

Regularly Offered MSU Environment Graduate Courses...Only courses open to students from multiple departments... Cross-listed courses listed by host department... Experimental courses in separate list for current term.

Department	Course	Semester	Year	Title	Cred
AFRE	801	Fa	Annual	Mathematical Applications in Economics	3
AFRE	802	Fa	Annual	Statistical Methods for Agriculture, Food and Resource Economists	3
AFRE	805	Fa, Sp	Annual	Microeconomic Analysis	3
AFRE	810	Fa	Annual	Institutional and Behavioral Economics	3
AFRE	817	Sp	Annual	Political Economy of Agricultural and Trade Policy	3
AFRE	823	Fa	Odd years	Environmental Economics Methods	3
AFRE	829	Sp	Annual	Economics of Environmental Resources	3
AFRE	835	Sp	Annual	Introductory Econometrics	3
AFRE	841	Sp	Annual	Analysis of Food System Organization and Performance	3
AFRE	861	Fa	Annual	Agriculture in Economic Development	3
AFRE	923	Fa	Annual	Advanced Environmental and Resource Economics	3
ANP	430	Fa	Odd years	<u>Culture, Resources, and Power</u>	3
ANP	431	Fa	Odd years	<u>Gender, Environment, and Development</u>	3
ANP	831	Fa	Even years	<u>Seminar in Cultural Ecology</u>	3
ANP	836	Sp	Odd years	<u>Culture, Resources, and Power</u>	3
ANP/ FW/ FOR/ GEO/ RD/ SOC	858	Fall	Even years	<u>Gender, Justice, and Environmental Change: Issues and Concepts</u>	3
ANP/ FW/ FOR/ GEO/ RD/ SOC	859	Sp	Even years	<u>Gender, Justice and Environmental Change: Methods and Application</u>	3
ANR	880	Fa, Sp	Annual	<u>Leadership and the Policy Process in Agriculture and Natural Resources</u>	3
ANS	407	Fa	Annual	<u>Food and Animal Toxicology</u>	3
ANS/ BE	418	Fa	Annual	<u>Comprehensive Nutrient Management Planning</u>	3
ANS/CSS/HRT/C SUS	424	Fa	Annual	<u>Sustainable Agriculture and Food Systems: Integration and Synthesis</u>	3
ANS/ ENE/SOC	427	Sp	Odd years	<u>Environmental Toxicology and Society</u>	3
ANS	455	Sp	Annual	<u>Avian Physiology</u>	4
ANS	480	Fa, Sp, Su	Annual	<u>Animal Systems in International Development</u>	3
ANS/ ZOL	805	Fa	Annual	<u>Animal Welfare Assessment</u>	3

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BE/GEO	402	Fa	Even years	<u>Agricultural Climatology</u>	3
BE/GEO/FW/FOR	419	Sp	Annual	<u>Applications of Geographic Information Systems to Natural Resources Management</u>	
BE/FW/PB/ZOL	443	Sp	Annual	<u>Restoration Ecology</u>	3
BE/CSUS/FOR/FW/CSS	452	Fa, Sp, Su	annual	<u>Watershed Concepts</u>	3
BE/AE	456	Sp	Annual	<u>Electric Power and Control</u>	3
BE/EEP	460	Sp	Annual	<u>Natural Resources Economics</u>	3
BE/CE	468	Fa	Annual	<u>Biomass Conversion Engineering</u>	3
BE/CE	469	Sp	Annual	<u>Sustainable Bioenergy Systems</u>	3
BE	481	Fa	Annual	<u>Water Resource Systems Analysis and Modeling</u>	3
BE	482	Sp	Annual	<u>Diffuse-Source Pollution Engineering</u>	3
BE	485	Fa	Annual	<u>Biosystems Design Techniques</u>	3
BE	815	Sp	Annual	<u>Experimentation and Instrumentation for Biosystems Engineering</u>	3
BE	820	Fa	Annual	<u>Research Methods in Biosystems Engineering</u>	1
BE	835	Fa	Annual	<u>Engineering Analysis and Optimization of Bio Systems</u>	3
BE	845	Sp	Annual	<u>Biosensor Principles and Applications</u>	3
BMB	515	Fa	Annual	<u>Medical Biochemistry and Molecular Biology</u>	2
BMB	526	Fa	Annual	<u>Molecular Biology and Medical Genetics</u>	2
BMB/PHM	816	Fa	Odd years	<u>Integrative Toxicology: Mechanisms, Pathology and Regulation</u>	3
BMB	856	Sp	Annual	<u>Plant Molecular and Omic Biology</u>	3
BMB/ PLB	864	Fa	Even years	<u>Plant Biochemistry</u>	3
CAS	825	Fa	Annual	<u>Mass Communication and Public Health</u>	3
CAS	826	Sp	Annual	<u>Health Communication for Diverse Populations</u>	3
CAS	892	Fa, Sp, Su	Even years	<u>Special Topics</u>	3
CE/ ENE	421	Fa	Annual	<u>Engineering Hydrology</u>	3
CE	448	Sp	Annual	<u>Transportation Planning</u>	3
CE/ ENE	481	Fa	Annual	<u>Environmental Chemistry: Equilibrium Concepts</u>	3
CE/ ENE	483	Fa	Annual	<u>Water and Wastewater Engineering</u>	3
CE/ ENE	485	Sp	Annual	<u>Landfill Design</u>	3
CE	487	Sp	Annual	<u>Microbiology for Environmental Science and Engineering</u>	3
CE	489	SP	Annual	<u>Air Pollution: Science and Engineering</u>	3

