Approved by Faculty Senate 4/15/10

M E M O R A N D U M

TO: Deans and Chairs

From: Becky Bitter, Assistant Registrar

DATE: 8 April, 2010

SUBJECT: Minor Change Bulletin No. 6 – Updates to UI Cooperative Courses

The courses below reflect the listing of University of Idaho cooperative courses that are offered to WSU students in our catalog. According to the *Educational Policies and Procedures Manual*, the WSU course information should be identical with the listing in the University of Idaho catalog.

The courses do retain their WSU prerequisites and other information pertinent to WSU students.

Prefix	Course Number	New Revise Drop	Current	Proposed	Effective Date
A S	**274**	**Revise**	~~**Feedlot Management**~~ 2 (1-3) ~~Concepts used in the cattle feeding industry~~. Cooperative course taught by UI, open to WSU students (AVS 274).	**Beef Feedlot Systems** 2 (1-3) Overview of feeding management, feed milling and batching, animal health, and economics of the commercial cattle feeding business. One 1-day field trip. Cooperative course taught by UI, open to WSU students (AVS 274).	**8-10**
A S	**466**	**Revise**	~~**Horse Production**~~ 3 Prereq A S 313; A S 330; A S 350. ~~Principles of breeding, feeding, and management of horses. Field trip required.~~ Cooperative course taught by UI, open to WSU students (AVS 466).	**Horse Science and Management** 3 Prereq A S 313; A S 330; A S 350. Principles of managing, feeding, and breeding, horses. Course divided into three subject matter sections: Management, Nutrition, Reproduction and Health. Cooperative course taught by UI, open to WSU students (AVS 466).	**8-10**
Arabc	**101**	**Revise**	~~**First Semester**~~ 4 (3-2) ~~Fundamentals of speaking, listening, reading and writing. Not open to native speakers except with permission.~~ Cooperative course taught by UI, open to WSU students (ARBC 101).	**Elementary Modern Standard Arabic** I 4 (3-2) A beginning course in Modern Standard Arabic. Alphabet and writing system, pronunciation, vocabulary, and functional grammar. Greater emphasis on oral and written expression in second semester. Course delivery combining interactive video	**8-10**

				distance learning and classroom instruction. (Fall only).Cooperative course taught by UI, open to WSU students (ARBC 101).	
Ath T	**305**	**Revise**	**Nutrition Related to Fitness and Sport** 3 Prereq FSHN 130 or 233. Identification of energy, macro/micro nutrient and fluid requirements during exercise; evaluation of dietary regimens and ergogenic aids for pre and post competition, weight maintenance, and wellness. Cooperative course taught by UI, open to WSU students (FCS 305).	**Nutrition Related to Fitness and Sport** 3 Prereq FSHN 130 or 233. Identification of energy, macro/micro nutrient and fluid requirements during exercise; evaluation of dietary regimens and ergogenic aids for pre and post competition, weight maintenance, and wellness; assignments include a case analysis of a UI or WSU athlete and evaluation and critical review of related research. (Fall only). Cooperative course taught by UI, open to WSU students (FCS 305).	**8-10**
Biol	**511**	**Revise**	**Reproductive Biology of Fishes** 2 Prereq graduate standing. ~~A graduate-level course covering all aspects of the reproductive biology of fishes~~. Cooperative course taught by UI, open to WSU students (BIOL 558).	**Reproductive Biology of Fishes** 2 Prereq graduate standing. Covering all aspects of the reproductive biology of fishes. The class will meet once per week for 2 hours; the first hour will be used for a formal lecture, the second hour will be used for informal student presentations/discussion of current literature topics or assigned readings in the field. (Spring only, Alt/yrs). Cooperative course taught by UI, open to WSU students (BIOL 558).	**8-10**
Biol	**523**	**Revise**	**Advanced Fishery Management** 3 ~~Contemporary management of marine and freshwater fish and shellfish populations; commercial, recreational and subsistence fisheries; policy interface of biological systems~~. Cooperative course taught by UI, open to WSU students (FISH 510).	**Advanced Fishery Management** 3 Contemporary management of marine and freshwater fish and shellfish populations of the world. Approaches, factors, and models used to manage commercial, recreational and subsistence fisheries; and the policy interface of biological systems with governmental and social institutions. (Spring, Alt/yrs). Cooperative course taught by UI, open to WSU students (FISH 510).	**8-10**
C E	**507**	**Revise**	**Seepage and ~~Earth Dams~~** 3 ~~Principles of earth-dam design, failures, considerations in construction; principles governing flow of water through soils.~~ Cooperative course taught by UI,	**Seepage and Slope Stability** 3 Principles governing the flow of water through soils; mechanics of stability analysis of slopes, landslides, and embankments for soil and rock masses; probabilistic analyses;	**8-10**

