**DEREE COLLEGE SYLLABUS FOR:**

**ITC 3125 Mobile Applications Development** **3/0/3**
(Previously ITC 3225) **UK LEVEL: 5**
(Updated Fall 2025) **UK CREDITS: 15**

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| **PREREQUISITES:** | ITC 2088 Introduction to Programming |
| **COREQUISITES:** | None. |
| **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 modern mobile device software development methodologies and programming principles. Students have the opportunity to design, develop, deploy and debug mobile applications, enhancing their understanding of mobile platforms 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:<br>1. Distinguish between mobile, web and desktop design considerations and describe relevant programming frameworks.<br>2. Utilize rapid application prototyping and development techniques to design interactive and effective user interfaces.<br>3. Develop programming skills for the mobile operating systems using basic and more advanced techniques.<br>4. Explain the deployment and distribution applications process on the marketplace. |
| **METHOD OF TEACHING AND LEARNING:** | In congruence with the teaching and learning strategy of the college, the following tools are used:<br>• Classroom lectures, discussions, and review of real-world cases based on specific theoretical concepts. Laboratory practical sessions and use of generative AI tools to inform course content. .<br>• Office hours held by the instructor to provide further assistance to students.<br>• 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:**<br>1st assessment: Midterm Examination programming problems, short answers — **30%**<br>2nd assessment: Portfolio of student work and oral assessment — **10%**<br>Final assessment: Programming Project — **60%**<br><br>**Formative:**<br>Continuation/finalization of problems tackled during the in-class hands-on sessions. — **0%**<br><br>The formative assessments aim to prepare students for the summative |

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| | assessments and expose them to teamwork.<br>The 1st summative assessment tests the LOs 2,3.<br>The 2nd summative assessment tests the LOs 1-4.<br>The final summative assessment tests the LOs 1-4.<br><br>*The final grade for this module will be determined by averaging all summative assessment grades, based on predetermined weights for each assessment. If students pass the **final summative assessment,** which tests all Learning Outcomes for this module, and the average grade for the module is 40 or above, students are not required to resit any failed assessments.* |
| **INDICATIVE READING:** | **REQUIRED READING:**<br>1. Dawn Griffiths and David Griffiths. 2021. Head First Android Development (3rd. ed.). O'Reilly Media, Inc.<br>2. Instructor notes<br><br>**RECOMMENDED READING:**<br>1. Bill Phillips, Chris Stewart, Brian Hardy, and Kristin Marsicano. 2019. Android Programming: The Big Nerd Ranch Guide (4th. ed.). Big Nerd Ranch. |
| **INDICATIVE MATERIAL:**<br>*(e.g. audiovisual, digital material, etc.)* | **REQUIRED MATERIAL:** N/A<br><br>**RECOMMENDED MATERIAL:**<br>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:** | A relational database management software (OracleXE or MySql)<br>A client software to access the database (SQL Developer or MySQL Workbench),<br>An Entity-Relationship modelling tool (Oracle's SQL Data Modeller or MySQL Workbench Visual Database Design) |
| **WWW RESOURCES:** | • Android Online Developers Guide http://developer.android.com/reference/<br>• 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.<br>2. Creating applications and activities<br>3. Building user interfaces for tablets and phones: Layouts, widgets, localization<br>4. Intents and broadcast receivers: Multiple activities and reusing activities from other applications<br>5. Files, saving state, and preferences<br>6. Adapters and adapter layouts<br>7. Expanding the user experience: Spinners, radio buttons<br>8. Advanced user experience: Multiple screens, styles and themes.<br>9. Promoting, and distributing applications Advanced user experience, |

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| | graphics, animation and multi-touch gestures. |