

# Fundamentals Of Networking

## ITNW-1325

Spring 2014 Section SECTION\_302 CRN-22462 3 Credits 01/13/2014 to 05/06/2014 Modified 01/06/2014

### Meeting Times

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#### Classroom

Tuesday, Thursday, 9:10 AM to 10:25 AM, Bryan Campus E-233

#### Lab

Thursday, 10:35 AM to 11:50 AM, Bryan Campus E-233

### Contact Information

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#### Instructor: Mrs. Kelli M. Adam M.S.

Email: [Kelli.Adam@blinn.edu](mailto:Kelli.Adam@blinn.edu)

Office: Bryan Campus E227

Phone: 979-324-8985 cell/text

#### Office Hours

Monday, 11:00 AM to 12:00 PM, E-210, Student Center, Bryan Campus or Lab/Room E-233

Tuesday, 10:30 AM to 11:30 AM, E-210, Student Center, Bryan Campus or Lab/Room E-233

### Description

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Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.

#### Requisites

Prerequisites: Appropriate scores on the reading and math portions of the THEA Test or alternate test OR completion of the Math, Reading, and Study Skills developmental course sequences.

Corequisites:

### Core Curriculum Statement

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This course is not a core curriculum course.

### Outcomes

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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

Distinguish between Local Area Networks (LANs) and Wide Area Networks (WANs) and identify the components used to expand a LAN into a WAN

## Materials

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### CompTIA Network+ N10-005 Authorized Cert Guide

**Author:** Kevin Wallace

**Publisher:** Pearson

**Edition:** 12

**ISBN:** 978-0-7897-4821-8

**Availability:** Campus Bookstore

©2012 • Hardcover with DVD, 576 pp

### Flash Drive

USB Flash thumb drive.

## Course Requirements

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CompTIA Network+ certification exam.

Transfers by title to the Technology Management Program in the College of Education and Human Development at Texas A&M University, College Station, Texas.

Transfers to BAAS degree at SHSU.

Transfers to BAS-IT degree at UHCL.

## Evaluation

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### Criteria

Type	Weight	Topic	Notes
Exams	50%		Four major exams and a comprehensive final exam each worth 10% of the course grade
Course Project	20%		A small-team course project designing a local area network
Assignments and Labs	20%		Hardware and software
Class Participation	10%		Daily contributions to discussion and labs

## Blinn College Policies

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Blinn College policies on civility, class attendance; scholastic integrity; students with disabilities; final grade appeals; and electronic devices as stated in the Blinn College Student Handbook, Faculty Handbook, Blinn College Catalog and specific technical program handbooks. All policies, guidelines and procedures in the Student and Faculty Handbook and the Board and Administrative Policy Manuals are applicable to this course

### Civility Statement

Members of the Blinn College community, which includes faculty, staff and students, are expected to act honestly and responsibly

in all aspects of campus life. Blinn College holds all members accountable for their actions and words. Therefore, all members should commit themselves to behave in a manner that recognizes personal respect and demonstrates concern for the personal dignity, rights, and freedoms of every member of the College community, including respect for College property and the physical and intellectual property of others.

**Civility Notification Statement.** If a student is asked to leave the classroom because of uncivil behavior, the student may not return to that class until he or she arranges a conference with the instructor; it is the student's responsibility to arrange for this conference.

This statement reflects step one in a possible four step process. The Incivility Protocol is detailed in the [Blinn College Student Handbook](http://www.blinn.edu/student%20handbook.pdf). (<http://www.blinn.edu/student%20handbook.pdf>)

## Attendance Policy

The College District believes that class attendance is essential for student success; therefore, students are required to promptly and regularly attend all their classes. A record of attendance will be maintained from the first day of classes and/or the first day the student's name appears on the roster through final examinations. If a student has one week's worth of unexcused absences during the semester, he or she will be sent an e-mail by the College District requiring the student to contact his or her instructor and schedule a conference immediately to discuss his/her attendance issues. Should the student accumulate two weeks' worth of unexcused absences, he or she will be administratively withdrawn from class.

There are four forms of excused absences recognized by the institution:

1. observance of religious holy days—The student should notify his or her instructor(s) not later than the 15<sup>th</sup> day of the semester concerning the specific date(s) that the student will be absent for any religious holy day(s);
2. representing the College District at an official institutional function;
3. high school dual credit students representing the independent school district at an official institutional function; and
4. military service.

