

Module Specifications

Year/Level: 5
Programme: CyberSecurity

Module:	Algorithms and Data Structures
----------------	--------------------------------

Module Code:	5FTC2091
---------------------	----------

Module Description:

This module aims to give students a detailed understanding of the importance of the relationship between the use of algorithms, data structures, and their implementation. Understand the significance of a range of algorithms and data structure types and their application in the problem-solving process.

Module:	Database Systems
----------------	------------------

Module Code:	5FTC2090
---------------------	----------

Module Description:

This module aims to enable students to determine the advantages and disadvantages of the application of database-related techniques, tools, and paradigms. Develop an understanding of the key advanced skills in database design and obtain skills to support the development of complete database systems.

Module:	Accessibility and Usability
----------------	-----------------------------

Module Code:	5FTC2089
---------------------	----------

Module Description:

This module aims to enable students to develop their understanding of the legal, social, ethical and professional concerns. Additionally, it aims to deepen students' awareness of the implications of accessibility and usability to further develop their communication skills and apply these effectively in analysing and communicating.

Module:	Operating Systems and Networks
----------------	--------------------------------

Module Code:	5FTC2095
---------------------	----------

Module Description:

This module aims to enable students to consolidate their understanding of operating systems and how they have used and doing so as a system administrator rather than an ordinary user. Develop their skills and what must be done to configure them correctly. Become more familiar with the relationships between hardware and software. Build confidence in using command line tools and configuration files to work with operating systems.

Module:	Computing Things
----------------	------------------

Module Code:	5FTC2094
---------------------	----------

Module Description:

This module aims to enable students to understand low-power, low-bit-rate computing devices. Additionally, it aims to enable students to understand the requirements for interfacing such devices with sensors and actuators to gather data from the environment. It also covers security measures available for protecting data for small, embedded platforms.

Module:	Artificial Intelligence
----------------	-------------------------

Module Code:	5FTC2093
---------------------	----------

Module Description:

This module aims to give students first contact with and a broad overview of Artificial Intelligence (AI). Additionally, it aims to enable students to acquire knowledge of programming techniques specific to AI, and to apply this knowledge to solve problems.

Module:	Principles and Practices of Large-Scale Software Systems
----------------	--

Module Code:	5FTC2092
---------------------	----------

Module Description:

This module aims to enable students to develop practical skills in developing large software systems for embedded systems. It covers the use of object-oriented tools and techniques in a programming language such as Java; employ software engineering principles, including requirements engineering, software analysis, design, testing, and implementation of large-scale programs; experience a professional, team-based approach to software development; and apply learned knowledge and skills to enable them to successfully compete for and successfully complete projects.

Engineering & Computer Sciences

Credits:	15
-----------------	----

Mandatory

en problems and their solutions through the development and underlying mathematical concepts. Appreciate a range of

Credits:	15
-----------------	----

Mandatory

of multiple database paradigms. Plan and critique the function of a Database Management System. Develop systems.

Credits:	15
-----------------	----

Mandatory

essional issues that pertain to accessibility and usability ability problems. This module also aims to enable to studnets ig accessibility and usability issues.

Credits:	15
-----------------	----

Mandatory

they work by using alternative operating systems that some
etailed understanding of computer networks, how they operate,
en theoretical concepts and practical applications in
systems and networks.

Credits:	15
-----------------	----

Mandatory

ially, this module aims to enable students to develop skills and
ent. This module also aims to enable students to discuss cyber

Credits:	15
-----------------	----

Mandatory

nderstand the algorithms underlying key basic AI notions.
and program simple AI systems.

Credits:	30
-----------------	----

Mandatory

maintainability and reusability by realising and applying a range
eering tools and techniques used in the specification, design,
to software development, and appreciate the issues that arise;
ete a CS placement.