



Bachelor of Science in Biomedical Sciences

Catalog Year 2019-2020

I. University Requirements

- UCF General Education Program (36 hrs)

II. Departmental Requirements (74 hrs)

- SLS 2311C Overview of Select Medical Careers 2 hrs
**Recommended for pre-professional students*

A. Core Curriculum (57 hrs)

Life Sciences

- BSC 2010C Biology I 4 hrs
- PCB 4280 -OR- PCB 3233 Molecular Immunology or 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 2045C Chemistry Fundamentals I 4 hrs
- CHM 2046 Chemistry Fundamentals II 3 hrs
- CHM 2046L Chemistry Fundamentals II Lab 1 hr
- CHM 2210 Organic Chemistry I 3 hrs
- 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 114C, MAC 1140C
- STA 2023 Statistical Methods I 3 hrs

Physics

- PHY 2048C -OR- PHY 2053C General Physics Using Calculus I or College Physics I 4 hrs
- PHY 2049C -OR- PHY 2054C General Physics Using Calculus II or College Physics II 4 hrs

B. Upper Division Restricted Electives (17 hrs)

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 Biomedical Sciences department. 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, HUT (formerly HIM), PILOT, or PURE will substitute for one restricted elective.

III. Unrestricted Electives: University requirement 3000 level or above (9-12 hrs)

See the "Unrestricted Electives" sheet for suggestions.

	Course	Credit Hours
Unrestricted Elective #1		
Unrestricted Elective #2		
Unrestricted Elective #3		



Biomedical Sciences Restricted Electives

* = *recommended for pre-professional students*

^ = *outside of the Biomedical Sciences department*

BCH 4054 Biochemistry II*^	PCB 4135 Applied Molecular Cell Biology
BCH 4103L Biochemical Methods^	PCB 4174 Foundation of Bio-Imaging Science
BOT 4434C General Mycology	PCB 4234 Cancer Biology*
BOT 4850 Medicinal Botany^	PCB 4264 Stem Cell Biology
BSC 3424 Nanobiotechnology	PCB 4284 Immunobiology
BSC 4434 Biomed Informatics: Sequence Analysis	PCB 4402 Disease Ecology & Ecoimmunology^
BSC 4439 Biomed Informatics: Structure Analysis	PCB 4514 Genetics II*^
MCB 3202 Principles of Infectious Disease*	PCB 4521 Tissue Engineering
MCB 3203/L Pathogenic Microbiology + Lab*	PCB 4529C Experimental Molecular Cell Biology
MCB 3903 Explorations in Biomed Science Research	PCB 4663 Human Genetics
MCB 3933 Biomedical Sciences Careers	PCB 4683/L Evolutionary Biology + Lab^
MCB 4201 Microbial Stress Response	PCB 4708L Lab Virtual Simulations in Physiology
MCB 4204 Cell Micro: Host-Pathogen Interactions	PCB 4723 Animal Physiology*^ (pre-vet)
MCB 4207 Infectious Processes*	PCB 4805 Endocrinology*
MCB 4224 Molecular Biology of Diseases*	PCB 4813 Molecular Aspects of Obesity
MCB 4276 Epidemiology of Infectious Diseases*	PCB 4832 Cell and Molec Basis of Brain Functions
MCB 4312 Molecular Biotechnology*	PCB 4833 Advanced Human Physiology
MCB 4404 Bacterial Genetics and Physiology	PCB 4843 Cellular and Molecular Neuroscience
MCB 4503C Virology*	ZOO 3713C Comparative Vertebrate Anatomy*^ (pre-vet)
MCB 4603 Environmental Microbiology	ZOO 3733C Human Anatomy*
MCB 4721C Methods in Biotechnology	ZOO 3744 Neurobiology*
MLS 3305 Hematology*	ZOO 3755C Introductory Histology*
MLS 3305L Hematology Lab*	ZOO 4513 Animal Behavior*^ (pre-vet)
MLS 4334 Hemostasis*	ZOO 4603C Embryology/Development*^
MLS 4505C Immunodiagnosics*	ZOO 4605 Human Clinical Embryology*
MLS 4625 Advanced Clinical Chemistry I	ZOO 4701 Dissection Techniques*
MLS 4630 Advanced Clinical Chemistry II	ZOO 4742 Advanced Neurobiology*
PCB 3063 Genetics*^	ZOO 4743C Clinical Neuroanatomy & Neuroscience*
PCB 3703C Human Physiology*	ZOO 4747C Clinical Neuroscience*
PCB 4028 Molecular and Cellular Pharmacology*	ZOO 4753C Vertebrate Histology*



**Bachelor of Science in Biomedical Sciences
Suggested Plan of Study**

Freshman Year				
Fall		Spring		Summer
CHM 2045C	4 hrs	BSC 2010C	4 hrs	Plan your 9 required summer hours into your course of study.
ENC 1101	3 hrs	CHM 2046	3 hrs	
MAC 1105C	3 hrs	CHM 2046L	1 hr	
GEP #9	3 hrs	ENC 1102	3 hrs	
		MAC 1114C	3 hrs	
		SLS 2311C*	2 hrs	
Total	13 hrs	Total	14-16 hrs	
*Recommended for pre-professional students pursuing any of the following fields: Chiropractic, Dental, Medical, Optometry, Pharmacy, Podiatry, Veterinary				

Sophomore Year				
Fall		Spring		Summer
CHM 2210	3 hrs	BSC 3403C	4 hrs	
MAC 1140C	3 hrs	CHM 2211	3 hrs	
MCB 3020C	5 hrs	CHM 2211L	2 hrs	
GEP #4	3 hrs	MAC 2311C	4 hrs	
		GEP #5	3 hrs	
Total	14 hrs	Total	16 hrs	

Junior Year				
Fall		Spring		Summer
BSC 2011C*	4 hrs	PCB 3233L	1 hr	
BCH 4053 <u>or</u> BCH 4024	3/4 hrs	PCB 3522	3 hrs	
PHY 2053C <u>or</u> PHY 2048C**	4 hrs	PCB 4280 <u>or</u> PCB 3233	3 hrs	
3000-Level Elective	3/4 hrs	PHY 2054C <u>or</u> PHY 2049C**	4 hrs	
GEP #10	3 hrs	Restricted Elective	3/4 hrs	
Total	13-17 hrs	Total	14-15 hrs	
*Recommended for Vet School **Students enrolling in PHY 2048C/2049C must accommodate taking MAC 2311C/2312 as prerequisites				

Senior Year				
Fall		Spring		Summer
GEP #6	3 hrs	STA 2023	3 hrs	
PCB 4524	3 hrs	SPC 1603C* <u>or</u> SPC 1608	3 hrs	
Restricted Elective	3/4 hrs	Restricted Elective	3/4 hrs	
Restricted Elective	3/4 hrs	Restricted Elective	3/4 hrs	
3000-Level Elective	3/4 hrs	3000-Level Elective	3/4 hrs	
Total	15-17 hrs	Total	15-17 hrs	
*Recommended				

**Burnett School of Biomedical Sciences
Office of Student Services & Advising**
HPA II 335 | (407) 823-5932 | med.ucf.edu/biomed | BSBSAdvising@ucf.edu