

Upper-Level Biology Courses - Offered Fall 2017

*Courses may be listed under multiple departments if they are crosslisted, but not all crosslistings may be accounted for - the "Crosslistings" column will list ALL departments the course appears under in Course Guide or Class Search. Is there a course not on the list you think should count (or is on our website and is offered but not on the list)? Contact the academic advisor!

Subject

Cross-listed?

Anatomy

619: Microscopy of Life (3 cr.)	ANATOMY, BME, PHMCO-M, CHEM, MED PHYS, PHYSICS, RADIOL
675: Stem Cell Seminar (1 cr.)	

Agronomy

302: Forage Management and Utilization (3 cr.)	
339: Plant Biotechnology - Principles and Technology I (4 cr.)	AGRONOMY, BOTANY, HORT
370: Grassland Ecology (3 cr.)	AGRONOMY, BOTANY, SOIL SCI

Animal Sciences

370: Livestock Production and Health in Agricultural Development (3 cr.)	AN SCI, DY SCI
414: Ruminant Nutrition (2 cr.)	AN SCI, DY SCI
415: Application of Monogastric Nutrition Principles (2 cr.)	
431: Beef Cattle Production (3 cr.)	
434: Reproductive Physiology (3 cr.)	AN SCI, DY SCI
515: Commercial Meat Processing (2 cr.)	AN SCI, FOOD SCI

Biochemistry*

510: Biochemical Principles of Human and Animal Nutrition (3 cr.)	BIOCHEM, NUTR SCI
601: Protein and Enzyme Structure and Function (2 cr.)	
612: Prokaryotic Molecular Biology (3 cr.)	BIOCHEM, GENETICS, MICROBIO
630: Cellular Signal Transduction Mechanisms (3 cr.)	BIOCHEM, PHMCO-M, ZOOLOGY
645: Molecular Control of Metabolism and Metabolic Disease (3 cr.)	BIOCHEM, NUTR SCI

*Courses only count for upper-level biology once "biochemistry" requirements are fulfilled (Biochem 507+508; or Biochem 501 + 500/600 level elective) are fulfilled (Biochem 507+508; or Biochem 501 + 500/600 level elective)

Biological Systems Engineering

367: Renewable Energy Systems (3 cr.)	BSE, ENVIR ST
460: Biorefining – Energy and Products from Renewable Resources (3 cr.)	
461: Food and Bioprocessing Operations (3 cr.)	

Biostatistics and Medical Informatics

541: Introduction to Biostatistics (3 cr.)	B M I, STAT
576: Introduction to Bioinformatics (3 cr.)	B M I, COMP SCI

Botany

300: Plant Anatomy (4 cr.)	
330: Algae (3 cr.)	
339: Plant Biotechnology – Principles and Techniques I (4 cr.)	AGRONOMY, BOTANY, HORT
370: Grassland Ecology (3 cr.)	AGRONOMY, BOTANY, SOIL SCI
400: Plant Systematics (4 cr.)	BOTANY, F&W ECOL, ZOOLOGY
402: Dendrology (2 cr.)	BOTANY, F&W ECOL
410: Evolutionary Biology (3 cr.)	ANTHRO, BOTANY, ZOOLOGY
455: The Vegetation of Wisconsin (4 cr.)	BIOCHEM, BOTANY
460: General Ecology (3 cr.)	BOTANY, F&W ECOL, ZOOLOGY
474: Ethnobotany (3-4 cr.)	AMER IND, ANTHRO, BOTANY
626: Mineral Nutrition of Plants (3 cr.)	BOTANY, HORT, SOIL SCI
651: Conservation Biology (3 cr.)	BOTANY, ENVIR ST, F&W ECOL, ZOOLOGY

Dairy Science

305: Lactation Physiology (3 cr.)	
370: Livestock Production and Health in Agricultural Development (3 cr.)	AN SCI, DY SCI
414: Ruminant Nutrition (2 cr.)	AN SCI, DY SCI
434: Reproductive Physiology (3 cr.)	AN SCI, DY SCI

Entomology

302: Introduction to Entomology (4 cr.)	ENTOM, ZOOLOGY
331: Taxonomy of Mature Insects (4 cr.)	
351: Principles of Economic Entomology (3 cr.)	

Environmental Studies

502: Air Pollution and Human Health (3 cr.)	ENVIR ST, POP HLTH
651: Conservation Biology (3 cr.)	BOTANY, ENVIR ST, F&W ECOL, ZOOLOGY

Food Science

324: Food Microbiology Lab (2 cr.)	FOOD SCI, MICROBIO
325: Food Microbiology (3 cr.)	FOOD SCI, MICROBIO
410: Food Chemistry (3 cr.)	
440: Principles of Food Engineering (3 cr.)	

Forest and Wildlife Ecology

309: Diseases of Landscape Trees and Shrubs (3 cr.)	F&W ECOL, HORT, LAND ARC, PL PATH
318: Principles of Wildlife Ecology (3 cr.)	
360: Extinction of Species (3 cr.)	ENVIR ST, F&W ECOL, ZOOLOGY
401: Physiological Animal Ecology (3 cr.)	
402: Dendrology (2 cr.)	BOTANY, F&W ECOL
415: Tree Physiology (3 cr.)	
455: The Vegetation of Wisconsin (4 cr.)	BOTANY, F&W ECOL
460: General Ecology (4 cr.)	BOTANY, F&W ECOL, ZOOLOGY
548: Diseases of Wildlife (3 cr.)	F&W ECOL, SURG SCI
550: Forest Ecology (3 cr.)	
561: Wildlife Management Techniques (3 cr.)	
590: Integrated Resources Management (3 cr.)	
651: Conservation Biology (3 cr.)	BOTANY, ENVIR ST, F&W ECOL, ZOOLOGY

Genetics

466: General Genetics (3 cr.)	BOTANY, GENETICS, ZOOLOGY
545: Genetics Lab (2 cr.)	
565: Human Genetics (3 cr.)	GENETICS, MD GENET
610: Quantitative Genetics (3 cr.)	AN SCI, GENETICS
612: Prokaryotic Molecular Biology (3 cr.)	BIOCHEM, GENETICS, MICROBIO

Horticulture

326: Plant Nutrition Management (3 cr.)	AGRONOMY, HORT, SOIL SCI
338: Plant Breeding and Biotechnology (3 cr.)	AGRONOMY, HORT
501: Principles of Plant Breeding (3 cr.)	AGRONOMY, HORT
550: Molecular Approaches for Potential Crop Improvement (3 cr.)	GENETICS, HORT

Human Oncology

501: Radiological Physics and Dosimetry (3 cr.)	B M E, H ONCOL, MED PHYS, PHYSICS
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Medical Genetics

565: Human Genetics (3 cr.)	GENETICS, MD GENET
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Medical Microbiology and Immunology

301: Pathogenic Bacteriology (2 cr.)	
341: Immunology (3 cr.)	
528: Immunology (2 cr.)	M M & I, MICROBIO, PATH-BIO
554: Emerging Infectious Diseases and Bioterrorism (2 cr.)	

Microbiology

303: Biology of Microorganisms (3 cr.)	
304: Biology of Microorganisms Lab (2 cr.)	
324: Food Microbiology Lab (2 cr.)	FOOD SCI, MICROBIO
325: Food Microbiology (3 cr.)	FOOD SCI, MICROBIO
450: Diversity, Ecology, and Evolution of Microorganisms (2 cr.)	
470: Microbial Genetics & Molecular Machines (3 cr.)	
526: Physiology of Microorganisms (3 cr.)	
527: Physiology of Microorganisms Lab (2 cr.)	
528: Immunology (3 cr.)	M M & I, MICROBIO, PATH-BIO
612: Prokaryotic Molecular Biology (3 cr.)	BIOCHEM, GENETICS, MICROBIO
622: Plant-Bacterial Interactions (3 cr.)	MICROBIO, PL PATH
640: General Virology-Multiplication of Viruses (3 cr.)	MICROBIO, ONCOLOGY, PL PATH

Nutritional Science

332: Human Nutritional Needs (3 cr.)	
510: Biochemical Principles of Human and Animal Nutrition (3 cr.)	BIOCHEM, NUTR SCI

Oncology

401: Introduction to Experimental Oncology (2 cr.)	
625: Toxicology I (3 cr.)	MEDICINE, M&ENVTOX, ONCOLOGY, PATH, PHM SCI, PHM COL-M, POP HLTH
640: General Virology – Multiplication of Viruses (3 cr.)	MICROBIO, ONCOLOGY, PL PATH

Pharmaceutical Sciences

401: Survey of Pharmacology (3 cr.)	
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Physiology

335: Physiology (5 cr.)	
610: Cellular & Molecular Neuroscience (4 cr.)	NTP, PHMCOL-M, PHYSIOL

Plant Pathology

300: Introduction to Plant Pathology (4 cr.)	
309: Diseases of Landscape Trees and Shrubs (3 cr.)	F&W ECOL, HORT, LAND ARC, PL PATH
323: Soil Biology (3 cr.)	PL PATH, SOIL SCI
622: Plant-Bacterial Interactions (3 cr.)	MICROBIO, PL PATH
640: General Virology (3 cr.)	MICROBIO, ONCOLOGY, PL PATH

Soil Science

323: Soil Biology (3 cr.)	PL PATH, SOIL SCI
370: Grassland Ecology (3 cr.)	AGRONOMY, BOTANY, SOIL SCI
626: Mineral Nutrition of Plants (3 cr.)	BOTANY, HORT, SOIL SCI

Zoology

302: Introduction to Entomology (4 cr.)	ENTOM, ZOOLOGY
315: Limnology – Conservation of Aquatic Resources (2 cr.)	ENVIR ST, ZOOLOGY
316: Limnology – Conservation of Aquatic Resources Lab (3 cr.)	
360: Extinction of Species (3 cr.)	ENVIR ST, F&W ECOL, ZOOLOGY
410: Evolutionary Biology (3 cr.)	ANTHRO, BOTANY, ZOOLOGY
430: Comparative Anatomy of the Vertebrates (5 cr.)	
460: General Ecology (4 cr.)	BOTANY, F&W ECOL, ZOOLOGY
470: Introduction to Animal Development (3 cr.)	
523: Neurobiology (3 cr.)	PSYCH, ZOOLOGY
555: Lab-Developmental Biology (3 cr.)	
570: Cell Biology (3 cr.)	
630: Cellular Signal Transduction Mechanisms (3 cr.)	BIOCHEM, PHMCOL-M, ZOOLOGY
651: Conservation Biology (3 cr.)	BOTANY, ENVIR ST, F&W ECOL, ZOOLOGY