			open to WSU students (CE 563).	stabilization methods. (Alt/even yrs, Spring only). Cooperative course taught by UI, open to WSU students (CE 563).	
C E	**527**	**Revise**	~~**Advanced Soil Mechanics**~~ 3 Prereq C E 317. ~~Effective stresses and lateral earth pressures; interrelationships of applied stresses, permeability, strain and shear strength of soils.~~ Cooperative course taught by UI, open to WSU students (CE 561).	**Engineering Properties of Soils** 3 Prereq C E 317. Physical properties, compressibility and consolidation, shear strength, compaction, saturated and unsaturated soils, laboratory and field methods of measurement, relations of physical and engineering properties, introduction to critical-state soil mechanics. Cooperative course taught by UI, open to WSU students (CE 561).	**8-10**
C E	**528**	**Revise**	**Advanced Foundation Engineering** 3 Prereq C E 317. ~~Consolidation theories, bearing capacity, and settlements of foundations, pile group behavior, theory of subgrade reaction, materials foundations, laterally loaded piles.~~ Cooperative course taught by UI, open to WSU students (CE 562).	**Advanced Foundation Engineering** 3 Prereq C E 317. Interpretation of in-situ tests for foundation design parameters, bearing capacity and settlement of axially loaded piles, pile groups, and drilled shafts, pile dynamics, laterally loaded deep foundations, downdrag and uplift of deep foundations, foundation load and integrity testing methods and data interpretation, mat foundations. Cooperative course taught by UI, open to WSU students (CE 562).	**8-10**
Cpt S	**425**	**Revise**	**Network Security** 3 (1-6) Prereq Cpt S 360. ~~Practical topics in network security; policy and mechanism; intrusion, detection, prevention, response, cryptography.~~ Cooperative course taught by UI, open to WSU students (CS 438).	**Network Security** 3 (1-6) Prereq Cpt S 360. Practical topics in network security; policy and mechanism, malicious code; intrusion detection, prevention, response; cryptographic techniques for privacy and integrity; emphasis on tradeoffs between risk of misuse, cost of prevention, and societal issues; concepts implemented in programming assignments. Additional projects/assignments reqd for grad cr. Cooperative course taught by UI, open to WSU students (CS 438).	**8-10**
CropS	**520**	**Revise**	**Plant Cytogenetic Techniques** 3 (~~1-6~~) Prereq MBioS 301. ~~Plant genes and chromosomes.~~ Cooperative course taught by UI, open to WSU students (PLSC 520).	**Plant Cytogenetic Techniques** 3 (2-4) Prereq MBioS 301. Techniques to study plant genes and chromosomes. Two lec and 4 hrs of lab a wk. (Alt/yrs). Cooperative course taught by UI, open to WSU students (PLSC	**8-10**

