***Appendix B – Approved Syllabus Format (Rev. 4/18)***

**Curriculum Committee – Approved: November 2021**

**CSCI 2205 – Mobile Device Programming**

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1. **COURSE TITLE\*: Mobile Device Programming**
2. **CATALOG – PREFIX/COURSE NUMBER/COURSE SECTION\*: CSCI 2205**
3. **PREREQUISITE(S)\*: CSCI 1121 COREQUISITE(S)\*:**
4. **COURSE TIME/LOCATION: (*Course Syllabus – Individual Instructor Specific*)**
5. **CREDIT HOURS\*: 3 LECTURE HOURS\*: 2**

**LABORATORY HOURS\*: 1 OBSERVATION HOURS\*:**

1. **FACULTY CONTACT INFORMATION: *(Course Syllabus – Individual Instructor Specific)***
2. **COURSE DESCRIPTION\*:** This course prepares students to develop applications for the Google Android platform. Students will be able to build useful apps with Java and the other integrated development environments. Object-oriented programming techniques will be reinforced.
3. **LEARNING OBJECTIVES\*:**
   1. Learn how to write Applications and GUI applications
   2. Run and test an interactive mobile application
   3. Develop the user interface using the Android SDK
   4. Determine input/output controls using methods
   5. Introduction to key programming concepts
   6. Manipulate the Android user interface
   7. Create and implement variables
   8. Implementing audio, graphics and animation
   9. Create and implement user input options
   10. Implementing icons and themes
   11. Understand and implement control structures
   12. Declare and construct arrays
   13. Create and implement lists
   14. Create fully-functional Android applications
4. **ADOPTED TEXT(S)\*:**

No textbook required, free online resources will be used to teach this course. Resources include Udacity, Khan Academy and Code Academy.

**9a: SUPPLEMENTAL TEXTS APPROVED BY FULL TIME DEPARTMENTAL FACULTY (INSTRUCTOR MUST NOTIFY THE BOOKSTORE BEFORE THE TEXTBOOK ORDERING DEADLINE DATE PRIOR TO ADOPTION) \*\*\*.**

1. **OTHER REQUIRED MATERIALS: (SEE APPENDIX C FOR TECHNOLOGY REQUEST FORM.)\*\***
2. **GRADING SCALE\*\*\*:**

Grading will follow the policy in the catalog. The scale is as follows:

A: 90 – 100

B: 80 – 89

C: 70 – 79

D: 60 – 69

F: 0 – 59

1. **GRADING PROCEDURES OR ASSESSMENTS: (*Course Syllabus – Individual Instructor Specific)***

|  |  |  |
| --- | --- | --- |
| *Category* | ***EXAMPLE ONLY***  *Total Points* | *% of Grade* |
| Chapter Assignments (10x30) | 300 | 30% |
| Quizzes (10x20) | 200 | 20% |
| Unit Exams (3x100) | 300 | 30% |
| Assignments (5x10) | 50 | 5% |
| Annual Report Project (100) | 100 | 10% |
| Attendance | 50 | 5% |
| Total | 1000 | 100% |

1. **COURSE METHODOLOGY OR COURSE FORMAT: *(Course Syllabus – Individual Instructor Specific)***

May include but not limited to: lecture, independent and group hand-on computer lab projects, in-class and at-home assignments, tests and quizzes

**14. COURSE OUTLINE: *(Course Syllabus – Individual Instructor Specific)***

|  |  |  |
| --- | --- | --- |
| **Week** | **Topics** | **Learning Objectives** |
| **1 & 2** | Android Basics: User Interface  https://www.udacity.com/course/android-basics-user-interface--ud834   * Take your hand drawn app designs and lay them out on the phone screen. * Learn the XML markup language used to lay out Android applications. * Add text and color to your app. * Learn about Views and View Groups, the basic building blocks of any Android App's User Interface. * Learn how to use Views and View Groups to display images and text. * Use padding and margins in order to make your layout comfortable on many different devices. | **1, 3, 5 & 6** |
| **3 & 4** | Android Basics: User Input  https://www.udacity.com/course/android-basics-user-input--ud836   * Harness the power of Java to create an interactive coffee ordering app! * Start by writing simple Java code statements that add interactivity to your app. * Use a fundamental concept in programming, a variable, to keep track of all the coffee drinks ordered. * Take a deeper dive into the Android Framework and build the Just Java coffee ordering app! * See in more detail how Android works behind the scenes and take your first steps towards learning Object Oriented Programming. * Add the ability to add toppings to your coffee, and show a detailed order summary when the customer purchases a coffee. | **1, 2, 5, & 9** |
| **5** | Developing Android Apps – Project Sunshine  https://www.udacity.com/course/new-android-fundamentals--ud851   * Learn how to create and run a simple Android app * Create simple layouts for Android * Learn about the Android Studio IDE | **1, 6, 9 & 10** |
| **6** | Loading Data from the Internet   * Connect to the Internet and communicate with web APIs * Learn about threading and how to make requests without slowing down your app * Learn how to add menus to your app | **1 & 4** |
| **7** | Recycler View   * Learn about the components that convert a list of data into visual UI elements | **1, 2 & 8** |
| **8** | Intents   * Learn the difference between Explicit and Implicit Intents * Learn how to navigate inside your apps using intents * Learn how to create Intents that apps outside your control can respond to | **1, 7 & 12** |
| **9** | The Application Lifecycle   * Understand the phases of the Android application lifecycle * Learn how to persist data between orientation and other changes | **1, & 8** |
| **10** | Preferences   * Allow users to customize some aspects of your app * Consider when to omit or add a preference | **1 & 11** |
| **11** | Creating SQLite Databases   * Implement a SQLite database * Make queries to and modify that database in your app | **1 & 12** |
| **12** | Introduction to Content Providers   * Learn how Content Providers provide an interface to share data * Consume data from an already existing ContentProvider | **1 & 13** |
| **13** | Building a Content Provider   * Learn to build a Content Provider | **1 & 13** |
| **14** | Background Tasks   * Run jobs in the background of an app * Create notifications and schedule long-running background processes | **1, 2 & 11** |
| **15** | Completing the UI   * Build a well-organized, accessible UI for your app * Try different layouts, views, viewgroups, and methods of databinding * Design your UI for users who speak different languages | **1, 2, 3 & 14** |
| **16** | Polishing the UI   * Add visual polish to your apps with different layouts, fonts, and colors * Use design principles to create apps that look great across multiple form factors | **1, 2, 3 & 14** |

**15. SPECIFIC MANAGEMENT REQUIREMENTS\*\*\*:**

**16. OTHER INFORMATION\*\*\*:**

**FERPA:** Students need to understand that your work may be seen by others. Others may see your work when being distributed, during group project work, or if it is chosen for demonstration purposes. Students also need to know that there is a strong possibility that your work may be submitted to other entities for the purpose of plagiarism checks.

**DISABILITIES:** Students with disabilities may contact the Disabilities Service Office, Central Campus, at 800-628-7722 or 937-393-3431.

**SYLLABUS TEMPLATE KEY**

**\*** Item cannot be altered from that which is included in the master syllabus approved by the Curriculum Committee.

**\*\*** Any alteration or addition must be approved by the Curriculum Committee

**\*\*\*** Item should begin with language as approved in the master syllabus but may be added to at the discretion of the faculty member.