

CHEMISTRY (CHM)

CHM1020 CHEMISTRY IN EVERYDAY LIFE (3.00 Credits)

Selected topics from general chemistry and their applications in one or more of the following areas: environmental science, food and nutrition, health and medicine, energy, and/or everyday materials. This course is designed specifically for students seeking to fulfil their General Education requirement in science.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

CHM1020L CHEMISTRY FOR EVERDAY LIFE LABORATORY (1.00 Credits)

Laboratory experiments to accompany CHM1020.

Total Contact Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$24.00

Complete all the courses in the following option:

- Pre or Corequisite: CHM1020 (minimum grade: C)

CHM1025 INTRODUCTION TO CHEMISTRY (3.00 Credits)

This course will provide beginning students with the skills to understand the basic concepts of chemistry, which will enable them to be successful in the first semester of General Chemistry I, CHM 1045. This course is designed for students who have not previously had a successful high school chemistry experience. Topics covered include chemical measurements, atomic structure, the periodic table, chemical bonding, inorganic compound nomenclature and formula writing, stoichiometry, gases, liquids, solids, solutions, and chemical reactions.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in one of the following options:

- Option 1 - Pre or Corequisite: MAC1105 (minimum grade: C)
- Option 2 - Pre or Corequisite: MAC1105C (minimum grade: C)

CHM1032 CHEMISTRY FOR HEALTH SCIENCES (3.00 Credits)

Selected topics from general chemistry, organic chemistry and biochemistry. This course is designed specifically for Nursing and other Allied Health Technology students.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

CHM1032L CHEMISTRY FOR HEALTH SCIENCES LAB (1.00 Credits)

Laboratory exercises to accompany CHM1032.

Total Contact Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$19.00

Complete all the courses in the following option:

- Pre or Corequisite: CHM1032 (minimum grade: C)

CHM1040 GENERAL CHEMISTRY A (EXPANDED SEQUENCE) (3.00 Credits)

This is the first course in a three semester sequence, CHM1040, CHM1041 and CHM1046. This sequence includes two laboratories: CHM1045L to be taken concurrently with CHM1041 and CHM1046L to be taken with CHM1046. Topics covered include: measurements, stoichiometry, atomic structure, periodic table, chemical bonding, ionic and covalent compounds, nomenclature, and formula writing.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in the following option:

- Pre or Corequisite: MAT1033 (minimum grade: C)

CHM1041 GENERAL CHEMISTRY B (EXPANDED SEQUENCE) (3.00 Credits)

This is the second course in a three semester sequence which includes: CHM1040, CHM1041 and CHM1046. This sequence also includes two laboratories: (1) CHM1045L to be taken concurrently with CHM1041 and (2) CHM1046L to be taken with CHM1046. Topics covered include: gases, liquids, solids, solutions acid-base chemistry and ionic reactions, thermodynamics and some descriptive chemistry of non-metals.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CHM1040 (minimum grade: C), Pre or Corequisite: CHM1045L (minimum grade: C) and MAC1105 (minimum grade: C)

CHM1045 GENERAL CHEMISTRY I (3.00 Credits)

This is the first course in a two semester sequence, CHM 1045 and CHM 1046. This sequence includes two laboratories: CHM 1045L to be taken concurrently with CHM 1045 and CHM 1046L to be taken with CHM 1046. This sequence is for students who have already had high school chemistry. Topics covered include: chemical measurements, stoichiometry, atomic structure periodic table, chemical bonding, inorganic compounds, nomenclature, formula writing, thermochemistry, gases, liquids, solids, solutions acid-base chemistry and ionic reactions and some descriptive chemistry of non-metals. To enroll, it is strongly recommended that students have had previous chemistry at the high school or college level. If a student has not had prior experience in a chemistry course CHM1025 is highly recommended.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in one of the following options:

- Option 1 - Pre or Corequisite: CHM1045L (minimum grade: C) and MAC1105 (minimum grade: C)
- Option 2 - Pre or Corequisite: CHM1045L (minimum grade: C) and MAC1105C (minimum grade: C)

CHM1045L GENERAL CHEMISTRY I LAB (1.00 Credits)

Laboratory experiments to accompany CHM1045 for hands on experience.

