



## 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:

- |                                    |  |       |
|------------------------------------|--|-------|
| <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

- |   |   |       |
|---|---|-------|
| <input type="checkbox"/> BSC 2011C              | Biology II                                | 4 hrs |
| <input type="checkbox"/> PCB 3233 -OR- PCB 4280 | Immunology <u>or</u> 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 |
| <b>-OR-</b>  |                                   |       |
| <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.**