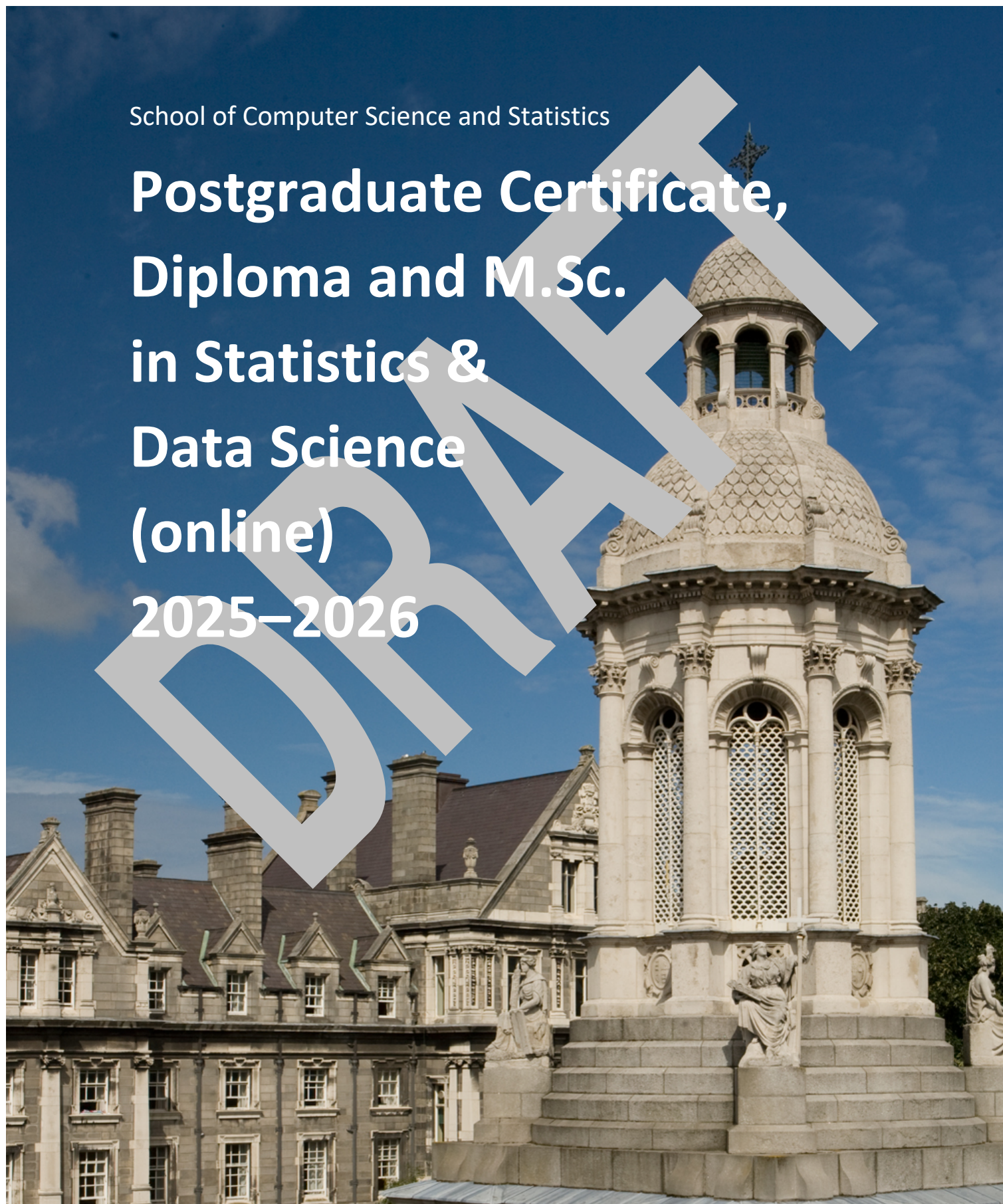**Trinity College Dublin**
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

School of Computer Science and Statistics

Postgraduate Certificate, Diploma and M.Sc. in Statistics & Data Science (online) 2025–2026

DRAFT

Dear Participant,

Welcome to the Postgraduate Certificate and Diploma in Statistics and Data Science.

This booklet contains some important information on various aspects of the 3 courses - dates of lecture terms, examination regulations and course outlines. So please take some time to read it.

This is the first year that the M.Sc. year of the course is running. All of the lectures, homework, reading material, live tutorial sessions and examinations will be made available online through the College's Blackboard system, accessible with your TCD username and password at https://tcd.blackboard.com/.

If you have any queries or problems **in relation to the academic side** of the course then please contact the course director Professor Simon Wilson on swilson@tcd.ie. Natasha Blanchfield is the executive officer who administers the course; her number is +353 1 896 1787, email: pgcert.stats@tcd.ie   Administrative queries should be addressed to Natasha in the first instance.

Note that we will want to communicate with you by e-mail from time to time. We will use the Blackboard system to do this, which sends messages to your College email address that you will be assigned (many of you will have these already in the form NAME@tcd.ie). E-mails will NOT be sent to non-TCD email addresses. It is important, therefore, that you check your college mail regularly (and frequently!).

It is also important that you register at the appropriate times – if you do not, you may be charged a late registration fee.

I hope you enjoy the course.
Best wishes,

Simon Wilson
Course Director

Disclaimers:

The information contained in this document is intended to provide a guide to those seeking admission to the programme, and to the students on the course. Trinity College Dublin reserves the right to update or change syllabi, timetables, or other aspects of the programme at any time. Changes will be notified to current students by email.

Table of Contents for Course Handbook.
Postgraduate Certificate and Diploma in Statistics and Data Science

Alternative formats of the Handbook can be made on request.

Introduction

This handbook describes the Postgraduate Certificate, Diploma and M.Sc. in Statistics and Data Science. It details the required regulations and provides information on services and supports throughout College. In the event of any conflict between the General regulations published in the University Calendar and information contained in this handbook, the provision of the General Regulation in the Calendar will prevail. See https://www.tcd.ie/calendar/graduate-studies-higher-degrees/ for the General College Regulations.

Academic Structure

The Postgraduate Certificate, Diploma and M.Sc. in Statistics and Data Science is run by the School of Computer Science and Statistics. The course is run online. The Postgraduate Certificate consists of four modules: Introduction to statistical concepts and methods, Implementing statistical methods in R, Linear regression and Foundations of data science 1. The Postgraduate Diploma requires that the Postgraduate Certificate year have been passed and then consists of six further modules: Experimental design, Advanced linear models 1, Foundations of data science 2, Advanced linear models 2, Time series and Multivariate analysis. The M.Sc. consists of a single module where a dissertation on some aspect of statistics and data science is prepared and submitted. Detailed syllabi for each of the modules are given in Appendix A.

This course is run entirely online and there is no need to come to Trinity College's campus for any aspect of it. The course will be delivered through Blackboard, the system that Trinity College uses for online learning; this includes lecture presentations, homework and other resources, live tutorial sessions and examinations. Blackboard can be accessed at https://tcd.blackboard.com using your Trinity College username and password.

The Certificate programme is normally completed within one academic year. Once the Certificate is completed, the Diploma programme normally takes one more year. Once the Diploma is completed, the M.Sc. takes an additional year. To facilitate students registered as their primary course who, due to work commitments, cannot do this, it is possible to take each programme over two years. Note, though, that full fees are charged for the second year. Students who wish to take the Postgraduate Certificate or Diploma programme over two years must apply to do so before the end of the first semester. Students have to complete each programme within two years.