Total Contact Hrs: 48.00

Lab Hrs: 48.00

Fees: LABORATORY FEE \$19.00

Complete all the courses in one of the following options:

- Option 1 - Pre or Corequisite: CHM1045 (minimum grade: C)
- Option 2 - Pre or Corequisite: CHM1041 (minimum grade: C)

CHM1046 GENERAL CHEMISTRY II (3.00 Credits)

This is the final course of the two-semester general chemistry sequence: CHM1045 and CHM1046; These sequences include two laboratories: (1)CHM1045L to be taken concurrently with CHM1045, and (2)CHM1046L to be taken with CHM1046. Topics covered include thermochemistry, thermodynamics, kinetics, equilibrium, electrochemistry, coordination chemistry, descriptive chemistry of metals, nuclear chemistry and an introduction to organic chemistry.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CHM1045 (minimum grade: C) and CHM1045L (minimum grade: C), Pre or Corequisite: CHM1046L (minimum grade: C)

CHM1046L GENERAL CHEMISTRY II LAB (1.00 Credits)

Laboratory experiments to accompany CHM1046E or CHM1046. Special fee charged. Upon successful completion of this course, the students should be able to use appropriate laboratory equipment to safely perform laboratory experiments that relate to the topics covered in CHM1046 or CHM1046E, to collect data accurately and to use those data to calculate a reasonable answer or come to a logical conclusion.

Total Contact Hrs: 48.00

Lab Hrs: 48.00

Fees: LABORATORY FEE \$26.00, LABORATORY FEE \$26.00

Complete all the courses in one of the following options:

- Option 1 - Prerequisite: CHM1045 (minimum grade: C) and CHM1045L (minimum grade: C), Pre or Corequisite: CHM1046 (minimum grade: C)
- Option 2 - Prerequisite: CHM1041 (minimum grade: C), Pre or Corequisite: CHM1046 (minimum grade: C)

CHM2210 ORGANIC CHEMISTRY I (3.00 Credits)

First part of a two course sequence presenting the structure, preparation, reaction, and nomenclature of various classes of organic compounds and their derivatives. Reaction electronic mechanisms are interpreted and unified in the light of modern theory.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CHM1046 (minimum grade: C) and CHM1046L (minimum grade: C), Corequisite: CHM2210L

CHM2210L ORGANIC CHEMISTRY I LABORATORY (1.00 Credits)

Organic laboratory experiments and preparations to accompany CHM2210. Special fee charged.

Total Contact Hrs: 48.00

Lab Hrs: 48.00

Fees: LABORATORY FEE \$65.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CHM1046 (minimum grade: C) and CHM1046L (minimum grade: C), Corequisite: CHM2210

CHM2211 ORGANIC CHEMISTRY II (3.00 Credits)

Second of the two-part organic chemistry course. A continuation of the study of the remaining classes of organic compounds including use of spectroscopic methods and an introduction to bio-organic molecules.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CHM2210 (minimum grade: C) and CHM2210L (minimum grade: C), Corequisite: CHM2211L

CHM2211L ORGANIC CHEMISTRY II LABORATORY (1.00 Credits)

Appropriate experiments and preparation to compliment CHM2211. Special fee charged.

Total Contact Hrs: 48.00

Lab Hrs: 48.00

Fees: LABORATORY FEE \$93.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CHM2210 (minimum grade: C) and CHM2210L (minimum grade: C), Pre or Corequisite: CHM2211 (minimum grade: C)

CHM3203 ORGANIC & BIOCHEMISTRY (3.00 Credits)

This course introduces the preprofessional science educator to fundamental organic and biochemical concepts. This is a content course in the B.S. Degree in the BC Science Education Program. The course has been designed to enhance the understanding of organic and biochemical concepts essential for the K-12 classroom. This program has been designed to correlate chemistry concepts with the NSTA National Science Content Standards, the Florida Subject Matter Content Standards, and the Florida Sunshine State Science Standards.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in the following option:

- Corequisite: CHM3203L

CHM3203L ORGANIC & BIOCHEMISTRY LAB (1.00 Credits)

This course has a weekly 3-hour session with laboratory experiments to accompany the lectures in CHM3205 Survey of Organic Chemistry and Biochemistry. This is a content laboratory course in the B.S. Degree in the BC Science Education Program. The course has been designed to enhance the understanding of organic and biochemical concepts essential to the K-12 classroom. This program has been designed to correlate chemistry concepts with the NSTA National Science Content Standards, the Florida Subject Matter Content Standards, and the Florida Sunshine State Science Standards.

Total Contact Hrs: 48.00

Lab Hrs: 48.00

Fees: LABORATORY FEE \$53.00, LABORATORY FEE \$53.00

Complete all the courses in the following option:

- Corequisite: CHM3203