

COMP 4310/6310 – Wireless Mobile Computing

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Contact Information:

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Office Hours:

See the instructor's or the class website; or by email appointment.

Course Description:

COMP 4310/6310 – Wireless Mobile Computing (3)

Internet architecture and design, IPv4 and IPv6, routing algorithms, TCP congestion control, peer-to-peer applications, wireless LAN, mobile IP, mobile ad hoc networks, wireless sensor networks.

PREREQUISITE: COMP3825.

The content and syllabus are subject to adjustment during the semester. The materials used in this course will be based on existing lectures from other universities.

Why this course?

1. To strengthen your understanding of how existing wireless and mobile networks work;
2. To inspire you to design the next-generation wireless and mobile networks;

Recommended Texts (not mandatory, slides and the Internet are good resources to get related information):

1. "Mobile Communications (2nd Edition)," Jochen Schiller
2. "Computer Networking: A Top-Down Approach," 6th Edition, James F. Kurose and Keith W. Ross.
3. "Ad Hoc Wireless Networks: Architectures and Protocols," C. Siva Ram Murthy and B.S. Manoj.

Evaluation:

Final Grades: Your final grade will come from the following sources: class attendance, homework assignments, topic presentation, two midterms, and final exam/project.

Grading Scale: A: 85 – 100, B: 70 – 84, C: 60 – 69, D: 50 – 59, F: 49 and below. (Plus/minus grading will be used).

Grading:

1. Attendance: 5%
2. Assignments: 20%
3. Topic presentations: 15%
4. Midterm 1: 20%
5. Midterm 2: 20%
5. Final exam/project: 20%

Course Policies:

Late Policy: Without prior request, no late work will be accepted. All late submission maybe accepted at a penalty of 15% per day for no more than THREE days.

Testing Policy: The exam given is closed book/note/laptop/neighbor. But students are allowed to bring one cheat sheet (letter-sized 8.5-by-11) for quick reference. There will NOT be any makeup exams unless there is a documented emergency.

Homework Assignment and Project Report Policy: It is recommended that students use a word processing software (e.g., Word or LaTeX) to type their homework solutions or project report, then submit well-formatted PDF files.

Plagiarism/Cheating Policy: (These paragraphs are mandatory.)

Plagiarism or cheating behavior in any form is unethical and detrimental to proper education and **will not be tolerated**. All work submitted by a student (projects, programming assignments, lab assignments, quizzes, tests, etc.) is expected to be a student's own work. The plagiarism is incurred when any part of anybody else's work is passed as your own (no proper credit is listed to the sources in your own work) so the reader is led to believe it is therefore your own effort. Students are allowed and encouraged to discuss with each other and look up resources in the literature (including the internet) on their assignments, but **appropriate references must be included for the materials consulted**, and appropriate citations made when the material is taken verbatim.

If plagiarism or cheating occurs, the student will receive a failing grade on the assignment and (at the instructor's discretion) a failing grade in the course. The course instructor may also decide to forward the incident to the University Judicial Affairs Office for further disciplinary action. For further information on U of M code of student conduct and academic discipline procedures, please refer to: <http://www.people.memphis.edu/~jaffairs/>

Tentative Class Schedule (Subject to Change)

Topic	Topic
1	Course Overview and Introduction
2	Physical Layer
3	MAC Layer
4	Satellites
5	WiFi

6	Bluetooth
7	Ad-hoc networks
8	Sensor networks
9	Mobile IP
10	Wireless TCP
11	Novel mobile applications