

# CHEMISTRY (CHE) - ROCK COUNTY

## Courses

### CHE 114 CHEMISTRY IN THE KITCHEN 4 Units

Cooking food is perhaps the oldest everyday example of humans doing chemistry. This course explores the chemistry of food at a beginning level, and presents concepts about the structure of molecules, interactions between molecules, and how foods change in the cooking process. Laboratory exercises are completed with materials used in a kitchen, and include activities such as measurement, phase change, denaturation, extraction, and energy studies. Not a suitable prerequisite for higher-level chemistry courses or pre-professional programs. Students may not earn more than 4 credits by taking any combination of CHE 114, CHE 121, CHE 123, or CHE 124.

### CHE 121 CHEMISTRY AND SOCIETY LABORATORY 1 Units

Laboratory work to accompany CHE 123. Three hours of laboratory activity per week, including experimental design, analytical techniques, and simple reaction chemistry.

PREREQ: PRIOR COMPLETION WITH C OR BETTER OR CONCURRENT ENROLLMENT IN CHE 123

### CHE 123 CHEMISTRY AND SOCIETY 3 Units

A course for non-science majors that covers basic chemistry concepts in a social context. May include explorations of how chemistry impacts the environment, public health, energy policies, and other contemporary social issues. Consists of lectures and may also include discussions and demonstrations.

### CHE 124 APPLIED CHEMISTRY AND SOCIETY 4 Units

A course for non-science majors that covers basic chemistry concepts in a social context. May include explorations of how chemistry impacts the environment, public health, energy policies, and other contemporary social issues. Consists of lectures and laboratory activities and may also include discussions and demonstrations.

### CHE 125 INTRODUCTORY CHEMISTRY 5 Units

An introductory course in college chemistry including an introduction to organic chemistry. Consists of lectures, discussions, and laboratory work. Primarily for students whose programs require only CHE 125 or the CHE 125/CHE 203 or CHE 125/CHE 204 combination.

PREREQ: PRIOR COMPLETION WITH C OR BETTER OR CONCURRENT ENROLLMENT IN MAT 105

### CHE 145 GENERAL CHEMISTRY I 5 Units

For students whose programs require a year of college chemistry or who plan to take advanced courses in chemistry. One year of recent high school chemistry or another preparatory chemistry course is recommended, but not required. NS/LS Students must be enrolled in one lecture section, one lab section, and one discussion.

PREREQ: PRIOR COMPLETION WITH C OR BETTER OR CONCURRENT ENROLLMENT IN MAT 105

### CHE 155 GENERAL CHEMISTRY II 5 Units

The second semester of a one-year course in college chemistry. Consists of lectures, discussions, and laboratory work. For students whose programs require a year of college chemistry or who plan to take further courses in chemistry.

PREREQ: (C- OR BETTER IN CHE 145) AND (PRIOR COMPLETION WITH C OR BETTER OR CONCURRENT ENROLLMENT IN MAT 110)

### CHE 165 CHEMISTRY FOR ENGINEERS 5 Units

A one-semester chemistry course for engineering students. Topics include measurements, atomic theory, stoichiometry, molecular structure, thermochemistry, electrochemistry, solid state chemistry, materials science, and organic chemistry.

PREREQ: C OR BETTER IN MAT 110

### CHE 203 SURVEY OF BIOCHEMISTRY 3 Units

A foundational course in the chemical makeup and metabolic processes of living organisms. Consists of lectures and may also include discussions and demonstrations. Together CHE 125 and CHE 203 constitute a year-long course with emphasis on organic and biological chemistry.

PREREQ: C- OR BETTER IN (CHE 125 OR CHE 145)

### CHE 204 APPLIED SURVEY OF BIOCHEMISTRY 4 Units

A foundational course in the chemical makeup and metabolic processes of living organisms. Consists of lectures and laboratory work, and may also include discussions and demonstrations. Together CHE 125 and CHE 204 constitute a year course with emphasis on organic and biological chemistry. CHE 204 is equivalent to the combination of CHE 203 and CHE 211.

PREREQ: C- OR BETTER IN (CHE 125 OR CHE 145)

### CHE 211 BIOCHEMISTRY LABORATORY 1 Units

Laboratory activity to accompany CHE 203. Students will complete three hours of laboratory work each week, focused on identifying biomolecules and reactions with biomolecules.

PREREQ: C- OR BETTER IN (CHE 125 OR CHE 145)

### CHE 250 REVIEW AND UPDATES IN CHEMISTRY AND BIOCHEMISTRY 3 Units

This course was designed specifically for the nursing consortium & is to be taken primarily by RNs already accepted into their BSN degree completion program. This course is not a substitute for the CHE 125/CHE 203 sequence required of students at the beginning of their academic careers, even if planning to enter the nursing profession. CHE 250 begins with a review of relevant topics in Chem., both general & organic, & then covers topics typical of a bioChem. course such as biological molecules, metabolism, Nut., protein function, & molecular Bio..

### CHE 299 INDEPENDENT STUDY IN CHEMISTRY *Repeatable* 1-3 Units

Prereq: Cons. instr.

### CHE 343 ORGANIC CHEMISTRY I 3 Units

The first semester of a year-long course in organic chemistry, including study of bonding, functional groups, molecular structures, structure-reactivity principles and reaction mechanisms. Consists of lectures and may also include discussions and demonstrations.

PREREQ: C- OR BETTER IN CHE 155

### CHE 351 ORGANIC CHEMISTRY LABORATORY PART I 1 Units

The first semester of a year-long course in organic chemistry lab. Three hours of laboratory work per week, including organic laboratory techniques, spectroscopic identification of compounds, and introductory laboratory synthesis.

PREREQ: PRIOR COMPLETION OR CONCURRENT ENROLLMENT IN CHE 343

### CHE 352 ORGANIC CHEMISTRY LABORATORY 2 Units

Basic lab techniques for organic chemistry, including commonly used synthetic methods, purification and spectroscopic characterization of reaction products. Six hours of laboratory work per week. CHE 352 is equivalent to the combination of CHE 351 and CHE 361.

PREREQ: (C- OR BETTER IN CHE 343) OR (CONCURRENT ENROLLMENT IN CHE 363)

**CHE 361 ORGANIC CHEMISTRY LABORATORY PART II 1 Units**

The second semester of a year-long course in organic chemistry laboratory. Three hours of laboratory work per week, including advanced laboratory techniques, multi-step syntheses, and spectroscopic identification.

PREREQ: C- OR BETTER IN CHE 351

**CHE 363 ORGANIC CHEMISTRY II 3 Units**

Continuation of Organic Chemistry I, including study of the structure, properties, and mechanisms of reactions with benzene and substituted benzene, carbonyl-containing compounds, amines and heterocyclics, including multi-step synthesis. Consists of lectures and may also include discussions and demonstrations.

PREREQ: CHE 343

**CHE 390 RESOURCES AND SUSTAINABILITY 3 Units**

This course will investigate the many roles that natural resources play in society. We will examine the practical issues of how they are found, used, and disposed, as well as the broader concerns about how resources influence the modern world. We will take a global approach to critically analyze the scientific, economic, ecological, political and social implications of resource usage. By the end of the semester, you are expected to be able to integrate your and others thoughts on how society is impacted by its use of resources.

PREREQ: JUNIOR STANDING OR CONSENT OF INSTRUCTOR