

WASHINGTON STATE UNIVERSITY COOPERATIVELY OFFERED COURSES

2023-2024 WSU Cooperative Courses Open to U of I students

Students may search for the cooperative courses that are offered for any particular semester by going to <http://schedules.wsu.edu/Coop/> and choosing the appropriate fall or spring semester.

Subject	Number	Course Title and Credits
AFS	590	Sociology of Agriculture and Food Systems (3 credits)
AGTM	305	Agricultural Precision Systems (3 credits)
AGTM	310	Small Engine Maintenance and Repair (3 credits)
AGTM	315	Irrigation Systems and Water Management (3 credits)
ANIM SCI	101	Introductory Animal Science (3 credits)
ANIM SCI	172	Dairy Cattle Management Laboratory (1 credit)
ANIM SCI	174	Beef Cow Calf Management Laboratory (1 credit)
ANIM SCI	178	Swine Management Laboratory (1 credit)
ANIM SCI	260	Live Animal and Carcass Evaluation (3 credits)
ANIM SCI	274	Beef Feedlot Systems (2 credits)
ANIM SCI	285	Rights and Welfare of Animals (3 credits)
ANIM SCI	313	Feeds and Feeding (4 credits)
ANIM SCI	314	Principles of Nutrition (3 credits)
ANIM SCI	330	Animal Genetics (3 credits)
ANIM SCI	345	Animal Growth and Development (3 credits)
ANIM SCI	346	Introduction to Skeletal Muscle Physiology (3 credits)
ANIM SCI	350	Physiology of Reproduction (3 credits)
ANIM SCI	351	Physiology of Reproduction Laboratory (1 credit)
ANIM SCI	360	Meat Science (3 credits)
ANIM SCI	405	Ciders and Other Fermented Foods (3 credits)
ANIM SCI	451	Endocrine Physiology (3 credits)
ANIM SCI	454	Artificial Insemination and Pregnancy Detection (2 credits)
ANIM SCI	460	Advanced Meat Science (3 credits)
ANIM SCI	464	Companion Animal Management (3 credits)
ANIM SCI	468	Applied Physiology of Cultured Fish (3 credits)
ANIM SCI	472	Dairy Cattle Management (3 credits)
ANIM SCI	473	Advanced Dairy Management (3 credits)
ANIM SCI	478	Swine Production (3 credits)
ANIM SCI	485	Applied Animal Behavior (3 credits)
ANIM SCI	488	Perspectives in Biotechnology (3 credits)
ANIM SCI	513	Mineral and Vitamin Metabolism (4 credits)
ANIM SCI	545	Statistical Genomics (3 credits)
ANIM SCI	551	Endocrine Physiology (3 credits)
ANIM SCI	558	Molecular and Cellular Reproduction (3 credits)
ANIM SCI	588	Perspectives in Biotechnology (3 credits)
ANIM SCI	598	Advanced Topics in Animal Sciences (1-2 credits)
ANTH	450	Descriptive Linguistics (3 credits)
ANTH	463	Introduction to Anthropological Demography and Epidemiology (3 credits)
ANTH	465	Human Evolution (3 credits)
ANTH	535	Cultural Resource Management (3 credits)
ANTH	550	Descriptive Linguistics (3 credits)
ANTH	563	Introduction to Anthropological Demography and Epidemiology (3 credits)
ANTH	565	Human Evolution (3 credits)
ANTH	573	Zooarchaeology (4 credits)
ARCH	490	Seminar in Architectural Design (1-4 credits)
ASIA	111	Asian Film (3 credits)
ASIA	121	Modern Chinese Culture (3 credits)
ASIA	131	Masterpieces of Asian Literature (3 credits)
ASIA	320	Issues in East Asian Ethics (3 credits)
ASIA	330	The Art of War (3 credits)
ASTRONOM	581	Advanced Topics in Astronomy (3 credits)
BIOLOGY	324	Comparative Vertebrate Anatomy (4 credits)
BIOLOGY	416	Fisheries Management (4 credits)
BIOLOGY	469	Ecosystem Ecology and Global Change (3 credits)
BIOLOGY	494	Seminar in Mathematical Biology (1 credit)
BIOLOGY	514	Fish Genetics (2 credits)
BIOLOGY	519	Introduction to Population Genetics (3 credits)
BIOLOGY	540	Stable Isotope Theory and Methods (3 credits)
BIOLOGY	545	Statistical Genomics (3 credits)

BIOLOGY	548	Evolutionary Ecology of Populations (3 credits)	CE	442	Water and Wastewater Treatment Design (3 credits)
BIOLOGY	563	Field Ecology (2 credits)	CE	450	Design and Simulation of Water Resource Systems (3 credits)
BIOLOGY	566	Mathematical Genetics (3 credits)	CE	451	Open Channel Flow (3 credits)
BIOLOGY	569	Ecosystem Ecology and Global Change (3 credits)	CE	460	Advanced Hydrology (3 credits)
BIOLOGY	579	Mathematical Modeling in the Biological and Health Sciences (3 credits)	CE	472	Durable and Sustainable Pavements and Bridges (3 credits)
BSYSE	551	Advanced Biological Systems Engineering Topics (1-4 credits)	CE	473	Pavement Design (3 credits)
BSYSE	552	Advanced Biological Systems Engineering Topics (1-4 credits)	CE	475	Groundwater (3 credits)
