Bachelor of Science in Molecular and Cellular Biology  
Catalog Year 2022-2023

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: Passing Score on Chemistry Placement Exam or CHM 1025
   - 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 UCF GPA to graduate with this degree.
   A. Core Curriculum
      Life Sciences
      - BSC 2011C Biology II 4 hrs
      - PCB 4280 Molecular 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 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 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
   - MCB 4224 Molecular Biology of Diseases
   - MCB 4721C Methods in Biotechnology
   - PCB 3703C Human Physiology
   - PCB 4028 Molecular and Cell Pharmacology
   - PCB 4174 Foundation of Bio-Imaging Science
   - PCB 4234 Cancer Biology
   - PCB 4264 Stem Cell Biology
   - PCB 4284 Immunobiology
   - PCY 4852 Tissue Engineering
   - PCY 4805 Endocrinology
   - PCY 4813 Molecular Aspects of Obesity
   - PCY 4832 Cell and Molec Basis of Brain Func
   - PCY 4833 Advanced Human Physiology
   - PCY 4843 Cell and Molecular Neuroscience
   - ZOO 3744 Neurobiology
   - ZOO 4742 Advanced Neurobiology
   - ZOO 4753C Vertebrate Histology

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