ECTS – European Credit Transfer System (ECTS)

Each module is assigned an European Credit Transfer System (ECTS) rating. For the Certificate, the modules on statistical concepts and methods, and on linear regression, are assigned an ECTS value of 10 with the other two modules assigned 5 ECTS each, for a total of 30 ECTS for the programme. For the Diploma year, all 6 modules are assigned 5 ECTS. The lone module in the M.Sc. year is assigned 30 ECTSAs a rough guide, 1 credit represents 20-25 hours estimated input including class contact time, assessments and examinations.

Requirements for Postgraduate Certificate, Diploma and M.Sc.

To obtain the Postgraduate Certificate participants must pass all 4 modules. To obtain the Postgraduate Diploma, participants must first pass the Certificate and then pass all 6 modules in the Diploma year. To obtain the M.Sc., participants must first pass the Certificate

and Diploma years and then pass the dissertation module. Please note that progression from one year of the programme to another may be subject to a limit on the number of places. In case that the number of students who wish to progress to any year exceeds the quota, students will be chosen to progress based on the results of the most recent year in the programme that they have completed; see the section on Progression later in this handbook for more details.

Key dates:

Start of Semester 1: Monday 15th September 2025
Exams for Semester 1 modules: Monday 15th December to Monday 22nd December 2025
Start of Semester 2: Monday 19th January 2026
Exams for Semester 2 modules: Tuesday 21st April to Friday 1st May 2026
Reassessment 2026: TBA (Contingency dates maybe added)
These dates are subject to change – all up to date information is available on the Academic Registry website. https://www.tcd.ie/academicregistry/exams/
Academic Year Structure https://www.tcd.ie/calendar/academic-year-structure

Staff

Course Director
Professor Simon Wilson Simon.Wilson@tcd.ie Tel +353 1 896 1759

Course Administration
Ms. Natasha Blanchfield (pgcert.stats@tcd.ie) Tel: +353 1 896 1787

Lecturers
Professor Cornelius Fritz fritzc@tcd.ie
Dr. Bahman Honari   bhonari@tcd.ie
Professor Emma Howard emhoward@tcd.ie
Professor James Ng ngja@tcd.ie
Professor Mimi Zhang Mimi.Zhang@tcd.ie

External Examiner:
Professor Theodore Kypraios, University of Nottingham

Location of Lectures
All lectures take place online.

Timetable for the Postgraduate Certificate

The online nature of the programme means that there is no strict timetable of lectures.

Each week, new content will be posted to the course's webpage within Blackboard. This will occur on the Friday before each week in the teaching semester. So the first material will appear on Blackboard on Friday 12th September 2025. On the Thursday of each week in the teaching semester, a live tutorial session will take place with the module lecturer or a demonstrator that will cover the material released the Friday before. Other live sessions, in the form of 'office hours' where students can go online and ask questions, may also be timetabled earlier in the week. Module lecturers will arrange the exact time for live tutorials and communicate that to you before the start of term.

The timetable for the release of content for the 4 modules follows the schedule listed below.

Semester 1 timetable

Week number	Module code and session number	Date of release of content	Date of live tutorial
1	ST8001 Session 1	12/09/2025	18/09/2025
2	ST8001 Session 2	19/09/2025	25/09/2025
3	ST8001 Session 3	26/09/2025	02/10/2025
4	ST8002 Session 1	03/10/2025	09/10/2025
5	ST8001 Session 4	10/10/2025	16/10/2025
6	ST8002 Session 2	17/10/2025	23/10/2025
7	Reading Week – no content released		
8	ST8001 Session 5	31/10/2025	06/11/2025
9	ST8002 Session 3	07/11/2025	13/11/2025
10	ST8001 Session 6	14/11/2025	20/11/2025
11	ST8001 Session 7	21/11/2025	28/11/2025
12	ST8002 Session 4	28/11/2025	04/12/2025

ST8001: Introduction to statistical concepts and methods (Prof. Zhang)

ST8002: Implementing statistical methods in R (Prof. Zhang)

Semester 2 timetable

Week number	Module code and session number	Date of release of content	Date of live tutorial
1	ST8003 Session 1	16/01/2026	22/01/2026
2	ST8003 Session 2	23/01/2026	29/01/2026
3	ST8003 Session 3	30/01/2026	05/02/2026
4	ST8003 Session 4	06/02/2026	12/02/2026
5	ST8003 Session 5	13/02/2026	19/02/2026
6	ST8003 Session 6	20/02/2026	26/02/2026
7	Reading Week – no content released		
8	ST8003 Session 7	06/03/2026	12/03/2026
9	STP80080 Session 1	13/03/2026	19/03/2026
10	STP80080 Session 2	20/03/2026	26/03/2026
11	STP80080 Session 3	27/03/2026	02/04/2026
12	STP80080 Session 4	02/04/2026[1]	09/04/2026

ST8003: Linear regression

STP80080: Foundations of data science 1 (Prof. Fritz)

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[1] Content released a day early as 3rd April 2026 is a holiday.

Timetable for the Postgraduate Diploma

The online nature of the programme means that there is no strict timetable of lectures. Each week, new content will be posted to the course's webpage within Blackboard. This will occur on the Friday before each week in the teaching semester. So the first material will appear on Blackboard on Friday 6th September 2024. On the Thursday of each week in the teaching semester, a live tutorial session will take place with the module lecturer or a demonstrator that will cover the material released the Friday before. Other live sessions, in the form of 'office hours' where students can go online and ask questions, may also be timetabled earlier in the week. Module lecturers will arrange the exact time for live tutorials and communicate that to you before the start of term. The timetable for the release of content for the 6 modules follows the schedule listed below.

Semester 1 timetable

Week number	Module code and session number	Date of release of content	Date of live tutorial
1	ST8004 Session 1	12/09/2025	18/09/2025
2	ST8004 Session 2	19/09/2025	25/09/2025
3	ST8004 Session 3	26/09/2025	02/10/2025
4	ST8004 Session 4	03/10/2025	09/10/2025
5	ST8004 Session 5	10/10/2025	16/10/2025
6	STP80110 Session 1	17/10/2025	23/10/2025
7	STP80110 Session 2	24/10/2025	30/10/2025
8	STP80110 Session 3	31/10/2025	06/11/2025
9	STP80110 Session 4	07/11/2025	13/11/2025
10	STP80090 Session 1	14/11/2025	20/11/2025
11	STP80090 Session 2	21/11/2025	27/11/2025
12	STP80090 Session 3	28/11/2025	04/12/2025
13	STP80090 Session 4[2]	05/12/2025	11/12/2025

ST8004: Experimental design (Prof. Ng)

STP80110: Advanced linear models 1

STP80090: Foundations of data science 2

Semester 2 timetable

Week number	Module code and session number	Date of release of content	Date of live tutorial
1	STP80120 Session 1	16/01/2026	22/01/2026
2	STP80120 Session 2	23/01/2026	29/01/2026
3	STP80120 Session 3	30/01/2026	05/02/2026
4	STP80120 Session 4	06/02/2026	12/02/2026
5	STP80140 Session 1	13/02/2026	19/02/2026
6	STP80140 Session 2	20/02/2026	26/02/2026
7	STP80140 Session 3	27/02/2026	05/03/2026
8	STP80140 Session 4	06/03/2026	12/03/2026
9	STP80130 Session 1	13/03/2026	19/03/2026
10	STP80130 Session 2	20/03/2026	26/03/2026
11	STP80130 Session 3	27/03/2026	02/04/2026
12	STP80130 Session 4	02/04/2026[3]	09/04/2026

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[2] This session falls outside of the teaching semester but it is an industry case study that is not examined.

[3] Content released a day early as 3rd April 2026 is a holiday.

STP80120: Advanced linear models 2
STP80140: Time series (Prof. Howard)
STP80130: Multivariate analysis (Prof. Howard)

Timetable for the M.Sc.

