



INSTRUCTIONAL PACKAGE

IST 166

NETWORK FUNDAMENTALS

Effective Term
SPRING 2019

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Part I: Course Information

Effective Term: SPRING 2019

COURSE PREFIX: IST 166

COURSE TITLE: NETWORK FUNDAMENTALS

CONTACT HOURS: 5

CREDIT HOURS: 3

RATIONALE FOR THE COURSE:

The purpose of this course is to provide the student with the fundamental concepts of networking, including terminology, equipment, software and procedures used in the communications industry.

COURSE DESCRIPTION:

This course is a study of local area networking concepts through discussions on connectivity, communications and other networking fundamentals. The course is designed to prepare the student to be successful in completing industry network fundamental certification exams.

PREREQUISITES/CO-REQUISITES:

CPT 209 Computer Systems Management

REQUIRED MATERIALS:

No textbook is required for this course.

ADDITIONAL REQUIREMENTS:

This class will require considerable time and effort outside of the regular class hours in order to successfully complete the project, labs, and exams.

USB Jump Drive

All assignments are due by the due date and time, no exceptions. Student must schedule time on campus in a computer lab to complete assignments until the student home computer is working properly.

TECHNICAL REQUIREMENTS:

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

WaveNet and D2L email access.

Web browser, Comodo Ice Dragon, Mozilla Firefox or Google Chrome are preferred

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*:

- Describe basic network components and how they impact our lives.
- List and describe all layers of the OSI and TCP/IP models and how they relate to the structure of a network.
- Describe the Application Layer functionality and protocols.
- Describe the role of the Transport Layer and the TCP and UDP protocols.
- List the steps of data encapsulation in an internetwork.
- Describe how information is routed from one network to another using the IP protocol in the Network Layer.
- Describe and solve problems in converting binary numbers to and from decimal.
- Describe the function and structure of IP addressing.
- Use testing utilities to verify and test network connectivity.
- Describe the role of Data Link Layer protocols in data transmission.
- Identify and describe the purposes of devices used in networking.
- Describe the specifications and performances of different types of networking media.
- Describe the operation of an Ethernet network.
- Create a small peer-to-peer and switched network.
- List and explain dynamic addressing techniques.
- Use a subnet mask to determine a subnet ID.
- Create an IP subnet.
- Perform basic router configuration using the command line interface

****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

<i>Chapter Exams</i>	30%
<i>Assignments</i>	50%
<i>Final Exam</i>	20%
Total Points	100%

NOTE: The final exam cannot be exempted. If you do not take the final exam, you will receive a zero (0). You must also take the final at the pre-set time for your course as outlined by the HGTC Administration. There are no make-up exams for the final.

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

GRADING SYSTEM:

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 ([ACADEMIC CALENDAR](#)). 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 eighty percent (80%) of his or her classes in order to be eligible to receive credit for any course. However, due to the varied nature of courses taught at the College, a more rigid attendance policy may be required by individual instructors. At a minimum, a student may be withdrawn from a course(s) after he or she has been absent in excess of ten percent (10%) of the total contact hours for a course. **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.

Part V: Student Resources

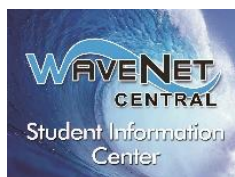


The Student Success and Tutoring Center (SSTC)

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

1. **Academic coaches** for most subject areas, **Writing Center Support**, and **college success skills**.
2. **On-line student success and academic support resources**.

Visit the SSTC website: [Student Success & Tutoring Center](#) and visit the student services tab in your WaveNet account to schedule appointments using TutorTrac. For more information, call: SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455. Room locations and Live Chat is available on the SSTC website.



Student Information Center: WaveNet Central (WNC)

WNC offers to all students the following **free** resources:

1. **Getting around HGTC**: General information and guidance for enrollment!
2. Use the [Online Resource Center \(ORC\)](#) for COMPASS support, technology education, and online tools.
3. **Drop-in technology support or scheduled training** in the Center or in class.
4. **In-person workshops, online tutorials and more services** are available.

Visit the WNC website: [Wavenet Central](#). Live Chat and Center locations are posted on the website. Or please call one of the following locations: WNC Conway, 349-5182; WNC Grand Strand, 477-2076; and WNC Georgetown, 520-1473.

Disability Services:

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to Beth Havens, Director of Student Development on the Conway Campus Jaime Davis, Counselor/Advisor on the Georgetown Campus or Kristin Griffin, Counselor on the Grand Strand Campus. These individuals 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, gender, national or ethnic origin, age, religion, disability, marital status, veteran status, sexual orientation, gender identity, or pregnancy in educational programs and/or activities.

Title IX Requirements

Horry Georgetown Technical College prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking. Any student who believe he or she has experienced or witnessed discrimination including sexual harassment, domestic violence, dating violence, sexual assault or stalking is encouraged to report such incidents to one of the College's Title IX Coordinators.

*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 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 Associate Vice President for Student Affairs.	Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Associate Vice President for Human Resources.
Dr. Melissa Batten, AVP Student Affairs <i>Title IX Coordinator</i>	Jacquelyne Snyder, AVP Human Resources <i>Section 504, Title II, and Title IX Coordinator</i>
Building 1100, Room 107A, Conway Campus PO Box 261966, Conway, SC 29528-6066 843-349-5228 Melissa.Batten@hgtc.edu	Building 200, Room 212A, Conway Campus PO Box 261966, Conway, SC 29528-6066 843-349-5212 Jacquelyne.Snyder@hgtc.edu