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| utdbw83x35 | **Course** | **CS/CE 6392.001, Mobile Computing Systems** |
| **Professor** | Ravi Prakash |
| **Term** | Spring 2017 |
| **Meetings** | TR 2:30 pm – 3:45 pm, CB 1.223 |

**Professor’s Contact Information**

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| **Office Phone** | (972) 883-2289 |
| **Other Phone** | (972) 883-2185 (CS Department Phone Number) |
| **Office Location** | ECS South 4.210 |
| **Email Address** | ravip@utdallas.edu |
| **Office Hours** | Tuesdays, Thursdays: 10-11 am. |
| **Other Information** | I scan the *elearning* discussion group and emails occasionally. The best way to communicate with me is through the UTD email address above. Email me if you wish to make an appointment (no appointment needed for office hours) |

**General Course Information**

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| **Pre-requisites, Co-requisites, & other restrictions** | Pre-requisites: CS 6378 or CS 6390, programming skills in C/C++ and/or in Java, socket programming skills, and working knowledge of a UNIX-based operating system. |
| **Course Description** | Topics include coping with mobility of computing systems, data management, reliability issues, packet transmission, mobile IP, end-to-end reliable communication, channel and other resource allocation, slot assignment, routing protocols, and issues in mobile wireless networks (without base stations). |
| **Course Learning Objectives** | * Models of Mobile Computing Systems * Channel Access and Channel Allocation Protocols * Routing in Mobile Ad Hoc Networks * Mobile IP * Transport Protocols for Mobile Networks * Applications for Mobile Networks * Sensor networks |
| **Required Texts & Materials** | There is no textbook for the course. A manuscript prepared by the instructor will be distributed to the class during the semester. The use of this manuscript is restricted to the course. The instructor has exclusive rights to copy, store, and disseminate this manuscript. Others should obtain written permission of the instructor to do the same. Various  research papers published in journals and conference proceedings, Internet Drafts and RFCs will also constitute the reading list for the course. |
| **Suggested Texts, Readings, & Materials** | None. |

**Assignments & Academic Calendar**

*[Topics, Reading Assignments, Due Dates, Exam Dates]*

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| **Number of Lectures** | **Topic** |
| **2** | Introduction |
| **2** | System models |
| **7** | Channel access and allocation |
| **5** | Routing in mobile ad hoc networks |
| **5** | Mobile IP |
| **3** | Transport protocols for mobile networks |
| **2** | Mobile Applications |
| **1** | Sensor networks |
| **Exam Dates and Times** | Midterm Examination 1: Thursday, February 9 (during class)  Midterm Examination 2: Tuesday, March 28 (during class)  Final Examination: As per university schedule for final exams. |

**Course Policies**

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| **Grading (credit) Criteria** | Midterm Examination I: 20%,  Midterm Examination 2: 20%,  Final Examination: 30%,  Semester-long research project: 30%. |
| **Make-up Exams** | Make-up examinations will be offered only if the student has a valid medical reason and produces a doctor’s letter. |
| **Extra Credit** | No extra credit work will be assigned. |
| **Late Work** | Project reports and other assignments submitted after the due date will be penalized at the rate of 10% of the total credit for that project/homework for every day (not including weekends and holidays) by which they are late. Late submissions will not be accepted once the solution has been discussed in class and the graded submissions have been returned. |
| **Special Assignments** | **Research project**: Multiple project topics will be provided a few weeks into the semester. The project will involve a combination of algorithm development, protocol design, and *extensive simulation experiments* for performance measurement. Students will work in small groups and are expected to meet the instructor at regular intervals, during office hours or other mutually convenient time, to discuss the solution approach and to report progress. The final project report should be in the form of a research paper that states the problem, summarizes previous work in the field, proposes a new solution, compares the solution with existing solutions, analyzes the results of simulation experiments and cites the relevant literature. |
| **Class Attendance** | As per the Department of Computer Science policy, three consecutive absences leads to one letter grade drop. Four consecutive absences leads to an F. |
| **Classroom Citizenship** | The instructor encourages students to take active part in class discussions. No question is too simple/stupid to be asked. So, do not hesitate. |
| **Comet Creed** | *This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:*  *“As a Comet, I pledge honesty, integrity, and service in all that I do.”* |
| **UT Dallas Syllabus Policies and Procedures** | *The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.*  *Please go to* [*http://go.utdallas.edu/syllabus-policies*](http://go.utdallas.edu/syllabus-policies) *for these policies.* |

***These descriptions and timelines are subject to change at the discretion of the Professor.***