Bachelor of Science in Biomedical Sciences
Molecular and Cellular Biology Track
Catalog Year 2020-2021

I. University Requirements
- UCF General Education Program
- 120 Total Credit Hours
- 48 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: Passing Score on Chemistry Placement Exam or CHM 1025
- CHM 2046    Chemistry Fundamentals II     3 hrs
- CHM 2210    Organic Chemistry I          3 hrs

III. Major Requirements
- Students must maintain a 3.2 Science GPA to graduate with this degree.

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
- BSC 3403C   Quantitative Biological Methods    4 hrs
- PCB 3522C   Molecular Biology I     3 hrs
- PCB 4524C   Molecular Biology II     3 hrs
- PCB 4028C   Molecular and Cellular Pharmacology     3 hrs
- PCB 4234C   Cancer 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 4053 -OR- BCH 4024 Biochemistry I or Medical Biochemistry 3 hrs/4 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 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 4284 Immunobiology
- MCB 4224 Molecular Biology of Diseases   PCB 4521 Tissue Engineering
- MCB 4721C Methods in Biotechnology      PCB 4663 Human Genetics
- PCB 3703C Human Physiology              PCB 4813 Molecular Aspects of Obesity
- PCB 4174 Foundation Bio-Imaging Science PCB 5275 Signal Transduction Mechanics
- PCB 4264 Stem Cell Biology              ZOO 3744 Neurobiology

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