Approved by Faculty Senate 10/15/09

M E M O R A N D U M

TO: Deans and Chairs

From: Becky Bitter, Assistant Registrar

DATE: 9 October 2009

SUBJECT: Minor Change Bulletin No. 1

The courses listed below reflect the minor curricular changes approved by the catalog editor since approval of the last Minor Change Bulletin. The column to the far right indicates the date each change becomes effective.

Prefix	Course Number	Revise Drop	Current	Proposed	Effective Date
Acctg	**543**	**Revise**	**Special Topics in ~~Taxation~~** 3 Prereq admission to Master of Accounting program. Critical topics in ~~taxation~~ including new developments. May be repeated for credit; cumumlative maximum 6 hours.	**Special Topics in Accounting** 3 Prereq admission to Master of Accounting program. Critical topics in accounting including new developments. May be repeated for credit; cumulative maximum 6 hours.	**1-10**
B E	**320**	**Drop**	**[M] Mechanics of Biomaterials** 4 (3-3) Prereq C E 211; Math 423 or c//; certified B E major or instructor's permission. Composition of biological materials, mechanical and thermal properties, chemical and biological changes.	--N/A--	**8-09**
B E	**350**	**Revise**	**Introduction to Cellular Bioengineering** ~~4 (3-3)~~ Prereq Biol 107; Chem 345; Math 315; Phys 202; MBioS 303 or c//; certified B E major. Integrating cellular biology and engineering science by applying quantitative engineering principles for development of cellular-based materials, diagnostic devices and sensor designs.	**Introduction to Cellular Bioengineering** 3 Prereq Biol 107; Chem 345; Math 315; Phys 202; MBioS 303 or c//; certified B E major. Integrating cellular biology and engineering science by applying quantitative engineering principles for development of cellular-based materials, diagnostic devices and sensor designs.	**8-09**
B E	**550**	**Revise**	**Cellular Bioengineering** 3 ~~Prereq B E 350.~~ Cellular biology integrated with engineering science; cellular phenomena from an engineering perspective; quantitative engineering principles for cellular-based materials, diagnostic devise and sensor designs.	**Cellular Bioengineering** 3 Cellular biology integrated with engineering science; cellular phenomena from an engineering perspective; quantitative engineering principles for cellular-based materials, diagnostic devise and sensor designs.	**8-09**
Biol	**105**	**Revise**	**[B] General Biology Laboratory** 1 (0-3) Prereq college-level non-laboratory general biology course. Understanding biology as a science and its effect on issues within society. Laboratory only;	**[B] General Biology Laboratory** 1 (0-3) Prereq college-level non-laboratory general biology course; junior standing or permission of instructor. Understanding biology as a science and	**8-09**

			not for students majoring in the life sciences. Credit granted only to students who have not already completed Biol 102. Credit not granted to students who have already completed Biol 106 and/or 107. Students who declare a major requiring Biol 106 and/or 107 will need to complete those courses for credit toward their major.	its effect on issues within society. Laboratory only; not for students majoring in the life sciences. Credit granted only to students who have not already completed Biol 102. Credit not granted to students who have already completed Biol 106 and/or 107. Students who declare a major requiring Biol 106 and/or 107 will need to complete those courses for credit toward their major.	
Biol	**409**	**Revise**	**Plant Anatomy** 4 (2-6) Prereq Biol 120. Developmental anatomy and morphology of vascular plants; economic forms. Credit not granted for both Biol 409 and 509.	**Plant Anatomy** 4 (2-6) Prereq Biol 120 or 106. Developmental anatomy and morphology of vascular plants; economic forms. Credit not granted for both Biol 409 and 509.	**8-09**
Biol	**430**	**Revise**	**Methods of Teaching Science** 3 (2-3) Prereq ~~admission to secondary teacher prep;~~ 36 hours science. Methods, philosophy, and structure of science; application in teaching middle and secondary school science courses. ~~Taken during last semester prior to student teaching.~~	**Methods of Teaching Science** 3 (2-3) Prereq 36 hours science. Methods, philosophy, and structure of science; application in teaching middle and secondary school science courses.	**8-10**
Biol	**491**	**Revise**	~~**Physical Therapy**~~ **Clinical Experience** V 1-4 May be repeated for credit; cumulative maximum 20 hours. Prereq Psych 105; Biol 315; major in biology; junior standing; by interview only. Work experience under supervision of a qualified professional in ~~treatment of human physical disabilities.~~ S, F grading.	**Clinical Experience** V 1-4 May be repeated for credit; cumulative maximum 20 hours. Prereq Psych 105; Biol 315; major in biology or zoology; junior standing; by interview only. Work experience under supervision of a qualified professional in a clinical setting. S, F grading.	**8-09**
Biol	**589**	**Revise**	**Advanced Topics in ~~Zoology~~** V 1-3 May be repeated for credit; cumulative maximum ~~10 hours~~. Recent advances in ~~zoology~~.	**Advanced Topics in Biology** V 1-3 May be repeated for credit; cumulative maximum 6 hours. Recent advances in biology.	**1-10**
C E	**322**	**Revise**	**Transportation Engineering** 3 Prereq Math 360 or c//; 301; certified major in C E or instructor permission. ~~Transportation engineering; demand and performance functions; geometric design; capacity and control of transport modes.~~	**Transportation Engineering** 3 Prereq Math 360, 370 or c//; C E 302 or c//; certified major in C E or instructor permission. Road-vehicle interaction, geometric design, traffic flow and queuing theory, highway capacity and level of service, and introduction to pavement design and materials.	**8-09**
C E	**341**	**Revise**	**Introduction to Environmental Engineering** 3 Prereq ~~Biol 102 or MBioS 101; Chem 105.~~ Impact of pollutants on the environment; pollution sources and sinks; engineering aspects of air and water quality; introduction to pollution control.	**Introduction to Environmental Engineering** 3 Prereq Chem 105; rec MBioS 101. Impact of pollutants on the environment; pollution sources and sinks; engineering aspects of air and water quality; introduction to pollution control.	**8-09**

