater Study (3 cr)
Math 170, 175 Analytic Geometry and Calculus I-II (8 cr)

Stat 251 Principles of Statistics 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 351 Hydrology (3 cr)
~~BAE 451~~ 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)
~~GeoE~~ Stat 428 Geostatistics (3 cr)
Geog 385 GIS Primer (3 cr)
~~Geol 464 The Geochemistry of Natural Waters (3 cr)~~
Hydr 409/509 Quantitative Hydrogeology (3 cr)
Hydr 412 Environmental Hydrogeology (3 cr)
~~Hydr 463 Hydrogeology (3 cr)~~
Hydr 464/564 The Geochemistry of Natural Waters (3 cr)
Hydr 468 Aquifer Test Design and Analysis (3 cr)
~~Hydr 470 Groundwater Remediation (3 cr)~~
~~Hydr 472 Groundwater Management (3 cr)~~
~~Hydr 475 Design and Construction of Water Wells (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)
Geol 578 Advanced Geochemistry of Natural Waters (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)
~~Soil 419 Solute Transport in Porous Media (2 cr)~~

MECHANICAL ENGINEERING

Change the title and cross list the following course [**Effective**: Spring 2004]
ME **415 Materials Selection and ~~Processing for Mechanical~~ Design** (3 cr) ~~Selection of materials for mechanical design based on material properties, processing, and service conditions. Prereq: ME 261 or Met 201, and ME 262. Coreq: Engr 350.~~See Met 415.

MICROBIOLOGY, MOLECULAR BIOLOGY, AND BIOCHEMISTRY

Change the title of the following course [**Effective**: Summer 2004]
MMBB **155 Introductory ~~Biology of Bacteria and Viruses~~ Microbiology Laboratory** (1 cr). *May be used as core credit in J-3-b when taken with MMBB 154.* May be taken by microbiology majors but carries no credit after MMBB 250. Introductory laboratory training in basic microbiology; includes sterile technique, bacterial enumeration methods, culturing techniques, yogurt preparation and analysis, recombinant DNA techniques. Three hrs of lab a wk. Coreq: MMBB 154.

NEUROSCIENCE

Creation of "Neur" course subject field and standard course numbers as authorized by Faculty Staff Handbook 4130.
[**Effective**: Spring 2004]

PHYSICS

1. Change the description of the following courses [**Effective**: Summer 2004]
   - Phys **111 General Physics I** (4 cr) (C) *May be used as core credit in J-3-b.* Kinematics, forces and dynamics,~~ and forces~~conservation laws, thermodynamics, waves. Three lec, one recitation, and one 2-hr lab a wk. Prereq: Math 143.
   - Phys **112 General Physics II** (4 cr) (C) *May be used as core credit in J-3-b.* ~~Sound, e~~Electricity, magnetism, ~~light~~optics, and ~~selected topics from~~ modern physics. Three lec, one recitation, and one 2-hr lab a wk. Prereq: Phys 111.

2. Change the description and add a joint level course to the following courses [**Effective**: Summer 2004]
   - Phys **J443/J543 Optics** (3 cr) Geometrical optics~~ and photometry, interference, diffraction, double refraction, and polarization; application to modern optical instruments~~, wave optics and physical optics with emphasis on modern instrumentation and methods of measurement. Additional projects/assignments reqd for grad cr. Prereq Phys 443:

Phys 212 or 213, Math 175, and Sr standing or perm. Prereq Phys 543: Admission to Physics Grad program or perm.
Enforce the prerequisites: Yes

- Phys **J444/J544 Quantum Optics** (3 cr) ~~Theory and application of~~ Introduction to the physics of lasers,~~ optical spectrum analyzers, electro-optic modulators, and detectors; modern optical concepts and techniques; Gaussian beams and optical resonators, interaction of radiation and quantized matter, nonlinear optical effects, and laser spectroscopy~~ laser spectroscopy, non-linear optical effects, and the interaction of radiation and matter. Additional projects/assignments reqd for grad cr. Prereq Phys 444: Phys 212 or 213, Math 175, and Sr standing or perm. Prereq Phys 544: Admission to Physics Grad program or perm.
Enforce the prerequisites: Yes

