

Module Details	
Module Title	ISO27000 Framework (Information Security Management System)
Module Code	COS7030-B
Academic Year	2023/4
Credits	20
School	Department of Computer Science
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Practical Classes or Workshops	24 - 2 hours per week; both modes: online and offline (50%/50%)
Tutorials	24 - 2 hours per week; both modes: online and offline (50%/50%)
Directed Study	152

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1

Module Aims
<p>Having appropriate systems in place to protect data should be a number one priority for all businesses when it comes to cyber security. Enabling authentication, limiting access to confidential data and setting secure passwords are just a few ways to enhance organisational cyber security. ISO/IEC 27001 is the most widely used information security management standard that helps organizations, of any size or industry, to protect their information in a systematic and cost-effective way, through the adoption of an Information Security Management System (ISMS).</p> <p>In this module, the students will learn key security concepts for establishing, implementing, maintaining and continually improving an ISMS based on ISO/IEC 27001 compliance. This module will enable the students to develop the necessary expertise to protect the critical assets of the organisation, quantify risks of cyber-attacks associated with these assets, mitigate risks and protect personally identifiable information through the adoption of ISO/IEC 27001 and its extensions such as ISO/IEC 27002, and ISO/IEC 27701.</p>

## Outline Syllabus

The outline syllabus indicates the topics that you will study. This information may change, so please keep a record of any module announcements regarding changes from your Module Tutor via CANVAS. This module will cover these key topics:

How to implement and manage an ISO/IEC 27001-compliant ISMS?

Fundamental principles of information security to ensure data confidentiality, integrity, and availability

Information security control best practices based on ISO/IEC 27002 (including reference to ISO/IEC 22301)

Privacy objectives based on ISO/IEC 27701

Planning and implementing ISMS based on ISO/IEC 27001

Performance evaluation, monitoring and measurement of an ISMS based on ISO/IEC 27001

Continual improvement of an ISMS based on ISO/IEC 27001

Preparation for an ISMS audit

## Learning Outcomes

Outcome Number	Description
LO1	Acknowledge the correlation between ISO/IEC 27001, ISO/IEC 27002, ISO/IEC 27701 and other industry standards and regulatory frameworks.
LO2	Apply the concepts, approaches, methods, and techniques to implement and effectively manage an ISMS.
LO3	Interpret the ISO/IEC 27001 requirements appropriately in the specific context of an organisation and how to support an organisation to plan, implement, manage, monitor effectively, and maintain an ISMS.
LO4	Provide best practice advice to an organisation on implementing and managing ISMS.
LO5	Apply skills of research, problem-solving and communication.
06	Apply skills of research, problem-solving and communication.

## Learning, Teaching and Assessment Strategy

Students will develop the knowledge, understanding and skills necessary to meet the learning outcomes of the module through the team-based learning and teaching strategy. Students will engage with the core knowledge-based content of the module out of class as pre-work (either a PowerPoint presentation provided by the PECB or a pdf of standards published on CANVAS). During practical classes, students' understanding of the material will be evaluated through a series of individual readiness assurance tests (i-RAT), which are MCQ assessments. Students will discuss the i-RAT assessment in teams of 5-7 and retake the assessment as a team (t-RAT). InteDashboard will be used to conduct these readiness assurance tests. Feedback will be provided to students through the readiness assurance process, when answers will be discussed immediately after completion of the TRAT, ensuring that students are provided with an understanding of their level of content knowledge.

In tutorials, students will work in teams to solve application problems that allow them to apply and expand on the knowledge they have learned in the i-RAT & t-RAT. For each application exercise, team members must discuss and arrive at a consensus to choose an appropriate solution for the problem. After the completion of each practical exercise, the module instructor will facilitate a discussion or debate among teams to consider the possible solutions to the application problem. The student engagement will also include submitting formative work for assessment (scope and risk assessment). You will receive feedback to ensure that you are approaching the coursework appropriately. The feedback will highlight errors of understanding, areas where the assessment brief has not been met and suggestions for areas of development.

This student engagement through the readiness assurance process and practical exercises will assess and enhance the knowledge provided in course material and effectively prepare students to implement the ISMS in an organisation. Knowledge obtained via these activities is relevant to aspects of all competency domains outlined in the PECB ISO/IEC 27001 Lead Implementer certification.

The summative assessment (70%) of this module is based on a case study. It requires students to prepare an individual portfolio that should reflect skills and knowledge learnt to evaluate, monitor, and measure the performance of an ISMS. The portfolio will be submitted via PebblePad, and its details will be covered within the module's sessions and team-based application exercises. This work must be related to ISO/IEC 27001, ISO/IEC 27002, ISO/IEC 27701 and other relevant industry standards. Students will also be expected to undertake self-directed reading of academic journals and conference papers to support their findings in the portfolio.

If a student requires supplementary assessment for re-assessment, they will be asked to re-submit coursework, which should incorporate the feedback to address the pointed-out shortcomings.

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Team-Based Learning Assessment	Student Engagement (e.g., i-RAT,t-RAT and formative assessment). i-RATs and t-RATs will be organised via InterDashboard.	30%
Summative	Coursework - Portfolio/e-portfolio	Portfolio (to be submitted via PebblePad). Equivalent to 4000 words.	70%

### Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

**Please note:**

*This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.*