C E	**473**	**Revise**	**Pavement Design** 3 Prereq ~~C E 215, 317; Econ 101 or 102, Math 360; c// in C E 322.~~ Pavement performance evaluation, material characterization, traffic analysis, pavement structural response analysis, transfer function application, and pavement design procedures for both flexible and rigid pavements including MEPDG design procedure. Cooperative course taught jointly by WSU and UI (CE 475).	**Pavement Design** 3 Prereq C E 317; EconS 101 or 102; c// in C E 322. Pavement performance evaluation, material characterization, traffic analysis, pavement structural response analysis, transfer function application, and pavement design procedures for both flexible and rigid pavements including MEPDG design procedure. Cooperative course taught jointly by WSU and UI (CE 475).	**8-09**
C E	**539**	**Revise**	**Advanced ~~Wood Engineering~~** 3 Prereq CE 436. Engineering properties of wood materials; theory and design of wood composites, connections and load-sharing systems; performance criteria and durability.	**Advanced Design of Timber Structures** 3 Prereq CE 436. Engineering properties of wood materials; theory and design of wood composites, connections and load-sharing systems; performance criteria and durability.	**8-09**
Cpt S	**223**	**Revise**	**Advanced Data Structures** 3 Prereq Cpt S 122; Math 216 or equivalent. Advanced data structures, object oriented programming concepts, concurrency, and program design principles.	**Advanced Data Structures** 3 Prereq Cpt S 122; Math 216 or equivalent, or c//. Advanced data structures, object oriented programming concepts, concurrency, and program design principles.	**1-10**
Cpt S	**322**	**Revise**	**[M] Software Engineering Principles I** 3 Prereq ~~Cpt S 224,~~ Math 216~~, c// in Engl 402.~~ Introduction to software engineering; requirements analysis, definition, specification including formal methods; prototyping; design including object and function oriented design.	**[M] Software Engineering Principles I** 3 Prereq Math 216. Introduction to software engineering; requirements analysis, definition, specification including formal methods; prototyping; design including object and function oriented design.	**1-10**
Cpt S	**355**	**Revise**	**Programming Language Design** 3 Prereq Cpt S 223~~, 224.~~ Design concepts of high-level programming languages; survey of existing languages, experience using some languages.	**Programming Language Design** 3 Prereq Cpt S 223. Design concepts of high-level programming languages; survey of existing languages, experience using some languages.	**1-10**
Cpt S	**401**	**Revise**	**[T] Computers and Society** 3 Prereq ~~Phil 260 or Soc 101;~~ completion of one Tier I and three Tier II courses; ~~completion of University Writing Portfolio.~~ Skills and literacy course. Ethical and societal issues related to computers and computer networks; computers as enabling technology; computer crime, software theft, privacy, viruses, worms. Credit not granted for both Cpt S 401 and 402.	**[T] Computers and Society** 3 Prereq completion of one Tier I and three Tier II courses. Skills and literacy course. Ethical and societal issues related to computers and computer networks; computers as enabling technology; computer crime, software theft, privacy, viruses, worms. Credit not granted for both Cpt S 401 and 402.	**1-10**
Cpt S	**402**	**Revise**	**[M] Social and Professional Issues in Computer Science** 3 Prereq Cpt S 121; certified in computer science; ~~completion of University Writing Portfolio.~~ Social, legal, ethical and professional issues that	**[M] Social and Professional Issues in Computer Science** 3 Prereq Cpt S 121; certified in computer science. Social, legal, ethical and professional issues that arise in the context of computing. Credit	**1-10**

