



**Bachelor of Science in Biomedical Sciences**

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:

- 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**

- SLS 2311C Overview of Select Medical Careers\* 2 hrs

*\*Recommended for pre-professional students*

**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 3522 Molecular Biology I 3 hrs
- PCB 4524 Molecular Biology II 3 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
- 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 **5 restricted elective courses (2 with labs)** and no more than 2 courses can be MLS courses or outside of the College of Medicine. Choose from the list on the back of this form.

	Course	Credit Hours
Restricted Elective #1		
Restricted Elective #2		
Restricted Elective #3		
Restricted Elective #4 (with lab)		
Restricted Elective #5 (with lab)		

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



## **Biomedical Sciences Restricted Electives**

*\* = recommended for pre-professional students*

*^ = outside of the College of Medicine*

<b>BCH 4054</b> Biochemistry II*^	<b>MLS 4630</b> Advanced Clinical Chemistry II
<b>BOT 4850</b> Medicinal Botany^	<b>PCB 4028</b> Molecular and Cellular Pharmacology*
<b>BSC 3424</b> Nanobiotechnology	<b>PCB 4135</b> Applied Molecular Cell Biology
<b>BSC 4434</b> Biomed Informatics: Sequence Analysis	<b>PCB 4174</b> Foundation of Bio-Imaging Science
<b>BSC 4439</b> Biomed Informatics: Structure Analysis	<b>PCB 4234</b> Cancer Biology*
<b>MCB 3202</b> Principles of Infectious Disease*	<b>PCB 4264</b> Stem Cell Biology
<b>MCB 3903</b> Explorations in Biomed Sci Research	<b>PCB 4284</b> Immunobiology
<b>MCB 3933</b> Biomedical Sciences Careers	<b>PCB 4402</b> Disease Ecology & Ecoimmunology^
<b>MCB 4201</b> Microbial Stress Response	<b>PCB 4514</b> Genetics II*^
<b>MCB 4204</b> Cell Micro: Host-Pathogen Interactions	<b>PCB 4521</b> Tissue Engineering
<b>MCB 4207</b> Infectious Processes*	<b>PCB 4663</b> Human Genetics
<b>MCB 4224</b> Molecular Biology of Diseases*	<b>PCB 4723</b> Animal Physiology*^ <sup>(pre-vet)</sup>
<b>MCB 4276</b> Epidemiology of Infectious Diseases*	<b>PCB 4805</b> Endocrinology*
<b>MCB 4312</b> Molecular Biotechnology*	<b>PCB 4808</b> Physiology of Reproduction
<b>MCB 4404</b> Bacterial Genetics and Physiology	<b>PCB 4813</b> Molecular Aspects of Obesity
<b>MCB 4414</b> Microbial Metabolism*	<b>PCB 4832</b> Cell and Molec Basis of Brain Functions
<b>MCB 4503</b> Virology*	<b>PCB 4833</b> Advanced Human Physiology
<b>MCB 4603</b> Environmental Microbiology	<b>PCB 4843</b> Cellular and Molecular Neuroscience
<b>MLS 3305</b> Hematology*	<b>ZOO 3744</b> Neurobiology*
<b>MLS 4334</b> Hemostasis*	<b>ZOO 4513</b> Animal Behavior*^ <sup>(pre-vet)</sup>
<b>MLS 4505</b> Immunodiagnosics*	<b>ZOO 4605</b> Human Clinical Embryology*
<b>MLS 4625</b> Advanced Clinical Chemistry I	<b>ZOO 4742</b> Advanced Neurobiology*

### **Electives with Labs**

<b>BCH 4103L</b> Biochemical Methods^	<b>PCB 4708L</b> Lab Virtual Simulations in Physiology
<b>BOT 4434C</b> General Mycology	<b>ZOO 3713C</b> Comparative Vertebrate Anat*^ <sup>(pre-vet)</sup>
<b>MCB 3203/L</b> Pathogenic Microbiology + Lab*	<b>ZOO 3733C</b> Human Anatomy*
<b>MCB 4114C</b> Determinative & Systemic Microbiology	<b>ZOO 3755C</b> Introductory Histology*
<b>MCB 4721C</b> Methods in Biotechnology	<b>ZOO 4603C</b> Embryology/Development*^
<b>PCB 3063/L</b> Genetics*^ + Lab	<b>ZOO 4701</b> Dissection Techniques*
<b>PCB 3703C</b> Human Physiology*	<b>ZOO 4743C</b> Clinical Neuroanatomy & Neuroscience*
<b>PCB 4529C</b> Experimental Molecular Cell Biology	<b>ZOO 4747C</b> Clinical Neuroscience*
<b>PCB 4683/L</b> Evolutionary Biology + Lab^	<b>ZOO 4753C</b> Vertebrate Histology*