The M.Sc. year differs from the previous 2 years of the programme in that there are no scheduled weekly sessions with content released. Rather, the student works with a supervisor from the School towards the preparation and submission of a research dissertation. The student and supervisor agree a schedule for when to meet. Typically this will be online but face-to-face meetings cam be accommodated if the student has access to the Trinity College campus.

A provisional timetable is below. Please note that this is the first year that this part of the programme is run and so these dates may be subject to change in response to how the year evolves. Broadly speaking, from 1st September 2025, faculty will begin to submit project titles and descriptions to the School's project allocation system. Students have access to these and can register their interest in any of them. This process continues until 26th September 2025, at which point the School will start to allocate projects. This should be completed by 17th October 2025 although normally students will be allocated quite quickly after 26th September. There are only 2 other formal dates for this year:

- A presentation and/or demonstration of the work, to occur about 1 month before submission. This will be given to the supervisor and the other examiner of the dissertation (known as the 2nd reader).
- Submission of the dissertation. This will be done to the Dissertation module's page on Blackboard.

Event	Date
Project and supervisor allocation.	01/09 - 26/09/2025
Latest date of supervisor assignment to students	17/10/2025
Presentation and/or demonstration of work to 2nd reader	09/03 - 20/03/2026
Submission deadline for dissertation	16/04/2026
Publication of results	late May / early June 2026 (exact date TBD)

Examinations

Each module will be examined separately. The form of the examination may vary from module to module and may include a combination of assignments, projects and written online examinations.   Details will be given by the lecturers concerned.
As noted above, any online examination for the semester 1 modules takes place between 15th and 22nd December 2025 inclusive. Any online examination for the semester 2 modules takes place in the week of 20th April 2026 or the week after. Individual examination dates are set by the Examinations Office of the University and will not be available until later in the semester. Examination timetables will be posted to your my.tcd account:
No letters will be sent regarding this matter.
Subject to the recommendation of the court of examiners, students who are unsuccessful in the annual examinations may be allowed a supplemental examination. The supplemental examinations will normally be held in the week of 24th August 2026 (Contingency dates maybe added). Failure in the supplemental examination leads to exclusion from the course.

Marking scale

Each module will be graded as follows: fail (< 50%), pass (50%+). To obtain the Postgraduate Certificate or Diploma with distinction, participants must obtain an overall average of at least 68% and have at least 70% in modules amounting to 15 or more credits. The average is weighted using the ECTS units for the various modules.

Late submission

When an assessment is submitted late, a penalty to the mark will be applied. The penalty policy may vary from module to module and should be clearly stated by the module lecturer. In the case where the lecturer does not specify a late submission penalty policy, the following will apply:

- When an assessment is submitted late, there is a penalty of 10% per day or part thereof on the total possible mark. For example, if a student submits an assessment 1 1/2 days late, that counts as 2 days and so there is a 20% penalty applied to the mark from the assessment. So if the assessment were marked at 70%, the returned mark is 70% x 80% = 56%.
- Students can request an extension from the module lecturer of up to 1 week. They must be prepared to provide some grounds for the extension and have evidence for those if asked e.g. medical, family bereavement. The request must be made to the module lecturer before the submission deadline.
- For extensions greater than 1 week, permission must also be given by the course director.

Process for marking the M.Sc. dissertation

Following submission of the dissertation, it is assessed independently by the supervisor and one other faculty member (known as the 2nd reader). Each assessor grades the dissertation out of 100%. Once both examiners have marked the dissertation, a final mark is arrived at as follows:

- If the 2 marks are within 10% of each other then normally the final agreed mark is their average;
- If the 2 marks differ by more than 10% then at first the 2 examiners will discuss their marks to see if a final mark can be agreed. If no agreement can be made then a 3rd reader will be assigned, who will mark the dissertation separately. Once this is done then a final mark is agreed between the 3 examiners and the course director.

Previous examination papers

Copies of previous examinations papers are published at:
http://www.tcd.ie/Local/Exam_Papers/index.html
Note that supplemental examination papers are not published. Please also note that all examinations from 2019 and before were 'face to face' examinations, taking place in a room and under invigilation and so less representative of the examinations of an online programme, which necessarily take place also online.

Deferring examinations

In exceptional circumstances (e.g. illness, force majeure), permission may be granted by the Dean of Graduate Studies to defer examinations to the supplemental examination period. Contact the course administrator to organize the request to the Dean of Graduate Studies. Please note that inadequate preparation for the examinations is not a valid basis for a deferral and that force majeure does not include attendance at conferences, research visits or other work-related requirements.

If a student cannot sit an examination for medical reasons, **medical certificates must be submitted to the Course Administrator**; the College regulations require that this be done **"within three days of the beginning of the period of absence from the examination". Unexplained absence from examinations results in exclusion from the course.** Please note that all students must complete any of the 3 courses within two years.

Progression

At the end of years 1 or 2 of the programme, students who have successfully completed the year can choose to do one of the following:
1. Exit the programme with the award for the year that they have completed (Certificate or Diploma);
2. Apply to progress to the next year of the programme.

The Diploma and M.Sc. years have a quota for the maximum number of places that can be accommodated. In the case that the number of students wishing to progress exceeds the quota, places will be offered in order of the annual result from the most recent year e.g. for progression to the Diploma year, the Certificate year results will be used, while for progression to the M.Sc. year the Diploma year results will be used.

Students who exit the programme are permitted to return to the next year for up to 5 years after exiting. They must inform the course administrator of their intention to do this by the end of June of the year that they wish to continue. Such students will be subject to the same selection criteria as any other student wishing to progress in that year.

Criteria for progression in the case that the quota for places is exceeded.

*   Any student who successfully completes the Certificate or Diploma year of the programme is eligible to progress into the next year.
*   Each year the School will determine how many places on the Diploma and M.Sc. year it will make available.
*   In the case that more eligible students wish to progress to a year than there are places, the following selection criteria will be used:
    o   Places will be offered in order according to the highest overall course mark obtained in the most recent year that the student has completed. The overall mark is the credit-weighted average of marks obtained in the course modules for that year.
    o   In the event that there are more students with a tied highest mark than there are remaining places, places will be offered to those students by lottery, where each student with the tied highest mark has the same chance of being given one of the remaining places.
    o   If a student fails a module in a year and passes it at the supplemental session then he or she is eligible to progress, subject to any places remaining following the selection.
*   Eligible students can study the Diploma or M.Sc. year up to 5 years after having completed the Diploma year.
*   In the event that a student is unsuccessful in obtaining a place in a particular year, he or she can apply again in subsequent years up to the 5 year limit.

Individual Work and Plagiarism

It is important to highlight that all work submitted must be your own, and not taken directly from the internet or other sources. The College takes plagiarism seriously. The College regulations governing plagiarism are available in the college calendar and are copied in Appendix B. You are expected to be familiar with these rules and to understand what is considered plagiarism.

Before beginning your first assignment, you must complete the online tutorial on avoiding plagiarism 'Ready, Steady, Write', located at

https://libguides.tcd.ie/academic-integrity/ready-steady-write

You are also encouraged to use the College Library's repository of resources on plagiarism and its avoidance at

https://libguides.tcd.ie/academic-integrity/

In the case of group work, groups should establish some mechanism to ensure that no member engages in plagiarism. Do not sign the Group Assignment Declaration if you have not assured yourself that the whole assignment is original.

Students must also follow the College's policy on the use of AI systems, such as ChatGPT, as stated here:

https://www.tcd.ie/academicpractice/assets/pdf/college-statement-on-genai.pdf

Where an online take-home exam is part of the assessment, and the modeul lecturer has not informed the students otherwise, students must not use any AI system. It is noted that the College has various tools to detect where such systems may have been used in a submitted assessment.