			arise in the context of computing. Credit not granted for both Cpt S 401 and 402.	not granted for both Cpt S 401 and 402.	
Cpt S	**421**	**Revise**	**Software Design Project I** 3 (0-9) Prereq Cpt S 322; Cpt S 323. Large-scale software development including requirements analysis, estimation, design, verification and project management.	**Software Design Project I** 3 (0-9) Prereq Cpt S 322; Cpt S 323 or c//. Large-scale software development including requirements analysis, estimation, design, verification and project management.	**1-10**
Cpt S	**423**	**Revise**	**Software Design Project II** 3 (1-6) Prereq Cpt S 421; Cpt S 422. Laboratory/group design project for large-scale software development, requirements analysis, estimation, design, verification techniques.	**Software Design Project II** 3 (1-6) Prereq Cpt S 421; Cpt S 422 or c//. Laboratory/group design project for large-scale software development, requirements analysis, estimation, design, verification techniques.	**1-10**
Cpt S	**450**	**Revise**	**Design and Analysis of Algorithms** 3 Prereq Cpt S 223, 317~~, Stat 360.~~ Analysis of data structures and algorithms; computational complexity and design of efficient data-handling procedures.	**Design and Analysis of Algorithms** 3 Prereq Cpt S 223; Cpt S 317. Analysis of data structures and algorithms; computational complexity and design of efficient data-handling procedures.	**1-10**
Cpt S	**490**	**Revise**	**Work Study Internship** V 1-9 May be repeated for credit; cumulative maximum 9 hours. Prereq ~~Cpt S 224; E E 234;~~ computer science major; by interview only. Experience in programming and systems analysis in a working environment under supervision of industrial or governmental professionals and faculty. S, F grading.	**Work Study Internship** V 1-9 May be repeated for credit; cumulative maximum 9 hours. Prereq computer science major; by interview only. Experience in programming and systems analysis in a working environment under supervision of industrial or governmental professionals and faculty. S, F grading.	**1-10**
CropS	**318**	**Drop**	**Athletic Field Management** 1 Current athletic field management practices (BMPs) for turfgrass students and turfgrass industry professionals.	--N/A--	**8-09**
CropS	**411**	**Revise**	**[M] Crop Environment Interactions** 3 Prereq ~~Biol 320, CropS 201.~~ Effects of environment and management on crop growth and development.	**[M] Crop Environment Interactions** 3 Prereq Hort 202. Effects of environment and management on crop growth and development.	**8-09**
Cst M	**254**	**Revise**	**Construction Graphics** 2 (1-2) Prereq certified Cst M major. Visual literacy and details in construction documents using drawing techniques.	**Construction Graphics** 2 (1-2) Prereq certified Cst M majors or C E majors. Visual literacy and details in construction documents using drawing techniques.	**8-09**
E E	**261**	**Revise**	**Electrical Circuits I** 3 Prereq Math 315 or c//; Phys 202~~; c// in E E 262.~~ Application of fundamental concepts of electrical science in linear circuit analysis; mathematical models of electric components and circuits.	**Electrical Circuits I** 3 Prereq Math 315 or c//; Phys 202. Application of fundamental concepts of electrical science in linear circuit analysis; mathematical models of electric components and circuits.	**8-10**
E E	**311**	**Revise**	**Electronics** 3 Prereq E E 214, 261. Fundamental device characteristics including diodes, MOSFETs and bipolar transistors; small- and large-signal	**Electronics** 3 Prereq E E 214; E E 261; c// in E E 352. Fundamental device characteristics including diodes, MOSFETs and bipolar transistors;	**1-10**