3. Change the prerequisites of the following courses [**Effective**: Summer 2004]
   - Phys **321 Analytical Mechanics** (3 cr) Statics; kinematics and dynamics of a particle; systems of particles; rigid continuous media; intro to Lagrange's equations. Prereq: Phys ~~112 or~~ 212, ~~or~~ 213, and Math 275.
   - Phys **322 Analytical Mechanics** (3 cr) Statics; kinematics and dynamics of a particle; systems of particles; rigid continuous media; intro to Lagrange's equations. Prereq: Phys~~ 112 or 212 or 213~~ 321~~, and Math 275~~.
   - Phys **341 Electromagnetic Fields I** (3 cr) Theory using vector calculus; electrostatics; magnetostatics, electromagnetism, analysis of AC and DC circuits; Maxwell's equations; radiation and propagation of electromagnetic waves. Prereq: Phys ~~112 or~~ 212, ~~or~~ 213, and Math 275.
   - Phys **342 Electromagnetic Fields II** (3 cr) Theory using vector calculus; electrostatics; magnetostatics, electromagnetism, analysis of AC and DC circuits; Maxwell's equations; radiation and propagation of electromagnetic waves. Prereq: Phys~~ 112 or 212 or 213~~ 341~~, and Math 275~~

PLANT, SOIL, AND ENTOMOLOGICAL SCIENCES

1. Add the following course [**Effective**: Spring 2004]
   PlSc **203 General Botany** (4 cr) Same as Biol 203. Growth, development and ecology of plants, fungi, and protists in relation to their environments. Rec. Prep: Chem 101 and PlSc 102. Prereq: Biol 115. (Spring only)
   Enforce the prerequisites: Yes

2. Drop the following course [**Effective**: Summer 2004]
   Soil **ID&WS460 Environment, Agriculture and Food** (3 cr). WSU SoilS 460. Environmental issues in agriculture and food production; pesticides, fertilizers, organic wastes, biotechnology, quality of life, risk-benefit assessment. Prereq: 1 year of biological or physical science or perm.
   Recommended Substitution:

3. Change the credits of the following courses [**Effective**: Summer 2004]
   - Ent **ID-J447/ID-J547 Fundamentals of Biological Control** (~~2~~3 cr). WSU Entom 447/547. Intro to history and development of biological control and biological and ecological factors involved; emphasis on entomophagous and phytophagous insects. For graduate credit, students present a paper or "grant proposal" for critique. Prereq: Ent 211 and general ecology or perm. (Alt/yrs)
   - Soil **458 Soil and Site Evaluation** (1-2 cr, max 8). Description and evaluation of soils; emphasis on morphological features and properties that influence land use. Graded P/F. Two-four hrs of lab a wk; one 3-day or one 6-day field trip. Prereq: Soil 205 or perm.

PSYCHOLOGY AND COMMUNICATION STUDIES

1. Designate the following courses as core Social Science courses [**Effective**: Summer 2004]
   - Comm **233 Interpersonal Communication** (3 cr) *May be used as core credit in J-3-d.* Communication concepts and skills applied to relationship management; communication process, listening, self-disclosure, perception, conflict.
   - Comm **335 Intercultural Communication** (3 cr) *May be used as core credit in J-3-d.* Survey of current theories and research on intercultural communication; development of critical thinking skills in regard to intercultural interaction and communication styles.
   - Comm **449 Theory in Communication** (3 cr) *May be used as core credit in J-3-d.* Interdisciplinary approach to understanding the process of communication.

2. Designate the following course as an International course [**Effective**: Summer 2004]
   Comm **335 Intercultural Communication** (3 cr) *May be used as core credit in J-3-d.* Survey of current theories and research on intercultural communication; development of critical thinking skills in regard to intercultural interaction and communication styles.

RESOURCE, RECREATION AND TOURISM

Designate the following course as a core International course [**Effective**: Summer 2004]
RRT **493 International Land Preservation and Conservation Systems** (3 cr) *May be used as core credit in J-3-d.* An examination of international approaches to land preservation and conservation; comparative analysis of philosophies, methods of implementation (Parks, Biosphere Reserves, RAMSAR sites, etc.), and associated issues and concerns with these social interventions; ramifications of conservation practices for biophysical and social systems. (Spring only)

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FOR THE FACULTY'S INFORMATION

Correction to General Curriculum Report 226:
The change to CORE 201 was listed incorrectly in General Curriculum Report 226. The following correctly lists the changes.