BSYSE	554	Aquatic System Restoration (3 credits)	CE	476	Pavement Evaluation and Rehabilitation (3 credits)
BSYSE	555	Natural Treatment Systems (3 credits)	CE	501	Advanced Topics in Transportation Engineering (2-4 credits)
BSYSE	560	Aquatic Chemistry (3 credits)	CE	502	Applied Meteorology (3 credits)
BSYSE	582	Food Process Engineering I (3 credits)	CE	503	Air Quality Management (3 credits)
BSYSE	596	Biomass Thermo-Chemical Conversion (3 credits)	CE	504	Sustainability Engineering I (3 credits)
CE	211	Statics (3 credits)	CE	505	Decision-Making for Sustainable and Resilient Civil Infrastructure (3 credits)
CE	215	Mechanics of Materials (3 credits)	CE	506	Theory and Measurement of Turbulent Fluxes (3 credits)
CE	322	Transportation Engineering (3 credits)	CE	507	Sustainability: Life Cycle Assessment (3 credits)
CE	351	Water Resources Engineering (3 credits)	CE	508	Concrete Durability (3 credits)
CE	400	Highway Materials Engineering (3 credits)	CE	509	Numerical Modeling of Geomaterials (3 credits)
CE	401	Climate Change Science and Engineering (3 credits)	CE	510	Advanced Geomaterial Characterization (3 credits)
CE	402	Applied Meteorology (3 credits)	CE	511	Advanced Topics in Geotechnical Engineering (2-4 credits)
CE	403	Air Quality Management (3 credits)	CE	512	Dynamics of Structures (3 credits)
CE	405	Decision-Making for Sustainable and Resilient Civil Infrastructure (3 credits)	CE	514	Advanced Mechanics of Materials (3 credits)
CE	414	Structural Design Loads and Load Paths (3 credits)	CE	515	Environmental Measures (3 credits)
CE	415	Environmental Measures (3 credits)	CE	517	Mechanics of Sediment Transport (3 credits)
CE	416	Hydraulic Engineering Laboratory (3 credits)	CE	518	Hazardous Containment Pathway Analysis (3-4 credits)
CE	418	Hazardous Containment Pathway Analysis (V 3-4 credits)	CE	519	Hazardous Waste Treatment (3 credits)
CE	419	Hazardous Waste Treatment (3 credits)	CE	524	Geotechnical Earthquake Engineering (3 credits)
CE	425	Soil and Site Improvement (3 credits)	CE	525	Soil and Site Improvement (3 credits)
CE	430	Analysis of Indeterminate Structures (3 credits)	CE	527	Engineering Properties of Soils (3 credits)
CE	431	Structural Steel Design (3 credits)	CE	530	Advanced Design of Steel Structures (3 credits)
CE	433	Reinforced Concrete Design (3 credits)	CE	531	Probability and Statistical Models in Engineering (3 credits)
CE	434	Masonry Design (3 credits)	CE	532	Finite Elements (3 credits)
CE	435	Foundations (3 credits)			
CE	436	Design of Timber Structures (3 credits)			

CE	533	Advanced Reinforced Concrete Design (3 credits)	CE	596	Engineered Wood Composites (3 credits)
CE	534	Prestressed Concrete and Bridge Design (3 credits)	CE	597	Polymers and Surfaces for Adhesion (3 credits)
CE	535	Advanced Finite Elements (3 credits)	CE	598	Natural Fiber Polymer Composites (3 credits)
CE credits)	537	Advanced Topics in Structural Engineering (3	CHE	510	Transport Processes (3 credits)
CE	538	Earthquake Engineering (3 credits)	CHE	527	Macroscopic Thermodynamics (3 credits)
CE	539	Advanced Design of Timber Structures (3 credits)	CHE	529	Chemical Engineering Kinetics (3 credits)
CE	540	Instrumental Analysis of Environmental Contaminants (3 credits)	CHE	541	Chemical Engineering Analysis (3 credits)
CE	541	Physicochemical Water and Wastewater Treatment (3 credits)	CHE	560	Biochemical Engineering (3 credits)
CE	542	Biochemical Wastewater Treatment (3 credits)	CHEM credits)	503	Advanced Topics in Inorganic Chemistry (1-3
CE	543	Advanced Topics in Environmental Engineering Practice (1-4 credits)	CHEM	532	Advanced Physical Chemistry II (3 credits)
CE	550	Hydroclimatology (3 credits)	CHEM	537	Advanced Topics in Physical Chemistry (1-3 credits)
CE	551	Open Channel Flow (3 credits)	CHEM	542	Advanced Organic Chemistry (3 credits)
CE credits)	552	Advanced Topics in Hydraulic Engineering (1-3	CHEM	544	Advanced Topics in Organic Chemistry (1-3 credits)
CE	555	Natural Treatment Systems (3 credits)	CHEM	545	Synthetic Organic Chemistry (3 credits)
CE	560	Advanced Hydrology (3 credits)	CHINESE	101	First Semester (4 credits)
CE	562	Advanced Subsurface Flow and Transport (3 credits)	CHINESE	102	Second Semester (4 credits)
