

**The University of Alabama in Huntsville - ECE Department**  
**CPE 448/548: Introduction to Computer Networks**  
**Section 01: Monday/Wednesday 2:20 PM – 3:40 PM, EB240**

**Course Objectives:**

Introduction to the basic computer network concepts and underlying technologies including Local Area Networks (LANs), Ethernet, Internet, TCP/IP and Application Layer Protocols, Socket Programming, Data Compression and Network Security. CPE548 students will be required to complete additional work.

**Required Textbook:**

Computer Networks: A System Approach, 5<sup>th</sup> Edition. L.L. Peterson and B.S. Davie, Morgan Kaufman Publishers, INC., 2012.

**Course Prerequisites:**

- CPE112 (Introduction to programming in Engineering)
- CPE/EE 221 (old CPE/EE 321) (Computer Organization)

**Instructor:** Mr. Ron Bowman

**Office:** EB 221,      **Phone:** (256) 824-6033,      **Email:** Through Canvas

**Office Hours:**      The times below, whenever I am in my office, or by appointment.

<b><u>Day:</u></b>	<b><u>Time:</u></b>
Monday, Wednesday	10:00 AM – 11:00 AM (in my office or EB 246)
Monday, Wednesday	12:45 PM – 01:45 PM (in my office or EB 246)
Tuesday, Thursday	11:15 AM – 12:15 PM (in my office or EB 246)
Tuesday, Thursday	02:30 PM – 03:30 PM (in my office or EB 246)
Friday	When present in my office

**Final Exam:**

**EB 240:**      **Monday April 25, 3:00 PM - 5:30 PM**  
**Content:**      **The final exam will be comprehensive**

**Tentative Exam Dates:**

**Class Exam #1:**      **Wednesday February 17, 2016**  
**Class Exam #2:**      **Wednesday April 6, 2016**

**Course Web Page:**

- Canvas course management software will be used to assist in course administration. Students may access Canvas via the URL **canvas.uah.edu**
- Each student is responsible for checking the course Canvas page for assignment updates, assignment due dates and other course related announcements.
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**Disability Accommodations ([www.uah.edu/health-and-wellness/disability-support](http://www.uah.edu/health-and-wellness/disability-support)):**

- The University of Alabama in Huntsville will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations.
- Students should identify themselves to the Disability Support Services Office (256.824.1997 or 317 Wilson Hall) and their instructor as soon as possible (first week) to coordinate accommodations.

**Course Grade Computation:**

		<u>Course Letter Grade Scale</u>	
Homework	15%	> 90%	A
Projects	15%	80-90%	B
Hour Exams (2 @ 20% each)	40%	70-80%	C
Final Exam	30%	60-70%	D
-----		< 60%	F
Total	100%		

- Students may track their progress by examining their grades on Canvas
- Grade discrepancies need to be reported to the instructor as soon as possible.

**Attendance Policy:**

- To minimize interruptions in the class, please arrive before class starts.
- All students are **expected** to attend all course lectures.
- Canvas will be used to ***assist*** in course administration. This course, however, is **not** an “online course”. Lecture materials may be posted online (or they may not).

**Noise Policy:**

- Turn off or mute all electronic devices before class starts.

**Academic Honesty:**

- Students enrolled in this course are expected to adhere to the academic honesty policies outlined in the UAH Student Handbook at all times.
- Collaboration on exams or laboratory assignments will not be permitted and will be considered cheating. All work submitted for a grade must be entirely your own, including the laboratory assignments.
- **Students who cheat will be reported to the University Judicial Officer and will receive no credit (0) for that exam or assignment.**

**Exam Policies:**

- Exam questions may be drawn from information presented during the class lectures, topics covered by Lab assignments, or material from the assigned textbook readings.
- **All written exams are closed book / closed notes.** No reference materials of any kind will be permitted. Collaboration on exams is not permitted.

**Makeup Exam Policies:**

- There will be no makeup exams given without a **written excuse** from your doctor, your employer, or the UAH Office of Student Affairs. → No exceptions will be made. ←  
**Note: Personal travel plans are not a valid excuse for missing an exam!!!**
- If you qualify for a makeup exam, you must schedule and complete the makeup exam within one week of the original in-class exam; otherwise, you will receive **no credit (0)**.
- The instructor decides the format of all makeup exams. Makeup exams may be a one-hour oral exam, a one-hour programming assignment or a written exam similar to the one given
- **No makeup exams will be given for the Final Exam – UAH Policy**

**Homework:**

Homework is due at the beginning of class on the date specified. **No late Homework will be accepted.**

**Project Information:**

Project information will be disseminated in class as needed. Information will be posted on Canvas regarding the project assignments.

**Tentative Course Schedule (chapters 1 – 9 of text) - Subject to change...**

Date	Day	Topic
01/06	W	Introduction, Network Topologies
01/11	M	Network Protocols, Client/Server Models
01/13	W	Performance of Protocols, Delays and Throughputs
<b>01/18</b>	<b>M</b>	<b>No Class – MLK Jr. Holiday</b>
01/20	W	Layered Network Architectures, Physical Layer
01/25	M	Data Encoding, Modulation, A/D Conversion
01/27	W	Multiplexing, Digital Carrier Systems
02/01	M	Data Link Control Protocols, Error Detection
02/03	W	ARQ, Congestion Control
02/08	M	Medium Access Protocols
02/10	W	Local Area Networks, Ethernet
02/15	M	Wireless Networks
<b>02/17</b>	<b>W</b>	<b>Hour Exam I</b>
02/22	M	Packet Switching
02/24	W	Internetworking Devices
02/29	M	Internet Protocol (IP)
03/02	W	ARP, DNS, DHCP
03/07	M	Routing Algorithms
03/09	W	End-to-End Protocols, TCP
03/14	M	UDP, Protocol Analysis Tools
03/16	W	Socket Programming, TCP/IP Protocols
<b>03/21</b>	<b>M</b>	<b>Spring Break – No Classes</b>
<b>03/23</b>	<b>W</b>	<b>Spring Break – No Classes</b>
03/28	M	Application Layer Protocols
03/30	W	HTTP Protocol
04/04	M	Data Compression Tools
<b>04/06</b>	<b>W</b>	<b>Hour Exam II</b>
04/11	M	Cryptographic Algorithms
04/13	W	Cryptographic Tools
04/18	M	Security Mechanisms
04/20	W	Security Mechanisms
04/25	<b>Mon</b>	<b>Final Exam EB 240: 3:00 PM – 5:30 PM</b>

**Disclaimer:**

The instructor reserves the right to amend this syllabus as needed. Any updates to the syllabus will be posted on the course Canvas page

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**Additional CPE548 Course Requirements:**

Throughout the semester, graduate students will be assigned additional work not required for undergraduates. This work will be additional homework problems, modifications to homework problems requiring more in depth analysis/work, additional problems on exams and additional requirements for projects that are assigned.