

CORE remaining

EXPECTED GRADUATION DATE

Franklin College Requirements

Regents/ University of Georgia Requirements

Language 1, 2, 3	Biological Science	US/Georgia Constitution Requirement	Experiential
FA/PHY/REL 1	Physical Science	US/Georgia History Requirement	FYOS
FA/PHY/REL 2	Literature	Environmental Literacy Requirement	120 hours
Social Science 1	History	Cultural Diversity	39 hour rule
Social Science 2	Multicultural	PEDB	Residency Requirement (45/60)

MAJOR REQUIREMENTS: A baccalaureate degree program must require at least 21 semester hours of upper division courses in the major field and at least 39 semester hours of upper division work overall. Students in the Franklin College must earn a grade of "C" (2.0) or better in major courses.

Required Courses (34-36 hours) 10 courses
A minimum grade of "C" (2.0) is required.

- BIOL 1108 (3) or BIOL 2108H (3) and BIOL 1108L (1)
- BCMB 3100 or BCMB 3100H - (4 hrs) - Intro Biochemistry and Molecular Biology **or** BCMB 4020 - (3 hrs) - Biochemistry and Molecular Biology II
- GENE 3200 - (4 hrs) - Genetics or GENE 3200H (4 hrs) - Honors Genetics
- CBIO 3400 or CBIO 3400H - (4 hrs) - Cell Biology **or** CBIO 3600 - (4 hrs) - Developmental Biology or PBIO 3600 - (4 hrs) Plant Cell & Developmental Biology
- ECOL 3500 and 3500L (3+1 hrs) **or** ECOL 3505H/L (4 hrs) Ecology **or** GENE 3000 or GENE 3000H (4 hrs) Evolutionary Biology or PBIO 3650 (4 hrs) Plant Ecology

Laboratory A minimum grade of "C" (2.0) is required.

Laboratory _____

Choose one course from the following: (3-5 hours)

- BCMB 4030/L - (4 hrs) - Bioprocess Technology
- BIOL 3110L - (4 hrs) - Basic Skills in the Laboratory
- BIOL 3710L - (3 hrs) - Animal Behavior Laboratory
- BIOL 3720L - (3 hrs) - Field Animal Behavior
- BIOL 4960R - (4 hrs) - Undergrad Research
- BIOL(CBIO) 5050/L - (3 hrs) - Electron Microscopy Lab
- BTEC(BCMB)PBIO 4000L (4 hrs) Methods Biotechnology
- CBIO 3410L - (4 hrs) - Lab in Cellular & Devel Biol
- ECOL(BIOL) 3510 - (3-4 hrs) - Ecology Laboratory
- ECOL 4070-4070L (4 hrs) Invertebrate Zoology
- ECOL(MARS) 4225/L (4 hrs) - Methods in Marine Ecology
- ECOL(MARS)4330/L (4 hrs) Tropical Marine Invertebrates
- ECOL 4130L - (3 hrs) - Ecological Methodology
- GENE 3210L - (3 hrs) - Experimental Genetics
- GENE 4210L - (4 hrs) - Molecular Genetics Lab
- GENE 4220L - (3 hrs) - Bioinformatics and Modeling Lab
- GENE 4230L - (3 hrs) - Evolutionary Biology Lab
- GENE 4240L - (3 hrs) - Experimental Microbiome Genetics
- MARS (PBIO) 4160/L - (4 hrs) - Life and Death in the Salt Marsh
- MARS 4500 - (3-5 hrs) - Field Study Oceanography & Marine Methods
- MIBO 3510L - (3 hrs) - Introductory Microbiology Laboratory
- MIBO 4600/L - (4 hrs) - Experimental Microbiology Laboratory
- PBIO 3660L - (4 hrs) - Plant Biology Intensive Lab

Organismal Biology A minimum grade of "C" (2.0) is required.

Organismal _____

Choose one course from the following: (3-4 hours)