Student Supports and Services

Trinity College provides a number of supports for students. There is a handbook on the Student Services available at http://www.tcd.ie/students/supports-services/

The Postgraduate Advisory Service

The Postgraduate Advisory Service (PAS) is a free and confidential service available to all registered postgraduate students in Trinity College. PAS offers a comprehensive range of academic, pastoral and professional supports including one-to-one appointments, workshops and trainings, and emergency financial assistance.

PAS exists to ensure that all postgraduates students have a dedicated, specialist service independent of the School-system to whom they can turn for support and advice during their stay in College. Common concerns students present to PAS include stress; financial worries; queries about regulations or services available at Trinity; supervisor-relationship concerns; academic progression issues; academic appeals; and plagiarism hearings.

The Postgraduate Advisory Service is led by the Postgraduate Student Support Officers who provide frontline support for all Postgraduate students in Trinity. These Support Officers will act as your first point of contact and a source of support and guidance; they can also put you in touch with or recommend other services, depending on your needs.

For an appointment, please e-mail postgrad.support@tcd.ie

Website: https://www.tcd.ie/Senior_Tutor/postgraduateadvisory/

To keep up to date with the supports and events for postgraduate please check out the monthly PAS newsletter sent to all postgraduates via email or follow PAS on Instagram or Twitter: @TCDPGAdvisory

The Graduate Students Union

Located on the second floor of House Six, Trinity's Graduate Students' Union (commonly referred to as the GSU) is an independent body within the College that represents postgraduate students throughout the University. Upon registration, all postgraduates are automatically members. The Union is managed by two full-time sabbatical officers the President and the Vice President. The President is responsible for strategy and policy formulation, whilst representing postgraduate students on a wide range of College Committees.

The Vice-president acts as the Union's Education and Welfare Officer and advises students on matters such as academic appeals and supervisor relationships; whilst also representing postgraduate students on a range of University Committees. The Vice president is also here to help on more personal matters, such as financial concerns, illness and bereavement. Any discussions about such concerns are treated with the strictest confidentiality.

Contact us at either: president@tcdgsu.ie, or vicepresident@tcdgsu.ie and please visit our website www.tcdgsu.ie for the latest postgraduate student updates. The GSU organise a range of social and research related events throughout the year and you'll hear about these from your GSU postgraduate representative, as well as via the GSU weekly email. Please get involved, either as a representative or at an individual level.

Trinity Careers Service

As a Trinity College Dublin student you have access to information, support and guidance from the professional team of Careers Consultants throughout your time at Trinity and for a year after you graduate. The support offered includes individual career guidance appointments, CV and LinkedIn profile clinics and practice interviews. The Trinity Careers Service and the School of Computer Science and Statistics also hold an annual Careers Fair in October which gives you the opportunity to find out about career prospects in a wide range of companies..

Visit https://www.tcd.ie/Careers for career and job search advice

Sign into MyCareer to book appointments, find information about vacancies and bursaries, and book your place on upcoming employer events.

Follow the service on Instagram for career news and advice @trinity.careers.service

Research Ethics

Any research project that involves human participation conducted through the courses (for example, a questionnaire or survey, or system user-evaluation, etc.) must have independent review by a Research Ethics Committee before its commencement.

A basic principle is that prospective participants should be fully informed about the research and its implications for them as participants, with time to reflect on the possibility for participation prior to being asked to sign an informed consent form.

For research associated with the School of Computer Science & Statistics, detailed information on the ethics application process can be found at
https://www.tcd.ie/scss/research/research-ethics/

It takes time to prepare an application for research ethics approval, to have the application considered, and to respond to feedback on the application where issues are raised. You should plan in your work for the time it takes to obtain research ethics approval.

Retrospective approval will not be granted.

Please also note, research conducted in the School of Computer Science and Statistics should be undertaken with cognisance of the TCD Guidelines for Good Research Practice; see https://www.tcd.ie/graduatestudies/assets/pdf/good-research-practice-policy.pdf

Other Useful links and College Contacts

There are many other useful sites in TCD. Here are a number of them. If you find any other TCD links that you think would be useful for the class please e-mail the Course Administrator (nblanchf@tcd.ie).

Site	Address
Junior Dean and Registrar of Chambers Junior.Dean@tcd.ie	http://www.tcd.ie/Junior_Dean/
TCD Website	http://www.tcd.ie
Library	http://www.tcd.ie/library
IT Services	http://www.tcd.ie/itservices/
Graduate Studies	http://www.tcd.ie/Graduate_Studies/
Student Counselling	http://www.tcd.ie/Student_Counselling/
Computer Science and Statistics	http://www.scss.tcd.ie
Mature Student Office	http://www.tcd.ie/maturestudents/
Chaplaincy	http://www.tcd.ie/Chaplaincy/

Health & Safety

The Faculty of Science, Technology, Engineering and Mathematics Health and Safety Manual is available for download at the url below.
https://www.tcd.ie/stem/faculty-health-safety.php
There will be no printed Health & Safety booklets distributed this year and Declaration Forms A, B & C will now be forwarded to all incoming, registered students via email and in Word format to ease completion.

Emergency Procedure

In the event of an emergency, dial Security Services on extension 1999 (+353-1-8961999 from a mobile phone or an external landline). Security Services provide a 24-hour service to the college community, 365 days a year. They are the liaison to the Fire, Garda and Ambulance services and all staff and students are advised to always telephone extension 1999 (+353 1 896 1999) in case of an emergency. Should you require any emergency or rescue services on campus, you must contact Security Services. This includes chemical spills, personal injury or first aid assistance. It is recommended that all students save at least one emergency contact in their phone under ICE (In Case of Emergency).

University Policies

- The *Dignity and Respect Policy* supports a respectful work and study environment free from bullying and harassment: https://www.tcd.ie/equality/policy/dignity-and-respect-policy/
- The *Student Complaints Procedure* ensures that legitimate student complaints are investigated in a transparent, fair and timely manner: https://www.tcd.ie/about/policies/university-policies/complaints-procedure/
- A comprehensive listing of Academic Policies is available at: http://www.tcd.ie/teaching-learning/academic-policies/

Appeals process for graduate students

The College has an extensive appeals process. See Appendix C for a copy of the procedure.

Data Protection

Trinity College Dublin uses personal data relating to students for a variety of purposes. We are careful to comply with our obligations under data protection laws and we have prepared a short guide (available at https://www.tcd.ie/info_compliance/data-protection/student-data/) to ensure you understand how we obtain, use and disclose student data in the course of performing University functions and services.

Feedback and Evaluation

At the end of the year the School of Computer Science and Statistics will conduct surveys of each module. Students are welcome to contact the Director of the Course if they have a complaint during the year

BlackBoard

Trinity College uses the online learning system Blackboard which is accessible via https://tcd.blackboard.com

Student Information System (SITS)

ACCESS VIA https://my.tcd.ie/

All communications from College will be sent to you via your online portal which will give you access to an 'intray' of your messages. You will also be able to view your timetables online, both for your teaching and for your examinations. All fee invoices/payments, student levies and commencement fees will be issued online and all payments will be carried out online. You will be able to view your personal details in the new system – some sections of which you will be able to edit yourself. Your results will also be communicated to you via the online portal. Future plans for the new system include online module registration and ongoing provision of module assessment results.

Enjoy the Course!

