Module: Software Testing 262

Module name:	Software Testing 262
Code:	SWT262
NQF level:	6
Type:	Elective – Diploma in Information Technology (Software Development Stream)
Contact time:	72 hours
Structured time:	12 hours
Self-directed time:	36 hours
Notional hours:	120 hours
Credits:	12
Prerequisites:	Software Testing 261

Purpose

The main focus of this course is on practical implementation of software testing techniques.

Outcomes

Upon successful completion of this module, the student will be able to demonstrate:

- Knowledge of specific and suitable software development and testing tools, with a sound understanding of each tool's extent of applicability and capabilities
- The ability to plan and apply the appropriate level of testing within the context of a software development application, gathering evidence and applying solutions, based on evidence and appropriate software testing procedures, to meet the requirements of the project beneficiaries
- The ability to make decisions and act appropriately in familiar and in new testing contexts, demonstrating an understanding in the relation between software systems, and of how actions or developments in one system impact on other systems
- The ability to work effectively in a team and to take responsibility for their decisions and actions and the decisions and actions of others within the context of this team, including the responsibility for the use of resources where appropriate

Assessment

Assessment is performed using a variety of instruments:

- Continuous evaluation of theoretical work through written assignments, formative tests, and a summative test.
- Continuous evaluation through tracking of progress, offering support, guidance and provision of constant stream of opportunities to prove mastery of subject material and pursuing more challenging work as they master the basics.
- Final assessment through an examination.

Teaching and Learning

Learning materials
Prescribed books (EBSCO)
-   *Rex Black* **et al.** *(2017)* **Agile Testing Foundations : An ISTQB Foundation Level Agile Tester Guide***. Swindon, UK: BCS, The Chartered Institute for IT.*
-   *Hass, A. M. J. (2014)* **Guide to Advanced Software Testing***. Boston: Artech House.*
-   *Satheesh Kumar, N. and Subashni S. (2013)* **Software Testing Using Visual Studio 2012***. Birmingham, UK: Packt Publishing. Learning activities*

Learning activities
Learning will be facilitated by the lecturer with student centred activities that involve problem-based learning where pupils are presented with challenges that replicate the situation in the real-world environment. This will be achieved through a combination between presentation of theoretical concepts, guided exercises, group work and discussions during the module.

Notional learning hours

Contact	Distance	Other	Type of learning activities	% Learning
y	y	n	Lectures (face-to-face, limited interaction or technologically mediated)	40%
y	y	n	Tutorials: individual groups	20%
n	y	n	Syndicate groups	10%
n	y	n	Independent self-study of standard texts and references (study guides, books, journal articles)	10%
n	y	n	Independent self-study of specially prepared materials (case studies, multi-media, etc.	20%

Syllabus
- Static Testing and static analysis tools
- Dynamic analysis and test design techniques, including Black Box testing, White Box testing
- Testing Tools: Types and selection of tools
- Automation testing