			characteristics and design of linear circuits.	small- and large-signal characteristics and design of linear circuits.	
E E	**477**	**Revise**	~~**[M]**~~ **Analog Integrated Circuits Laboratory** 2 (1-3) Prereq c// in E E 476. Laboratory applications of E E 476 including the computer-aided design of analog integrated circuits; emphasis on design documentation and reporting.	**Analog Integrated Circuits Laboratory** 2 (1-3) Prereq c// in E E 476. Laboratory applications of E E 476 including the computer-aided design of analog integrated circuits; emphasis on design documentation and reporting.	**1-10**
E E	**494**	**Revise**	**Protective Relay Labs** ~~2 (0-6)~~ Prereq E E 493 or c//. Experiments and measurements of protective relay equipment under test, simulated fault and fault conditions.	**Protective Relay Labs** 1 (0-3) Prereq E E 361; E E 493 or c//. Experiments and measurements of protective relay equipment under test, simulated fault and fault conditions.	**1-10**
E E	**495**	**Revise**	**Internship in Electrical Industry** V 2-4 May be repeated for credit; cumulative maximum 8 hours. Prereq ~~E E 341 or 361; for juniors and seniors in electrical engineering.~~ Students work full time on engineering assignments in approved industries. S, F grading.	**Internship in Electrical Industry** V 2-4 May be repeated for credit; cumulative maximum 8 hours. Prereq electrical engineering major; by interview only. Students work full time on engineering assignments in approved industries. S, F grading.	**1-10**
E E	**524**	**Revise**	**Advanced Computer Architecture** 3 Prereq E E ~~424~~. Instruction set architectures, pipelining and super pipelining, instruction level parallelism, superscalar and VLIW processors, cache memory, thread-level parallelism and VLSI.	**Advanced Computer Architecture** 3 Prereq E E 334. Instruction set architectures, pipelining and super pipelining, instruction level parallelism, superscalar and VLIW processors, cache memory, thread-level parallelism and VLSI.	**1-10**
E E	**530**	**Revise**	**Digital Signal Processing II** 3 Prereq ~~E E 341, 464.~~ Frequency selective digital filtering, least-squares filtering, adaptive filtering, multirate signal processing.	**Digital Signal Processing II** 3 Prereq E E 464, 507, or permission. Frequency selective digital filtering, least-squares filtering, adaptive filtering, multirate signal processing.	**1-10**
E E	**545**	**Revise**	**Data Compression** 3 Prereq E E 507~~, 543. Source~~ coding with a fidelity criterion; quantization theory; predictive, transform and subband coding; noiseless source codes.	**Data Compression** 3 Prereq E E 507. Source coding with a fidelity criterion; quantization theory; predictive, transform and subband coding; noiseless source codes.	**1-10**
E E	**576**	**Revise**	**Analog Integrated Circuits** 3 Prereq graduate standing; E E 311; 351 or c//; 489 or c//; ~~c// in 477 for capstone design credit.~~ Graduate-level counterpart of E E 476; additional requirements. Credit not granted for both E E 476 and 576.	**Analog Integrated Circuits** 3 Prereq graduate standing; E E 311; 351 or c//; 489 or c//. Graduate-level counterpart of E E 476; additional requirements. Credit not granted for both E E 476 and 576.	**1-10**
E E	**586**	**Revise**	**VLSI Systems Design** 3 Prereq E E ~~444~~. VLSI models, layout algorithms, design methodologies, simulation and layout tools, algorithm design for VLSI implementation.	**VLSI Systems Design** 3 Prereq E E 311. VLSI models, layout algorithms, design methodologies, simulation and layout tools, algorithm design for VLSI implementation.	**1-10**
EconS	**451**	**Revise**	**[M] Advanced ~~Agricultural~~ Marketing** 3 Prereq EconS 301 or 305; ~~EconS 351; Math 202 or 171; Stat 212 or MgtOp 215.~~	**[M] Advanced Food Economics and Marketing** 3 Prereq EconS 301 or 305; EconS 311. Institutions, practices,	**1-10**

			Institutions, practices, policies, ~~and problems in agricultural input and output marketing.~~	policies, problems, and empirical analysis of food economics and marketing.	
EconS	**452**	**Revise**	**[M] Advanced Business Management Economics** 3 Prereq EconS 301; ~~EconS 352;~~ Math 171 or 202; MgtOp 215 or Stat 212. Topics in business management economics and strategy, from demand and supply to bargaining, contracting, pricing strategies, and market structure.	**[M] Advanced Business Management Economics** 3 Prereq EconS 301; EconS 350 or 352; Math 171 or 202; MgtOp 215 or Stat 212. Topics in business management economics and strategy, from demand and supply to bargaining, contracting, pricing strategies, and market structure.	**8-10**
EconS	**533**	**Revise**	**International Trade and Policy** 3 Prereq graduate standing. International trade theories, policies, and research issues related to world trade with emphasis on agricultural commodity markets. ~~Cooperative course taught by UI, open to WSU students (AGEC 533).~~	**International Trade and Policy** 3 Prereq graduate standing. International trade theories, policies, and research issues related to world trade with emphasis on agricultural commodity markets. Cooperative course taught jointly by WSU and UI (AGEC 533).	**8-09**
Engl	**332**	**Revise**	**[M] Topics in ~~Poetry~~** 3 May be repeated for credit; cumulative maximum 6 hours. ~~Forms, history, development of poetry; the epic, the lyric, verse satire, dramatic monologue, modernist verse.~~	**[M] Topics in Literature** 3 May be repeated for credit; cumulative maximum 6 hours. Special topics in fiction, poetry, drama, or creative nonfiction.	**8-09**
Engl	**494**	**Revise**	**[M] Advanced Topics in ~~American~~ Literature** 3 May be repeated for credit; cumulative maximum 6 hours. Not open to graduate students. Seminar with term paper project; focused studies in ~~American literature.~~	**[M] Advanced Topics in Literature** 3 May be repeated for credit; cumulative maximum 6 hours. Not open to graduate students. Seminar with term paper project; focused studies in American, British, or global literatures.	**8-09**
F A	**381**	**Revise**	**Beginning Photography** 3 (0-6) Prereq F A 102. Camera and black/white film used in conjunction with studio and darkroom techniques; composition and aesthetic concepts introduced.	**Beginning Photography** 3 (0-6) Prereq F A 102. Camera and black/white film used in conjunction with studio and darkroom techniques; composition and aesthetic concepts introduced. Cooperative course taught by WSU, open to UI students (Art 204).	**8-09**
F A	**382**	**Revise**	**Intermediate Photography** 3 (0-6) May be repeated for credit; cumulative maximum 9 hours. Prereq F A 381. Expansion of conceptual building in black/white darkroom and camera techniques; research and portfolio.	**Intermediate Photography** 3 (0-6) May be repeated for credit; cumulative maximum 9 hours. Prereq F A 381. Expansion of conceptual building in black/white darkroom and camera techniques; research and portfolio. Cooperative course taught by WSU, open to UI students (Art 404).	**8-09**
Fin	**325**	**Revise**	**Introduction to Financial Management** 3 Prereq Acctg 231; EconS 101; MgtOp 215. Financial decision making, financial strategies, investment in current and fixed assets, financial instruments, and capital markets.	**Introduction to Financial Management** 3 Prereq Acctg 231; EconS 101; MgtOp 215. Financial decision making, financial strategies, investment in current and fixed assets, financial instruments, and capital markets. Credit not granted for both Fin	**8-10**

