



Bachelor of Science in Biomedical Sciences

Director: Dr. Griffith Parks, BBS 101G

Associate Director: Dr. William Self, HPA II 335C

I. University Requirements

UCF General Education Program (36 hrs)

Communication Foundations (9 hrs); Historical & Cultural Foundations (9 hrs); Social Foundations (6 hrs);
Mathematical Foundations and Science Foundations (12 hrs – satisfied by major requirements)

II. Departmental Requirements (83 hrs)

A. Core Curriculum (60 hrs)

<input type="checkbox"/> SLS 2311C	Overview of Select Medical Careers <i>*Required for pre-professional concentration</i>	2 hrs
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Life Sciences

<input type="checkbox"/> BSC 2010C	Biology I	4 hrs
<input type="checkbox"/> BSC 3403C	Quantitative Biological Methods	4 hrs
<input type="checkbox"/> MCB 3020C	General Microbiology	5 hrs
<input type="checkbox"/> PCB 3522, 4524	Molecular Biology I, II	6 hrs
<input type="checkbox"/> PCB 4280 -OR- PCB 3233, 3233L	Molecular Immunology or Immunology + Immunology Lab	4 hrs

Chemistry

<input type="checkbox"/> BCH 4053 -OR- BCH 4024	Biochemistry I or Medical Biochemistry	3 hrs
<input type="checkbox"/> CHM 2045C, 2046, 2046L	Chemistry Fundamentals I, II + Lab	8 hrs
<input type="checkbox"/> CHM 2210, 2211, 2211L	Organic Chemistry I, II + Lab	8 hrs

Math

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

Physics

<input type="checkbox"/> PHY 2048C, 2049C -OR- <input type="checkbox"/> PHY 2053C, 2054C	General Physics Using Calculus I, II College Physics I, II	8 hrs 8 hrs
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B. Upper Division Restricted Electives (17 hrs)

Students must take at least **5 restricted elective courses**. At least **2 courses must be laboratory courses**. No more than 2 courses may be MLS courses. No more than 2 courses may be outside of the Biomedical Sciences Department. See separate sheet for a full list of restricted electives. **** = recommended for pre-professional students**

❖ BOT 4434C General Mycology	4 hrs	❖ PCB 4028 Molecular and Cellular Pharmacology**	3 hrs
❖ BSC 3424 Nanobiotechnology	3 hrs	❖ PCB 4135 Applied Molecular Cell Biology	3 hrs
❖ BSC 4434 Biomedical Informatics: Sequence Analysis	3 hrs	❖ PCB 4174 Foundation of Bio-Imaging Science	3 hrs
❖ BSC 4439 Biomedical Informatics: Structure Analysis	3 hrs	❖ PCB 4234 Cancer Biology**	3 hrs
❖ MCB 3202 Principles of Infectious Disease**	3 hrs	❖ PCB 4264 Stem Cell Biology	3 hrs
❖ MCB 3203, 3203L Pathogenic Microbiology + Lab	4 hrs	❖ PCB 4284 Immunobiology**	3 hrs
❖ MCB 4201 Microbial Stress Response	3 hrs	❖ PCB 4521 Tissue Engineering	3 hrs
❖ MCB 4204 Cell Microbiology: Host-Pathogen Interactions	3 hrs	❖ PCB 4529C Experimental Molecular Cell Biology	3 hrs
❖ MCB 4207 Infectious Processes**	3 hrs	❖ PCB 4663 Human Genetics	3 hrs
❖ MCB 4224 Molecular Biology of Diseases**	3 hrs	❖ PCB 4708L Lab Virtual Simulations in Physiology	3 hrs
❖ MCB 4276 Epidemiology of Infectious Diseases**	3 hrs	❖ PCB 4804 Reproductive Physiology	3 hrs
❖ MCB 4312 Molecular Biotechnology**	3 hrs	❖ PCB 4805 Endocrinology**	3 hrs
❖ MCB 4404 Bacterial Genetics and Physiology	3 hrs	❖ PCB 4813 Molecular Aspects of Obesity	3 hrs
❖ MCB 4414 Microbial Metabolism	3 hrs	❖ PCB 4832 Cellular and Molecular Brain Functions	3 hrs
❖ MCB 4503C Virology**	3 hrs	❖ PCB 4833 Advanced Human Physiology	3 hrs
❖ MCB 4603 Environmental Microbiology	3 hrs	❖ PCB 4843 Cellular and Molecular Neuroscience	3 hrs
❖ MCB 4721C Methods in Biotechnology	4 hrs	❖ ZOO 3733C Human Anatomy**	4 hrs
❖ MLS 3305 Hematology**	3 hrs	❖ ZOO 3744 Neurobiology**	3 hrs
❖ MLS 4334 Hemostasis**	3 hrs	❖ ZOO 3755C Introductory Histology**	4 hrs
❖ MLS 4505C Immunodiagnostics**	2 hrs	❖ ZOO 4605 Human Clinical Embryology**	3 hrs
❖ MLS 4625 Advanced Clinical Chemistry I	3 hrs	❖ ZOO 4742 Advanced Neurobiology**	3 hrs
❖ MLS 4630 Advanced Clinical Chemistry II	3 hrs	❖ ZOO 4743C Clinical Neuroanatomy & Neurosci.**	4 hrs
❖ PCB 3063 Genetics**	3 hrs	❖ ZOO 4747C Clinical Neuroscience**	4 hrs
❖ PCB 3703C Human Physiology**	4 hrs	❖ ZOO 4753C Vertebrate Histology**	4 hrs