CE	564	Numerical Methods (3 credits)	CHINESE	111	Asian Film (3 credits)
CE credits)	567	Properties of Highway Pavement Materials (3	CHINESE	121	Modern Chinese Culture (3 credits)
CE	572	Advanced Pavement Design and Analysis (3 credits)	CHINESE	131	Masterpieces of Asian Literature (3 credits)
CE	583	Aquatic Chemistry (3 credits)	CHINESE	203	Third Semester (4 credits)
CE	584	Environmental Microbiology (3 credits)	CHINESE	204	Fourth Semester (4 credits)
CE	585	Aquatic System Restoration (3 credits)	CHINESE	305	Intermediate Conversation II (1 credit)
CE	586	Bioremediation of Hazardous Waste (3 credits)	CHINESE	306	Intermediate Reading and Translation (3 credits)
CE (3 credits)	588	Atmospheric Turbulence and Air Pollution Modeling	CHINESE	308	Intermediate Grammar and Writing (3 credits)
CE credits)	589	Atmospheric Chemical and Physical Processes (3	CHINESE	320	Issues in East Asian Ethics (3 credits)
CE	590	Spectroscopy and Radiative Transfer of the Atmosphere (3 credits)	CHINESE	330	The Art of War (3 credits)
CE	591	Aerosol Dynamics and Chemistry (3 credits)	CHINESE	361	Advanced Chinese for the Professions (3 credits)
CE	593	Polymer Materials and Engineering (3 credits)	CHINESE	363	Introduction to Literary Chinese (3 credits)
CE	594	Natural Fibers (3 credits)	CHINESE	364	Media Chinese (3 credits)
CE	595	Polymer and Composite Processing (3 credits)	CHINESE	405	Advanced Conversation (1 credit)
			CHINESE	450	Seminar in Chinese Studies - Themes (3 credits)
			COUN PSY	511	Theories, Research, and Techniques in Counseling Psychology I (3 credits)
			COUN PSY	512	Theories, Research, and Techniques in Counseling Psychology II (3 credits)

COUN PSY	515	Ethics and Professional Problems in Counseling Psychology (3 credits)	CROP SCI	360	World Agricultural Systems (3 credits)
COUN PSY	518	Theoretical Foundations of Group Counseling (3 credits)	CROP SCI	401	Turfgrass Science (3 credits)
COUN PSY	541	Clinical and Experimental Hypnosis Seminar (3 credits)	CROP SCI	403	Advanced Cropping Systems (3 credits)
CPT S	442	Computer Graphics (3 credits)	CROP SCI	445	Plant Breeding (4 credits)
CPT S	464	Distributed Systems Concepts and Programming (3 credits)	CROP SCI	503	Advanced Cropping Systems (3 credits)
CPT S	466	Embedded Systems (3 credits)	CROP SCI	504	Plant Transmission Genetics (3 credits)
CPT S	531	Advanced Matrix Computations (3 credits)	CROP SCI	505	Advanced Classical and Molecular Breeding (3 credits)
CPT S	542	Computer Graphics (3 credits)	CROP SCI	545	Statistical Genomics (3 credits)
CPT S	564	Distributed Systems Concepts and Programming (3 credits)	CROP SCI	555	Epigenetics in Plants (2 credits)
CPT S	566	Embedded Systems (3 credits)	E E	451	Digital Communication Systems (3 credits)
CRM J	101	Introduction to the Administration of Criminal Justice (3 credits)	E E	486	Power Electronics (3 credits)
CRM J	270	Introduction to Policing (3 credits)	E E	501	Linear System Theory (3 credits)
CRM J	280	Introduction to American Criminal Courts (3 credits)	E E	502	Linear Multivariable Control (3 credits)
CRM J	320	Criminal Law (3 credits)	E E	504	Modern Optics (3 credits)
CRM J	330	Crime Control Policies (3 credits)	E E	505	Nonlinear System Theory (3 credits)
CRM J	365	Juvenile Justice and Corrections (3 credits)	E E	507	Random Processes in Engineering (3 credits)
CRM J	370	Policing and Society (3 credits)	E E	508	Estimation Theory for Signal Processing, Communications, and Control (3 credits)
CRM J	400	Special Topics in Criminal Justice and Criminology (3 credits)	E E	511	Protection of Power Systems II (3 credits)
CRM J	405	Comparative Criminal Justice Systems (3 credits)	E E	518	Advanced Electromagnetic Theory I (3 credits)
CRM J	420	Criminal Procedure (3 credits)	E E	527	Antenna Theory and Design (3 credits)
CRM J	424	Community Corrections (3 credits)	E E	530	Digital Signal Processing II (3 credits)
CRM J	491	Special Topics: Study Abroad (3 credits)	E E	551	Data Communication Systems (3 credits)
CRM J	505	Comparative Criminal Justice (3 credits)	E E	581	Advanced Topics in Power Systems (2-3 credits)
CRM J	530	Criminal Justice: Process and Institutions (3 credits)	E E	582	Advanced Topics (1-3 credits)
