CELL AND MOLECULAR BIOLOGY (2018-2019)

DEPARTMENT OF CELL BIOLOGY, MICROBIOLOGY, AND MOLECULAR BIOLOGY

BioAdvise | SCA 203 | BioAdvise@usf.edu | Ph: (813)974-3250 | Fax: (813)974-2876 | www.biology.usf.edu/bioadvise/

- Must receive a C- or better or meet major requirements
- Must maintain a 2.0 GPA in all Major’s coursework: this is the Applied Attempts GPA in the Major block of DegreeWorks
- Must have fewer than 3 D and/or F grades in applicable science coursework

MAJOR REQUIREMENTS (25 CREDIT HOURS)

- BSC 2010/L: Cellular Processes with lab
  No prerequisites; must take lecture and lab together
- BSC 2011/L: Biodiversity with lab
  No prerequisites; must take lecture and lab together
- PCB 3063/L: Genetics and lab
  Prerequisites: BSC 2010/L and CHM 2046
- PCB 3023/L: Cell Biology and lab
  Prerequisites: BSC 2010/L and CHM 2046
- MCB 3410: Cell Metabolism
  Prerequisites: BSC 2010/L and CHM 2046
- PCB 4024: Molecular Biology of the Cell
  Prerequisites: PCB 3063, PCB 3023 and MCB 3410
- Molecular Option, choose 1:
  - PCB 4026: Molecular Biology of the Gene
    Prerequisites: PCB 3063, PCB 3023 and MCB 3410
  - PCB 4109: Cancer Biology
    Prerequisites: PCB 3063, PCB 3023 and MCB 3410

CAM ELECTIVE OPTIONS (15 CREDIT HOURS)

- BCH 3053: Biochemistry
- BSC 4434: Bioinformatics
- BSC 4905: Independent Study (max 1 credit)
- BSC 4910: Undergraduate Research (max 4 credits)
- BSC 4933: Readings in Cell and Molecular Biology
- BSC 4935: Seminar in Cell and Molecular Biology
- MCB 3020/L: Microbiology with lab
- MCB 4503: Virology
- MCB 4933: Cellular Microbiology
- PCB 4671: Molecular Evolution
- PCB 3043/L: Ecology and lab
- PCB 3712/13L: General Physiology and lab
- PCB 4234: Principles of Immunology
- PCB 4522C: Experimental Genetics and Cell Bio
- PCB 4663: Human Genetics
- PCB 4744: Biomedical Physiology
- ZOO 4753: Human Histology & Histopathology
- ZOO 4694: Developmental Biology

THIS IS NOT A COMPLETE LIST: Please refer to the Major Electives page for additional options and prerequisites

Most advanced biology courses are not offered every semester; there are no set offerings for summer

SUPPORTING SCIENCE (32-34 CREDIT HOURS)

- CHM 2045/L: General Chemistry I and lab
  Prerequisites: C or better in MAC 1105 or test equivalent
- CHM 2046/L: General Chemistry II and lab
  Prerequisites: C or better in CHM 2045/L
- CHM 2210/L: Organic Chemistry I and lab
  Prerequisites: C or better in CHM 2046/L
- CHM 2211/L: Organic Chemistry II and lab
  Prerequisites: C or better in CHM 2210/L
- One Physics Sequence:
  - PHY 2053/L AND PHY 2054/L (non-calculus based, recommended for life science/pre-health majors)
  - PHY 2048/L AND PHY 2049/L (calculus based, must take MAC 2311 and 2312 math sequence)
  - PHY 2060+2048L AND PHY 2061+ 2049L (Enriched Physics, must take MAC 2311 and 2312 math sequence)
- Calculus I: MAC 2241 OR MAC 2311 OR MAC 2281
  Prerequisites: C or better in MAC 1147 or test equivalent
- Calculus II OR Statistics: MAC 2242 OR MAC 2312 OR MAC 2282 OR STA 2023
ADDITIONAL DEGREE REQUIREMENTS

- ENC 1101
- ENC 1102
- Core Social Science: AMH 2020, ANT 2000, ECO 2013, POS 2041, PSY 2012 OR SYG 2000
- Enhanced General Education – Creative Thinking
- Enhanced General Education – Human and Cultural Diversity
- Enhanced General Education – Information and Data Literacy
- Enhanced General Education – Ethical Reasoning and Civic Engagement
- Enhanced General Education – High Impact Practice

OTHER UNIVERSITY REQUIREMENTS

- 120 Hours – A Bachelor’s Degree requires a minimum of 120 credit hours
- Upper-level requirement – All students are required to take at least 42 credits at the 3000+ level. In your Cell and Molecular Biology major courses, you will complete 32 upper-level credits. Based on the number of credits you have already taken, you have ______ upper level credits remaining, outside the major.
- Summer Rule – All students who enter USF with fewer than 60 credits are required to take at least 9 credits of coursework in the summer at a State University System (SUS) 4-year University. You have _____ summer credits remaining to complete.
- GPA Requirement – Students must earn an overall 2.0 GPA and USF 2.0 GPA
- USF Residency – Student must complete 30 of the last 60 credits in USF Tampa coursework
- Biology Residency – Student must complete 20 of the last 30 biology credits at USF Tampa
- FLENT (Foreign Language Entrance Requirement)
- State Communication – ENC 1101, ENC 1102, and two ‘double-dip’ courses

The final responsibility for meeting all graduation requirements stated in the catalog rests with the student. See the USF catalog for a complete list of graduation requirements. [www.ugs.usf.edu/catalog.htm](http://www.ugs.usf.edu/catalog.htm)

GET INVOLVED!

- Undergraduate Research- Work one-on-one with faculty beginning your junior year with the possibility of being published!
- Lab experience through a wide array of coursework
- USF Cell, Molecular and Microbiology Club
- Pre-Health Profession Clubs
- USF Health Byrd Alzheimer’s Institute allows students to volunteer in the research labs
- Moffitt Cancer Center offers internships in various research areas
- Centers for Disease Control and Prevention (CDC) offers paid summer internships in Atlanta

Please refer to the BioAdvise involvement website for links to the above opportunities: [http://biology.usf.edu/bioadvise/involvement/clubs.aspx](http://biology.usf.edu/bioadvise/involvement/clubs.aspx)

“BioAdvise at USF” on Facebook for new opportunities within the Biology Field!