				325 and EconS 335.	
FS	**511**	**Revise**	**(FSHN) Food ~~Carbohydrates and~~ Lipids** 3 Rec biochemistry, food chemistry. Occurrence, structure, chemical and physical properties; functions of ~~carbohydrates and~~ lipids in foods. Cooperative course taught jointly by WSU and UI (FS 511).	**(FSHN) Food Lipids** 3 Rec biochemistry, food chemistry. Occurrence, structure, chemical and physical properties; functions of lipids in foods. Cooperative course taught jointly by WSU and UI (FS 511).	**8-09**
FSHN	**350**	**Revise**	**Nutritional Counseling and Assessment** 3 ~~(2-3)~~ Rec FSHN 331. Fundamental knowledge and skills in nutritional counseling, including theory and strategies of behavior change and principles of nutritional and dietary assessment.	**Nutritional Counseling and Assessment** 3 (2-2) Rec FSHN 331. Fundamental knowledge and skills in nutritional counseling, including theory and strategies of behavior change and principles of nutritional and dietary assessment.	**8-09**
HBM	**381**	**Revise**	**[M] Hospitality ~~Management and Organization~~** 3 Prereq HBM 131. ~~Advanced management methods and concepts utilized in the administration of hospitality service industries.~~ Cooperative course taught by WSU, open to UI students (RRT 381).	**[M] Hospitality Leadership and Organizational Behavior** 3 Prereq HBM 131. Focusing on interpersonal skills and group dynamics; covers key hospitality leadership and management issues. Cooperative course taught by WSU, open to UI students (RRT 381).	**8-09**
Hort	**416**	**Revise**	**Advanced Horticultural Crop Physiology** 3 Prereq ~~Biol 320.~~ Physiological processes related to growth, development, and productivity of horticultural crops; advances in recombinant DNA technology; the impact on horticultural practices. Credit not granted for both Hort 416 and 516.	**Advanced Horticultural Crop Physiology** 3 Prereq Hort 202. Physiological processes related to growth, development, and productivity of horticultural crops; advances in recombinant DNA technology; the impact on horticultural practices. Credit not granted for both Hort 416 and 516.	**8-09**
M E	**316**	**Revise**	**[M] Systems Design** 3 Prereq C E 215; M E 216; ~~ME 313; MSE 201 or c//;~~ major in engineering. ~~Engineering design process for systems and components; design criteria, creativity, engineering economics, CAD, standards, product safety; design projects.~~	**[M] Systems Design** 3 Prereq C E 215; M E 216; major in engineering. Systems and component design; product development from specifications to manufacturing; team-based CAD design projects; engineering economics; engineering professional skills.	**1-10**
M E	**473**	**Revise**	**~~Computer-aided Design~~** 3 (2-3) Prereq M E 316. ~~Interactive computer programming and graphics in the design of engineering systems.~~	**Advanced CAD and Geometric Modeling** 3 (2-3) Prereq M E 316. Parametric and feature based CAD/CAM; geometric modeling and its mathematical basis; integration of CAD with design processes and other software.	**1-10**
M E	**474**	**Revise**	**~~Advanced Manufacturing Processes~~** 3 Prereq M E 310. ~~Mechanical and metallurgical fundamentals of metal machining and materials processing by deformation; manufacturing systems concepts in production.~~	**Design for Manufacture and Modern Manufacturing Strategies** 3 Prereq M E 310. Design for manufacture and assembly; modern manufacturing philosophies and practices; lean manufacturing; manufacturing cost and time analysis; quality control.	**1-10**

