

**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
- 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 4500 – (3-5 hrs) – Field Study Oceanography & Marine Methods
- MIBO 3510L – (3 hrs) - IntroMicrobiology Laboratory
- MIBO 4600/L– (4 hrs) – Experimental Microbiology Laboratory
- MIBO 4710L- (3 hrs) - Medical Mycology 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)
- 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	

<p><b>CBIO</b> 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</p>	<p>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</p>
<b>CHEM(BCMB) 4190 – (3 hrs) – Introduction of NMR Spectroscopy</b>	
<p><b>ECOL</b> 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</p>	<p>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</p>
<b>EHSC(FDST)(MIBO) 4310/L – (4 hrs) - Environmental Microbiology</b>	
<p><b>ENTO</b> 3140/L – (4 hrs) - Insect Natural History  ENTO 3645 – (3 hrs) - Medical Entomology Lecture  ENTO 3650/L – (4 hrs) - Medical Entomology</p>	<p>ENTO 4000/L – (4 hrs) - General Entomology  ENTO 4450 – (3 hrs) – Insect Behavior</p>
<b>FDST(MIBO) 4120/L – (3 hrs) - Food Fermentations</b>	
<p><b>FISH(ECOL)(MARS)(WILD) 4300 – (3 hrs) - Environmental Biology of Fishes</b>  FISH(ECOL) 4360 – (4 hrs) - Fish Ecology</p>	<p>FISH 4500 – (3 hrs) - Fish Physiology  FISH(ECOL)(MARS)(WILD) 4550/L – (4 hrs) - Conservation Aquaculture</p>
<p><b>GENE</b> 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</p>	<p>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</p>
<b>HORT (CRSS) 4430 or 4430E– (3 hrs) Plant Physiology</b>	
<b>IDIS(CBIO) 3100 – (3 hrs) - People, Parasites, and Plagues</b>	
<p><b>KINS</b> 4690-4690L (4 hrs) Neuromuscular Exercise Physiology</p>	<p><b>KINS</b> 5690 (3 hrs) Skeletal Muscle and Mitochondria Physiology</p>
<p><b>MARS</b> 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</p>	<p>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</p>
<p><b>MIBO</b> 3500 or MIBO 3500E– (3 hrs) - Introductory Microbiology  MIBO 3500L (1) – Introductory Microbiology Lab I  MIBO 3510L or MIBO 3510H– (3 hrs) - Introductory Microbiology Lab II  MIBO 4090 or 4090E– (3 hrs) - Prokaryotic Biology  MIBO 4110 – (3 hrs) – Plant Microbe Interactions (Griffin only)  MIBO(POPH) 4220 or 4220S (3 hrs) - Pathogenic Bacteriology</p>	<p>MIBO 4300 or 4300 E– (3 hrs) - Microbial Diversity and Evolution  MIBO 4500 or MIBO 4500E– (3 hrs) -Bacterial Symbioses  MIBO 4600L – (4 hrs) - Experimental Microbiology Laboratory  MIBO 4680 – (4 hrs) - Industrial Microbiology and Biotechnology  MIBO 4700 – (3 hrs) - Medical Mycology  MIBO 4710L – (3 hrs) - Medical Mycology Laboratory</p>
<b>PATH (ANTH)(PBIO) 3010 – (3 hrs) - Fungi: Friends and Foes</b>	
<p><b>PBIO</b> 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</p>	<p>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 &amp; Evolution  PBIO(ECOL) 4750 – (3 hrs) - Tropical Ecology and Conservation</p>
<p><b>PMCY</b> 3000 – (4 hrs) – Human Physiology</p>	<p>PMCY 4000 – (3 hrs) - The War on Cancer</p>
<p><b>POPH(MIBO)(IDIS) 4450/L – (4 hrs) - Microbial Genetics and Genomics</b>  POPH(MIBO)(IDIS) 4650 – (3 hrs) – Introduction to Virology</p>	<p>POPH(MIBO) 4651 – (3 hrs) – RNA Virus Genomic Diversity</p>
<b>POUL(BIOL) 4060 – (3 hrs) - Reproductive Endocrinology</b>	
<p><b>PSYC</b> 4120 – (3 hrs) - Sensation and Perception  PSYC 4130 – (3 hrs) - Physiological and Comparative Psychology  PSYC 4140 – (3 hrs) - Cognitive Neuroscience</p>	<p>PSYC 4150 – (3 hrs) – Biological Foundations of Health Psychology  PSYC 5850 – (3 hrs) - Psychopharmacology – Drugs and Behavior</p>
<b>VPAT 3100H (3 hrs) Introduction to Disease</b>	
<p><b>VPHY</b> 3100 (3 hrs) - Elements of Physiology  VPHY 3107 (4 hrs)- Integrative Concepts in Physiology I  VPHY 3108 (3 hrs) - Integrative Concepts in Physiology II</p>	<p>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</p>
<p><b>WILD(ECOL) 3580/L - (3/1=4 hrs) - Vertebrate Natural History</b>  WILD(ECOL) 4040/L – (4 hrs) – Herpetology  WILD(BIOL) 4050/L – (4 hrs) - Mammalogy</p>	<p>WILD 4060/L – (3 hrs) – Ornithology  WILD (ECOL) 4575-4575L – (6 hrs) – Conservation Medicine  WILD 5200 (2-6 hrs) International Issues in Wildlife Conservation</p>