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CE	807	Sp	Even years	<u>Seismic Structural Design</u>	3
CE	812	Fa	Odd years	<u>Properties of Soils</u>	3
CE	813	Fa	Annual	<u>Soil Dynamics</u>	1
CE/ENE	821	Fa	Annual	<u>Groundwater Hydraulics</u>	3
CE/ ENE	822	Sp	Even	<u>Groundwater Modeling</u>	3
CE	823	Sp	Odd years	<u>Stochastic Groundwater Modeling</u>	3
CE/ ENE	829	Fa	Odd years	<u>Mixing and Transport in Surface Waters</u>	3
CJ/VM	821	Fall	Annual	<u>Food Protection and Defense</u>	3
CJ	845	Spring	Odd years	<u>Environmental Risk Perception and Decision-Making</u>	3
CJ/ ESP/ FW	846	Sp	Even years	<u>Corporate Environmental Crime and Risk</u>	3
CJ/ FW	847	Fa	Annual	<u>Global Risks, Conservation and Criminology</u>	3
CJ	858	Fa	Annual	<u>Gender, Justice and Environmental Change: Issues and Concepts</u>	3
CSS	424	Fa	Annual	<u>Sustainable Agriculture and Food Systems: Integration and Synthesis</u>	3
CSS	425	Sp	Annual	<u>Microbial Ecology</u>	3
CSS	431	Sp	Annual	<u>International Agricultural Systems</u>	3
CSS/ FOR/ HRT	441	Sp	Even years	<u>Plant Breeding &amp; Biotechnology</u>	3
CSS	442	Fa	Annual	<u>Agricultural Ecology</u>	3
CSS	445	Fa, Sp, Su	Annual	<u>Evolution</u>	3
CSS/ FOR/ HRT	451	Sp	Annual	<u>Biotechnology Applications for Plant Breeding and Genetics</u>	3
CSS	452	Fa, Sp, Su	Annual	<u>Watershed Concepts</u>	3
CSS	455	Fa	Annual	<u>Environmental Pollutants in the Soil and Water</u>	3
CSS/ BE/ FOR	467	Fa	Annual	<u>BioEnergy Feedstock Production</u>	3
CSS	470	Fa	Annual	<u>Soil Resources</u>	3
CSS	477	Fa	Even	<u>Pesticides in Pest Management</u>	3
CSS	478	Sp	Odd years	<u>Integrated Pest Management</u>	3
CSS	480	Fa	Annual	<u>Soil Fertility and Management</u>	3
CSS	486	Fa	Even	<u>Biotechnology in Agriculture: Applied and Ethical Issues</u>	3

