MODULE DESCRIPTOR

Module Title

Thesis

Reference	END002	Version	2
Created	August 2021	SCQF Level	SCQF 11
Approved	May 2020	SCQF Points	60
Amended	August 2021	ECTS Points	30

Aims of Module

To enable the student to critically apply the knowledge acquired during the taught components to generate an innovative and contemporary solution for industry within an Engineering Innovation project.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1	A critical understanding of a range of specialised theories, boundaries, concepts and principles within a specific challenge or problem facing the industry.
2	Apply knowledge, skills and understanding in planning and executing a significant project of research, investigation or development to prepare and deliver a robust solution(s) with clear and confident understanding of the theoretical and empirical limits and boundaries of the engineering problem in question.
3	Critically review, consolidate and extend knowledge, skills, practices and thinking in chosen project topic to demonstrate professional competence in making informed judgements even in the absence of complete or consistent data/information.
4	Undertake critical evaluations of a wide range of numerical and graphical data and ability to communicate them effectively with peers more senior colleagues and specialists in the subject matter related to the research project.
5	Manage complex ethical and professional issues of related to the regulatory frameworks applicable to the respective industry and their role of innovation in the competitive landscape.

Indicative Module Content

Undertake an engineering innovation project under supervision as the basis for the completion of a dissertation which is the culmination of learning from the taught modules. The work requires reference to and integration of the various taught elements, independent research (data collection, analysis, interpretation), together with a general knowledge of all aspects of innovation (including political, economic, social, technological, environmental and legal factors). Normally projects will involve working with an industry partner and students can be based in industry.

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Module Delivery

Normally weekly supervision sessions to be arranged between supervisor and student. Students will be required to pursue an engineering project (on the topic they have scoped in the Project Scoping course), either based in the University or in an industry partner. They will be assigned a University supervisor and assisted to engage an appropriate industry mentor. The student will be responsible for maintaining contact with their supervisor in person and/or electronically.

Indicative Student Workload	Full Time	Part Time
Contact Hours	22	22
Non-Contact Hours	578	578
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	600	600
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	70%	Outcomes Assessed:	1, 2, 3, 4, 5
Description:	Thesis.				

Component 2

Type:	Practical Exam	Weighting:	30%	Outcomes Assessed:	1, 2, 3, 4, 5
Description:	Oral presentation.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The module has 2 components and an overall grade D is required to pass the module. The component weighting is as follows: C1 is worth 70% and C2 is worth 30%.

		Practical Exam:						
		A	**B**	**C**	**D**	**E**	**F**	**NS**
Coursework:	**A**	A	A	B	B	B	E	
	B	B	B	B	C	C	E	
	C	B	C	C	C	D	E	
	D	C	C	D	D	D	E	
	E	D	D	D	E	E	E	
	F	E	E	E	E	F	F	
	NS	Non-submission of work by published deadline or non-attendance for examination						

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Module Requirements

Prerequisites for Module	Successful completion of the PgDip Stage.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

1	TURABIAN, K.L., 2013. A manual for writers of research papers, theses, and dissertations: Chicago style for students and researchers. University of Chicago Press.
2	CIALDINI, R.B., 2009. Influence: Science and practice. Boston, MA: Pearson Education.
3	WILLIAMS, J.M. and BIZUP, J., 2014. Lessons in clarity and grace. Pearson.
4	BELCHER, W.L, 2019. Writing your journal article in twelve weeks: A guide to academic publishing success. University of Chicago Press.
5	ATHANASOU, J.A. et al, 2012. Complete your thesis or dissertation successfully: Practical guidelines. Juta.
6	HABASH, R., 2017. Green Engineering: Innovation, Entrepreneurship and Design. CRC Press.
7	LEGUM, B.M., STILES, A.R. and VONDRAN J.L., 2019. Engineering Innovation: From idea to market through concepts and case studies. De Gruyter.
8	RAFINEJAD, D., 2007. Innovation, product development and commercialization: Case studies and key practices for market leadership. J. Ross Publishing.