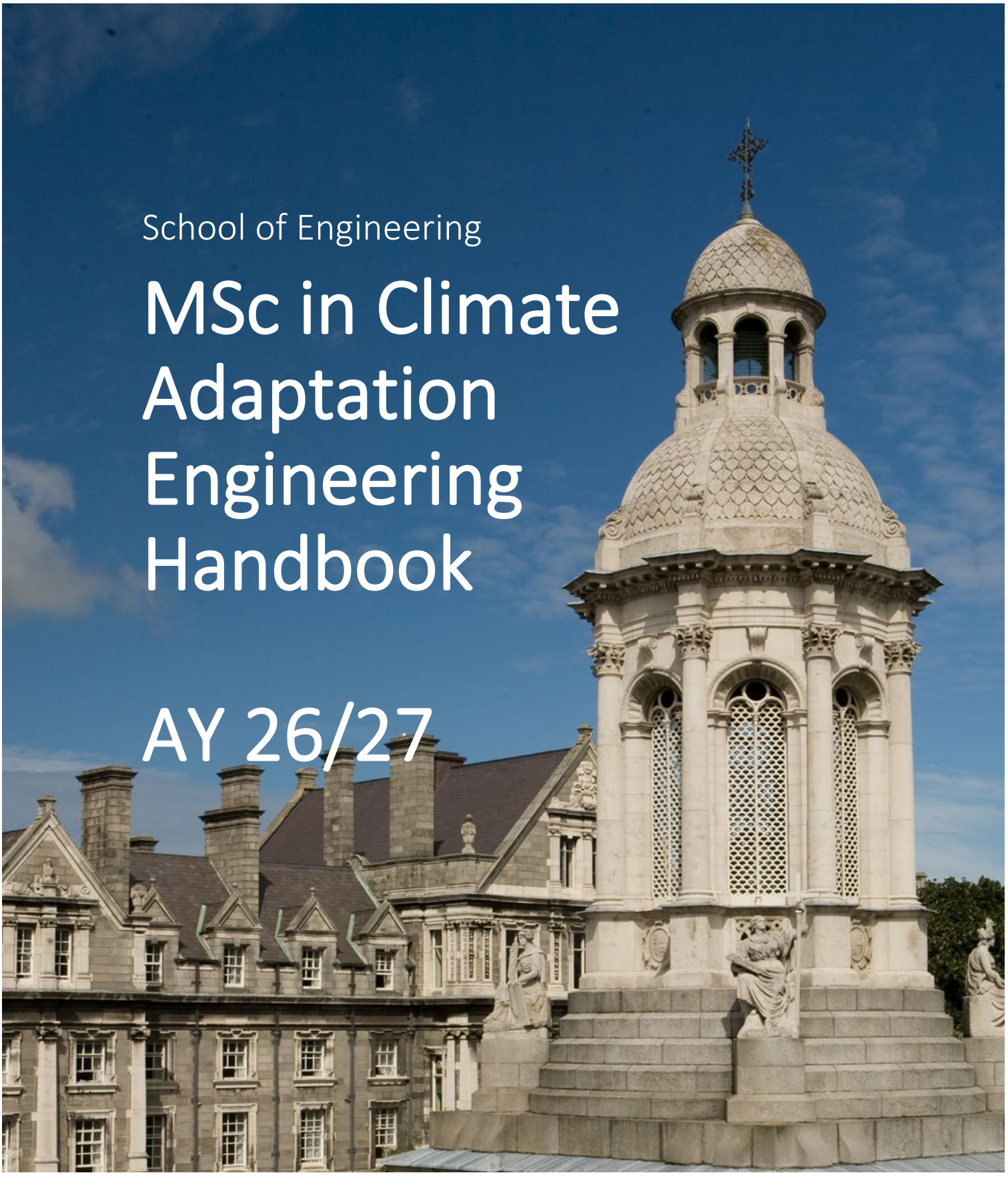


School of Engineering

MSc in Climate Adaptation Engineering Handbook

AY 26/27

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1. INTRODUCTION

The MSc in Climate Adaptation Engineering has been developed as part of an E3 initiative. E3 stands for Engineering, Environment and Emerging Technologies, and is a new collaboration between the Schools of Engineering, Natural Sciences, and Computer Science & Statistics at Trinity College Dublin. The philosophy behind the E3 is that it is possible to have a vibrant economy while at the same time supporting the natural world and the people, societies, and cultures it sustains. As such, the E3 MSc in Climate Adaptation Engineering is a uniquely multidisciplinary programme tailored to educate new professionals with the mindset and skills to deliver solutions to address climate change in a balanced form.

As the International Panel for Climate Change outlines, the need for climate adaptation is a core part of addressing climate change impacts. Projects across a range of sectors including the built environment, industry, transportation, energy, and infrastructure, are in need of incorporating climate adaptation into their practice. The E3 MSc in Climate Adaptation Engineering is therefore structured to train students in the technical and non-technical aspects of global climate challenges, approaching STEM education through an interdisciplinary lens. It is designed with a blend of theoretical and empirical knowledge that will make them the next generation of leaders in climate adaptation.

To achieve this, the MSc in Climate Adaptation Engineering delivers bespoke core programme modules (50 ECTS), in combination with additional elective modules (10 ECTS) and an industry-led research project (30ECTS) to develop graduates who are climate adaptation experts with a capacity to deal with the technical, environmental, economic, governance, and societal dimensions of climate adaptation; while also having the complementary skills to leverage this knowledge into effective holistic solutions for climate adaptation. This makes the programme highly aligned with National (Climate Action Plans) and International (UN's Sustainable Development Goals) priorities and an international reference in climate adaptation education.

1.1 Contact Details

1.1.1 School of Engineering

School of Engineering, Room 1.01, 1st Floor, Museum Building.

Staff Name	**Role/Title**	**Email address**	**Contact number**
Prof. Anil Kokaram	**Head of School**	Anil.Kokaram@tcd.ie	01 896 2900
Asst. Prof. Breiffni Fitzgerald	**Director of Postgraduate, Teaching and Learning**	Breiffni.fitzgerald@tcd.ie	01 896 1146
Ms. Patricia Hughes	**School Manager**	pahughes@tcd.ie	01 896 1796

1.1.2 Department of Civil, Structural & Environmental Engineering

Departmental Office, Room 1.01, 1st Floor, Museum Building

Discipline of Civil, Structural and Environmental Engineering, Room 1.01, 1st Floor, Museum Building. **Office hours:** Monday – Friday, 09:00 hrs until 13:00 hrs

Staff Name	**Role/Title**	**Email address**	**Contact number**
Asst. Prof. Rui Teixeira	**Programme Director, MSc in Climate Adaptation Engineering**	Rui.Teixeira@tcd.ie	01 896 1146
Asst. Prof. Aimee Byrne	**E3 Asst. Prof. in Climate Adaptation Engineering**	aimee.byrne@tcd.ie	01 896 XXXX

Ms. Mary Curley	MSc in Climate Adaptation Engineering, Administrator	curleyma@tcd.ie	01 896 2217/ 01 896 1457 (086) 0661924
XX. XXXXXX XXXXXX (Vacant position)	Executive Officer	XXXXXXXXXX@tcd.ie	01 896 1457

1.1.3 Department of Civil, Structural and Environmental Engineering – Academic Staff

Staff Name	**Role/Title**	**Email address**	**Contact number**
Asst. Prof. Muhammad Ali		Muhammad.ali@tcd.ie	01 896 1743
Prof. Brian Broderick		bbrodrck@tcd.ie	01 896 2348
Prof. Biswajit Basu *(on sabbactical – January 2027- September 2027)*		basub@tcd.ie	01 896 2389
Prof. Brian Caulfield		Brian.caulfield@tcd.ie	01 896 2534
Asst. Prof. Barnaby Dobson		bdobson@tcd.ie	01 896 XXXX
Asst. Prof. Breiffni Fitzgerald		fitzgeb@tcd.ie	01 896 1638
Assoc. John Gallagher		j.gallagher@tcd.ie	01 896 1638
Asst. Prof. Mohammad Reza Ghaani		mohammad.ghaani@tcd.ie	01 896 5019
Assoc. Prof. Bidisha Ghosh		bghosh@tcd.ie	01 896 3646
Prof. Laurence Gill		laurence.gill@tcd.ie	01 896 1047
Asst. Prof. John Hickey		John.hickey@tcd.ie	01 896 XXXX
Assoc. Prof. David Igoe		igoed@tcd.ie	01 896 3805
Prof. Sarah McCormack	**Head of Department**	mccorms1@tcd.ie	01 896 3837

Asst. Prof. Patrick Morrissey		Morrisp5@tcd.ie	01 896 5011
Prof. Alan O'Connor (*on secondment*)		Alan.oconnor@tcd.ie	01 896 1822
Asst. Prof. David O'Connell		David.oconnell@tcd.ie	01 896 XXXX
Assoc. Prof. Dermot O'Dwyer		dwodwyer@tcd.ie	01 896 2532
Assoc. Prof. Brendan O'Kelly		Brendan.okelly@tcd.ie	01 896 2387
Prof. Margaret O'Mahony		Margaret.omahony@tcd.ie	01 896 2084
Prof. Sara Pavia		pavias@tcd.ie	01 896 2516
Assoc. Prof. Liwen Xiao		liwen.xiao@tcd.ie	01 896 3741

1.1.4 School of Natural Sciences – Academic Staff

Staff Name	**Role/Title**	**Email address**	**Contact number**
Assoc. Prof. Marcus Collier		colliema@tcd.ie	01 896 1641
Asst. Prof. Federico Cugurullo		cugurulf@tcd.ie	01 896
Prof. Ian Donohue		Ian.Donohue@tcd.ie	01 896 1356
Assoc. Prof. Robin Edwards		Robin.Edwards@tcd.ie	
Prof. Fraser Mitchell	BD7059, Global Environmental Change Module Co-ordinator	Fraser.Mitchell@tcd.ie	01 896 1811
Assoc. Prof. Susan Murphy	DP7023 Climate Change: Science, Development & Justice	Susan.p.murphy@tcd.ie	01 896 3540

Asst. Prof. Sean McClenaghan	ES7027 Environmental Policy	mcclens@tcd.ie	01 896 1585
Assoc. Prof. Matt Saunders		saundem@tcd.ie	
Prof. Jane Stout	BD7056, Human Interactions With Biodiversity Module Co-ordinator	Jane.stout@tcd.ie	

1.1.5 School of Computer Sciences & Statistics – Academic Staff

Staff Name	**Role/Title**	**Email address**	**Contact number**
Assoc. Prof. Alessio Benavoli	STP80110, Advanced Linear Models 1 Module Co-ordinator	Alessio.benavoli@tcd.ie	
Asst. Prof. Giovanni Di Liberto		gdiliber@tcd.ie	01 896 1261

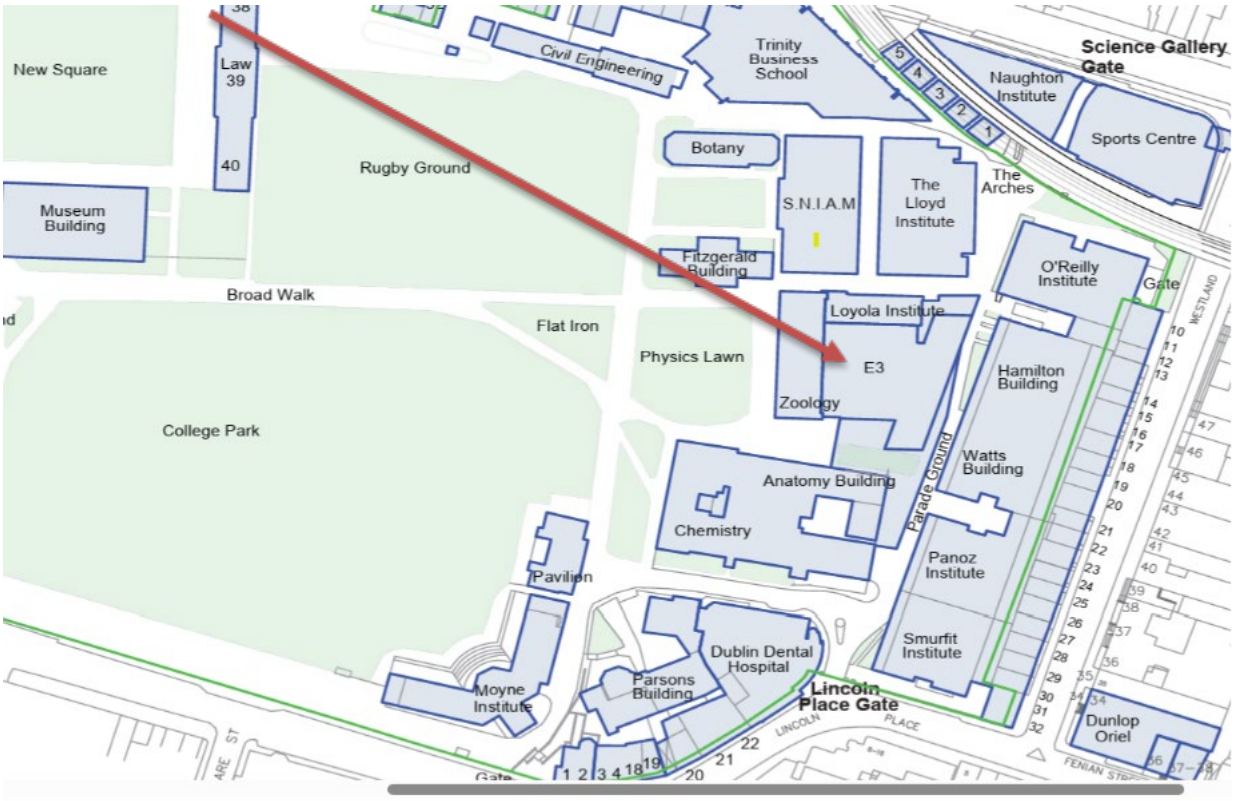
1.1.6 Department of Civil, Structural and Environmental Engineering – Technical Support Staff

Mr. David Mc Aulay	Chief Technical Officer 1	David.mcaulay@tcd.ie	01 896 2386
Mr. Robert Fitzpatrick	Senior Technical Officer	Robert.fitzpatrick@tcd.ie	01 896 8578
Mr. Michael Grimes	Chief Technical Officer Specialist	Michael.grimes@tcd.ie	01 896 2388