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CSS	488	Sp	Annual	<u>Agricultural Cropping Systems: Integration and Problem Solving</u>	3
CSS	802	Sp	Even years	<u>Weed Biology</u>	2
CSS	805	Sp	Odd years	<u>Herbicide Action &amp; Metabolism</u>	2
CSS	820	Sp	Odd years	<u>Plant Reproductive Biology and Polyploidy</u>	1
CSS	821	Sp	Odd years	<u>Crop Evolution</u>	1
CSS	822	Sp	Odd years	<u>Historical Geography of Crop Plants</u>	1
CSS	840	Fa	Odd years	<u>Soil Physics</u>	3
CSS	842	Fa	Annual	<u>Population Genetics, Geneology and Genomics</u>	3
CSS	850	Sp	Annual	<u>Soil Chemistry</u>	3
CSS	853	Fa	Odd years	<u>Plant Mineral Nutrition</u>	3
CSS	856	Sp	Annual	<u>Plant Molecular and Omic Biology</u>	3
CSS	865	Sp	Even years	<u>Environmental Fate of Organic Contaminants in Soils</u>	3
CSS/ACR	892B	Fa, Sp	Annual	<u>Ecological Food and Farming Systems Seminar</u>	1
CSS/ FOR/ HRT	941	Sp	Even years	<u>Quantitative Genetics of Plant Breeding</u>	3
ENE	481	Fa	Annual	<u>Environmental Chemistry: Equilibrium Concepts</u>	3
ENE/ CE	483	Fa	Annual	<u>Water and Wastewater Engineering</u>	3
ENE/ CE	487	Sp	Annual	<u>Microbiology for Environmental Science and Engineering</u>	3
ENE/ CE	489	Sp	Annual	<u>Air Pollution: Science and Engineering</u>	3
ENE	801	Sp	Annual	<u>Dynamics of Environmental Systems</u>	3
ENE	802	Fa	Annual	<u>Physicochemical Processes in Environmental Engineering</u>	3
ENE	803	Sp	Odd years	<u>Water Quality and Public Health</u>	3
ENE	804	Fa	Annual	<u>Biological Processes in Environmental Egeineering</u>	3
ENE	805	Sp	Odd years	<u>Contaminated Site Remediation</u>	3
ENE	806	Sp	Annual	<u>Environmental Engineering Process Laboratory</u>	3

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ENE	811	Sp	Odd years	<u>Membrane Processes</u>	3
ENE	821	Fa	Annual	<u>Groundwater Hydraulics</u>	3
ENT	404	Fa	Annual	<u>Fundamentals of Entomology</u>	3
ENT	407	Sp	Annual	<u>Diseases and Insects of Forest and Shade Trees</u>	4
ENT	410	Fa , Sp	Annual	<u>Apiculture and Pollination</u>	3
ENT/FW/ZOL	422	Fa	Odd years	<u>Aquatic Entomology</u>	3
ENT/FW	469	Su	Odd years	<u>Biomonitoring of Streams and Rivers</u>	3
ENT	470	Sp	Odd years	<u>General Nematology</u>	3
ENT/ CSS/ FW/ HRT	477	Fa	Even years	<u>Pesticides in Pest Management</u>	3
ENT/ CSS/ FOR/FW/ HRT	478	Sp	Even years	<u>Integrated Pest Management</u>	3
ENT	479	Fa	Annual	<u>Organic Pest Management</u>	3
ENT	485	Sp	Annual	<u>Tropic Biology</u>	3
ENT	815	Fa	Odd years	<u>Insect Behavior</u>	3
ENT	818	Fa	Odd years	<u>Adult Insect Taxonomy</u>	3
ENT	838	Fa	Even years	<u>Immature Insect Taxonomy</u>	3
ENT	844	Fa	Even years	<u>Insect Ecology, Evolution and Conservation</u>	3
ENT	848	Sp	Odd years	<u>Biological Control of Insects and Weeds</u>	3
ENT	850	Sp	Odd years	<u>Insect Physiology</u>	3
ENT/ GEN	851	Fa	Odd years	<u>Molecular Entomology</u>	3
ESP	800	Fa	Annual	<u>Principles of Environmental Science and Policy</u>	3
ESP	801	Fa	Annual	<u>Physical, Chemical, and Biological Processes of the Environment</u>	3
ESP	802	Sp	Annual	<u>Human Systems and Environment</u>	3

