

MODULE TITLE	Data Science MSci Individual Project			CREDIT VALUE	30
MODULE CODE	COMM032			MODULE CONVENER	Unknown
DURATION: TERM	1	2	3		
DURATION: WEEKS	11	11	1		
Number of Students Taking Module (anticipated)	30				

DESCRIPTION - summary of the module content

In this module, you will analyse and work towards the solution of a selected research problem in Data Science. This is an individual, independent piece of work that will include aspects of research, analysis and implementation to solve the chosen problem. You will work with an individual supervisor and often you will interact with the supervisor's research group in the area. The diversity of topics in data science and the methods that can be brought to bear on them means that there is a wide range of possible topics and the module provides an opportunity for an in-depth exploration of a topic of particular interest to you.

Pre-requisite Modules: COM3021 Data Science At Scale

AIMS - intentions of the module

This module builds upon the experience gained in the individual project at level 3, allowing you to conduct a more advanced project with a substantial research element. The module aims to put into practice the knowledge acquired from the taught elements of the programme and to give you experience of many aspects of research work, including literature review, planning, experimentation and analysis, interpretation of results, and presentation. You will also gain valuable experience in concisely presenting scientific results via the writing of an academic research paper. Presenting the results of commissioned research in a compact and clear form is an essential research skill in both industry and academia.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)

On successful completion of this module, *you should be able to:*

Module Specific Skills and Knowledge:

- 1 Demonstrate knowledge of a research topic in data science, acquired through a deep and self-motivated exploration of that topic;
- 2 Design and follow systematically the phases of research project development;
- 3 Apply sophisticated and appropriate analysis and development techniques at each stage of a project;

Discipline Specific Skills and Knowledge:

- 4 Show familiarity with the background and context of a new application area;
- 5 Produce a concise research article;

Personal and Key Transferable / Employment Skills and Knowledge:

- 6 Conduct independent study, including library and web-based research;
- 7 Reflect critically on processes and products;
- 8 Plan an extended project and manage your time effectively;
- 9 Present your work to a non-specialist audience.

SYLLABUS PLAN - summary of the structure and academic content of the module

- Students are expected to have weekly meetings with their supervisor and maintain a project log-book which will be handed in along with the final report and assessed as part of the supervisor's report. Log-book entries should record the subjects discussed and actions agreed, and will be signed and dated by both student and supervisor;
- Students should attend relevant departmental and Institute of Data Science & AI seminars;
- The final report should be written in the style of a research paper suitable for a conference or journal appropriate for the research topic;
- 10% of the marks for the module will come from your supervisor's report, which will take into account your progress throughout the year, including attendance at meetings and the oral presentation, submission of agreed deliverables including the log-book, demonstration of ambition and initiative.

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)

Scheduled Learning & Teaching Activities	32.00	Guided Independent Study	268.00	Placement / Study Abroad	0.00
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DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS

Category	Hours of study time	Description
Scheduled Learning and Teaching Activities	12	Lectures, Seminars
Guided Independent Study	20	Supervision
Guided Independent Study	268	Self-Study and Background Reading

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of Assessment (e.g. duration/length)	ILOs Assessed	Feedback Method
Project Outline Talk	20 minutes	1,2,4, 6-8	Oral commentary from supervisor and written feedback using customised marksheet

SUMMATIVE ASSESSMENT (% of credit)

Coursework	90	Written Exams	0	Practical Exams	10
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DETAILS OF SUMMATIVE ASSESSMENT

Form of Assessment	% of Credit	Size of Assessment (e.g. duration/length)	ILOs Assessed	Feedback Method
Literature Review and Plan	20	10 pages	4.5	Written using customised marksheet
Final Report	60	30 pages	All	Written using customised marksheet
Supervisor's Report	10	N/A	2,6,7,8	Oral feedback from supervisor
Demonstration and Viva	10	30 minutes	All	Written using customised marksheet

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original Form of Assessment	Form of Re-assessment	ILOs Re-assessed	Time Scale for Re-assessment
All Above	Coursework (100%)	All	Completed over summer with a deadline in August

RE-ASSESSMENT NOTES

Re-assessment will be by resubmission of the final report only. For referred candidates, the mark will be capped at 50%. For deferred candidates the mark will be uncapped.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type & level of information that you are expected to consult. Further guidance will be provided by the Module Convener

Basic Reading:

ELE: <http://vle.exeter.ac.uk/>

Reading list for this module:

There are currently no reading list entries found for this module.

CREDIT VALUE	30	ECTS VALUE	15
PRE-REQUISITE MODULES	COM2013, COM3021		
CO-REQUISITE MODULES			
NQF LEVEL (FHEQ)	7	AVAILABLE AS DISTANCE LEARNING	No
ORIGIN DATE	Friday 12 April 2019	LAST REVISION DATE	Tuesday 24 January 2023
KEY WORDS SEARCH	Research Project; Literature Review; Data Science; Machine Learning; Statistics; Data Governance; Data Visualisation; Data Exploration		