

SUBJECT DESCRIPTION FORM

Subject title: Advanced and Research Topics in Mobile and Pervasive Computing

Subject code: COMP6822

Credit value: 3

Responsible staff and department:

Keith Chan (COMP), Alvin Chan (COMP), Qin Lu (COMP), Hong Va Leong (COMP)

Pre-requisite: (Subject title and code no, if any)

Nil

Recommended background knowledge:

Knowledge in operating systems at the undergraduate level

Mutual exclusions:

Nil

Learning approach:

Staff will hold regular meetings with student. Student will survey research papers, discuss on research problems, conduct analysis, and give oral/written reports. The student has to submit at least one written report, which may be a survey, or a critical analysis of existing research results. Examination may be written or oral (in the presence of external members).

Assessment:

Continuous Assessment	45%
Examination	55%

Objectives:

- To equip student with appropriate research background and state-of-the-art knowledge in the area of research: mobile and pervasive computing.
- To train up student with ability to analyze and give critics to research papers.
- To allow student to learn skill to consolidate and produce technical research report.

Keyword syllabus:

State-of-the-art research topics and issues, including, but not restricted to, some of the following:

- wireless networking
- architecture and protocol for disconnection management
- mobile databases
- mobile agents
- mobile web access
- context-aware computing
- location-dependent applications
- sensor networks
- location tracking
- mobile service management and delivery
- mobile device programming

Indicative reading list and references:

- ACM Computing Surveys
- Communications of the ACM
- IEEE Computer
- Journal of the ACM
- Relevant ACM Transactions: Transactions on Internet Technology
- Relevant IEEE Transactions: Transactions on Mobile Computing
- Other relevant journals and magazines: IEEE Pervasive Computing, IEEE Personal Communications, MONET, WINET, MC2R
- Seminal papers in relevant conferences: MobiCom, SIGCOMM, MDM/MDA