Mr. Joseph O'Connell	Technical Officer	Joseph.oconnell@tcd.ie	01 896 1009
Mr. Patrick Veale	Environmental Technical Officer	vealep@tcd.ie	01 896 3013
Mr. Danny Dempsey McMahon	Senior Laboratory Attendant (TBC)	XXXXXXX@tcd.ie	01 896 2386
Dr. Owen Humphreys	Senior Technical Officer	Owen.humphreys@tcd.ie	01 896 8578
Miss Gabriela Chmiel	Laboratory Attendant	chmielg@tcd.ie	01 896 2244

1.2 Key Locations

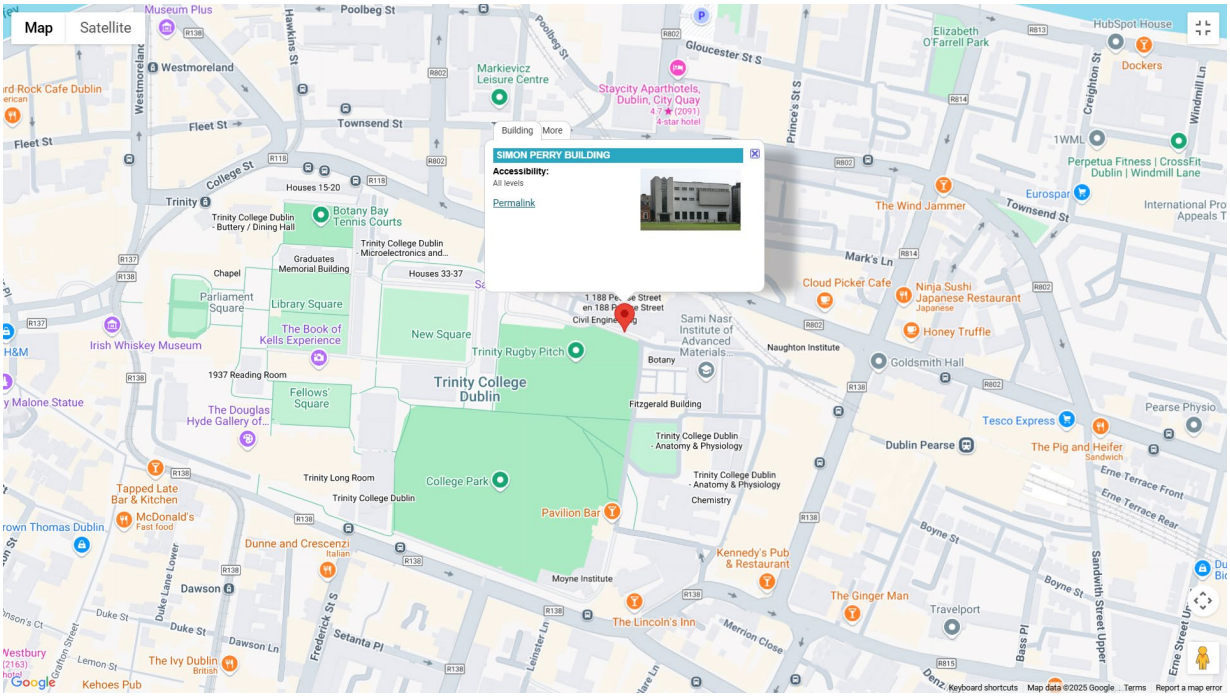
E3 Learning Foundry



[Museum Building]



Simon Perry Building



College Services



1.3 Key Dates

Important dates and submission deadlines. **Note:** dates presented are provisional and may have minor changes accordingly to updated planning by the Module Coordinators.

Important Dates		
WEEK	**DATE**	**MICHAELMAS TERM 2026**
2	07-Sep-26	Orientation PG week
3	14-Sep-26	**Tutorials begin from this week**
4	21-Sep-26	Teaching and Learning
5	28-Sep-26	
6	05-Oct-26	Submission of assignment 1: 'Name of module'
9	26-Oct-26	**Study/Review Week**
10	02-Nov-26	Teaching and Learning
11	09-Nov-26	Teaching and Learning
12	16-Nov-26	Teaching and Learning Submission of assignment: 'Introduction to Climate Adaptation Engineering' Submission of Group Project: 'Civil Engineering for Sustainable Development'
13	23-Nov-26	Teaching and Learning
14	30-Nov-26	
15	07-Dec-26	**Revision / Assessment**
16	14-Dec-26	**Assessment**
17	21-Dec-26	**Assessment/Christmas**
18	22-Dec-25	**Christmas Period** (College closed 24 December 2026 to 3 January 2027, inclusive)

WEEK	DATE	HILARY TERM 2027
1	18-Jan-27	Lectures begin in all modules
2	25-Jan-27	Tutorials begin from this week
3	01-Feb-27	Teaching and Learning Submission of assignment 1: 'Adaptation Planning for Infrastructure' Submission Group Exercise 1: "Climate Adaptation Engineering
4	08-Feb-27	Teaching and Learning **Submission of Dissertation Concept Note**
5	15-Feb-27	Teaching and Learning
6	22-Feb-27	Teaching and Learning Submission Knowledge Map: "Climate Adaptation Engineering Challenge"
7	01-Mar-27	**Study/Review Week**
8	08-Mar-27	Teaching and Learning Submission of assignment 2: 'Adaptation Planning for Infrastructure'
9	15-Mar-27	Teaching and Learning Submission of scoping review: 'Life Cycle Assessment for Engineering Practice'
10	22-Mar-27	Teaching and Learning **Submission of Dissertation Project Proposal**
11	29-Mar-27	Teaching and Learning Group Project Presentations : "Adaptation Planning for Infrastructure" Submission of assignment 3: "Adaptation Planning for Infrastructure"
12	05-Apr-27	Submission Group report: "Climate Adaptation Engineering Challenge" Group Project Presentations : "Climate Adaptation Engineering Challenge" Submission of e-portfolio "Adaptation Planning for Infrastructure" Submission and presentations of LCA project: 'Life Cycle Assessment for Engineering Practice' Submission written article : 'Human interactions with biodiversity'
13	12-Apr-27	**Revision**
14	19-Apr-27	**Trinity Week / Assessment**
15	26-Apr-27	**Assessment**

16	03-May-27	MSc Dissertation
17	10-May-27	MSc Dissertation
18	17-May-27	Thesis **Project Presentations**
31	16-Aug-27	**Submission of Final Dissertation** (Monday, 16th August '27 – 12:00 noon)
… 52	23-Aug-27	**Reassessment Examinations**

Reference/Source:

Academic Year Structure

1.4 Timetable

The MSc in Climate Adaptation will be available on the mytcd.ie site. The MSc timetable will be issued with the handbook. The timetable will be available from the 8th September 2026. Any amendments to the MSc in Climate Adaptation will be circulated to the class by email or via blackboard.

Reference/Source:

My TCD

1.5 Internships/Placements for Credit

The following excerpt has been taken from the Internships and Placements Policy, "Trinity aims to create opportunities for students to engage in internships and placements during their time at Trinity. This is to help support the student's academic knowledge to the development of transferrable skills and to prepare them for their future careers."

