COURSE OUTLINE: MAP204 - HANDS-ON ANDROID DEV

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Approved: David Orazietti, Dean, Environment, Technology, and Business

Course Code: Title	MAP204: HANDS-ON ANDROID DEVELOPMENT
Program Number: Name	2191: MOBILE APPS DESIGN
Department:	COMPUTER STUDIES
Semesters/Terms:	21W
Course Description:	In this course, students will learn to develop Android apps in a hands-on, application-driven approach. In this second Android course, students will extend their skills by learning to research advance Android Application Programming Interfaces (APIs) and create increasingly complex applications. The final capstone project will be based on an individual or group app development scenario.
Total Credits:	5
Hours/Week:	5
Total Hours:	75
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**2191 - MOBILE APPS DESIGN** VLO 1 Evaluate business and design requirements to select, formulate and implement mobile solutions. VLO 3 Develop application and user interfaces for various mobile platforms that leverage evolving mobile device capabilities. VLO 6 Design, develop and publish device-specific mobile applications using mobile solution technology to meet stakeholder requirements. VLO 7 Evaluate and implement new features for current IOS, Android and other platforms to meet client needs.
Essential Employability Skills (EES) addressed in this course:	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others. EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. EES 10 Manage the use of time and other resources to complete projects. EES 11 Take responsibility for ones own actions, decisions, and consequences.

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.

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Course Evaluation:	Passing Grade: 50%, D
	A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Other Course Evaluation & Assessment Requirements:	The student must pass both the lab and test portions of the course.
	Attendance: Sault College is committed to student success. There is a direct correlation between academic performance and class attendance, therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.
	Absences due to medical or other unavoidable circumstances should be discussed with the instructor. Students are required to be in class on time and attendance will be taken within the first five minutes of class.
	Absentee reports will be discussed with each student during regular meetings with Faculty Advisors.
	Grade Definition Grade Point Equivalent A+ 90 - 100% 4.00 A 80 - 89% B 70 - 79% 3.00 C 60 - 69% 2.00 D 50 - 59% 1.00 F (Fail) 49% and below 0.00 CR (Credit) Credit for diploma requirements has been awarded. S Satisfactory achievement in field /clinical placement or non-graded subject area. U Unsatisfactory achievement in field/clinical placement or non-graded subject area. X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course. NR Grade not reported to Registrar`s office. W Student has withdrawn from the course without academic penalty
Books and Required Resources:	Android Programming (The Big Nerd Ranch Guide) by Bill Phillips, Chris Stewart, Kristin Marsicano, Brian Gardner Publisher: Pearson Edition: 4 ISBN: 9780135245125

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Layouts, widgets and fragment navigation.	1.1 Describe what fragment arguments are and when to use them. 1.2 Implement LiveData Transformations. 1.3 Differentiate between various user interface widgets. 1.4 Implement a variety of user interface layouts.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
Displaying lists with the RecyclerView.	2.1 Understand the components of the RecyclerView. 2.2 Describe how ViewHolders work. 2.3 Define data binding.

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	2.4 Implement adapters to feed data to your list.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
Interacting with mobile device hardware and external apps.	3.1 Describe what implicit intents are. 3.2 Examine various ways you can use implicit intents. 3.3 Demonstrate the use of implicit intents. 3.4 Integrate camera hardware into an app. 3.5 Implement an integration to the contacts database.
Course Outcome 4	**Learning Objectives for Course Outcome 4**
HTTP, background tasks and multi-threading.	4.1 Define how networking works with Retrofit 4.2 Describe Loopers, Handlers and the HandlerThread. 4.3 Contrast between background tasks and multi-threading. 4.4 Implement threads to communicate over the network. 4.5 Explore JSON and how to consume it from a web service.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Lab 1	8%
Lab 2	8%
Lab 3	8%
Lab 4	8%
Lab 5	8%
Test 1	25%
Test 2	35%

Date: October 1, 2020

Addendum: Please refer to the course outline addendum on the Learning Management System for further information.

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