Appendix A: Module Descriptors

Module 1 Code	ST8001
Module 1 Title	Introduction to statistical concepts and methods
ECTS weighting	10
Term	Michaelmas Term
Contact Hours	7
Module Personnel	Professor Mimi Zhang
Module Learning Outcomes	MLO1.1 Demonstrate a systematic understanding of the fundamental inferential ideas which underpin statistical methods MLO1.2 Demonstrate a broad understanding of the role of statistical ideas and methods covering both data collection and data analysis MLO1.3 Demonstrate a competence in the use of basic statistical tools: data summaries, graphs, estimation and hypothesis testing
Module Learning Aims	The module is designed to introduce students to the basic methods of statistical analysis
Module Content	Specific topics addressed in this module include: Data summaries and graphs Statistical models Sampling distributions: confidence intervals and tests Comparative experiments: t-tests, confidence intervals, design issues
Recommended Reading	Core reading materials. The core reading material is the module study notes. These texts complement that material: Moore, McCabe and Craig, "Introduction to the Practice of Statistics", 9th edition, published by Freeman. Carlson and Winquist, "An Introduction to Statistics: An Active Learning Approach", 2nd edition, published by Sage. Online reading materials. There are several free online texts in statistics that cover most of the material in this module. This one covers almost all of the module content: Shafer and Zhang, "Introductory Statistics", https://open.umn.edu/opentextbooks/textbooks/135 Supplementary reading or similar materials: Grimmett and Welsh, "Probability: an Introduction", published by Oxford University Press. Hogg, McKean and Craig, "Mathematical Statistics: an Introduction", 8th edition. Spiegelhalter, "The Art of Statistics: How to Learn from Data Hardcover – Illustrated", published by Basic Books. James, Witten, Hastie and Tibshirani, "An Introduction to Statistical Learning: with Applications in R", published by Springer. Silver, "The Signal and the Noise", published by Penguin. Taleb, "The Black Swan", published by Allen Lane.

Assessment Details	The module is assessed by a real-time online examination (100%).

Module 2 Code	ST8002
Module 2 Title	Implementing statistical methods in R
ECTS weighting	5
Term	Michaelmas Term
Contact Hours	4
Module Personnel	Professor Mimi Zhang
Module Learning Outcomes	Students who complete this module should be able to: MLO2.1 Load and manipulate data for analysis in R MLO2.2 Implement statistical techniques that are taught in ST8001 in R MLO2.3 Interpret the output of these statistical techniques that R produces
Module Learning Aims	The module is designed to introduce students to the R package and how it can be used to implement many of the methods described in ST8001.
Module Content	Install and run R through the RStudion environment. Basic operations in R. Import data, format data, visualise data and save data. Implement the statistical methods of ST8001 in R. Interpret R outputs.
Recommended Reading	Core reading materials. The core reading material is of course the module study notes. These texts complement that material: Frost, "Regression Analysis". The R project website has an extensive online manual at https://cran.r-project.org/manuals.html Davies, "The Book of R: A First Course in Programming and Statistics", 1st edition. Published by No Starch Press. Supplementary reading or similar materials: James, Witten, Hastie and Tibshirani, "An Introduction to Statistical Learning: with Applications in R", published by Springer. Montgomery, Peck and Vining, "Introduction to Linear Regression Analysis", 5th edition, published by Wiley.
Assessment Details	The module is assessed by a series of practical tasks (30%) and a final individual project (70%)
Teaching and Learning Methods	This module has 4 weekly sessions that students work on in Weeks 9-12 of Michaelmas Term. The session will be released the Friday before the start of that week, with the synchronous session taking place on the Thursday or Friday of the week. Session 1 Installing and running R. The user interface. Basic operations. Session 2 Graphing data. Loading and saving data in R. Session 3 Calculating point estimates and confidence intervals. Session 4 Hypothesis testing.

Module 3 Code	ST8003
Module 3 Title	Linear regression
ECTS weighting	10
Term	Hilary Term
Contact Hours	7
Module Personnel	TBA
Learning Outcomes	On successful completion of this module students should be able: MLO3.1 To carry out an initial examination of the data to determine an appropriate regression model to use. MLO3.2 To use a regression package (R) to apply multiple regression to simple data sets. MLO3.3 To produce and interpret graphs for data summary and model diagnostics, MLO3.4 To interpret the results of the model and see such modelling as the basis for more advanced statistical analysis. MLO3.5 To construct and exploit derived variables, such as logs, products and indicator variables.
Module Learning Aims	Multiple linear regression – and its many variants – is the most widely used tool in applied statistics. This course will build on simple linear regression, introduced in the Base Module. The aim is to become familiar with its use, to further develop experience and confidence in the use and role of statistical modelling. As the class is diverse in terms of research area and quantitative skills, students are encouraged to conduct small analyses of data in their own research fields.
Module Content	Specific topics addressed in this module include: Review of simple linear regression model: assumptions, model fitting, estimation of coefficients and their standard errors The multiple linear regression model and its analysis including: Confidence intervals and statistical significance tests on model parameters Issues in the interpretation of the multiple parameters Analysis of variance in regression: F-tests, r-squared Indicator variables and interaction terms Model validation: residuals, residual plots, normal plots, diagnostics Introduction to logistic regression
Recommended Reading List	Core reading materials. The core reading material is of course the module study notes. These texts complement that material: Sheather, S. J. A Modern Approach to regression with R,, New York:, Springer 2009 Neter, J., Wasserman, W. & Kutner, M.H. Applied Linear Models , 2nd edition Boston, Irwin:1989 Kutner. M. H., Nachtsheim, C.J., Neter, J. & Li, W. Applied Linear Statistical Models, 5th, Boston: McGraw-Hill, 2005

	Davies, "The Book of R: A First Course in Programming and Statistics", 1st edition. Published by No Starch Press. The R project website has an extensive online manual at https://cran.r-project.org/manuals.html, including material on regression Supplementary reading or similar materials: James, Witten, Hastie and Tibshirani, "An Introduction to Statistical Learning: with Applications in R.
Assessment Details	The module is assessed by a series of practical tasks (50%) and a final project (50%)
Weekly Session Descriptions	This module has 7 weekly sessions that students work on in Weeks 1-7 of Hilary Term. The session will be released the Friday before the start of that week, with the synchronous session taking place on the Thursday or Friday of the week. Session 1 What is regression? Simple linear regression and the principle of least squares. Diagnostics. Session 2 Multiple linear regression, including confidence intervals, hypothesis tests and prediction. Session 3 Implementing regression in R and interpreting the output Session 4 Pre-processing data for better analysis: transformations and multi-collinearity. Session 5 Analysis of Variance: regression when the variables are discrete. Adding indicator variables and interactions to a regression analysis. Session 6 Introduction to logistic regression. Choosing a regression model. . Session 7 Implementing ANOVA and logistic regression in R and interpreting the output.

Module 4 Code	STP80080
Module 4 Title	Foundations of Data Science 1
ECTS weighting	5
Term	Hilary Term
Contact Hours	5
Module Personnel	Professor Cornelius Fritz
Learning Outcomes	Upon successful completion of the module the student should be able to: MLO4.1 Identify the different skills, in computer science, statistics and elsewhere, that make up the field of data science and how they work together; MLO4.2 Recognise which machine learning method is appropriate for a particular data analysis task, implement it and assess its performance; MLO4.3 Undertake various statistical analyses and implement a machine learning algorithms using Python;
Module Learning Aims	This module and its successor aim to give a broad overview of the aspects of data science other than statistics, broadly speaking: machine learning, distributed computing and data security and privacy. In addition, students will be introduced to another computing language, Python, to complement their knowledge of R, for data analysis. This module focusses on machine learning, and includes session that will be devoted to an industry case study.
Module Content	Specific topics addressed in this module include: • Machine learning and how it differs from statistics; non-statistical ML methods (such as case-based reasoning), regression with neural networks; classification (support vector machines, kNN); • Evaluating ML methods: cross validation, ROC; Installing and running Python. Its user interface and basic operations. • Introducing information systems and their use in managing and storing data; • Industry case study.
Recommended Reading List	
Assessment Details	The module is assessed by a series of final exam (100%)
Weekly Session Descriptions	This module has 4 weekly sessions that students work on in Weeks 9-12 of Hilary Term. The session will be released the Friday before the start of that week, with the synchronous session taking place on the Thursday or Friday of the week Session 1 Programming in Python Session 2 Machine learning Session 3 Introduction to information systems Session 4 Industry case study