				520).	
Entom	**441**	**Revise**	**Insect Ecology** 3 (2-3) Prereq Entom 343 or general ecology course. ~~Population and community dynamics, theory and application in natural and artificial systems. Field trips required.~~ Credit not granted for both Entom 441 and 541. Cooperative course taught by UI, open to WSU students (ENT 441).	**Insect Ecology** 3 (2-3) Prereq Entom 343 or general ecology course. Population and community dynamics set in a systems framework; theory and applications in natural and altered systems. Requirements for graduate credit include a longer (10 vs. 5 pages), more synthetic term paper, and each 500-level student will lead a web-based or in-class discussion on a research paper of their choice. Two 1-day field trips. Credit not granted for both Entom 441 and 541. Cooperative course taught by UI, open to WSU students (ENT 441).	**8-10**
Entom	**445**	**Revise**	**Insect-Plant Interactions: ~~Mechanisms of Resistance to Arthropods~~** 3 (2-3) Prereq Entom 343. ~~Biochemical, ecological and microevolutionary principles of plant resistance.~~ Credit not granted for both Entom 445 and 545. Cooperative course taught by UI, open to WSU students (ENT 549).	**Insect-Plant Interactions** 3 (2-3) Prereq Entom 343. Ecology, evolution, and mechanisms of the interactions between insects and plants. Requirements for graduate credit include formal report of field study, term paper. (Alt/yrs). Credit not allowed for both Entom 445 and 545. Cooperative course taught by UI, open to WSU students (ENT 549).	**8-10**
Entom	**446**	**Revise**	**Host Plant Resistance** 3 Prereq Entom 343. ~~Principles and methods of screening and developing crop cultivars resistant to arthropods.~~ Credit not granted for Entom 446 and 546. Cooperative course taught by UI, open to WSU students (ENT 446).	**Host Plant Resistance to Insects and Pathogens** 3 Prereq Entom 343. Principles and methodologies for developing pest-resistant crop varieties. Requirements for graduate credit include preparation of grant proposal, classroom presentation. Field trips. (Alt/yrs). Credit not granted for Entom 446 and 546. Cooperative course taught by UI, open to WSU students (ENT 446).	**8-10**
Entom	**447**	**Revise**	**~~Introduction to Biological Control~~** 3 ~~Principles and methods of controlling insect pests and weeds by biological means.~~ Credit not granted for both Entom 447 and 547. Cooperative course taught by UI, open to WSU students (ENT 447).	**Fundamentals of Biological Control** 3 Intro to history and development of biological control and biological and ecological factors involved; emphasis on entomophagous and phytophagous insects. For graduate credit, students present a paper or "grant proposal" for critique. (Alt/yrs). Credit not granted for both Entom 447 and 547. Cooperative course taught by UI, open to WSU students (ENT 447).	**8-10**

Entom	**472**	**Revise**	**Aquatic Entomology** 3 (~~2-3~~) Identification and biology of insects associated with aquatic and subaquatic environments. Credit not granted for both Entom 472 and 572. Cooperative course taught by UI, open to WSU students (ENT 472).	**Aquatic Entomology** 3 (1-6) Identification and biology of insects associated with aquatic and subaquatic environments. Additional projects/assignments required for graduate credit. One lec and two 3-hr labs a wk; two 1-day field trips. (Spring, alt/yrs). Credit not granted for both Entom 472 and 572. Cooperative course taught by UI, open to WSU students (ENT 472).	**8-10**
Entom	**541**	**Revise**	**Insect Ecology** 3 (2-3) Prereq Entom 343 or general ecology course. ~~Graduate-level counterpart of Entom 441; additional requirements.~~ Cooperative course taught by UI, open to WSU students (ENT 541).	**Insect Ecology** 3 (2-3) Prereq Entom 343 or general ecology course. Population and community dynamics set in a systems framework; theory and applications in natural and altered systems. Requirements for graduate credit include a longer (10 vs. 5 pages), more synthetic term paper, and each 500-level student will lead a web-based or in-class discussion on a research paper of their choice. Two 1-day field trips. Credit not granted for both Entom 441 and 541.Cooperative course taught by UI, open to WSU students (ENT 541).	**8-10**
Entom	**545**	**Revise**	~~**Insect-Plant Interactions: Mechanisms of Resistance to Arthropods**~~ 3 (2-3) Prereq Entom 343~~. Graduate-level counterpart of Entom 445; additional requirements.~~ Credit not allowed for both Entom 445 and 545. Cooperative course taught by UI, open to WSU students (ENT ~~445~~).	**Insect-Plant Interactions** 3 (2-3) Prereq Entom 343. Ecology, evolution, and mechanisms of the interactions between insects and plants. Requirements for graduate credit include formal report of field study, term paper. (Alt/yrs). Credit not allowed for both Entom 445 and 545. Cooperative course taught by UI, open to WSU students (ENT 549).	**8-10**
Entom	**546**	**Revise**	**Host Plant Resistance** 3 Prereq one semester calculus, graduate standing~~. Graduate-level counterpart of Entom 446; additional requirements.~~ Credit not granted for both Entom 446 and 546. Cooperative course taught by UI, open to WSU students (ENT 546).	**Host Plant Resistance to Insects and Pathogens** 3 Prereq one semester calculus; graduate standing. Principles and methodologies for developing pest-resistant crop varieties. Requirements for graduate credit include preparation of grant proposal, classroom presentation. Field trips. (Alt/yrs). Credit not granted for Entom 446 and 546. Cooperative course taught by UI, open to WSU students (ENT 546).	**8-10**