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ESP	803	Fa	Annual	<u>Human and Ecological Health Assessment and Management</u>	3
ESP	804	Sp	Annual	<u>Environmental Applications and Analysis</u>	3
ESP	845	Sp	Odd years	<u>Environmental Risk Perception and Decision-Making</u>	3
ESP	846	Sp	Even years	<u>Corporate Environmental Crime and Risk</u>	3
ESP	847	Fa	annual	<u>Global Risks, Conservation and Criminology</u>	3
ESP	850	Fa	Annual	<u>Introduction to Environmental and Social Systems Modeling</u>	1
ESP	851	Sp	Annual	<u>Modeling Natural Resource Systems</u>	3
ESP	869	Sp	Annual	<u>Geosimulation</u>	3
ESP	883	Sp	Annual	<u>Multi-Equation Quantitative Methods</u>	3
ESP	890	Fa	Annual	<u>Modeling Environmental and Social Systems</u>	2
FOR/ CSS	404	Fa	Annual	<u>Forest Ecology</u>	3
FOR	405	Sp	Annual	<u>Forest Ecosystem Services</u>	3
FOR	406	Fa	Annual	<u>Applied Foresty Ecology: Silviculture</u>	3
FOR	412	Sp	Annual	<u>Wildland Fire</u>	2
FOR	414	Fa	Annual	<u>Renewable Wood Products</u>	3
FOR	419	Sp	Annual	<u>Applications of Geographic Information Systems to Natural Resources Management</u>	4
FOR	420	Summer	Ann	<u>Forestry Field Studies</u>	3
FOR	462	Fa	Annual	<u>Forest Resource Economics and Management</u>	4
FOR/ FW/ PRR/ RD	466	Sp	Annual	<u>Natural Resource Policy</u>	3
FOR	802	Fa	Annual	<u>Forest Science Research</u>	2
FOR	831	Fa	Annual	<u>Forest Biogeochemistry and Global Climate Change</u>	3
FOR	833	Fa	Annual	<u>Human Dimensions of Forest Carbon Management</u>	3
FOR	835	Sp	Annual	<u>Forest Carbon Policy, Economics and Finance</u>	3
FOR	837	Sp	Annual	<u>Measurement and Monitoring of Forest Carbon</u>	3
FOR/HRT	840	Fa	Annual	<u>Agroforestry Systems</u>	3
FOR/ ANS/ CSS/ FW/ GEN/HRT	842	Fa	Annual	<u>Population Genetics, Geneology and Genomics</u>	3
FW	410	Sp	Annual	<u>Upland Ecosystem Management</u>	3
FW	413	Fa	Annual	<u>Wildlife Research and Management Techniques</u>	3
FW	414	Fa	Annual	<u>Aquatic Ecosystem Management</u>	3
FW	416	Fa	Annual	<u>Marine Ecosystem Management</u>	3

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FW/ PLB	417	Fa	Annual	<u>Wetland Ecology and Management</u>	3
FW/ ACR/ BE/ FOR/ GEO	419	Sp	Annual	<u>Application of GIS to Natural Resources</u>	4
FW/ ZOL	420	Fa	Annual	<u>Stream Ecology</u>	3
ENT/FW/ZOL	422	Fa	Odd years	<u>Aquatic Entomology</u>	3
FW/LCS	423	Fa	Odd years	<u>Principles of Fish and Wildlife Disease</u>	3
FW	424	Fa	Annual	<u>Population Analysis and Management</u>	4
FW	431	Sp	Odd years	<u>Ecophysiology and Toxicology of Fishes</u>	3
FW	434	Sp	Annual	<u>Human Dimensions of Fisheries and Wildlife Management</u>	3
FW	435	Fa	Annual	<u>Integrated Communications for the Fisheries and Wildlife Professional</u>	3
FW/ LB	438	Sp	Odd years	<u>Philosophy of Ecology</u>	3
FW	439	Sp	Even years	<u>Conservation Ethics</u>	3
FW/ BE/ ZOL	443	Sp	Annual	<u>Restoration Ecology</u>	3
FW/ ZOL	444	Sp	Annual	<u>Conservation Biology</u>	3
FW/ MC	445	Sp	Even	<u>Biodiversity Conservation Policy and Practice</u>	3
FW/ MC	450	Sp	Annual	<u>International Environmental Law and Policy</u>	3
FW	454	Sp	Odd years	<u>Environmental Hydrology for Watershed Management</u>	3
FW/LCS	463	Sp	Even years	<u>Wildlife Disease Ecology</u>	3
FW/ ZOL	471	Sp	Annual	<u>Ichthyology</u>	4
FW/ ZOL	472	Sp	Annual	<u>Limnology</u>	3
FW/ ZOL	474	Fa	Annual	<u>Field and Lab Techniques for Aquatic Studies</u>	3
FW	479	Sp	Annual	<u>Fisheries Management</u>	3
FW	480-753	Fa, Sp, Su	Annual	<u>International Studies in Fisheries and Wildlife</u>	varies
FW/MC	481	Sp	Even	<u>Global Issues in Fisheries and Wildlife</u>	3
FW	810	Sp	Even years	<u>Human Dimensions Research in Fisheries and Wildlife</u>	3
FW	813	Fa	Odd years	<u>Democracy and Environment</u>	3