Other absences may be considered excused at the discretion of the faculty member with appropriate documentation. A student enrolled in a developmental course is subject to College District-mandated attendance policies. Failure to attend developmental classes shall result in removal from the course as defined by the College District.

It is the student's responsibility to officially drop a class he or she is no longer attending. To officially drop a class the student must obtain the class withdrawal form from Enrollment Services, complete the class withdrawal form, secure the required signatures, and return the completed form to Enrollment Services. The last day to drop with a Q is according to the [Academic Calendar](http://calendar.blinn.edu/events/academic_calendar.pdf) ([http://calendar.blinn.edu/events/academic\\_calendar.pdf](http://calendar.blinn.edu/events/academic_calendar.pdf)).

## Scholastic Integrity

Blinn College does not tolerate cheating, plagiarism, or any other act of dishonesty with regard to the course in which you are enrolled. The following text defines the faculty member's responsibility with regard to the scholastic integrity expectation for this and all courses at Blinn College.

It is the responsibility of faculty members to maintain scholastic integrity at the College District by refusing to tolerate any form of scholastic dishonesty. Adequate control of test materials, strict supervision during testing, and other preventive measures should be utilized, as necessary, to prevent cheating or plagiarism. If there is compelling evidence that a student is involved in cheating or plagiarism, the instructor should assume responsibility and address the infraction. Likewise, any student accused of scholastic dishonesty is entitled to due process as outlined in Blinn College Board Policy FLB (Local). The Scholastic Integrity Policy is located in the [Blinn College Student Handbook](http://www.blinn.edu/student%20handbook.pdf). (<http://www.blinn.edu/student%20handbook.pdf>) In a case of scholastic dishonesty, it is critical that written documentation be maintained at each level throughout the process.

## Students with Disabilities

Blinn College is dedicated to providing the least restrictive learning environment for all students. Support services for students with documented disabilities are provided on an individual basis, upon request. Requests for services should be made directly to the Office of Special Populations serving the campus of your choice. For the Bryan campus, the Office of Special Populations (Administration Building) can be reached at (979)209-7251. The

Brenham, Sealy and Schulenburg campuses are served by the Office of Special Populations on the Brenham campus (Administration Building Room 104) and can be reached at (979)830-4157. Additional information can be found at [www.blinn.edu/disability/index.html](http://www.blinn.edu/disability/index.html).

## Final Grade Appeal

If a student wishes to appeal a final grade in a course, Blinn College Board Policy FLDB (Local), Course Grade Complaints, outlines the timeline for the appeal and the four steps in the appeal. This policy is located in the [Blinn College Student Handbook](http://www.blinn.edu/student%20handbook.pdf). (<http://www.blinn.edu/student%20handbook.pdf>)

## Electronic Devices

Cellular telephones and beepers/pagers must be disengaged while the student is in the Blinn College Library or any classroom/lab, unless otherwise instructed. Any noncompliance with this policy shall be addressed in accordance with the College District civility policy (administrative policy). This information is contained in Blinn College Board Policy FLB (Local).

## \* Course Policies

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### Student Email

Blinn students are issued email addresses by Blinn College. Your Blinn email account is the **OFFICIAL** means of communication between the instructor and the student.

### Exam Review Procedures

Regular exams will be administered online. Students are encouraged to question exam answers via research and study. Opinions are nice but will not override facts. If there is an error in the questions or answers as posted, please notify me via email so the class may receive credit and the exam may be improved.

### Deadlines for Assignments and Labs

Assignment Zero (Asg0), found in each course on eCampus, **MUST** be completed before a student will be allowed to take a regular exam.

Students will submit their assignments and labs **before the beginning of class** on the date the assignment is due. Credit for late submissions is at the discretion of the Instructor.

### Reading and Research

In order to be successful in the computer field one must build an extensive personal library. Different authors and imprints have varied approaches as to how they present information. Books used in the program were selected based on extensive research by the instructors; however, the approach may not be a style which you find comfortable. To fully understand content and concepts you may need to acquire additional references or visit additional sources. You are encouraged to do research on the Web, visit the Blinn Library or purchase additional texts to aid in your education.