Module 5 Code	ST8004
Module 5 Title	Introduction to Experimental Design
ECTS weighting	5
Term	Michaelmas Term
Contact Hours	5
Module Personnel	Professor James Ng
Learning Outcomes	On successful completion of this module students should be able to: MLO5.1 describe and explain the roles of control, blocking, randomisation and replication in experimentation, MLO5.2 explain the advantages of statistical designs for multifactor experiments, MLO5.3 describe and explain the genesis of a range of basic experimental desig structures, MLO5.4 implement and interpret the analysis of variance for a range of experimental designs, MLO5.5 describe the models underlying the analysis of variance for a range of basic experimental designs,
Module Learning Aims	Experimental design is concerned with the design of data collection exercises for the assessment of the effects of making deliberate changes to factors associated with a process or system, and the analysis of the data subsequently produced. In order to assure that the experimental changes caused the observed effects, strict conditions of control of the process must be adhered to. Specifically, the conditions under which the experimentation is conducted must be as homogeneous as possible with regard to all extraneous factors that might affect the process, other than the experimental factors that are deliberately varied. Design principles intended to assure such control of experimental conditions are advocated. The simplest experiments involve comparison of process results when a single factor is varied over two possible conditions. When more than two factors are involved, issues regarding the most efficient choice of combinations of factor conditions and ability to detect interactions between factors become important. With many factors and many possible experimental conditions for each factor, the scale of a comprehensive experimental design becomes impractical and suitable strategies for choosing informative subsets of the full design are needed. The analysis of data resulting from well-designed experiments is often very simple and graphical analysis can be very effective. Standard statistical significance tests may be used to assure that apparent effects are real and not due simply to chance process variation. In cases with more complicated experimental structure, a more advanced technique of statistical inference, Analysis of Variance, may be used. Confidence intervals are used in estimating the magnitude of effects.
Module Content	Specific topics addressed in this module include: The need for experiments: experimental and observational studies, cause and effect, control

	Basic design principles for experiments: Control, Blocking (pairing), Randomisation, Replication, Factorial structure Standard designs: Randomised blocks, Two-level factors, Multi-level factors, Split units Analysis of experimental data, Exploratory data analysis, Effect estimation and significance testing, Analysis of variance, Statistical models, fixed and random effects, Model validation, diagnostics
Recommended Reading List	Core reading materials. The core reading material is the module study notes. These texts complement that material: Mullins, E., Statistics for the Quality Control Chemistry Laboratory, Royal Society of Chemistry, 2003, particularly Chapters 4-5, 7-8. Montgomery, D.C., Design and analysis of experiments, 8th ed., Wiley, 2013. Dean, Angela and Voss, Daniel, Design and analysis of experiments, Springer, 1999. Supplementary reading or similar materials: Box, G.E.P, Hunter, J.S. and Hunter, W.G., Statistics for Experimenters, 2nd. ed., Wiley, 2005. Cox, D.R., Planning of Experiments, Wiley, 1958. Daniel, C., Applications of Statistics to Industrial Experimentation, Wiley, 1976. Fisher, R.A., The Design of Experiments, Oliver and Boyd, 1935, (8th ed. 1966). Mead, R., Gilmour, SG and Mead, A, Statistical Principles for the Design of Experiments: Applications to Real Experiments, Cambridge University Press, 2012. Robinson, G.K., Practical Strategies for Experimenting, Wiley, 2000.
Assessment Details	The module is assessed by a series of practical tasks (50%) and a final project (50%)
Weekly Session Descriptions	This module has 5 weekly sessions that students work on in Weeks 8-12 of Michaelmas Term. The session will be released the Friday before the start of that week, with the synchronous session taking place on the Thursday or Friday of the week Session 1 The need for experiments Session 2 Basic design principles Session 3 Standard designs Session 4 Analysis of experimental data 1: Exploratory data analysis, effect estimation and significance testing, analysis of variance Session 5 Analysis of experimental data 2: Statistical models, fixed and random effects, model validation, diagnostics

Module 6 Code	STP80110
Module 6 Title	Advanced Linear Models 1
ECTS weighting	5
Term	Michaelmas Term
Contact Hours	5
Module Personnel	TBA
Learning Outcomes	MLO6.1: Fit and interpret simple and multiple linear regression models, and understand their underlying theory, using statistical software as appropriate. MLO6.2: Diagnose and resolve diagnostic issues with regression models, using statistical software as appropriate. MLO6.3: Identify data situations when generalized linear models are required beyond regular regression models, and fit and interpret a range of GLMs, using statistical software as appropriate
Module Learning Aims	The overall aim of this module is to familiarise students with a range of regression and generalised linear models and to develop their confidence in identifying an appropriate model for a given dataset, fit the model using software (where appropriate) and interpret and communicate the outcomes in a variety of contexts.
Module Content	This module will cover simple linear regression and multiple regression, with underlying theory; Regression model diagnostics and how to resolve problems; Generalized Linear Models (GLMs), to include an overview of GLMs, logistic regression, Poisson regression and ordinal regression. An emphasis will be placed on learning how to implement these techniques using R or other statistical software. Multiple choice quizzes will be used as study aids to help students evaluate their knowledge throughout the semester.
Recommended Reading List	
Assessment Details	The module is assessed by a series of final exam (100%)
Weekly Session Descriptions	This module has 4 weekly sessions that students work on in Weeks 9-12 of Hilary Term. The session will be released the Friday before the start of that week, with the synchronous session taking place on the Thursday or Friday of the week Session 1 Recap of linear regression and matrix notation Session 2 Assumptions, diagnostics and transformations Session 3 Generalised linear models, logistic regression Session 4 Poisson and ordinal regression

Module 7 Code	STP80090
Module 7 Title	Foundations of Data Science 2
ECTS weighting	5
Term	Michaelmas Term
Contact Hours	5
Module Personnel	TBA
Learning Outcomes	Upon successful completion of the module, the student should be able to MLO7.1 Identify the various stages of a machine learning project, and be able to assess how well it is performing. MLO7.2 Describe the main issues around maintaining data privacy and the ways in which computer systems can be attacked and defended; MLO573 Identify the different forms of distributed computing and their roles in data analysis.
Module Learning Aims	This module and its predecessor aim to give a broad overview of the aspects of data science other than statistics, broadly speaking: machine learning, distributed computing and data security and privacy. In addition, students will be introduced to another computing language, Python, to complement their knowledge of R, for data analysis. This module focusses on machine learning, and includes session that will be devoted to an industry invited speaker
Module Content	Specific topics addressed in this module include: • Taking a further look at machine learning, focussing on the typical workflow of a ML project and how we assess and improve performance of an ML algorithm; • An introduction to security and privacy of computer systems with a focus on the issues pertaining to data storage and transmission; • An introduction to distributed computing: how and why it is used in data science. • Industry case study
Recommended Reading List	
Assessment Details	The module is assessed by a series of final exam (100%)
Weekly Session Descriptions	This module has 4 weekly sessions that students work on in Weeks 9-12 of Hilary Term. The session will be released the Friday before the start of that week, with the synchronous session taking place on the Thursday or Friday of the week Session 1 Machine learning 2 Session 2 Security and privacy Session 3 Distributed computing Session 4 Industry case study

