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| **ISCG7424:** | **Mobile Software Development** | | | | | |
| **Course number:** | | ISCG7424 | **Level:** | 7 | **Credits:** | 15 |
| **Main programme:** | | BCS | | | Elective | |  |
| **Pathway(s):** | |  | | | | |  |
| **Requisites / Restrictions:** | | Pre-requisites: (ISCG6414 or ISCG6234 or ISCG7132 or ISCG7142) and (ISCG6421 or ISCG6222)  Co-requisites: ISCG6426 | | | | |
| **Other programmes:** | | GDCMP | | | | |
| **NZSCED field of Study:** | |  | **Delivery mode:** |  | | |

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| **Hours directed:** | **Hours in the Workplace:** | **Hours Self-directed:** | **Total Learning Hours:** |
| 32.5 |  | 117.5 | 150 |

**Outcome Statement:**

To provide students with the ability to investigate and use advanced techniques that extend the standard software development environment so that the student is competent in approaches required in the development and deployment of software applications for mobile devices.

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| **Learning Outcomes:**   |  |  | | --- | --- | |  | **Learning outcomes** | | 1. | Acquire in depth knowledge of a range of advanced technical features that extend the standard software development environment to cater for the development of software for mobile devices by obtaining information from the internet, manuals, textbooks and supplied sample code. | | 2. | Demonstrate the ability to successfully apply such features and techniques when writing code to solve selected problems in the given language for a mobile device. | | 3. | Communicate the knowledge from learning outcome 1, in a form that other programmers will find usable, relevant and easily intelligible. | |

**Learning and Teaching:**

After the initial sessions students will be expected to present an idea for a mobile application that they want to develop. The best ideas will be selected and students put into teams to develop these applications. The students who have the product vision will each lead a team of developers. The finished products will be presented to our industry partner who will select one of them to sponsor and commercialise as a BCS level 7 Project with that group of students.

Lectures, laboratory work, self-directed study

Topics:

Topics include: researching advanced level techniques, building controls and writing advanced level programming applications.

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| Expanded Outcomes |
| **Outcome1:**  Acquire in depth knowledge of a range of advanced technical features that extend the standard software development environment to cater for the development of software for mobile devices by obtaining information from the internet, manuals, textbooks and supplied sample code.  Students will demonstrate competence in a selection of the following topics or additional topics depending on language and operating system features.   * Identification of technology and software trends for mobile devices * Different software environments and technologies available for the mobile devices * Different software development platforms available for mobile devices * User interface design for mobile technologies * Deploying and installing software to mobile devices * Network awareness - off-line and on-line operations * Usability issues for mobile devices |
| **Outcome 2:**  Demonstrate the ability to successfully apply such features and techniques when writing code to solve selected problems in the given language for a mobile device. |
| **Outcome 3:**  Communicate the knowledge from learning outcome 1 in a form that other programmers will find usable, relevant and easily intelligible. |

Assessment:

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| **Weighting** | **Nature of assessment** | **Learning outcomes** | **Type** |
| 70% | Design / develop mobile applications based on prescriptive assignment description(s). | 1,2 | Individual |
| 30% | Semester long, group work project to design, develop, test and present a mobile application. | 1,2,3 | Group |

**Learning resources required:**

Textbook: Refer to the current programme booklist.

**Learning resources recommended:**

**Other Programmes:**

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| GDCMP | **Elective** | Pre-requisites: (ISCG6414 or ISCG6234 or ISCG7132 or ISCG7142) and (ISCG6421 or ISCG6222)  Co-requisites: ISCG6426 |

**Version Tracking:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Version No.* | *Date of Change* | *Effective from* | *Approved by* | *Description of change* |
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