- BIOL(FANR) 3460 or 3460H - Natural History South Pacific
- BIOL(WILD)3700 - (3 hrs) - Animal Behavior
- CBIO 3000/L - (4 hrs) - Comparative Vertebrate Anatomy
- CBIO 3010/L - (4 hrs) - Gross Anatomy
- CBIO (PBIO) 4600/L - (4 hrs) - Biology of Protists
- ECOL 3220 - (3 hrs) - Biology & Conservation Marine Mammals
- ECOL 4050/L - (4 hrs) - Ichthyology
- ECOL 4070/L - (4 hrs) - Invertebrate Zoology
- ECOL(MARS)4330/L (4 hrs) Tropical Marine Invertebrates
- ENTO 3140/L - (4 hrs) - Insect Natural History
- ENTO 3645 - (3 hrs) - Medical Entomology
- ENTO 3650/L - (4 hrs) - Medical Entomology
- ENTO 4000/L - (4 hrs) - General Entomology
- ENTO 4450 - (3 hrs) - Insect Behavior
- MARS 3450 - (3 hrs) - Marine Biology
- MIBO 3500 - (3 hrs) - Introductory Microbiology
- MIBO 3510L - (3 hrs) - Intro Microbiology Laboratory
- MIBO 4110 - (3 hrs) - Plant-Microbe Interactions (Griffin)
- MIBO (POPH)(IDIS) 4450/L - (4 hrs) - Microbial Genetics and Genomics
- PATH(PBIO) 4200/L - (3 hrs) - Introductory Mycology
- PBIO 3270 - (3 hrs) - Flowers
- PBIO 4650/L - (4 hrs) - Plant Taxonomy
- WILD(ECOL) 3580/L - (3/1=4 hrs) - Vertebrate Natural History
- WILD(ECOL) 4040/L - (4 hrs) - Herpetology
- WILD(BIOL) 4050/L - (4 hrs) - Mammalogy
- WILD 4060/L - (3 hrs) - Ornithology

Biology Major Electives (9 hours minimum) - A minimum grade of "C" (2.0) is required.

For a total of nine hours, choose three or more courses from the list below. At least two of the courses must be 3 or more credit hours and from two different departments.
PLEASE NOTE: Only ONE semester of research can be used in the Biology major, all other research will count as a general elective.

Major Elective (3+ hours) _____ Major Elective (3+ hours) _____ Major Elective (s) (remaining hours) _____

ANTH(ECOL) 4210 - (4 hrs) - Zoo Archaeology	ANTH(BIOL)(ECOL)(EETH)(ENTO)(FANR)(GEOL)(PATH)(PBIO) 4261 - (3 hrs) - Museum of Natural History Internship
ANTH(BIOL)(ECOL)(ENTO)(PBIO) 4260/L - (4 hrs) - Natural History Collections Management	ANTH(ECOL) 4290 - (3 hrs) - Environmental Archaeology
ANTH 4300 (4 hrs) - Ethnobotany	ANTH 4790 - (3 hrs) - Human Adaptation
BCMB 3100 - (4 hrs) - Intro Biochemistry and Molecular Biology	BCMB 4030/L - (4 hrs) - Bioprocess Technology
BCMB(GENE) 3433 - (4 hrs) - Biology for Medicine	BCMB(CHEM) 4110 - (3 hrs) - Physical Biochemistry
BCMB 3600 - (3 hrs) - Genomics and Bioinformatics	BCMB 4120 - (4 hrs) - Human Biochemistry and Disease
BCMB 3600H - (3 hrs) - Genomics and Bioinformatics (Honors)	BCMB 4130 (3 hrs) - Human Biochemistry II
BCMB 4010 - (4 hrs) - Biochemistry and Molecular Biology I	BCMB(ENTO)(BTEC) 4200 - (3 hrs) - Biotechnology
BCMB 4020 - (3 hrs) - Biochemistry and Molecular Biology II	
BINF(PBIO) 4550 - (3 hrs) - Bioinformatics Applications	
BIOL 3110L - (4 hrs) - Basic Skills in the Laboratory	BIOL 4200W or BIOL 4300W (3) - Science Writing options
BIOL(FANR) 3460 or 3460H - Natural History of the South Pacific	BIOL 4910 - (1-4 hrs) - Advanced Topics in Biology
BIOL(WILD) 3700 - (3 hrs) - Animal Behavior	BIOL 4960R (4 hrs) - Undergraduate Research in Biology
BIOL 3710L - (3 hrs) - Animal Behavior Lab	BIOL(CBIO)(VPAT) 5040 - (3 hrs) - Electron Microscopy
BIOL 3720L - (3 hrs) - Field Animal Behavior	BIOL(CBIO) 5050L - (3 hrs) - Electron Microscopy Laboratory
BTEC(BCMB)(PBIO) 4000L - (4 hrs) - Methods in Biotechnology	