Module 8 Code	STP80120
Module 8 Title	Advanced linear models 2
ECTS weighting	5
Term	Hilary Term
Contact Hours	5
Module Personnel	TBA
Learning Outcomes	On successful completion of the module students should be able to: MLO8.1: Distinguish between various approaches to estimating linear regression and linear mixed models, and identify how estimation approaches can be determined by the underlying theory of the model. MLO8.2: Identify hierarchical structures in datasets, formulate the appropriate statistical linear mixed model to analyse the data, implement using statistical software as appropriate and interpret fitted models. MLO8.3: Develop and implement non-parametric modelling approaches using statistical software as appropriate.
Module Learning Aims	The overall aim of this module is to familiarise students with the theory of regression and linear mixed models, and to develop their confidence in identifying an appropriate model for a given dataset with hierarchical structures, fit the model using software (where appropriate) and interpret and communicate the outcomes in a variety of contexts.
Module Content	This module will cover the theory of linear regression and linear mixed models and their estimation methods; modelling repeated measures over time; various random effects models, including single random effects, multiple random effects, and random coefficient models; and non-parametric modelling approaches, to include splines and bootstrapping. An emphasis will be placed on learning how to implement these techniques using R or other statistical software. Multiple choice quizzes will be used as study aids to help students evaluate their knowledge throughout the semester.
Recommended Reading List	
Assessment Details	The module is assessed by a series of final exam (100%)
Weekly Session Descriptions	This module has 4 weekly sessions: Session 1 Estimation, linear mixed models Session 2 Repeated measures and random effects Session 3 Weighted least squares and maximum likelihood Session 4 Random coefficient models and non-parametrics

Module 9 Code	STP80140
Module 9 Title	Time series
ECTS weighting	5
Term	Hilary Term
Contact Hours	5
Module Personnel	Professor Emma Howard
Learning Outcomes	On successful completion of this module students should be able: MLO9.1 Define and describe the different patterns that can be found in times series and propose algorithms and statistical models that are suitable for their analysis. MLO9.2 Program, analyse and select the best model for forecasting. MLO9.3 Interpret output of time series data analysis performed using a statistical software package.
Module Learning Aims	The overall aim of this module is to familiarise students with time series data and to develop their confidence in identifying and implementing a range of time series analytical approaches for forecasting.
Module Content	This module will include an overview of classical and modern time series methods; Exponential smoothing and Holt Winters; ARIMA models; using transformations; implementing and validating times series models in a variety of contexts. An emphasis will be placed on learning how to implement these techniques using R or other statistical software. Multiple choice quizzes will be used as study aids to help students evaluate their knowledge throughout the semester.
Recommended Reading List	
Assessment Details	The module is assessed by continuous assessment (100%).
Weekly Session Descriptions	This module has 4 weekly sessions: Session 1 Basic concepts Session 2 Exponential smoothing Session 3 ARIMA Session 4 Advanced methods

Module 10 Code	STP80130
Module 10 Title	Multivariate analysis
ECTS weighting	5
Term	Hilary Term
Contact Hours	5
Module Personnel	Professor Emma Howard
Learning Outcomes	On successful completion of this module students should be able: MLO10.1 Define and describe various classical dimension reduction techniques for multivariate data. MLO10.2 Implement clustering and/or classification algorithms and assess and compare the results, using statistical software as appropriate. MLO10.3 Interpret output of multivariate data analysis performed using a statistical software package.
Module Learning Aims	The overall aim of this module is for students to be able to identify, understand and to implement and interpret a range of multivariate data techniques.
Module Content	This module will include the theory of multivariate distributions, including the multivariate Gaussian distribution; methods for dimension reduction such as principal components analysis, Factor analysis, multidimensional scaling, and discriminant analysis; classification methods such as logistic regression, K-nearest neighbours, decision trees and random forests; and clustering techniques. Multiple choice quizzes will be used as study aids to help students evaluate their knowledge throughout the semester.
Recommended Reading List	
Assessment Details	The module is assessed by continuous assessment (100%)
Weekly Session Descriptions	This module has 4 weekly sessions: Session 1 Multivariate data and analysis Session 2 Clustering Session 3 Dimension reduction Session 4 Discriminant analysis and classification

Module 11 Code	STP80030
Module 11 Title	Dissertation
ECTS weighting	30
Term	Michaelmas and Hilary Terms
Contact Hours	5
Module Personnel	The module is coordinated by Professor Simon Wilson. Each student will be assigned a supervisor for the module.
Learning Outcomes	On successful completion of this module students should be able: MLO11.1 Engage in a sustained piece of individual, academic research on a chosen topic within the fields of statistics and data science. MLO11.2 Read widely and critically reflect on a number of pieces of written research. MLO11.3 Explore varying methodological approaches and adopt the relevant approaches suitable to the topic being researched. ML11.4 Produce a written dissertation of publishable standard that evaluates and synthesises written materials, and displays evidence of independent research skills.
Module Learning Aims	This module aims to give the student the experience in conducting a piece of academic research, then presenting and writing it up in a dissertation.
Module Content	This module involves the student and academic supervisor working together on a research topic.
Recommended Reading List	None
Assessment Details	The module is assessed on the dissertation.
Weekly Session Descriptions	Not applicable.

Choose an item.

Choose an item.

Appendix B: Plagiarism Calendar Entry

PLAGIARISM General

It is clearly understood that all members of the academic community use and build on the work and ideas of others. It is commonly accepted also, however, that we build on the work and ideas of others in an open and explicit manner, and with due acknowledgement.

Plagiarism is the act of presenting the work or ideas of others as one's own, without due acknowledgement.

Plagiarism can arise from deliberate actions and also through careless thinking and/or methodology. The offence lies not in the attitude or intention of the perpetrator, but in the action and in its consequences.

It is the responsibility of the author of any work to ensure that he/she does not commit plagiarism.

Plagiarism is considered to be academically fraudulent, and an offence against academic integrity that is subject to the disciplinary procedures of the University.

Plagiarism can arise from actions such as:

(a) copying another student's work;

67 Examples of Plagiarism

2. (b) enlisting another person or persons to complete an assignment on the student's behalf;

3. (c) procuring, whether with payment or otherwise, the work or ideas of another;

4. (d) quoting directly, without acknowledgement, from books, articles or other sources, either in printed, recorded or electronic format, including websites and social media;

5. (e) paraphrasing, without acknowledgement, the writings of other authors.

Examples (d) and (e) in particular can arise through careless thinking and/or methodology where students:

1. (i) fail to distinguish between their own ideas and those of others;

2. (ii) fail to take proper notes during preliminary research and therefore lose track of the sources from which the notes were drawn;

3. (iii) fail to distinguish between information which needs no acknowledgement because it is firmly in the public

domain, and information which might be widely known, but which nevertheless requires some sort of acknowledgement;

(iv) come across a distinctive methodology or idea and fail to record its source.

23

All the above serve only as examples and are not exhaustive.

68 Plagiarism in the context of group work

Students should normally submit work done in co-operation with other students only when it is done with the full knowledge and permission of the lecturer concerned. Without this, submitting work which is the product of collaboration with other students may be considered to be plagiarism.

When work is submitted as the result of a group project, it is the responsibility of all students in the group to ensure, so far as is possible, that no work submitted by the group is plagia

rised. In order to avoid plagiarism in the context of collaboration and groupwork, it is particularly important to ensure that each student appropriately attributes work that is not their own.

69 SELF PLAGIARISM

No work can normally be submitted for more than one assessment for credit. Resubmitting the same work for more than one assessment for credit is normally considered self-plagiarism.

70 AVOIDING PLAGIARISM

Students should ensure the integrity of their work by seeking advice from their lecturers, tutor or supervisor on avoiding plagiarism. All schools and departments must include, in their handbooks or other literature given to students, guidelines on the appropriate methodology for the kind of work that students will be expected to undertake. In addition, a general set of guidelines for students on avoiding plagiarism is available at http://tcd-ie.libguides.com/plagiarism

71 If plagiarism as referred to in paragraph (1) above is suspected, the Director of Teaching and Learning (Postgraduate) or his/her designate will arrange an informal meeting with the student, the student's Supervisor and/or the academic staff member concerned, to put their suspicions to the student and give the student the opportunity to respond. Students may nominate a Graduate Students' Union representative or PG advisor to accompany them to the meeting. The student will be requested to respond in writing stating his/her agreement to attend such a meeting and confirming on which of the suggested dates and times it will be possible for them to attend. If the student does not in this manner agree to attend such a meeting, the Director of Teaching and Learning (Postgraduate), or designate, may refer the case directly to the Junior Dean, who will interview the student and may implement the procedures as referred to in Section 5 (Other General Regulations).

