COSC 4342 Computer Networks
COLLEGE OF SCIENCE AND ENGINEERING/COMPUTER SCIENCE

Fall 2015 – Section 001

A. COURSE INFORMATION

Course number/section: COSC4342/001
Class meeting time: MWF 09:00-09:50AM
Class location: OCNR-133
Course Website: bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Abdelfattah, Eman
Office location: EN 314A
Office hours: MW 10:00-11:00AM, 1:00-2:00PM
Telephone: (361) 825-2610
e-mail: eman.abdelfattah@tamucc.edu
Appointments: Send an email to set up an appointment

C. COURSE DESCRIPTION

Computer-based communication systems. Topics include: advanced computer network architectures, protocols, and programming.

D. PREREQUISITES AND COREQUISITES

Prerequisites
COSC 3346 (Operating Systems) and Math 2413 (Calculus I). In particular, students should understand basic computer organization and be able to write programs in C/C++.

Corequisites
none

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES


Supplies
none

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Upon successful completion of this course, the student will:

1. Become knowledgeable of the data transmission fundamentals and general principles and concepts of computer networks.
2. Become familiar with the knowledge of local area networking technologies, such as Ethernet, Token Rings, and Wireless Networks.
3. Become familiar with the knowledge of wide area networking technologies (Packet-Switching and Routing).
4. Become familiar with the knowledge of Internet protocols (IP, TCP, and UDP) and security.
5. Become familiar with the network programming and system programming skills.
6. Have the ability to design and develop basic network services.
7. Be able to synthesize ideas presented in the course into new network services, protocols, architectures, or tools.

Assessment of objectives will be conducted through exams, quizzes, final project, and assignments.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

This course will be a mixture of lectures and discussions. The student is expected to actively participate in all class activities. The student is also expected to do outside work on assignments and reading regularly as they are absolutely essential for success in this course.

H. MAJOR COURSE REQUIREMENTS AND GRADING

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Exams (2)</td>
<td>40% (20% each)</td>
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<tr>
<td>Quizzes</td>
<td>15%</td>
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<tr>
<td>Homework and labs</td>
<td>15%</td>
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<tr>
<td>Class Participation and Attendance</td>
<td>10%</td>
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<tr>
<td>Final Project</td>
<td>20%</td>
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I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Chapter 1: Foundation</th>
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<tbody>
<tr>
<td>Week 2</td>
<td>Chapter 1: Foundation, HW1</td>
</tr>
<tr>
<td>September 7</td>
<td>Labor Day Holiday</td>
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<tr>
<td>Week 3</td>
<td>Chapter 2: Getting Connected</td>
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<tr>
<td>Week</td>
<td>Chapter(s)</td>
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<tr>
<td>4</td>
<td>Week 4: Chapter 2: Getting Connected, <strong>HW2</strong></td>
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<tr>
<td>5</td>
<td>Week 5: Chapter 2: Getting Connected, Chapter 3: Internetworking</td>
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<tr>
<td>6</td>
<td>Week 6: Chapter 3: Internetworking</td>
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<td>7</td>
<td>Week 7: Exam 1 Review / Presentations, Exam 1</td>
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<tr>
<td>8</td>
<td>Week 8: Chapter 4: Advanced Internetworking</td>
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<tr>
<td>9</td>
<td>Week 9: Chapter 4: Advanced Internetworking, <strong>HW3</strong></td>
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<td>10</td>
<td>Week 10: Chapter 5: End-to-End Protocols, <strong>HW4</strong></td>
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<td>11</td>
<td>Week 11: Chapter 6: Congestion Control and Resource Allocation, <strong>HW5</strong></td>
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<td>12</td>
<td>Week 12: Chapter 8: Network Security</td>
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<td>13</td>
<td>Week 13: Chapter 8: Network Security, <strong>HW6</strong></td>
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<td>14</td>
<td>Week 14: Chapter 9: Applications, Overlay Networks</td>
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<td>15</td>
<td>Week 15: Final Project Presentations</td>
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| 16   | Week 16: **Final Exam Chapters: 4, 5, 6, 8, 9**  
**Final Project is due on the day of the final exam at 11:59PM** |

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.

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

**Assignments:** 6 homework assignments will be given.

**Quizzes**

They will cover all lecture and reading material from the text. No makeup quizzes will be given under any circumstances.

Lecture slides in PowerPoint (PPT) format are provided at the following link:


The link for the library databases is as follows:

J. COURSE POLICIES

Course Syllabus
We will meet in lecture on Mondays, Wednesdays and Fridays. The assignments, quizzes, projects, and exams will be given during the class hours. You are responsible for all the material presented during the lecture.

Attendance/Tardiness
The students are expected to come to class on time every day the class meets. Read the chapter to be discussed before coming to class. Ask questions of material you do not understand. If I cannot explain the answers to your satisfaction, make an appointment with me to discuss the question. Demonstrate integrity, maturity, and ethical behavior.

Late Work and Make-up Exams
Makeup exams will not be given under normal circumstances. If you notify me immediately that serious, unavoidable, documentable (e.g., with a letter from your doctor) circumstances have arisen, I will discuss options for replacing the missing grade. (For example, I may allow the grade earned on the final exam to replace the grade for the missed exam.) Excused absences due to school sponsored activities, religious observations, family rituals, etc. should be discussed in advance.

Extra Credit
Students can earn extra credits when they actively participate in class.

Cell Phone Use
No cell phone is allowed.

Laptop Use
It is not allowed to use laptop during class.

Food in Class
No food is allowed during class.

Class Participation
It is part of the students’ grade. Also, they can earn extra credits when they actively participate in class.

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)**
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. The grade of W will be assigned to any student officially dropping a course. Please consult with me 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/) for the last day to drop a course. It is November 6, 2015 for Fall 2015.

- **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, and the College of Science
and Engineering Grade Appeals webpage at 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.