

HDip IN DATA SCIENCE AND DATA ANALYTICS

MAYNOOTH UNIVERSITY

STUDENT HANDBOOK 2019-2020

INTRODUCTION

This HDip is a full-time conversion course (new in 2016) designed to prepare students for the fast expanding job market in Data Science and Analytics. Students will gain the knowledge and skills to collect, process, analyse and visualise data in order to extract useful information, explore patterns and evaluate models. The course is a collaboration between the Departments of Mathematics & Statistics, Computer Science and the National Centre for Geocomputation.

Modules cover programming, statistics and databases, and advanced topics in modern statistical machine learning. The course includes material on the social and ethical consequences of the use of data and the implications for business and government. Applications from many industry sectors will be explored in our Case Studies module. Students will gain experience in report writing, presentations and teamwork.

Applicants must have a recognised primary degree which is considered equivalent to Irish university primary degree level. The degree should be at level 8 in any subject with some Mathematical content.

MODULES

Module	Topic	Semester	Credits	C/O
CS621C	SPATIAL DATABASES	1	10	C
CS632	STRUCTURED PROGRAMMING FOR DATA ANALYTICS	1	7.5	C
ST661	R FOR DATA ANALYTICS	1	5	C
ST663	STATISTICAL METHODS FOR DATA SCIENCE	1	10	C
CS620C	STRUCTURED PROGRAMMING	1	10	O
ST673	LINEAR MODELS 1	1	5	O
ST675	LINEAR MODELS 2	1	5	O
CS633	WORK PLACEMENT PREPARATION	2	2.5	C
NCG612	CASE STUDIES IN DATA SCIENCE & ANALYTICS	2	5	C
NCG613	DATA ANALYTICS PROJECT	2	5	C
NIR605	CRITICAL DATA STUDIES	2	5	C
ST662	TOPICS IN DATA ANALYTICS	2	5	C
ST674	STATISTICAL MACHINE LEARNING	2	5	C
CS615C	INTERNET SOLUTIONS ENGINEERING FOR DATA SCIENTISTS	2	10	O
ST676	ADVANCED STATISTICAL MODELLING	2	5	O
NCG608	INTRODUCTION TO GEOGRAPHICAL INFORMATION SCIENCE	1	10	O

C= Compulsory module, O= Optional module

CHOOSING MODULES

Module details and descriptions are on the [University Course Finder](#). From this page, click on 'Year 1' and then 'Data Analytics'. Follow links to modules for descriptions. Note that NCG608 is actually a semester 1 module. For your convenience, a one page listing of modules is at https://www.maynoothuniversity.ie/sites/default/files/assets/document//DSmoduledescriptors_201920.pdf

CS620C is an intensive programming course beginning September 2 (in 2019) running for 3 weeks, from 9.30 to 5pm each day. It takes place in Lab 003/4/5, ground floor, Eolas Building, North campus. All other semester 1 module begin in the week of September 23, 2019.

Students would typically take CS621C, CS632, ST661, ST663 in Semester 1 and CS633, NCG612, NCG613, NIR605, ST662, ST674 in Semester 2.

Students are welcome to discuss their module choices with the Course Director prior to the start of both semesters.

LOCATIONS

The HDip is jointly offered by the Department of Mathematics and Statistics, located in Logic House, South Campus, the Department of Computer Science located in the Eolas Building, and the National Centre for Geocomputation (NCG) located in Iontas, both on the North Campus.

LECTURES

The official start of term is Monday September 23 2019. For students taking CS620C, lectures begin on September 2, 2019. You will find information on [key term dates here](#). Module timetables will be available early in September, [check here](#). Some modules will have additional tutorials. Lecturers will advise you of this on the first day of class. Attendance at lectures, labs and tutorials is required.

ASSESSMENT

Students will find assessment information for modules on [course finder](#). The lecturer will give you more details at the start of the semester. Module pass marks are either 40% or 50%. Pass by compensation is allowed in some cases when students obtain a mark of at least 35%. The [University Marks and Standard document](#) explains this.

EXAMS

Some modules are examined by continuous assessment or in class exams. Others are examined during the official University examination periods which are two weeks in January and two weeks in May. Repeat exams (for modules offering them) take place in August. Check the [key term dates link for details](#).

PLAGIARISM

[Students should make themselves aware of the University policy on plagiarism.](#)

STUDENT SUPPORTS

- The University has a [Career development centre](#), which offers career related talks and employer presentations.
- There is also a [general student services office](#), which has links to information on finding accommodation, student health and budgeting.

MOODLE

Moodle is Maynooth University's online learning environment. To log in to Moodle, you need to enter your Maynooth University username and password in the login area. You will find material there related to your modules.

COMPUTERS

[The University IT services website](#) has information about email accounts, and the [publicly available computer labs](#) and [wifi](#).

HDip students will also have accounts for the computer labs in Logic House.