# CmpE 475 Computer Networks
## Fall 2010

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**TA:** Hande Özgür Alemdar, ETA 46, Tel: 359 7125, [ozgurh@boun.edu.tr](mailto:ozgurh@boun.edu.tr)

**Class Meetings:**
- Thursday  09:00-09:50  ETA-A2
- Thursday  12:00-13:50  ETA-A2

**Textbook:**
- Also recommended: W. Stallings, *Data and Computer Communications*, Prentice-Hall, Latest Edition

**Grading:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Term papers &amp; term project</td>
<td>200</td>
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<tr>
<td>Midterm 1</td>
<td>200</td>
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<tr>
<td>Midterm 2</td>
<td>250</td>
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<tr>
<td>Final Exam</td>
<td>350 Total exams: 80%</td>
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<td>Total</td>
<td>1000</td>
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**Subjects to be covered:**

1. **Introduction:** Overview of computer networks, network hardware/software, layers, OSI and TCP/IP reference models, example networks, standardization (Ch 1)
2. **Physical Layer (Data Communications):** Theoretical basis, transmission media, wireless transmission, satellites, wired and mobile telephone system, xDSL, cable television (Ch 2)
3. **Data Link Layer:** Design issues, error detection and correction, elementary protocols, sliding window protocols, protocol performance, specification and verification, example data link layers (HDLC, PPP) (Ch 3)
4. **Medium Access Control Sublayer:** Channel allocation problem, multiple access protocols, IEEE 802 standards for local area networks, Ethernet, wireless LAN's, broadband wireless, Bluetooth, bridges and switches (Ch 4)
5. **Network Layer:** Design issues, routing algorithms, congestion control, quality of service, differentiated services, MPLS, internetworking, Internet Protocol (IP, mobile IP, IPv6), routing protocols OSPF, BGP, multicasting (Ch 5)
6. **Transport Layer:** Services, elements of a transport protocol, example transport protocol, UDP and TCP, performance issues (Ch 6, if time permits)

**Not all sections above will be lectured, you will study the related sections in the textbook and you are responsible for these sections**

**Exam Dates and Times:**
- Midterm 1: On November 4, 2010 Thursday 12:00-13:50
- Midterm 2: On December 2, 2010 Thursday 12:00-13:50
- Final Exam: As scheduled by the Registrar

**Additional Notes:**

1. Paper/project grading: 25% less for each day late, no acceptance after 4 days late.
2. You get zero if you miss an exam without official excuse.
3. Your attendance is required in all classes.
4. Successful completion of CmpE 322 Operating Systems course is recommended.
5. The email list [cmpe475@listeci.cmpe.boun.edu.tr](mailto:cmpe475@listeci.cmpe.boun.edu.tr) will be used by all students and by the instructor for internal communications within this course.