CRM J	540	Seminar in Evaluation Research (3 credits)	E MIC	586	Special Projects in Electron Microscopy (2-3 credits)
CRM J	541	Seminar in Corrections (3 credits)	E MIC	587	Special Topics in Electron Microscopy (1 credit)
CRM J	570	The Police and Society (3 credits)	ECONS	324	The Economics of Health Care (3 credits)
CRM J	572	Seminar in Comparative Policing (3 credits)	ECONS	424	Strategy and Game Theory (3 credits)
CRM J	591	Seminar in the Administration of Criminal Justice (3 credits)	ECONS	523	Big Data Management and Processing for Economics (3 credits)
CROP SCI	301	Turfgrass Management (3 credits)	ECONS	524	Applied Machine Learning for Economics (3 credits)
			ECONS	525	Master's Econometrics (3 credits)
			ECONS	526	Master's Microeconomic Analysis I (3 credits)
			ECONS	527	Master's Microeconomic Analysis II (3 credits)
			ECONS	528	Master's Macroeconomics Analysis (3 credits)

ECONS	529	Research Methods (1-2 credits)	FS	407	Evaluation of Dairy Products Lab (1 credit)
ECONS	533	International Trade and Policy (3 credits)	FS	409	Principles of Environmental Toxicology (3 credits)
ECONS	534	Production Economics (3 credits)	FS	416	Food Microbiology (3 credits)
ECONS	701	Master's Independent Capstone Project and/or Examination (1-6 credits)	FS	417	Food Microbiology Laboratory (2 credits)
ED AD	580	School Organization and Administration (3 credits)	FS	418	Oral Seminar in Food Science (1 credit)
ED AD	585	Financial Management in Education (3 credits)	FS	422	Sensory Evaluation of Food and Wine (3 credits)
ED PSYCH	508	Educational Statistics (3 credits)	FS	423	Sensory Evaluation of Food and Wine Lab (1 credit)
ENGLISH	443	Phonology (3 credits)	FS	429	Dairy Products (3 credits)
ENGLISH	543	Phonology (3 credits)	FS	430	Dairy Processing Lab (1 credit)
ENGLISH	546	Topics in Teaching English as a Second Language (3 credits)	FS	432	Food Engineering (3 credits)
ENGLISH	580	Seminar in Medieval Literature (3 credits)	FS	433	Food Engineering Lab (1 credit)
ENTOM	150	Insects, Science, and World Cultures (3 credits)	FS	436	Principles of Sustainability (3 credits)
ENTOM	361	Honey Bee Biology (3 credits)	FS	460	Food Chemistry (3 credits)
ENTOM	401	Biology and Society, Past and Present (3 credits)	FS	461	Food Chemistry Laboratory (1 credit)
ENTOM	490	Special Topics in Entomology (1-4 credits)	FS	462	Food Analysis (3 credits)
ENTOM	539	Insect Identification (4 credits)	FS	464	Food Toxicology (3 credits)
ENTOM	590	Special Topics in Entomology (1-4 credits)	FS	465	Wine Microbiology and Processing (3 credits)
FINE ART	381	Beginning Photography (3 credits)	FS	466	Wine Microbiology and Processing Laboratory (1 credit)
FINE ART	382	Intermediate Photography (3 credits)	FS	470	Advanced Food Technology (3 credits)
FINE ART	555	Critical Practices (9 credits)	FS	475	Statistical Quality Management of Food Products (3 credits)
FRENCH	410	French Film in Translation (3 credits)	FS	489	Food Product Development (3 credits)
FS	110	Introduction to Food Science (3 credits)	FS	495	Internship in Food Science (2 credits)
FS	201	Science on Your Plate (3 credits)	FS	496	Internship in a Winery (2 credits)
FS	220	Food Safety and Quality (3 credits)	FS	499	Special Problems (1-4 credits)
FS	301	Food Mycology (3 credits)	FS	501	Topics in Food Science (1-3 credits)
FS	302	Food Processing Lab (1 credit)	FS	509	Principles of Environmental Toxicology (3 credits)
FS	303	Food Processing (3 credits)	FS	510	Functional Foods and Health (3 credits)
FS	304	Cereal Chemistry and Processing (3 credits)	FS	511	Food Lipids (3 credits)
FS	329	Dairy Foods Composition and Quality (4 credits)	FS	512	Food Proteins and Enzymes (2 credits)
FS	350	Instrumental and Sensory Analysis of Food (3 credits)	FS	513	Food Carbohydrates (3 credits)
FS	401	Topics in Food Science (1-3 credits)	FS	514	Starch Chemistry (3 credits)
FS	402	Industrial Fermentations (3 credits)	FS	515	Food Fermentations - Microbiology and Technology (3 credits)
FS	405	Ciders and Other Fermented Foods (3 credits)	FS	516	Food Laws (2 credits)
FS	406	Evaluation of Dairy Products I (1 credit)	FS	517	Scientific Writing (2 credits)

FS	518	Seminar Oral (1 credit)	HORT	313	Viticulture (3 credits)
