BACHELOR OF SCIENCE WITH A MAJOR IN BIOLOGY

Biology Major

Biology, the study of life, is the most all-encompassing of the sciences. Understanding basic life processes requires working in many areas in an integrated way. Students who major in Biology engage in a curriculum that explores the breadth of the biological sciences. They develop hands-on laboratory skills and have the opportunity to participate in laboratory and field research projects, under the direction of a faculty mentor.

The biology program provides a solid foundation in basic scientific knowledge. Every student will take a common set of core classes providing this initial set of core competencies that will be built upon and reinforced as you progress through intermediate level courses. Once the core is complete, students can enter into one of the three advisory tracks to complete the remaining credits required for the major that are designed to assist in course selection based on individual career goals and needs.

These tracks are:

- `General Biology`

  The General Biology track offers a broad foundation in the biological sciences, ideal for students seeking flexibility in their career paths. While many graduates pursue advanced degrees in healthcare, others go on to graduate studies or careers in research, education, or biotechnology. This track provides a strong scientific core with the freedom to explore diverse areas of biology.

- `Pre-Med/Pre-Health`

  Designed specifically for students preparing for medical, dental, veterinary, physician assistant, or other professional health programs, the Pre-Med/Pre-Health track includes all prerequisite coursework required by most healthcare schools. This rigorous curriculum ensures students are well-prepared for entrance exams and competitive application processes.

- `Environmental Biology`

The Environmental Biology track focuses on the intersection of biology and environmental science. Students take specialized courses such as Introduction to Environmental Sustainability and Climate Change and can tailor their degree with electives from an approved list of environmental biology courses. This track is ideal for those passionate about conservation, ecology, and environmental policy.

Our interdisciplinary approach to teaching encourages students to make connections across scientific, social, and economic domains. In particular, we emphasize the growing intersection between health and business—an essential consideration in today's healthcare landscape. This perspective equips students to understand and navigate the broader context in which scientific and medical decisions are made.

With our multiple track program, Biology majors are prepared for a wide array of opportunities including careers in the health sciences, biomedical research, physical therapy, biotechnology, pharmaceutical science, environmental biology, food science, and industrial research.

The Pre-Medical and Pre-Health Professional Advisor provides guidance and resource materials for all students interested in medical school, physician assistant programs, dental school, nursing, veterinary or other biomedical professional programs. Those students will follow the pre-health advisory track and will get assistance with the application process from the pre-health advisor.

Biology majors engage in a challenging and rewarding program that is tailored to fit individual student needs by customizing upper-level course selection. Biology majors at Bryant gain a strong foundation in the science of biology and develop the abilities required to engage in thoughtful consideration of complex biological issues from multiple perspectives.

Students in the Biology major will:

- Demonstrate understanding of the processes of science, the scientific method, and the relationship between scientific research and established knowledge.
- Express biological scientific literacy in oral and written communication.
- Demonstrate content knowledge in biology.
- Demonstrate fundamental lab skills.
- Evaluate biological data, draw reasonable conclusions, recognize the ethical implications of these conclusions, and apply these conclusions to personal, community, and scientific problems.

Bachelor of Science Degree with a Biology Major Requirements:

General Education Requirements:

(Calculus and Analytic Geometry I (Biology Majors are required to take MATH 121. It can be used for the GEN Ed Math requirement of MATH 110)

University Minor Requirements

Biology Major Curriculum Requirements

Biology Degree Core Requirements		
SCI 251 & SCI L251	Biology I Principles of Biology and Biology I Laboratory	4
SCI 253 & SCI L253	Biology II Organismal Biology and Biology II Laboratory	4
SCI 264 & SCI L264	Physics I Introductory Physics and Physics I Laboratory	4
SCI 265 & SCI L265	Introductory Chemistry I and Introductory Chemistry I Laboratory	4
SCI 267 & SCI L267	Introductory Chemistry II and Introductory Chemistry II Laboratory	4
SCI 359 or AI 201	Artificial Intelligence (AI) in Healthcare Introduction to Artificial Intelligence	3
Choose one of the following tracks:		
Track 1: General Biology		
Biology Core plus the following General Biology Required Course:		
SCI 365 & SCI L365	Organic Chemistry I and Organic Chemistry I Laboratory	4

