General Curriculum Report #247

UNIVERSITY OF IDAHO - REGISTRAR'S OFFICE
January 11, 2008

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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Adult, Career and Technology Education

1. Drop the following courses [**Effective**: Summer 2008]

PTTE 135 Electrical Systems (3 cr)
Fundamentals of AC/DC circuits and components, motors, transformers, and switchgear, national electrical code wiring requirements.
Recommended Substitution: N/A

PTTE 314 Principles of Total Quality Management and Quality Assurance (3 cr)
Total quality management, and quality assurance principles and processes as applied in industry including conducting, management, and evaluation.
Prereq: Stat 251
Recommended Substitution: N/A

PTTE 338 Thermal and Fluid Fundamentals for Technology (3 cr)
Fundamentals of statics, fluid mechanics, thermodynamics, and heat transfer for use in the industrial technology field. Three lec and 4 hrs of lab a wk. Recommended preparation: biochemistry, human physiology.
Prereq: Math 170, Phys 211, Chem 101
Recommended Substitution: N/A

PTTE 340 Nondestructive Examination Techniques and Methods (3 cr)
Intro to nondestructive testing, liquid penetrant exam, magnetic particle exam, and radiography in modern industry.
Recommended Substitution: N/A

PTTE 350 Teaching and Learning Construction Systems (3 cr)
Teaching techniques and methods of instruction for systems approach to construction technology including residential, commercial, and civil. Three lec and 4 hrs of lab a wk. Enrollment limited to lab stations available.
Prereq: PTTE 152 or Work Experience and Permission
Recommended Substitution: PTTE 252

PTTE 402 Teaching and Learning Principles of Technology (3 cr)
In-depth examination and implementation of physical science in industrial situations; emphasizes principles rather than specifics of technology; illustrates application of mathematics associated with these principles. Three lec. and 4 hours of lab a week.
Recommended Equivalency: PTTE 173

PTTE 413 Advanced Internet Scripting (3 cr)
Study Java and Java Advanced Imaging, enhanced graphics, imaging and communication capabilities. Java 2D for graphics, text, and fundamental image manipulation; the Java Media Framework for components to play and control time-based media such as audio and video; Java Sound; and Java 3D.
Recommended Substitution: N/A

PTTE 414 Teaching and Learning Visual Basic (3 cr)
Teaching and Learning using Microsoft Visual Basic computer language.
Recommended Substitution: N/A

PTTE 433 Quality Auditing (3 cr)
Industrial value of audit as a management tool; audit methods and techniques; present practical examples related to real-life applications and benefits.
Recommended Substitution: N/A

PTTE 444 Telecommunications (3 cr)

Advanced experimental telecommunications theory, telecommunications equipment, and data communications; applications of telecommunications theory and principles at work, at school, and in personal endeavors. Three lec and 2 hrs of lab a wk.
Recommended Substitution: N/A

PTTE 453 Environmental Monitoring (3 cr)
In-depth examination of advanced study of personal and area illumination, temperature, ventilation, gas/vapor, biological/ergonomics, noise. Recommended Preparation: PTTE 362.
Recommended Substitution: N/A

PTTE 458 Permit Processing (3 cr)
Preparing, processing, implementing, permit requirements, permitting authorities (local, state, federal).
Recommended Substitution: N/A

PTTE 465 Environmental Regulations (3 cr)
Survey of major environmental statutes and their implementing regulations; emphasis on practical applications.
Recommended Substitution: N/A

PTTE 473 Teaching and Learning Power, Energy, and Transportation Technology Systems (3 cr)
In-depth examination and implementation of internal-external combustion engines; solar, wind, water, biomass, and nuclear energy; lab experience in generating, transporting, and converting energy forms. Enrollment per section limited to lab stations available. Three lec. and 4 hrs of lab a week.
Recommended Equivalency: PTTE 273

PTTE 480 Technology Management Practicum (1-6 cr, max 6)
Experiences to enable the individual to gain depth in technical competency beyond the basic certification requirements, and to maintain skills in harmony with current industrial practice.
Prereq: Permission
Recommended Substitution: N/A

PTTE 482 Computer Hardware Technology (3 cr)
Hardware and software knowledge and skills necessary to purchase, maintain, and repair personal computer systems; not a beginning computer class. Three lec and 3 hrs of lab a wk. Recommended preparation: knowledge of disk operating systems and multi-tasking systems.
Recommended Equivalency: PTTE 428

PTTE 485 Waste Management Alternatives (3 cr)
Basic introduction to waste management including regulatory, technical, and political implications of waste management.
Recommended Substitution: N/A

PTTE 517 Industrial Liability (3 cr)
In-depth examination and implementation of workman's compensation, second injury, insurance and self-insurance; third party responsibilities; product liability, personal liability; plant damage.
Recommended Substitution: N/A

PTTE 520 Advanced Accounting, Personal Finance & Economics Methods (2-3 cr)
Advanced methods and strategies of teaching accounting, personal finance and economics at the secondary or adult level. (Fall only)
Recommended Substitution: N/A

2. Add the following courses [**Effective**: Summer 2008]

AdOL 473 Foundations of Adult Education and Adult Development (3 cr)
Foundation of Adult Education and an Introduction to Adult and Lifespan Development.

AdOL 570 Introduction to Research in Workforce Education (3 cr)
Same as PTTE 570. The first emphasis of this course is to help workforce education students find, interpret and evaluate scholarly research. The second emphasis is to prepare students to conceptualize, design, and conduct various forms of action research.

PTTE 120 Introduction to Computer Aided Drafting (1 cr)
This course has been designed to give students an introductory experience in sketching, drafting theory, and Computer Aided Drafting (CAD).

PTTE 121 Introduction to Principles of Engineering and Technology (1 cr)
Students will be introduced to the principles of engineering and technology.

PTTE 122 Introduction to Manufacturing and Construction (1 cr)
This course introduces students to safety, materials, and processes used in the manufacturing and construction industries.

PTTE 123 Introduction to Power, Energy, and Transportation (1 cr)
Students will be introduced to the topics of power, energy, and transportation and their impact on technical societies.

PTTE 152 Manufacturing: Non-Metallic Materials and Processes (3 cr)
This course introduces and reinforces knowledge in the area of manufacturing and manufacturing processes of non-metallic materials such as wood and composites. The materials themselves, primary processing, and the systems of secondary processing will be studied. Recommended Preparation: PTTE 120, 267 or Engr 105.

PTTE 173 PTTE Principles of Engineering and Technology (3 cr)
Principles of Engineering and Technology introduces students to the design, build, and analyze aspect of engineering. Students learn to integrate scientific, engineering, and mathematical concepts into the problem solving process.

PTTE 252 Green Construction Technology (3 cr) (PTTE 350)
The theory and the praxis—hands-on how to—of green building. Concepts such as structure, building loads, thermal mass, insulation and more are addressed and basic traditional building techniques will be addressed. Alternative building methods such as earth plaster, straw bale, cordwood, cob, and living roofs are examined and are experimented with.
Prereq: PTTE 152 or Work Experience and Permission

PTTE 273 Power, Energy, and Transportation Technology (3 cr)
This course examines traditional and alternative energy sources of energy to power an industrial society. Students will use the design process to research, design, build models, and evaluate their solutions to several energy and transportation problems.

PTTE 355 Professional-Technical Education Micro-Enterprises (3 cr)
In preparation for running a Technology Student Association (TSA) club in their school, students will explore mass production systems, marketing, and entrepreneurship and learn how to fund club related activities at the state and national level.
Prereq: PTTE 152, 225 and 352; or Work Experience and Permission

PTTE 417 Teaching and Learning in Technology Education (3 cr)
Students examine research-based approaches to the selection and application of appropriate teaching and assessment methods for engineering and technology education educators at the middle and high school level. Instructional strategies best suited to learning technical skills, related academics, problem solving, and hands-on activities will be explored. Recommended Preparation: ED 401.
Prereq: ED 201 and 301

PTTE 436 Human Performance Fundamentals (3 cr)
Introduction to the factors that control and influence human performance. Explore the basis of individual and leader behaviors as well as organizational processes and values that either lead to or prevent error. Fundamental knowledge of human and organizational behavior is emphasized so that the manager, supervisor, and worker can better handle error-provoking work situations to prevent human error and work-place events.

PTTE 466 Human Performance Field Investigation (3 cr)
Provides education in the area of participating in an investigation of an incident that has a significant human contribution. Principles of the old view of human error – the problems it holds, the traps it represents, and the temptations that can make one fall into them. The new view of human error in which human error is the starting point for an investigation. Reconstruct the human contribution to system failure and "reverse engineer" the evolving mindset of personnel who were caught up in an event. Investigate the biases and difficulties in understanding past behavior associated with system failure. Recommended Preparation: PTTE 436.

PTTE 474 Power Distribution (3 cr)
This course examines the distribution of energy after the production phase. It will cover power grid design, operation, and security.

PTTE 483 Project and Construction Management (3 cr)
This course introduces the fundamental nature of projects and defines special techniques involved in project/construction management. Concepts such as the definition of a project, the nature of the project team, and the role and function of the project manager are presented. Discussion incorporates the language of projects, the context in which projects are conducted, and the key players in the project management process. Students investigate practical application of project management principles as applied to practice settings. The Project Management Body of Knowledge (PMBOK) is introduced as the basis to further explore practices, tools, and techniques for successful project management.

PTTE 486 Homeland Security (3 cr)
This course will provide students with a basic understanding of terrorism involving Weapons of Mass Destruction (WMD) (e.g. biological, nuclear, incendiary, chemical, radiological, and explosive devices). The history of WMD/Terrorism and how it relates to modern day devices and concepts will be discussed. The students will gain an understanding of International terrorism and homegrown terrorists.

PTTE 494 Senior Design Project (3 cr)
In the last year of study, students select an individual design project related to their area of specialization within technology education. Some students may have the option of joining a Senior Design Team in the College of Engineering. Project must be approved by instructor.

PTTE 512 Fundamental Concepts of Nuclear Science (3 cr)
Fundamental concepts of nuclear science and engineering technologies: nuclear radiations (origin, detection & measurement, shielding & health physics), the chart of the nuclides, the neutron (life cycle, multiplication & criticality, cross sections, fission, activation), nuclear fuel cycles (fuels, reactors and waste streams), and basic reactor behavior.
Prereq: Permission

PTTE 513 Nuclear Criticality Safety (3 cr)
In-depth overview of nuclear criticality safety including nuclear physics, fission and neutron multiplication, moderation and reflection of neutrons, criticality issues in the fuel cycle, critical experiments and sub-critical limits, calculations of criticality, nuclear criticality safety practices, case studies, incident reporting and recovery, emergency procedures, and nuclear regulations and standards.
Prereq: Permission

PTTE 514 Nuclear Safety (3 cr)
An in-depth technical study of safety issues within the nuclear fuel cycle and within various reactor types. Evaluation methods, system disturbances, safety criteria, containment, NRC licensing, and codes for safety analysis will be presented. Case studies of reactor accidents and corrective measures included.
Prereq: Permission

PTTE 516 Nuclear Rules and Regulations (3 cr)
An in-depth examination of nuclear regulatory agencies; major nuclear legislation; current radiation protection standards and organizational responsibility for their implementation.
Prereq: Permission

PTTE 524 Nuclear Detection and Measurement (3 cr)
In-depth understanding of nuclear radiations with focus on detection, measurement and health physics. Students will learn how to select the proper detector given the energy and type of radiation measured; analyze the results of counting experiments to calculate errors, uncertainties, and energy spectra. In-class and laboratory experiments are included.
Prereq: Permission

PTTE 552 Industrial Ergonomics (3 cr)
A course designed to focus on work design and ergonomics in occupational settings. Specific attention will be focused on introducing the terminology and the techniques used in work design, and on the fundamental concepts embodied in industrial ergonomics. (Summer only)

PTTE 570 Introduction to Research in Workforce Education (3 cr)
See AdOL 570.

3. Change the title of the following courses [**Effective**: Summer 2008]

PTTE J419/J519 ~~Teaching and Learning~~ Database Applications and Information Management (3 cr)
Teaching and training strategies for database applications. Includes database management principles and methods of information retrieval, processing, storage and distribution. Advanced project reqd for grad cr. Recommended Preparation: PTTE 111.

PTTE 448 Construction Safety ~~Principles~~ (3 cr)
Major components of construction health and safety, including hazards, law, written programs, implementation, control and behavior.

PTTE 519 ~~Teaching and Learning~~ Database Applications and Information Management (3 cr)
See PTTE J419/J519.

4. Change the description and title of the following courses [**Effective**: Summer 2008]

AdOL 573 Adult Learners: Foundations and Characteristics ~~of Adult Education~~ (3 cr)
Philosophical, psychological, social and economic foundations of adult education and characteristics of adult learners.~~Philosophical, economic, sociological, and psychological bases of adult education; roles, limitations, and coordination of adult education, domestic and international programs--public and private sector.~~

AdOL 575 Strategies for Facilitating Adult Learning~~Teaching Adults~~ (3 cr)
Strategies for planning and facilitating adult learning courses and programs including face-to-face, hybrid and on-line delivery.~~Design and application of teaching strategies for learning domains and learning styles appropriate for adult learners.~~

PTTE 130 Introduction to Electricity and ~~Basic~~ Electronics (3 cr)
This introduction to electricity and electronics includes properties of resistors, capacitors, and inductors in electrical circuits; basics of power distribution systems and house wiring; and the use of meters and oscilloscopes in lab.~~For beginning students with no experience in electricity; properties of resistors, capacitors, and inductors in electrical circuit; basics of power distribution system and house wiring; use of meters and oscilloscopes in lab.~~ Three 1-hr lec and one 2-hr lab a wk. ~~Enrollment per section limited to lab stations available. Knowledge of algebra recommended.~~

PTTE 310 ~~Principles of~~Production Safety (3 cr)
Students will learn and demonstrate the safe use of tools, machines, and lab equipment. Knowledge will be applied to both industrial and educational settings. This is intended to be the first course taken in PTTE for technology education and industrial technology majors.~~Applications of safety construction, operations, industry for safety, industrial hygiene, and fire protection.~~
Prereq: Stat 251, Math 143

PTTE 333 ~~Computer~~ Industrial Electronics (3 cr)
This course will provide students an in-depth knowledge of electronic components and circuits used in automated industrial settings.~~Logic of circuits, basic circuits used in computers, and interfacing hardware for computer peripherals.~~

PTTE 362 ~~Environmental Health~~Behavior Based Safety (3 cr)
Principles of paradigm shifts required for total safety, human barriers to safety, the basic principles of behavior-based psychology and behavioral safety analysis and behavior-based interventions.~~Types, mechanisms, and magnitudes of toxicity and their relation to the human system as an industrial environmental problem; all types of metals, compounds, and reagents and their influence on human productivity; sampling and analysis of contaminants.~~

PTTE 411 Web Graphics and Animation~~using Flash~~ (3 cr)
This course involves study of the role of multi-media and animated graphic elements in supporting effective websites. Specific focus on the design and creation of animated graphics using industry standard applications is emphasized throughout the process of website development. Content is taught in the context of Professional-Technical Education.~~Create multi media animation through Flash and XML. Study of Network protocols and PHP server scripting, Sockets and SQL. Hands-on exercises and projects, problem solving, research, computer operation, and thinking skills to produce animations and interactive Web sites.~~

PTTE 428 ~~Teaching and Learning~~ Computer ~~Operating~~ Integrated Systems ~~for Technology~~ (3 cr)
PC maintenance fundamentals, an overview of various computer operating systems, fundamental networking applications, peripherals and integration of PC technology into the home and industry. Students will have the tools they need for further study and industry certification. Enrollment per section limited to computer stations available.~~In-depth examination and implementation of advanced DOS, multi-tasking and network operating systems, planning and maintenance of computer systems. Three lec and 4 hrs of lab a wk. Enrollment per section limited to computer stations available.~~
Prereq: PTTE 111 or Permission