FS	522	Sensory Evaluation of Food and Wine (3 credits)	HORT	320	Olericulture (3 credits)
FS	529	Dairy Products (3 credits)	HORT	321	Olericulture Laboratory (1 credit)
FS	530	Dairy Processing Lab (1 credit)	HORT	332	Interior Landscaping (3 credits)
FS	531	Advanced Food Safety and Quality (3 credits)	HORT	357	Greenhouse Management and Crop Production (3 credits)
FS	532	Advanced Food Microbiology (3 credits)	HORT	358	Greenhouse Management and Crop Production Lab (1 credit)
FS	536	Principles of Sustainability (3 credits)	HORT	403	Special Topics (1-4 credits)
FS	538	Physical Properties of Foods (2 credits)	HORT	413	Advanced Viticulture (3 credits)
FS	564	Food Toxicology (3 credits)	HORT	416	Advanced Horticultural Crop Physiology (3 credits)
FS	565	Wine Microbiology and Processing (3 credits)	HORT	418	Post-harvest Biology and Technology (3 credits)
FS	570	Advanced Food Technology (3 credits)	HORT	445	Plant Breeding (4 credits)
FS	583	Advances in Cereal Sciences and Technology (2 credits)	HORT	513	Advanced Viticulture (3 credits)
FOR LANG	100	Studies in Foreign Languages I (1-4 credits)	HORT	516	Advanced Horticultural Crop Physiology (3 credits)
FOR LANG	200	Studies in Foreign Languages II (1-4 credits)	HORT	518	Post-harvest Biology and Technology (3 credits)
FOR LANG	300	Studies in Foreign Languages (1-4 credits)	HORT	545	Statistical Genomics (3 credits)
FOR LANG	450	Descriptive Linguistics (3 credits)	HUMANITY	131	Masterpieces of Asian Literature (3 credits)
FRENCH	310	French and Francophone Film (3 credits)	HUMANITY	320	Issues in East Asian Ethics (3 credits)
GERMAN	308	Intermediate Grammar and Writing (3 credits)	ITALIAN	101	First Semester (4 credits)
GERMAN	320	German Culture (3 credits)	ITALIAN	102	Second Semester (4 credits)
GERMAN	450	Seminar in German Studies - Themes (3 credits)	ITALIAN	105	Elementary Conversation (1 credit)
GERMAN	451	Seminar in German Studies - Authors (3 credits)	ITALIAN	205	Intermediate Conversation (1 credit)
H D	514	Research Methods in Human Development II (3 credits)	JAPANESE	320	Issues in East Asian Ethics (3 credits)
H D	580	Families, Community and Public Policy (3 credits)	LND ARCH	480	Professional Practice (2 credits)
HBM	131	Introduction to Hospitality Business Management (3 credits)	LND ARCH	520	The Northern Rocky Mountain Regional Landscape (4 credits)
HBM	235	Travel, Society and Business (3 credits)	LND ARCH	521	Cultural Interpretation of the Regional Landscape (4 credits)
HBM	381	Hospitality Leadership and Organizational Behavior (3 credits)	MATH	416	Numerical Simulations for Probabilistic Models (3 credits)
HISTORY	308	North American Indian History, Precontact to Present (3 credits)	MATH	431	Intersections of Culture and Mathematics (3 credits)
HISTORY	395	Topics in History (3 credits)	MATH	440	Applied Mathematics I: PDEs (3 credits)
HISTORY	427	Public History: Theory and Methodology (3 credits)	MATH	441	Applied Mathematics II: Complex Variables (3 credits)
HISTORY	525	Seminar in American History (3 credits)	MATH	453	Graph Theory (3 credits)
HISTORY	527	Public History: Theory and Methodology (3 credits)	MATH	466	Optimization in Networks (3 credits)
HISTORY	569	Field Course in Modern European History (3 credits)			
HORT	310	Pomology (3 credits)			

MATH credits)	486	Mathematical Methods in Natural Sciences (3 credits)	MATH	568	Statistical Theory I (3 credits)
MATH	494	Seminar in Mathematical Biology (1 credit)	MATH	569	Statistical Theory II (3 credits)
MATH	503	Complex Analysis (3 credits)	MATH	570	Continuum Mechanics (3 credits)
MATH	504	Measure and Integration (3 credits)	MATH	571	Mathematical Foundations of Continuum Mechanics II (3 credits)
MATH	505	Abstract Algebra (3 credits)	MATH	574	Topics in Optimization (3 credits)
MATH	507	Advanced Theory of Numbers (3 credits)	MATH	575	Asset Pricing in Financial Engineering (3 credits)
MATH	508	Advanced Mathematical Methods for Physics and Engineering (3 credits)	MATH	576	Quantitative Risk Management (3 credits)
MATH	511	Advanced Linear Algebra (3 credits)	MATH	579	Mathematical Modeling in the Biological and Health Sciences (3 credits)
MATH	512	Ordinary Differential Equations (3 credits)	MATH	581	Topics in Mathematics (V 1-3 credits)
