Network Systems: COSC 2366.002
Department of Computing Sciences
Spring 2018

A. COURSE INFORMATION

Course number/section: COSC-2366.002
Class meeting time: MW 3:30-4:45
Class location: CI 230
Course Website: http://bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: Dr. Mamta Yadav
Office location: EN 316N
Office hours: TR 9:30 AM – 12 Noon
Telephone: 361-825-2688
e-mail: Mamta.Yadav@tamucc.edu
Appointments: By e-mail

C. COURSE DESCRIPTION

Catalog Course Description
This course focuses on the standards and technologies used to establish inter-network structures that will support a TCP/IP data stream for higher-level services to operate over. This course introduces local area networks (LAN) and wide area networks (WAN). Topics include the TCP/IP and open system interconnection (OSI) models, cabling, switches, routers, protocols, subnetting, and networking hardware and software. Initial switch and router configuration will be examined and evaluated.

Extended Course Description
This course will help prepare students for the CCENT 100-105 test.

D. PREREQUISITES AND COREQUISITES

Prerequisites
COSC 1435 - Introduction to Problem Solving with Computers I, COSC 2365 - Linux Systems

Corequisites
None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)

Optional Textbook(s) or Other References
None
Supplies
None

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:
1. Work with various layers of the OSI and TCP/IP model.
2. Work with IP addressing and create subnet networks
3. Implement basic and advanced switching configurations
4. Implement basic routing configurations
5. Implement basic networking security principles

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Instructional methods will consist of lectures, in class exercises, homework assignments, and virtual/physical lab setups.

H. MAJOR COURSE REQUIREMENTS AND GRADING

Your course grade will be decided on your performance in the homework, quizzes, two mid-term exams, and the final exam. The distribution of points is as follows:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>50</td>
</tr>
<tr>
<td>Quizzes</td>
<td>15</td>
</tr>
<tr>
<td>Exercises</td>
<td>35</td>
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</tbody>
</table>

Grading scale: A: 100-90, B: 89-80, C: 79-70, D: 69-60, and F: 59-0.

Homework: Approximately 10 - 12 homework assignments will be given.

Exams: The first exam will be given on February 21, 2018, the second exam will be given on April 11, 2018 during the scheduled class time, and the final exam will be given on May 07, 2018 from 1:45 – 4:15 pm.
I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE (BY DAY)</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
<th>ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/17/18</td>
<td>OSI Networking Model</td>
<td>Chapter 1</td>
<td>HW1</td>
</tr>
<tr>
<td>01/22/18</td>
<td>Ethernet Networks</td>
<td>Chapter 2</td>
<td>HW2</td>
</tr>
<tr>
<td>01/24/18</td>
<td>Three Layer Hierarchical Model</td>
<td>Chapter 2</td>
<td></td>
</tr>
<tr>
<td>01/29/18</td>
<td>Introduction to TCP/IP</td>
<td>Chapter 3</td>
<td>HW3</td>
</tr>
<tr>
<td>01/31/18</td>
<td>Introduction to TCP/IP</td>
<td>Chapter 3</td>
<td></td>
</tr>
<tr>
<td>02/05/18</td>
<td>Easy Subnetting</td>
<td>Chapter 4</td>
<td>HW4</td>
</tr>
<tr>
<td>02/07/18</td>
<td>Variable Length Subnet Masks</td>
<td>Chapter 5</td>
<td>HW5</td>
</tr>
<tr>
<td>02/12/18</td>
<td>Cisco IOS</td>
<td>Chapter 6</td>
<td>HW6</td>
</tr>
<tr>
<td>02/14/18</td>
<td>Cisco IOS</td>
<td>Chapter 6</td>
<td></td>
</tr>
<tr>
<td>02/19/18</td>
<td>Cisco IOS</td>
<td>Chapter 6</td>
<td>Exercise 1</td>
</tr>
<tr>
<td>02/21/18</td>
<td>Exam 1</td>
<td>LO 1&amp;2</td>
<td></td>
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<tr>
<td>02/26/18</td>
<td>Managing a Cisco Internetwork</td>
<td>Chapter 7</td>
<td>HW7</td>
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<tr>
<td>02/28/18</td>
<td>Managing a Cisco Internetwork</td>
<td>Chapter 7</td>
<td></td>
</tr>
<tr>
<td>03/05/18</td>
<td>Managing a Cisco Internetwork</td>
<td>Chapter 7</td>
<td>Exercise 2</td>
</tr>
<tr>
<td>03/07/18</td>
<td>Managing Cisco Devices</td>
<td>Chapter 8</td>
<td>HW8</td>
</tr>
<tr>
<td>03/12/18</td>
<td>Spring Break – No Classes</td>
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<tr>
<td>03/14/18</td>
<td>Spring Break – No Classes</td>
<td></td>
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<tr>
<td>03/18/18</td>
<td>Managing Cisco Devices</td>
<td>Chapter 8</td>
<td>Exercise 3</td>
</tr>
<tr>
<td>03/21/18</td>
<td>IP Routing</td>
<td>Chapter 9</td>
<td>HW9</td>
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<tr>
<td>03/26/18</td>
<td>IP Routing</td>
<td>Chapter 9</td>
<td>Exercise 4</td>
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<tr>
<td>03/28/18</td>
<td>Layer 2 Switching</td>
<td>Chapter 10</td>
<td></td>
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<tr>
<td>04/02/18</td>
<td>Layer 2 Switching</td>
<td>Chapter 10</td>
<td>HW 10 &amp; Exercise 5</td>
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<tr>
<td>04/04/18</td>
<td>VLANs</td>
<td>Chapter 11</td>
<td>HW11</td>
</tr>
<tr>
<td>04/09/18</td>
<td>VLANs</td>
<td>Chapter 11</td>
<td>Exercise 6</td>
</tr>
<tr>
<td>04/11/18</td>
<td>Exam 2</td>
<td>LO 3&amp;4</td>
<td></td>
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<tr>
<td>04/16/18</td>
<td>Security</td>
<td>Chapter 12</td>
<td>HW12</td>
</tr>
<tr>
<td>04/18/18</td>
<td>Security</td>
<td>Chapter 12</td>
<td>Exercise 7</td>
</tr>
<tr>
<td>04/23/18</td>
<td>Network Address Translation</td>
<td>Chapter 13</td>
<td>HW13</td>
</tr>
<tr>
<td>04/25/18</td>
<td>Network Address Translation</td>
<td>Chapter 13</td>
<td>Exercise 8</td>
</tr>
<tr>
<td>04/30/18</td>
<td>NAT &amp; IPv6</td>
<td>Chapter 13&amp;14</td>
<td></td>
</tr>
<tr>
<td>05/02/18</td>
<td>Internet Protocol Version 6</td>
<td>Chapter 14</td>
<td>Exercise 9</td>
</tr>
</tbody>
</table>

