



INSTRUCTIONAL PACKAGE

CHM105

General, Organic, and Biochemistry

Effective Term

Fall 2022/Spring 2023/Summer 2023

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: 2022-2023

COURSE PREFIX: CHM 105

COURSE TITLE: General, Organic, and Biochemistry

CONTACT HOURS: 3-3

CREDIT HOURS: 4

RATIONALE FOR THE COURSE:

Completion of CHM 105 enables the student to gain an appreciation and working knowledge of fundamental principles in three areas: general chemistry, organic chemistry, and biochemistry. These concepts are approached through the development of problem-solving skills, which helps prepare students for future careers in allied health fields.

COURSE DESCRIPTION:

This course is a study of the fundamental principles of chemistry, including atomic and molecular structure, common substances and reactions, introduction to organic chemistry and biochemistry.

PREREQUISITES/CO-REQUISITES:

((New ACCUPLACER Reading Comp 250 and New ACCUPLACER Sentence Skills 250) or (Multiple Measures English 1) or (Writing Sample ENG101 1 or WS ENG101 with Lab 1 or Writing Sample ENG155 1) or (ACT English 19 and ACT Reading 19) or (SAT Critical Reading 480) or (Credit level [ENG 155](#) Minimum Grade of C or Credit level [ENG 155](#) Minimum Grade of TC or Credit level [ENG 101](#) Minimum Grade of C or Credit level [ENG 101](#) Minimum Grade of TC)

***Online/Hybrid** courses require students to complete the [DLi Orientation Video](#) prior to enrolling in an online course.

REQUIRED MATERIALS:

Please visit the [BOOKSTORE](#) online site for most current textbook information.

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

ADDITIONAL REQUIREMENTS:

A scientific calculator will be needed for in-class use and for tests.

Laboratory safety glasses will be provided, but students may bring their own pair if desired.

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's student portal for course materials.

myHGTC and college email access.

CLASSROOM ETIQUETTE:

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

NETIQUETTE: is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit [Online Netiquette](#).

ACADEMIC DISHONESTY:

All forms of academic dishonesty, as outlined in the Student Code in the HGTC catalog, will NOT be tolerated and will result in disciplinary action. Anyone caught cheating or committing plagiarism (Defined in the code as: "The appropriation of any other person's work and the unacknowledged incorporation of that work in one's own work offered for credit") will be given a grade of a zero for that assignment and reported to the Senior VP of Academic Affairs, in accordance with the student handbook. A second offense will result in the student being withdrawn from the course with a "WF" and charges being filed with the Chief Student Services Officer.

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

A student will demonstrate an understanding of the basics of chemistry measurements by:

- identifying appropriate metric units for length, mass, and volume.
- utilizing both scientific notation and decimal notation.
- utilizing unit conversion factors to perform unit conversions.
- solving density calculation problems.
- solving percent calculation problems.

A student will demonstrate an understanding of atomic structure by:

- identifying the subatomic particles (protons, neutrons, and electrons) by relative mass, charge, and location in the atom.
- defining atomic number, mass number, and average atomic mass of an atom.
- determining the number of each type of subatomic particle in a particular atom using chemical symbols.
- defining isotopes and representing their composition with chemical symbols.
- distinguishing among electron energy levels in atoms.

A student will demonstrate an understanding of basic chemical bonding by:

- distinguishing cations from anions from their numbers of electrons and protons.
- utilizing the periodic table to determine the charge of ions of main group elements.
- utilizing the periodic table to determine the number of valence electrons of an atom.
- utilizing the periodic table to distinguish metals from nonmetals.

creating electron dot symbols for main group elements and ions.
 utilizing electron dot structures to depict ionic bonds between atoms.
 determining the formula of ionic compounds, given the name.
 identifying by name cations, anions, and ionic compounds, given their symbols (or formulas).
 identifying common polyatomic ions.
 creating electron dot structures for simple covalent molecules.

A student will demonstrate an understanding of the fundamentals of organic chemistry by:

illustrating the way that carbon atoms are bonded in organic compounds.
 creating Lewis structures, condensed structure, and skeletal structures for organic molecules.
 illustrating structural formulas for isomers of a given hydrocarbon.
 identifying by name simple hydrocarbons according to IUPAC rules.
 identifying by name common alkyl groups.
 identifying by structure the following families of organic compounds: alkyl halides, alcohols, aldehydes, ketones, carboxylic acids, esters, and amines.
 determining IUPAC names for simple compounds within the types of compounds listed above.
 distinguishing among conformational isomers, structural isomers, and stereoisomers by comparing their structural formulas.
 distinguishing between cis- and trans-cycloalkanes.
 identifying benzene by structure.
 determining structures for the reaction products of carboxylic acids plus alcohols.
 predicting the outcome of ester hydrolysis reactions.
 identifying chiral carbons in organic molecules.
 distinguishing between enantiomers and diastereomers.

A student will demonstrate an understanding of basic biochemistry by:

identifying and distinguishing the different types of amino acids.
 identifying and illustrating the formation of peptides and proteins.
 discussing and distinguishing among the four different 3-D structures of proteins.
 identifying the functions of proteins.