PTTE 432 Systems ~~Safety Analysis~~Integration (3 cr)
This course is designed to provide students with an understanding of Systems Integration (SI) processes, approaches, drivers, tools and techniques required for successful SI, critical success factors, and best practices. The objective of the course is to provide the students an understanding of the technical and business process issues involved in systems integration. Systems integration process is illustrated over the life cycle concept of projects – during design, development, implementation, testing and production.~~In-depth examination and implementation of principles of system safety; defining a system; risk and consequences; introduction to hazard and risk analyses; systemic accident investigation.~~

PTTE 450 ~~Industrial~~ Occupational Safety (3 cr)
Overview of occupational safety in business, schools, and industry. Topics Include: Overview of OSHA, Worker's Compensation, Safety Program Organization, Hazard Identification and Elimination, and Safety Program Implementation.~~Organization and administration of safety programs in industry and professional-technical education laboratories; materials, research literature, methods, and techniques for industrial safety education.~~

PTTE 452 Fire ~~Protection System Design~~Emergency Planning (3 cr)
This course is intended to provide information that will enable persons just entering the profession or expanding their roles to have the ability to assess their community's fire hazards, determine community resources, and write an all-hazards plan to assign responsibility to various agencies who will respond during a fire emergency or disaster.~~Methods and practical design of fire protection systems (water, gas, chemicals); testing and maintenance of systems.~~
Prereq: Permission

PTTE 454 ~~Environmental Health II~~National Incident Management Systems (3 cr)
This course is designed to increase the participants' knowledge and understanding of the inherent flexibility of the Incident Command System to manage major or complex incidents. Utilizing lectures and small group activities, participants will acquire an in-depth knowledge of the National Incident Management System (NIMS), terminology, players, and management philosophy. Participants will also acquire the ability to organize and manage major or complex incidents. The material covered during the course includes command and general staff duties and responsibilities, unified command, major incident management and area command structures.~~Intro of human system response and susceptibility to problems of occupation originating from air conditioning, air cleaning, ventilation, respiratory devices, air pressure, noise, lighting, temperature, and radiation; identification, documentation, and reporting of problems and results.~~

PTTE 472 ~~Professional-Technical & Technology Education~~ Teaching and Learning in Occupation Education~~Methods~~ (3 cr)
Students examine research-based approaches to facilitate learning outcomes for occupational educators in post-secondary, secondary and private sector contexts; Instructional strategies and materials will be considered and developed to facilitate learning in technical skills, related applied academics, and workplace readiness knowledge and dispositions.~~Dem, lec, and problem solving; preparation and use of instructional aids, individual instruction sheets, and programmed instructional materials.~~

5. Change the description, prerequisites and title of the following courses [**Effective**: Summer 2008]

PTTE 352 Manufacturing: Metallic Materials and Processes~~Technology Systems~~ (3 cr)
This course introduces and reinforces knowledge in the area of manufacturing and manufacturing processes of metallic materials (ferrous and nonferrous). The materials themselves, primary processing, and the systems of secondary processing will be studied in-depth. Recommended Preparation: PTTE 267. ~~In-depth examination and implementation to manufacturing theory, applications, and processes including research and development, starting and organizing manufacturing companies, and product production and marketing. Two lec and 6 hrs of lab a wk.~~
Prereq: PTTE 152 or Work Experience and Permission

PTTE 353 ~~Teaching and Learning~~ Advanced Manufacturing Systems ~~Technology~~ (3 cr)
In-depth examination and implementation of manufacturing theory and processes including research and development, product planning and controlling. Topics, such as Lean Manufacturing, Kanban, relating to manufacturing facilities and management of manufacturing

processes will be discussed, studied and implemented in the manufacture of a designed product in quantity.~~on industrial system manufacturing processing; manufacturing organization and management; address societal, environmental, and labor relations of manufacturing. Three lec and 3 hrs of lab a wk. Recommended Preparation: PTTE 352.~~
Prereq: PTTE 267 or Engr 105; and PTTE 352

PTTE 462 ~~Teaching and Learning~~ Communication Technology ~~Systems~~ (3 cr)
The first part of this course investigates the evolution of communication technology, and the problems associated with interpersonal human communication and human to machine communication. The second part of the course covers the Infinity Pre-engineering program which investigates the science and mathematics in technologies such as cell phones, music, and video. Recommended Preparation: PTTE 415.~~Teaching techniques and methods of instruction for study of communication technology including sub systems of interpersonal human communication and communication between humans and machines. Two lec and 6 hrs of lab a wk.~~
Prereq: PTTE 111

PTTE 481 Computer ~~Numerical Control~~Integrated Manufacturing (3 cr)
In-depth examination and implementation of advanced computer aided drafting, 3D solids modeling, computer numerical control, basic and advanced toolpath generation, virtual machining environments, and robotics applications. Enrollment per section limited to lab stations available.~~computer aided manufacturing, computer numerical control, and robotics, with lab applications. Enrollment per section limited to lab stations available. Three lec and 3 hrs of lab a wk. Recommended Preparation: PTTE 367.~~
Prereq: PTTE 367 or Engr 105; and PTTE 352

6. Change the description and number of the following course [**Effective**: Summer 2008]

AdOL ~~689~~ 589 Critical Thinking (2-3 cr) (AdOL 689)
See EdAd ~~689~~589.

7. Change the credits, description, number and title of the following course [**Effective**: Summer 2008]

PTTE ~~367~~ 267 ~~Teaching and Learning~~ Computer Aided Drafting/Design (~~2~~ 3 cr) (PTTE 367)
This course has been designed to give students an introductory experience in drafting theory, Computer Aided Drafting, and CNC manufacturing. Students may have to spend time in the CAD lab outside of class time to complete the required work. 3 hours of lecture per week. ~~In-depth examination and implementation of fundamental principles of computer aided drafting and design; theory of and skill development in file creation, digitizing, plotting, and computer assisted design. One lec and 2 hrs of lab a wk.~~

8. Change the curricular requirements of **Professional-Technical and Technology Education** (B.S.Ed.) [**Effective**: Summer 2008]

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

General Professional-Technical and Technology Education Requirements

~~ED 201 Diverse Learners in Schools and Social/Cultural Contexts or PTTE 447 Diverse Populations and Individual Differences (2-3 cr)~~
PTTE 351 Principles and Philosophy of Professional-Technical Education (3 cr)
~~PTTE 426 Instructional Design and Curriculum (3 cr)~~
PTTE 430 Leadership and Student Organizations (2 cr)
PTTE 431 Supervising PTTE Student Organizations (1 cr)
PTTE 445 Professional Role Development in PTTE I (2 cr)*
PTTE 455 Professional Role Development in PTTE II (1 cr)*
PTTE 464 Career Guidance and Transitioning to Work (3 cr)
~~PTTE 472 Professional-Technical & Technology Education Teaching Methods (3 cr)~~

*Note: PTTE 445 and 455 replace the requirement of ED 401 (see College of Education requirements)

Completion of one of the following three options:

A. Business and Marketing Education Option

The Business and Marketing Education option is for students interested in teaching business, marketing, and business technology subjects at the high school or post-secondary level. Completers of this option may apply for Idaho secondary teacher certification with endorsements in business technology, marketing technology, and usually economics (based on selected elective)~~consumer economics~~.

Requirements include the General Professional-Technical and Technology Education Requirements, ~~the Idaho Technology Competency Certification,~~ the satisfactory completion of the PRAXIS II Content Area ~~Test~~Exam, and the following:

Acct 201 Introduction to Financial Accounting (3 cr)
Acct 202 Introduction to Managerial Accounting (3 cr)
BLaw 265 Legal Environment of Business (3 cr)
Bus 101 Introduction to Business Enterprises (3 cr)
Bus 311 Introduction to Management (3 cr)
Bus 321 Marketing (3 cr)
Bus 425 Retail Distribution Management (3 cr)
Comm 101 Fundamentals of Public Speaking or Comm 111 Introduction to Communication Studies (3 cr)
Econ 201, 202 Principles of Economics (6 cr)
ED 201 Diverse Learners in Schools and Social/Cultural Contexts or PTTE 447 Diverse Populations and Individual Differences (2-3 cr)

ED 301 Principles of Learning and Development in Education (3 cr)
ED 302 Curriculum, Instruction, and Assessment Strategies (3 cr)
EDCI 463 Literacy Methods for Content Learning (3 cr)
Engl 313 Business Writing (3 cr)
FCS 448 Consumer Economic Issues (3 cr)
Psyc 101 Intro to Psychology or Psyc 305 Developmental Psychology (3 cr)
PTTE 104 Input Technologies for the 21st Century (3 cr)
PTTE 415 Microcomputer Applications (3 cr)
PTTE 416 Website Design and Development or PTTE 460 Desktop Publishing (3 cr)
PTTE 418 Teaching Economics and Personal Finance (3 cr)
PTTE 419 Teaching and Learning Database Applications (3 cr)
PTTE 484 Internship in Professional-Technical and Technology Education Teaching (14 cr)
PTTE 492 Business and Marketing Education Methods (3 cr)
PTTE 495 Administrative Technology Management and Procedures (3 cr)
Accounting, business, economics or PTTE electives (6 cr)
Electives to total 128 credits

Note: Students interesting in obtaining a teaching endorsement in Economics need to ensure that 3 credit of designated elective credits are in economics, finance or accounting, see an advisor for details.

B. Professional-Technical Education Option

This option is designed for those teachers in secondary trade and industrial programs who wish to teach in post-secondary professional-technical programs. Requirements include the General Professional-Technical and Technology Education Requirements and the following:

PTTE 420 Evaluation in Professional-Technical Education (3 cr)
PTTE 426 Instructional Design and Curriculum (3 cr)
PTTE 447 Diverse Populations and Individual Differences (2-3 cr)
PTTE 472 Teaching and Learning in Occupation Education (3 cr)
Approved course in computer literacy (3 cr)
Professional-technical electives approved by advisor to total 128 credits:
- PTTE 200, 400 Seminar (cr arr)
- PTTE 203, 403 Workshop (cr arr)
- PTTE 204, 404 Special Topics (cr arr)
- PTTE 299, 499 Directed Study (cr arr)
- PTTE 306 Preservice for New Professional-Technical Teachers (3 cr)
- PTTE 307 Inservice for New Professional-Technical Teachers (3 cr)
- PTTE 418 Teaching Economics and Personal Finance (3 cr)
- PTTE 470 Technical Competence (1-32 cr)

Additional requirements for PTE students seeking Idaho Secondary Teaching Certificate include ~~the Idaho Technology Competency Certification,~~ the satisfactory completion of the PRAXIS II Content Area Test, and the following:

Comm 101 Fundamentals of Public Speaking or Comm 132 Oral Interpretation (2 cr)
ED 201 Diverse Learners in Schools and Social/Cultural Contexts (3 cr)
ED 301 Principles of Learning and Development in Education (3 cr)
ED 302 Curriculum, Instruction, and Assessment Strategies (3 cr)
ED 401 Professional Role Development (3 cr)
EDCI 463 Literacy Methods for Content Learning (3 cr)
EDCI 485 Secondary Internship or PTTE 484 Internship in Professional-Technical and Technology Education Teaching (18 cr)
Psyc 101 Intro to Psychology or Psyc 305 Developmental Psychology (3 cr)

C. Technology Education Option

~~NOTE: Students must demonstrate competency in welding, metalworking and woodworking.~~

Requirements include the General Professional-Technical and Technology Education Requirements, ~~the Idaho Technology Competency Certification,~~ the satisfactory completion of the PRAXIS II Content Area ~~Test~~Exam, and the following:

ASM 107 Beginning Welding (2 cr)
Comm 101 Fundamentals of Public Speaking or Comm 132 Oral Interpretation (2 cr)
ED 201 Diverse Learners in Schools and Social/Cultural Contexts (3 cr)
ED 301 Principles of Learning and Development in Education (3 cr)
ED 302 Curriculum, Instruction, and Assessment Strategies (3 cr)
~~ED 401 Professional Role Development (3 cr)~~
EDCI 463 Literacy Methods for Content Learning (3 cr)
Engl 317 Technical Writing (3 cr)
Math 143 Pre-calculus Algebra and Analytic Geometry (3 cr)
Phys 111 General Physics I (4 cr)
Phys 112 General Physics II (4 cr)
Psyc 101 Intro to Psychology or Psyc 305 Developmental Psychology (3 cr)
PTTE 130 Introduction to Electricity and Electronics~~Basic Electronics~~ (3 cr)
PTTE 152 Manufacturing: Non-Metallic Materials and Processes (3 cr)
PTTE 173 PTTE Principles of Engineering and Technology (3 cr)
PTTE 252 Green Construction Technology (3 cr)

PTTE 267 Computer Aided Drafting/Design (3 cr)
PTTE 273 Power, Energy, and Transportation Technology (3 cr)
~~PTTE 350 Teaching and Learning Construction Systems (3 cr)~~
PTTE 352 Manufacturing: Metallic Materials and Processes (3 cr)
~~PTTE 353 Teaching and Learning Advanced Manufacturing Systems Technology (3 cr)~~
PTTE 355 Professional-Technical Education Micro-Enterprises (3 cr)
~~PTTE 367 Teaching and Learning Computer Aided Drafting/Design (2 cr)~~
~~PTTE 402 Teaching and Learning Principles of Technology (3 cr)~~
~~PTTE 410 Technology and Society (3 cr)~~
PTTE 415 Microcomputer Applications (3 cr)
~~PTTE 416 Website Design and Development (3 cr)~~
PTTE 417 Teaching and Learning in Technology Education (3 cr)
~~PTTE 428 Teaching and Learning Computer Operating Systems for Technology (3 cr)~~
PTTE 438 Digital Electronics (3 cr)
~~PTTE 450 Industrial Safety (3 cr)~~
PTTE 462 Teaching and Learning Communication Technology Systems (3 cr)
~~PTTE 473 Teaching and Learning Power, Energy, and Transportation Technology Systems (3 cr)~~
~~PTTE 475 LAN Technology (3 cr)~~
~~PTTE 481 Computer Numerical Control Manufacturing (3 cr)~~
~~PTTE 482 Computer Hardware Technology (3 cr)~~
PTTE 484 Internship in Professional-Technical and Technology Education Teaching (18 cr)
PTTE 494 Senior Design Project (3 cr)

Recommended Engineering and Technology Electives:
- ASM 210 Small Engines (2 cr)
- Arch 154 Introduction to Architectural Graphics (2 cr)
- Engr 105 Engineering Graphics (2 cr)
- PTTE 353 Advanced Manufacturing Systems (3 cr)
- PTTE 416 Website Design and Development (3 cr)
- PTTE 428 Computer Integrated Systems (3 cr)
- PTTE 475 LAN Technology (3 cr)
- PTTE 481 Computer Integrated Manufacturing (3 cr)

~~And one of the following areas:~~
- ~~a. INDUSTRIAL TECHNOLOGY: 12 credits in approved PTTE courses distributed throughout several technology areas.~~
- ~~b. INDUSTRIAL TECHNOLOGY SPECIALIZATION: 12 additional credits in a specialized area of technology.~~
- ~~c. TEACHING MINOR: 20 credit teaching minor to be selected from the list of "Teaching Majors and Minors" in the College of Education (see Part 4).~~

Electives to total ~~128~~ 129 credits

Animal and Veterinary Science

1. Change the cooperative status of the following course [**Effective**: Summer 2008]

AVS ID&WS475 Advanced Dairy Management (3 cr) WSU A S 473
Application of concepts of dairy cattle management to practical situations. One lec and 1-2 hrs of lab a wk. Recommended Preparation: AVS 472.

