CSIS-503 – Mobile Computing

Course Description

This course presents both big picture and detailed coding considerations in contemporary mobile computing and application development. Students code apps but also read current trade publications and scholarly research to acquire up-to-date understandings of business and engineering issues in the field. Students design and develop code on three mobile platforms, Android, iOS, and PhoneGap. Because of rapid change in the mobile computing field, it is possible that additional platforms may be added mid-course. The course teaches conceptual fundamentals, problem solving and design skills, and coding skills through lectures and lab sessions. Students demonstrate accomplishments but completing a semester project. Platform trends, market, and business model are discussed. Advanced topics include Internet-of-Things (IoT), location-based services, geo-social services, offline capable apps, and UI/UX design. The course presents emerging technologies and tools used to design and implement multimedia applications for smartphones and other mobile devices taking into account the technical constraints relative to storage capacity, processing capacity, display screen, communication interfaces, as well as user context and profile and economic considerations.

Prerequisite: None

Credits: 3

None

No

Run Impact Report

No Affected Departments

Rationale and Resources:

Mobile development is an increasingly critical component of computer science education. Just as applications in prior years moved from paper to mainframe, and later from mainframe to web, applications today are moving rapidly from web to mobile. Advanced computing education must adapt. This course provides students with hands on learning, fundamental theoretical concepts and recent research which will provide a foundation for managing and implementing web-to-mobile system future migration.

Resources

How will this course affect the ability to offer other courses?

The only caveat on successfully offering this course will be having extra faculty resources to staff the course. This will be true for all courses in the proposed master’s program.

What additional resources will be required (including library resources)?

No additional resources will be required other than the faculty mentioned above.

How will these resources be attained?

The administration at SVSU is aware of the intent of the CSIS Department to offer this new master’s program. The administration has been very supportive each step of the way and kept informed as the program was fleshed out. The CSIS Department has been told that it will receive two temporary full time faculty positions to help staff the program. We believe that these resources will be sufficient to successfully start the program and allow a gauging of demand for the program.

This is one of a series of new courses that are being proposed for the MS-CSIS program. Additionally, there are courses from other departments that are to be cross-listed. Furthermore, there is a graduate committee proposal that contains all of the details on the new master’s program.

Winter, Yearly, 20, Year