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South East Technological University

Module Descriptor

Mobile Game Development (Computing and Mathematics)

Mobile Game Development (A12581)

Short Title: Mobile Game Development
Department: Computing and Mathematics
Credits: 5 **Level:** Advanced

Description of Module / Aims

The aim of the module is to provide students with an understanding of the main concepts and issues in the design and development of mobile games. Students are given the opportunity to acquire practical experience of the tools, technologies and platforms employed in the development of mobile games.

Programmes

		stage/semester/status
COMP-0671	BSc (Hons) in Applied Computing (WD_KACCM_B)	4 / 7 / E
COMP-0671	BSc (Hons) in Applied Computing (WD_KCOMP_B)	4 / 7 / E
COMP-0671	BSc (Hons) in Computer Science (WD_KCMSC_B)	4 / 7 / E

Indicative Content

- Overview of mobile gaming devices: mobile gaming platforms and development environments, cross platforms game engines and native game development
- Developing mobiles games: UI considerations, asset management and rendering for mobile devices, implementing gameplay mechanics, deploying games on mobile devices
- Mobile gaming markets: mobile game market analysis, revenue generation and publishing games

Learning Outcomes

On successful completion of this module, a student will be able to:

1. Select and apply appropriate methodologies and techniques for the development of games for mobile devices, taking in consideration the limitations of mobile devices.
2. Manage the publication of a mobile game application.
3. Develop non-trivial game prototypes for selected mobile platform using industry standard tools and technologies.
4. Evaluate the effectiveness and the quality of the games developed.

Learning and Teaching Methods

- Since this module is focused on developing practical programming skills (i.e., game programming for mobile devices), the four contact hours will be delivered in the computer labs in the form of two 2-hour practicals.
- Due to the very practical nature of the skills to be acquired in this module, these practical sessions will be centred around the idea of learning by doing, whereby students develop proficiency in the specified skill set through guided activities, and whereby lecturers provide short formal presentations of relevant concepts and technologies, as well as practical tips, feedback, and best practices.
- Practical exercises will provide students with an opportunity to develop a range of technical competencies relating to mobile game development using industry standard development tools, technologies and techniques. Emphasis is placed on further developing the students' software engineering and development skills.

Learning Modes

Learning Type	F/T Hours	P/T Hours
Practical	48	
Independent Learning	87	

Assessment Methods

	Weighting	Outcomes Assessed
Continuous Assessment	100%	
Assignment	30%	1,2
Assignment	40%	1,3
Assignment	30%	3,4

Assessment Criteria

<40%: Inability to demonstrate an understanding of the issues attendant to mobile game development, as per Learning Outcome 1. Inability to implement simple games on a mobile device using the development tools and methodology covered during the module as per Learning Outcomes 2,3 & 4.

40%–49%: Able to demonstrate a basic understanding of mobile game development features and issues, as per Learning Outcome 1. Able to implement simple games on a mobile device as per Learning Outcomes 2 & 3.

50%–59%: All the above and in addition able to evaluate own code for significant performance and resource bottlenecks, as per Learning Outcome 4.

60%–69%: All of the above, in addition implement all required features consistently well.

70%–100%: All previous to an excellent level. Implement additional features or uses technology/tools-chains not directly presented in class.

Supplementary Material(s)

- Brothaler, K. *OpenGL ES 2 for Android: A Quick-Start Guide (Pragmatic Programmers)*. 1. NY: Pragmatic Bookshelf, 2013.
- Oehlke, A. *Learning Libgdx Game Development*. 2. NY: Packt Publishing, 2015.

Requested Resources

- Room Type: Computer Lab