

Module Details	
Module Title	Simulation Modelling
Module Code	OIM7514-A
Academic Year	2023/4
Credits	10
School	School of Management
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Lectures	11
Online Lecture (Asynchronous)	11
Laboratories	22
Directed Study	56

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims
<p>This module aims at equipping you with various Business Project Simulation and Modelling methods in various business contexts in addition to introducing prescriptive analytics. The module will focus on Simulation prescriptive analytics as a very important approach in analytics and logistics fields. You will study the building blocks of modelling and simulation of business and learn about model design and implementation. This is in addition to becoming acquainted with various approaches of system optimisation.</p>

Outline Syllabus
<p>Introduction to Systems and Modelling Main components of dynamic models Conceptual Modelling of Systems Concepts of Discrete Event Simulations (DES) DES in Practice and Tools Concepts Systems Dynamics (SD) SD in Practice and Tools Hybrid Simulation Case Studies</p>

Learning Outcomes	
Outcome Number	Description
01	Show rigorous understanding of the main concepts of systems and system modelling.
02	Critically compare and evaluate relevant simulation methods to improve business productivity.
03	Demonstrate adaptability and originality in designing and implementing simulation models and explain their results.
04	Demonstrate adaptability and originality in tackling and solving problems, and the ability to work cooperatively with others.

Learning, Teaching and Assessment Strategy
<p>The teaching strategy encourages critical understanding of the role played by simulation for business decision making. Learning will be directed, supported, and reinforced through a combination of lectures, computer laboratory sessions, and online discussion groups, plus directed and self-directed studies. The course may include research-led elements and offers a mix of theoretical insights and case study material that will be delivered both online and offline where appropriate.</p> <p>The assessment strategy is designed to provide students with the opportunity to demonstrate that they appreciate methods that underpin Modelling and Simulation and their uses to gain business insights.</p> <p>Assessment for this module consists of (formative) weekly quizzes and a final (Summative) Simulation coursework 100%.</p> <p>Feedback: Students will be given the opportunity to receive formative assessment and feedback relevant to the weekly sessions. Some quizzes based assessment relevant to the coursework may be provided on Canvas discussion forums. You are encouraged to seek further feedback during the lab sessions or during feedback consultation hours.</p>

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Coursework - Written	Final Simulation coursework	100%
Formative	Not assessed	Weekly sessions based quizzes	N/A

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.

