

Biogeochemistry Dual Title Major (revised Jan 21, 2014)

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>Biogeochemistry</b>	<b>Biochemistry and Microbiology</b>	<b>Soil Science and Materials Science and Engineering</b>	<b>Water Reactions &amp; Transport</b>	<b>Plant Science and Plant Systems</b>	<b>Research Tools</b>
<b>Topics in Biogeochemistry (Overview course) GEOSC 597E, 2 credits, is offered every other fall semester and counts as 2 credits in any of the six categories</b>					
Organic Geochemistry GEOSC 419 3 credits	General Biochemistry BMB 401 or 402 2 or 3 credits	Soil Properties and Functions SOILS 502 3 credits	Hydropedology SOILS 405 3 credits	Biometeorology METEO 563 3 credits	Molecular Biology Lab, IBIOS 593 3 credits
Mathematical Modeling in Geosciences, GEOSC 561 4 credits	Biological Chemistry CHEM 476 3 credits	Surface Chemistry CHEM 448, 3 credits or Surface Characterization (CHE/MATSE 597A) 3cr	Biological Treatment Processes CE 572 3 credits	Environmental Biophysics, ERM 497A 3credits	Biological Applications of Mass Spectrometry, BMMB 598I ? credits
Marine Biogeochemistry GEOSC 411 3 credits	Lab in Molecular Genetics BMB 445W 3 credits	Nature of Soil Minerals SOILS 519 3 credits	Environmental Transport Processes, CE 576 3 credits	Ecology of Plant Roots HORT 517 3 credits	Techniques in Environ. Geochemistry, GEOSC 413 3 credits
Evolution of the Biosphere, GEOSC 502 4 credits	Environmental Microbiology for Engineers, CE 479 3 credits	Soil Genesis and Classification SOILS 416 3 credits	Watershed Measurements and Techniques, FOR 470 3 credits	Plant Nutrition HORT 402W 3 credits	Introduction to Isotopes GEOSC 416 3 credits
Ecosystem Nutrient Cycles SOILS 571 3 credits	Microbial Physiology MICRB 401 3 credits	Remed. of Contaminated Soils SOILS 420 3 credits	Soil Physics SOILS 507 3-4 credits	Techniques and Concepts in Plant Ecophysiology HORT 514 2 credits	Stable Isotopes GEOSC 518 3 credits
Models in Ag and Natural Systems, AGRO597B 3 credits	Microbial Diversity MICRB 413 2 credits	Soil Genesis SOILS 516 1 credits	Geochemistry of Aqueous Systems, GEOSC 522 3 credits	Plant Resource Acquisition and Use, PLBIO 512 4 credits	Analytical Separations, CHEM 525 3 credits
Global Carbon Cycle METEO 597A 3 credits	Env. Soil Microbiology SOILS 512 3 credits	Soil Environmental Chem SOILS 513 3 credits	Water Quality Chemistry CE 475 3 credits		Spectroscopic Analysis CHEM 526 3 credits
Biophysical Chemistry CHEM 540 3 credits	Geomicrobiology GEOSC 409W 3 credits	Soil Morphology Practicum SOILS 403 2 credits	Principles of Geochemistry GEOSC 533 3 credits		Molecular Spectroscopy CHEM 567 3 credits
Environmental Organic Chemistry, CE 573 3 credits	Bioinorganic Chemistry BMMB 538 3 credits	Polymer Chemistry (colisted with Chem) MATSE 543 or CHEM 543, 3 credits	Environmental Aquatic Chem CE 570 3 credits		Lab of General and Applied Micro, MICRB 421W 3 credits
Kinetics of Geochemical Processes, GEOSC 560 3 credits	Biomolecular Structure BMMB 531 2 credits	Functional Polymeric Materials MATSE 575, 3 credits	Vadose Zone Transport SOILS 597 3 credits		Multivariate statistics with R GEOSC 597G (3 credits)
	Microbial Biology I BMMB 521 4 credits				