Change the course prefix of the following course **[Effective**: Summer 2004]
CORES ~~201~~205-297 ~~(s)~~ **Integrated Science** (3 or 4 cr) (CORE 201) *May be used as core credit in J-3-b.* An interdisciplinary, thematically based course intended to provide the student with the skills to analyze and evaluate scientific claims and to make intelligent scientific and social decisions; among the topics addressed are the impact of science on society and the ethical dilemmas and moral consequences of scientific research; all themes/sections emphasize discussion, collaborative work, and the conduct of science, though not necessarily in a formal lab setting. See http://www.webs.uidaho.edu/core for specific course titles and descriptions.

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)

1. Add cooperative status to the following courses [**Effective**: Fall 2003 Only]
   - AgEc WS**383 Economics for Natural Resource Managers** (3 cr). See For 383.
   - For WS**383 Economics for Natural Resource Managers** (3 cr). Same as AgEc 383. WSU AgEc 311. Role of economic forces in resource analysis and conservation; planning of forest resource use by the firm and society. Prereq: Econ 202; Math 160; For/RRT 235, or perm.
   - RRT WS**383 Resource Economics for Environmental Policymaking** (3 cr). WSU AgEc 311. Application of economic theories and methods to natural resources management and environmental policy-making, with a focus on equitable, efficient provision of private-market and public goods and services; economic analysis of commodity and amenity resource production, including integrated resource decision-making and joint production optimization. Prereq: Econ 202 or 201 or perm. (Fall only)

2. Drop the following cooperative courses [**Effective**: Summer 2004]
   - Ag **WS310 Accessing Information for Research** (1 cr). WSU GenEd 300. Course available only to students at off-campus locations.
   - AgEd **WS440 Principles of Vocational Education** (2-3 cr). WSU Ag Ed 440. Course available only to students at off-campus locations.
   - Soil **WS513 Models for Vadose Zone Transport** (2 cr). WSU SoilS 513. (Alt/yrs)

Other Informational Changes:

ADULT, COUNSELOR AND TECHNOLOGY EDUCATION
Change the title of the following course [**Effective**: Summer 2004]
AdOL **577 Organization~~al~~ Development** (3 cr) (AdEd 577) Planned change strategies for human resources in organizations; motivation, training/re-training, assessing, and crafting the corporate culture through educational efforts; assessing the knowledge skill gaps in the human resources.

AGRICULTURAL EXTENSION AND EDUCATION
Change the description of the following courses [**Effective**: Summer 2004]
- AgEd **180 Introduction to Agricultural Education** (1 cr). Overview of purposes and career opportunities in agricultural education; role of secondary agriculture instructor in secondary school systems. ~~(Accelerated; first half of Fall semester)~~
- AgEd **181 Introduction to Extension Education** (1 cr). Overview of purpose and career opportunities available in extension education profession; role of cooperative extension faculty; basic principles and practices of Cooperative Extension System including related legislation. ~~(Accelerated; second half of Fall semester)~~

BIOLOGICAL AND AGRICULUTRAL ENGINEERING
Cross list the following course [**Effective**: Spring 2004]

ASM **ID&WS433 Agricultural Processing Systems** (3 cr) WSU AgTM and FSHN 433. Same as FST 433. Grain cleaning, mixing, and drying; materials handling, heat transfer, pumps, fans, refrigeration, and instrumentation. Two lec and one 3-hr lab a wk; one 1-day field trip. Prereq: Math 160.

ENVIRONMENTAL SCIENCE

Change the credits of the following course [**Effective**: Spring 2004]

EnvS **504** (s) **Special Topics** (~~3 cr, max~~ cr arr). Prereq: perm.

FOOD SCIENCE AND TOXICOLOGY

Cross list the following course [**Effective**: Spring 2004]

FST **ID&WS433 Agricultural Processing Systems** (3 cr). WSU AgTM and FSHN 433. ~~Principles of heat transfer, steam, air-vapor mixtures, refrigeration and fluid flow as applied to commodity processing and storage.~~See ASM 433.

THEATRE AND FILM

Change the prefix of all TheA courses to TheF. [**Effective**: Summer 2004]