

AMITY GLOBAL INSTITUTE

MODULE SYLLABUS

Course	Master of Science in Business Analytics Awarded by University of Northampton
Module Title	Digital Twins and Internet of things
Module Syllabus No. (if any)	BS0M078
Content	Introduction to Innovation, DOI and Technology Adoption, Industry 4.0 and digital twins, internet of things, and industrial informatics, Value Chain and infrastructure asset management, digital twins for smart cities, maintenance strategies, decision-making, practices within the context, risk, safety, security and ethical concepts related to the above.
No. of Teaching Hours	30
Teaching Methods	Lectures, tutorials, case-studies analysis, research journals and group discussion
Assessment Methods and Weightages	PS1 Presentation 20-minute group presentation AS1 Report Individual Report (2400 words)
Skills for Maximising Learning Outcomes	Reading and Research
Dates of Examinations, Major Assessments and Assignments	See University calendar
Recommended Text	Innovation and Entrepreneurship by John Bessant; Joe Tidd, John Wliey & Sons, 2015
Additional Reference Texts (if any)	
Additional Remarks (if any)	

No.	Learning Outcomes/Aims
1	Demonstrate a critical understanding of underlying concepts related to Industrial Informatics, Digital Twins and Internet of Things.
2	Appraise and critique the potential of Digital Twins for improving visibility, decision making, monitoring and informing in relevant contexts and/or case studies.
3	Evaluate different approaches in devising appropriate maintenance strategies for infrastructure asset management.
4	Formulate suitable optimisation techniques for pertinent decision problems.
5	Develop critical responses to existing theoretical discourses or practices, and suggest new concepts or approaches using different communication means such as report writing, use of ICT and presentation.
6	Autonomously evaluate specialised contexts, requiring selection and application from a wide range of information sources.
7	Perform in a team to undertake a given task, and collaborate effectively in complex, diverse and ambiguous situations.
8	To investigate Digital Twin (DT) as an emerging technology, Internet of Things (IoT) as an enabler and other related theories and practices.

Note: All Information provided to Amity will be kept strictly confidential except for those required under statutory requirements and by government authorities and relevant university partners and accreditation bodies as part of the regulatory or course requirements.