Approved Advanced Biotechnology Classes

Note: Some classes may not be offered during the semester indicated Check the schedule of classes (http://schedule.msu.edu/) for the most up-to-date listing of course offerings.

* - Indicates courses that may be used if not already being used to fulfill another program requirement

Course Num. (Cr-Sem)	Course Name	Course Num. (Cr-Sem)	Course Name
ANS 314 (4-F, S)	Genetic Improvement of Domestic Animals	LB 348 (3 cr S)	Research Experiences in Biology: Exploring Genomes and Person Genomics Data (Restricted to Lyman Briggs Students)
ANS 407 (3-F)	Food and Animal Toxicology	MMG 301 (3-F,S,Sum.)	Introductory Microbiology
ANS 425 (3-S)	Animal Biotechnology	MMG 302 (1-F,S,Sum.)	Introductory Microbiology Laboratory
*BMB 472 (3-F)	*Advanced Molecular Biology Lab	*MMG 408 (3-F)	*Advanced Microbiology Laboratory (W)
BMB 490 (1-3-F,S,Sum.) OR BMB 499 (1-3-F,S,Sum.)	Independent Research (up to 3 credits for either) Senior Thesis (research component)	MMG 421 (3-F)	Prokaryotic Cell Physiology
BE 429 (3-S)	Fundamentals of Food Engineering	MMG 431 (3-F)	Microbial Genetics
BLD 446 (1-S)	Immunobiology of Neoplasia	MMG 433 (3-S)	Microbial Genomics
BLD 447 (1-S)	Immunomodulation and Immunotherapy	MMG 445 (3-F)	Microbial Biotechnology (W)
BLD 439 (1-S)	Histocompatibility and Immunogenetics	MMG 451 (3-F)	Immunology
CEM 482 (3-F)	Science and Technology of Wine Production (contact CEM dept. for an override)	NEU 420 (3-S)	Neurobiology of Disease
CEM 485 (3-S even years)	Modern Nuclear Chemistry	NEU 440 (3-S even yrs.)	Synaptic Transmission
CHE 201 (3-F,S)	Material and Energy Balances	NSC 491(1-F)	Job Search Strategies For Science Majors (Preference given to CNS Sophomore, Junior, and Senior students)
CHE 321 (4-S)	Thermodynamics for Chemical Engineering	PHM 321 (3-S)	Common Drugs
CSE 231 (4-F,S,Sum)	Introduction to Programming I	PHM 351 (2-S)	Fundamentals of Drug Safety
*CSS 350 (3-S)	*Introduction to Plant Genetics	PHM 422 (2-S)	Fundamentals of Neuropharmacology
CSS 441 (3-S even yrs.)	Plant Breeding and Biotechnology	PHM 440 (1-Sum.)	Principles of Drug Action
*CSS 451 (3-S)	*Biotechnology Applications for Plant Breeding and Genetics	PHM 450 (3-F,S,Sum.)	Introduction to Chemical Toxicology
CSS 467 (3-F)	BioEnergy Feedstock Production	PHM 454 (3-F, S)	Leadership and Teams for Scientists and Health Professionals
ENT 461 (3-Sum.)	Field Ecology of Arthropod Disease Vectors (Available at Kellogg Biological Station – enroll through KBS)	PHM 483 (3-F,S)	Antimicrobial Chemotherapy
FSC 325 (3-S)	Food Processing: Unit Operations	PLB/MMG/BMB 400 (3-F even years)	Introduction to Bioinformatics
FSC 440 (3-S)	Food Microbiology	PLB/PLP 402 (4-F odd years)	Biology of Fungi
FSC 441 (2-S)	Food Microbiology Laboratory	PLB 415 (3-S)	Plant Physiology
HRT 486 (3-F even yrs.)	Biotechnology in Agriculture: Applications and Ethical Issues	PLB 416L (2-S)	Plant Physiology Laboratory
IBIO 316 (3-S)	General Parasitology	PLP 405 (3-S)	Plant Pathology
*IBIO 341 (4-F,S,Sum.)	*Fundamental Genetics	STT 231 (3-F,S,Sum.)	Statistics for Scientists
IBIO 425 (4-S)	Cells and Development (W)	STT 464 (3-F)	Statistics for Biologists
IBIO 450 (3-S)	Cancer Biology (W)		