Bachelor of Science in Molecular and Cellular Biology
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, unless otherwise stated:
- BSC 2010C  Biology I        4 hrs
- CHM 2045C  Chemistry Fundamentals I*  4 hrs
  *Prerequisites: Appropriate Chemistry Placement Exam score or CHM 1025 and MAC 1105
- CHM 2046  Chemistry Fundamentals II  3 hrs
- CHM 2210  Organic Chemistry I  3 hrs
- BSC 3403C  Quantitative Biological Methods (“B” or better)  4 hrs

III. Major Requirements
Students must maintain a 3.0 Science GPA to graduate from this degree plan.

A. Core Curriculum

Life Sciences
- BSC 2011C  Biology II  4 hrs
- PCB 3233  Immunology  3 hrs
- PCB 3233L  Immunology Lab  1 hr
- PCB 3063 -OR- PCB 4663  Genetics or Human Genetics  3 hrs
- PCB 3522  Molecular Biology I  3 hrs
- PCB 4524  Molecular Biology II  3 hrs
- PCB 3023  Molecular Cell Biology  3 hrs
- PCB 4529C  Experimental Molecular Cell Biology  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
-OR-
- 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 take at least 3 restricted elective courses (at least 1 must have a lab component and only 1 can be chosen from the full list of Biomedical Sciences restricted electives).
- BSC 4434 Bio Informatics: Seq Analysis  •  PCB 4521 Tissue Engineering
- MCB 4224 Molecular Biology of Diseases  •  PCB 4805 Endocrinology
- MCB 4721C Methods in Biotechnology  •  PCB 4813 Molecular Aspects of Obesity
- PCB 3703C Human Physiology  •  PCB 4832 Cell and Molec Basis of Brain Func
- PCB 4028 Molecular and Cell Pharmacology  •  PCB 4833 Advanced Human Physiology
- PCB 4174 Foundation of Bio-Imaging Science  •  PCB 4843 Cell and Molecular Neuroscience
- PCB 4234 Cancer Biology  •  ZOO 3744 Neurobiology
- PCB 4264 Stem Cell Biology  •  ZOO 4742 Advanced Neurobiology
- PCB 4284 Immunobiology  •  ZOO 4753C Vertebrate Histology

Note: Participating in AIM, GEAR, HIM (with approval), PILOT, or PURE will substitute for one lab restricted elective.