JOHN ABBOTT
CEGEP/COLLEGE

CONTINUING
EDUCATION
FORMATION
CONTINUE

Course Outline

Internet Programming and Development – LEA.BN

A. General Information

COURSE NAME	MOBILE APPLICATIONS
PROGRAM NAME	Internet Programming and Development
COURSE NUMBER	420-P84-AB
START DATE	6/30/2021
END DATE	7/16/2021
DAY(S) AND TIMES	Monday to Friday, 10:00-13:00 & 15:00-18:00
CLASSROOM/LAB NUMBER	On-line
PONDERATION *RATIO OF LECTURE, PRACTICAL AND HOMEWORK HOURS*	2-3-3
HOURS	60
CREDITS	2.33
COMPETENCY STATEMENT(S) AND CODE(S)	DC75: Implement a native mobile application
PREREQUISITE (IF ANY)	(420-PZ4-AB) Programming II – Object-Oriented Programming, and (420-P14-AB) Database I
SEMESTER	Winter 2021 – IPD-24
TEACHER	Masoud Bozorgi
TEACHER'S CONTACT INFO	MIO

B. Introduction

This course is part of the Internet Programming and Development program leading to the *Attestation d'études collégiales* (A.E.C). It should be taken in the 3rd semester of the program.

By the end of this course, students should be able to perform the following:

Competency code(s) and statements	Element(s) of the competency One per row	Performance criteria (if applicable)
DC75: Implement a native mobile application	E1. Understand the mobile app structure	P1.1 Know the core concerns related to limited resources of mobile devices P1.2 Know the reason for existence and the use of Activities, Views, Services, and Content Providers. P1.3 Know how to include resource files into a mobile app and how to load them from the app at runtime. P1.4 Know the directory structure of a mobile app project.
	E2. Understand User Interface design and technology	P2.1 Know the basic building blocks of User Interface. P2.2 Know the vendor's guidelines for User Interface (UI) designs offering optimal User Experience (UX). P2.3 Know how to edit UI design both by drag-and-drop visual creator as well as direct XML source file editing. P2.4 Know how to define an Activity class. P2.5 Know how to use ListView and various types of Adapters. P2.6 Know how to use Toast and dialog boxes.
	E3. Understand how to handle events and broadcasts	P3.1 Know how to attach an event handler to an action on the user interface.

		P3.2 Know how to use anonymous inner classes to create event handlers. P3.3 Know how to receive system event broadcasts.
	E4. Understand networking on a mobile device	P4.1 Know how to request permission to use Internet connectivity. P4.2 Know how to use AsyncTask class to execute network requests. P4.3 Know how to cancel AsyncTask and how to publish progress of Async task to UI thread.
	E5. Know how to store persistent data	P5.1 Know how to read and write to a file. P5.2 Know how to initialize and use SQLite database.
	E6. Understand error handling and debugging of a mobile app.	P6.1 Know how to write to app's log and how to view log's content. P6.2 Know how to handle exceptions and inform the user of errors. P6.3 Know how to run an app on an emulator or an actual device. P6.4 Know how to use debugger. P6.5 Know how to access the storage and detailed debug information about an Android device.

D. Evaluation Plan

EVALUATION	%	APPROXIMATE DATE	LINK TO COMPETENC(IES) AND ELEMENT(S)
MID-COURSE EVALUATION - PRACTICAL	35%	July 12	E 1, E2, E3, E4, E5, E6
FINAL EVALUATION **MINIMUM OF 40% OF FINAL GRADE**			
FINAL EVALUATION - PRACTICAL	35%	July 15	E 1, E2, E3, E4, E5, E6
FINAL PROJECT **DEMO**	30%	July 16	E 1, E2, E3, E4, E5, E6
IN THE FINAL PROJECT, YOU MUST DEMO YOUR PROJECT AND ANSWER SOME QUESTIONS.			

JOHN ABBOTT
CEGEP/COLLEGE

CONTINUING
EDUCATION
FORMATION
CONTINUE

E. Course Content and Schedule

DATE	SPECIFIC CONTENT	ONLINE
JUNE 30	1- Prepare the development environment 2- Android App Project Structure 3- Core concerns related to limited resources of mobile	☒

JULY 02	4- Basic building blocks of User Interface
	
	5- UI design direct XML source file editing,
	
	6- Layouts:
	
	   a. Relative Layout
	
	   b. Linear Layout
	
	   c. Grid Layout
	
	   d. Table Layout
	
	7- Customise Widgets shape and color
	
	8- Image View
		☒

JULY 05	9- Create a resource file and use resource values like string.xml, styles.xml, colours.xml 10- Change application name and icon 11- Localization 12- Attach an event handler to widgets in xml 13- Use interfaces and anonymous inner classes to create event handlers 14- Radio Buttons	☒

JULY 06	15- Explicit Intents:
	
	   a. Concept of Activity Back Stack
	   b. Pass data and objects from one activity to other activity
	   c. Receive an answer from another activity
		☒

