

Biomedical Sciences, B.S., (BMS) Catalog Years 2018 & Later

Please note that a grade of "C" or higher is required for all courses in the major

Tier 1: Required Lower-Level Courses: 40-42 credits

Chemistry Courses: 18 Credits Total

- ☐ CHM 2045 ☐ CHM 2045L General Chem. I & Lab
- ☐ CHM 2046 ☐ CHM 2046L General Chem. II & Lab
- ☐ CHM 2210 ☐ CHM 2210L Organic Chem. I & Lab
- ☐ CHM 2211 ☐ CHM 2211L Organic Chem. II & Lab

Biology Courses: 8 Credits Total

- ☐ BSC 2010 ☐ BSC 2010L Cellular Processes & Lab
- ☐ BSC 2011 ☐ BSC 2011L BioDiversity & Lab

Mathematics Courses: 6-8 Credits Total

- ☐ MAC 2241 Life Sci. Calc. I **OR** ☐ MAC 2311 Calc. I
- ☐ MAC 2242 Life Sci. Calc. II **OR** ☐ MAC 2312 Calc. II **OR** ☐ STA 2023 Intro. Stats

Physics Courses*: 8 Credits Total

- ☐ PHY 2053 ☐ PHY 2053L Physics I & Lab
- ☐ PHY 2054 ☐ PHY 2054L Physics II & Lab
- OR**
- ☐ PHY 2048 ☐ PHY 2048L Physics I & Lab
- ☐ PHY 2049 ☐ PHY 2049L Physics II & Lab

OR*

Anatomy & Physiology Courses*: 8 Credits Total

- ☐ BSC 2085 & Lab **OR** ☐ BSC 2093C Anat. & Phys. I & Lab
- ☐ BSC 2086 & Lab **OR** ☐ BSC 2094C Anat. & Phys. II & Lab

*Physics or A&P required.
Check with your advisor to
determine the proper
series for your academic &
career goals.

Tier 2: Required Upper-Level Biomedical Courses: 21 Credits

☐ Total 7-8 Credits Required Courses:

- ☐ BCH 3053 (3cr)
- ☐ MCB 3020 (3cr) & MCB 3020L (1cr) **OR**

Choose 1 Lecture : ☐ PCB 3063 or ☐ PCB 3023 **AND Choose 1 Lab:** ☐ PCB 3063L or ☐ PCB 3023L or ☐ BCH 3023L

☐ Total 14 Additional Biomedical Credits to include ONE Lab: **No duplicate credit allowed**

- ☐ Upper-Level BIOLOGY Course **Choose ONE:** _____ 3 credit minimum lecture
- ☐ Upper-Level CHEMISTRY Course **Choose ONE:** _____ 3 credit minimum lecture
- ☐ Upper-Level CHEMISTRY OR BIOLOGY Course **Choose ONE:** _____ 3 credit minimum lecture
- ☐ Upper-Level CHEMISTRY OR BIOLOGY **LAB:** _____ 1 credit minimum lab
- ☐ Additional Biomedical Electives: _____ 4 credit minimum lecture and/or lab

☐ **Upper-Division Residency Requirement:** 12 credits of major-applicable upper-level natural science courses must be completed at USF

☐ **Chemistry Residency Requirement:** 7 credits of Chemistry coursework applicable to the BMS major must be completed at USF.

Upper-Level Biology Coursework Options

- BOT 3850 Medical Botany (3cr)
- MCB 3410 Cellular Metabolism (3cr)
- MCB 4115 Determinative Bacteriology (3cr)-**Fall Only**
- MCB 4404 Microbial Phys. & Genetics (4cr)
- MCB 4503 Virology (3cr)- **Fall Only**
- PCB 3023 Cell Biology (3cr)
- PCB 3063 General Genetics (3cr)
- PCB 3712 General Physiology (3cr)
- PCB 4234 Principles of Immunology (3cr)
- PCB 4522C** Experimental Genetics (3cr)
- PCB 4744 Biomedical Physiology (3cr)
- ZOO 3713C** Comp. Vert. Anatomy (5cr)-**Spring Only**
- ZOO 4753 Human Histology & Mole Path Disease (3cr)

