Module Specification – (Programme Specs Ver. 5.0)

The BRITISH UNIVERSITY IN EGYPT

Module Code: 23 CSIS01I	Title: System Analysis and Design	
Level: I	Modular weight: 10	Faculty/Dept: ICS
Pre-requisite modules: CSSE01C & CSCI04C		
Reassessment: *No Restrictions*		
Module Leader: Assoc. Prof. Nahla Barakat		
Semester taught: One		
Date of latest revision: March 2022		

Aims

The aim(s) of this module is to provide the students with the chance to experience the recent issues and trends, the important aspects in software development of different software systems including interactive applications and computer games. Experiencing these issues, the students then will appreciate the systematic and organized way to develop software of specific nature like games.

Intended Learning Outcomes

On completion of this module students should be able to:

Knowledge and Understanding

1. Recognize the activities associated with the development a small interactive application (ex. a simple game), and the role of systems development methodologies, within a group of people with distributed tasks. [A2, A3]
2. Recall and integrate knowledge studied in software engineering I, HCI and programming to develop a software application or a simple 2D game. [A1, A2, A4]

Intellectual Skills

3. Reflect upon the issues associated with the selection and evaluation of development techniques and methodologies within the life cycle. [B4, B5, B6]

Practical and Professional Skills

4. Critically evaluate systems development methodologies. [C2, C7]

General and Transferable skills

5. Develop an analytical approach to interpreting problem specifications and enhance ability to approach problems systematically. [D1, D2]
6. Develop interpersonal skills planning and managing personal time and work, as well as working in teams. [D2, D6]

Employability
This module will provide opportunities for students to:

1. Express ideas effectively and convey information, appropriately and accurately. [B.2.1]

2. Carry out a range of complex ICT activities related to their work that involve application software.[B.3.1]
3. Demonstrate effective time management to manage time effectively so as to prioritise tasks and to work to deadlines.[C.1.5]
4. Generate imaginative ideas that can be applied to different situations. [C.2.1]
5. Demonstrate effective planning, prioritisation and organisation to plan activities and carry them through effectively. [C.2.2]
6. To analyse situations by gathering information systematically to establish facts and principles and to use this to solve problems. [C.2.3]
7. Demonstrate determination to get things done and to constantly looking for better ways of doing things. [C.2.6]
8. Influence others by expressing self effectively in a group and in one-to-one situations. [C.3.1]
9. Demonstrate effective team working by building and developing appropriate relationships with academic staff, peers, colleagues and people within the organisation. [C.3.2]
10. Recognise and respect different perspectives and to appreciate the benefits of being open to the ideas and views of others. [C.3.4]
11. Understand the importance of being self-motivated in order to progress the area of work. [A.5]

Indicative Content

- Introduction to games & game design
- Essential elements of a game
- Game concepts
- Game rules & game play
- Game design process
- Guiding the player
- Game documentation

Methods of Learning, Teaching and Assessment

Total student effort for the module: 100 hours on average over one semester.

Type of session	Typical Student Effort		
	Typical number in the semester/s	Typical hours per week	Total hours
Lecture	6	2	12
Tutorial	N/A	N/A	N/A
Laboratory	12	3	36
Private study			52

Assessment

Assessment Type	Weight %	ILOs Assessed	Exam Semester	Exam/ Written Coursework Length
Individual in lab practical assignment	30	3-5	1	Two hours
One group project (3-4students) composed of three phases, proposal, design documentation & implementation, where students will integrate and apply the practical knowledge acquired. The individual component worth 10% of the last phase of the project.	70	1-6	1	Project

Methods of Feedback

In response to assessed work:

- Oral generic feedback on each phase of the project during contact hours.
- Specific oral feedback for each team during contact hours.

Developmental feedback generated through teaching activities:

- Dialogue between students and staff in workshops and Labs

Indicative Reading List

- Rudy von, Bitter Rucker, Rudy Rucker, (2003). Software Engineering and Computer Games, Addison Wesley.
- John P Flynt, Omar Salem, (2004). Software Engineering for Game Developers course Technology PTR.
- Sommerville, Ian, (2010). Software Engineering 9th ed, Pearson HE , New York.
- Benyon David, Turner Phil, Turner, Susan,(2005). Designing Interactive Systems, People, Activities, Contexts, Technologies, Addison-Wesley.
- John P. Flynt (2005). Software Engineering for Game Developers, Thomson Course Technology.
- Jeannie Novak, (2011). Game Development Essentials: An Introduction, Cengage Learning.