Faculty of Computing and Information Technology

Department of Computer Science

Spring 2018

CPCS-494 Syllabus

Catalog Description

CPCS-494 Special/Selected Topics
Credit: 3 (Theory: 3, Lab: 0, Practical: 0)
Prerequisite: None
Classification: Elective

The objective of this course is to explore selected topics about the latest advancements in the field of Computer Science (topics determined by the Council of the Computer Science Department).

Class Schedule

Meet 50 minutes 3 times/week or 80 minutes 2 times/week

Lab/Tutorial 90 minutes 1 times/week

Grade Distribution

Week	Assessment	Grade %
1	Homework	10
1	Lab Exams	35
1	Projects	25
7	Mid- Exam	10
16	Exam	20

Topics Coverage Durations

Topics	Weeks
Course Logistics	0
Course Introduction	0
Android Basics	0
Android Basics	0
Android Fundamentals	0
Beyond Basics II	0
Beyond Basics III	0
Project Proposals Discussion	0
Advanced Android I	0
Advanced Android II	0
Advanced Android Development & Looking Forward	0
Conclusion & Final Project Presentations	0

Last Articulated

Relationship to Student Outcomes

a	b	c	d	e	f	g	h	i	j	k
									x	x

Course Learning Outcomes (CLO)

By completion of the course the students should be able to

1. Identify how mobile phone development (and more specific Android development) differs from software development for PC. ()
2. Explain the unique aspects of mobile application design and its application life cycle. ()
3. Design and implement user interfaces based on the design guidelines for Android applications. ()
4. Define the three fundamental concepts of Android programming: activities, fragments, and intents. ()
5. Describe various UI components of Android, such as layouts, widgets, views and menus along with the events associated with them. ()
6. Explain what contents providers are, how to use a content provider, and how to create a user-defined, custom content provider. ()
7. Articulate the network programming features and capabilities of Android platforms, including HTTP, XML web services, JSON web services. ()
8. Describe how to create an Android service (e.g., long-running or repeated tasks) that runs in the background and how an activity and a service communicate. ()
9. Differentiate techniques for persisting user data, such as shared preferences, traditional file systems (internal and external storage), and SQLite database. ()
10. Implement a small-sized application that utilizes Android networking capabilities---SMS messages, emails, HTTP, XML web services, JSON web services, and Socket---to communicate with the outside world. ()
11. Implement a location-based service (LBS) application of small size using Google Maps, e.g., obtaining, monitoring, and tracking geographical locations. ()
12. Express the design of a moderate-sized Android application using a standard modeling notation such as UML and evaluate its quality by relating to software engineering design principles such as cohesion and coupling, encapsulation, reusability, and maintainability. ()
13. Demonstrate their ability to deploy software to mobile devices. ()

Coordinator(s)