SYLLABUS

Course Organization:
Instructor: Dr. Kemal Akkaya
Office: EC 3915
Office Phone: 305-3483017
Email: kakkaya@fiu.edu
Dr. Akkaya: Wednesday: 10am-12:00pm

TA: Abdullah Aydeger
E-Mail Address: aayde001@fiu.edu
Office: EC 3155
Office Hours: Tuesday: 1-3pm

Course Description:
This course covers the basics of networking and Internet. The course presents an insider's perspective on how networks are built and how they communicate through TCP/IP stack. Since the course is intended to serve students with a background in Electrical and Computer Engineering, some computer programming skills are expected. Topics covered include OSI and TCP/IP model, Ethernet, Routing, IP addressing, TCP/UDP, network protocols, network management, and wireless networks.

Course Objectives:
At the end of this course, the students will be able to:

- Compare OSI layering and TCP/IP models
- Differentiate different networking topologies and technologies
- Evaluate the IP Address schemes and their management
- Design routing protocols for different domains
- Differentiate between TCP and UDP services
- Assess various TCP/IP protocols for functioning of Internet
- Examine network management issues

Textbook:
Computer networking: a top-down approach / James F. Kurose, Keith W. Ross.—6th or 7th ed.

Grading:

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<tbody>
<tr>
<td>Midterm Exam</td>
<td>25%</td>
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<td>Final Exam</td>
<td>30%</td>
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<td>Quizzes</td>
<td>12%</td>
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<td>Assignments</td>
<td>30%</td>
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<td>Participation</td>
<td>3%</td>
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**Course Web Site:** The lectures, HWs, quiz and other announcements will be made available through Blackboard: http://online.fiu.edu. The lecture notes will be both in ppt and pdf format. They will be available before the class. It is your responsibility to check the announcements on the web site frequently to follow what is new about the course.

**Assignments:**
- There will be 5 assignments as scheduled in the course calendar.
- The due dates will be at least one week ahead of the assignment date. Late assignments are not acceptable for points.
- Each assignment will be done individually.
- The assignments will be submitted through Assignment Dropbox.

**Quizzes:**
- There will be a quiz each week regarding the topics covered in the previous classes.
- There will be 6 graded quizzes.
- Each quiz will be 20 minutes.
- The book and notes can be open.
- The answers will be posted on Monday of the upcoming week for feedback to students.

**Late Assignments/Project:** All assignments and projects are due by the end of class on the date established by the Instructor. Your grade is based on timely work accomplished during the semester. Late assignments are not acceptable for points.

**Exam Policy:** The exams will be closed-book and closed-notes. The final exam will be comprehensive. No makeup exams will be given.

**Academic Integrity:** By enrolling in this course, each student assumes the responsibilities of an active participant in FIU’s scholarly community in which everyone’s academic work and behavior are held to the highest standards of honesty. If we catch anyone cheating, we will take the maximum action possible against them, including reporting the matter to the appropriate university authorities. Please cooperate by doing your own work and not seeking inappropriate help from your classmates. You may, of course, discuss HWs and assignments amongst yourselves, as long as that discussion does not lead to an exchange of solutions.
# Course Schedule

<table>
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<tr>
<th>Week</th>
<th>Modules</th>
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| 1    | **Module 1: TCP/IP Networking**  
Syllabus, Networks, OSI and TCP/IP Layering, TCP/IP Details,  
**Tasks**  
1. HW1 Assignment on TCP/IP layering  
2. Quiz 1 |
| 2-3  | **Module 2: Data Link Layer Protocols**  
Layer 2 services, MAC protocol types, Ethernet protocol  
**Tasks**  
1. HW2 Assignment on Ethernet  
2. Quiz 2 |
| 4-5  | **Module 3: Network Layer**  
IP Addresses, Routing protocols, Internet Routing  
**Tasks**  
1. HW3 Assignment on Routing  
2. Midterm Exam  
3. Quiz 3 |
| 6    | **Module 4: Transport Layer**  
UDP, TCP  
**Tasks**  
1. HW4 Assignment on TCP  
2. Quiz 4 |
| 7    | **Module 5: Wireless Networking**  
WiFi, Cellular Networks  
**Tasks**  
1. HW5 Assignment on WiFi  
2. Quiz 5 |
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| 8    | Module 7: Network Management  
Hardware and software tools, SNMP, Logs |

**Tasks**

1. Quiz 6  
2. Final Exam