H9PRAC: Practicum

Module Code:	H9PRAC
Long Title	Practicum APPROVED
Title	Practicum
Module Level:	LEVEL 9
EQF Level:	7
EHEA Level:	Second Cycle
Credits:	30
Module Coordinator:	Arghir Moldovan
Module Author:	Arghir Moldovan
Departments:	School of Computing
Specifications of the qualifications and experience required of staff	PhD/Master's degree in a computing or cognate discipline. May have industry experience also.

Learning Outcomes	
On successful completion of this module the learner will be able to:	
#	**Learning Outcome Description**
LO1	Propose a research question, project objectives and methodology.
LO2	Analyse, synthesise, and critically evaluate the state of the art.
LO3	Propose, architect, implement, and evaluate an ICT solution related to the programme area.
LO4	Investigate potential future research and invention disclosures.
LO5	Present and defend the project findings through a viva, artefact/product demo, and report.
LO6	Understand the ethical issues that need to be addressed when conducting research.
LO7	Demonstrate initiative whilst working alone or part of a team, and appropriate communication and interpersonal skills.

Dependencies
Module Recommendations
No recommendations listed
Co-requisite Modules
No Co-requisite modules listed

Entry requirements	Programme entry requirements must be satisfied.

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Module Content & Assessment

Indicative Content

Research Questions and Literature Review and Novel Contribution
• Structure and purpose of a literature review • Search tools and sources • Selecting and coping with literature • Identifying novel contribution

Scientific Methodology, Research Questions and Literature Review
• Exploring different research methodologies and assessing the context for these research methodologies • Formulating a research question • Ethics in research

Computing Community and Resources
• The research community and their major platforms (journals, conferences, etc) • Making use of scientific articles to make informed choices in development

Computing Practices and Project Management
• Planning software development and evaluation • User involvement • Descriptive, theory oriented and applied projects • Time and project management, making efficient use of time and resources to manage multiple tasks at the same time and reach the goals.

Academic Writing
• Proposal structure • Selection and assessing the quality of literature

Academic Writing
• Project structure • Citations and referencing

Academic Writing
• Presenting qualitative data • Presenting quantitative data

Academic Writing
• The importance of ethics and reproducibility in research

Academic Writing
• Scientific writing and style considerations • Plagiarism and self-plagiarism

Technical Information
• Reading, understanding and summarising technical material, including source code, academic articles, patents, and documentation • Writing effective technical documentation and materials

Ethics
• Ethics considerations around human participants, secondary datasets • Ethics approval process

Communication
• Dynamics of oral, written, and electronic team and group communication

Assessment Breakdown	%
Coursework	100.00%

Assessments

Full Time

Coursework

Assessment Type:	Formative Assessment	% of total:	Non-Marked
Assessment Date:	n/a	Outcome addressed:	1,2,3,4,5,6,7
Non-Marked:	Yes		

Assessment Description:
Formative assessment will be provided on the in-class individual or group activities. Feedback will be provided in written or oral format, or on-line through Moodle. In addition, in class discussions will be undertaken as part of the practical approach to learning.

Assessment Type:	Project	% of total:	100
Assessment Date:	n/a	Outcome addressed:	1,2,3,4,5,6,7
Non-Marked:	No		

Assessment Description:
Project Proposal and Ethics Approval (10%); Project Specification and Objectives (5%); Literature Review (10%); Artefact/Product Development (30%); Artefact/Product Evaluation and Analysis (25%); Document Presentation/Structure, Referencing, and Configuration Manual (10%); Weekly Activity Report (5%); Viva (5%);

No End of Module Assessment

No Workplace Assessment

Reassessment Requirement

Coursework Only
This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.

Reassessment Description
The repeat strategy for this module is by a project that covers all learning outcomes.

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Module Workload				

Module Target Workload Hours 0 Hours

Workload: Full Time

Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Classroom and demonstrations	12	Per 12 week block	1.00
Tutorial	Mentoring and small-group tutoring	36	Per 12 week block	3.00
Independent Learning	Independent learning	702	Per 12 week block	58.50
			Total Weekly Contact Hours	4.00

Workload: Blended

Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Classroom and demonstrations	12	Per Semester	1.00
Tutorial	Mentoring and small-group tutoring	24	Per Semester	2.00
Directed Learning	Directed e-learning	12	Per Semester	1.00
Independent Learning	Independent learning	702	Per Semester	58.50
			Total Weekly Contact Hours	4.00

Workload: Part Time

Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Classroom and demonstrations	12	Per Semester	1.00
Tutorial	Mentoring and small-group tutoring	36	Per Semester	3.00
Independent Learning	Independent learning	702	Per Semester	58.50
			Total Weekly Contact Hours	4.00

Module Resources

Recommended Book Resources

John W. Creswell,J. David Creswell. (2022), Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, 6th Ed. Sage Publications, Incorporated, [ISBN: 978-1071817940].

Justin Zobel. (2015), Writing for Computer Science, 3rd Edition. Springer, [ISBN: 978-1447166382].

Christian Dawson. (2015), Projects in Computing and Information Systems: A Student's Guide, 3rd Edition. Pearson, [ISBN: 978-1292073460].

Supplementary Book Resources

Gary Thomas. (2017), How to Do Your Research Project: A Guide for Students, 3rd Edition. SAGE Publications Limited, [ISBN: 978-1473948860].

Justin Kitzes,Daniel Turek,Fatma Deniz. (2017), The Practice of Reproducible Research: Case Studies and Lessons from the Data-Intensive Sciences, Univ of California Press, p.364, [ISBN: 978-0520294745].

David Evans,Paul Gruba,Justin Zobel. (2014), How to Write a Better Thesis, 3rd Edition. Springer, p.167, [ISBN: 978-3319042855].

Diana Ridley. (2012), The Literature Review: A Step-by-Step Guide for Students, 2nd Edition. SAGE Publications, p.233, [ISBN: 978-1446201435].

This module does not have any article/paper resources

Other Resources

[Website], Intellectual Property Office of Ireland,
https://www.ipoi.gov.ie/en/

[Website], European Patent Office,
http://www.epo.org/searching/free/espace net.html

[Website], Prof Alan Bundy. How to Write an Informatics Paper, University of Edinburgh,
https://sweb.inf.ed.ac.uk/bundy/how-tos/ writingGuide.html

Discussion Note: