



Module Specification

Professional Issues in Data Science

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Part 1: Information

Module title: Professional Issues in Data Science

Module code: UFCEKF-15-2

Level: Level 5

For implementation from: 2026-27

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Arts, Technology and Environment

School: CATE School of Computing and Creative Technologies

Partner institutions: None

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: In this module we will be exploring the key ethical theories, principles, and case studies relevant to the data science profession. Together we will discuss issues of data privacy, security, bias, fairness transparency, and accountability in data science practices.

Features: Not applicable

Educational aims: This module aims to build students' awareness of the societal impacts and risks around data science, and the need for regulatory compliance and data governance. Students will be encouraged to discover solutions and mitigation strategies through research and dialogue.

Outline syllabus: Indicative syllabus:

Introduction to Professional Ethics

Data Privacy and Security

Bias and Fairness in Data Science

Transparency and Accountability

Intellectual Property and Open Source

Professional Communication and Collaboration

Data Science in Society

Regulatory and Compliance Issues

Data Science and Data Governance

Future Challenges in Data Science Ethics

Part 3: Teaching and learning methods

Teaching and learning methods: Lectures and Guest Speakers:

Purpose: Introduce core concepts and frameworks, such as ethics, data governance, legal compliance, and societal impact.

Case Studies:

Purpose: Use real-world case studies to explore topics like bias in algorithms, privacy breaches, or ethical dilemmas in data analysis.

Group Projects:

Purpose: Allow students to work collaboratively on projects that simulate real-world professional scenarios (e.g., creating an ethical framework for a data science project or developing a privacy impact assessment).

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

MO1 Communicate an understanding of professional issues, ethics and legislation, including data protection, privacy, anonymity, bias and fairness

MO2 Critically and effectively apply key data and information governance, compliance and risk management principles and practice

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://rl.talis.com/3/uwe/lists/332AF07A-2DF6-53D7-2A60-1DB6574F652E.html?lang=en-GB&login=1) via the following link <https://rl.talis.com/3/uwe/lists/332AF07A-2DF6-53D7-2A60-1DB6574F652E.html?lang=en-GB&login=1>

Part 4: Assessment

Assessment strategy: The assessment strategy is based on a group presentation. The assessment should evaluate both individual and group contributions while focusing on the key learning outcomes related to professional challenges in data science.

The resit assessment will have the same format as the first sit assessment.

Assessment tasks:

Presentation (First Sit)

Description: Group presentation focused on ethical analyses of real-world data science scenarios (15 Mins)

Weighting: 100 %

Final assessment: Yes

Group work: Yes

Learning outcomes tested: MO1, MO2

Presentation (Resit)

Description: Group presentation focused on ethical analyses of real-world data science scenarios (15 Mins)

Weighting: 100 %

Final assessment: Yes

Group work: Yes

Learning outcomes tested: MO1, MO2

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Data Science [Frenchay] BSc (Hons) 2025-26