Bachelor of Science in Biotechnology
Catalog Year 2024-2025

I. University Requirements

- UCF General Education Program
- 120 Total Credit Hours
- 42 Upper-Level Credit Hours

*Refer to your degree audit to ensure all University requirements are Satisfied

II. Pending Requirements

To transition out of "Pending" status, students must earn a “C” or better in these courses or their equivalents:

- BSC 2010C    Biology I       4 hrs
- CHM 2045C   Chemistry Fundamentals I* 4 hrs
  *Prerequisites: Appropriate Chemistry Placement Exam score or CHM 1025 & MAC 1105
- CHM 2046    Chemistry Fundamentals II 3 hrs
- CHM 2210    Organic Chemistry I 3 hrs

III. Major Requirements

A. Core Curriculum

Life Sciences

- BSC 2011C   Biology II      4 hrs
- PCB 3233 -OR- PCB 4280 Immunology or Molecular Immunology 3 hrs
- PCB 3233L  Immunology Lab 1 hr
- MCB 3020C   General Microbiology 5 hrs
- PCB 3522    Molecular Biology I 3 hrs
- PCB 4524    Molecular Biology II 3 hrs
- MCB 4720    Industrial Perspectives Seminar 3 hrs
- MCB 4312    Molecular Biotechnology 3 hrs
- BSC 3403C -OR- MCB 4721C Quant Biological Methods or Methods in Biotechnology 4 hrs
- PCB 4135 -OR- PCB 4529C Applied Mol. Cell Biology or Experimental Mol. Cell Biology 3 hrs/4 hrs

Chemistry

- CHM 2046L   Chemistry Fundamentals Lab 1 hr
- CHM 2211    Organic Chemistry II 3 hrs
- CHM 2211L   Organic Laboratory Techniques I 2 hrs
- BCH 4024 -OR- BCH 4053 Medical Biochemistry or Biochemistry I 4 hrs/3 hrs

Math

- MAC 2311C  Calculus with Analytic Geometry I* 4 hrs
  *Prerequisites: MAT 1033C, MAC 1105C, MAC 1114C, MAC 1140C
- STA 2023               Statistical Methods I 3 hrs

Physics

Select One Sequence:

- PHY 2053C (or PHY 2053+2053L) College Physics I 4 hrs
- PHY 2054C (or PHY 2054+2054L) College Physics II 4 hrs
- PHY 2048C (or PHY 2048+2048L) General Physics Using Calculus I 4 hrs
- PHY 2049C (or PHY 2049+2049L) General Physics Using Calculus II 4 hrs

B. Restricted Electives

- Must participate in at least 3 credit hours of research (ex. MCB 4912, MCB 4941).
  - Note: Participating in AIM, GEAR, HIM (with approval), PILOT, or PURE will count for research credit.
- Must take 1 restricted elective course from the list below.

BCH 4054 Biochemistry II MCB 4204 Cell Micro: Host-Pathogen PCB 4234 Cancer Biology
BCH 4103L Biochemical Methods MCB 4207 Infectious Processes PCB 4264 Stem Cell Biology
BSC 3424 Nanobiotechnology MCB 4224 Molec Biology of Diseases PCB 4284 Immunobiology
BSC 4434 Sequence Analysis MCB 4404 Bacterial Genetics & Physio PCB 4521 Tissue Engineering
BSC 4439 Structure Analysis MCB 4414 Physio & Biochem Microbes PCB 4663 Human Genetics
CHM 3120/L Analytical Chemistry/Lab MCB 4503 Virology PCB 4805 Endocrinology
CHM 3410 Physical Chemistry I MCB 4603 Environmental Microbiology PCB 4813 Molec Aspects of Obesity
MCB 3202 Infectious Disease PCB 3063 Genetics PCB 4832 Brain Functions
MCB 3203/L Pathogenic Micro/Lab PCB 3703C Human Physiology PCB 4833 Advanced Human Physiology
MCB 4201 Microbial Stress Response PCB 4174 Foundation of Bio-Imaging PCB 4843 Cell and Molec Neuroscience