CBIO 3000/L – (4 hrs) – Comparative Vertebrate Anatomy CBIO 3010/L (4 hrs) – Gross Anatomy CBIO 3050 – (3 hrs) – Medical Histology CBIO 3200L – (1-3 hrs) - Medical Anatomy CBIO 3400 – (4 hrs) - Cell Biology CBIO 3410L – (4 hrs) - Lab In Cellular and Developmental Biology CBIO 3600 – (4 hrs) - Developmental Biology CBIO 3710 – (3 hrs) - Principles in Physiology CBIO 3710L (1 hr) – Human Physiology Lab	CBIO 3800 – (4 hrs) – Neurobiology CBIO3800L – (2 hrs) – Neurobiology Laboratory CBIO(MIBO)(IDIS) 4100 – (3 hrs) - Immunology CBIO 4200 or 4200H – (3 hrs) - Biomedical Research in Health and Disease CBIO 4340 - (3 hrs) - Biology of Aging CBIO 4500 – (3 hrs) - Medical Parasitology CBIO(PBIO) 4600/L – (4 hrs) - Biology of Protists CBIO 4730 – (3 hrs) - Endocrinology CBIO 4320 – (3 hrs) – Stem Cell Biology
CHEM(BCMB) 4190 – (3 hrs) – Introduction of NMR Spectroscopy	
ECOL 3000/L – (4 hrs) - Introduction to Field Methods ECOL 3100/L – (4 hrs) -Tropical Field Ecology ECOL 3220/L – (4 hrs) - Biology and Conservation of Marine Mammals ECOL 3500/L – (4 hrs) - Ecology ECOL 3505H/L – (4 hrs) - Ecology (Honors) ECOL 3510 – (3-4 hrs) - Ecology Laboratory ECOL 3530-3530D – (3 hrs) - Conservation Biology ECOL 3600 (3 hrs) - Tropical Ecology: From Organisms to Ecosystems ECOL 3820 (3 hrs) – Evolutionary Medicine ECOL 3880H – (3 hrs) - Ecosystems of the World (Honors) ECOL 4000 – (3 hrs) - Population and Community Ecology ECOL 4010 – (3 hrs) - Ecosystem Ecology ECOL 4050/L – (4 hrs) – Ichthyology	ECOL 4070/L – (4 hrs) - Invertebrate Zoology ECOL 4130L – (3 hrs) - Ecological Methodology ECOL 4150/L – (4 hrs) - Population Biology of Infectious Diseases ECOL 4160 – (4 hrs) - Ecology of North America ECOL(MARS) 4225/L – (4 hrs) - Methods in Marine Ecology ECOL 4240/L – (4 hrs) - Physiological Ecology ECOL 4280/L (3/1) – Coral Reef Ecology ECOL(FISH)(WASR) 4310/L – (4 hrs) – Freshwater Ecosystems ECOL(BIOL)(MARS) 4330/L – (4 hrs) - Tropical Marine Invertebrates ECOL 4500 – (3 hrs) - Evolutionary Ecology ECOL 4540 - (3 hrs) – Behavioral Ecology ECOL 4775+L (4 hrs) - Ecological Developmental Biology and Ecotoxicology
EHSC(FDST)(MIBO) 4310/L – (4 hrs) - Environmental Microbiology	
ENTO 3140/L – (4 hrs) - Insect Natural History ENTO 3645 – (3 hrs) - Medical Entomology Lecture ENTO 3650/L – (4 hrs) - Medical Entomology	ENTO 4000/L – (4 hrs) - General Entomology ENTO 4450 – (3 hrs) – Insect Behavior
FDST(MIBO) 4120/L – (3 hrs) - Food Fermentations	
FISH(ECOL)(MARS)(WILD) 4300 – (3 hrs) - Environmental Biology of Fishes FISH(ECOL) 4360 – (4 hrs) - Fish Ecology	FISH 4500 – (3 hrs) - Fish Physiology FISH(ECOL)(MARS)(WILD) 4550/L – (4 hrs) - Conservation Aquaculture
GENE 3000 or GENE 3000H – (4 hrs) - Evolutionary Biology GENE 3210L – (3 hrs) - Experimental Genetics GENE 3220L (3 hrs) – Genetics Problem Solving Lab GENE 4000 (3 hrs) – Advanced Evolutionary Biology GENE 4020W (3 hrs) - Evolution and Climate Change in the Ocean GENE 4200 – (3 hrs) - Advanced Genetics GENE 4210L – (4 hrs) - Molecular Genetics Lab GENE 4220L – (3 Hrs) - Bioinformatics and Modeling Laboratory GENE 4230L – (3 hrs) - Evolutionary Biology Laboratory	GENE 4240L – (3 hrs) - Experimental Microbiome Genetics GENE 4300 – (3 hrs) - Evolutionary Genomics GENE 4310 – (3 hrs) – Genetic Approaches to Developmental Neuroscience GENE 4400 – (3 hrs) – Epigenetic Control and Genetic Instability GENE 4500 – (3 hrs) - Human Genetics GENE 4520 (3 hrs) - Genetics of Industrial Micro-Organisms GENE(ECOL) 4530 (3 hrs) – Molecular Genetics GENE 4540 (3 hrs) – Cancer Genetics GENE 4550 – (3 hrs) – Evolution and Development