Entom	**547**	**Revise**	**Introduction to Biological Control** 3 ~~Principles and methods of controlling insect pests and weeds by biological means.~~ Credit not granted for both Entom 447 and 547. Cooperative course taught by UI, open to WSU students (ENT 547).	**Fundamentals of Biological Control** 3 Intro to history and development of biological control and biological and ecological factors involved; emphasis on entomophagous and phytophagous insects. For graduate credit, students present a paper or "grant proposal" for critique. (Alt/yrs). Credit not granted for both Entom 447 and 547. Cooperative course taught by UI, open to WSU students (ENT 547).	**8-10**
Entom	**572**	**Revise**	**Aquatic Entomology** 3 (~~2-3~~) Graduate-level counterpart of Entom 472; additional requirements. Credit not granted for both Entom 472 and 572. Cooperative course taught by UI, open to WSU students (ENT 572).	**Aquatic Entomology** 3 (1-6) Identification and biology of insects associated with aquatic and subaquatic environments. Additional projects/assignments required for graduate credit. One lec and two 3-hr labs a wk; two 1-day field trips. (Spring, alt/yrs). Credit not granted for both Entom 472 and 572. Cooperative course taught by UI, open to WSU students (ENT 572).	**8-10**
FSHN	**305**	**Revise**	**Nutrition Related to Fitness and Sport** 3 Prereq FSHN 130 or 233. Same as Ath T 305. Cooperative course taught by UI, open to WSU students (FCS 305).	**Nutrition Related to Fitness and Sport** 3 Prereq FSHN 130 or 233. Same as Ath T 305. Cooperative course taught by UI, open to WSU students (FCS 305).	**8-10**
Geol	**418**	**Revise**	**Geomicrobiology** 3 ~~Explore the interactions of microorganisms with the environment, particularly soil-rock-water interaction and how microorganisms are important to our understanding of geological and hydrological processes; topics include ground water microbiology, subsurface microbiology and the microbiology of extreme environments. Additional work required for graduate credit.~~ Credit not granted for both Geol 418 and 518. Cooperative course taught by UI, open to WSU students (GEOL 418).	**Geomicrobiology** 3 The role of microorganisms in the formation and dissolution of rocks and minerals; microbial processes in ground and surface water environments, extreme environments and the deep subsurface; early life on Earth and the possibility of life on other planetary bodies. Two additional research assignments and an additional question on two exams required for graduate credit. Credit not granted for both Geol 418 and 518. Cooperative course taught by UI, open to WSU students (GEOL 418).	**8-10**
Geol	**428**	**Revise**	**Geostatistics** 3 Prereq Stat 360. Same as Stat 428. Cooperative course taught by UI, open to WSU students (GEOE 428).	**Geostatistics** 3 Prereq Stat 360. Same as Stat 428. Cooperative course taught by UI, open to WSU students (GEOE 428).	**8-10**