Biological and Agricultural Engineering

1. Change the curricular requirements of **Biological and Agricultural Engineering** (B.S.B.A.E.) [**Effective**: Summer 2008]

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

BAE 142 Engineering for Living Systems (2 cr)
BAE 143 Engineering Problem Solving or CS 112 Introduction to Problem Solving and Programming (3 cr)
BAE 355 Fundamentals of Hydrologic Engineering (3 cr)
BAE 441 Instrumentation and Measurements (3 cr)
BAE 462 Electric Power and Controls (3 cr)
BAE 478 Engineering Design I (2 cr)
BAE 479 Engineering Design II (2 cr)
BAE 491 Senior Seminar (1 cr)
Chem 111 Principles of Chemistry I (4 cr)
Chem 112 Principles of Chemistry II (5 cr)
Engr 105 Engineering Graphics (2 cr)
Engr 210 Engineering Statics (3 cr)
Engr 240 Introduction to Electrical Circuits (3 cr)
Engr 320 Engineering Thermodynamics and Heat Transfer (3 cr)
Engr 335 Engineering Fluid Mechanics (3 cr)
Engr 350 Engineering Mechanics of Material (3 cr)
Engr 360 Engineering Economy (3 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)
Math 310 Ordinary Differential Equations (3 cr)
Phys 211 Engineering Physics I (4 cr)
Phys 212 Engineering Physics II (4 cr)
Soil 205 The Soil Ecosystem (3 cr)
Stat 301 Probability and Statistics (3 cr)

And one of the following options:

A. Agricultural Engineering Option

BAE 242 Agricultural Engineering Analysis and Design (2 cr)
BAE 372 Agricultural Power and Machines (3 cr)
BAE 459 Irrigation System Design (3 cr)
BAE 461 Bioprocess Engineering (3 cr)
Biol 115 Cells and the Evolution of Life (4 cr)
CE 211 Engineering Measurements (3 cr)
CE 322/323 Hydraulics and Lab (3-4 cr)
CE 342 Theory of Structures (3 cr)
Engr 220 Engineering Dynamics (3 cr)
~~Biological Science Electives (3 cr)~~
Technical Electives (8 cr)
Electives to total 128 cr for the degree

B. Biological Systems Engineering Option

BAE 242 Agricultural Engineering Analysis and Design (2 cr)
BAE 461 Bioprocess Engineering (3 cr)
Biol 115 Cells and the Evolution of Life (4 cr)
Chem 277 Organic Chemistry I (3 cr)
Chem 278 Organic Chemistry I: Lab (1 cr)
MMBB 250, 255 General Microbiology and Lab (5 cr)
MMBB 380 Introductory Biochemistry (4 cr)
Biological Science Electives (3 cr)
Technical Electives (9 cr)
Electives to total 128 cr for the degree

C. Environmental Engineering Option

BAE 242 Engineering Analysis and Design (2 cr)
BAE 461 Bioprocess Engineering (3 cr)
Biol 115 Cells and the Evolution of Life (4 cr)
Chem 277 Organic Chemistry I (3 cr)
Chem 278 Organic Chemistry I: Lab (1 cr)
CE 330 Fundamentals of Environmental Engineering (3 cr)
MMBB 250, 255 General Microbiology and Lab (5 cr)
MMBB 380 Introductory Biochemistry (4 cr)
Two electives chosen from the following: (6 cr)
    BAE 432 Bioreactor Theory and Design for Waste Treatment (3 cr)
    BAE 433 Bioremediation (3 cr)
    BAE 452 Environmental Water Quality (3 cr)
Electives to total 128 cr for the degree

D. Food and Bioprocess Engineering Option

BAE 242 Agricultural Engineering Analysis and Design (2 cr)
BAE 461 Bioprocess Engineering (3 cr)
Biol 115 Cells and the Evolution of Life (4 cr)
Chem 277 Organic Chemistry I (3 cr)
Chem 278 Organic Chemistry I: Lab (1 cr)
FST 303 Food Processing (3 cr)
MMBB 250, 255 General Microbiology and Lab (5 cr)
MMBB 380 Introductory Biochemistry (4 cr)
Technical Electives (3 cr)
Food Engineering Electives (3 cr)
Food Science Electives (3 cr)
Electives to total 128 cr for the degree

E. Soil and Water Engineering Option

BAE 242 Agricultural Engineering Analysis and Design (2 cr)
BAE 451 Engineering Hydrology (3 cr)
BAE 452 Environmental Water Quality (3 cr)
BAE 458 Open Channel Hydraulics (3 cr)
BAE 459 Irrigation System Design (3 cr)

Biol 115 Cells and the Evolution of Life (4 cr)
CE 211 Engineering Measurements (3 cr)
Technical Electives (8 cr)
~~Soil and/or Water Engineering Electives (3 cr)~~
Biological Science Electives (3 cr)
Electives to total 128 cr for the degree

A grade of C or better is required in each of the following courses before registration is permitted in upper-division engineering courses: BAE 143, BAE 242, Chem 111, Engr 210, Math 275, and Phys 211.

To graduate in this program, a grade of C or better is required in each of the following courses: BAE 143, BAE 242, Chem 111, Engr 210, Math 275, and Phys 211.

Students are required to submit a course plan and a statement of how the humanistic and social course requirements complement the technical content of the curriculum and are consistent with the program and institution objectives.

Civil Engineering

1. Add the following course [**Effective**: Summer 2008]

CE 315 Introduction to Numerical Methods of Civil Engineering (2 cr)
Numerical Methods with applications in Civil Engineering, including roots of equations, systems of linear equations, numerical differentiation and integration, and ordinary differential equations. Requires programming and/or the use of software to implement the methods covered in class. One 50 min. lecture and one 75 min. computational laboratory per week. Recommended Preparation: Ability to write computer programs for engineering analysis.
Prereq: CE 315
Coreq: Math 310

2. Change the dormant status of the following course [**Effective**: Summer 2008]

CE **ID&WS510 Advanced Mechanics of Materials** (3 cr) WSU C E 514
See ME 539.

3. Change the credits, description and title of the following course [**Effective**: Summer 2008]

CE 211 Engineering ~~Measurements~~ Surveying (3-~~4~~ cr)
Theory of measurements, basic equations for survey computations, types of distribution of errors, topographical and land surveying introduction to geographic information systems and global positioning systems, coordinate geometry and coordinate transformations, site engineering projects using land development software, application of surveying methods to construction; site engineering, and civil engineering projects surveying instruments. Two lec and one 3-hr lab a week; periodic field data collection and one or two field trips. ~~For engineering and cartography students. Theory and practice; types and distribution of errors; manipulation of instruments; route and land surveying; construction survey; intro to photogrammetry. Two lec and one 3-hr lab a wk; additional 1-hr recitation a wk for 4 cr reqd unless waived by exam.~~
Prereq: Math 143 or 170 or 175, and Engr 105

4. Change the prerequisites of all CE courses [**Effective**: Summer 2008]

Prerequisites: All prerequisites for Civil Engineering (CE) courses must be completed successfully with a grade of C or better.

5. Change the curricular requirements of **Civil Engineering** (B.S.C.E.) [**Effective**: Summer 2008]

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

AmSt 301 Studies in American Culture or Phil 103 Ethics (3 cr)
CE 115 Introduction to Civil Engineering (2 cr)
CE 211 Engineering ~~Measurements~~ Surveying (3 cr)
CE 215 Civil Engineering Analysis and Design (2 cr)
CE 315 Introduction to Numerical Methods of Civil Engineering (2 cr)
CE 322 Hydraulics (3 cr)
CE 325 Fundamentals of Hydrologic Engineering (3 cr)
CE 330 Fundamentals of Environmental Engineering (3 cr)
CE 342 Theory of Structures (3 cr)
CE 357 Properties of Construction Materials (4 cr)
CE 360 Fundamentals of Geotechnical Engineering (4 cr)
CE 372 Fundamentals of Transportation Engineering (4 cr)
CE 491 Civil Engineering Professional Seminar (1 cr)
CE 493-494 Senior Design Project (4 cr)
Chem 111 Principles of Chemistry I (4 cr)
Econ 201 Principles of Economics or Econ 202 Principles of Economics, or Econ 272 Foundations of Economic Analysis (3-4 cr)
Engl 317 Technical Writing (3 cr)

Engr 105 Engineering Graphics (2 cr)
Engr 210 Engineering Statics (3 cr)
Engr 220 Engineering Dynamics (3 cr)
Engr 240 Introduction to Electrical Circuits or Engr 320 Engineering Thermodynamics and Heat Transfer (3 cr)
Engr 335 Engineering Fluid Mechanics (3 cr)
Engr 350 Engineering Mechanics of Materials (3 cr)
Engr 360 Engineering Economy (2 cr)
Math 170 Analytic Geometry and Calculus (4 cr)
Math 175 Analytic Geometry and Calculus II (4 cr)
Math 275 Analytic Geometry and Calculus III (3 cr)
Math 310 Ordinary Differential Equations (3 cr)
Phys 211 Engineering Physics I (3 cr)
Stat 301 Probability and Statistics (3 cr)
Two of the following (8-9 cr):
- Biol 115 Cells and the Evolution of Life (4 cr)
- Chem 112 Principles of Chemistry II or Phys 212 Engineering Physics II (4-5 cr)
- Geol 111 Physical Geology for Science Majors (4 cr)
- MMBB 154, 155 Introductory Biology of Bacteria and Viruses and Lab (4 cr)

Technical electives. To ensure sufficient breadth, technical electives must include at least 15 credits from at least three of the following five groups (18 cr):

Environmental:
- CE 431 Design of Water and Wastewater Systems I (3 cr)
- CE 432 Design of Water and Wastewater Systems II (3 cr)
- CE 433 Water Quality Management (3 cr)

Geotechnical:
- CE 460 Geotechnical Engineering Design (3 cr)
- GeoE 436 Geological Engineering Analysis and Design (3 cr)

Hyd/Water Resources:
- CE 421 Engineering Hydrology (3 cr)
- CE 422 Hydraulic Design (3 cr)
- CE 428 Open Channel Hydraulics (3 cr)

Structures:
- CE 441 Reinforced Concrete Design (3 cr)
- CE 444 Steel Design (3 cr)
- CE 445 Matrix Structural Analysis (3 cr)

Transportation:
- CE 473 Highway Design (3 cr)
- CE 474 Traffic Systems Design (3 cr)
- CE 475 Pavement Design and Evaluation (3 cr)

Other CE 400 level classes (except CE 411), or approved alternatives, may be used to complete the required 18 cr of tech electives.

The minimum number of credits for the degree is 128, excluding math below 170, English below 102, and any classes needed to remove deficiencies.

Computer Science

1. Drop the following courses [**Effective**: Summer 2008]

CS 414 Object-Oriented Design (3 cr)
Concepts and techniques used in object-oriented design (OOD) and object-oriented programming (OOP); current topics in OO discussed; concepts illustrated with the design and implementation of both individual and group projects.
Recommended Substitution: N/A

CS 421 Data Communication Lab (1 cr)
Hands-on experience with data communication systems using workstations and protocol analyzers; analysis of protocols, network diagnostics, and network system management. Graded P/F.
Coreq: CS 420 or equiv
Recommended Substitution: N/A

CS J482/J582 Software Project Management (3 cr)
Techniques for planning, organizing, scheduling, and controlling complex software system development and support projects. Additional projects/assignments reqd for grad cr.
Prereq: CS 383 or 480 or Permission
Recommended Substitution: N/A

CS ID581 Software Engineering Analysis (3 cr) WSU Cpt S 521
Intro to research in software engineering; strong emphasis on application of quantitative techniques in the software life cycle; students will develop a command of current software engineering literature; exploration of techniques of mathematical modeling and solutions to software engineering problems.
Recommended Substitution: N/A

CS 582 Software Project Management (3 cr)
See CS J482/J582.
Recommended Substitution: N/A

CS 585 Software Process Management (3 cr)
Systematic software development from management perspective that centers on constituent tasks and their interrelationships; evaluation of software development process maturity and means to improve process maturity. Additional projects/assignments reqd for grad cr.
Prereq: CS 383
Recommended Substitution: N/A

2. Add the following courses [**Effective**: Summer 2008]

CS 130 Programming with Visual Basic (3 cr)
Introduction to fundamental problem solving techniques using the computer and the object oriented, event driven language Visual Basic. The course introduces structured programming concepts; the use of fundamental data types, including arrays and database structures; and editing and program execution.
Prereq: Math 143

CS 428 Games and Virtual Environments (3 cr)
Software design and programming issues involved in constructing computer games and multi-user virtual environments.
Prereq: CS 210 and 324

3. Change the prerequisites of the following courses [**Effective**: Summer 2008]

CS 360 Database Systems (3 cr)
Study of database design and implementation; comparison of basic models (entity-relationship, hierarchical, network, relational); study of query languages; discussion of issues of integrity, security, dependencies, and normal forms.
Prereq: CS 240 and 270

CS 386 Derivational Programming (3 cr)
Introduction of a practical approach based on methodically developing programs from their specifications; focus on developing reliable programs with attention to real issues.
Prereq: CS 210

CS J413/J513 Concurrent Systems (3 cr)
Issues of parallel computer architecture considering a hardware/software approach; topics include convergence of parallel architectures, fundamental design issues, parallel programs, programming for performance, workload-driven evaluation, shared memory multiprocessors, snoopy-based multiprocessor design, scalable multiprocessors, cache coherence, hardware software tradeoffs, interconnection network design, latency tolerance, and future directions of concurrent systems.
Prereq: CS 150 and 240

CS J420/J520 Data Communication Systems (3 cr)
Concept and terminology of data communications, equipment, protocols (including ISO/OSI and TCP/IP), architectures; transmission alternatives, regulatory issues and network management. Additional projects/assignments reqd for grad cr.
Prereq: CS 150 and 240

CS ID&WS445 Compiler and Translator Design (4 cr) WSU Cpt S 452
Algorithms used by the following system software: assemblers, macro-processors, interpreters, and compilers; compiler design options and code optimization; all concepts implemented in major programming assignments.
Prereq: CS 210 and 385

CS J470/J570 Artificial Intelligence (3 cr)
Concepts and techniques involved in artificial intelligence, Lisp, goal-directed searching, history trees, inductive and deductive reasoning, natural language processing, and learning. Extra term paper reqd for cr in 570.
Prereq: CS 210

CS J472/J572 Evolutionary Computation (3 cr)
Solving computation problems by "growing" solutions; simulates natural evolution using analogues of mutation, crossover, and other generic transformations on representations of potential solutions; standard EC techniques such as genetic algorithms and evolutionary programming, mathematical explanations of why they work, and a survey of some applications; the focus is on solving real-world problems using projects. Graduate-level research and possible paper or presentation required for grad cr.
Prereq: CS 210

4. Change the curricular requirements of **Computer Science** (B.S.C.S.) [**Effective**: Summer 2008]

General Education and Broadening Electives (9 cr):
- Comm 101 Fundamentals of Public Speaking (2 cr)
- Engl 317 Technical Writing (3 cr)
- Broadening Electives (4 cr)

Computer Science (43 cr):

CS 105 Computer Science as a Profession (2 cr)
CS 120 Computer Science I (4 cr)
CS 121 Computer Science II (4 cr)
CS 150 Computer Organization and Architecture (3 cr)
CS 210 Computing Languages (3 cr)
CS 240 Computer Operating Systems (3 cr)
CS 270 System Software (3 cr)
CS 383 Software Engineering I (3 cr)
CS 384 Software Engineering II (3 cr)
CS 385 Theory of Computation (3 cr)
CS 395 Analysis of Algorithms (3 cr)
CS 401 Contemporary Issues in Computer Science (1 cr)
CS 445 Compiler and Translator Design (4 cr)
CS 481 Senior Capstone Design (4 cr)
~~Engl 317 Technical Writing (3 cr)~~
Mathematics and Statistics (17 cr):
Math 170 Analytic Geometry and Calculus I (4 cr)
Math 175 Analytic Geometry and Calculus II (4 cr)
Math 176 Discrete Mathematics (3 cr)
Math 330 Linear Algebra (3 cr)
Stat 301 Probability and Statistics (3 cr)
One of the following laboratory science sequences (8-9 cr):
Biol 115 Cells and the Evolution of Life and Biol 116 Organisms and Environments (8 cr)
Chem 111 Principles of Chemistry I and Chem 112 Principles of Chemistry II (9 cr)
Phys 211 Engineering Physics I and Phys 212 Engineering Physics II (8 cr)
Phys 211 Engineering Physics I and Phys 213 Engineering Physics III (8 cr)
Science electives (4 cr)
Upper-division technical electives selected to satisfy the credit distribution in these categories (15 cr):
Computer Science (12 cr) – any upper-division CS course except 499.
Mathematics (3 cr) – Math 275 or any upper-division Math or Stat course except Math 400, 404, 499, and 513-519.
~~Science electives (4 cr)~~
The minimum number of credits for the degree is 128, not counting Engl 101, Math 143, and other courses that might be required to remove deficiencies.