Reference/Source:

Internships and Placements Policy

1.6 Equality, Diversity and Inclusion (EDI)

The School of Engineering holds an Athena SWAN Bronze Award in recognition of its commitment to advancing equality, diversity and inclusion. The Athena SWAN Charter provides a framework for supporting and advancing gender equality and inclusive practices in higher education and research. The School remains committed to ongoing Athena SWAN action planning and promotion to ensure that all students and staff can pursue their academic and professional goals without fear of discrimination, harassment, or bullying. For more information on EDI in the School, including resources, links and contacts, please go to https://www.tcd.ie/engineering/equality-and-diversity/.
For more information on university-wide resources go to https://www.tcd.ie/equality/.

1.7 Academic Integrity and Referencing Guide

The following is an extract from the Academic Calendar in relation to Section 1: General Academic Regulations for Graduate Studies and Higher Degrees

1.7.1 Academic Integrity

ACADEMIC INTEGRITY[1]

General

50 It is clearly understood that all members of the academic community use and build on the work and ideas of others. However, it is essential that we do so with integrity, in an open and explicit manner, and with due acknowledgement. Any action or attempted action that undermines academic integrity and may result in an unfair academic advantage or disadvantage for any member of the academic community or wider society may be considered as academic misconduct.

Examples of academic misconduct can be found in the Curriculum Glossary.

51 *Academic misconduct in the context of group work*

Students should normally submit assessments and/or examinations done in co-operation with other students only when the cooperation is done with the full knowledge and permission of the lecturer concerned. Without this permission, submitting assessments and/or examinations which are the product of collaboration with other students may be considered to be academic misconduct. 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 plagiarised, or that any other academic misconduct has taken place. In order to avoid academic misconduct in the context of collaboration and group work, it is particularly important to ensure that each student appropriately attributes work that is not their own. Should a module coordinator suspect academic misconduct in a group assignment, the procedure in cases of suspected academic misconduct must be followed for each student.

52 *Avoiding Academic Misconduct*

Students should ensure the integrity of their work by seeking advice from their module coordinator or supervisor on avoiding academic misconduct. 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 academic misconduct is available at https://libguides.tcd.ie/academic-integrity.

53 *Procedure in cases of suspected academic misconduct (taught)*

If academic misconduct as referred to in §50 above is suspected, the procedure in cases of suspected academic misconduct, available at https://www.tcd.ie/teaching-learning/academic-affairs/academic-integrity/ must be followed.

54 *Procedures in cases of suspected academic misconduct (research)*

In cases of suspected misconduct by postgraduate research students within elements related to their dissertation or thesis, the case should be referred to the Dean of Graduate Studies in the first instance, who may refer the case to the Dean of Research, the Junior Dean, or the School according to the specifics of the case. Where a concern of misconduct arises in the context of taught elements of the research programme, the procedure for managing cases of suspected academic misconduct available https://www.tcd.ie/teaching-learning/academic-affairs/academic-integrity/ must be followed.

55 If the facts of the case are in dispute, or if the Director of Teaching and Learning (Postgraduate), or designate, feels that the consequences provided for under the academic misconduct procedure are inappropriate given the circumstances of the case, they may refer the case directly to the Junior Dean, who will interview the student and may implement the procedures as referred to under conduct and college regulations §2.Nothing provided for under the summary procedure diminishes or prejudices the disciplinary powers of the Junior Dean under the 2010 Consolidated Statutes.

1.7.2 Library Guidelines for Avoiding Plagiarism

The following extract has been taken from the Academic Integrity Library Guides:

'All students must read and understand this guide, and complete the Ready Steady Write tutorial. We appreciate that it is sometimes challenging for students to recognize what good

academic practice looks like. These resources are designed to help you understand and avoid academic misconduct as you develop your academic writing skills. Writing with academic integrity, that is, not plagiarising ideas or representing work you have not done yourself as your own, is a key expectation of Trinity students.'

1.7.3 Coversheet declaration

The declaration text must be submitted with assignments.

I have read and understood 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 read and understood the guide, and completed the 'Ready Steady Write' Tutorial on avoiding plagiarism, located at https://libguides.tcd.ie/academic-integrity/ready-steady-write.

1.7.4 Generative AI

Aligned with the **College Statement on Artificial Intelligence and Generative AI in Teaching, Learning, Assessment & Research (2024),** the use of GenAI is permitted unless otherwise stated. Where the output of GenAI is used in a document or work output, this usage should be acknowledged and appropriate cited, as per Library guidelines on acknowledging and reference GenAI.

References/Sources:

Calendar Part III, Section 1: General Regulations & Information, 'Plagiarism'

Statement of Principles on Integrity

Plagiarism Policy

Library Guides - Avoiding Plagiarism

Plagiarism Declaration

1.8 Research Ethics

1.8.1 Research Ethics

The following excerpt is from the Research Ethics website,

'The quest for knowledge and the betterment of society through research are central to the mission of Trinity College. It is essential that all of our research is conducted with integrity and that it adheres to the highest standards of ethical oversight. Research excellence in College is guided by the principes described in the policy on Good Research Practice document (2002; updated in 2009) and these principles apply to all research conducted by staff and students under the auspices of Trinity College.'

1.8.2 Trinity Policy on Good Research Practice

The following excerpt is from the policy on Good Research Practice, "the policy guides and protects the researcher, facilitating them to "work on their own challenging ideas, to be disruptive in their thinking, to do great research as individuals and collectively, and to excel at what they do".

1.8.3 Ethics Policy

The following excerpt is from the Ethics Policy, "This Ethics Policy sets out Trinity's values and ethical principles. These are critical to the University's reputation and are embedded in how the business of the University, our teaching and research and all other activities, is conducted".

The purpose of the policy is to define the standards of ethical conduct that the University upholds.

References/Sources:

