CS 496 – Mobile and Cloud Software Development

Catalog Description: Introduction to the concepts and techniques for developing mobile and cloud applications.

Credits: 4  Terms Offered: Spring

Prerequisites: CS311

Courses that require this as a prerequisite: None

Structure: eCampus: This course combines approximately 30 hours of online instruction, 60 hours of homework/programming assignments, and 15 hours of online quizzes and exams.

On campus: Three 50-minute lectures per week
Note: Due to extensive programming assignments, this course has an implied, non-scheduled lab. The lab takes place in an EECS computer lab at various times, and is not part of the official course schedule. TAs are available to help the students with programming assignments at times announced in the syllabus.

Instructors: Christopher Scaffidi

Course Content:
- Development tools
- Servlet pages for the cloud
- Efficient data storage models
- Transactions and asynchronous operations
- Analysis and benchmarking of computational resources
- User interfaces with mobile emulators and devices
- Performance, reliability, and security
- Specialized application programming interfaces

Measurable Student Learning Outcomes:
At the completion of the course, students will be able to…
1. **Install** and **configure** tools for cloud and mobile development
2. **Create** basic cloud and mobile applications that include:
   - Efficient storage of replicated data
   - Reliable synchronization of offline data
   - Presentation of mobile-optimized user interfaces
   - Effective use of relevant application programming interfaces
Learning Resources:
One of the following:
- Roche, K., "Beginning Java Google App Engine", ISBN 143022553X
And one of the following:
- Stark, J., "Building Android Apps with HTML, CSS, and JavaScript", ISBN 1449383262
- Wright, N., "Building iPhone Applications with Titanium", ISBN 047066083X

Evaluation of Student Learning:
- programming projects (approx. 40%)
- homework (approx. 10%)
- midterm exams (approx. 25%)
- final exam (approx. 25%)

Students with Disabilities:
Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

Link to Statement of Expectations for Student Conduct:
http://oregonstate.edu/admin/stucon/achon.htm

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