MATH credits)	516	Numerical Simulations for Probabilistic Models (3 credits)	MATH	583	Topics in Applied Mathematics (1-3 credits)
MATH	525	General Topology (3 credits)	MATH	585	Topics in Mathematical Biology (1-3 credits)
MATH	531	Intersections of Culture and Mathematics (3 credits)	MATH credits)	586	Mathematical Methods in Natural Sciences (3 credits)
MATH	532	Advanced Mathematical Thinking (3 credits)	MATSE	505	Advanced Materials Science (3 credits)
MATH	534	Theories of Learning in Mathematics (3 credits)	MATSE	513	Theory of Plasticity and its Physical Foundations (3 credits)
MATH credits)	535	Research Paradigms in Mathematics Education (3 credits)	MATSE	516	Phase Transformations (3 credits)
MATH	536	Statistical Computing (3 credits)	MATSE	521	Statistics of Microstructures (3 credits)
MATH	540	Applied Mathematics I: PDEs (3 credits)	MBIOS	303	Introductory Biochemistry (4 credits)
MATH credits)	541	Applied Mathematics II: Complex Variables (3 credits)	MBIOS	440	Immunology (3 credits)
MATH credits)	543	Stable Numerical Methods Using Orthogonality (3 credits)	MBIOS	442	General Virology (3 credits)
MATH	544	Advanced Matrix Computations (3 credits)	MBIOS	446	Epidemiology (3 credits)
MATH	545	Numerical Analysis of Parabolic and Hyperbolic PDEs (3 credits)	MBIOS	528	Molecular and Cellular Reproduction (3 credits)
MATH	546	Numerical Analysis of Elliptic PDEs (3 credits)	MBIOS	540	Immunology (3 credits)
MATH	553	Graph Theory (3 credits)	MBIOS	542	General Virology (3 credits)
MATH	555	Topics in Combinatorics (3 credits)	MBIOS	548	Selected Topics in Immunology and Virology (1 credit)
MATH	560	Partial Differential Equations I (3 credits)	MBIOS	582	Seminar in Reproductive Biology (1 credit)
MATH	561	Partial Differential Equations II (3 credits)	ME	212	Dynamics (3 credits)
MATH	563	Mathematical Genetics (3 credits)	ME	301	Fundamentals of Thermodynamics (3 credits)
MATH	564	Convex and Nonlinear Optimization (3 credits)	ME	303	Fluid Mechanics (3 credits)
MATH	565	Nonsmooth Analysis and Optimization with Applications (3 credits)	ME	304	Heat Transfer (3 credits)
MATH	566	Optimization in Networks (3 credits)	ME	313	Engineering Analysis (3 credits)
MATH	567	Integer and Combinatorial Optimization (3 credits)	ME	419	Air Conditioning (3 credits)
			ME	449	Mechanical Vibration (3 credits)

ME	474	Design for Manufacture and Modern Manufacturing Strategies (3 credits)	MSE	508	Polymer Nanocomposites and Functionalities (3 credits)
ME	481	Control Systems (3 credits)	MSE	509	MEMS Engineering (3 credits)
ME	501	Continuum Mechanics (3 credits)	MSE	513	Theory of Plasticity and its Physical Foundations (3 credits)
ME	502	Sustainability Assessment for Engineering Design (3 credits)	MSE	514	Thermodynamics of Solids (3 credits)
ME	503	Systems Design Approaches for Sustainability (3 credits)	MSE	515	Electronic Properties of Materials (3 credits)
ME	507	Additive Manufacturing (3 credits)	MSE	516	Phase Transformations (3 credits)
ME	509	MEMS Engineering (3 credits)	MSE	517	Thin Films (3 credits)
ME	513	Theory of Plasticity and its Physical Foundations (3 credits)	MSE	520	Multiscale Modeling in Thermomechanics of Materials (3 credits)
ME	514	Thermodynamics of Solids (3 credits)	MSE	521	Statistics of Microstructures (3 credits)
ME	515	Convective Heat Transfer (3 credits)	MSE	523	Ceramics Processing (3 credits)
ME	516	Conduction and Radiation Heat Transfer (3 credits)	MSE	530	Elasticity (3 credits)
ME	517	Thin Films (3 credits)	MSE	534	Mechanics of Composite Materials (3 credits)
ME	520	Multiscale Modeling in Thermomechanics of Materials (3 credits)	MSE	537	Fracture Mechanics and Mechanisms (3 credits)
ME	521	Fundamentals of Fluids I (3 credits)	MSE	543	Polymer Materials and Engineering (3 credits)
ME	526	Statistical Thermodynamics (3 credits)	MSE	544	Natural Fibers (3 credits)
ME	527	Macroscopic Thermodynamics (3 credits)	MSE	545	Polymer and Composite Processing (3 credits)
ME	530	Elasticity (3 credits)	MSE	546	Engineered Wood Composites (3 credits)
ME	532	Finite Elements (3 credits)	MSE	547	Polymers and Surfaces for Adhesion (3 credits)
ME	534	Mechanics of Composite Materials (3 credits)	MSE	548	Natural Fiber Polymer Composites (3 credits)
