SEQUENCE OF CHEM COURSES FOR BIOLOGY MAJORS
Current for Spring 2015

For info on Fall 2015 changes, see http://biology.sfsu.edu/sites/default/files/Chemistry_changes-Fall2015.pdf

• The flowchart below shows suggested paths for each major. The arrows indicate prerequisites (course that must be completed before the course pointed to). Note: A grade of C or better is required in prerequisite courses for CHEM courses, unless otherwise stated.

• General biology majors must complete two semesters of general chemistry (CHEM 115/215) and one semester course in organic chemistry (CHEM 130). Students may take one semester of biochemistry (CHEM 349) for the cell biology requirement.

• Pre-health majors (i.e., students intending to apply to medical, pharmacy, dental programs) should generally follow the cell and molecular biology path. Although specific requirements depend on the program(s) you’re applying to, most require a year of general chemistry and lab (CHEM 115, 215/216), a year of organic chemistry and labs (CHEM 233/234-335/336), and general biochemistry or biochemistry (CHEM 349 or 340).

• Cell and molecular biology majors must complete a year of general chemistry and lab (CHEM 115, 215/216), a year of organic chemistry (CHEM 233 and 335), and biochemistry CHEM 349.

• Physiology majors must complete a year of general chemistry and lab (CHEM 115, 215/216), a one semester course in organic chemistry (CHEM 130) and one semester of biochemistry (CHEM 349 or 340).

• Microbiology majors must complete a year of general chemistry and lab (CHEM 115, 215/216), a year of organic chemistry (CHEM 233 and 335), and one semester of biochemistry (CHEM 349 or 340).

• Microbiology (Clinical Science track) majors must complete a year of general chemistry and lab (CHEM 115, 215/216), a one semester course in organic chemistry (CHEM 130), and several other chemistry courses (CHEM 321, 322, 334, 343, 349).

• Botany, Ecology, Marine Biology, and Zoology majors must complete one semester of general chemistry (CHEM 115) and a one semester course in organic chemistry (CHEM 130). They may take one additional semester (CHEM 215/216).

• Check Bulletin course descriptions for updated prerequisites.

General Biology, Botany, Ecology, Microbiology(CS)
Marine Biology, Physiology, and Zoology majors

CHEM 115
General Chemistry I
Prereq: Chem 100 or Chem Placement Exam with score \( \geq 22 \)

CHEM 130
General Organic Chem
Prereq: Chem 115

CHEM 215/216
General Chemistry II & Lab
Prereq: Chem 115, and either Phys 111 or 220 (\( \geq C – \), for physics)

CHEM 233
Organic Chemistry I
Prereq: Chem 115

CHEM 215/216
General Chemistry II & Lab
Prereq: Chem 115, and either Phys 111 or 220 (\( \geq C – \), for physics)

CHEM 335
Organic Chemistry II
Prereq: Chem 233

CHEM 343
Biochemistry I Lab
Prereq: Chem 254, Chem 216, & Chem 340 (or Chem 349, concurrent enrollment in either Biochem)

CHEM 341
Biochemistry II
Prereq: Chem 340

P.T. Palmer, 31-Oct 07; mod SGP 9/12/12, 3/4/15