Geol	**518**	**Revise**	**Geomicrobiology** 3 ~~Graduate-level counterpart of Geol 418; additional requirements.~~ Credit not granted for both Geol 418 and 518. Cooperative course taught by UI, open to WSU students (GEOL 518).	**Geomicrobiology** 3 The role of microorganisms in the formation and dissolution of rocks and minerals; microbial processes in ground and surface water environments, extreme environments and the deep subsurface; early life on Earth and the possibility of life on other planetary bodies. Two additional research assignments and an additional question on two exams required for graduate credit. Credit not granted for both Geol 418 and 518. Cooperative course taught by UI, open to WSU students (GEOL 518).	**8-10**
Geol	**546**	**Revise**	**Fault Mechanics** 3 Prereq Geol 340~~. Examination of fault mechanics; internal fault architectures; fault slip distributions; relationship to rock properties; echelon fault systems, as well as earthquake behavior and seismic hazard recognition. Field trip required~~. Cooperative course taught by UI, open to WSU students (GEOL 546).	**Fault Mechanics** 3 Prereq Geol 340. Examination of fundamental concepts of fault mechanics, including brittle failure, rock friction, fluid pressure effects, and variable rheological behaviors; examination of internal fault architectures to distinguish fault zone styles; stress, strain, and displacement fields addressed from a theoretical perspective and the application of geodetic measurement techniques and secondary structure analyses; emphasis on interpretation of fault slip distributions and relationship to rock properties, fault shape, and mechanical interaction in echelon fault systems; such insights placed in context of 3-D fault systems geometric evolution as well as earthquake behavior and seismic hazard recognition. One weekend field trip. Cooperative course taught by UI, open to WSU students (GEOL 546).	**8-10**
Geol	**554**	**Revise**	**Physical Petrology** 3 Prereq Geol 356. ~~The a~~pplications of continuum mechanics and fluid dynamics to ~~the~~ generation, rise, storage, and eruption of magmas. Cooperative course taught by UI, open to WSU students (GEOL 554).	**Physical Petrology** 3 Prereq Geol 356. Applications of continuum mechanics and fluid dynamics to generation, rise, storage, and eruption of magmas. Cooperative course taught by UI, open to WSU students (GEOL 554).	**8-10**
N S	**101**	**Revise**	**Introduction to Naval Science** 2 ~~Roles of major elements of naval service; design and structure of~~	**Introduction to Naval Science** 2 Intro to the Navy: customs, structure, basic leadership, career paths, and ships and	**8-10**

			~~ships.~~ Cooperative course taught by UI, open to WSU students (NS 101).	aircraft of the U.S. Fleet. (Fall only). Cooperative course taught by UI, open to WSU students (NS 101).	
N S	**102**	**Revise**	**Ships Systems I** 3 ~~Introduction to damage control and propulsion systems of naval ships; nuclear and conventional power.~~ Cooperative course taught by UI, open to WSU students (NS 102).	**Ships Systems I** 3 Intro to Naval shipboard engineering systems; propulsion systems; nuclear, gas turbine, and conventional; auxiliary systems and shipboard damage control; basic concepts in ship design. (Fall only). Cooperative course taught by UI, open to WSU students (NS 102).	**8-10**
N S	**201**	**Revise**	**Ships Systems II** 3 ~~Naval weapons: ballistics, control, propulsion, components, systems analysis.~~ Cooperative course taught by UI, open to WSU students (NS 201).	**Ships Systems II** 3 Naval weapons systems; theory and process of detection (radar and sonar), evaluation; weapons; delivery, guidance, and explosives; integration of weapons systems with command, control, and communications systems. (Spring only). Cooperative course taught by UI, open to WSU students (NS 201).	**8-10**
N S	**202**	**Revise**	**Seapower and Maritime Affairs** 3 ~~US Navy and merchant marine seapower, development, and policy.~~ Cooperative course taught by UI, open to WSU students (NS 202).	**Seapower and Maritime Affairs** 3 US Survey of U.S. Naval history; seapower and maritime affairs emphasizing present-day concerns; comparisons of U.S. and foreign Naval strategies. (Spring only). Cooperative course taught by UI, open to WSU students (NS 202).	**8-10**
N S	**301**	**Revise**	**Navigation** 3 ~~Theory, principles, and procedures of terrestrial and celestial navigation.~~ Cooperative course taught by UI, open to WSU students (NS 301).	Navigation 3 Theory, principles, and procedures of terrestrial and electronic navigation, and "rules of the nautical road." (Spring only). Cooperative course taught by UI, open to WSU students (NS 301).	**8-10**
N S	**302**	**Revise**	**Naval Operations** 3 Prereq N S 301. ~~Naval operations and tactics, relative motion, rules of the nautical road.~~ Cooperative course taught by UI, open to WSU students (NS 302).	**Naval Operations** 3 Prereq N S 301. Naval operations and tactics, relative motion, and Maneuvering Boards. (Fall only). Cooperative course taught by UI, open to WSU students (NS 302).	**8-10**
N S	**401**	**Revise**	~~**Naval Organization and Management**~~ 3 Theories of management and management resources, motivational theories and leadership. Cooperative	**Naval Leadership and Management** 3 Theories of management and management resources, motivational theories and leadership. Cooperative course taught by UI, open to WSU	**8-10**

