COURSE SYLLABUS

CSEN 5323
Computer Communication Networks
Fall 2014
Credits 3 HRS
Sec 2: TR 5:00-6:15pm  ENGC 138

Instructor  Ashraf Yaseen
Office     EC 263
Office Phone  (361) 593 -
Office Hours MW: 12-2pm, 3-5pm.
                 T: 4-5pm. F: 12-1pm.
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website     www.cs.odu.edu/~ayaseen

Course Description

The International Standards Organization (ISO) Open Systems Interconnection (OSI) model as a framework for the study of computer communications network. Data communication. Functions and protocols of physical layer, medium access sublayer, link layer, network layer and transport layer. Case studies. ISDN.

Prerequisite: graduate standing in computer science or electrical engineering.

COURSE OBJECTIVES

- Learn the computer networking concepts, basic terminology, and applications.
- Understand the Internet architecture, components, services, and measures of performance.
- Understand the application-layer concepts, protocol principles, transport-layer interfaces, and network applications such as the WEB and HTTP and the FTP.
- Understand the transport-layer concepts, relationship with the network- and application layers, and services such as the principles of Reliable Data Transfer.
• Understand the network-layer concepts and routing principles, algorithms, and protocols.
• Understand the data link-layer concepts, protocols, and services such as error-detection and correction, addressing, and multiple-access techniques.
• Learn the main concepts of wireless and mobile networks.

**LEARNING OUTCOMES**

Upon successful completion of this course, students are expected to gain the following skills:

• List the five layers of the Internet protocol stack and give an example of each.
• Define the roles of the major components of the computer networks and the Internet such as the host, router, network application, protocol, and network services.
• Use the basic computer networking terminology to describe the different components, services, and applications provided of the Internet.
• Describe the main design issues related to network engineering such as scalability, reliability, efficiency, and cost-effectiveness.
• Explain what happens on the network when you open a web page or click a link on a web page.
• Explain how an email message you send to a friend is sent and delivered.
• List the two main types of routing algorithms and which protocols use those algorithms.
• Compute the end-to-end delay for a packet given the propagation delay, link bandwidth, and packet size.
• Explain the difference between congestion control and flow control and how each is implemented in TCP
• Write basic network applications using sockets. (for example, chat, echo, a web client, and an FTP client)
• Differentiate between the addressing information used in each network layer and their corresponding functions such as port numbers, IP addresses, and MAC addresses.

While this course has specific learning outcomes which are described above, the following TAMUK’s institutional learning outcomes will also be reinforced throughout the course through activities and assignments:

• Effective Communication skills (written and verbal communication)
• Critical Thinking Skills
• Application of the Scientific Process

**TEXTBOOK**


**REFERENCES**

• W. Stallings, “Computer Networking with Internet Protocols and Technology”, Upper Saddle River,
METHODS OF ASSESSMENT

**Homework Assignments**
There will be homework assignments given during the semester. All homework assignments are due at the beginning of the class period on the due date. All homework assignments are to be typed and submitted in class on the due date. If an assignment is not submitted by the end of class on the due date, it is considered late. All homework assignments should follow the format specified in the syllabus attachment entitled “Homework Assignment Template”.

**Programming Assignments**
Each student will complete a number of programming assignments during the semester. All programming assignments are due at the beginning of the class period on the due date.

**Report/Presentation**
In addition to homework, each student group will be required to write a report and present it. If the report is not submitted by the end of class on the due date, it is considered late. Each report is worth 10 points toward the student’s final grade. All reports should follow the format specified in the syllabus attachment entitled “Report Template”.

**Examinations**
There will be in-class tests given during the semester. Makeup exam should not be given unless there is a valid excuse according to TAMUK policies. Arrangements to take an exam at a time other than the one scheduled MUST be made prior to the scheduled exam time.

GRADING SYSTEM
For each assignment, recitation, and test, a numerical grade is recorded,

<table>
<thead>
<tr>
<th>Activities/ Evaluation Methods</th>
<th>Number</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam</td>
<td>1</td>
<td>30%</td>
</tr>
<tr>
<td>Assignments and Lab</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>Report/Presentation</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>1</td>
<td>30%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

- >=90% A Excellent
- 80-89% B Very Good
- 70-79% C Good
- 60-69% D Failed
- <60% F Failed

- Methods of evaluations, grading policy and course schedule subject to change to better enhance the students’ performance.
## Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Description (Syllabus) &amp; Overview</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Introduction</td>
<td>CH-1</td>
</tr>
<tr>
<td>3, 4, 5</td>
<td>Application Layer</td>
<td>CH-2</td>
</tr>
<tr>
<td>6, 7, 8</td>
<td>Transport Layer</td>
<td>CH-3</td>
</tr>
<tr>
<td>9, 10, 11</td>
<td>The Network Layer</td>
<td>CH-4</td>
</tr>
<tr>
<td>12, 13, 14</td>
<td>The Link Layer</td>
<td>CH-5</td>
</tr>
<tr>
<td>15</td>
<td>Wireless and Mobile Networks</td>
<td>CH-6</td>
</tr>
<tr>
<td>16</td>
<td>Final Exam Review</td>
<td></td>
</tr>
</tbody>
</table>

## Course Policies

<table>
<thead>
<tr>
<th><strong>Attendance Policy</strong></th>
<th>Regular attendance is needed for your success in this course. You are expected to consult with me whenever an absence is necessary.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Make-up exams</strong></td>
<td>Make-ups for missed exams are granted only for excused (official university) absences</td>
</tr>
<tr>
<td><strong>Cell Phones</strong></td>
<td>Students should turn off and stow their cell phones during class.</td>
</tr>
<tr>
<td><strong>Late Assignment</strong></td>
<td>The penalty for a late assignment is 10 percent deduction for each day late. For example, if your assignment grade is 92 and you submitted two days late, then your assignment grade would be 72. No assignment will be accepted after 2 days late.</td>
</tr>
</tbody>
</table>
## University Policies

### DISABILITY STATEMENT
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 disability. If you believe you have a disability requiring an accommodation please contact the Disability Resource Center (DRC) as early as possible in the term at (361) 593-2904. DRC is located in the Life Service and Wellness building at 1210 Retama Drive.

