

# Fundamentals of Mobile Computing

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Class Time   **1:00pm – 4:00pm**

## Course Description:

Mobile computer with wireless network is current trend in human-computer interaction technology as well as the social lifestyle. The smart-phone is the first mobile computer and smart pad comes next replacing the notebook which is replacing the desk top computer. Mobile computing is composed of mobile communication, mobile hardware, and mobile software. Communication issues include ad hoc and infrastructure networks as well as communication properties, protocols, data formats and concrete technologies. Hardware includes mobile devices or device components. Mobile software deals with the characteristics and requirements of mobile applications.

## Course Requirements:

Not Specified

## Course Materials:

Textbook, PPT

## Prerequisites:

Not Specified

## Assignments:

Reports at the end of each chapters

This course will require a lot of thought, reactions and discussions.

Student will be asked to do readings and discuss and critique the readings.

## Grading:

Mid Exam (30%), Final Exam (30%), Reports(20%), Attendance (20%)

**Course Schedule:**

<u>Day</u>	<u>Subject</u>	<u>Notes</u>
1	Introduction to Mobile Computing	History of computing and development to mobile computing
2	Mobile computing systems	Mobile computing system, LBS, Mobile Device, Network
3	Mobile computing devices	Cellular phone, Smart phone, Smart Pad
4	Limitations	Range, Power of wireless
5	Vehicle and fleet computing	Inter vehicle/fleet/plane communications by wifi, cellular, satellite, etc
6	Cloud system	Cloud system for mobile systems
7	Mid-term Exam	Written test
8	Field Trip #1	LG CNS (Data Center)
9	Field Trip #2	SK Telecom (service provider)
10	Security	Security for Mobile computing systems
11	Mobile Data Communications	From Classic Analog Generation to Recent Digital Generation
12	Location Base Services	LBS based system operations
13	Mobile App	Software for mobile computing
14	Ubiquitous	Social Culture of Mobile computing, M2M
15	Final Exam	Written test