If the Director of Teaching and Learning (Postgraduate) forms the view that plagiarism has taken place, he/she must decide if the offence can be dealt with under the summary procedure set out below. In order for this summary procedure to be followed, all parties noted above must be in agreement and must state their agreement in writing to the Director of Teaching and Learning (Postgraduate) or designate. If one of the parties to the informal meeting withholds his/her written agreement to the application of the summary procedure, or if the facts of the case are in dispute, or if the Director of Teaching and Learning (Postgraduate) feels that the penalties provided for

under the summary procedure below are inappropriate given the circumstances of the case, he/she will refer the case directly to the Junior Dean, who will interview the student and may implement the procedures set out in Section 5 (Other General Regulations).

72 If the offence can be dealt with under the summary procedure, the Director of Teaching and Learning (Postgraduate) will recommend one of the following penalties:

(a) Level 1: Student receives an informal verbal warning. The piece of work in question is inadmissible. The student is required to rephrase and correctly reference all plagiarised elements. Other content should not be altered. The resubmitted work will be assessed and marked without penalty;

(b) Level 2: Student receives a formal written warning. The piece of work in question is inadmissible. The student is required to rephrase and correctly reference all plagiarised elements. Other content should not be altered. The resubmitted work will receive a reduced or capped mark depending on the seriousness/extent of plagiarism;

(c) Level 3: Student receives a formal written warning. The piece of work in question is inadmissible. There is no opportunity for resubmission.

Provided that the appropriate procedure has been followed and all parties in (6) above are in agreement with the proposed penalty, the Director of Teaching and Learning (Postgraduate) should in the case of a Level 1 offence, inform the Course Director and, where appropriate, the Course Office. In the case of a Level 2 or Level 3 offence, the Dean of Graduate Studies must be notified and requested to approve the recommended penalty. The Dean of Graduate Studies may approve or reject the recommended penalty, or seek further information before making a decision. If he/she considers that the penalties provided for under the summary procedure are inappropriate given the circumstances of the case, he/she may also refer the matter directly to the Junior Dean who will interview the student and may implement the procedures as referred to under conduct and college. Notwithstanding his/her decision, the Dean of Graduate Studies will inform the Junior Dean of all notified cases of Level 2 and Level 3 offences accordingly. The Junior Dean may nevertheless implement the procedures as set out in Section 5 (Other General Regulations).

73 If the case cannot normally be dealt with under summary procedures, it is deemed to be a Level 4 offence and will be referred directly to the Junior Dean. Nothing provided for under the summary procedure diminishes or prejudices the disciplinary powers of the Junior Dean under the 2010 Consolidated Statutes. to be a Level 4 offence and will be referred directly to the Junior Dean. Nothing provided for under the summary procedure diminishes or prejudices the disciplinary powers of the Junior Dean under the 2010 Consolidated Statutes.

https://www.tcd.ie/calendar/graduate-studies-higher-degrees/complete-part-III-hl.pdf

Appendix C: College Appeals procedures

APPEALS PROCESS FOR GRADUATE STUDENTS GENERAL

74 Every School will have a defined appeals process, with one or more appeals committees to hear student cases relating to decisions made at a School level. These include: i) appeals against the decision of a taught postgraduate course committee; and ii) appeals against the decision of a School research transfer/confirmation panel.

75 Appeals against the decision of the examiners of a research thesis will be made in the first instance to the Dean of Graduate Studies. Appeals against the decision of a School appeals committee will be made to the Dean of Graduate Studies.

76 Appeals by postgraduate students against the decision of the Dean of Graduate Studies will be made to the Academic Appeals Committee for Graduate Students (Taught) for taught graduate students or to the Academic Appeals Committee for Graduate Students (Research) for research graduate students – See Paragraph 1.24.7.

77 The Academic Appeals Committee for Graduate Students (Taught or Research) will refer its recommendation to the University Council for approval. If the Academic Appeals Committee for Graduate Students (Taught or Research) upholds a graduate student's appeal, then its recommendations must be fully implemented. Where the Academic Appeals Committee for Graduate Students (Taught or Research) cannot arrive at a decision, or where the graduate student is dissatisfied with the decision of the Committee, he/she may seek redress from the Visitor.

78 It should be noted that no appeals committee can overturn the examiners' academic verdict on the work as presented. Only changes of a procedural nature can be recommended. An appeal other than an ad misericordiam appeal cannot be made against the normal application of College academic regulations approved by the University Council.

REPRESENTATION

79 The student is entitled to have representation appropriate to the formality of the appeal hearing – i.e., a supervisor, other appropriate academic staff member (who is not a relative), a Graduate Students' Union representative, or an advisor from the Postgraduate Advisory Service. When the Academic Appeals Committee for Graduate Students (Taught or Research) hears an appeal, the graduate student must attend and is entitled to present her/his own case if this is desired, with the support of a Postgraduate Student Advisor or a representative of the Graduate Students Union.

CONFLICT OF INTEREST

80 Conflicts of interest will be avoided throughout all stages of the Postgraduate Appeals process (i.e., no person from the relevant course committee or an examiner or supervisor should serve on the appeals committee; when the Dean of Graduate Studies is also the supervisor, examiner or lecturer, a pro-Dean will be appointed).

APPEALING THE DECISION OF A TAUGHT POSTGRADUATE COURSE COMMITTEE

81 Where a graduate student has failed on the coursework component, and feels that there are mitigating circumstances, he/she may make a request, in writing, to the Course Co-ordinator/Director for permission to repeat the examination(s) and/or assessment(s). The reasons for the request must be clearly stated and supported where necessary by documentary evidence. If the graduate student is granted a supplemental examination, the results of that examination will be considered to be final, i.e., repetition of the year will not be permitted.

82 Where a graduate student has passed the coursework component but has failed on the assessment of the dissertation (including an oral examination), and is dissatisfied with the manner in which the dissertation was examined, he/she may make a request, in writing, to the Course Co-ordinator/Director. The reasons for the request must be clearly stated and supported where necessary by documentary evidence.

83 If the Course Co-ordinator refuses to grant a request, the student may make an appeal to the relevant School appeals committee. If the School appeals committee refuses to grant the appeal, or the student is not satisfied with the outcome of the appeal process, he or she may appeal the decision of the School in writing to the Dean of Graduate Studies, clearly stating under what grounds of (i) to (iii) listed in Paragraph 20 above they are appealing and what remedy they are seeking. If the Dean of Graduate Studies denies the appeal, the student may appeal this decision to the Academic Appeals Committee for Graduate Students (Taught).

Appendix D: SCSS Assessment Submission Sheet

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

School of Computer Science and Statistics

Assessment Submission Form

Student Name	
Student ID Number	
Course Title	
Module Title	
Lecturer(s)	
Assessment Title	
Date Submitted	
Word Count	

I have read and I understand the plagiarism provisions in the General Regulations of the University Calendar for the current year, found at: http://www.tcd.ie/calendar
**I have also completed the Online Tutorial on avoiding plagiarism 'Ready, Steady, Write',
located at** http://tcd-ie.libguides.com/plagiarism/ready-steady-write
**I declare that the assignment being submitted represents my own work and has not been
taken from the work of others save where appropriately referenced in the body of the
assignment.**

Signed ……………………………………………… Date …………………………………