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FW/LCS	821	Fa	Even years	<u>Conservation Medicine</u>	3
FW	824	Sp	Even years	<u>Analysis of Wildlife Populations</u>	3
FW/ PLB/ZOL	828	Fa	Even years	<u>Conservation and Genetics</u>	3
FW	840	Fa	Even years	<u>Landscape Ecology</u>	3
FW	849	Fa	Even years	<u>Applied Bayesian Inference using Monte Carlo Methods for Quantitative Biologists</u>	3
FW	850	Sp	Even years	<u>Applied Multivariate Statistical Methods</u>	4
FW	854	Fa	Odd years	<u>Adaptive Management of Natural Resource Systems</u>	3
FW/ ANP/ ESA/ FOR/ GEO/SOC	858	Fa	Annual	<u>Gender, Justice, and Environmental Change: Issues and Concepts</u>	3
FW/LCS/ZOL	863	Sp	Even years	<u>Wildlife Disease Ecology</u>	3
FW	868	Fa	Odd years	<u>Water Policy and Management</u>	3
FW	877	Fa	Even years	<u>Fish Population Dynamics</u>	3
FW/ AEC/ FOR/ PRR	885	Fa	Even years	<u>Leadership in Natural Resources and Management</u>	3
GEO	401	Fa	Odd years	<u>Geography of Plants of North America</u>	3
GEO/ BE	402	Fa	Even years	<u>Agricultural Climatology</u>	3
GEO	403	Sp	Annual	<u>Dynamic Meteorology</u>	3
GEO	405	Sp	Annual	<u>Weather Analysis and Forecasting</u>	4
GEO	407	Sp	Odd years	<u>Regional Geomorphology of the United States</u>	3
GEO	408	Fa	Odd years	<u>Soil Geomorphology Field Study</u>	4
GEO	409	Fa	Odd years	<u>Global Climate Change and Variability</u>	3
GEO	410	Fa	Annual	<u>Geography of Food and Agriculture</u>	3



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GEO	411	Sp	Even	<u>Stream Systems and Landforms</u>	3
GEO	412	Sp	Annual	<u>Glacial Geology and the Record of Climate Change</u>	3
GEO/ UP	413	Sp	Annual	<u>Urban Geography</u>	3
GEO	414	Fa	Odd years	<u>Geography of Transportation</u>	3
GEO/ UP	415	Fa	Even years	<u>Location Theory and Land Use Analysis</u>	3
GEO	418	Fa	Odd years	<u>The Ghetto</u>	3
GEO	423	Fa	Annual	<u>Cartographic Design and Production</u>	4
GEO	424	Sp	Annual	<u>Advanced Remote Sensing</u>	4
GEO/ UP	425	Sp	Annual	<u>Problems in Geographic Information Science</u>	3
GEO	426	Sp	Annual	<u>Thematic Cartography</u>	4
GEO	428	Fa	Even	<u>Digital Terrain Analysis</u>	4
GEO	429	Sp	Annual	<u>Geoprocessing</u>	3
GEO	432	Fa	Annual	<u>Environmental Ethics</u>	3
GEO	435	Fa	Annual	<u>Geography of Health and Disease</u>	3
GEO	436	Sp	Odd years	<u>Spatial Analysis of Populations</u>	3
GEO	440	Sp	Even years	<u>Critical Geopolitics</u>	3
GEO	441	Sp	Odd years	<u>Cultural Geography</u>	3
GEO	453	Sp	Annual	<u>Metropolitan Environments: Urban Forms and Land Uses</u>	3
GEO	454	Sp	Annual	<u>Geography of Environment and Development</u>	3
GEO	459	Sp	Odd years	<u>Tourism in Regional Development</u>	3
GEO	802	Fa	Annual	<u>Geospatial Technology</u>	3
GEO	813	Sp	Annual	<u>Seminar in Urban and Economic Geography</u>	3
GEO	816	Sp	Annual	<u>The World System of Cities</u>	3
GEO	817	Fa	Even years	<u>China and Globalization</u>	3
GEO	820	Fa	Odd years	<u>GIS and Management</u>	3
GEO	827	Fa	Annual	<u>Digital Image Processing and Analysis</u>	4
GEO	865	Sp	Annual	<u>Advanced Quantitative Methods in Geography</u>	4
GEO/ STT	866	Fa	Annual	<u>Spatial Data Analysis</u>	4

