



INSTRUCTIONAL PACKAGE

HRT 110

Plant Form and Function

Effective Term

Fall 2023/Spring 2024/Summer 2024

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: Fall 2023/Spring 2024/Summer 2024

COURSE PREFIX: HRT 110

COURSE TITLE: Plant Form and Function

CONTACT HOURS: 6.0

CREDIT HOURS: 4.0

RATIONALE FOR THE COURSE:

A basic understanding of plant biology (botany) is critical for persons in supervisory positions to maintain high-quality and healthy turfgrasses and landscape plants. This course is designed to provide this necessary information on how plants grow and function.

COURSE DESCRIPTION:

This course studies morphology, anatomy, and physiology of higher plants. Emphasis is on plant structure, functions of plant parts, plant processes, plant growth and development, and plant inheritance

PREREQUISITES/CO-REQUISITES:

None

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.

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's learning management system (LMS) used for course materials.

Access to myHGTC portal for student self-services.

College email access – this is the college's primary official form of communication.

STUDENT IDENTIFICATION VERIFICATION:

Students enrolled in online courses will be required to participate in a minimum of one (1) proctored assignment and/or one (1) virtual event to support student identification verification. Please refer to your Instructor Information Sheet for information regarding this requirement.

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](#).

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

UNIT I Introduction to Plant Biology and Classification (Chapters 1 and 16)

The student should be able to describe Botany as a Science and have an ability to understand the diversification of plants. Students will understand the importance of the development of the Binomial System of Nomenclature and be able to classify the major groups associated within the plant community.

UNIT II Chemistry of Plant Life (Chapter 2) The student will be able to develop and in depth knowledge of the following concepts as related to chemistry and plant life. The Elements, Molecules, Valence, Bonds and Ions, Acids, Bases, and Salts, The pH Scale, Energy and Monomers and Polymers

Unit III Cells and Tissues (Chapters 3 and 4)

Students will have a working knowledge of plant cells and tissues. Students be able to describe Cell History, Eukaryotic vs. Prokaryotic Cells, Cell Structure and Communication, Cellular Components, Cellular Reproduction (Mitosis), Higher Plant Cells vs. Animal Cells, Meristematic Tissues, and Tissues Produced by Meristems (Simple and Complex Tissues)

Unit IV. Roots, Stems, and Leaves (Chapters 5, 6, and 7)

Students will be able to identify the types of plant structures and their role in plant physiology. How roots develop, root structure, specialized roots, root nodules, external form of a woody twig, origin and development of stems, tissues patterns in stems, specialized stems, leaf arrangements and types, internal structure of leaves, stomata, mesophyll and veins, specialized leaves, autumnal changes in leaf color, and abscission

Unit V. Reproduction in Plants (Chapters 8, 12, and 23)

Students will describe the differences between dicots and monocots. Understand the role of structures in flowers. Additionally, students will demonstrate the importance of fruits and seed development and dispersal. Students will also explain the phases of meiosis, alternation of generations and the life cycle of flowering plants.

Unit VI. Water in Plants (Chapter 9)

Students will be able to apply the following concepts molecular movement, water and its movement through the plant, regulation of transpiration, and the transport of food substances in solution.

Unit VII. Plant Metabolism and Growth (Chapters 10 and 11)

Students will have and understanding of photosynthesis and respiration, plant hormones, hormonal interactions

and photoperiodism.

***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*

EXAMPLE 1 - Module #1

Materials Covered: Unit 2 Chemistry of Plant Life

***Assessment(s):** Research activity.

Learning Outcomes:

1. Describe how a part of an organism can be dead and the other alive.
2. Explain difference between inherited form and form resulting from response to environment.
3. Explain what might happen if all enzymes were to work at half their usual speed.

EXAMPLE 1 - Module #2

Materials Covered: Unit 6 Reproduction in Plants

***Assessment(s):** Lab activity

Learning Outcomes:

1. Understand what *Brownian movement* is and why it occur.
2. Know and understand diffusion, osmosis, dialysis, and plasmolysis.
3. Explain how auxin and gibberellin affect stem growth; what tropisms are and why they occur; etiolation ; and the effect of ethylene on leaf abscission.

Tests	25%
Assignments	25%
Lab	25%
Homework	<u>25%</u>
	100

***Students, for the specific number and type of evaluations, please refer to the**

Instructor's Course Information Sheet.

GRADING SYSTEM:

State the College's or departmental grading system as delineated in the Catalog. 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, and if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

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 ssc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email ssc@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.



HGTC LIBRARY:

Each campus location has a library where HGTC students, faculty, and staff may check out materials with their HGTC ID. All three HGTC campus libraries are equipped with computers to support academic research and related school work; printing is available as well. Visit the [Library](#) website for more information or call (843) 349-5268.

STUDENT TESTING:

Testing in an **online/hybrid** course and in **make-up exam** situations may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper

- Test administered through Publisher Platforms (which may have a fee associated with the usage) 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, Title VII, 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, Section 504, and Title II 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

Affirmative Action/Equal Opportunity Officer and Title IX Coordinator
Building 200, Room 205B, Conway Campus
PO Box 261966, Conway, SC 29528-6066
843-349-5212

Jacquelyne.Snyder@hgtc.edu