Students majoring in computer science must earn a grade of C or better, with a 2.50 GPA or higher, in CS 120, 121, and 150 and a C or better in Math 176 before registration is permitted in 200 level CS courses. Students majoring in computer science must earn a grade of C or better in CS 210, 240, 270, and Math 170 and 175 before registration is permitted in upper-division CS courses.

Students must consult with their advisors when selecting electives within the curriculum to insure that their career objectives are met.

Counseling and Sschool Psychology, Special Education and Educational Leadership

1. Add the following courses [**Effective**: Summer 2008]

CASP 543 Neuropsychology of Learning and Behavior (2 cr)
Overview of the fundamental principles of neuropsychology. Emphasis is placed on developing an understanding of the relationship between these principles and how they apply to individual case studies. Students are expected to develop an understanding of the brain and its relation to learning, developmental, behavioral, and psychological disorders. (Summer only)

EdAd 570 Methods of Educational Research (3 cr)
This course examines philosophical and theoretical frameworks, methodologies, strategies, techniques, and designs of educational research. The primary themes: (1) the integration of research with educational practices, (2) the role of diversity in the social/political context of research, and (3) the design and use of research in education.
Recommended Substitution: Ed 570

2. Change the dormant status, credits, description and prerequisites of the following course [**Effective**: Summer 2008]

CASP 570 Research and Evaluation in Counseling Psychology (2 cr)
Overview of measures, instruments, and research methodologies used in the fields of counseling and school psychology. Primary focus is on preparing students to understand the process of scientific enquiry, fundamental statistical concepts, the use of technology, data analysis, qualitative research, and single-subject design. Students will be equipped with an ethical and competent skill set that can be used in the research and evaluation of individual/group treatments, programs, and student outcomes. (Summer only)~~Review of research and evaluation in counseling psychology; application to personal doctoral study.~~
~~**Prereq:** graduate course in research methodology.~~
Recommended Substitution: Ed 570

3. Change the description, number and prerequisites of the following course [**Effective**: Summer 2008]

EdAd ~~689~~ 589 Critical Thinking (2-3 cr) (EdAd 689)
Same as AdOL ~~689~~589. For individuals curious about the thinking process; a variety of ways of learn about Vertical Thinking and Lateral Thinking; emphasis on practice using Lateral Thinking skills.

~~**Prereq:** Enrollment in a Doctoral program.~~

4. Change the credits of the following courses [**Effective**: Summer 2008]

CASP J407/J507 Orientation to Counseling and School Psychology (~~2~~ 1 cr)
Exploratory course for students considering entering counseling or school psychology. Focus is on the role and function of counselors and school psychologists, their values, and responses to contemporary issues. The course requires participation in small group work and role playing. Students are assessed on the knowledge and skills they have acquired. Successful completion of the course is one of the criteria for final admission to the masters and/or education specialist degree programs. Additional projects/assignments reqd for grad cr.
Prereq: Permission

CASP 507 Orientation to Counseling and School Psychology (~~2~~ 1 cr)
See CASP J407/J507.

5. Change the number and prerequisites of the following course [**Effective**: Summer 2008]

EdAd ~~688~~ 588 Critique of Research (2-3 cr) (EdAd 688)
Research design and methods applicable to the dissertation; dissertation content, format, and style; primarily for educational administration doctoral students who have completed most of their course work; emphasis on review of educational administration doctoral dissertations and peer-reviewed literature.
Prereq: Stat 251 or Equivalent, ED 571 or Equivalent~~, and Enrollment in a Doctoral program~~

Curriculum and Instruction

1. Drop the following courses [**Effective**: Summer 2008]

EDCI 423 Integrated Literacy in the Classroom (1 cr)
Facilitate intern teachers' understanding of literacy development and applications of appropriate literacy methods and materials. Interns will be expected to implement various approaches to the integration of reading, writing, speaking and listening and the selection of appropriate literature to support the content.
Prereq: EDCI 321
Prereq or **Coreq:** EDCI 322
Recommended Equivalency: EDCI 409

EDCI 425 Elementary Art in the Classroom (1 cr)
Implementation of methods, research, curricula, and media in teaching elementary art.
Prereq or **Coreq:** EDCI 325
Recommended Equivalency: EDCI 409

EDCI 427 Elementary Mathematics in the Classroom (1 cr)
Implementation of methods, research, curricula, and media in teaching elementary mathematics.
Prereq or **Coreq:** EDCI 327
Recommended Equivalency: EDCI 408

EDCI 428 Elementary Social Studies in the Classroom (1 cr)
Implementation of methods, research, curricula, and media in teaching elementary social studies. Students will teach social studies to elementary students 2-3 hrs a wk as part of the internship experience.
Prereq or **Coreq:** EDCI 328
Recommended Equivalency: EDCI 408

EDCI 429 Elementary Science in the Classroom (1 cr)
Implementation of methods, research, curricula, and media in teaching elementary science.
Prereq or **Coreq:** EDCI 329
Recommended Equivalency: EDCI 408

2. Add the following courses [**Effective**: Summer 2008]

EDCI 408 Integrated Methods Practicum I (1 cr)
Implementation of mathematics/science/social studies methods, research, curricula, and technology in elementary classrooms. Course will include 30 hours in K-8 classrooms and 15 hours of associated scheduled activities.
Prereq: ED 302 or Permission
Coreq: EDCI 327, 328 329 and PEP 350; or Permission
Recommended Equivalency: EDCI 427, 428 and 429

EDCI 409 Integrated Methods Practicum II (1 cr)
Implementation of literacy and arts methods, research, curricula, and technology in elementary classrooms. Course will include 30 hours in K-8 classrooms and 15 hours of associated scheduled activities.
Prereq: ED 302 or Permission

Coreq: EDCI 321, 322, 325 Dan 360 and TheF 411; or Permission
Recommended Equivalency: EDCI 423 and 425

EDCI 530 Science Education (3 cr)
Students will examine relevant research and practical knowledge shared by the science education community. Includes the examination of history, theoretical perspectives, student learning, and pedagogy.
Prereq: EDCI 524 or 572; or Permission

EDCI 570 Introduction to Research in Curriculum and Instruction (3 cr)
Explorations of research foundations focused on developing skills in consuming, synthesizing and conduction research from contemporary and diverse perspectives.
Recommended Substitution: ED 570

3. Change the prerequisites of the following course [**Effective**: Summer 2008]

EDCI 526 Advanced Educational Psychology (3 cr)
Examination of selected psychological theories as applied to classroom management, values education, instructional and motivational strategies, learning and cognitive styles, gender differences, and related educational research.
Prereq: ED 301 or Permission

4. Change the co-requisites and prerequisites of the following course [**Effective**: Summer 2008]

EDCI 485 (s) Secondary Internship (15 cr)
Guided observation, supervised instruction, and comprehensive team and independent teaching in school settings. Graded P/F. Recommended Preparation: integrated course work.
~~**Prereq**~~**Coreq:** ED 401 and Permission of ~~division~~Department

5. Change the prerequisites and title of the following courses [**Effective**: Summer 2008]

EDCI 432 Secondary Social Studies Methods~~I~~ (3 cr).
Specific methods, research, curricula, and media in teaching Secondary Social Studies Methods. (Fall only)
Prereq: ED ~~301~~302 or Permission
Coreq: EDCI 442

EDCI 433 Secondary Science Methods~~I~~ (3 cr)
Specific methods, research, curricula, and media in teaching Secondary Science Methods. (Fall only)
Prereq: ED ~~301~~ 302 or Permission
Coreq: EDCI 443

EDCI 434 Secondary Mathematics Methods~~I~~ (3 cr)
Specific methods, research, curricula, and media in teaching Secondary Mathematics Methods. (Fall only)
Prereq: ED ~~301~~ 302 or Permission
Coreq: EDCI 454

EDCI 436 Secondary Art Methods~~I~~ (3 cr)
Specific methods, research, curricula, and media in teaching Secondary Art Methods. (Fall only)
Prereq: ED ~~301~~302 or Permission
Coreq: EDCI 446

EDCI 437 Secondary Foreign Language Methods~~I~~ (3 cr)
Specific methods, research, curricula, and media in teaching Secondary Foreign Language. (Fall only)
Prereq: ED ~~301~~ 302 or Permission
Coreq: EDCI 447

6. Change the number, prerequisites and title of the following course [**Effective**: Summer 2008]

EDCI ~~440~~ 431 Secondary English Methods~~I~~ (3 cr) (EDCI 440)
Specific methods, research, curricula, and media in teaching Secondary English Methods. (Fall only)
Prereq: ED ~~301~~ 302 or Permission
Coreq: EDCI 441

7. Change the co-requisites, credits, description, prerequisites and title of the following courses [**Effective**: Summer 2008]

EDCI 321 Literature for Children (~~2~~ 3 cr)
Specific methods, research, curricula, and technology in teaching Children's Literature for diverse populations. Facilitating of understanding content, curriculum, methods and assessment in an integrated setting.~~media in literature for children at each grade level including dramatization, storytelling, and use of literature in the elementary classroom. Recommended Preparation: courses in the social studies/literacy/arts education block.~~
Prereq: ED 302 and EDCI 320; or Permission
Corerq: Dan 360, EDCI 322, 325, 409, and TheF 411; or Permission

EDCI 322 Integrated Language and Literacy (~~2~~ 3 cr)
Specific methods, research, curricula, and technology in teaching elementary language arts for diverse populations. Facilitating of understanding content, curriculum and methods in an integrated setting~~Approaches to the integration of reading, writing, speaking, and listening across the curriculum in diverse, collaborative, learner-centered communities. Recommended Preparation: courses in the social studies/literacy/arts education block.~~
Prereq: ED 302 and EDCI 320; or Permission
Coreq: Dan 360, EDCI 322, 325, 409, and TheF 411; or Permission~~EDCI 423~~

EDCI 325 Elementary Art Education (~~2~~ 3 cr)
Specific methods, research, curricula, and ~~media~~ technology in teaching elementary art for diverse populations. Facilitation of understanding content, curriculum, methods and assessment in an integrated setting. ~~Recommended Preparation: courses in the social studies/literacy/arts education block.~~
Prereq: ED 302 and EDCI 320; or Permission
Coreq: Dan 360, EDCI 322, 325, 409, and TheF 411; or Permission~~EDCI 425~~

EDCI 327 Elementary Mathematics Education (~~2~~ 3 cr)
Specific methods, research, curricula, and ~~media~~ technology in teaching elementary mathematics for diverse populations. Facilitation of understanding content, curriculum, methods and assessment in an integrated setting.~~ Recommended Preparation: courses in the mathematics/science/physical education block.~~
Prereq: ED 302 and Math 235-236~~,~~ or Math 301; or Permission
Coreq: EDCI ~~427~~328, 329, 408 and PEP 350; or Permission

EDCI 328 Elementary Social Studies Education (~~2~~ 3 cr)
Specific methods, research, curricula, and ~~media~~ technology in teaching elementary social studies for diverse populations. Facilitation of understanding content, curriculum, methods and assessment in an integrated setting.~~ Recommended Preparation: courses in the social studies/literacy/arts education block.~~
Prereq: ED 302 or Permission
Coreq: EDCI ~~428~~327, 329, 408 and PEP 350; or Permission

EDCI 329 Elementary Science Education (~~2~~ 3 cr)
Specific methods, research, curricula, and ~~media~~ technology in teaching elementary science for diverse populations. Facilitation of understanding content, curriculum, methods and assessment in an integrated setting.~~ Recommended Preparation: courses in the mathematics/science/physical education block.~~
Prereq: ED 302 or Permission
Coreq: EDCI ~~429~~327, 328, 408 and PEP 350; or Permission

8. Change the description, prerequisites and title of the following courses [**Effective**: Summer 2008]

EDCI 442 Secondary Social Studies Methods ~~Lab~~ Practicum (1 cr)
Implementation of secondary social studies methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities.~~Implementation of methods, research, curricula, and media in teaching Secondary Social Studies Methods in a 6-12 grade classroom setting.~~ (Fall only)
Prereq: ED ~~301~~ 302 or Permission
Coreq: EDCI 432

EDCI 443 Secondary Science Methods ~~Lab~~ Practicum (1 cr)
Implementation of secondary foreign language methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities.~~Implementation of methods, curricula, and media in teaching Secondary Science Methods in a 6-12 grade classroom setting.~~ (Fall only)
Prereq: ED ~~301~~ 302 or Permission
Coreq: EDCI 433

EDCI 446 Secondary Art Methods ~~Lab~~ Practicum (1 cr)
Implementation of secondary art methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities.~~Implementation of methods, curricula, and media in teaching Secondary Art Methods in a 6-12 grade classroom setting.~~ (Fall only)
Prereq: ED ~~301~~ 302 or Permission
Coreq: EDCI 436

EDCI 447 Secondary Foreign Language Methods ~~Lab~~ Practicum (1 cr)
Implementation of secondary foreign language methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities.~~Implementation of methods, curricula, and media in teaching Secondary Foreign Language Methods in a 6-12 grade classroom setting.~~ (Fall only)
Prereq: ED ~~301~~ 302 or Permission
Coreq: EDCI 437

EDCI 454 Secondary Mathematics Methods ~~Lab~~ Practicum (1 cr)
Implementation of secondary mathematics methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities.~~Implementation of methods, curricula, and media in teaching Secondary Mathematics Methods in a 6-12 grade classroom setting.~~ (Fall only)
Prereq: ED ~~301~~ 302 or Permission

Coreq: EDCI 434

9. Change the co-requisites, description, prerequisites and title of the following course [**Effective**: Summer 2008]

EDCI 441 Secondary English ~~Methods Lab~~Practicum (1 cr)
Implementation of Secondary English methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities.~~Implementation of methods, curricula, and media in teaching Secondary English Methods in a 6-12 grade classroom setting.~~ (Fall only)
Prereq: ED ~~301~~ 302 or Permisson
Coreq: EDCI ~~440~~431

10. Change the curricular requirement of **Elementary Education** (B.S.Ed.) [**Effective**: Summer 2008]

Required course work includes the university requirements (see regulation J-3), successful completion of the Idaho Technology Performance Assessment and the Praxis II test prior to the internship. Maintain at least a grade of C in the following course requirements:

Comm 101 Fundamentals of Public Speaking (2 cr)
ED 201 Diverse Learners in Schools and Social/Cultural Contexts (3 cr)
ED 301 Principles of Learning and Development in Education (3 cr)
ED 302 Curriculum, Instruction, and Assessment Strategies (3 cr)
ED 401 Professional Role Development (3 cr)
EDCI 320 Foundations of Literacy Development (4 cr)
Hist 101 or 102 History of Western Civilization (3 cr)
Hist 111 or 112 Intro to U.S. History (3 cr)
Math 143 Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 235 Mathematics for Elementary Teachers I (3 cr)
Math 236 Mathematics for Elementary Teachers II (3 cr)
MusT 381 Elementary School Music Methods for Nonmajors (3 cr)
Psyc 305 Developmental Psychology (3 cr)
Advanced composition elective (3 cr)
- Engl 207 Persuasive Writing (3 cr)
- Engl 208 Personal and Exploratory Writing (3 cr)
- Engl 209 Inquiry-Based Writing (3 cr)
- Engl 291 Creative Writing: Poetry (3 cr)
- Engl 292 Creative Writing: Fiction (3 cr)
- Engl 309 Advanced Prose Writing (3 cr)
- Engl 313 Business Writing (3 cr)
- Engl 317 Technical Writing (3 cr)
- Engl 401 Writing Workshop for Teachers (3 cr)

Earth science elective (4 cr):
- Geog 100 Physical Geography (4 cr)
- Geol 101 Physical Geology (4 cr)

Physical science elective (4 cr):
- Chem 101 Introduction to Chemistry I (4 cr)
- Chem 111 Principles of Chemistry I (4 cr)
- Chem 112 Principles of Chemistry II (5 cr)
- Phys 103 General Astronomy and Phys 104 Astronomy Lab (4 cr)
- Phys 111 General Physics I (4 cr)

Life science elective (4 cr):
- Biol 102 Biology and Society (4 cr)
- Biol 115 Cells and the Evolution of Life (4 cr)

~~Art elective (non-methods course) (2 cr)~~
English elective in composition or literature (excluding Engl 101 and 102) (3 cr)
Literature elective (3 cr)
~~Music elective (non-methods course) (2 cr)~~
Social science electives other than psychology (6 cr)

Elementary Education Major Requirements

Mathematics/Science/Social Studies/Physical Education Block:
- EDCI 327 Elementary Mathematics Education (~~2~~ 3 cr)
- EDCI 328 Elementary Social Studies Education (~~2~~ 3 cr)
- EDCI 329 Elementary Science Education (~~2~~ 3 cr)
- EDCI 408 Integrated Methods Practicum I (1 cr)
- PEP 350 Elementary Physical and Health Education (3 cr)

Literacy/Arts Education Block:
- EDCI 321 Literature for Children (~~2~~ 3 cr)
- EDCI 322 Integrated Language and Literacy (~~2~~ 3 cr)
- EDCI 325 Elementary Art Education (~~2~~ 3 cr)
- EDCI 409 Integrated Methods Practicum II (1 cr)
- Dan 360 Children's Dance (1 cr)
- TheF 411 Theatre Methods (1 cr)

Internship Year:
~~EDCI 423 Integrated Literacy in the Classroom (1 cr)~~
~~EDCI 425 Elementary Art in the Classroom (1 cr)~~
~~EDCI 427 Elementary Mathematics in the Classroom (1 cr)~~
~~EDCI 428 Elementary Social Studies in the Classroom (1 cr)~~
~~EDCI 429 Elementary Science in the Classroom (1 cr)~~
EDCI 466 Literacy Assessment and Intervention (3 cr)
EDCI 483 Elementary Internship I (7 cr)
EDCI 484 Elementary Internship II (15 cr)

It is highly recommended that elementary students who are planning to teach grades 6, 7, and 8 select an area of concentration that meets state endorsement standards for secondary education. Students should consult with their advisor for details.

The minimum number of credits required for the degree is 128.

11. Change the curricular requirement of **Early Childhood Development and Education** (B.S.Erly.Chldhd.Dev.Ed.) [**Effective**: Summer 2008]

Coursework will prepare students to be recommended for Idaho Early Childhood Education/Early Childhood Special Education (ECE/ECSE) Blended Teacher Certification. Students will be certified to teach children birth through grade three.

The minimum credits required for graduation are 139, including at least 36 credits at the 300-level or above. Required course work includes the university requirements (see regulation J-3) and:

Art 100 World Art and Culture or MusH 101 Survey of Music (3 cr)
Comm 101 Fundamentals of Public Speaking (2 cr)
Dan 360 Children's Dance (1 cr)
~~ED 201 Diverse Learners in Schools & Social/Cultural Contexts (3 cr)~~
~~ED 301 Principles of Learning & Development in Education (3 cr)~~
ED 302 Curriculum, Instruction & Assessment Strategies (3 cr)
ED 401 Professional Role Development (2 cr)
EDSP 350 Language, Communication Development, and Disorders (3 cr)
EDSP 351 Family & Community Involvement (2 cr)
EDSP 460 Early Childhood Assessment (3 cr)
EDSP 461 Early Childhood SPED Curriculum (3 cr)
EDSP 490 Infant Practicum (7-10 cr)
EDCI 320 Foundations of Literacy Development (4 cr)
EDCI 321 Literature for Children (~~2~~ 3 cr)
EDCI 322 Integrated Language & Literacy (~~2~~ 3 cr)
EDCI 327 Elementary Mathematics Education (~~2~~ 3 cr)
EDCI 328 Elementary Social Studies Education (~~2~~ 3 cr)
EDCI 329 Elementary Science Education (~~2~~ 3 cr)
EDCI 484 Elementary Internship II (15 cr)
Engl 257 or 258 Literature of Western Civilization (3 cr)
FCS 205 Concepts in Human Nutrition (3 cr)
FCS 210 Intro to Early Childhood Educ (2 cr)
FCS 234 Infancy and Early Childhood Dev (3 cr)
FCS 235 Principles & Methods of Child Observation (3 cr)
FCS 333 Developmental Curriculum for Young Children (4 cr)
FCS 340 Parent-Child Relationships in Family & Community (3 cr)
FCS 435 Feeding Young Children in Group Settings (1 cr)
FCS 436 Theories of Child & Family Development (3 cr)
FCS 497 Practicum: Preschool (8 cr)
Math 301 Early Childhood Mathematics (4 cr)
MusT 381 Elementary School Music Methods for Nonmajors (3 cr)
PEP 350 Elementary Health & Physical Education (3 cr)
Stat 150 Introduction to Statistics (3 cr)
US History course (Hist) or US Government course (PolS) (3 cr)
English electives (9 cr)
Natural Science electives (8 cr)
Social Science electives taken from the following disciplines: Hist, PolS, Soc, Anth, Econ, Geog. (9 cr)

12. Change the curricular requirements of **20-Credit Mathematics Teaching Minor** [**Effective**: Summer 2008]

C. ~~20~~23-CREDIT MATHEMATICS TEACHING MINOR

Math 170 Analytic Geometry and Calculus I (4 cr)
Math 175 Analytic Geometry and Calculus II (4 cr)
Math 176 Discrete Mathematics (3 cr)
~~Math 215 Seminar in Topology of the Plane (3 cr)~~
Math 330 Linear Algebra (3 cr)
Math 386 Theory of Numbers (3 cr)
Math 390 Axiomatic Geometry or Math 391 Modern Geometry (3 cr)

~~Stat 251 Prin of Stat or Stat 301 Probability and Stat or Math 451 Probability Theory (3 cr)~~
One of the following (3-4 cr):
Stat 251 Statistical Methods (3 cr)
Stat 271 Statistical Inference and Decision Analysis (4 cr)
Stat 301 Probability and Stat (3 cr)
Math 451 Probability Theory (3cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:
EDCI 434 Secondary Mathematics Methods I (3 cr)
EDCI 454 Secondary Mathematics Methods Lab (1 cr)

13. Change the curricular requirements of **21-Credit Dance Teaching Minor** [**Effective**: Summer 2008]

21-CREDIT DANCE TEACHING MINOR

The dance minor provides broad experiences in techniques, composition, production, and teaching.

~~Dan 105 Dance (ballet, jazz, modern) (5 cr)~~
Dan 210 Dance Theatre (1 cr)
Dan 320 Labanotation (3 cr)
Dan 321 Dance Pedagogy (3 cr)
~~Dan 325 Dance Production (3 cr)~~
Dan 360 Children's Dance (1 cr)
~~Dan 383 Dance Composition (2 cr)~~
Dan 384 Dance Composition I (3 cr)
Dan 421 Dance History (3 cr)
3 Credits in Modern:
Dan 105 Dance (1 cr, max arr)
Dan 216 Techniques (cr arr)
Dan 416 Advanced Technique (cr arr)
4 Credits selected from Social Dance, World Dance, Ballet, Jazz, and Modern:
Dan 105 Dance (1 cr, max arr)
Dan 216 Techniques (cr arr)
Dan 416 Advanced Technique (cr arr)

14. Change the curricular requirements of **22-Credit Health Education Teaching Minor** [**Effective**: Summer 2008]

~~22~~24-25-CREDIT HEALTH EDUCATION TEACHING MINOR

~~Students minoring in health education who plan to apply for teacher certification must include a course in anatomy or physiology or general biology or MMBB among the courses they select to meet the general studies requirements.~~ A current advanced first aid and emergency care card is required upon graduation.

FCS 205 Concepts in Human Nutrition ~~or 305 Nutrition Related to Fitness/Sport~~ (3 cr)
FCS 240 Intimate Relationships or Psyc 330 Human Sexuality (3 cr)
H&S 150 Wellness Lifestyles or HPRD 201 Foundations of Physical Activity and Wellness (3 cr)
H&S 288 First Aid: Emergency Response (2 cr)
H&S 289 Drugs in Society and H&S 350 Stress Management and Mental Health; or H&S 451 Psychosocial Determinants of Health (~~2~~ 3-4 cr)
~~H&S 316 Community and Global Health (2 cr)~~
~~H&S 350 Stress Management and Mental Health (2 cr)~~
H&S 423 School Health Education Methods and Administration (3 cr)
H&S 450 ~~Consumer~~ Critical Health ~~and Health Care~~ Issues (~~2~~ 3 cr)
Choose one of the following (4 cr):
Biol 102 Biology and Society (4 cr)
Biol 115 Cells and the Evolution of Life (4 cr)
Biol 120 Human Anatomy (4 cr)
MMBB 154, 155 Introductory Microbiology and Laboratory (4 cr)

15. Change the curricular requirements of **29-Credit Physical Education Teaching Minor** [**Effective**: Summer 2008]

~~29~~ 30 TO 31 PHYSICAL EDUCATION TEACHING MINOR (Grade levels 1-12)

~~H&S 150 Wellness Lifestyles (3 cr)~~
H&S 288 First Aid: Emergency Response (2 cr)
HPRD 201 Physical Activity, Wellness & Behavior Change (3 cr)
HPRD 210 Meaning of Movement and Injury Prevention (2 cr)
PEP 107 Movement Fundamentals (1 cr)
PEP 161 Introduction to Physical Education (1 cr)
~~PEP 201 Fitness Activities and Concepts (2 cr)~~
PEP 300 Applied Human Anatomy & Biomechanics or PEP 418 Physiology of Exercise (2-3 cr)
~~PEP 305 Applied Sports Psychology or PEP 310 Cultural/Phil Aspects of Sport (2-3 cr)~~
PEP 360 Motor Behavior (3 cr)
PEP 380 Measurement and Evaluation (2 cr)

PEP 412 Elementary Physical Education Methods (3 cr)
PEP 421 Secondary Physical Education Methods (3 cr)
PEP 424 Physical Education for Special Populations (2 cr)
PEP 440 Physical Education Curriculum and Administration (2 cr)
Rec 125 Outdoor Leisure Pursuits (2 cr)
One of the following individual activity courses (1 cr):
PEP 132 Skill and Analysis of Tennis, Pickleball, and Badminton (1 cr)
PEP 133 Skill and Analysis of Golf, Softball and Archery (1 cr)
PEP 202 Skill and Analysis of Stunts and Tumbling (1 cr)
One of the following team activity courses (1 cr):
PEP 134 Skill and Analysis of Track and Field (1 cr)
PEP 135 Skill and Analysis of Basketball and Volleyball (1 cr)
PEP 136 Skill and Analysis of Soccer and Speedball (1 cr)

Education

1. Drop the following course [**Effective**: Summer 2008]

ED 570 Foundations of Educational Research (3 cr)
Examines various and diverse philosophical/theoretical frameworks, methodologies, strategies/techniques, and design. Explores three paradigms: Positivism/Post positivism, Interpretive/Constructivist and Action/Emancipatory with an emphasis in conducting research in multicultural/diverse settings.
Recommended Substitution: N/A

Electrical and Computer Engineering

1. Drop the following course [**Effective**: Summer 2008]

ECE 454 Digital Data Storage Systems (3 cr)
(Alt/yrs)
Prereq: ECE 330, 331, and 450 or Permission
Recommended Substitution: N/A

2. Add the following courses [**Effective**: Summer 2008]

ECE J418/J518 Introduction to Electronic Packaging (3 cr)
This course serves as an introduction to electronic packaging and "back-end" microelectronic processes. Topics include substrate design & fabrication, SMT & first level assembly, clean room protocol, thermal design, simulation, and process considerations. Additional project work will be required for students enrolled in 518.
Prereq: ECE 310

ECE 434 Antenna Principles and Design (3 cr)
Maxwell's equations, vector potential theory, radiation patterns, antenna efficiency and bandwidth, polarization, dipole and loop antennas, line sources, patch antennas, lineal arrays, antenna systems, radar equation.
Prereq: ECE 330 or Permission

ECE 518 Introduction to Electronic Packaging (3 cr)
See ECE J418/J518.

3. Change the description and prerequisites of the following courses [**Effective**: Summer 2008]

ECE 319 Background Study in Electronics (3 cr)
Not applicable toward any UI undergrad degree; valid only for removal of electronics (ECE 310) deficiency for grad students who do not have BSEE background. See ECE 310 for description. Graded P/F based on comprehensive exam at completion of course.~~; NTU students earn regular letter grades instead of P/F.~~
Prereq: ~~Passing grade on Department of Electrical Engineering's upper-division qualifying exam~~Permission

ECE 339 Background Study in Electromagnetic Theory (3 cr)
Not applicable toward any UI undergrad degree; valid only for removal of electromagnetic theory (ECE 330) deficiency for grad students who do not have BSEE background. See ECE 330 for description. Graded P/F based on comprehensive exam at completion of course.~~; NTU students earn regular letter grades instead of P/F.~~
Prereq: ~~Passing grade on Department of Electrical Engineering's upper-division qualifying exam~~Permission

ECE 359 Background Study in Signals and Systems Analysis (3 cr)
Not applicable toward any UI undergrad degree; valid only for removal of signals and systems analysis (ECE 350) deficiency for grad students who do not have BSEE background. See ECE 350 for description. Graded P/F based on comprehensive exam at completion of course.~~; NTU students earn regular letter grades instead of P/F.~~
Prereq: ~~Passing grade on Department of Electrical Engineering's upper-division qualifying exam~~Permission

4. Change the description and title of the following courses [**Effective**: Summer 2008]

ECE 349 Background Study in Digital ~~Computer Fundamentals~~Logic (3 cr)
Not applicable toward any UI undergraduate degree; valid only for removal of digital computer fundamentals (ECE 240) deficiency for graduate students. See ECE 240 for description. Graded P/F~~; NTU students earn regular letter grades instead of P/F~~.