M E	**475**	**Revise**	**Manufacturing ~~Automation~~** 3 (2-3) Prereq ~~Cpt S 203 or 251; E E 304; M E 310. Computer control of manufacturing processes; numerically controlled machine tools, robotics, control algorithms, component and system design.~~	**Manufacturing Enterprise Systems -- Automation and Product Realization** 3 (2-3) Prereq MME computer programming course; M E 316. Manufacturing automation and product realization; role of information technology and electronic data in manufacturing enterprise systems; product life-cycle management (PLM) and related tools and processes; sustainable and green manufacturing.	**1-10**
Math	**101**	**Revise**	**Intermediate Algebra** 3 Fundamental algebraic operations and concepts. (This material is currently available on the Pullman campus through a 3 credit course, Math ~~91,~~ taught by the Institute for Extended Learning, Community Colleges of Spokane.)	**Intermediate Algebra** 3 Fundamental algebraic operations and concepts. (This material is currently available on the Pullman campus through a 3 credit course, Math 99, taught by the Institute for Extended Learning, Community Colleges of Spokane). No credit earned toward degree.	**8-10**
Math	**103**	**Revise**	**Algebra Methods and Introduction to Functions** 3 Fundamental algebraic operations and concepts, linear systems and inequalities, polynomial and rational functions, introduction to exponential and logarithmic functions. ~~(This material is currently available on the Pullman campus through a 3 credit course, Math 99, taught by the Institute for Extended Learning, Community Colleges of Spokane.)~~	**Algebra Methods and Introduction to Functions** 3 Fundamental algebraic operations and concepts, linear systems and inequalities, polynomial and rational functions, introduction to exponential and logarithmic functions. (This material is currently not available on the Pullman campus).	**8-10**
Math	**107**	**Revise**	**Precalculus** 4 Prereq Math 101 or 103 with a grade of C or better or satisfactory math placement score. Graphs, properties, and applications of polynomial, rational, exponential, logarithmic, and trigonometric functions.	**Precalculus** 4 Prereq Math 101 or 103 with a grade of C or better or satisfactory math placement score. Graphs, properties, and applications of polynomial, rational, exponential, logarithmic, and trigonometric functions. Credit not normally granted for both Math 107 and 106/108.	**1-10**
Math	**140**	**Revise**	**[N] Calculus for Life Scientists** 4 (3-3) ~~Prereq Math 107 with a grade of C or better, or satisfactory math placement score.~~ Differential and integral calculus with emphasis on life science applications. Credit not normally granted for more than one of Math 140, 171, 202, 206.	**[N] Calculus for Life Scientists** 4 (3-3) Prereq Math 107 or 108 with a grade of C or better, or satisfactory math placement score. Differential and integral calculus with emphasis on life science applications. Credit not normally granted for more than one of Math 140, 171, 202, 206.	**1-10**
Math	**151**	**Revise**	**Calculus for Middle School Teachers** 3 ~~Prereq Math 107 with a grade of C or better.~~ Differential and integral calculus in relation to middle school mathematics and real world problems through visualization, hands-on activities and	**Calculus for Middle School Teachers** 3 Prereq Math 106 with a grade of C or better, or satisfactory math placement score. Differential and integral calculus in relation to middle school mathematics and real world problems through	**1-10**