ME	537	Fracture Mechanics and Mechanisms (3 credits)	MSE	592	Transmission of Electron Microscopy (3 credits)
ME	540	Advanced Dynamics of Physical Systems (3 credits)	NEUROSCI	520	Fundamentals of Neuroscience (4 credits)
ME	556	Numerical Modeling in Fluid Mechanics (3 credits)	NEUROSCI	540	Special Topics in Integrative Neuroscience (1-3 credits)
ME	565	Nuclear Reactor Engineering (3 credits)	NEUROSCI	541	Special Topics in Cellular and Molecular Neuroscience (1-3 credits)
ME	579	Advanced Topics in Mechanical Engineering (1-3 credits)	NEUROSCI	542	Special Topics in Interdisciplinary Neuroscience (1-3 credits)
ME	581	Control Systems (3 credits)	NEUROSCI	543	Special Topics in Behavioral/Clinical Neuroscience (1-3 credits)
ME	598	Seminar (1 credit)	PHIL	207	Philosophy of Religion (3 credits)
MGTOP	516	Time Series (3 credits)	PHIL	320	History of Ancient and Medieval Philosophy (3 credits)
MSE	402	Polymeric Materials (3 credits)	PHIL	321	History of Modern Philosophy (3 credits)
MSE	503	Advanced Topics in Materials Engineering (1-3 credits)	PHIL	322	Nineteenth-century Philosophy (3 credits)
MSE	505	Advanced Materials Science (3 credits)	PHIL	350	Philosophy of Science (3 credits)
MSE	507	Additive Manufacturing (3 credits)	PHIL	401	Advanced Formal Logic (3 credits)

PHIL	407	Seminar in Philosophy of Religion (3 credits)	PHYSICS	563	Physics of the Solid State (3 credits)
PHIL	420	Contemporary Continental Philosophy (3 credits)	PHYSICS	571	Methods of Theoretical Physics (3 credits)
PHIL	421	Kant (3 credits)	PHYSICS	581	Advanced Topics in Physics (3 credits)
PHIL	431	Aesthetics and Philosophy of Art (3 credits)	PL P	301	Food Mycology (3 credits)
PHIL	442	Philosophy of Mind (3 credits)	PL P	403	Advanced Cropping Systems (3 credits)
PHIL	443	Philosophy of Language (3 credits)	PL P	503	Advanced Cropping Systems (3 credits)
PHIL	446	Metaphysics (3 credits)	PL P	511	Viruses and Virus Diseases of Plants (4 credits)
PHIL	447	Theory of Knowledge (3 credits)	PL P	513	Plant Nematology (3 credits)
PHIL	460	Ethical Theory (3 credits)	PL P	514	Phylobacteriology (3 credits)
PHIL	462	Women and Ethics (3 credits)	PL P	521	General Mycology (3 credits)
PHIL	470	Philosophy of Law (3 credits)	PL P	526	Advanced Fungal Biology (4 credits)
PHIL	472	Social and Political Philosophy (3 credits)	PL P	535	Molecular Genetics of Plant and Pathogen Interactions (3 credits)
PHIL	501	Advanced Formal Logic (3 credits)	PL P	545	Statistical Genomics (3 credits)
PHIL	504	Special Topics in Philosophy (3 credits)	PL P	551	Epidemiology and Management of Plant Diseases (3 credits)
PHIL	507	Seminar in Philosophy of Religion (3 credits)	PL P	570	Techniques in Plant Pathology (3 credits)
PHIL	510	Seminar in the History of Philosophy (3 credits)	POL S	405	Comparative Criminal Justice Systems (3 credits)
PHIL	520	Seminar in Ethical Theory (3 credits)	POL S	445	Public Personnel Administration (3 credits)
PHIL	522	Seminar in Metaphysics (3 credits)	POL S	503	Research Methods in Political Science and Criminal Justice (3 credits)
PHIL	524	Seminar in Epistemology (3 credits)	POL S	516	Seminar on Law, Courts, and Judicial Politics (3 credits)
PHIL	530	Bioethics (2 credits)	POL S	530	American Foreign Policy: Theories and Applications (3 credits)
PHIL	532	Seminar in Business Ethics (3 credits)	POL S	531	Seminar in International Security (3 credits)
PHIL	535	Advanced Biomedical Ethics (3 credits)	POL S	534	Seminar in Comparative Politics (3 credits)
PHIL	543	Philosophy of Language (3 credits)	POL S	541	Seminar in Evaluation Research (3 credits)
PHIL	570	Philosophy of Law (3 credits)	POL S	542	Proseminar in Administration, Justice, and Applied Policy Studies (3 credits)
PHYSICS	450	Introduction to Quantum Mechanics (3 credits)	PSYCH	504	History of Psychology: Theoretical and Scientific Foundations (3 credits)
PHYSICS	463	Introduction to Solid State and Materials Physics (3 credits)	PSYCH	550	Social Psychology (3 credits)
PHYSICS	521	Classical Mechanics I (3 credits)	PSYCH	574	Clinical and Experimental Biopsychology (3 credits)
PHYSICS	533	Thermal and Statistical Physics I (3 credits)	PSYCH	577	Behavioral Pharmacology (3 credits)