ECE 545 Advanced VLSI Design (3 cr)
CMOS circuit techniques, analysis, modeling, performance, processing, and scaling; design of CMOS logic, gate arrays, data and signal processors, and memory. May not be used with ECE 546 for graduation.
Prereq: ECE 445

5. Change the description, prerequisites and title of the following course [**Effective**: Summer 2008]

ECE 329 Background Study in ~~Electrical Machines~~Energy Systems (3 cr)
Not applicable toward any UI undergrad degree; valid only for removal of electrical machinery (ECE 320) deficiency for grad students who do not have BSEE background. See ECE 320 for description. Graded P/F based on comprehensive exam at completion of course.~~; NTU students earn regular letter grades instead of P/F.~~
Prereq: ~~Passing grade on Department of Electrical Engineering's upper-division qualifying exam~~Permission

6. Change the prerequisites of the following courses [**Effective**: Summer 2008]

ECE 471 Digital Control Systems (3 cr)
Design of digital control systems; sampling, A/D, and D/A conversion issues; time domain, frequency domain, and state space design methods; use of computer-aided design tools. Three lec a wk and approximately three 3-hr labs.
Prereq: ECE 450, 470 or ME 481

ECE 476 Digital Filtering (3 cr)
Design methods for recursive and non-recursive filters; frequency domain characteristics; computer-aided design; applications.
Prereq: ECE ~~350~~450

7. Change the curricular requirements of **Computer Engineering** (B.S.Comp.E.) [**Effective**: Summer 2008]

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

AmSt 301 Studies in American Culture or Phil 103 Ethics (3 cr)
Comm 101 Fundamentals of Public Speaking (2 cr)
CS 120 Computer Science I (4 cr)
CS 121 Computer Science II (4 cr)
CS 150 Computer Organization and Architecture (3 cr)
CS 210 Computing Languages (3 cr)
CS 240 Computer Operating Systems (3 cr)
CS 270 System Software (3 cr)
ECE 101 Foundations of Electrical and Computer Engineering (2 cr)
ECE 210 Electrical Circuits I (3 cr)
ECE 211 Electrical Circuits I Lab (1 cr)
ECE 212 Electrical Circuits II (3 cr)
ECE 213 Electrical Circuits II Lab (1 cr)
ECE 240 Digital Logic (3 cr)
ECE 241 Logic Circuit Lab (1 cr)
ECE 292 Sophomore Seminar (0 cr)
ECE 310 Fundamentals of Electronics (3 cr)
ECE 311 Fundamentals of Electronics Lab (1 cr)
ECE 340 Microcontrollers (3 cr)
ECE 341 Microcontrollers Lab (1 cr)
ECE 350 Signals and Systems Analysis (3 cr)
ECE 351 Signals and System Lab (1 cr)
ECE 440 Digital Systems Engineering (3 cr)
ECE 482, 483 CompE Senior Design I and II (6 cr)
ECE 491 Senior Seminar (0 cr)
Econ 201 Principles of Economics, Econ 202 Principles of Economics, or Econ 272 Foundations of Economics (3-4 cr)
Engl 317 Technical Writing (3 cr)
Math 170 Analytic Geometry and Calculus I (4 cr)
Math 175 Analytic Geometry and Calculus II (4 cr)
Math 176 Discrete Mathematics (3 cr)
Math 310 Ordinary Differential Equations (3 cr)
Math 330 Linear Algebra (3 cr)
Phys 211 Engineering Physics I (4 cr)
Phys 212 Engineering Physics II (4 cr)
Stat 301 Probability and Statistics (3 cr)
Science elective selected from Chem 111, Ent 211, Geol 111, MMBB 154/155, or Phys 213 (4 cr)
Technical electives selected from upper-division computer engineering, electrical engineering, and computer science courses (15 cr)

The minimum number of credits for the degree is 128, not counting Engl 101, Math 143, and other courses that might be required to remove deficiencies.

Students majoring in computer engineering must earn a grade of C or better in each of the following courses for graduation, and before registration is permitted in upper-division engineering courses: ECE 210, 212, 240, 241, Math 170, 175, 310, Phys 211, 212. Students majoring in computer engineering must earn a grade of B or better in CS 120, 121, 150, and a C or better in Math 176 for graduation and before registration is permitted in 200-level CS courses. Students majoring in computer engineering must earn a grade of C or better in CS 210, 240, 270, and Math 170, 175, 176 for graduation and before registration is permitted in upper-division CS courses.

Any student majoring in computer engineering may accumulate no more than a total of 14 credits of D's and F's in mathematics, science, or engineering courses that are used to satisfy graduation requirements. Included in this number are multiple repeats of a single course or single repeats in multiple courses and courses transferred from other institutions.

Health, Physical Education, Recreation and Dance

1. Drop the following courses [**Effective**: Summer 2008]

H&S ID349 Advanced Athletic Injuries (3 cr) WSU Ath T 349
Special fee course. Etiologic symptoms of sports-related injuries; diagnostic emphasis given to specific injuries of the extremities. Two lec and one lab a wk.
Prereq: H&S 245 or Permission
Recommended Substitution: N/A

H&S ID&WS465 Medical Aspects of Athletic Injuries (1 cr) WSU Ath T 465
Role and function of various medical and paramedical specialists in the treatment of sport-related injuries/illnesses.
Prereq: H&S 245
Recommended Substitution: N/A

PEP 250 Elementary Physical and Health Education (3 cr)
Content, methods, and materials in elementary school physical education and health for classroom teachers. Four hrs of lec-lab a wk.
Recommended Substitution: N/A

PEP 322 Skills and Analysis of Individual Activities (2 cr)
Skill development and knowledge of teaching progressions, techniques, and analysis of a variety of individual sports and activities. Three hrs of lec/labs a wk.
Recommended Substitution: N/A

PEP 431 Practicum: Elementary and Secondary Student Teaching (7 or 14 cr)
Credit earned in this course may not be applied to total cr needed for a PE teaching major. Supervised student teaching at elementary and secondary levels. Double majors select the 7-cr option; all other students select 14 cr divided between elementary and secondary level. Graded P/F.
Prereq: Admission to teacher education, PEP 420, ED 302, cumulative GPA of 2.5, and perm of dept. (Submit application to director of clinical experiences in the College of Education by December 1 of school year before enrolling.)
Recommended Substitution: N/A

PEP WS565 Advanced Educational Statistics (3 cr) WSU EdPsy 565
Applications of inferential statistics in educational research and evaluation.
Prereq: EdAd 507
Recommended Substitution: N/A

PEP 581 Research in Physical Activity, Theory, and Design (1-6 cr, max 6)
Principles of scientific inquiry; application to the study of physical activity; individual research projects.
Recommended Substitution: N/A

Rec 349 Facility Planning and Management (2 cr)
Principles and procedures of planning, design, development, and management of recreation, park, and leisure facilities. Three 1-day field trips. (Alt/yrs)
Recommended Substitution: N/A

Rec 460 History and Philosophy of Recreation and Leisure (2 cr)
Development of recreation movement and its cultural, social, and economic background; philosophies of significant leaders in the field; students develop a personal philosophy of recreation. (Alt/yrs)
Recommended Substitution: N/A

Rec 486 Recreation Program Planning and Marketing I (2 cr)
Planning and development of recreation programs and implementation of marketing techniques; theoretical emphasis with recreation special event programmed at end of semester. (Alt/yrs)
Recommended Substitution: N/A

Rec ID594 Sport and Recreation Budget and Finance (3 cr) WSU RLS 594
Policies and practices involved in acquisition, control, and financial management in sport and recreation agencies. (Spring only)
Recommended Substitution: N/A

Rec ID597 Computer Applications in Recreation and Leisure Studies (3 cr) WSU RLS 597
Identifying different computer applications in recreation and leisure fields; acquiring specific computer skills in use of specialized software packages for registration, scheduling, budgeting, and league operations; production of schedules and registration forms. (Fall only)
Recommended Substitution: N/A

2. Add the following courses [**Effective**: Summer 2008]

H&S 462 General Medicine for Physically Active Individuals (1 cr)
This course covers the understanding, recognition, and treatment along with the appropriate referral process for general medical conditions and disabilities that the entry-level athletic trainer may encounter in the physically active population that they serve. Conditions are presented for the integumentary, cardiovascular, respiratory, endocrine, digestive, urinary, musculoskeletal, reproductive, nervous, and lymphatic/immunity systems. Relevant medical diagnostic testing and referral are also included.

H&S 463 Pharmacology for Physically Active Individuals (1 cr)
This course covers the knowledge, skills, and ethical basis that entry-level certified athletic trainers must possess in pharmacological applications, including awareness of the indications, contraindications, precautions and interactions of medications and the governing of the regulations relevant to the treatment of injuries to and illnesses of physically active individuals.

H&S 464 Athletic Training Lower Extremity Evaluation (3 cr)
Advanced lower extremity injury evaluation theory and techniques in athletic training.
Prereq: H&S 245, Admission into clinical portion of ATEP; or Permission

HPRD 351 Social and Environmental Aspects of Physical Activity (1 cr)
This course will (a) examine the major social and environmental determinants of physical-activity behavior; and (b) explore intervention strategies designed to create social environments that facilitate and enhance physical activity among groups and communities. Emphasis will be placed on using theory and research to promote physical activity in various settings.
Prereq: HPRD 350 and major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education, or Recreation.
Coreq: HPRD 429

HPRD 570 Research in Physical Activity, Theory and Design (3 cr)
To understand and apply principles of scientific inquiry using both quantitative and qualitative research methodology; and apply such principles through individual research projects in physical activity.

PEP 301 Mental Training (2 cr)
Students will learn and apply mental training skills that are necessary for developing a personalized peak performance program.
Prereq: Permission. Enrollment is restricted to students who are highly engaged in performance activities such as athletes, performing artists, military cadets, etc.

PEP 532 Health and Community Development (3 cr)
This multidisciplinary course will discuss the determinants of sustainable and active healthy lifestyles, and explore the links between health, physical activity, and community development.

Rec 208 Professional Involvement in Recreation (1 cr)
This course is designed to encourage students to gain exposure to the recreation and leisure profession by participating in professional development activities such as: conferences, workshops, seminars or special education programs.

3. Change the dormant status of the following course [**Effective**: Summer 2008]

Rec 243 Recreation Activities (2 cr)
See~~Same as~~ PEP 243. ~~Experience in planning, organizing, leading, and evaluating a broad range of games, social recreation, music, drama, arts and crafts, and special events activities.~~

4. Change the cross-list status of the following course [**Effective**: Summer 2008]

PEP 243 Recreation Activities (2 cr)
Same as Rec 243. Experience in planning, organizing, leading, and evaluating a broad range of games, social recreation, music, drama, arts and crafts, and special events activities.

5. Change the coop-status of the following courses [**Effective**: Summer 2008]

PEP ~~ID&WS~~522 Pedagogy Applied to Health, Physical Education, Recreation, and Dance (3 cr)~~ WSU Kin 582~~
Provides theoretical and practical skills in the study and analysis of the teaching and learning process in health, physical education, recreation, and dance.

Rec ~~ID~~110 Recreation for People with Disabilities (3 cr)~~ WSU RLS 110~~
Overview of recreation for special populations with emphasis on history, etiology, characteristics, services, resources, professional competencies and opportunities, and recreation programs. Two 1-day field trips may be required.

Rec ~~ID~~365 Leisure and the Aging Process (3 cr) ~~WSU RLS 365~~
Recreation programming for the elderly based on aging process, cultural influences, and psychological and sociological aspects; visitation and field experience reqd. (Alt/yrs)

6. Change the cooperative status, joint-list status and description of the following course [**Effective**: Summer 2008]

PEP ~~J493/ID J~~593 Fitness Assessment and Prescription (3 cr) ~~WSU Kin 568~~
Development of skills in exercise testing, data interpretation, and prescription for health related fitness. ~~Credit earned in PEP 593 by completion of additional projects/assignments.~~ Two lec and 2 hrs of lab per~~a~~ wk. (Spring only)
Prereq: PEP 418 or Permission

7. Change the description of the following courses [**Effective**: Summer 2008]

PEP 350 Elementary Health and Physical Education (3 cr)
Specific methods, research, curricula, and media in teaching elementary health and physical education. Three lecture/lab hours per week and 15 hours of practicum work in the schools.
Coreq: Courses in the math/science/physical education block

PEP 424 Physical Education for Special Populations (2 cr)
Adapting physical education programs to meet individual needs. ~~Lec and lab. 8-hour school practicum required. (Spring only)~~ 2 hours of lec per week. Includes a 20 hour required practicum working with individuals with disabilities.
Prereq: PEP 360
Prereq or **Coreq:** ED 302

PEP 440 Physical Education Curriculum and Administration (2 cr)
Curriculum, programming, organization, and administration of school physical education and intramurals; field experience. Includes a 16 hr required practicum at the secondary level.
Prereq or **Coreq:** ED 302

8. Change the grade mode of the following courses [**Effective**: Summer 2008]

Rec 102 Introduction to Recreation Professions (1 cr)
Intro to recreation and its related management problems, resources, and professional opportunities. ~~Graded P/F.~~ (Fall only)

Rec 598 (s) Internship (cr arr)
Supervised field experience in an appropriate leisure agency. ~~Graded P/F.~~
Prereq: Permission

9. Change the title of the following course [**Effective**: Summer 2008]

PEP 100 Introduction to ~~Sport~~ Exercise Science~~s~~ & Health (1 cr)
Introduction to career opportunities within the field of sport science; topics on professional development, advising issues, and guest lectures from professionals practicing in related fields. (Fall only)

10. Change the description, prerequisite and title of the following course [**Effective**: Summer 2008]

H&S J423/J523 School Health Education Methods and Administration (3 cr)
Curriculum design, organization and administration, methods and strategies, and resource materials for teaching health in school ~~and community~~ health settings. Team leadership project and activity required for graduate credit. (Fall only)
Prereq: H&S 150 or HPRD 201

11. Change the prerequisites of the following courses [**Effective**: Summer 2008]

H&S 467 Athletic Training Rehabilitation (3 cr)
Advanced injury rehabilitation theory and techniques in athletic training. (Spring only)
Prereq: H&S 245, ~~and~~ 466~~,~~ and admission to the clinical portion of ATEP; or Permission

H&S 468 Athletic Training Modalities (3 cr)
Advanced theory and techniques of modality use in athletic training. (Fall only)
Prereq: H&S 245 and admission to the clinical portion of ATEP; or Permission

H&S 469 Athletic Training Organization and Administration (3 cr)
The organization and administration of athletic training programs. (Spring, alt/yrs)
Prereq: H&S 245, and admission to the clinical portion of ATEP; or Permission

H&S 470 Seminar in Athletic Training (2 cr)
Capstone course designed to prepare students for entry into Athletic Training profession. Additional items include preparation for NATABOC national examination, career development, portfolio and resume completion, professionalism and other ethics, and various professional topics. (Spring, Alt/yrs)
Prereq: H&S 466, 467, 468, ~~and~~ 469~~,~~ and admission to the clinical portion of ATEP; or Permission

12. Change the co-requisites, credits and prerequisites of the following course [**Effective**: Summer 2008]

HPRD 210 Meaning of Movement and Injury Prevention (2~~-3~~ cr)
Explores the meaning of movement and injury prevention through a phenomenological approach. Develops skills necessary to find meaning in movement across the lifespan. 1-2 lec cr and 1 lab cr.
Prereq: Major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation
Coreq: HPRD 201

13. Change the credits and prerequisites of the following course [**Effective**: Summer 2008]

Rec 487 Recreation Program Planning and Marketing (~~2~~ 1 cr)
Planning and development of recreation programs and implementation of marketing techniques; practical application emphasis.
~~**Prereq:** Rec 486 or Permission~~

14. Change the credits, description, prerequisites and title of the following courses [**Effective**: Summer 2008]

H&S 450 ~~Consumer~~ Critical Health ~~and Health Care~~ Issues (~~2~~ 3 cr)
May be used as core credit in J-3-d. Provides a sampling of information that represents the current and projected trends in health; students will gain an understanding of broad public health issues and what strategies would be useful to address these problems.~~Examination of major personal health and health care consumer issues including advertising, labeling, health insurance, Medicare, health care services, over-the-counter drugs, disease prevention and control, health fads, detection of health fraud and quackery, sources of consumer protection, and other topics of interest to the consumer.~~
~~**Prereq:** H&S 150~~

HPRD 350 ~~Behavior Change in~~Practicum in Physical Activity Behavior Change (~~2~~ 1 cr)
Students will apply the concepts learned in HPRD 201 and HPRD 210 to effect change in the personal behavior related to physical activity. 1 recitation and 2 outside hours per week.~~Examination of the theories, research, practical skills, and psychological and social factors that influence physical activity behavior of individuals and groups. Emphasis will be placed on strategies to improve individual motivation to be physically active by understanding key principles of behavior change~~
Prereq: HPRD 201, 210 and major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation

HPRD 486 Programming ~~Planning~~ and Marketing for Healthy, Active Lifestyles (~~2~~ 1 cr)
~~Planning, development, marketing~~Marketing, implementation, and assessment of physical activity programs for individuals, groups, schools, and communities. 1 ~~lec cr and 1 lab cr~~recitation and 2 outside hrs per week.
Prereq: HPRD 351, 429 and major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation.

