### **Computer Science Technology Department**

Houston Community College



## ITNW 1425 Fundamentals of Networking Technologies Course Syllabus

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Course Reference Number (CRN)	73262	Course Level	Beginning
Course Description:	Introduction to the fundamentals, basic concepts, and terminology of networks. Topics include the access and use of the Internet and networking hardware and software, including current developments in networking.		
Course Prerequisite(s)	Must be at college-level skills in reading, writing, and mathematics		
Course Semester Credit Hours (SCH) (Lecture, Lab)	Credit Hours 4.0 (Lecture 3, Lab 3)		
Course Location/Times	ON LINE 24/7	Total Course Contact Hours	96
Instructional Materials - TEXT	Guide to Networking Essentials, Fifth Edition. Author: Tomsho, Tittle & Johnson. ISBN: 1418837180. Publisher: Cengage.		
Instructional Methods (select one)	On Line	Type of Instruction (Lecture/Lab, Lecture, COOP, Practicum	Lecture/ Lab
Course Length (number	of weeks)	16 Weeks	_

## Instructor's Requirements

The grading scale is a follows:

COURSE GRADING:		
25%	Final Exam	
25%	Mid-Term Exam	
40%	Chapter Quizzes	
10%	Hands-on Assignments/Field Trip	
100%	TOTAL	

EXAMS: MID-TERM 25%, FINAL EXAM 25%

Each exam is composed to test knowledge and skills acquired through reading and participation.

Exams are an evaluation of your individual knowledge and skill acquired.

#### **CHAPTER QUIZZES 40%**

Quizzes are an evaluation of your individual knowledge and skill acquired.

INTRODUCTION AND FIELD TRIP AND/OR HANDS-ON ASSIGNMENTS 10% Your instructor will give you more specific information regarding this section.

#### **OVERVIEW OF THE COURSE**

This three-credit course serves as a general introduction for students to acquire a foundation in current network technologies: local area networks (LANs), wide area networks (WANs), and the Internet. It provides an introduction to the hardware, software, terminology, components, design, and connections of a network, as well as the topologies and protocols for LANs. It covers LAN-user concepts and the basic functions of system administration and operation. The course uses a combination of lectures, demonstrations, discussions, and hands-on labs. In this course, we will take an in depth look at some advanced networking concepts and techniques. We will examine theoretical concepts that make the world of networking unique. Also, this course will adopt a practical hands-on approach when examining networking techniques. Along with examining different networking strategies, this course will explore the advancement of network development, as well as, timeless problem solving strategies

#### **END OF COURSE OUTCOMES**

End-of-Course Outcomes: Identify and use network transmission media; explain the OSI model; Identify the characteristics of network topologies and protocols; identify the functions of a network operating system and distinguish between centralized, client/server, and peer-to-peer systems; and distinguish between Local Area Networks (LANs) and Wide Area Networks (WANs) and identify the components used to expand a LAN into a WAN.

The Final Exam requires an on-campus visit. Potential conflicts should be resolved individually with your Instructor.

<u>DE Course Orientation:</u> Each student is expected to complete the Distance Education Department's orientation. You complete an orientation for each course you are taking. Click on the "Orientations" link on the Distance Education's home page at: <a href="http://de.hccs.edu/portal/site/de/">http://de.hccs.edu/portal/site/de/</a>

Blackboard Technical Support for HCC: HCC has contracted with Blackboard and Presidium Learning to establish a 24/7 support environment to provide comprehensive technical help desk services for all users (students, faculty, and staff). There will be a 24/7 toll-free phone service, a comprehensive online Blackboard Vista knowledge base, real-time chat and the ability to submit and track a "trouble ticket". Click on the "Support Center" link on the Distance Education's home page at: http://de.hccs.edu/portal/site/de/

#### NOTICE FOR STUDENTS OUTSIDE OF HCC SERVICE AREA

Students who live or work outside the HCC service area and cannot take paper exams at one of our HCC testing locations MUST make arrangements for a proctor. Please see the DE Student Services Additional Resources webpage for more information.

#### **BLACKBOARD STUDENT USER ID**

Your Blackboard login user ID will be your HCC User ID (sometimes referred to as the "W" number). All HCC students have a unique User ID. If you do not know your User ID you can look it up by visiting the HCC home page:

- From www.hccs.edu, under the column "CONNECT", click on the "Student System Sign In" link
- o Then click on "Retrieve User ID" and follow the instructions.

Or use the direct link to access the Student Sign in page: <a href="https://hccsaweb.hccs.edu:8080/psp/csprd/?cmd=login&languageCd=ENG">https://hccsaweb.hccs.edu:8080/psp/csprd/?cmd=login&languageCd=ENG</a>

The default student password is "distance." Students will then be prompted to change their password after their first login. Please visit the Distance Education Technical Support website if you need additional assistance with your login.