Research Ethics

Policy on Good Research Practice

Ethics Policy

2. Teaching and Learning

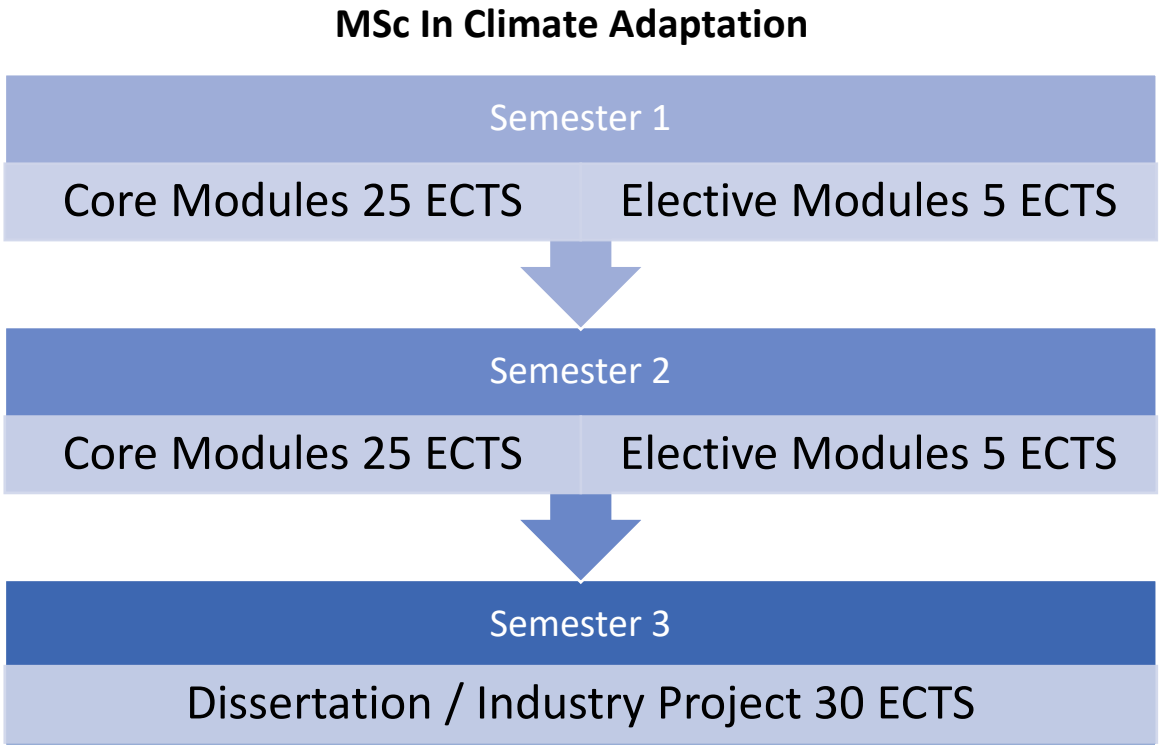
2.1 Programme Structure

The MSc in Climate Adaptation Engineering has been developed as part of the E3 initiative. The programme is uniquely multidisciplinary, with contributions from academics across the three participating Schools of Engineering, Natural Sciences, and Computer Science and Statistics.

The course aims to develop graduates, who are climate adaptation experts with a capacity to deal with the technical, environmental, economic, governance, and societal dimensions of climate adaptation.

The MSc in Climate Adaptation Engineering is a full-time one year, 90 ECTS programme. Students will complete 30 ECTS in each of the three semesters, with Semester 1 and 2 made up of 25 ECTS core content (4 and 5 modules, respectively) and 5 ECTS of elective content (1 x 5 ECTS module).

In Semester 3, students will complete their 30 ECTS industry-led Climate Adaptation research project.



The predominant part of this programme will be delivered in-person, with complementary content in several modules, (e.g., *Introduction to Climate Adaptation Engineering* and *Life Cycle*

Assessment for Engineering Practice) having accessible complementary online content to provided flexibility and an interactive learning experience.

The industry-led climate adaptation research project will be unique component to this course. Active collaboration with industry will be facilitated through an existing list of private and public sector partnerships, students will be encouraged to identify and make their own industry connections.

The project will have both an industry and university supervisor, to ensure the professional and academic needs are both met within the project. This climate adaptation project will expose students to real-world problems and produce research outputs that are of value to relevant stakeholders.

Masters students will be assessed on the basis of written examinations and the completion of dissertation (approximately 30,000 words).

2.1.1 Degree Awards

The following regulations refer to Part III of the 2023-2024 Calendar for Graduate Studies and Higher Degrees at https://www.tcd.ie/calendar/graduate-studies-higher-degrees/complete-part-III.pdf.

1. The final mark is based on a credit-weighted average of the mark awarded in each module.
2. The pass mark on this course is **50%** and above.
3. Students must obtain credit for the academic year of their course by satisfactory completion of all course requirements.
4. Students may compensate for failed mark in up to 10 ECTS of modules provided that the overall credit-weighted average mark across all modules is 50% or over, and students have passed taught modules amounting to at least 50 credits and have a mark of not less than 40% in the failed module. Students must achieve a mark of 50% or over in the research project in order to pass the Masters course as a whole.
5. To qualify for the Masters award, students must, as a minimum,
    a. achieve an overall pass mark which is normally the credit-weighted average mark for all taught modules taken,
    b. achieve a pass mark in all modules designated as non-compensatable, and

c. achieve a pass mark in the research element or dissertation.

6. Module marks are considered by the court of examiners at the end of year and results will be passed on to the Academic Registry and inputted to SITS. Final results are determined at the final Court of Examiners' meeting at the end of the academic year with the external examiner input.

7. Students failing to pass individual taught modules may present for supplemental examination or re-submit required work. Students who, following the supplemental examination or re-assessment, have failed to pass the requisite taught modules will be deemed to have failed the course, and may apply to the School of Engineering for permission to repeat the course.

8. Students on a Masters course who do not achieve a pass mark in the research element/ dissertation/industry-led climate adaptation research project but achieve a mark within the range of 40-49% may make one application to the School to repeat this section of their programme. Marks for a new submission will be capped at 50%. Resubmitted research elements must be submitted before the next examination session at a date determined and published by the School. Alternatively, and where this is provided for in the Course regulations, such students may be awarded an associated Postgraduate Diploma upon the successful completion of all taught components (equivalent to 60 ECTS).

9. In order to qualify for the award of Masters with Distinction students must have not failed any assessment component during the period of study and must as a minimum, achieve a final overall average mark for the course of at least 70%, and a mark of at least 70% in the dissertation or research element.

10. In order to qualify for the award of Postgraduate Diploma with Distinction students must not have failed any component during the period of study and must as a minimum achieve an overall credit-weighted average mark of at least 70% across all modules.

11. All postgraduate examination results are published anonymously under a student's registered number.

12. Students who successfully complete their programme will have the qualification, where appropriate, awarded within grade.

13. Supplemental re-assessment/examinations:

    (i) There is no compensation permitted across modules.

    (ii) Supplemental re-assessment/examinations: Subject to the recommendation of

the Court of Examiners, students who are unsuccessful in the annual examinations may be allowed a supplemental examination. This examination may take the form of an additional summative assessment. Where a module is assessed by continuous assessment only, the supplemental examination may also take the form of an additional summative assessment.

2.1.2 The National Framework of Qualifications

The National Framework of Qualifications is a 10 – level system used to describe qualifications in the Irish education and training system. Level 9 is typically considered postgraduate education as entry is reserved for those with undergraduate qualifications.

2 MASTERS DEGREES (LEVEL 9, National Framework of Qualifications)

Those who hold this award have been able to demonstrate, through a variety of assessment procedures:

- systematic understanding of knowledge, at, or informed by, the forefront of a field of learning
- a critical awareness of current problems and/or new insights, generally informed by the forefront of a field of learning
- demonstrate a range of standards and specialised research or equivalent tools and techniques of enquiry
- select from complex and advanced skills across a field of learning; develop new skills to a high level, including novel and emerging techniques
- act in a wide and often unpredictable variety of professional levels and ill-defined contexts
- take significant responsibility for the work of individuals and groups; lead and initiate activity
- learn to self-evaluate and take responsibility for continuing academic/professional development
- scrutinise and reflect on social normal and relationships and act to change them
- that they have developed those learning skills which are necessary for them to progress to programmes leading to Masters or Doctoral degrees.