****Students – please refer to the Instructor’s Course Information sheet for specific information on assessments and due dates.***

Part III: Grading and Assessment

EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS*

Students’ performance will be assessed and the weight associated with the various measures/artifacts are listed below.

EVALUATION*

Lecture	75%
Lab	25%
Total	100%

****Students, for the specific number and type of evaluations, please refer to the Instructor's Course Information Sheet.***

GRADING SYSTEM:

Please note the College adheres to a 10 point grading scale A = 100 – 90, B = 89- 80, C = 79 – 70, D = 69 – 60, F = 59 and below.

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the [academic calendar](#) for deadlines for add/drop. You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty is obligated to withdraw the student and a student may not be permitted to reenroll. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

For online and hybrid courses, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, instructors may require tests to be taken at approved testing sites, if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

Lecture Attendance:

The allowed number of absences for a MW or TR class is as follows: four (4) absences are allowed for lecture, regardless of reason. For a lecture class that meets once a week, the allowed number of absences is two (2). When a student surpasses the allowed number of absences, the student will be withdrawn automatically from the course with a W or a WF. Remember, an absence is an absence, no matter if it is excused or not!

Lab Attendance:

Students are allowed two (2) lab absences for a lab that meets weekly. When a student surpasses the allowed number of absences, the student will be withdrawn automatically from the course with a W or a WF.

Online/Hybrid Attendance:

Students enrolled in distance learning courses (hybrid and online) are required to maintain contact with the instructor on a regular basis to be counted as "in attendance" for the course. All distance learning students must participate weekly in an academic activity in order to demonstrate course participation. For an online lecture, the allowed number of absences is two weekly lecture absences. For an online lab, the allowed number of absences is two weekly lab absences. Students showing no activity in the course for more than two weeks (these weeks do not need to be consecutive) will be withdrawn due to lack of attendance.

Lab Attendance for Hybrid Courses:

Students in hybrid classes in which labs meet weekly, are allowed two (2) lab absences. Students in hybrid labs that only meet 5 or 6 times during the semester, must attend all lab sessions for its entirety. When a student surpasses the allowed number of absences, the student will be dropped automatically from the course with a W or a WF.

Part V: Student Resources**THE STUDENT SUCCESS AND TUTORING CENTER (SSTC):**

The SSTC offers to all students the following **free** resources:

1. **Academic tutors** for most subject areas, **Writing Center support**, and **college success skills**.
2. Online **tutoring** and academic support resources.
3. Professional and interpersonal communication **coaching** in the EPIC Labs.

Visit the [Student Success & Tutoring Center](#) website for more information. To schedule tutoring, contact the SSTC at sstc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email sstc@hgtc.edu or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the [Online Resource Center](#) to access on-demand resources.

**STUDENT INFORMATION CENTER: TECH Central**

TECH Central offers to all students the following **free** resources:

1. **Getting around HGTC:** General information and guidance for enrollment, financial aid, registration, and payment plan support!
2. Use the [Online Resource Center \(ORC\)](#) including Office 365 support, password resets, and username information.

3. **In-person workshops, online tutorials and more services** are available in Desire2Learn, Student Portal, Degree Works, and Office 365.
4. **Chat with our staff on TECH Talk**, our live chat service. TECH Talk can be accessed on the student portal and on TECH Central's website, or by texting questions to (843) 375-8552.

Visit the [Tech Central](#) website for more information. Live Chat and Center locations are posted on the website. Or please call (843) 349 – TECH (8324), Option #1.

STUDENT TESTING:

(If course is offered in multiple format include this section, delete if only F2F sections are offered.)

Testing in an **online/hybrid** course may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms

Furthermore tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through our online proctoring service. To find out more about proctoring services, please visit the [Online Testing](#) section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

DISABILITY SERVICES:

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to HGTC's [Accessibility and Disability Service webpage](#). The Accessibility and Disability staff will review documentation of the student's disability and, in a confidential setting with the student, develop an educational accommodation plan.

Note: It is the student's responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided.

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Horry-Georgetown Technical College prohibits discrimination and harassment, including sexual harassment and abuse, on the basis of race, color, sex, national or ethnic origin, age, religion, disability, marital or family status, veteran status, political ideas, sexual orientation, gender identity, or pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation in educational programs and/or activities.

TITLE IX REQUIREMENTS:

All students (as well as other persons) at Horry-Georgetown Technical College are protected by Title IX—regardless of their sex, sexual orientation, gender identity, part- or full-time status, disability, race, or national origin—in all aspects of educational programs and activities. Any student, or other member of the college community, who believes that he/she is or has been a victim of sexual harassment or

sexual violence may file a report with the college's Chief Student Services Officer, campus law enforcement, or with the college's Title IX Coordinator, or designee.

*Faculty and Staff are required to report incidents to the Title IX Coordinators when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

INQUIRIES REGARDING THE NON-DISCRIMINATION/TITLE IX POLICIES:

Student and prospective student inquiries concerning Section 504, Title II, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs.

Dr. Melissa Batten, VP Student Affairs

Title IX Coordinator

Building 1100, Room 107A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5228

Melissa.Batten@hgtc.edu

Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources.

Jacquelyne Snyder, VP Human Resources

EEO and Title IX Coordinator

Building 200, Room 212A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5212

Jacquelyne.Snyder@hgtc.edu