Use this direct link to access the Blackboard Student Sign in page: <u>Log in to HCCS - Blackboard Vista</u>

DISTANCE EDUCATION (DE) ADVISING AND COUNSELING SERVICES

Much DE student information can be found on the DE Student Services website:

<u>de.hccs.edu</u>. Advising or counseling can be accomplished through our online request form <u>AskDECounseling</u>. Counselors and Student Services Associates (SSA) can assist students with admissions, registration, entrance testing requirements, degree planning, transfer issues, and career counseling. In-person, confidential sessions can also be scheduled to provide brief counseling and community referrals to address personal concerns affecting academic success.

#### ASKDECOUNSELING FORM

AskDECounseling is a student services online help form. This is the best and quickest way for students to get accurate assistance with DE registration, enrollment, advising, and counseling. The online help form is simple to fill out, convenient, and readily accessible through the internet. Students do not have to travel to campus sites, leave work, or wait in an office or lobby to receive assistance. Upon submission, student requests are answered in the order they are received.

#### **EARLY ALERT**

HCC has instituted an Early Alert process by which your professor may "alert" you and DE counselors that you might fail a class because of excessive absences and/or poor academic performance. A counselor will then reach out to you to discuss your progress and offer any relevant resources. This initiative is designed to provide students with support services and resources to assist them in successfully completing their course.

#### HCC COURSE WITHDRAWAL POLICY

Beginning fall 2007, the State of Texas imposes penalties on students who withdraw/drop courses excessively. Students are limited to no more than SIX total course withdrawals throughout their educational career at a Texas public college or university. Students are encouraged to review the <a href="HCC 6 Drop Policy">HCC 6 Drop Policy</a>. To help you avoid having to withdraw from any class, contact your DE professor regarding your academic performance. You may also want to contact your DE counselor to learn about helpful HCC resources (e.g. online tutoring, child care, financial aid, job placement, etc.).

#### **HOW TO DROP**

- If a student decides to withdraw from a class upon careful review of other options, the student can withdraw online prior to the deadline through their <u>HCC Student Center.</u>
- HCC and/or professors may withdraw students for excessive absences without notification (see Class Attendance below).
- Students should check HCC's Academic Calendar by Term for withdrawal dates and deadlines. Classes of other duration (flex-entry, 8-weeks, etc.) may have different final withdrawal deadlines. Please contact the HCC Registrar's Office at 713.718.8500 to determine mini-term class withdrawal deadlines.

#### **CLASS ATTENDANCE**

As stated in the HCC Catalog, all students are expected to attend classes regularly. Students in DE courses must log into their Blackboard class or they will be counted as absent. Just like an on-campus class, your regular participation is required.

Although it is the responsibility of the student to withdraw officially from a course, the professor also has the authority to block a student from accessing Blackboard, and/or to withdraw a student for excessive absences or failure to participate regularly. DE students who do not log into their Blackboard class before the Official Day of Record will be automatically dropped for non-attendance. Completing the DE online orientation does not count as attendance.

#### **DISABILITY SERVICES**

Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Support Services Office at the beginning of each semester. Professors are authorized to provide only the accommodations requested by the Disability Support Services Office.

DE students who are requesting special testing accommodations may choose the most convenient DSS office for assistance each semester:

District ADA Coordinator - Donna Price - 713.718.5165

Central ADA Counselors – Jaime Torres & Martha Scribner – 713.718.6164

Northeast ADA Counselor- Kim Ingram – 713.718.8420

Northwest ADA Counselor – Mahnaz Kolaini – 713.718.5422

Southeast ADA Counselor - Jette Lott - 713.718.7218

Southwest ADA Counselor – Dr. Becky Hauri – 713.718.7910

Coleman ADA Counselor - Dr. Raj Gupta - 713.718.7631

After student accommodation letters have been approved by the DSS office and submitted to DE Counseling for processing, students will receive an email confirmation informing them of the Instructional Support Specialist (ISS) assigned to their professor.

#### LIBRARY RESOURCES

As a DE student you have the same access to first-rate information resources that the HCC Libraries make available to all HCC students. A special website pulls together all the tools DE students will need to complete research. Visit <u>Library Resources</u> specifically for Distance Education students.

Library services are available throughout HCC. Through a daily library delivery service and a listing of all materials belonging to HCC libraries, books may be requested from and delivered to any campus library. HCC also has cooperative borrowing agreements with the University of Houston libraries and provides a copy of the Houston Public library catalog at each library. These arrangements provide students with access to over 4 million volumes.

Special services provided by the library system include photocopying facilities;

specialized equipment for disabled students; group and personalized instruction in library use, including a self-instructional media program to orient students to the use of the HCCS libraries; a "term paper" workshop; and online bibliographic search services.

#### **ONLINE TUTORING**

HCC provides free online tutoring in writing, math, science, and other subjects. Look for Ask Online on your Blackboard log-in page. This directs students to the HCC <u>AskOnline</u> Tutoring site: <a href="http://hccs.askonline.net/">http://hccs.askonline.net/</a>. Use your student ID or HCC e-mail address to create an account. Instructions, including a 5-minute video, are provided to make you familiar with the capabilities of this service.

#### SOCIAL NETWORKING

DE students are encouraged to become a fan of <u>DE on Facebook</u> and follow <u>DE on Twitter</u>. These social networking sites can provide a sense of community for the online learner, as well as up-to-date information and announcements related to HCC and DE.