3 POSTGRADUATE DIPLOMAS (LEVEL 9, National Framework of Qualifications)

Those who hold this award have been able to demonstrate, through a variety of assessment procedures:

- systematic understanding of knowledge, at, or informed by, the forefront of a field of learning
- a critical awareness of current problems and/or new insights, generally informed by the forefront of a field of learning
- demonstrate a range of standards and specialised research or equivalent tools and techniques of enquiry
- select from complex and advanced skills across a field of learning; develop new skills to a high level, including novel and emerging techniques act in a wide and often unpredictable variety of professional levels and ill-defined contexts
- take significant responsibility for the work of individuals and groups; lead and initiate activity
- learn to self-evaluate and take responsibility for continuing academic/professional development
- scrutinise and reflect on social normal and relationships and act to change them
- that they have developed those learning skills which are necessary for them to progress to programmes leading to Masters or Doctoral degrees.

2.2 Programme Structure and Workload

List of modules identified by title and code, their ECTS weightings, and a **general statement** on the learning workload to include approximate hours of self-directed learning or research.

CORE			
Module Title	**Module Code**	**ECTS Weighting**	**Learning Workload**
Introduction to Climate Adaptation Engineering	CEPCAE01	5 ECTS	
Global Environmental Change	BD7059	10 ECTS	
Advanced Spatial Analysis using GIS	CE7C05	5 ECTS	Contact hours: 26 Independent study: 70
Introduction to Machine Learning	CSP7000	5 ECTS	
Adaptation Planning for Infrastructure	CEPCAE02	5 ECTS	

Civil Engineering for Sustainable Development	DP8018	5 ECTS	
Life Cycle Assessment for Engineering	CEPCA002	5 ECTS	
Human Interactions with Biodiversity	BD7056	5 ECTS	
Industry-led Climate Adaptation Research	CEPCAE05	30 ECTS	

ELECTIVE			
Module Title	**Module Code**	**ECTS Weighting**	**Learning Workload**
Advanced Linear Models 1	STP80110	5 ECTS	
Bridge Engineering	CE7S04	5 ECTS	Contact hours: 36 Independent study: 70
Climate Change: Science, Development & Justice	DP7023	5 ECTS	
Energy Policy & Energy Storage	CE7J04	5 ECTS	Contact hours: 30 Independent study: 75
Sustainable Water Supply & Sanitation	CE7E07	5 ECTS	Contact hours: 27 Independent study: 73
Transportation Modelling & Planning	CE7T02	5 ECTS	Contact hours: 27 Independent study: 41
Environmental Policy	ES7027	5 ECTS	
Smart Eco-Cities of the Future	DP8017	5 ECTS	
Water Resource Planning & Climate Change	CE7E06	5 ECTS	Contact hours: 27 Independent study: 73
~~**Wave & Hydro Energy**~~ *Not running in 2026/27*	~~CE7J06~~	5 ECTS	Contact hours: 33 Independent study: 92
Wind Energy	CE7J01	5 ECTS	Contact hours: 36

			Independent study: 90

Reference/Source:

Policy on Trinity Virtual Learning Environment

2.3 Learning Outcomes

On completion of the course students should be able to:

CL01. Attain fundamental knowledge of current challenges and future goals related to mitigation and adaptation to climate change at local, national and global levels.

CL02. Analyse complex engineering and applied science problems to support a balanced and data-driven approach to strategic planning for delivering resilience for both the built and natural environments.

CL03. Attain experimental knowledge (quantitative and/or qualitative) to apply scientific and statistical methodologies and tools that help evaluate and support the design of climate adaptation measures.

CL04. Perform detailed assessments and informed designs of novel engineering-and nature-based systems to support climate change adaptation in practice.

CL05. Effectively work in multidisciplinary settings and maximize the capacity of project teams in the public and private sectors to effectively deliver climate adaptation measures for society.

CL06. Produce professional standard reports and presentations as outputs from programme coursework.

CL07. Undertake a collaborative industry-led climate adaptation research project that applies programme learning outcomes to support climate adaptation in practice.

Course learning outcomes (CLOs) 1-6 will be achieved for completion of Postgraduate Diploma (exit award) and CLOs 1-7 are required to be achieved for the Masters award.

2.4 Module Descriptors & Compulsory Reading Lists

The School reserves the right to amend the list of available modules and, in particular to withdraw and add modules. Timetabling may restrict the availability of modules to individual students.

Refer to Blackboard.

2.5 Coursework Requirements

Assignments and coursework should be submitted on-line on the module blackboard page within the deadline as instructed by the module or coursework co-ordinator.

Late Submission of Extensions Policy

The purpose of this policy is to clearly outline the expectations regarding the submission of assessments, the procedures for dealing with assessments that are submitted after designated deadlines and the consequences of late submissions.

The policy aims to ensure fairness and consistency in handling late submissions. Adherence to this policy allows academics to manage their workload effectively and thereby provide timely feedback to students, which supports the learning experience. This Policy applies to undergraduate and taught postgraduate students who submit assessments, and to postgraduate research students when submitting assessments as part of the structured component of their degree.

Policy on participation in continuous assessment-based modules

Students who are absent from a third of their lectures, tutorials or labs of a continuous assessment-based module or who fail to submit a third of the required coursework will be deemed non-satisfactory. Students reported as non-satisfactory for both semesters of a given year may be refused permission to take their examinations and maybe required by Senior Lecturer to repeat the year.

Further details of the procedure for reporting a student as non-satisfactory can be viewed on the College Postgraduate Studies website.

Postgraduate Advisory Service

The Postgraduate Advisory Service (PAS) offers free, independent, and confidential support, guidance and advocacy to registered postgraduate students at Trinity College Dublin, the University of Dublin.

Some of the most common issues students come to PAS to discuss include: study-related stress or worry; concerns about academic progress; supervisor-relationship concerns; extensions and going off-books; queries regarding regulations and academic appeals; bullying; plagiarism and disciplinary cases.

Plagiarism

If you copy another student's essay, engage someone to write your work, quote material from any published or electronic source without acknowledgement, or extensively paraphrase such material without acknowledgement, you have committed the offence of plagiarism. A mark of zero may be awarded.

The College's definition of plagiarism and specification of its consequences can be viewed here

Reference/Source:

Student Learning Development

2.6 Marking Scale

The MSc in Climate Adaptation will be awarded Pass and Pass with Distinction (for the Dissertation).

Pass with distinction shall require at 70% in dissertation and at least 70% in the final aggregated mark.

Assessment of individual assignments will be based on common grading criteria as follows:

Grade	Mark (%)
A+	>75
A	70-74
B+	65-69
B	60-64
C+	55-59
C	50-54
FAIL	<50

Table 1: Indicative grades and associated provisional mark range for formative feedback. Marks are finalised at the Court of Examiners.

All marks are provisional until passed by the Court of Examiners meeting, which is held after the end of module teaching.

2.7 General Regulations

In the event of any conflict or inconsistency between the General Regulations published in the University Calendar and information contained in the programme or local handbooks, the provisions of the General Regulations in the Calendar will prevail.

Reference/Source:

Calendar Part III, Section I: General Regulations and Information

2.8 Attendance Requirements

Please note that attendance at lectures, tutorials and laboratory sessions is mandatory, as is the submission of all work subject to continuous assessment. Regarding online teaching, attendance is mandatory at live lectures, tutorials and labs. Pre-recorded lectures should be viewed at the allocated slot on the timetable. Students who prove lacking in any of these elements may be issued with a Non-Satisfactory form and asked for an explanation for their poor attendance. Students who do not provide a satisfactory explanation can be prevented from sitting the annual examinations.

