



Bachelor of Science in Molecular and Cellular Biology

Catalog Year 2023-2024

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:

- | | | |
|------------------------------------|--|-------|
| <input type="checkbox"/> BSC 2010C | Biology I | 4 hrs |
| <input type="checkbox"/> CHM 2045C | Chemistry Fundamentals I* | 4 hrs |
| | <i>*Prerequisites: Passing Score on Chemistry Placement Exam or CHM 1025</i> | |
| <input type="checkbox"/> CHM 2046 | Chemistry Fundamentals II | 3 hrs |
| <input type="checkbox"/> CHM 2210 | Organic Chemistry I | 3 hrs |
| <input type="checkbox"/> 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

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|---|-------------------------------------|-------|
| <input type="checkbox"/> BSC 2011C | Biology II | 4 hrs |
| <input type="checkbox"/> PCB 4280 | Molecular Immunology | 3 hrs |
| <input type="checkbox"/> PCB 3233L | Immunology Lab | 1 hr |
| <input type="checkbox"/> PCB 3063 -OR- PCB 4663 | Genetics <u>or</u> Human Genetics | 3 hrs |
| <input type="checkbox"/> PCB 3522 | Molecular Biology I | 3 hrs |
| <input type="checkbox"/> PCB 4524 | Molecular Biology II | 3 hrs |
| <input type="checkbox"/> PCB 3023 | Molecular Cell Biology | 3 hrs |
| <input type="checkbox"/> PCB 4529C | Experimental Molecular Cell Biology | 4 hrs |

Chemistry

- | | | |
|---|---|-------------|
| <input type="checkbox"/> CHM 2046L | Chemistry Fundamentals Lab | 1 hr |
| <input type="checkbox"/> CHM 2211 | Organic Chemistry II | 3 hrs |
| <input type="checkbox"/> CHM 2211L | Organic Laboratory Techniques I | 2 hrs |
| <input type="checkbox"/> BCH 4053 -OR- BCH 4024 | Biochemistry I <u>or</u> Medical Biochemistry | 3 hrs/4 hrs |

Math

- | | | |
|------------------------------------|---|-------|
| <input type="checkbox"/> MAC 2311C | Calculus with Analytic Geometry I* | 4 hrs |
| | <i>*Prerequisites: MAT 1033C, MAC 1105C, MAC 1114C, MAC 1140C</i> | |
| <input type="checkbox"/> STA 2023 | Statistical Methods I | 3 hrs |

Physics

Select One Sequence:

- | | | |
|--|-----------------------------------|-------|
| <input type="checkbox"/> PHY 2053C (<u>or</u> PHY 2053+2053L) | College Physics I | 4 hrs |
| <input type="checkbox"/> PHY 2054C (<u>or</u> PHY 2054+2054L) | College Physics II | 4 hrs |
| -OR- | | |
| <input type="checkbox"/> PHY 2048C (<u>or</u> PHY 2048+2048L) | General Physics Using Calculus I | 4 hrs |
| <input type="checkbox"/> PHY 2049C (<u>or</u> 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).

- | | |
|---|--|
| <input type="checkbox"/> BSC 4434 Bio Informatics: Seq Analysis | <input type="checkbox"/> PCB 4521 Tissue Engineering |
| <input type="checkbox"/> MCB 4224 Molecular Biology of Diseases | <input type="checkbox"/> PCB 4805 Endocrinology |
| <input type="checkbox"/> MCB 4721C Methods in Biotechnology | <input type="checkbox"/> PCB 4813 Molecular Aspects of Obesity |
| <input type="checkbox"/> PCB 3703C Human Physiology | <input type="checkbox"/> PCB 4832 Cell and Molec Basis of Brain Func |
| <input type="checkbox"/> PCB 4028 Molecular and Cell Pharmacology | <input type="checkbox"/> PCB 4833 Advanced Human Physiology |
| <input type="checkbox"/> PCB 4174 Foundation of Bio-Imaging Science | <input type="checkbox"/> PCB 4843 Cell and Molecular Neuroscience |
| <input type="checkbox"/> PCB 4234 Cancer Biology | <input type="checkbox"/> ZOO 3744 Neurobiology |
| <input type="checkbox"/> PCB 4264 Stem Cell Biology | <input type="checkbox"/> ZOO 4742 Advanced Neurobiology |
| <input type="checkbox"/> PCB 4284 Immunobiology | <input type="checkbox"/> ZOO 4753C Vertebrate Histology |

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