DEREE COLLEGE SYLLABUS FOR:

ITC 3225 MOBILE APPLICATIONS DEVELOPMENT **3/0/3**

(Updated Spring 2016) **UK LEVEL 5**
UK CREDITS: 15

PREREQUISITES:	ITC 1070 LE Information Technology Fundamentals –or- CS 1070 LE Introduction to Information systems ITC 2088 Introduction to Programming
CATALOG DESCRIPTION:	Programming mobile devices; user interface design; user interface building; input methods; data storage; motion sensing; memory management; exception handling.
RATIONALE:	The course exposes students to today's mobile device software development methodologies and programming principles. It provides students with the opportunity to design, develop, deploy and debug applications for the Android platform, enhancing their understanding of mobile development and their judgement of the effectiveness of different development techniques.
LEARNING OUTCOMES:	As a result of taking this course, the student should be able to: 1. Distinguish between mobile, web and desktop design considerations and describe android's programming framework. 2. Utilize rapid application prototyping and development techniques to design interactive and effective user interfaces. 3. Develop programming skills for the Android operating system using basic and more advanced techniques. 4. Explain the deployment and distribution applications process on the Android market place.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: • Lectures and class discussions. • Laboratory sessions, involving training and practice in program design and development. • Homework programming assignments. • Office hours held by the instructor to provide further assistance to students. • Use of the Blackboard site to further support communication, by posting lecture notes, assignment instruction, timely announcements, formative quizzes and online submission of assignments.
ASSESSMENT:	**Summative:** Midterm Examination (short programming problems, short answers to essay questions) **20%** Programming Project **80%** **Formative:** Take-home programming problems **0** The take-home programming problems aim to shape teaching along the semester and prepare students for the coursework. The midterm examination tests learning outcome 1 The programming project tests learning outcomes 2,3,4

INDICATIVE READING:	**REQUIRED READING:** Instructor notes **RECOMMENDED READING:** Reto Meier, (2012), *Professional Android 4 Application Development*, John Wiley & Sons
INDICATIVE MATERIAL: *(e.g. audiovisual, digital material, etc.)*	**REQUIRED MATERIAL:** N/A **RECOMMENDED MATERIAL:** A mobile device (phone or tablet) running Android.
COMMUNICATION REQUIREMENTS:	Daily access to the course's site on the College's Blackboard CMS. Effective presentation skills using proper written and oral English. Communicate and coordinate during development activities.
SOFTWARE REQUIREMENTS:	Android Studio (latest)
WWW RESOURCES:	Android Online Developers Guide http://developer.android.com/reference/ Udacity: Developing Android Apps- Fundamentals https://www.udacity.com/course/developing-android-apps-fundamentals--ud853-nd
INDICATIVE CONTENT:	1. Android platform and android development environment. 2. Creating applications and activities 3. Building user interfaces for tablets and phones. 4. Intents and broadcast receivers 5. Using Internet resources 6. Files, saving state, and preferences 7. Databases and content providers 8. Working in the background 9. Expanding the user experience 10. Advanced user experience, graphics, animation and multi-touch gestures. 11. Sensors 12. Promoting, and distributing applications