The College Calendar outlining the College Policy on attendance and related issues, please find it on the following link, https://www.tcd.ie/calendar/graduate-studies-higher-degrees/section-I.pdf

Reference/Source:

Calendar Part III, Section I: General Regulations and Information, 'Attendance and Off-Books'; Section III 'Attendance, Registration, Extensions'; Section IV 'Attendance and Examinations'

2.9 Absence from Examinations

Please find excerpt from College Calendar, in relation to absence from Examinations:

13 Postgraduate students who consider that illness may prevent them from attending an examination (or any part thereof) should consult their medical advisor and request a medical certificate for an appropriate period. If a certificate is granted, it must be presented to the student's Programme Co-ordinator/Director within three days of the beginning of the period of absence from the examination. Such medical certificates must state that the student is unfit to sit examinations. Medical certificates will not be accepted in explanation for poor performance; where an examination has been completed, subsequent withdrawal is not permitted. Further details of procedures subsequent to the submission of medical certificates are available in programme handbooks or from Programme Co-ordinators/Directors.

14 Postgraduate students who consider that other grave cause beyond their control may prevent them from attending an examination (or any part thereof) must consult and inform their Programme Co-ordinator/Director. The Programme Co-ordinator/Director will then make representations to the Dean of Graduate Studies requesting that permission be granted for absence from the examination.

15 The acceptance of medical disability is entirely at the discretion of the Dean of Graduate Studies, who may ask for a report from the medical officers in charge of the Student Health Service. The report will be strictly confidential to the Dean of Graduate Studies.

Reference/Source:

Calendar Part III, Section III: 'Examinations, Assessment and Progression'; Section IV: 'Attendance and Examinations'

Academic Policies

2.10 External Examiner

Professor Andrew Quinn, Professor of Climate Adaptation,

College of Engineering and Physical Sciences, University of Birmingham.

Reference/Source:

Procedure for the Transfer of Students' Assessed Work to External Examiners

2.11 Progression Regulations

Please find excerpt from College Calendar in relation to Progression Regulations:

21 The following regulations apply in all courses of study leading to the award of a Masters degree or Postgraduate Diploma.

Graduate students must obtain credit for each academic year of their course by satisfactory completion of course requirements as laid down in the relevant course handbook.

To qualify for the relevant postgraduate award, students must, as a minimum,

(i) achieve an overall pass mark which is normally the credit-weighted average mark for all taught modules taken, and

(ii) achieve a pass mark in all modules designated as non-compensatable in the course handbook, and

(iii) In the case of a Masters degree, achieve a pass mark in the research element or dissertation, and

Additional requirements for specific courses are laid down in the relevant course handbook.

Students failing to pass individual taught modules may present for supplemental examination or re-submit required work if and as provided for in the course regulations. Students who, following the supplemental examination or re-assessment, have failed to pass the requisite taught modules as provided for in the course regulations above will be deemed to have failed the course, and may apply to the relevant school for permission to repeat it.

Students on a Masters course who do not achieve a pass mark in the research element or dissertation but achieve a mark within the range of 40-49% (or 30-39%, where the pass mark is 40%) may make one application to the relevant school to repeat this section of their programme. Marks for a new submission will be capped at 50% (or 40 where the pass mark is 40%). Resubmitted research elements must be submitted before the next examination session at a date determined and published by the School. Alternatively, and where this is provided for in the Course regulations, such students may be awarded an associated Postgraduate Diploma.

A thesis Revision Fee will apply for repeated dissertations or research elements. As of May 2023, the fees applicable for EU and Non EU students in each Faculty are as follows:

AHSS: €1,853
HS: €2,174
STEM: €2,174

22 In order to qualify for the award of Masters with Distinction students must have not failed any component during the period of study and must as a minimum, either

(i) achieve a final overall average mark for the course of at least 70% and a mark of at least 70% in the dissertation or research element, or

(ii) achieve a mark of at least 70% in the dissertation or research element, and achieve at least 68% in the unrounded overall average mark for the taught modules, where modules amounting to at least half of the credits attaching to the taught modules (normally 30 credits) each have a mark of at least 70%, or

(iii) in courses in which the modules are assigned grades only, achieve a distinction in the dissertation or research element and distinctions in modules amounting to at least half of the required credit for the taught element of the course.

23 In order to qualify for the award of Postgraduate Diploma with Distinction students must not have failed any component during the period of study and must as a minimum either

(a) achieve an overall credit-weighted average mark of at least 70% across all modules, or

(b) achieve at least 68% in the overall credit-weighted average mark and achieve a minimum mark of 70% in individual modules which together amount to at least half of the required credits for the award of the Postgraduate Diploma associated with the student's registered course or

(c) in courses in which the modules are assigned grades only, achieve the grade of distinction in individual modules which amount to at least half of the required credit for the Postgraduate Diploma.

The following information relates to all examination results:

i. All postgraduate examination results are published anonymously under a student's registered number.
ii. Students who successfully complete their programme will have the qualification, where appropriate, awarded under their registered name and within grade.

References/Sources:

Calendar, Part III, Section III 'Examinations, Assessment and Progression' and 'Assessment and Progression Regulations'

National Framework for Qualifications

Trinity Courses

2.12 Awards

Level Descriptors for Major Award Types.

The following extract has been taken from the general information on the Academic Calendar - General information, qualifications under the categories listed below are awarded to students who have completed a programme:

2 MASTERS DEGREES (LEVEL 9, National Framework of Qualifications)

Those who hold this award have been able to demonstrate, through a variety of assessment procedures:

- systematic understanding of knowledge, at, or informed by, the forefront of a field of learning
- a critical awareness of current problems and/or new insights, generally informed by the forefront of a field of learning
- demonstrate a range of standards and specialised research or equivalent tools and techniques of enquiry
- select from complex and advanced skills across a field of learning; develop new skills to a high level, including novel and emerging techniques
- act in a wide and often unpredictable variety of professional levels and ill-defined contexts
- take significant responsibility for the work of individuals and groups; lead and initiate activity
- learn to self-evaluate and take responsibility for continuing academic/professional development
- scrutinise and reflect on social normal and relationships and act to change them

- that they have developed those learning skills which are necessary for them to progress to programmes leading to Masters or Doctoral degrees.

3 POSTGRADUATE DIPLOMAS (LEVEL 9, National Framework of Qualifications)
Those who hold this award have been able to demonstrate, through a variety of assessment procedures:

- systematic understanding of knowledge, at, or informed by, the forefront of a field of learning
- a critical awareness of current problems and/or new insights, generally informed by the forefront of a field of learning
- demonstrate a range of standards and specialised research or equivalent tools and techniques of enquiry
- select from complex and advanced skills across a field of learning; develop new skills to a high level, including novel and emerging techniques act in a wide and often unpredictable variety of professional levels and ill-defined contexts
- take significant responsibility for the work of individuals and groups; lead and initiate activity
- learn to self-evaluate and take responsibility for continuing academic/professional development
- scrutinise and reflect on social normal and relationships and act to change them
- that they have developed those learning skills which are necessary for them to progress to programmes leading to Masters or Doctoral degrees.

