CONESTOGA

COURSE OUTLINE

Course Systems Development: Mobile Application Design (2014-2015)

Code / Version INFO2040 (100)

Total Hours 45

Credits 3

PreRequisite(s) INFO2080 (101) Systems Development: Design

CoRequisite(s)

Course Description

This course will build on the Systems Development: Design course (INFO2080) to apply software design concepts to mobile applications. Students will be introduced to best current practices in interactive design, and will solve a series of design problems which illustrate the unique qualities of a mobile device, which may include a small screen, a limited keyboard, a touchscreen, and varying types of navigation controls. Students will also be required to develop a design project, working through the phases of conception, requirements gathering, addressing technical challenges, storyboarding, documenting and testing the design.

PLAR Eligible: Yes

Course Outcomes

Successful completion of this course will enable the student to:

1. Develop designs for various platforms and devices used in mobile application development.
2. Identify the business purpose of a mobile application and identify its possible revenue streams.
3. Analyze the user requirements for a mobile application.
4. Develop storyboards for a mobile application.
5. Develop a test plan for a mobile application design.
6. Document the design of a mobile application for the purpose of upgrading it.

Unit Outcomes

Successful completion of the following units will enable the student to:

1.0 Conception

- 1.1 Identify the business purpose for a mobile application (for example, eCommerce, social media, games, etc.) and analyze possible revenue streams available to it, or alternatively, business advantages such as an increase in productivity or efficiency,
- 1.2 Evaluate the suitability of various platforms available for an application.
- 1.3 Perform a web search to determine whether similar applications exist and, if so, how the proposed application would compare.
- 1.4 Analyze the benefits of making an application “native” versus “mobile web”.

2.0 Requirements Gathering

- 2.1 Determine the target users for an application, their demographic characteristics, and identify the conditions under which the application will be used.
- 2.2 Identify the major features of an application.
- 2.3 Identify external event triggers that influence work flow or user experience.
- 2.4 Identify the design-level security requirements for an application.
- 2.5 Develop a set of use cases for an application.
- 2.6 Determine the business entities together with their attributes for an application and combine them in an entity relationship diagram.

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3.0 Technical Challenges

- 3.1 Determine limiting characteristics and technical challenges for an application, such as discontinuance of signal or the impact of a small screen, and develop high level strategies to deal with them.

4.0 Application Design

- 4.1 Select suitable design patterns and controls for each use case, such as cascading menus or widgets.
- 4.2 Develop a “style” for the application, depending on its end use and target audience, which would specify type and use of font, colour, layout graphics and other digital media.
- 4.3 Identify the internal triggers, i.e., user actions that determine the navigation of the application.
- 4.4 Using a professional graphics tool or device emulator, develop story boards for each use case.

5.0 Design Documentation

- 5.1 Using the deliverables for each phase of the design, develop a cohesive set of documentation to be used for maintaining, expanding, migrating or improving the application.

6.0 Design Testing

- 6.1 Develop a test plan to evaluate the usability of the design.

7.0 New Opportunities or Directions for the Application

- 7.1 Identify opportunities for expanding or migrating the application to other platforms, devices, and user demographics.

Required Student Resources

Fling. Mobile Design and Development. O’Reilly Publishing..

Optional Student Resources

Satzinger, Jackson & Burd. Object-Oriented Analysis and Design with the Unified Process. Thompson Course Technology.

Language manuals, web sites, chat rooms and bulletin boards

Evaluation

The minimum passing grade for this course is 55 (D).

In order to successfully complete this course, the student is required to meet the following evaluation criteria:

Projects	30.00
Individual Assignments	10.00
Midterm Exam	30.00
Final Exam	30.00
	100.00 %

Other

Conestoga College is committed to providing academic accommodations for students with documented disabilities. Please contact the Accessibility Services Office.

Prepared By Randall Kozak

School Information Technology

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Date 2014-12-18