



Module Specification

Quality Models of Software and Information Systems [TSI]

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Part 1: Information

Module title: Quality Models of Software and Information Systems [TSI]

Module code: UFCEJ1-12-M

Level: Level 7

For implementation from: 2021-22

UWE credit rating: 12

ECTS credit rating: 6

Faculty: Faculty of Environment & Technology

Department: FET Dept of Computer Sci & Creative Tech

Partner institutions: Transport and Telecommunication Institute

Delivery locations: Transport and Telecommunication Institute Latvia

Field: Computer Science and Creative Technologies

Module type: Standard

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module explores quality frameworks, standards and techniques, providing students with the knowledge and understanding to produce high quality software.

Features: Not applicable

Educational aims: This module enables students to reason about and use current and emerging models of quality of software development processes and information services, in the implementation of IT projects

Outline syllabus: Process approach. Quality models history.

CMMI Models.

Introduction to process improvement.

Process Institutionalization.

Process Area Components.

Relationships Among Process Areas.

Using CMMI Appraisals.

Configuration Management.

Project Planning.

Project Monitoring and Control

Risk Management.

Measurement and Analysis

Quantitative Project Management

Process and Product Quality Assurance

Verification and Validation

Requirements Management & Development

Supplier Agreement Management

Decision Analysis and Resolution

Causal Analysis and Resolution

Organisational Process Definition

Technical Solution and Integrated Project Management

Organisational Innovation and Deployment

Six Sigma Overview

ITIL (Information Technology Infrastructure Library) Overview

Project Management & PMI

ISO Standards and Software Quality Models

Software and Information Systems Quality Models – what's the next?

Part 3: Teaching and learning methods

Teaching and learning methods: Learning and teaching will be provided to students in two forms: lectures and practical classes. During lectures, theoretical aspects of the course will be provided to students by the teaching staff. Lectures will be supported by presentations published and available to the students on e.tsi.lv under the module section. Also, additional materials, like publications on the internet, videos, etc will be presented in e.tsi.lv.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Evaluate the maturity levels of an organisation using appropriate standard and models.

MO2 Evaluate current techniques for measuring the effectiveness of the application of quality models.

MO3 Critically evaluate the characteristics and application of current popular quality frameworks.

MO4 Identify critical success factors and issues encountered during the implementation, adoption and management of information systems and propose suitable solutions.

Hours to be allocated: 120

Contact hours:

Independent study/self-guided study = 112 hours

Face-to-face learning = 48 hours

Total = 160

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://rl.talis.com/3/uwe/lists/CA5B4614-EC6B-AECE-796A-E584D82E430B.html?lang=en-gb&login=1) via the following link <https://rl.talis.com/3/uwe/lists/CA5B4614-EC6B-AECE-796A-E584D82E430B.html?lang=en-gb&login=1>

Part 4: Assessment

Assessment strategy: This module is assessed through a single assessment. Students are required to using labs, standards, frameworks and case studies to evaluate quality models of software and information systems.

Assessment components:

Examination - Component A (First Sit)

Description: Written examination (2 hours)

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO4

Portfolio - Component B (First Sit)

Description: A set of individual tasks

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

In-class test - Component B (First Sit)

Description: Delivered through VLE

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Examination - Component A (Resit)

Description: Written Exam (2 hours)

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO4

Portfolio - Component B (Resit)

Description: Resit failed elements of the portfolio

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

In-class test - Component B (Resit)

Description: Delivered through VLE

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Computer Science (Data Analytics and Artificial Intelligence) {Double Degree}

[Feb][FT][TSI][2yrs] MSc 2021-22