#### VIRTUAL CLASSROOM CONDUCT

As with on-campus classes, all students in HCC Distance Education courses are required to follow all HCC Policies & Procedures, the Student Code of Conduct, the Student Handbook, and relevant sections of the Texas Education Code when interacting and communicating in a virtual classroom with your professor and fellow students. Students who violate these policies and guidelines will be subject to disciplinary action that could include denial of access to course-related email, discussion groups, and chat rooms or even removal from the class.

## Instructor Grading Criteria

Grade	GPA Points
A = 100-90	4 points per semester hour
B = 89 - 80:	3 points per semester hour
C = 79 - 70:	2 points per semester hour
D = 69 - 60:	1 points per semester hour
59 and below = F	0 points per semester hour
IP (In Progress)	0 points per semester hour
W(Withdrawn)	0 points per semester hour
I (Incomplete)	0 points per semester hour
AUD (Audit)	0 points per semester hour

#### **COURSE OUTLINE/CALENDAR**

Dates	Cut Off Dates	Learning Modules	Notes
Jan 18	TBA	Classes Begin –	
		Introduction Module 1 Chapter 1	
Jan 25	TBA	Module 2 Chapter 2	
Feb 1	TBA	Module 3 Chapter 3	

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May 6		Final Exam on-campus – Southeast College	
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TBA	TBA	Field trip to be announced	
May 2	TBA	Module 14 Chapter 14	
Apr 25	TBA	Module 13 Chapter 13	
Apr 18	TBA	Module 12 Chapter 12	
Apr 11	TBA	Module 11 Chapter 11	
Apr 4	TBA	Module 10 Chapter 10	
Mar 28	TBA	Module 9 Chapter 9	
Mar 21	TBA	Module 8 Chapter 8	
Mar 14 - 20		Spring Break	
Mar 9-10th	TBA	Midterm exam Chapters 1-7	
Feb 28	TBA	Module 7 Chapter 7	
Feb 21	TBA	Module 6 Chapter 6	
Feb 15	TBA	Module 5 Chapter 5	
Feb 8	TBA	Module 4 Chapter 4	

Click here for a list of official HCC Spring 2011 dates.

# Learning Objective, Students Learning Outcome, and Program Spec

**Note**: This section of the syllabus provides the general course learning objectives, the expected students learning outcome, the course scope in terms of the department program, and the instrument used to evaluate the course. If you have any question, contact the instructor or the department.

HCC Grading Scale		
	Grade	GPA Points
	A = 100- 90	4 points per semester hour
	B = 89 - 80:	3 points per semester hour
	C = 79 - 70:	2 points per semester hour
	D = 69 - 60:	1 points per semester hour
	59 and below = F	0 points per semester hour
	IP (In Progress)	0 points per semester hour
	W(Withdrawn)	0 points per semester hour
	I (Incomplete)	0 points per semester hour
	AUD (Audit)	0 points per semester hour
Course Student Learning Outcomes (SLO):	To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP," "COM" and "I" do not affect GPA.  1. Identify network transmission media. 2. Identify the characteristics of OSI, Model, network topologies and protocols. 3. Identify the functions of a network operating system 4. Distinguish between centralized, client/server, and peer-to-peer systems; 5. Distinguish between Local Area Networks (LANs) and Wide Area Networks (WANs) 6. Identify the components used to expand a LAN into a WAN.	
Learning Objectives		
Student Assignments	Refer to the Curse Calendar	
Student Assessment(s)	Assessment criteria under development for the following:  1. Identify network transmission media.  2. Identify the characteristics of OSI, Model, network topologies and protocols.  3. Identify the functions of a network operating system  4. Distinguish between centralized, client/server, and peer-to-peer systems;  5. Distinguish between Local Area Networks (LANs) and Wide Area Networks (WANs)  6. Identify the components used to expand a LAN into a WAN.	
Program/Discipline Requirements:	Instructors will use syllabus that will satisfy CurricuUNET requirements and improve ongoing assessment of student-centered learning and teaching.	
Academic Discipline/CTE Program Learning	Install, configure, upgrade, and troubleshoot personal computer operating systems. Install, configure and troubleshoot networking hardware, protocols and services.	

SCANS and/or Core Curriculum Competencies:	Manage and maintain Microsoft Windows Server 2008 Environment/Network Infrastructure. Demonstrate knowledge in General Security Concepts, Communication Security, Infrastructure Security, and Unified Communications  C1. Allocate Time C5. Acquires and Evaluates Information F7. Creative Thinking C7. Interprets and Communicates Information C15. Understands Systems C18. Selects Technology	
HCC Policy Statement		
Access Student Services Policies on their Web site:	http://hccs.edu/student-rights	
Distance Education and/or Continuing Education Policies		
Access DE Policies on their Web site:	http://de.hccs.edu/de/de-student-handbook	
Access CE Policies on their Web site for non-credit classes:	http://hccs.edu/CE-student-guidelines	
Competencies:		