Note: Participating in GEAR, PURE, PILOT, or HIM will substitute for one restricted elective course.

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

See separate sheet for a list of unrestricted electives.



Suggested Baccalaureate Degree 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	
PSY 2012	3 hrs	ENC 1102	3 hrs	
OR SYG 2000		MAC 1114C	3 hrs	
OR ANT 2000		SLS 2311C**	2 hrs	
Total Hours	13	Total Hours	14-16	

***Required for students in the pre-professional concentration 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	
EUH 2000	3 hrs	MAC 2311C	4 hrs	
OR AMH 2010		EUH 2001	3 hrs	
OR HUM 2211		OR AMH 2020		
		OR HUM 2230		
Total Hours	14	Total Hours	16	

Junior Year				
Fall		Spring		Summer
BSC 2011C*	4 hrs	PCB 3233L	1 hr	
Upper Level Elective	3/4 hrs	PCB 3522	3 hrs	
BCH 4053	3/4 hrs	Restricted Elective	3/4 hrs	
OR BCH 4024		PCB 4280	3 hrs	
ECO 2013	3 hrs	OR PCB 3233		
OR POS 2041		PHY 2054C	4 hrs	
PHY 2053C	4 hrs	OR PHY 2049C**		
OR PHY 2048C**				
Total Hours	13-17	Total Hours	14-15	

**Recommended for Vet School*

***Students electing to enroll in the PHY 2048C/2049C sequence must accommodate taking MAC 2311C/2312 as prerequisites*

Senior Year				
Fall		Spring		Summer
Historical & Cultural Foundations Course	3 hrs	Restricted Elective	3/4 hrs	
PCB 4524	3 hrs	Upper Level Elective	3/4 hrs	
Restricted Elective	3/4 hrs	Restricted Elective	3/4 hrs	
Restricted Elective	3/4 hrs	STA 2023	3 hrs	
Upper Level Elective	3 hrs	SPC 1608	3 hrs	
		OR SPC 1603C**		
Total Hours	15-17	Total Hours	15-17	

***Recommended*

Alternative plans of study may be necessary as a result of transfers, course availability, or unsuccessful attempts at completing one or more courses. This should be discussed with a designated department academic advisor. Students should use unrestricted electives to meet the University requirement of 48 hours of courses at the 3000 level or above.

Students should consult with their designated academic advisor prior to each registration period.

For more information contact:

Office of Student Services and Advisement

HPA II 335 / (407) 823-5932 / med.ucf.edu/biomed BSBSAdvising@ucf.edu