Final Exam on Monday, May 07, 2018 from 1:45 PM - 4:15 PM.
Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

J. COURSE POLICIES

Course Syllabus: We will meet for lecture on Mondays and Wednesdays, when new material will be presented. We will follow the text generally, but non-text material may also be included in the lectures. The assignments and exams will be given during the class hours. You are responsible for all the material presented during the lecture.

Exams: Exams will cover all lecture and reading material discussed in the class. Exams must be taken on the hour they are scheduled.

Missed Exam: In the event, if you cannot attend the class to take the exam due to some emergency or some unavoidable situation (such as serious illness, death in the family, participation in university sports, religious observations, and so on) you must notify me as soon as possible before the exam and also you must validate your absence by providing me a document (e.g., with a letter from your doctor). Once your cause is validated a make-up exam will be given. Simply missing the exam without any notification will result in a 0.

Late Work: Late homework will not be accepted.

Grading Error: All questions concerning a test score or grading of a returned test or assignment must be resolved within one week. It is always a good idea to keep all of your work until the end of the semester. In case of any recording errors or doubts, you may produce them for correction or verification.

Extra Credit: There is no EXTRA CREDIT.

Academic Honesty Policy: You are expected to avoid all forms of academic dishonesty as defined in Catalog. In addition, students are expected to behave in an ethical manner in all class activities. If you feel uncertain about a particular activity, please speak to me BEFORE problems arise. Ethical behavior is a requirement for passing this course. All work submitted for grading must be the student's own work. Plagiarism will result in a score of 0 (zero) for the work or dismissal from the course and the Dean of Students office will be notified. No copying from another student's work, of any class, is allowed. It is the student's duty to allow no one to copy his or her work. Anyone found cheating and/or copying, in the exams or assignments, in the instructor's opinion, will receive an automatic F for the course.

Collaboration: There is no collaboration allowed on homework assignments.

Attendance: You must attend all classes. While in class attendance will not directly affect the grade, you are responsible for any materials covered or handed out or announcements made for
the tests and assignments in your absence. Records of your attendance will be maintained and reported to the university. Students found missing classes without the instructor's permission will be automatically withdrawn from the course.

**Absence from class:** Students are responsible for all materials covered in class and assigned. Should a student be absent from class, it is his/her responsibility to get the notes, etc. for that missed class. More important, should there be assignments, it is the student responsibility to obtain such assignments. No excuse will be accepted for assignments not turned in because the student was absent when it was due.

**Cell Phone Use:** Cell phones must be placed on vibrate or silence. I realize that life still exists outside the classroom walls. If it is an urgent call, please take it outside.

**Laptop Use:** Laptops can be used for notes, labs, or any other class related projects. If you are using the laptop for outside class material, you will be asked to put the laptop away.

**Food in Class:** No food and drink in the class!

**Participation:** Class participation is encouraged as it will facilitate the learning. Remember if you have a question, most likely someone else in the class has the same question.

**Student Security Statement:** Please read the Student Security Statement.

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### K. COLLEGE AND UNIVERSITY POLICIES

- **Academic Integrity (University)**
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

- **Classroom/Professional Behavior**
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.
• **Statement of Civility**
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

• **Deadline for Dropping a Course with a Grade of W (University)**
  The grade of W will be assigned to any student officially dropping a course. Please consult with the instructor before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must submitted. No student is eligible to receive a W without completing the official drop process by this deadline. Please consult the Academic Calendar ([http://www.tamucc.edu/academics/calendar/](http://www.tamucc.edu/academics/calendar/)) for the last day to drop a course.

• **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html), and the College of Science and Engineering Grade Appeals webpage at [http://sci.tamucc.edu/students/GradeAppeal.html](http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

• **Disability Services**
  The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.
If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

http://disabilityservices.tamucc.edu/

• **Statement of Academic Continuity**

  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

L. **OTHER INFORMATION**

• **Academic Advising**

  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.