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GEO	868	Fa	Annual	<u>Spatial Regression and Modeling</u>	3
GEO/ESP	869	Sp	Annual	<u>Geosimulation</u>	3
GEO	871	Fa	Annual	<u>Seminar in Physical Geography</u>	3
GEO	872	Fa	Annual	<u>Seminar in Human Geography</u>	3
GEO	873	Sp	Annual	<u>Seminar in Human - Environmental Geography</u>	3
GEO	874	Sp	Annual	<u>Seminar in Geographic Information Science</u>	3
GLG	411	Fa	Annual	<u>Hydrogeology</u>	3
GLG/ GEO	412	Sp	Annual	<u>Glacial Geology and the Record of Climate Change</u>	3
GLG	421	Sp	Annual	<u>Environmental Geochemistry</u>	4
GLG	431	Sp	Annual	<u>Sedimentology and Stratigraphy</u>	4
GLG/ ZOL	433	Fa	Even years	<u>Vertebrate Paleontology</u>	4
GLG/ ZOL	434	Fa	Odd years	<u>Evolutionary Paleobiology</u>	4
GLG	440	Sp	Annual	<u>Planetary Geology</u>	3
GLG	470	Sp	Odd years	<u>Principles of Modern Geophysics</u>	3
GLG	471	Sp	Annual	<u>Applied Geophysics</u>	4
GLG	481	Sp	Odd years	<u>Reservoirs and Aquifers</u>	3
GLG	821	Fa	Odd years	<u>Aqueous Geochemistry</u>	3
GLG	862	Fa	Even	<u>Igneous Petrology</u>	4
GLG	882	Sp	Even	<u>Basin Analysis</u>	3
HRT	401	Sp	Annual	<u>Advanced Horticultural Crop Physiology</u>	3
HRT	403	Fa	Annual	<u>Handling and Storage of Horticultural Crops</u>	3
HRT	415	Fa	Even years	<u>Natural Landscapes, Native Plants and Landscape Restoration</u>	3
HRT	417	Fa	Odd years	<u>Sustainable Sites and Environmental Landscape Practices</u>	3
HRT	430	Fa	Annual	<u>Exploring Wines and Vines</u>	3
HRT	441	Sp	Even years	<u>Plant Breeding and Biotechnology</u>	3
HRT	451	Sp	Annual	<u>Biotechnology Applications for Plant Breeding and Genetics</u>	3
HRT	460	Fa	Even years	<u>Green Roofs and Walls</u>	1

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HRT/ CSS/ FOR/ PHL	486	Fa	Even years	<u>Biotechnology in Agriculture: Applications and Ethical Issues</u>	3
HRT/ CSS/ FOR	819	Fa	Even years	<u>Advanced Plant Breeding</u>	3
HRT/ CSS/ FOR/ PLB/ PLP	820	Sp	Odd years	<u>Plant Reproductive Biology and Polyploidy</u>	1
HRT/ CSS/ FOR/ PLB/ PLP	821	Sp	Odd years	<u>Crop Evolution</u>	1
HRT/ CSS/ FOR/ PLB/ PLP	822	Sp	Odd years	<u>Historical Geography of Crop Plants</u>	1
HRT	853	Fa	Odd years	<u>Plant Mineral Nutrition</u>	3
HRT/ CSS/ FOR	892	Fa, Sp, Su	Annual	<u>Plant Breeding &amp; Genetics Seminar</u>	1
HST	410	Sp	Annual	<u>History of North American Urbanization</u>	3
JRN	472	Fa, Sp	Annual	<u>Special Topics in Environmental Reporting</u>	varies
JRN	473	Fa, Sp	Annual	<u>Special Topics in Environmental, Health and Science Journalism</u>	varies
JRN	872	Fa, Sp	Annual	<u>Environment, Science and Health Reporting Topics</u>	3
JRN	873	Fa, Sp	Annual	<u>Environment, Science and Health Journalism Seminars</u>	3
LA	446	Fa	Annual	<u>Regional Environmental Design</u>	3
LA/ HED/ HRT/ PRR	816	Fa	Annual	<u>Environmental Design Theory</u>	3
LA/ HED/ HRT/ PRR	817	Fa, Sp	Annual	<u>Environmental Design Studio</u>	3
LA/ HED/ HRT/ PRR	883	Fa, Sp	Annual	<u>Environmental Design Seminar</u>	3
MMG/ CSS	425	Sp	Annual	<u>Microbial Ecology</u>	3
MMG	431	Fa	Annual	<u>Microbial Genetics</u>	3
MMG	433	Sp	Annual	<u>Microbial Genomics</u>	3
MMG	445	Fa, Su	Annual	<u>Microbial Biotechnology</u>	3
MMG	801	Fa	Annual	<u>Integrative Microbial Biology</u>	4
MMG	803	Fa, Sp	Annual	<u>Topics in Integrative Microbial Biology</u>	2
MMG	833	Fa	Annual	<u>Microbial Genetics</u>	3
NSC/ AL	840	Sp	Annual	<u>Writing in the Sciences</u>	2
PHL	442	Fa	Odd years	<u>Ethics and Animals</u>	3
PHL	452	Fa	Annual	<u>Ethics and Development</u>	3