			technology.	visualization, hands-on activities and technology.	
Math	**171**	**Revise**	**[N] Calculus I** 4 (3-3) Prereq Math 107 with a grade of C or better, or satisfactory math placement score. Differential and integral calculus of one variable with associated analytic geometry. Credit not normally granted for more than one of Math 140, 171, 202, 206.	**[N] Calculus I** 4 (3-3) Prereq Math 107 or 108 with a grade of C or better, or satisfactory math placement score. Differential and integral calculus of one variable with associated analytic geometry. Credit not normally granted for more than one of Math 140, 171, 202, 206.	**1-10**
Math	**202**	**Revise**	**[N] Calculus for Business and Economics** 3 Prereq Math 107 or 201 with a grade of C or better, or satisfactory math placement score. Differential and integral calculus of the polynomial, exponential, and logarithmic functions. Credit not normally granted for more than one of Math 140, 171, 202, 206.	**[N] Calculus for Business and Economics** 3 Prereq Math 106, 107, or 201 with a grade of C or better, or satisfactory math placement score. Differential and integral calculus of the polynomial, exponential, and logarithmic functions. Credit not normally granted for more than one of Math 140, 171, 202, 206.	**1-10**
Math	**206**	**Revise**	**[N] Calculus for Architects** 3 ~~Prereq Math 107, with a grade C or better~~ or satisfactory math placement score. Calculus of elementary functions; trigonometry; applications to ~~architects~~. Credit not normally granted for more than one of Math 140, 171, 202, 206.	**[N] Calculus for Architects** 3 Prereq Math 106 and 108 with a grade of C or better in each; Math 107 with a grade of C or better, or satisfactory math placement score. Calculus of elementary functions; trigonometry; applications to architecture. Credit not normally granted for more than one of Math 140, 171, 202, 206.	**1-10**
Math	**216**	**Revise**	**Discrete Structures** 3 Prereq Math 107, ~~Phil 201,~~ and a programming course. Discrete mathematics, trees, graphs, elementary logic, and combinatorics with application to computer science.	**Discrete Structures** 3 Math 107 or 108 with a grade of C or better, and a programming course. Discrete mathematics, trees, graphs, elementary logic, and combinatorics with application to computer science.	**1-10**
Math	**251**	**Revise**	~~**Mathematics for Elementary School Teachers I** 3 (2-2) Prereq satisfactory math placement score or Math 101, 103, or 107 with a C or better. Logical and historical development of present-day number systems and associated algorithms; methods of problem solving.~~	**Fundamentals of Elementary Mathematics I** 3 (2-2) Prereq satisfactory math placement score or Math 101, 103, 106, 107, or 108 with a C or better. Comprehensive development of number systems emphasizing place-value, integers, rational numbers, and associated algorithms; methods of problem solving.	**1-10**
Math	**252**	**Revise**	~~**[N] Mathematics for Elementary School Teachers II** 3 (2-2) Prereq one year high school geometry; Math 251. Informal approach to basic ideas: mensuration, geometrical constructions, similarity, congruence, symmetry, probability, counting principles, measures of central tendency, graphical representation.~~	**[N] Fundamentals of Elementary Mathematics II** 3 (2-2) Prereq one year high school geometry and Math 251 with a C or better. Inquiry-based approach to fundamental concepts: measurement, geometrical constructions, similarity, congruence, symmetry, probability, counting principles, measures of central tendency,	**1-10**

				and distributions.	
Math	**301**	**Revise**	**Introduction to Mathematical Reasoning** 3 Prereq Math 220. Mathematical arguments and the writing of proofs.	**Introduction to Mathematical Reasoning** 3 Prereq Math 220 or 230 with a grade of C or better. Mathematical arguments and the writing of proofs.	**8-10**
Math	**340**	**Revise**	**Introduction to Mathematical Biology** 3 Prereq Math 140, 172, and 3 hours of biology. Mathematical biology and development of mathematical modeling for solutions to problems in the life sciences.	**Introduction to Mathematical Biology** 3 Prereq Math 140 or 172 with a grade of C or better, and 3 credits of biology. Mathematical biology and development of mathematical modeling for solutions to problems in the life sciences.	**8-10**
Math	**401**	**Revise**	**[M] Introduction to Analysis I** 3 Prereq Math 301. Properties of sets and sequences of real numbers; limits, continuity, differentiation and integration of functions; metric spaces.	**[M] Introduction to Analysis I** 3 Prereq Math 301 with a grade of C or better. Properties of sets and sequences of real numbers; limits, continuity, differentiation and integration of functions; metric spaces.	**8-10**
Math	**416**	**Revise**	**Simulation Methods** 3 Prereq ~~Cpt S 121 or 203; statistics course.~~ Model formulation and simulation in business, industry, and government; simulation languages; analysis of simulation output; applications. Credit not granted for both Math 416 and 516.	**Simulation Methods** 3 Prereq Math 360 and a computer programming course. Model formulation and simulation in business, industry, and government; simulation languages; analysis of simulation output; applications. Credit not granted for both Math 416 and 516.	**8-10**
Math	**420**	**Revise**	**Linear Algebra** 3 ~~Prereq Math 220; Math 301.~~ Advanced topics in linear algebra including similarity transformations, canonical forms, bilinear forms.	**Linear Algebra** 3 Prereq Math 220 or 230, and Math 301 with grades of C or better. Advanced topics in linear algebra including similarity transformations, canonical forms, bilinear forms.	**8-10**
Math	**421**	**Revise**	**[M] Algebraic Structures** 3 Prereq Math 301. Properties of algebraic structures and their homomorphisms, semi-groups, groups, rings, unique factorization domains, fields.	**[M] Algebraic Structures** 3 Prereq Math 301 with a grade of C or better. Properties of algebraic structures and their homomorphisms, semi-groups, groups, rings, unique factorization domains, fields.	**8-10**
Math	**516**	**Revise**	**Simulation Methods** 3 Prereq ~~Cpt S 121 or 203; statistics course.~~ Graduate-level counterpart of Math 416; additional requirements. Credit not granted for both Math 416 and 516.	**Simulation Methods** 3 Prereq Math 360 and a computer programming course. Graduate-level counterpart of Math 416; additional requirements. Credit not granted for both Math 416 and 516.	**8-10**
Math	**534**	**Drop**	**Approaches to Mathematics Teaching** 3 Prereq Math 531, 532. Instruction and curricula of mathematics content for community college and high school, covering basic arithmetic through calculus.	N/A	**8-10**
Math	**581**	**Revise**	**Seminar in ~~Analysis~~** V 1-3 May be repeated for credit. Cooperative course	**Seminar in Mathematics** V 1-3 May be repeated for credit. Cooperative course	**8-10**