### Information Technology Lab Hours and Decorum

The Program maintains a laboratory of computers that have all required application programs required by all IT courses. Use of the laboratory is not required if you have access to alternate resources. Feel free to use them. The normal hours of operation of this lab are 0800 to 2100. The lab is closed on weekends and College holidays.

Because the laboratory and the classroom are the same room, please guard your behavior while classes are in session. Your dress and behavior should reflect your training for a professional position. Hats will be removed while in the lab. Food and tobacco products are not permitted. Recycle bins are stationed at both ladder wells for metal and plastic containers; use them instead of the lab trash cans for recyclable materials.

### Removable Hard Drives

The Program maintains a large number of removable hard drives (rhd) for use in the Dell T300 tower servers.

When the instructor determines need, a student or team will be issued a rhd for a course, which is recorded on the deconfliction sheets posted on the blue doors to the front right side of the lab. Ensure proper insertion and locking of the rhd before powering the tower, and stopping of the tower before unlocking and removing the rhd from its cradle. Keys for the cradles stay in the lab. Deconfliction sheets may also indicate statically assigned IP addresses, in addition to the name of the student. Do not use a hard drive you have not been authorized. Store your rhd with the other rhds of its series on the shelves at the front of the lab. Maintain order and cleanliness of all lab spaces.

## Professional Disclaimer

Working with computers in any area provides a very challenging career. Changes in the computer industry are very rapid. The computer industry has created a 7/24 existence and service requirements are almost always an emergency. If you know anything about a computer, most users expect you to know everything. As a computer professional you are expected to keep up with the technology in almost every area. Your training and education as a Network Administrator only begins at Blinn College. To keep up with the rapid changes and the expanding environment you must continue learning every day.

The Information Technology Program at Blinn College expects students to perform in class the same way they would on the job. As a student of Information Technology you must read assignments in advance, research topics outside of class, and submit professional quality assignments. In short, you work your way through the program as if you were employed by the program. The instructors of the Information Technology Program view your time at Blinn College as on-the-job training.

The Information Technology Program is small enough that we take a serious interest in all our students. Your academic and professional development is important to us because your success is our success. You are encouraged to communicate openly with your instructors; you are also encouraged to communicate with the program coordinator for any reason.

## Learning Activities

Course information will be presented and described using a wide variety of methods. These methods may include but are not limited to, any of the following: Lecture, videos, slides, projects, web searches, student research resulting in written or oral reports, guest instructors, discussion of examinations, etc.

Instructors will not read from the book. Instructors will bring information to class from a variety of sources and will generally expand on information contained in the required readings.

## Schedule

14-Jan	Course Syllabus, Assignment 0	16-Jan	1: Introducing Computer Networks
21-Jan	2: Dissecting the OSI Model	24-Jan	2: Dissecting the OSI Model
28-Jan	3: Identifying Network Components	30-Jan	3: Identifying Network Components, Exam One (Lessons 1-3)
4-Feb	4: Understanding Ethernet	6-Feb	4: Understanding Ethernet
11-Feb	5: Working with IP Addresses	13-Feb	5: Working with IP Addresses
18-Feb	6: Routing Traffic	20-Feb	6: Routing Traffic, Exam Two (Lessons 4-6)
25-Feb	Introduce Course Project, Build a Private LAN	27-Feb	7: Introducing Wide-Area Networks
4-Mar	7: Introducing Wide-Area Networks	6-Mar	8: Connecting Wirelessly

11-Mar	<i>Spring Break</i>	13-Mar	<i>Spring Break</i>
18-Mar	8: Connecting Wirelessly	20-Mar	Course Project Brief 1
25-Mar	9: Optimizing Network Performance, Exam Three (Lessons 7-9)	27-Mar	9: Optimizing Network Performance
1-Apr	10: Using Command-Line Utilities	3-Apr	Course Project Brief 2
8-Apr	11: Managing a Network	10-Apr	11: Managing a Network
15-Apr	12: Securing a Network	17-Apr	12: Securing a Network
22-Apr	Course Project Presentations	24-Apr	13: Troubleshooting Network Issues, Exam Four (Lessons 10-13)
29-Apr	FINAL EXAM, Part 1	tbd	FINAL EXAM, Part 2