

Module Details	
Module Title	Internet of Things (IoT)
Module Code	COS7039-B
Academic Year	2021/2
Credits	20
School	Department of Computer Science
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Lectures	12
Online Tutorials (Synchronous)	12
Practical Classes or Workshops	12 (online synchronous and on campus labs)
Directed Study	164

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

Module Aims
To enhance students' understanding about the design and development of the Internet of Things (IoT) systems, including its' architecture, technologies on each layer, and IoT-specific data processing and analytics frameworks. Hands-on skills will be developed by studying applications of IoT in every corner of life, and implementing components of IoT applications.

Outline Syllabus
This module focuses on key technologies to develop an IoT system. Following topics will be covered: IoT components and architecture; Technologies in each layer of the architecture; Sensors and Sensing technology; Data transmission and connectivity; IoT platforms, including offerings by Google and Apple; IoT specific data processing and analytics; IoT and open data; IoT user interface issues including data models and semantics; Applications of IoT including smart cities, smart homes; Ongoing and future IoT challenges. LSEPI issues related to setting infrastructure for IoT systems and handling IoT data

Learning Outcomes	
Outcome Number	Description
01	Demonstrate an advanced understanding of designing and implementing IoT systems.
02	Analyse and effectively use available frameworks to design and implement IoT systems.
03	Demonstrate the ability to transfer theoretical concepts to practical applications

Learning, Teaching and Assessment Strategy
Lectures and lab sessions make up the contact time. The lectures will present the relevant theory underpinning the subject and the practical will enable students to apply the theory to practical situations. Assessment is by coursework.

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Coursework	Design and Development of an IoT system/component	100%

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.

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