DEREE COLLEGE SYLLABUS FOR:

ITC 4140 METHODS IN ICT PROJECT RESEARCH AND MANAGEMENT **3/0/3**
(Updated Fall 2021) **UK LEVEL: 6**
UK CREDITS: 15

PREREQUISITES:	MA 2010 Statistics I ***or*** MA 2021 Applied Statistics for Business ***or*** MA 2025 Applied Statistics for Science
COREQUISITES:	None.
CATALOG DESCRIPTION:	Integrated methods for ICT projects investigation and planning; problem identification; field review; selected investigative techniques; modelling and evaluation techniques; testing strategies; quality considerations. Comprehensive coverage of the procedure required for the development of a thorough ITC capstone project proposal.
RATIONALE:	The course aims to provide students with the theoretical and practical knowledge and cultivate the skills for formulating an ICT project proposal, supported by technological and context-related background research, problem analysis, cost and risk estimation, and effective progression planning. It is also suitable for everyone who is interested in learning how to develop and proceed with ICT-oriented projects. The course is part of the final year experience of the students of ITC Capstone projects and should be attended the term before the respective ITC capstone.
LEARNING OUTCOMES:	As a result of taking this course, the student should be able to: 1. Perform domain research and relate the findings to a specific ITC problem. 2. Apply appropriate ICT engineering and applied science procedures using domain-specific tools and techniques. 3. Formulate a well-structured ICT project proposal with minimum guidance and within agreed guidelines. 4. Demonstrate ability to collect, record, analyze, interpret and present data using appropriate methods and techniques. 5. Apply effective project management concepts to plan and proceed with their project.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: • Lectures and laboratory sessions. • Progress meetings (supervision sessions) to monitor individual performance and provide formative feedback on milestone project submissions. • Meetings with resource faculty. • Office hours held by the instructor to provide further assistance to students. • Use of the online content management system (Blackboard CMS) to further facilitate communication.
ASSESSMENT:	**Summative:**

	1st assessment: Group project Small-scale research project on selected topics including perspective, focused domain research, high-level analysis, cost estimation, risk analysis, testing. — **20%** 2nd assessment: Projects' defence and presentation — **10%** Final assessment: Individual project preliminary literature review and justification, analysis, preliminary design, methodology, risk assessment, testing strategy and quality considerations — **70%** **Formative:** Take-home case problems — **0%** The formative assessments aim to prepare students for the summative assessments. The 1st summative assessment tests LOs 1, 4, 5. The 2nd summative assessment tests Los 1-5. The final summative assessment tests LOs 1-5. *The final grade for this module will be determined by averaging all summative assessment grades, based on predetermined weights for each assessment. If students pass the **final summative assessment,** which tests all Learning Outcomes for this module, and the average grade for the module is 40 or above, students are not required to resit any failed assessments.*
INDICATIVE READING:	**REQUIRED READING:** 1. David V. Thiel, *Research Methods for Engineers*, Cambridge University Press, 1st edition, 2014, ISBN-13: 978-1107610194 2. Domain specific sources provided by resource faculty. 3. Instructor's notes. **RECOMMENDED READING:** 1. Kerzner Harold. *Project Management, A Systems Approach to Planning, Scheduling, and Controlling*, Wiley, 2013.
INDICATIVE MATERIAL: *(e.g. audiovisual, digital material, etc.)*	**REQUIRED MATERIAL**: N/A **RECOMMENDED MATERIAL:** N/A
COMMUNICATION REQUIREMENTS:	Daily access to the course's site on the College's Blackboard CMS and acg email. Effective communication using proper written and oral English. Use of word processing and presentation graphics SW for documentation and presentation of deliverables and the final project.
SOFTWARE REQUIREMENTS:	MS-Office MS-Visio
WWW RESOURCES:	• https://assets.cambridge.org/97811070/34884/frontmatter/9781107034884_frontmatter.pdf • www.pmi.org • www.projectmanagement.com

INDICATIVE CONTENT:	1. Principles of engineering research 2. Engineering ethics 3. Literature review and domain research 4. Impact assessment 5. Survey research methods 6. Analysis and optimization techniques 7. Types of research presentations 8. Quality Considerations 9. Testing methodology 10. Risk Analysis and Cost Estimation 11. Project planning and management