### SIX-DROP POLICY
The following provision does not apply to students with Texas public college or university credits prior to Fall 2007. The Texas Senate Bill 1231 specifies the number of course drops allowed to a student without penalty. After a student has dropped six courses, a grade of QF will normally be recorded for each subsequent drop. Additional information on Senate Bill 1231 is available at the Registrar’s Office at (361) 593-2811 and at [http://www.tamuk.edu/registrar/drop_policy.html](http://www.tamuk.edu/registrar/drop_policy.html).

### ACADEMIC MISCONDUCT STATEMENT
You are expected to adhere to the highest academic standards of behavior and personal conduct in this course and all other courses. Students who engage in academic misconduct are subject to university disciplinary procedures. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct, which discusses conduct expectations and academic dishonesty rules.

**Forms of academic dishonesty:**

1. **Cheating:** Using unauthorized notes or study aids, allowing another party to do one’s work/exam and turning in that work/exam as one’s own; submitting the same or similar work in more than one course without permission from the course instructors; deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.

2. **Aid of academic dishonesty:** Intentionally facilitating any act of academic dishonesty. Tampering with grades or taking part in obtaining or distributing any part of a scheduled test.

3. **Fabrication:** Falsification or creation of data, research or resources, or altering a graded work without the prior consent of the course instructor.

4. **Plagiarism:** Portrayal of another’s work or ideas as one’s own. Examples include unacknowledged quotation and/or paraphrase of someone else’s words, ideas, or data as one’s own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one’s own work also constitutes plagiarism.

5. **Lying:** Deliberate falsification with the intent to deceive in written or verbal form as it applies to an
### Other Forms of Academic Misconduct:

1. Failure to follow published departmental guidelines, professor’s syllabi, and other posted academic policies in place for the orderly and efficient instruction of classes, including laboratories, and use of academic resources or equipment.

2. Unauthorized possession of examinations, reserved library materials, laboratory materials or other course related materials.

3. Failure to follow the instructor or proctor’s test-taking instructions, including but not limited to not setting aside notes, books or study guides while the test is in progress, failing to sit in designated locations and/or leaving the classroom/test site without permission during a test.

4. Prevention of the convening, continuation or orderly conduct of any class, lab or class activity. Engaging in conduct that interferes with or disrupts university teaching, research or class activities such as making loud and distracting noises, repeatedly answering cell phones/text messaging or allowing pagers to beep, exhibiting erratic or irrational behavior, persisting in speaking without being recognized, repeatedly leaving and entering the classroom or test site without authorization, and making physical threats or verbal insults to the faculty member, or other students and staff.

5. Falsification of student transcript or other academic records; or unauthorized access to academic computer records.

6. Nondisclosure or misrepresentation in filling out applications or other university records.

7. Any action which may be deemed as unprofessional or inappropriate in the professional community of the discipline being studied.

### Non-academic misconduct:

The university respects the rights of instructors to teach and of students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with these rights will not be tolerated; examples include

1. interfering with the instructor’s ability to conduct the class,
2. causing inability of other students to profit from the instructional program, or
3. any interference with the rights of others.

An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under non-academic procedures.

Ongoing behaviors or single behaviors considered distracting (e.g., coming late to class, performing a
repetitive act that is annoying, sleeping or reading a newspaper in class, etc.) will be addressed by the faculty member initially either generally or individually. Cases in which such annoying behavior becomes excessive and the student refuses to respond to the faculty member’s efforts can be referred to the Dean of Students. In the case of serious disruptive behavior in a classroom the instructor may first request compliance from the student and if it is not received, an instructor has the authority to ask the student to leave the classroom. If the student fails to leave after being directed to do so, assistance may be obtained from other university personnel, including University Police Department. An individual engaging in such disruptive behavior is subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under non-academic procedures to determine if the student should be allowed to return to the classroom.

**HARASSMENT /DISCRIMINATION**

Texas A&M University-Kingsville does not tolerate discrimination on the basis of race, color, religion, national origin, age, disability, genetic information, gender, gender identity or sexual orientation (or any other illegal basis) and will investigate all complaints that indicate sexual harassment, harassment, or discrimination may have occurred. Sexual harassment and sexual assault are types of sex discrimination. Such sexual misconduct is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action. A person who believes he/she has been the victim of sexual misconduct harassment, harassment, or discrimination may pursue either the informal or the formal complaint resolution procedure. A complaint may be initially made to the Office of Compliance at (361) 593-4758, complainant’s immediate supervisor, a department head, a supervisory employee, or the Dean of Students at (361)-593-3606 or the Office of Compliance at (361) 593-4758. Regardless of who the complaint is filed with, the Compliance Office will be notified of the complaint so it can be investigated.

**AMENDMENTS TO SYLLABUS**

This syllabus provides a general plan for the course. The instructor reserves the right to amend this syllabus at any time. Any such change will be announced, and distributed to the class. As with all other class requirements, the student is responsible for being present to receive such changes or to refer to Blackboard to view the changes.