

MSCS 282 Mobile Technology

Fall 2007

INSTRUCTOR

Dr. Sheikh Iqbal Ahamed

Phone: (414) 288-5222

Class room: CU 412

Meets: Tuesday 5:45-8:25 pm

Office: CU 386

Office hours:

Wednesday: 2:00-3:00pm

Thursday: 2:30-3:30pm.

Tuesday and Thursday: 8:25-8:45pm

or **by appointment**

Email: iq@mcs.mu.edu

TEACHING ASSISTANT

Md. Sazzad Hossain

Email: sazbad@yahoo.com

Course URL: D2L (<https://d2l.mu.edu>)

Description

Mobile computing has made ubiquitous computing into reality- the transition from today's world of personal computers and networked computers to anywhere at anytime computing. This course will cover the fundamentals of mobile computing: challenges in mobile computing, mobility management, data management, context awareness, and wireless communications. The ubiquity of wireless communication technologies and the proliferation of portable computing devices have made possible a mobile computing era in which users, on the move, can seamlessly access network services and resources, from anywhere, at anytime. The other course contents are: middleware for mobile computing, operating systems, programming languages, network protocols and security aspects of mobile computing. The course will also cover main concepts in sensor networks, including operating systems, programming languages, network protocols, and programming models.

Text book:

No textbook will be used

Materials from internet, reference books, papers from IEEE digital library, ACM digital library will be used.

Dr. Iqbal will provide lecture slides.

References

- Frank Adelstein, Sandeep KS Gupta, Golden Richard III, Loren Schwiebert, Fundamentals of Mobile and Pervasive Computing, ISBN 0071412379 / 9780071412377, McGraw Hill, 2005
- J.Schiller, Mobile communications, ISBN: 0-321-12381-6, Addison-Wesley, 2003

Course Objectives

- Each student will become familiar with a broad range of fundamental concepts of mobile computing.
- Students will become familiar with state-of-the-art in this area
- Students will learn how wireless ad hoc network is formed
- Students will investigate novel ideas in a semester-long project
- Students will achieve a moderate level of skills, including a thorough understanding of the mobile applications development.
- Students will become familiar with different design and implementation of technologies (such as J2ME, .NET compact framework)

Computing Facilities

- You will be using the java stations of computer lab (CU 310) and computer lab (CU101). You have been given access to both of the rooms.
- When grading your programs, we will use the Pascal's JDK javac compiler and java interpreter available on the Pascal general server. Please make sure that your programs works on Pascal. We will also use C# and .NET in CU 310.

Communications: I expect to be able to contact you via email. Homework assignments updates, hints, and items of interest may be distributed by e-mail and on the D2L.

Grading:(MSCS 282)

25% assignments

10% in class performance (Quizzes, reading assignments)

30% group research project (It will have **three** phases and each group can have at members)

10% individual presentation and demo

10% take home midterm exam on October 30

15% take final exam on Tuesday, Dec. 11, 5:45-7:45pm

[94 - 100]	A	[90 - 94)	AB
[84 - 90)	B	[78 - 84)	BC
[70 - 78)	C	[64 - 70)	CD*
[55 - 64)	D*	below 55%	F

* Graduate students cannot earn a grade less than a C. Any grade of CD or lower will be assigned an F.

Late Policy:

Assignments are due at the beginning of the class period. A late assignment will be accepted for two class periods beyond the due date with a 20% penalty for each class period that is late. No assignments will be accepted more than two class periods late.

Honesty:

Unless otherwise stated, all work you turn in must be your own. Your assignments must be completed by YOU without excessive help from anyone. You are encouraged to use outside material such as web pages, research papers, white papers and books but you must cite references and write solutions in your own words.