			taught jointly by WSU and UI (MATH 541).	taught jointly by WSU and UI (MATH 541).	
Mus	**465**	**Revise**	**Seminar in Major Performance Literature** 2 May be repeated for credit; cumulative maximum 6 hours. Prereq Mus 351 or c//. Survey/performance of solo and chamber literature for voice, keyboard, strings, winds, brass, percussion. ~~Credit not granted for both MUS 465 and 565.~~	**Seminar in Major Performance Literature** 2 May be repeated for credit; cumulative maximum 6 hours. Prereq Mus 351 or c//. Survey/performance of solo and chamber literature for voice, keyboard, strings, winds, brass, percussion.	**8-10**
Mus	**565**	**Drop**	**Seminar in Major Performance Literature** 2 May be repeated for credit; cumulative maximum 6 hours. Graduate-level counterpart of MUS 465; additional requirements. Credit not granted for both MUS 465 and 565.	N/A	**8-10**
Ph S	**298**	**Drop**	**[P] Physical Science Honors** 4 (3-3) Concepts from cosmology, astronomy, physics, chemistry, and biochemistry; how matter evolved from the Big Bang to intelligent life forms.	N/A	**1-10**
Psych	**539**	**Revise**	**Measurement Theory and Intellectual Assessment** 3 Prereq by interview only. Psychometric theory, theories of intelligence, methods of appraising intelligence in children and adults, and development of testing and interpretive skills.	**Measurement Theory, Intellectual <u>and Personality</u> Assessment** 3 Prereq by interview only. Psychometric theory, theories of intelligence, methods of appraising intelligence in children and adults, and development of testing and interpretive skills.	**8-10**
Rus	**361**	**Revise**	**Russian for the Professions** 3 Prereq Rus 204 with a grade of C or better, or equivalent~~. Applied language skills useful in a professional or business environment.~~ Cooperative course taught by WSU, open to UI students (RUSS 361)	**Russian for the Professions** 3 Prereq Rus 204 with a grade of C or better, or equivalent. <u>Communication in Russian for professional purposes; telephone and meeting role-plays; letter and resume writing; discussions of current events in the Russian-speaking world.</u> Cooperative course taught by WSU, open to UI students (RUSS 361)	**8-09**
S W	**395**	**Drop**	**Child Welfare** 3 Social work practice in child welfare; adoption, foster homes, child protection, group homes, day care, children's institutions, dependency, traditional and non-traditional family.	N/A	**1-10**
Sci	**102**	**Revise**	**[Q] Dynamic Systems in the Natural World** 4 (3-3) Interdisciplinary approach to science in the modern world for non-science majors. If both Sci 101 and 102 are taken, students satisfy [B], [P] and laboratory requirement.	**[Q] Dynamic Systems in the Natural World** 4 (3-3) <u>Prereq Sci 101.</u> Interdisciplinary approach to science in the modern world for non-science majors. If both Sci 101 and 102 are taken, students satisfy [B], [P] and laboratory requirement.	**8-09**
Sci	**430**	**Revise-new for**	**Methods of Teaching Science** 3 (2-3) Prereq admission to secondary teacher	**<u>(Ph S)</u> Methods of Teaching Science** 3 (2-3) Prereq 36 hours science. Same as	**8-10**

		x-list	prep; 36 hours science. Same as Biol 430.	Biol 430.	
SoilS	**451**	**Revise**	**[M] ~~Pedology~~** 3 (2-3) Prereq SoilS 201. ~~Soil profiles, soil-forming processes, and soil classification.~~ Field trips required.	**[M] Soil Geography** 3 (2-3) Prereq SoilS 201; SoilS 368; or by instructor permission. Study the geographic distribution of soil features and properties at hillslope to global scales. Field trips required.	**8-09**
Stat	**212**	**Revise**	**[N] Introduction to Statistical Methods** 4 ~~(3-3)~~ Prereq Math 103 or intermediate math placement score of 13. Interpretation and application of statistical methods.	**[N] Introduction to Statistical Methods** 4 (3-2) Prereq Math 103 or intermediate math placement score of 13. Interpretation and application of statistical methods.	**8-09**
V M	**587**	**Revise**	**Clinical ~~Anesthesiology and Principles of Surgery~~** ~~3 (2-3)~~ Prereq veterinary medicine student. Clinical anesthesiology ~~and principles of surgery~~ for the professional veterinary student. S, M, F grading.	**Clinical Anesthesiology** 2 (1-3) Prereq veterinary medicine student. Clinical anesthesiology for the professional veterinary student. S, M, F grading.	**8-10**