Cell and Molecular Biology Concentration Requirements: 40 hours total

- Students must receive a C- or better to meet major requirements.
- Cascading Prerequisites are strictly enforced.
- Students must maintain a 2.0 GPA in all majors’ coursework, which is calculated using only USF Biology courses.
- Students must have less than 3 D and/or F grades in CMB concentration and supporting science requirement lectures.
- Students must complete a minimum of 20 hours in Biology at USF.

Biology Core Curriculum: 16 hours

- **BSC 2010, 2010L** Biology I Cellular Processes 4hrs
- **PCB 3063, 3063L** Genetics w/Lab 4hrs
- **BSC 2011, 2011L** Biology II Diversity 4hrs
- **PCB 3043, 3043L** Principles of Ecology w/Lab 4hrs

Cell and Molecular Biology Concentration Curriculum: 24 hours

Most advanced CMB courses are not offered every semester. There are no set offerings for summer semesters.

- **MCB 3410** Cell Metabolism 3hrs
- **PCB 3023, 3023L** Cell Biology w/Lab 4hrs
- **PCB 3024** Molecular Biology of Cell 3hrs
- **PCB 4026** Molecular Biology of Gene 3hrs

Choose 11 hours of Cell and Molecular major electives from the following courses:

- **BCH 3023** Biochemistry 3hrs
- **BCH 3023L** Biochemistry Laboratory 2hrs
- **BOT 4434C** Mycology 3hrs
- **BSC 4458** Bioinformatics 3hrs
- **BSC 4905** Independent Study 1hr
- **BSC 4933** Selected Topics 1-4 hrs
- **BSC 5420** Genetic Engineering 3hrs
- **MCB 3020C** General Microbiology 4hrs
- **MCB 4905** Undergraduate Research 1-4 hrs
- **PCB 3671** Molecular Evolution 3hrs
- **PCB 3712** General Physiology 3hrs
- **PCB 4234** Principles of Immunology 3hrs
- **PCB 4522C** Experimental Genetics 3hrs
- **PCB 4663** Human Genetics 3hrs
- **PCB 4843** Principles of Neuroscience 3hrs
- **PCB 5616** Molecular Phylogenetics 3hrs
- **ZOO 4694** Developmental Biology 4hrs
- **ZOO 4753** Human Histology and Histopathology 4hrs

Supporting Sciences: 34 hours total

- Students must receive a C- or better to meet requirements for degree
- **General Chemistry I & II**: CHM 2045/L & CHM 2046/L (8 hrs) C (2.0) grade min
- **Organic Chemistry I & II**: CHM 2210/L & CHM 2211/L (10 hrs) C (2.0) grade min
- **One** of the General Physics sequences (8 hrs):
  - **PHY 2053/L & 2054/L** (non-calculus based, recommended for life science/pre-health majors)
  - **PHY 2048/L & 2049/L** (calculus based – must take MAC 2311 and 2312 math sequence)
  - **Calc I**: MAC 2241 Life Sciences, MAC 2281 Engineering, or MAC 2311 (4hrs) C (2.0) grade min
  - **Calc II or Statistics**: MAC 2242, MAC 2282, MAC 2312, or STA 2023 (4hrs) C (2.0) grade min

9/2011