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PHL	453	Sp	Annual	<u>Ethical Issues in Global Public Health</u>	3
PHL	480	Fa	Annual	<u>Philosophy of Science</u>	4
PHL	484	Sp	Annual	<u>Philosophy of Biological Science</u>	3
PHL	485	Sp	Annual	<u>Philosophy of Social Science</u>	3
PHL	880	Sp	Annual	<u>Seminar in Philosophy of Science</u>	varies
PHM/ ANS/BMB/PDI	816	Fa	Odd years	<u>Integrative Toxicology: Mechanisms, Pathology and Regulation</u>	3
PKG	875	Fa	Odd years	<u>Stability &amp; Recyclability of Packaging Materials</u>	3
PLB	400	Sp	Odd years	<u>Introduction to Bioinformatics</u>	3
PLB/ PLP	402	Fa	Odd years	<u>Biology of Fungi</u>	3
PLB	415	Sp	Annual	<u>Plant Physiology</u>	3
PLB	418	Sp, Su	Annual	<u>Plant Systematics</u>	3
PLB/ ZOL	424	Fa	Even years	<u>Algal Biology</u>	4
PLB	434	Sp	Odd years	<u>Plant Structure and Function</u>	4
PLB	441	Fa	Annual	<u>Plant Ecology</u>	3
PLB	800	Fa	Annual	<u>Seminar in Plant Biology</u>	1
PLB	803	Sp	Even years	<u>Integrative Topics in Plant Biology</u>	varies
PLB	805	Fa, Su, Sp	Annual	<u>Special Problems in Physiology and Biochemistry</u>	varies
PLB	806	Fa, Su, Sp	Annual	<u>Special Problems in Genetics and Molecular Biology</u>	varies
PLB	809	Fa, Su, Sp	Annual	<u>Special Problems in Ecology, Systematics, and Evolution</u>	varies
PLB	812	Fa	Annual	<u>Principles and Applications of Plant Genomics</u>	3
PLB/ ZOL	849	Sp	Annual	<u>Evolutionary Biology</u>	3
PLB/ BMB/ CSS	856	Sp	Annual	<u>Plant Molecular and Omic Biology</u>	3
PLB/ HRT	863	Sp	Odd years	<u>Environmental Plant Physiology</u>	3
PLB/ HRT	865	Fa	Annual	<u>Plant Growth and Development</u>	3
PLP	405	Sp	Annual	<u>Plant Pathology</u>	3
PLP/ ENT/ PLB	407	Sp	Annual	<u>Diseases and Insects of Forest and Shade Trees</u>	4
PLP	812	Sp	Odd years	<u>Epidemiology of Plant Diseases</u>	3

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PLP/ PLB	847	Sp	Even years	<u>Advanced Mycology</u>	4
PLP	881	Sp	Odd years	<u>Molecular and Biochemical Plant Pathology</u>	3
PLP	882	Fa	Even	<u>Soilborne Pathogens and Diseases</u>	3
PLP/ PLB	884	Fa	Even years	<u>Prokaryotic Diseases of Plants</u>	3
PLP	894	Sp	Annual	<u>Seminar in Plant Pathology</u>	1
SOC	412	Sp	Annual	<u>Animals, People and Nature</u>	3
SOC	427	Sp	Odd years	<u>Environmental Toxicology and Society</u>	3
SOC	451	Fa	Annual	<u>Dynamics of Population</u>	3
SOC	452	Fa	Annual	<u>Environment and Society</u>	3
SOC	463	Fa	Even years	<u>Food Fight: Politics of Food</u>	3
SOC	475	Fa, Sp	Annual	<u>Health and Society</u>	3
SOC	801	Fa	Annual	<u>Global Transformation</u>	3
SOC	840	Sp	Annual	<u>Animals and Social Transformations</u>	3
SOC	851	Sp	Even years	<u>Demography and Public Health</u>	3
SOC	861	Fa	Even years	<u>Agricultural Structure and Change</u>	3
SOC	865	Fa	Odd years	<u>Environmental Sociology</u>	3
SOC	866	Sp	Annual	<u>Sociology of Risk</u>	3
SOC	868	Fa	Even years	<u>Science and Technology</u>	3
SOC/ FW/RD	869	Fa	Even years	<u>Community and Conservation</u>	3
SOC	950	Sp	Even years	<u>Topics in Rural and Environmental Studies</u>	3
UP	414	Fa	Odd years	<u>Geography of Transportation</u>	3
UP	433	Fa	Annual	<u>Introduction to Environmental Planning</u>	4
UP	455	Sp	Even years	<u>Urban Sustainability and Climate Change</u>	3