			course taught by UI, open to WSU students (NS 401).	students (NS 401).	
N S	**402**	**Revise**	~~**Naval Leadership**~~ 2 Rec N S 401. ~~Principles and styles of leadership, personal attributes, and UCMJ.~~ Cooperative course taught by UI, open to WSU students (NS 402).	**Naval Leadership and Ethics** 2 An intellectual exploration of Western moral traditions and ethical philosophy within a military context. Topics will include military leadership, core values, professional ethics, and the conduct of warfare. (Spring only). Cooperative course taught by UI, open to WSU students (NS 402).	**8-10**
N S	**412**	**Revise**	**Amphibious Operations** 3 Rec N S 311. Amphibious doctrine from Gallipoli to Mayquesz. Cooperative course taught by UI, open to WSU students (NS 412).	**Amphibious Operations** 3 Rec N S 311. Amphibious doctrine from Gallipoli to Mayquesz. (Fall only). Cooperative course taught by UI, open to WSU students (NS 412).	**8-10**
NATRS	**320**	**Revise**	~~**Timber Harvesting**~~ 3 Prereq NATRS 204~~. Current practices and problems; planning and coordinating timber harvesting with forest management. Field trips required.~~ Cooperative course taught by UI, open to WSU students (FORP 430).	**Forest Engineering and Harvesting** 3 Prereq NATRS 204. Survey of logging equipment capabilities; intro to cable logging systems, road layout, and design; cost analysis of logging systems; development of road and logging plans. Three days of field trips. (Fall only). Cooperative course taught by UI, open to WSU students (FORP 430).	**8-10**
NATRS	**321**	**Revise**	~~**Introduction to Wood Technology**~~ 3 Prereq Biol 107. ~~Anatomy of woody plants, identifying characteristics and properties of woods; relation of wood properties to processing and use. Field trips required.~~ Cooperative course taught by UI, open to WSU students (FORP 277).	**Wood Anatomy and Identification** 3 (2-2) Prereq Biol 107. Physiology of woody plants, anatomy and nomenclature of wood, physical and chemical nature of wood, identification of commercial wood species. Two lec and 2-hr lab a wk. (Fall only). Cooperative course taught by UI, open to WSU students (FORP 277).	**8-10**
NATRS	**524**	**Revise**	**Plant Ecophysiology** 3 Prereq course in general ecology or botany. ~~Adaptations of individual plant species to their environment, emphasizing ecophysiological mechanisms that influence plant establishment, below and above ground productivity. Field trips required.~~ Cooperative course taught by UI, open to WSU students (REM 560).	**Plant Ecophysiology** 3 Prereq course in general ecology or botany. Functional responses and adaptations of individual plant species to their environment, emphasizing morphological and physiological mechanisms that influence plant establishment, the physical environment, below- and above-ground productivity, and plant interactions such as competition, herbivory, and allelopathy. (Fall only).	**8-10**