JULY 07	16- Implicit Intent
	
	   a. Make a phone call
	   b. Send a SMS
	   c. Internet Connection
	
	17- Activity Life Cycle
		☒

JOHN ABBOTT
CEGEP/COLLEGE

CONTINUING
EDUCATION
FORMATION
CONTINUE

	18- Dialog	
	19- Internet Access	
JULY 08	20- Questioner Project Spinners	☒
	21- Async Task	
JULY 09	22- Web Service	☒
	23- List View	
JULY 12	Mid-Course Evaluation	
JULY 13	24- Broadcasts Receiver	☒
	15- Create a Menu	
	26- Progress Bar	
	27- Toasts	
JULY 14	28- Persistent Data	
	29- Play Video and Audio	
	30- Animation	
JULY 15	Final Evaluation	
JULY 16	Review and Demo Project	☒

NOTE: TEACHER RESERVES THE RIGHT TO ADJUST THE ORDER OF CONTENT AND TIME SPENT WHEN IT SERVES THE STUDENTS IN BETTER UNDERSTANDING AND APPLYING CONCEPTS AND PRACTICES TAUGHT IN THE COURSE.

F. Required Textbooks / Materials / Course Costs

Title / Item Name	Cost

JOHN ABBOTT
CEGEP/COLLEGE

CONTINUING
EDUCATION
FORMATION
CONTINUE

G. Bibliography (if applicable)

Head First Android Development: A Brain-Friendly Guide

H. Teaching Methods

This course will be approached from both a theoretical and practical perspective through:
- Lectures and workshops
- In-class exercises and simulations
- Case studies, quizzes and examinations

I. Departmental Policies

Please refer to the following documents concerning policies in place at the Centre for Continuing Education:

Summary of Continuing Education Departmental Policies and Guidelines (June 2020)

Online Civility and Student Code of Conduct (Continuing Education version) (June 2020)

J. Classroom Policies

Late submission of work

Assignments should be submitted on the due date in order to receive full credit. The penalty for unexcused late assignments will be determined by the following scale:

1. For one day or part thereof late, the instructor will reduce the assigned grade by 10 %
2. More than one day late assignments may receive no credit and result in failure

Classroom behaviour

Online etiquette

Avoid multitasking (e.g. checking your emails or looking at your phone) while attending your virtual class. Stay engaged in class activities and turn off any distracting devices.

Respect etiquette rules and maintain a professional dialogue with your peers.

Challenge each other's ideas (without talking over each other), and engage in stimulating discussions.

Think of online meetings as face-to-face interactions and conduct yourself as you would if you were sharing a non-virtual classroom with your instructor and peers.

Audio

Once your instructor calls on you, unmute yourself and speak. Remember to mute your microphone again when you are finished. Background noise is very distracting for everyone in the session.

If you wish to speak or ask a question, click the "Raise Hand" button and wait for the instructor to call on you.

Avoid talking over or at the same time as other students.

Video

Turn on your video when possible. Face-to-face communication fosters a congenial classroom atmosphere.

Use a Virtual Background or blur feature to hide any visual distractions or things that you don't want others to see.

If you have limited network bandwidth and you cannot turn on your video, upload a professional picture of yourself to your account.

If you choose to turn off your video, demonstrate your attentiveness by typing questions, comments, or answers in the chat box, or use the non-verbal communication tools to provide feedback to your instructor.

Chat

Stay on topic and avoid wordy sentences or paragraphs.

Use the chat box to ask questions or respond to your instructor's or peers' questions.

Use a clear writing style, grammar, punctuation and spelling, and read your message at least once before you submit it.

Avoid using the chat box to have private, side conversations with your peers.

K. College Policies

Please refer to the following document which summarizes some of the key policies in place at the College. See the specific policies for more information.

[Summary of College Policies and Guidelines (June 2020)](#)

Cheating and Plagiarism

Please refer to the following documents concerning cheating and plagiarism at John Abbott College:

[Policy 7: Institutional Policy on the Evaluation of Student Achievement (IPESA)](#)

See articles **9.1** and **9.2**.

[Academic Integrity: Cheating and Plagiarism Procedure](#)

Religious Holidays

Please refer to the following document concerning absences:

[Policy 7: Institutional Policy on the Evaluation of Student Achievement (IPESA)](#)

See articles **3.2.13** and **4.1.6**.

Student Rights and Responsibilities

Please refer to the following document concerning student rights and responsibilities:

[Policy 7: Institutional Policy on the Evaluation of Student Achievement (IPESA)](#)

See articles **3.2** and **3.3**.

Changes to Course Evaluation Plan in the Course Outline

Please refer to the following document concerning absences:

[Policy 7: Institutional Policy on the Evaluation of Student Achievement (IPESA)](#)

See article **5.3**.

Student Code of Conduct

Please refer to the following document concerning the College's student code of conduct and discipline procedures:

[Policy 13: Policy on Student Conduct and Discipline Procedures (September 15, 2009)](#)