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UP	458	Sp	Even years	<u>Housing and Real Estate Development</u>	3
UP/ GEO	478	Sp	Annual	<u>Urban Transportation Planning</u>	3
UP	488	Fa	Even years	<u>The Sustainable and Climate Resilient City</u>	3
UP	801	Fa, Sum	Annual	<u>Concepts and Issues in Planning and Development</u>	3
UP	823	Fa	Annual	<u>Urban Land Management and the Environment</u>	3
UP	844	Sp	Annual	<u>Planning Theory and Ethics</u>	3
UP/ GEO	854	Sp	Annual	<u>Economics of Planning &amp; Development</u>	3
UP	855	Sp	Odd years	<u>Urban Sustainability and Climate Change</u>	3
UP	865	Sp	Annual	<u>Planning and Development Law</u>	3
UP	888	Fa	Odd years	<u>The Sustainable and Climate Resilient City</u>	3
ZOL	415	Fa	Annual	<u>Ecological Aspects of Animal Behavior</u>	3
ZOL	425	Sp	Annual	<u>Cells and Development</u>	4
ZOL/ PLB	440	Su	Annual	<u>Field Ecology and Evolution (Kellogg Biol Station)</u>	4
ZOL/ PLB/ CSS	445	Fa, Sp, Su	Annual	<u>Evolution</u>	3
ZOL/ ESA	446	Fa	Annual	<u>Environmental Issues &amp; Public Policy</u>	3
ZOL/ PSL	483	Sp	Annual	<u>Environmental Physiology</u>	4
ZOL/ ENT/ PLB	485	Sp, Su	Annual	<u>Tropical Biology: An Ecological Approach</u>	3
ZOL	822	Sp	Odd years	<u>Topics in Ethology &amp; Behavioral Ecology</u>	3
ZOL/ GLG	824	Sp	Even years	<u>Stable Isotope Biogeochemistry</u>	2
ZOL	845	Sp	Annual	<u>Multi-disciplinary Research Methods for the Study of Evolution</u>	3
ZOL	851	Fa	Annual	<u>Statistical Methods for Ecology and Evolution</u>	3
ZOL/ MMG/ PLB	855	Fa	Odd years	<u>Molecular Evolution: Principles &amp; Techniques</u>	3
ZOL/ CSS/ PLB	891	Su	Annual	<u>Current Topics in Ecology and Evolution</u>	varies
ZOL/ PLB	896	Fa	Annual	<u>Population &amp; Community Ecology</u>	4
ZOL/ FW/ PLB	897	Sp	Annual	<u>Ecosystem Ecology and Global Change</u>	4

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<b>Key:</b>				
ACR	Community, Agriculture, Recreation, and Resource Studies			
ADV	Advertising			
AEC	Agriculture, Food, and Resource Economics			
ANP	Anthropology			
ANS	Animal Science			
BE	Biosystems Engineering			
BMB	Biochemistry and Molecular Biology			
CAS	Communication Arts and Sciences			
CE	Civil Engineering			
CSS	Crop and Soil Sciences			
ENE	Environmental Engineering			
ENT	Entomology			
ESA	Environmental Studies and Applications			
ESP	Program			
FOR	Forestry			
FW	Fisheries and Wildlife			
GEO	Geography			
GLG	Geological Sciences			
HED	Human Environment Design			
HRT	Horticulture			
JRN	Journalism			
LA	Landscape Architecture			
MC	Madison College			
MMG	Microbiology and Molecular Genetics			
MSE	Material Sciences and Engineering			

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NSC	Natural Sciences		
PHL	Philosophy		
PHM	Pharmacology and Toxicology		
PKG	Packaging		
PLB	Plant Biology		
PLP	Plant Pathology		
PRR	Community, Agriculture, Recreation, and Resource Studies		
SME	Science and Math Education		
SOC	Sociology		
UP	Urban Planning		
ZOL	Zoology		