HORT (CRSS) 4430 or 4430E– (3 hrs) Plant Physiology	
IDIS(CBIO) 3100 – (3 hrs) - People, Parasites, and Plagues	
KINS 4690-4690L (4 hrs) Neuromuscular Exercise Physiology	
MARS 3450/L – (4 hrs) - Marine Biology MARS 3550 – (3 hrs) - Life in Fluids MARS(PBIO) 4160/L – (4 hrs) - Life and Death in the Salt Marsh MARS 4200 – (3 hrs) - Chemical and Biological Oceanography	MARS(FISH) 4380/L (3 hrs) Marine Fisheries Biology MARS 4500 – (5 hrs) - Field Study in Oceanography and Marine Methods MARS(MIBO) 4620/L – (3 hrs) - Microbial Ecology MARS 4810 – (3 hrs) – Global Biogeochemical Cycles
MIBO 3500 or MIBO 3500E or MIBO 3500H (3 hrs) - Introductory Microbiology MIBO 3500L (1) – Introductory Microbiology Lab I MIBO 3510L – (3 hrs) - Introductory Microbiology Lab II MIBO 4090 or 4090E – (3 hrs) - Prokaryotic Biology MIBO(POPH) 4220 or 4220S (3 hrs) - Pathogenic Bacteriology	MIBO 4300 – (3 hrs) - Genome Editing in Mammals, Plants, Insects, and Microbes MIBO 4500 – (3 hrs) -Bacterial Symbioses MIBO 4600L – (4 hrs) - Experimental Microbiology Laboratory MIBO 4700 – (3 hrs) - Medical Mycology MIBO (POPH)(IDIS) 4650 or 6650 – (3 hrs) – Introduction to Virology
PATH (ANTH)(PBIO) 3010 – (3 hrs) - Fungi: Friends and Foes	
PBIO 3100 – (3 hrs) – Plant-Microbe Interactions PBIO 3270 – (3 hrs) – Flowers PBIO 3600 – (4 hrs) – Plant Cell and Developmental Biology PBIO 3650 – (4 hrs) – Plant Ecology PBIO 3660L – (4 hrs) – Plant Biology Intensive Laboratory PBIO 4500 – (3 hrs) – Introduction to Gene Technology	PATH(PBIO) – 4200/L – (3 hrs) - Introductory Mycology PBIO(GENE)(PATH) 4510 – (3 hrs) – Genome Evolution Across the Tree of Life PBIO (ECOL) 4520 – (3 hrs) – Plant-Animal Interactions PBIO 4640/L – (3 hrs) – Botanical Illustration PBIO 4650/L – (4 hrs) – Plant Taxonomy PBIO 4720 (4 hrs) – Plant Variation & Evolution PBIO(ECOL) 4750 – (3 hrs) - Tropical Ecology and Conservation
POPH(MIBO) 4651 – (3 hrs) – RNA Virus Genomic Diversity	
PMCY 3000 – (4 hrs) – Human Physiology	PMCY 4000 – (3 hrs) – The War on Cancer
POUL(BIOL) 4060 – (3 hrs) - Reproductive Endocrinology	
PSYC 4120 – (3 hrs) - Sensation and Perception PSYC 4130 – (3 hrs) - Physiological and Comparative Psychology PSYC 4140 – (3 hrs) - Cognitive Neuroscience	PSYC 4150 – (3 hrs) – Biological Foundations of Health Psychology PSYC 5850 – (3 hrs) – Psychopharmacology – Drugs and Behavior
VPAT 3100H (3 hrs) Introduction to Disease	
VPHY 3100 – (3 hrs) – Elements of Physiology VPHY 3107 – (4 hrs) – Integrative Concepts in Physiology I VPHY 3108 – (3 hrs) – Integrative Concepts in Physiology II	VPAT 4000 – (3 hrs) – On the Origins of Disease VPHY 4200 – (3 hrs) – Physiologic Basis of Diseases VPHY 4300 – (3 hrs) – Endocrine Physiology VPHY 4600 – (3 hrs) – Physiological Toxicology VPHY (KINS) 5690 – (3 hrs) - Skeletal Muscle and Mitochondria Physiology
WILD(ECOL) 3580/L – (3/1=4 hrs) – Vertebrate Natural History WILD(ECOL) 4040/L – (4 hrs) – Herpetology WILD(BIOL) 4050/L – (4 hrs) - Mammalogy	WILD 4060/L – (3 hrs) – Ornithology WILD (ECOL) 4575-4575L – (6 hrs) – Conservation Medicine WILD 5200 – (2-6 hrs) – International Issues in Wildlife Conservation