Choose 4 of the following courses plus one lab, at least one course must be at the 400-level		
SCI 351 & SCI L351	Ecology and Ecology Laboratory	4
SCI 352 & SCI L352	Exercise Physiology and Exercise Physiology Laboratory	4
SCI 354	Fundamentals of Nutrition	3
SCI 356	Introduction to Biotechnology	3
SCI 360 & SCI L360	Anatomy and Physiology I and Anatomy and Physiology Laboratory I (*)	4
SCI 363 & SCI L363	Genetics and Genetics Laboratory	4
SCI 366	Coastal Environments	3
SCI 367 & SCI L367	Biochemistry and Biochemistry Lab	3
SCI 368	Elements of Forensic Science	3
SCI 374 & SCI L374	Organic Chemistry II and Organic Chemistry II Laboratory	4
SCI 376	GIS for Health, Business, and the Environment	3
SCI 377 & SCI L377	Microbiology and Microbiology Laboratory	4
SCI 379	Emergency Medical Technician I	3
SCI 380 & SCI L380	Anatomy and Physiology II and Anatomy and Physiology Lab II (*)	4
SCI 381 & SCI L381	Human Kinesiology and Kinesiology Lab	4
SCI 382 & SCI L382	Cell Biology and Molecular Genetics and Cell Biology and Molecular Genetics Lab	3
SCI 383	Human Health and Disease	3
SCI 387	Functional Musculoskeletal Anatomy	3
SCI 390	Research Methods in Science	3
SCI 402	Current Topics in Nutrition	3
SCI 457	Environmental Toxicology and Human Health	3
SCI 466	Global Health Challenges	3
SCI 470	Immunity and Disease	3
SCI 490	Research Directed Study in Science	3
Track 2: Pre-Med/Pre-Health		
Biology core plus the following Pre-Med/Pre-Health Required courses:		
SCI 274 & SCI L274	Physics II Biological Physics and Physics || Laboratory	4
SCI 360 & SCI L360	Anatomy and Physiology I and Anatomy and Physiology Laboratory I	4
SCI 365 & SCI L365	Organic Chemistry I and Organic Chemistry I Laboratory	4
SCI 374 & SCI L374 or SCI 367	Organic Chemistry II and Organic Chemistry II Laboratory Biochemistry	4
SCI 380 & SCI L380	Anatomy and Physiology II and Anatomy and Physiology Lab II	4
****Choose 3 of the following course plus one lab, one course must be at the 400 level**		
HS 390	Research Methods in Health Sciences	3
SCI 352 & SCI L352	Exercise Physiology and Exercise Physiology Laboratory	4
SCI 354	Fundamentals of Nutrition	3
SCI 359	Artificial Intelligence (AI) in Healthcare	3
SCI 363 & SCI L363	Genetics and Genetics Laboratory	4
SCI 367 & SCI L367	Biochemistry and Biochemistry Lab	3
SCI 374 & SCI L374	Organic Chemistry II and Organic Chemistry II Laboratory	4
SCI 376	GIS for Health, Business, and the Environment	3
SCI 377 & SCI L377	Microbiology and Microbiology Laboratory	4
SCI 379	Emergency Medical Technician I	3
SCI 381 & SCI L381	Human Kinesiology and Kinesiology Lab	4
SCI 382 & SCI L382	Cell Biology and Molecular Genetics and Cell Biology and Molecular Genetics Lab	3
SCI 383	Human Health and Disease	3
SCI 387	Functional Musculoskeletal Anatomy	3
SCI 390	Research Methods in Science	3
SCI 401 & SCI L401	Fundamentals of Strength and Conditioning and Fundamentals of Strength and Conditioning Laboratory	4
SCI 402	Current Topics in Nutrition	3
SCI 457	Environmental Toxicology and Human Health	3
SCI 466	Global Health Challenges	3
SCI 470	Immunity and Disease	3
SCI 490	Research Directed Study in Science	3
*Recommended to be taken with the lab.		
Suggested Open Electives for the Pre-Health Track		
SCI 252	Medical Terminology	1
SCI 275	Introduction to Healthcare: Clinical and Business Perspectives	3
Track 3: Environmental Biology		
Biology Core plus Environmental Science Required Course:		
SCI 268	Introduction to Environmental Sustainability	3
SCI 269 & SCI L269	Climate Change and Climate Change Laboratory	4
Choose 1 additional course:		
SCI 262 & SCI L262	Physical Geology and Physical Geology Laboratory	4
SCI 351	Ecology	3
Choose 4 of the following courses plus one lab, at least one course must be at the 400 level		
SCI 351 & SCI L351	Ecology and Ecology Laboratory	4
SCI 355	Energy Strategies for a Sustainable World	3
SCI 365 & SCI L365	Organic Chemistry I and Organic Chemistry I Laboratory	4
SCI 366	Coastal Environments	3
SCI 371 & SCI L371	Human Impact on the Global Environment and Human Impact on the Global Environment Lab	4
SCI 376	GIS for Health, Business, and the Environment	3
SCI 377 & SCI L377	Microbiology and Microbiology Laboratory	4

SCI 392	Real World Applications for Sustainability and Climate Action	3
SCI 403	Innovations for Sustainable Futures	3
SCI 455	Environmental Policy: Decision Making and Problem Solving	3
SCI 457	Environmental Toxicology and Human Health	3
SCI 463	Issues in Environmental Science	3
SCI 466	Global Health Challenges	3
SCI 490	Research Directed Study in Science	3
Mathematics Requirements:		
MATH 121	Calculus and Analytic Geometry I ((Biology Majors are required to take MATH 121. It can be used for the GEN Ed Math requirement of MATH 110))	3

**General Track requires 40 credits for the major. Pre-Health Track requires 53 credits, Environmental Track requires 46/47 credits

A minimum of 120 credit hours is required for graduation.