15. Change the co-requisites, description, prerequisites and title of the following courses [**Effective**: Summer 2008]

HPRD 201 ~~Foundations of~~ Physical Activity, ~~and~~ Wellness & Behavior Change (3 cr)
Examines personal awareness and responsibility for maintenance of health, fitness, and well-being. Teaches skills necessary for individual physical activity program development and implementation to effect positive health-related behavior change for diverse populations.~~for diverse populations~~. 2 lec cr and 1 lab cr.
Prereq: Major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation.
Coreq: HPRD 210

HPRD 429 ~~Principles of~~ Leadership, ~~and~~ Pedagogy and Programming in Physical Activity (~~2-3~~4 cr)
Examines the theories, methods, principles and styles of leadership, ~~and~~ pedagogy and programming related to physical activity programs. Develops leadership, ~~and~~ pedagogical and programming skills. ~~1-~~2 lec cr and ~~1~~ 4 lab cr.
Prereq: HPRD 350 and major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation.
Coreq: HPRD 351

16. Change the description, prerequisites and title of the following course [**Effective**: Summer 2008]

H&S 466 Athletic Training Upper Extremity Evaluation (3 cr)
Advanced upper extremity injury evaluation theory and techniques in athletic training. (~~Fall~~ Spring only)
Prereq: H&S 245, 464 and admission to the clinical portion of ATEP; or Permission

17. Change the description and number of the following course [**Effective**: Summer 2008]

H&S ~~432~~ 232 Medical Terminology (2 cr) (H&S 432)

Intro to basic concepts of medical terminology and symbols related to ~~working with people with disabilities~~medical and allied health professionals. ~~Additional projects/assignments required for graduate credit. (Alt/yrs)~~

18. Change the description, number and title of the following course [**Effective**: Summer 2008]

H&S ~~436~~ 490 Health Promotion ~~Program Planning~~ (3 cr) (H&S 436)
May be used as core credit in J-3-d. Examines the philosophical, ethical and theoretical foundations of the professional practice of health promotion in school, community, and work site settings, as well as in health promotion consultant activities. Emphasis will be placed on facilitating prepared units/lessons to respective target populations such as students, employees, patients, or community members.~~Provides in-depth study of program planning, implementation and evaluation of health promotion/wellness programs in a variety of settings, including workplace and community. Students obtain hands-on experience planning a health promotion program. Special emphasis on competencies necessary for the health educators to function in a variety of community settings.~~ (Spring only)
Prereq: H&S 150 and Permission

19. Change the curricular requirements of **HPERD Core** [**Effective**: Summer 2008]

Courses required in all majors in the Department of Health, Physical Education, Recreation and Dance:

HPRD 201 Physical Activity, Wellness & Behavior Change~~Foundations of Physical Activity and Wellness~~ (3 cr)
HPRD 210 Meaning of Movement and Injury Prevention (2~~-3~~ cr)
HPRD 350 Behavior Change in Physical Activity (~~2~~ 1 cr)
HPRD 351 Social and Environmental Aspects of Physical Activity (1 cr)
HPRD 429 Leadership, Pedagogy and Programming in Physical Activity (4 cr)~~HPRD 429 Principles of Leadership and Pedagogy in Physical Activity (2-3 cr)~~
HPRD 486 Programming ~~Planning~~ and Marketing for Healthy, Active Lifestyles (~~2~~ 1 cr)
PTTE 111 Computer Skills~~, ITPA certification,~~ or approved elective (3 cr)

20. Change the curricular requirements of **Athletic Training** (B.S.P.E.) [**Effective**: Summer 2008]

The Athletic Training major has two portions to the education program, didactic and clinical. Prior to application to the clinical portion of the program, a pre-professional phase is required which includes a grade of 'C' or better in prerequisite courses (Biol 120, Biol 121, H&S 245, H&S 288 and PEP 101) and successful completion of an observation period in the athletic training room (PEP 171). See the Athletic Training ~~Coordinator~~ Education Program Director for the specific information regarding admission into the clinical portion of the program. This information includes admission requirements, pre-professional phase course work and observation period requirements, technical standards for admission, and an application form.

Additionally, to maintain good standing in the clinical portion of the program, the student must meet specific criteria, which includes maintaining a 2.75 cumulative GPA and a grade of 'C' or better in all professional courses. See the Athletic Training Education Program Director for specific information regarding continuation in the clinical portion of the program.

Required course work includes the university requirements (see regulation J-3), the Department of HPERD core and the following course work:

Professional Courses (68 cr):
- Biol 120 Human Anatomy (4 cr)
- Biol 121 Human Physiology (4 cr)
- FCS 205 Concepts in Human Nutrition (3 cr)
- FCS 305 Nutrition Related to Fitness and Sport (3 cr)
- H&S 232 Medical Terminology (2 cr)
- H&S 245 Introduction to Athletic Injuries (3 cr)
- H&S 288 First Aid: Emergency Response (2 cr)
- ~~H&S 390 Athletic Training High School Clinical Experience (1 cr)~~
- ~~H&S 391 Athletic Training Sports Medicine Clinical Experience (1 cr)~~
- ~~H&S 392 Athletic Training General Medical & Orthopedic Clinical Experience (1 cr)~~
- ~~H&S 432 Medical Terminology (2 cr)~~
- H&S 462 General Medicine for Physically Active Individuals (1 cr)
- H&S 463 Pharmacology for Physically Active Individuals (1 cr)
- H&S 464 Athletic Training Lower Extremity Evaluation (3 cr)
- H&S 466 Athletic Training Upper Extremity Evaluation (3 cr)
- H&S 467 Athletic Training Rehabilitation (3 cr)
- H&S 468 Athletic Training Modalities (3 cr)
- H&S 469 Athletic Training Organization and Administration (3 cr)
- H&S 470 Seminar in Athletic Training (2 cr)
- PEB 106 Individual and Dual Sports: Step Aerobics or Aerobics/Body Toning (1 cr)
- PEB 106 Individual and Dual Sports: Weight Training (1 cr)
- PEP 101 Introduction to Athletic Training (1 cr)
- PEP 300 Applied Human Anatomy and Biomechanics (3 cr)
- PEP 305 Applied Sports Psychology (3 cr)
- PEP 360 Motor Behavior (3 cr)
- PEP 380 Measurement and Evaluation (2 cr)
- PEP 418 Physiology of Exercise (3 cr)
- PEP 455 Design & Analysis of Research in HPERD (3 cr)
- PEP 475 Moral Reasoning in Sport (2 cr)
- PEP 493 Fitness Assessment and Prescription (3 cr)

One of the following (3 cr):
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 209 Inquiry-Based Writing (3 cr)
Engl 313 Business Writing (3 cr)
Engl 317 Technical Writing (3 cr)
Clinical Experiences (10 cr):
H&S 390 Athletic Training High School Clinical Experience (1 cr)
H&S 391 Athletic Training Sports Medicine Clinical Experience (1 cr)
H&S 392 Athletic Training General Medical & Orthopedic Clinical Experience (1 cr)
PEP 171 Athletic Training Clinical Experience I – Observation (1 cr)
PEP 272 Athletic Training Clinical Experience II (1 cr)
PEP 273 Athletic Training Clinical Experience III (1 cr)
~~PEP 300 Applied Human Anatomy and Biomechanics (3 cr)~~
~~PEP 305 Applied Sports Psychology (3 cr)~~
~~PEP 360 Motor Behavior (3 cr)~~
PEP 371 Athletic Training Clinical Experience IV (1 cr)
PEP 372 Athletic Training Clinical Experience V (1 cr)
~~PEP 380 Measurement and Evaluation (2 cr)~~
~~PEP 418 Physiology of Exercise (3 cr)~~
~~PEP 455 Design & Analysis of Research in HPERD (3 cr)~~
PEP 471 Athletic Training Clinical Experience VI (~~2~~ 1 cr)
PEP 472 Athletic Training Clinical Experience VII (~~2~~ 1 cr)
~~PEP 475 Moral Reasoning in Sport (2 cr)~~
~~PEP 493 Fitness Assessment and Prescription (3 cr)~~
~~One of the following (3 cr):~~
~~Engl 207 Persuasive Writing (3 cr)~~
~~Engl 208 Personal and Exploratory Writing (3 cr)~~
~~Engl 209 Inquiry-Based Writing (3 cr)~~
~~Engl 313 Business Writing (3 cr)~~
~~Engl 317 Technical Writing (3 cr)~~
Electives to total 128 cr for the degree

21. Change the curricular requirements of **Exercise Science and Health** (B.S.P.E.) [**Effective**: Summer 2008]

Required course work includes the university requirements (see regulation J-3), the Department of HPERD core, and the following.

Biol 120 Human Anatomy (4 cr)
Biol 121 Human Physiology (4 cr)
FCS 205 Concepts in Human Nutrition (3 cr)
H&S 288 First Aid: Emergency Response (or current Emergency Response or First Aid/CPR certification) (2 cr)
~~H&S 436 Health Promotion Program Planning (3 cr)~~
H&S 450 ~~Consumer~~ Critical Health ~~and Health Care~~ Issues (~~2~~ 3 cr)
H&S 451 Psychosocial Determinants of Health (3 cr)
H&S 490 Health Promotion (3 cr)
PEP 100 Introduction to Sport Sciences (1 cr)
PEP 300 Applied Human Anatomy and Biomechanics (3 cr)
PEP 360 Motor Behavior (3 cr)
PEP 418 Physiology of Exercise (3 cr)
PEP 455 Design & Analysis of Research in HPERD (3 cr)
PEP 493 Fitness Assessment and Prescription or PEP 305 Applied Sports Psychology (3 cr)
PEP 495 Practicum in Tutoring (3 cr)
PEP 498 Internship in Physical Education (summer preferred) (9 cr)
PE activity/skill classes (see advisor for selection) (5 cr)
One of the following (3 cr):
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 209 Inquiry-Based Writing (3 cr)
Engl 313 Business Writing (3 cr)
Engl 317 Technical Writing (3 cr)
Electives to total 128 cr for the degree

22. Change the curricular requirements of **Physical Education** (B.S.Ed.) [**Effective**: Summer 2008]

Required course work includes the university requirements (see regulation J-3), the Department of HPERD core, the Idaho Technology Competency Certification and the following course work:

Movement Courses (All to be completed prior to pedagogy course sequence)
Dan 105 Dance (1 cr)
Dan 360 Children's Dance (1 cr)
PEB 108 Swimming (1 cr)
PEP 107 Movement Fundamentals (1 cr)
PEP 202 Skill and Analysis: Stunts and Tumbling (1 cr)

Individual Skill Courses (All to be completed prior to or concurrent with Pedagogy course sequence)

PEP 132 Skill and Analysis of Tennis, Pickleball, and Badminton (1 cr)
PEP 133 Skill and Analysis of Golf, Softball and Archery (1 cr)
PEP 134 Skill and Analysis of Track and Field (1 cr)

Team Skill Courses (All to be completed prior to or concurrent with Pedagogy course sequence)
PEP 135 Skill and Analysis of Basketball and Volleyball (1 cr)
PEP 136 Skill and Analysis of Soccer and Speedball (1 cr)

Outdoor/Recreational Skill Courses (All to be completed prior to or concurrent with Pedagogy course sequence)
PEP 243 Recreation Activities (2 cr)
Rec 125 Outdoor Leisure Pursuits (2 cr)

Foundation Courses
Biol 120 Human Anatomy (4 cr)
Biol 121 Human Physiology (4 cr)
H&S 288 First Aid: Emergency Response (or current Emergency Response and CPR certification at the time of graduation) (2 cr)
PEP 161 Introduction to Physical Education (1 cr)
PEP 300 Applied Human Anatomy and Biomechanics (2 cr)
PEP 360 Motor Behavior (3 cr)
PEP 380 Measurement and Evaluation (2 cr)
PEP 418 Physiology of Exercise (3 cr)

Pedagogy Courses
Note: Acceptance into the physical education pedagogy sequence requires completion with no grade lower than a "C" in movement and skill courses, at least 6 of the 10 credits of required skill courses, PEP 161, 300, 360, ED 201, 301, minimum 2.75 GPA, appropriate portfolio evidence, and advisor recommendation.
PEP 412 Elementary Physical Education Methods (3 cr)
PEP 414 Proseminar in Physical Education (1 cr)
PEP 421 Secondary Physical Education Methods (2 cr)
PEP 424 Physical Education for Special Populations (2 cr)
PEP 440 Physical Education Curriculum and Administration (2 cr)

General College of Education Requirements
ED 201 Diverse Learners in Schools and Social/Cultural Contexts (3 cr)
ED 301 Principles of Learning and Development in Education (3 cr)
ED 302 Curriculum, Instruction, and Assessment Strategies (3 cr)
ED 401 Professional Role Development (3 cr)
EDCI 463 Literacy Methods for Content Learning (3 cr)
PEP 484 Internship in Physical Education Teaching (14 cr)
Psyc 101 Intro to Psychology or Psyc 305 Developmental Psychology (3 cr)

Advanced Composition Requirement (Select one of the following) (3 cr):
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 209 Inquiry-Based Writing (3 cr)
Engl 313 Business Writing (3 cr)
Engl 317 Technical Writing (3 cr)

Note: For registration in upper-division courses in education, students must have been admitted to the teacher education program and maintain a cumulative GPA of 2.75. For admission criteria, refer to "Admission to the Teacher Education Program" in the College of Education section in Part 4.

23. Change the curricular requirements of **Recreation** (B.S.Rec.) [**Effective**: Summer 2008]

A minimum cumulative university GPA of 2.25 is required of all recreation majors who seek to take upper-division courses. Recreation majors must also achieve a minimum cumulative university GPA of 2.25 to graduate with a B.S.Rec. degree.