PHYSICS	534	Thermal and Statistical Physics II (3 credits)	PSYCH	592	Cognition and Affective Bases of Behavior (3 credits)
PHYSICS	541	Electromagnetic Theory (3 credits)	SOC	356	Growing Up and Growing Older (3 credits)
PHYSICS	542	Electrodynamics (3 credits)	SOC	367	Juvenile Justice and Corrections (3 credits)
PHYSICS	550	Quantum Theory I (3 credits)			
PHYSICS	551	Quantum Theory II (3 credits)			
PHYSICS	552	Quantum Theory III (3 credits)			
PHYSICS	561	Atomic and Molecular Physics (3 credits)			

SOC credits)	517	Seminar in Contemporary Sociological Theory (3 credits)	SOIL SCI	508	Environmental Spatial Statistics (3 credits)
SOC	523	Qualitative Methods Practicum (3 credits)	SOIL SCI	514	Environmental Biophysics (2 credits)
SOC	525	Practicum in Survey Research (3 credits)	SOIL SCI	521	Physical Chemistry of Soils (3 credits)
SOC	553	Social Organization and the Family (3 credits)	SOIL SCI	531	Soil Microbiology (3 credits)
SOE	304	Ecosystem Field Measurements (4 credits)	SOIL SCI	547	Soil Fertility Management (3 credits)
SOE	310	Modeling the Environment (4 credits)	STAT	360	Probability and Statistics (3 credits)
SOE	318	Wildlife Genetics (3 credits)	STAT	412	Statistical Methods in Research I (3 credits)
SOE	408	Field Geology (3 credits)	STAT	422	Sampling Methods (3 credits)
SOE	431	Wildlife Nutrition (3 credits)	STAT	508	Environmental Spatial Statistics (3 credits)
SOE	444	Environmental Assessment (4 credits)	STAT	516	Time Series (3 credits)
SOE	445	Hazardous Waste Management (3 credits)	STAT	520	Statistical Analysis of Qualitative Data (3 credits)
SOE	470	Introduction to Economic Geology (3 credits)	STAT	522	Biostatistics and Statistical Epidemiology (3 credits)
SOE	475	Groundwater (3 credits)	STAT	533	Theory of Linear Models (3 credits)
SOE	492	Special Topics (1-3 credits)	STAT	535	Regression Analysis (3 credits)
SOE	510	Species Distribution Modeling (3 credits)	STAT	536	Statistical Computing (3 credits)
SOE	520	Advanced Topics in Sedimentology (3 credits)	STAT	544	Applied Stochastic Processes (3 credits)
SOE credits)	531	Fundamentals of Environmental Toxicology (3 credits)	STAT	548	Statistical Theory I (3 credits)
SOE	535	Integrated Water Resources Science and Management (3 credits)	STAT	549	Statistical Theory II (3 credits)
SOE	541	Orogenic Systems (2 credits)	STAT credits)	565	Analyzing Microarray and Other Genomic Data (3 credits)
SOE	542	Extensional Tectonics (3 credits)	TCH LRN	520	Topics in Special Student Populations (1-4 credits)
SOE	544	Environmental Assessment (4 credits)	VET CLIN	499	Special Problems (1-4 credits)
SOE	545	Hazardous Waste Management (3 credits)	VET CLIN	587	Hospital Rotation (3 credits)
SOE	550	System Dynamics Models of Environmental Systems (3 credits)	VET CLIN	592	Seminar (1 credit)
SOE	552	Analytical Methods in Earth Sciences (3 credits)	VET CLIN	600	Special Projects or Independent Study (1-18 credits)
SOE	556	Foraging Ecology of Herbivores (2 credits)	VET MED	520	Veterinary Physiology (5 credits)
SOE	560	Advanced Igneous Petrology (3 credits)	VET MED	526	Domestic and Exotic Animal Behavior (2 credits)
SOE	583	Radiogenic Isotopes and Geochronology (3 credits)	VET MED	545	General Pathology (3 credits)
SOE	584	Stable Isotope Geochemistry (3 credits)	VET MICR	499	Special Problems (1-4 credits)
SOE	594	Environmental and Natural Resources Issues and Ethics (3 credits)	VET MICR	600	Special Projects or Independent Study (1-18 credits)
SOIL SCI	101	Organic Gardening and Farming (3 credits)	VET PH	499	Special Problems (1-4 credits)
SOIL SCI	360	World Agricultural Systems (3 credits)	VET PH	600	Special Projects or Independent Study (1-18 credits)
SOIL SCI	414	Environmental Biophysics (2 credits)	VIT ENOL	113	Introduction to Vines and Wines (3 credits)
SOIL SCI	415	Environmental Biophysics Laboratory (1 credit)	VIT ENOL	313	Viticulture (3 credits)
			VIT ENOL	413	Advanced Viticulture (3 credits)
			VIT ENOL	422	Sensory Evaluation of Food and Wine (3 credits)

VIT ENOL	465	Wine Microbiology and Processing (3 credits)
VIT ENOL	466	Wine Microbiology and Processing Laboratory (1 credit)
VIT ENOL	496	Internship in a Winery (2 credits)
WOMEN ST	462	Women and Ethics (3 credits)