				Cooperative course taught by UI, open to WSU students (REM 560).	
NATRS	**551**	**Revise**	**Rangeland Vegetation Ecology** 3 Prereq two ecology courses. Ecological concepts of dynamics and distribution of plant communities; secondary succession processes, soil-vegetation relationships and development of vegetation classification schemes. Cooperative course taught by UI, open to WSU students (REM 551).	**Rangeland Vegetation Ecology** 3 Prereq two ecology courses. Ecological concepts of the nature, dynamics, and distribution of plant communities; secondary succession processes, soil-vegetation relations, and development of vegetation classification schemes for better land management. (Spring, Alt/odd yrs). Cooperative course taught by UI, open to WSU students (REM 551).	**8-10**
Neuro	**561**	**Revise**	**Biological Signal Processing** 3 ~~Development of quantitative models and analysis of neural systems.~~ Cooperative course taught by UI, open to WSU students (NEUR 521).	**Biological Signal Processing** 3 Introduction to computational neuroscience. Neurons and neuron models, basic signaling mechanisms of neurons, networks of neurons, learning models, learning model algorithms, weight-based memory models. The Hodgkin-Huxley model. A principal emphasis in this course is the development of quantitative models and analysis of neural systems. A term project is required. Recommended preparation: introductory course in linear algebra. Familiarity with at least one programming language. (Spring, alt/yrs). Cooperative course taught by UI, open to WSU students (NEUR 521).	**8-10**
SoilS	**537**	**Revise**	**Soil Biochemistry** 3 Prereq MBioS 303; Micro 201; SoilS 421. ~~Enzyme activity; microbial activity/biomass; rhizosphere; carbon, nitrogen phosphorus, sulfur, and micronutrient cycles.~~ Cooperative course taught by UI, open to WSU students (SOIL~~S~~537).	**Soil Biochemistry** 3 Prereq MBioS 303; Micro 201; SoilS 421. Origin, chemical structure, and significance of soil biochemical compounds. (Alt/yrs). Cooperative course taught by UI, open to WSU students (SOIL 537).	**8-10**
SoilS	**557**	**Revise**	**Advanced Soil Genesis and Classification** 3 (2-3) Prereq SoilS 451. ~~Genesis, classification and interpretation of soils, including field investigation emphasizing existing interrelationships.~~ Cooperative	**Advanced Soil Genesis and Classification** 3 (2-2) Prereq SoilS 451. Processes of soil genesis as influenced by environmental factors; rationale and development of soil taxonomy; field study of pedological problems. Two lec and one 2-hr lab a	**8-10**

			course taught by UI, open to WSU students (SOIL~~S~~ 557).	wk; 1/2-day and 1-day field trips reqd. (Alt/yr). Cooperative course taught by UI, open to WSU students (SOIL 557).	
Stat	**428**	**Revise**	**Geostatistics** 3 Prereq Stat 360. Applications of random variables and probability in geologic and engineering studies; regression, regionalized variables, spatial correlation. Cooperative course taught by UI, open to WSU students (GEOE 428).	**Geostatistics** 3 Prereq Stat 360. Applications of random variables and probability in geologic and engineering studies; regression, regionalized variables, spatial correlation, variograms, kriging, and simulation. Cooperative course taught by UI, open to WSU students (GEOE 428).	**8-10**
Stat	**514**	**Revise**	**Nonparametric Statistics** 3 Prereq Stat 512~~. Conceptual development of basic nonparametric tests including their power and efficiency.~~ Cooperative course taught by UI, open to WSU students (STAT 514).	**Nonparametric Statistics** 3 Prereq Stat 512. Conceptual development of nonparametric methods including one, two, and k-sample tests for location and scale, randomized complete blocks, rank correlation, and runs test; power, sample size, efficiency, and ARE. Cooperative course taught by UI, open to WSU students (STAT 514).	**8-10**
Stat	**555**	**Revise**	**Statistical Ecology** 3 Prereq Stat 443. ~~Ecological stochastic models, population dynamics and genetics, sampling, spatial analysis, discrete/continuous distributions, birth-death processes, diffusion processes.~~ Cooperative course taught by UI, open to WSU students (STAT 555).	**Statistical Ecology** 3 Prereq Stat 443. Stochastic models in ecological work; discrete and continuous statistical distributions, birth-death processes, diffusion processes; applications in population dynamics, population genetics, ecological sampling, spatial analysis, and conservation biology. (Spring, Alt/yrs). Cooperative course taught by UI, open to WSU students (STAT 555).	**8-10**