Stony Brook University

Syllabus

1. Course Staff and Office Hours

Instructor: Shan Lin
                      shan.x.lin@stonybrook.edu
                      Light Eng. 249
Office Hours: Monday, 10:30am to 2:00pm
                      Other hours by appointment

TA: Hongkai Chen <hongkai.chen@stonybrook.edu >
           Mohammed Elbadry <Mohammed.Elbadry@stonybrook.edu>

Office hours and locations may change. Please check Blackboard for most up-to-date information.

2. Course Description

Introduction to the basic concepts of mobile cloud computing, including: 1. The mobile computing technology used in modern smartphones; 2. The cloud computing technologies used in existing data centers; 3. The synergy of mobile and cloud computing and its applications; 4. Programming on smartphone utilizing data center services. Students will gain knowledge of: the fundamental principles of mobile cloud computing, the major technologies that support mobile cloud computing, the current challenges and primary areas of research within the field of mobile cloud computing, and a basic understanding of the role of mobile cloud computing in the context of everyday living.

Prerequisites: ESE 224 or CSE230 or CSE 214 or ISE 208

Credits: 3

3. Textbook

Raj Kamal. Mobile Computing. Oxford University Press. 2007.

Frank H. P. Fitzek, Marcos D. Katz . Mobile Clouds: Exploiting Distributed Resources in Wireless, Mobile and Social Networks. Wiley Press. 2013.

Other readings for this course will be in the form of research papers, which will be distributed to students online.

4. Course Learning Objectives

Upon completion of the course, students will have
1. Understand the evolution of computing paradigms in the past decade

2. Understand the basic architecture of modern smartphone platform
3. Know how to program smart phones to utilize its computing resources
4. Understand the basic cloud computing technologies
5. Understand the distinct and complementary nature of the mobile and cloud computing
6. Know how to design, simulate, and program mobile cloud applications

5. Student Learning Outcomes

1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	20%
3	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	40%
3.	an ability to communicate effectively with a range of audiences.	
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.	40%
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	

7. Assignments

7.1. Labs

Labs begin the first week of the semester. You must attend the section in which you are registered. Each lab results will be checked by the end of the lab session.

7.2. Homework Assignments

Homework assignments will be issued weekly after each lab. All assignments will be due at the *beginning* of the following week's lab. Please see the Late Homework Policy, below.

7.3. Late Homework Policy

Each student is given two "late days" for homework assignments. Each late day can be used to turn in one homework assignment one day late. You may not use both late days on one assignment. **Late days may not be used on labs.**

If you are out of late days, no late homework will be accepted.

7.4. Collaboration Policy

Homework assignments are to be completed individually. You may *discuss* them with your classmates. (In fact, you are encouraged to do so.) However, you must write up your own solution individually without any help from any other person.

For example, it is fine if you and a friend discuss a problem together, and then separately work out the details and write your own separate solutions. On the other hand, it is not acceptable to share written solutions with another person or to create the written solutions together. In other words, the work you turn in must entirely be your own personal effort.

Labs (and pre-lab assignments) can completed with your partners. You and your partners should work cooperatively. However, you may not collaborate on labs with other groups.

8. Grading

Your grade will be based on labs, homework assignments, two midterm examinations, and one final examination.

Labs	20%
Homework Assignments	20%
Midterm	20%
Final Project	40%

9. Academic Honesty

Any academic dishonesty on a written homework or lab will result in a zero grade for the assignment for all parties involved.

All exam work must be entirely your own with no collaboration or outside materials/information. Any academic dishonesty on the midterm exams or the final exam will result in failing the course. The case will be submitted to the College of Engineering's Committee on Academic Standing and Appeals.

11. Electronic Communication Statement

Email and especially email sent via Blackboard (http://blackboard.stonybrook.edu) is one of the ways the faculty officially communicates with you for this course. It is your responsibility to make sure that you read your email in your official University email account. For most students that is Google Apps for Education (http://www.stonybrook.edu/mycloud), but you may verify your official Electronic Post Office (EPO) address at http://it.stonybrook.edu/help/kb/checking-or-changing-your-mail-forwarding-address-in-the-epo.

If you choose to forward your official University email to another off-campus account, faculty are not responsible for any undeliverable messages to your alternative personal accounts. You can set up Google Mail forwarding using these DoIT-provided instructions found at http://

it.stonybrook.edu/help/
kb/setting-up-mail-forwarding-in-google-mail.

If you need technical assistance, please contact Client Support at (631) 632-9800 or supportteam@stonybrook.edu.

12. Student Accessibility Support Statement

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, 128 ECC Building, (631) 632-6748, or at sasc@Stonybrook.edu. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

13. Academic Integrity Statement

Each student must pursue their academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic_integrity/index.html

14. Critical Incident Management Statement

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.