



## Bachelor of Science in Molecular and Cellular Biology

Catalog Year 2025-2026

### 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
<b>*Prerequisites: Passing Score on Chemistry Placement Exam or CHM 1025</b>		
<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 Science GPA to graduate with this degree.

#### A. Core Curriculum

##### Life Sciences

<input type="checkbox"/> MCB 1310	Introduction to Biotechnology & Genetic Engineering	3 hrs
<input type="checkbox"/> BSC 2011C	Biology II	4 hrs
<input type="checkbox"/> PCB 3233	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
<b>*Prerequisites: MAT 1033C, MAC 1105C, MAC 1114C, MAC 1140C</b>		
<input type="checkbox"/> STA 2023	Statistical Methods I	3 hrs

##### Physics

##### Select One Sequence:

<input type="checkbox"/> PHY 2053C & 2054C ( <u>or</u> PHY 2053+2053L) College Physics I & II	8 hrs
<b>-OR-</b>	
<input type="checkbox"/> PHY 2048C & 2049C ( <u>or</u> PHY 2048+2048L) General Physics Using Calculus I	8 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.**