



# COURSE OUTLINE

## CSD309

Prepared: Fred Carella    Approved: Cory Meunier

<b>Course Code: Title</b>	CSD309: MOBILE APPLICATIONS II
<b>Program Number: Name</b>	2090: COMPUTER PROGRAMMER
<b>Department:</b>	COMPUTER STUDIES
<b>Semester/Term:</b>	17F
<b>Course Description:</b>	This course explores software development for Android based mobile devices. Students will become familiar with the processes involved in creating, testing, debugging and deploying Android applications. Software development will occur using Android Studio IDE and the Java programming language. Applications will be written that explore the building of user interfaces, the persistence of data, work with sensors, send emails and interact generally with the device. The written applications will be deployed to mobile device emulators and to various hardware devices, logistics permitting.
<b>Total Credits:</b>	4
<b>Hours/Week:</b>	3
<b>Total Hours:</b>	45
<b>Prerequisites:</b>	CSD203, CSD221
<b>Vocational Learning Outcomes (VLO's):</b>  Please refer to program web page for a complete listing of program outcomes where applicable.	#2. Develop, test, document, deploy, and maintain secure program code based on specifications. #4. Apply knowledge of networking concepts to develop, deploy, and maintain program code.
<b>Essential Employability Skills (EES):</b>	#1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. #2. Respond to written, spoken, or visual messages in a manner that ensures effective communication. #4. Apply a systematic approach to solve problems. #5. Use a variety of thinking skills to anticipate and solve problems. #6. Locate, select, organize, and document information using appropriate technology and information systems.
<b>Course Evaluation:</b>	Passing Grade: 50%, D



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### 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. A missed class will result in a penalty in your marks unless you have discussed your absence with the professor as described above. The penalty depends on course hours and will be applied as follows:

Course Hours Deduction  
5 hrs/week (75 hrs) 1% / hr  
4 hrs/week (60 hrs) 1.5% /hr  
3 hrs/week (45 hrs) 2% /hr  
2 hrs/week (30 hrs) 3%/hr

Absentee reports will be discussed with each student during regular meetings with Faculty Advisors. Final penalties will be reviewed by the professor and will be at the discretion of the professor.

#### 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.



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**Evaluation Process and Grading System:**

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**Books and Required Resources:**

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**Course Outcomes and Learning Objectives:**

Evaluation Type	Evaluation Weight
Labs	40%
Tests	60%

Instructor supplied resources

### Course Outcome 1.

Install and configure the development environment

#### Learning Objectives 1.

- Download and install Android Studio
- Discuss and identify a projects files and structure
- Download and install the Android SDK
- Identify and work with various views including design and text view
- Become familiar with the various tools and capabilities of the IDE

### Course Outcome 2.

Identify and incorporate application components

#### Learning Objectives 2.

- Identify, discuss and apply Activities
- Identify, discuss and apply Services
- Identify, discuss and apply Content providers
- Identify, discuss and apply Broadcast receivers
- Activate components with Intents
- Declare components via the applications manifest
- Declare app requirements
- Provide resources



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### Course Outcome 3.

Design and Develop User Interfaces

### Learning Objectives 3.

- Discuss interface elements and how they are built: Views and ViewGroups
- Apply various interface layouts in the design of the UI
- Apply various User Interface Components including Action Bars, Dialogs and Notifications

### Course Outcome 4.

Design and Write applications

### Learning Objectives 4.

- Utilize mockup tools in the design of an application
- Write applications that Incorporate
  - o input controls
  - o handle events
  - o implement menus
  - o implement an action bar
  - o application settings
  - o dialogs
  - o notifications
  - o search
  - o media playback
  - o audio
  - o camera
  - o location and motion capabilities
  - o various sensors
  - o connect using http, Bluetooth and NFC
  - o various data storage options including internal storage, sqllite databases and on local servers
    - Debug applications
    - Deploy application apks using various methods
    - Identify, discuss and develop web applications with WebView as opposed to client side apps



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### **Course Outcome 5.**

Incorporate Best Practices

### **Learning Objectives 5.**

- Design for and support multiple screens
- Support Tablets and Handsets

**Date:**

Friday, September 1, 2017

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