Required course work includes the university requirements (see regulation J-3), an academic minor or 20 credits in an approved cognate area of study, the Department of HPERD core and the following coursework:

H&S 288 First Aid: Emergency Response or Rec 290 Wilderness First Responder (or Emergency Responder Certification) (2-3 cr)
~~PEP~~ Rec 243 Recreation Activities (2 cr)
Psyc 101 Introduction to Psychology (3 cr)
Psyc 305 Developmental Psychology (3 cr)
Rec 102 Introduction to Recreation Professions (1 cr)
Rec 110 Recreation for People with Disabilities (3 cr)
Rec 125 Outdoor Leisure Pursuits (2 cr)
Rec 260 Historical Perspectives of Leisure and Society (3 cr)
Rec 280 Recreation Practicum (1 cr)
Rec 365 Leisure and the Aging Process (3 cr)
Rec 410 Trends and Legal Issues in Leisure Services (3 cr)
Rec 455 Design and Analysis of Research in HPERD (3 cr)
Rec 487 Recreation Program Planning and Marketing (2 cr)
Rec 493 Management of Leisure Services and Facilities (3 cr)
Rec 495 Practicum in Tutoring (1 cr)

Rec 498 Internship in Recreation (9 cr)
Additional courses selected from the following (4 cr):
Rec 208 Professional Involvement in Recreation (1 cr)
Rec 254 Camp Leadership (3 cr)
Rec 256 Camp Counseling Practicum (2-3 cr)
Rec 340 Hospitality, Leisure, and Recreation Enterprises (3 cr)
Rec 420 Experiential Education (2 cr)
One of the following (3 cr):
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 209 Inquiry-Based Writing (3 cr)
Engl 313 Business Writing (3 cr)
Engl 317 Technical Writing (3 cr)
One of the following (1-2 cr):
PEB 108 Swimming (1 cr)
PEP 244 Lifeguarding (2 cr)
PEP 266 Aquatic Instructor's Course (2 cr)
Four courses (only two may be B.I.P. courses, Dan 105 or PEB 106, 107) selected from Dan 105; PEB 106, 107, PEP 132, 133, 134, 135, 136, or 202; Rec 220, 221, 222, 223, 224, 225, 226, or 227 (4-5 cr)
Electives to total 128 cr for the degree

24. Change the curricular requirements of **Dance** (Minor) [**Effective**: Summer 2008]

Dan 210 Dance Theatre (2 cr)
Dan 320 Labanotation (3 cr)
~~Dan 325 Dance Production (3 cr)~~
Dan 321 Dance Pedagogy (3 cr)
Dan 384 Dance Composition I (3 cr)
Dan 421 Dance History (3 cr)
~~Dan 422 Labanalysis (3 cr)~~
~~Electives in theatrical dance tech (selected from ballet, jazz, modern) (7 cr)~~
7 Credits selected from Ballet, Jazz, and Modern:
Dan 216 Techniques (cr arr)
Dan 416 Advanced Technique (cr arr)

General Engineering

1. Change the title of the following course [**Effective**: Summer 2008]

Engr 205 ~~Idaho RISE Program~~Near Space Engineering (3 cr)
Idaho RISE (Research Involving Student Engineers and Educators) is the NASA Idaho Space Grant Consortium student high-altitude scientific balloon program at the University of Idaho. RISE is a multidisciplinary program involving students from all departments in the College of Engineering, as well as Physics, Chemistry, Life Sciences, Education, and many other departments. Students in ENGR 205 will participate in the design, development, testing, flight and flight operations, recovery, and data analysis of balloon-borne science and engineering instrumentation flown to altitudes of 100,000 feet and higher. Recommended Preparation: Interest in space, aerospace science and engineering recommended.

Mechanical Engineering

1. Drop the following courses [**Effective**: Summer 2008]

ME 225 Introduction to Machine Design (2 cr)
Two dimensional hand drawing of solid objects, three dimensional concepts, drawing processes, dimensioning, threads & fasteners, and tolerances.
Prereq: ME 123
Recommended Substitution: N/A

ME 262 Sophomore Laboratory (3 cr)
Foundation of experimental methods; testing of structures and engineering systems subject to various loads; use of computers for data reduction and analysis; development of visualization skills and engineering record keeping skills. Two lec and 2-hrs of lab a wk.
Prereq: Engr 210
Coreq: ME 223
Recommended Substitution: N/A

2. Add the following courses [**Effective**: Summer 2008]

ME 419 Advanced Simulation and Animation (3 cr)
Advanced topics in discrete system simulation with emphasis on topics of interest to the Mechanical Engineer. Students will learn how to model complex discrete systems using special software for both simulation and animation. Topics include: interfacing the simulation

language with other software, creating stand-alone animations, creating presentations showing the animation results. Each student will be assigned a major project to simulate. (Spring only)
Prereq: ME 418

ME J421/J521 Advanced Computer Aided Design (3 cr)
Use of solid modeling software for advanced component design, creation of complex multi-component assemblies, animation studies, and rendering. There are two major projects: solid modeling to reverse engineer an existing design and solid modeling for detail design synthesis.
Prereq: ME 301 and 341

ME 521 Advanced Computer Aided Design (3 cr)
See ME J421/J521.

3. Change the cross-list status of the following course [**Effective**: Summer 2008]

ME 539 Advanced Mechanics of Materials (3 cr)
Same as CE 510 and MSE 539. Limitations of results of elementary mechanics of materials, complex situations of loading and structural geometry, applications to design of machines and structure, introduction to elasticity.
Prereq: ME 341 or CE 342

4. Change the prerequisites the following courses [**Effective**: Summer 2008]

ME 301 Computer Aided Design Methods (3 cr)
Two and three dimensional graphics including geometric dimensioning and tolerancing (GDT); use of solid modeling software in engineering design (CAD); finite element analysis (FEA), and manufacturing (CAM).
Prereq: ME 223~~ and 225~~

ME 424 Mechanical Systems Design I (3 cr)
May be used as core credit in J-3-d. Study of production realization process including project planning, concept design, detail design, and manufacturing processes; modern design and manufacturing practices in each of these areas applied to a two-semester, industrial sponsored capstone design project (continued in ME 426). (Fall only)
Prereq: ME 301, 313, ~~323~~324, 325, 330, 345, and Certification

5. Change the co-requisites the following courses [**Effective**: Summer 2008]

ME 313 Dynamic Modeling of Engineering Systems (3 cr)
Application of basic engineering principles to model and analyze the dynamic response of engineering systems; problem solutions will utilize transfer function methods, state variable techniques, and simulation software.
Prereq: ME 223, Engr 220, Engr 240, and Math 310
Coreq: Math 330

ME ID&WS324 Dynamic Analysis in Machine Design (3 cr) WSU M E 312
Kinematic, static, and dynamic principles and application to analysis and synthesis of machines with emphasis on computer-aided design (CAD) techniques. Two lec and one 3-hr lab a wk; one 1-day field trip.
Prereq: Math 310, Engr 220, and ME 223
Coreq: Math 330

ME 426 Mechanical Systems Design II (3 cr)
May be used as core credit in J-3-d. Continuation of ME 424. Additional manufacturing issues; continuation of a two-semester, industrial sponsored capstone design project (begun in ME 424) to include the detail design, prototype construction, and testing. (Spring only)
Prereq: ME 424
Coreq: ME 435

ME 435 Thermal Energy Systems Design (3 cr)
Application of fluid mechanics, thermodynamics and heat transfer in the design of thermal energy systems; topics include thermal energy system component analysis and selection, component and system simulation, dynamic response of thermal systems, and system optimization. (Fall only)
Prereq: Engr 335 and ME 345
Coreq: Math 330

6. Change the curricular requirements of **Mechanical Engineering** (B.S.M.E.) [**Effective**: Summer 2008]

Required course work includes the university requirements (see regulation J-3), completion of the Fundamentals of Engineering (FE) examination and:

CE 411 Engineering Fundamentals (1 cr)
Chem 111 Principles of Chemistry I (4 cr)
Comm 101 Fundamentals of Public Speaking (2 cr)
Econ 201 or 202, or 272 (3-4 cr)
Engl 317 Technical Writing (3 cr)
Engr 210 Engineering Statics (3 cr)

Engr 220 Engineering Dynamics (3 cr)
Engr 240 Introduction to Electrical Circuits (3 cr)
Engr 320 Engineering Thermodynamics and Heat Transfer (3 cr)
Engr 335 Engineering Fluid Mechanics (3 cr)
Engr 350 Engineering Mechanics of Materials (3 cr)
MSE 201 Elements of Materials Science (3 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)
Math 310 Ordinary Differential Equations (3 cr)
Math 330 Linear Algebra (3 cr)
ME 123 Introduction to Mechanical Design (3 cr)
ME 223 Mechanical Design Analysis (3 cr)
~~ME 225 Introduction to Machine Design (2 cr)~~
ME 301 Computer Aided Design Methods (3 cr)
ME 313 Dynamic Modeling of Engineering Systems (3 cr)
ME 324 Dynamic Analysis in Machine Design (3 cr)
ME 325 Machine Component Design I (3 cr)
ME 330 Experimental Methods for Engineers (3 cr)
ME 341 Intermediate Mechanics of Materials (3 cr)
ME 345 Heat Transfer (3 cr)
ME 424 Mechanical Systems Design I (3 cr)
ME 426 Mechanical Systems Design II (3 cr)
ME 430 Senior Laboratory (3 cr)
ME 435 Thermal Energy Systems Design (3 cr)
Phil 103 Ethics or Phil 365 Biomedical Ethics (3 cr)
Phys 211, 212, 213 Engineering Physics I-II-III (12 cr)
Technical electives selected from ME 409, 410, 411, 412, 413, 415, 416, 417, 420, 422, 425, 433, 443, 444, 451, 461, 472, 473, 481, plus one more technical elective that is from either the preceding list or from Math 330, 420, 432, 433, 480, Stat 301, 401, 446. (12 cr) **

The minimum number of credits for the degree is 128, not counting Engl 101, Math 143, and other courses that might be required to remove deficiencies.

Students majoring in mechanical engineering may accumulate no more than three grades of D or F in the mathematics, science or engineering courses used to satisfy lower division requirements. Included in this number are multiple repeats of a single course or single repeats in multiple courses and courses transferred from other institutions. In addition, students must also earn at least five grades better than a C in mathematics, science or engineering courses used to satisfy lower division requirements before registration is permitted in upper-division mechanical engineering courses. The specific lower-division courses are: Chem 111; Engr 210, 220, and 240; Math 170, 175, 275; ME 123, 223, 225; MSE 201; and Phys 211, 212, and 213. In addition, a grade higher than C must be earned in at least five of these courses. A grade of P (pass) in any of these courses is considered as a C grade in satisfying this certification requirement.

**** With departmental approval, a graduate-level or special topics (ME 404) course may be used as a Technical Elective.

Material Science and Engineering

1. Drop the following courses [**Effective**: Summer 2008]

MSE R534 Radiation Effects in Materials (3 cr)
See Met 534.
Recommended Equivalency: MSE J437/J537

Met R534 Radiation Effects in Materials (3 cr)
Same as MSE R534. Interactions between radiation and solids.
Prereq: Permission
Recommended Equivalency: MSE J437/J537

2. Add the following courses [**Effective**: Summer 2008]

MSE J438/J538 Fundamentals of Nuclear Materials (3 cr)
Same as NE J438/J538. This course is designed for students who wish to learn about nuclear materials and fuels from a materials science viewpoint. Topics to be covered include crystal structure, diffusion, radiation damage processes etc. Students who wish to receive credit for the 500 level course are required to do term-projects and advanced problems. (Spring only)
Prereq: MSE 201 or NE 450; or Permission

MSE 538 Fundamentals of Nuclear Materials (3 cr)
See MSE J438/J538.

3. Change the campus, cross-list status and prerequisites of the following courses [**Effective**: Summer 2008]

MSE ~~R-~~J437/~~R-~~J537 Radiation Effects on Materials (3 cr)

Same as NE J437/J537. Interactions between radiation and solids.
Prereq: MSE 201 or Permission

MSE ~~R~~537 Radiation Effects on Materials (3 cr)
See MSE J437/J537.

Nuclear Engineering

1. Add the following courses [**Effective**: Summer 2008]

NE J437/J537 Radiation Effects on Materials (3 cr)
See MSE J437/J537.

NE 537 Radiation Effects on Materials (3 cr)
See MSE J437/J537.

NE J438/J538 Fundamentals of Nuclear Materials (3 cr)
See MSE J438/J538.

NE 538 Fundamentals of Nuclear Materials (3 cr)
See MSE J438/J538.

Vitural Technology and Design

1. Change the curricular requirements of **Virtual Technology and Design** (B.S.) [**Effective**: Summer 2008]

This is a four-year curriculum leading to a B.S. in Virtual Technology and Design. The third year design studio capacity is 20 students. After the second year of study, academic achievement is reviewed to determine eligibility for continued study in the VTD program and permission to enroll in the third year studio sequence. Applicants to the third yearmust have a minimum GPA of 2.5 and are required to submit an electronic media based portfolio containing examples of their art and design work. Applicants should contact the program coordinator regarding acceptable media formats. The submission should also contain a transcript of any college work outside the UI. The deadline for third year applications is the close of the spring semester. Results of the evaluation will be made known to applicants by the end of June. Students accepted into the third and fourth years of the curriculum are required to maintain a minimum GPA of 2.5 and to receive a grade of 'C' or higher in all required VTD courses.

Note: Students who have not been accepted into the third year of the curriculum may not enroll in VTD 300 level design courses. Students who have left the program or fail a design studio course may only re-enter the curriculum by application to the program admissions committee.

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

Art 110 Visual Communication (2 cr)
Art 121-122 Design Process I-II (5 cr)
Art 111 Drawing I (2 cr)
CS 112 Introduction to Problem Solving and Programming (3 cr)
Math 143 Pre-calculus Algebra and Analytic Geometry (3 cr)
Phys 111 General Physics (4 cr)
Psyc 101 Introduction to Psychology (3 cr)
VTD 152 Introduction to Virtual Design (2 cr)
VTD 244 Introduction to 3D Modeling (3 cr)
~~VTD 355 Virtual Design Studio I (4 cr)~~
VTD 253 Virtual Design I (3 cr)
VTD 254 Virtual Design II (3 cr)
VTD 355 Virtual Design III (4 cr)
VTD 356 Virtual Design IV (4 cr)
~~VTD 356 Virtual Design Studio II (4 cr)~~
VTD 400 Seminar (2 cr)
VTD 457 Capstone Design Studio I (9 cr)
VTD 458 Capstone Design Studio II (9 cr)
~~Three of the following courses (8-12 cr):~~
- ~~Arch 154 Introduction to Architectural Graphics (2 cr)~~
- ~~Arch 253 Architectural Design I (3 cr)~~
- ~~Arch 254 Architectural Design II (3 cr)~~
- ~~Art 221 Introduction to Graphic Design (3 cr)~~
- ~~Art 222 Introduction to Typography (3 cr)~~
- ~~JAMM 275 Introduction to Video/Television & Digital Media Production (3 cr)~~
- ~~LArc 245 Landscape Graphics I (2 cr)~~
- ~~LArc 256 Landscape Architecture I (3 cr)~~
- ~~LArc 257 Landscape Architecture I (3 cr)~~

Two of the following courses (5-7 cr):
- Art 271 Interaction Design I (3 cr)
- Art 272 Interface Design II (3 cr)
- Art 380 Digital Imaging (3 cr)
- JAMM 370 Digital Audio Production (3 cr)
- LArc 210 Computer Applications (2 cr)
- VTD 266 Animation (3 cr)
- VTD 344 Computer-Aided Design (2 cr)
- VTD 345 Advanced Modeling (3 cr)
- VTD 346 Advanced Lighting and Materials (3 cr)
- VTD 367 Advanced Animation (3 cr)
- VTD 371 Interactive Technologies (3 cr)
- VTD 372 Advanced Interactive Technologies (3 cr)

Two history or theory courses, that are associated with the disciplines of architecture, art, film, media, music or theatre, with approval of the VTD program (6 cr).

Three directed elective courses that allow a student to develop an emphasis area or breadth in a supporting discipline, with approval of VTD program (8-9cr).

~~Directed electives that allow a student to develop an emphasis area or breadth in a supporting discipline, with approval of VTD program. (14-15 cr)~~

Electives to total 128 cr for the degree.

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FOR THE FACULTY'S INFORMATION

Correction to General Curriculum Report 246:

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)

Other Informational Changes:

1. Change the credits of the following course [**Effective**: Spring 2008]

   PlSc WS506 Epidemiology and Management of Plant Diseases (~~4~~ 3 cr) WSU Pl P 551