**Combined Course-will satisfy lab requirement

Upper-Level Chemistry Coursework Options

- BCH 4033* Advanced Biochemistry I (3cr)-**Fall Only**
- BCH 4034 Advanced Biochemistry II (3cr)-**Spring Only**
- CHM 3120C**Elem. Analytical Chemistry (4cr)
- CHM 3610 Intermediate Inorganic Chemistry (3cr)
- CHM 3941 Peer Leading in Chemistry (3cr)
- CHM 4300 Biomolecules (3cr)-**Fall Only**
- CHM 4230 Spectroscopic Analysis of Organic Compounds (3cr)
- CHM 4292 Introduction to Medicinal Chemistry (3cr) **Spring Only**
- CHM 4274 Introduction to Drug Discovery (3cr) **Fall Only**
- CHM 4307 BioOrganic Chemistry (3cr)
- CHM 4455 Chemistry of High Polymers (3cr)
- CHM 4932 Special Topics in Chemistry
- CHS 4300 Clinical Chemistry (3cr)-**Fall Only**

*Only applicable if student has not previously completed BCH 3023

Upper-Level Biology or Chemistry Lab Options

- BCH 3023L Biochemistry Lab (2cr) (satisfied lab or elective only)
- CHM 3610L Intermediate Inorganic Chemistry Lab (1cr)
- CHS 4301L Clinical Chemistry Lab (2cr)- **Fall Only**
- MCB 4115L Determinative Bacteriology Lab (2cr)
- MCB 4404L Microbial Phys & Genetics Lab (1cr)
- PCB 3023L Cell Biology Lab (1cr)
- PCB 3063L General Genetics Lab (1cr)
- PCB 3713L General Physiology Lab (1cr)

Additional Biomedical Electives

- CHM 4060 Use of Chemical Literature (1cr)
- HSC 4504 Public Health Immunology (3cr) - **Cannot be combined with (or substituted for) PCB 4234**
- PHZ 4702 Apps. Of Physics to Bio & Med I (4cr)
- PHZ 4703 Apps. Of Physics to Bio & Med II (4cr)

USF Chemistry Advising
SCA 203; tel. 813-974-3250; fax. 813-974-2876 Email: chemadvise@usf.edu
Schedule your advising appointment at <http://chemistry.usf.edu/advising/appt/>
To declare your major visit: <http://www.cas.usf.edu/declare>

Students should regularly review their DegreeWorks audit to ensure they are on track to complete all graduation Requirements, and in preparation for all advising appointments.

If you are already declared as a Biomedical Sciences major, follow these steps to review your Degree Works report online:

Go to <http://Degreeworks.usf.edu> → Type in NetID and password →

View your degree audit! (DegreeWorks can also be accessed through Canvas and OASIS)

General Education Common Core & Additional USF Enhanced General Education courses:

☐ ENC 1101 (3cr)

☐ ENC 1102 (3cr)

☐ Gen Ed Core Humanities (3cr)

_____ (Select from: ARH 2000, HUM 1020, LIT 2000, MUL 2010, PHI 2010, and THE 2000)

☐ Gen Ed Core Social/Behavioral Sciences (3cr)

_____ (Select from: AMH 2020, ANT 2000, ECO 2013, POS 2041, PSY 2012, and SYG 2000)

☐ Enhanced General Education – Creative Thinking (3cr) _____

☐ Enhanced General Education— Information & Data Literacy (3cr) _____

☐ Enhanced General Education – Human/Cultural Diversity (3cr) _____

☐ Enhanced General Education – Ethical Reasoning & Civic Engagement (3cr) _____

☐ Enhanced General Education—High Impact Practice (3cr) _____

☐ Civics Literacy Requirement

Select from: AMH 2020: American History II (3cr) or POS 2041: American National Government (3cr)

OR Complete the online Canvas test (pass with 60% or higher)

____ cr→ **120 credits**: A Bachelor's degree requires a minimum of 120 credit hours.

____ cr→ **42 upper level credits**: All students are required to take at least 42 credits at the 3000 & 4000 level. Please note: The Biomedical Sciences major courses will satisfy **21** credits of the required 42 credits. Based on the number of upper level credits you have already taken, you have _____ upper level credits remaining, outside of the major courses.

____ cr→ **9 credit summer rule**: All students who enter USF with fewer than 60 credits are required to take at least 9 credits of course work in the summer at a State University System (SUS) 4-year University.

____ cr→ **12 cr of Gordon Rule Writing** ENC 1101 & ENC 1102, and two additional courses _____ & _____

____ **FLENT**: Foreign Language Entrance Requirement: All students must have two years of the same foreign language in high school. Students without this requirement must take two semesters of foreign language in college.