Module Specification

Critical Thinking and Innovation [TSI]

Version: 2023-24, v2.0, 20 Mar 2023

Contents

Part 1: Information

Module title: Critical Thinking and Innovation [TSI]

Module code: UFCE81-12-M

Level: Level 7

For implementation from: 2023-24

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: Not in use for Modules

Field: Computer Science and Creative Technologies

Module type: Module

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 aims to introduce students to different aspects of teaching within the context of higher education.

Features: Not applicable

Educational aims: The aim of this course is to equip students with the basic skills of exercising critical thought to develop and support their views and evaluate arguments in academic debate and practical affairs of everyday life.

Outline syllabus: •Critical thinking. Main definitions.
•Levels of intellectual skill: the thinking triangle.
•Critical Thinking Standards.
•Critical thinking strategies.
•Barriers to Critical Thinking.
•Thinking Skills.
•The role of critical thinking in project management.
•Tools to Develop Better Critical Thinking Skills.
•System approach for solution of problems.
•Mind map as holistic tool for critical thinking.
•TRIZ as methodology for innovative solutions for problem solving.
•Emerging technologies for innovative solutions for problem solving.

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 presentation published and available to the students on e.tsi.lv under the module section. Also, additional materials, like publications on the internet, videos, case-studies 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 Know and explain the key attitudes and skills involved in critical thinking.

MO2 Apply critical thinking skills to examine arguments in debates and texts.

MO3 Identify fallacious reasoning in everyday life and correct the fallacies identified.

MO4 Formulate the problem and actualise setting goals and objectives of the research in terms of systems theory.

MO5 Use system approach to the analysis and synthesis of complex systems for problem 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 via the following link https://rl.talis.com/3/uwe/lists/4C199AE9-DA21-1580-B8B6-4F519268658A.html?lang=en-gb&login=1

Part 4: Assessment

Assessment strategy: The main assessment strategy is formative assessment.

Assessment is built into the teaching process and is designed to communicate educational goals with students to help them become aware of learning standards. Involves students in self-assessment and partner evaluation.

Provides feedback: helps students to outline the next steps in the preparation of master thesis. Reinforces the belief that every student can make improvements. Involves both the teacher and students in the process of reviewing and reflecting on assessment data.

Assessment components:

Portfolio (First Sit)
Description: A series of case studies requiring students to research, discuss and defend a response.

Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

Portfolio (Resit)
Description: A series of case studies requiring students to research, discuss and defend a response.
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Computer Science (Data Analytics and Artificial Intelligence) {Double Degree} [TSI] MSc 2023-24