References/Sources:

National Framework for Qualifications

Trinity Courses

2.13 Professional and Statutory Body Accreditation

The MSc in Climate Adaptation degree programme will undergo accreditation by Engineers' Ireland in 2028.

Once accreditation has been approved, this will be issued retrospectively.

Further information can be found at:

https://www.engineersireland.ie/Students

2.14 Careers Information and Events

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 Engineering & Environment 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

FAIR DATE TIME PLACE

Computing and Technology	Thursday, 1st October 2026, 11:30 am – 2:30 pm	Sports Centre
Engineering & Environment	Thursday, 8th October 2026, 11:30am – 2:30pm	Sports Centre

2.15 Student Feedback and Evaluation

Statement on College requirements for evaluation and feedback, as well as an outline of additional feedback practices at a local level.

Student Feedback and Evaluation

- Annual undergraduate module evaluation – administered at School/course office level. Schools have discretion to choose which type of evaluation best suits their needs and to design their own questions. Schools are required to report on the type of evaluation conducted for each module, how it communicated feedback to student and actions arising from the evaluation;
- Annual postgraduate taught course evaluation – evaluated on two occasions using agreed on-line template questionnaires – at the end of the taught component and at the time of submission of the dissertation. Faculty Offices are responsible for administering these surveys and on alternative years Schools may use other forms of evaluation at a local level.

- Trinity has developed a Procedure for the conduct of focus groups for student evaluation of modules and programmes. The Quality Office maintains a panel of trained focus group facilitators and notetakers. Schools and Disciplines can access the panel via the Quality.Office@tcd.ie email.
- Students surveys and focus groups are conducted as part of the programme review process.
- Students are asked to participate in meetings with Quality Reviewers.

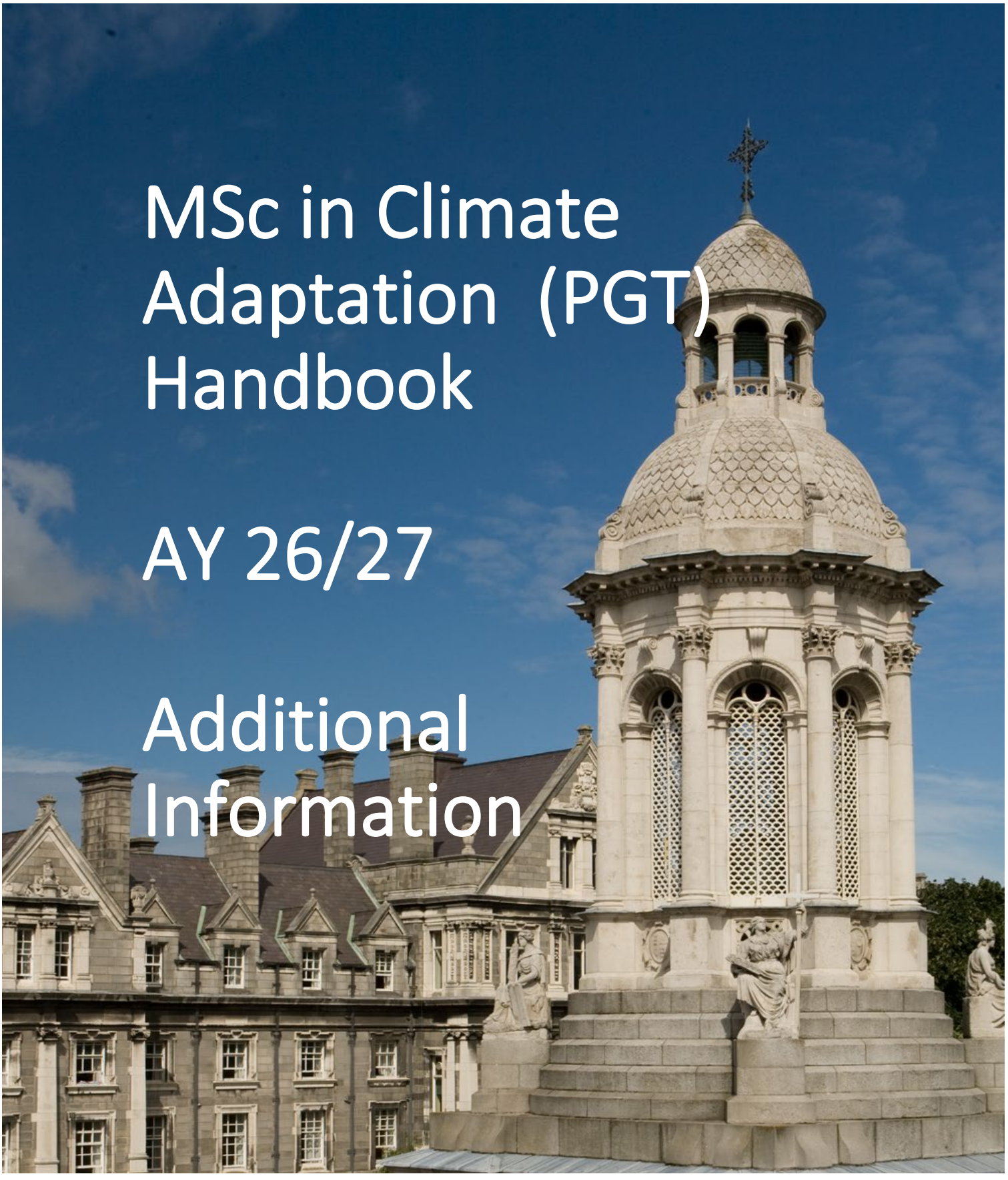
References/Sources:

Student Evaluation and Feedback

Student Partnership Policy

Procedure for the conduct of Focus Groups for Student Feedback on Modules and Programmes

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



MSc in Climate Adaptation (PGT) Handbook

AY 26/27

Additional Information

3. STUDENT SERVICES

Student Services has provided the following Student Services Handbook outlining the support Services provided to undergraduate and postgraduate students.

3.1 Academic Support

Student Learning Development	http://student-learning.tcd.ie/
The Library	http://www.tcd.ie/library/
Maths Help Room	http://maths.tcd.ie/outreach/helproom/
Undergraduate Programming Centre	http://www.scss.tcd.ie/misc/psc/
Language Learning Centre	http://www.tcd.ie/slscs/clcs/llc/
English for Academic Purposes	https://www.tcd.ie/slscs/english/
Disability Service	http://www.tcd.ie/disability/
Careers Service	http://www.tcd.ie/Careers/

3.2 Health and Wellbeing Support

Student Counselling	http://www.tcd.ie/Student_Counselling/
Health Centre	http://www.tcd.ie/collegehealth/
Sport	http://www.tcd.ie/Sport/
Healthy Trinity	http://www.tcd.ie/healthytrinity/
Student2Student	http://student2student.tcd.ie/
Chaplaincy	http://www.tcd.ie/Chaplaincy/

3.3 Getting involved

Students' Union	http://www.tcdsu.org/
Clubs	http://www.tcd.ie/Sport/student-sport/
Societies	http://trinitysocieties.ie/
Volunteering	http://www.tcd.ie/civicengagement/
Entrepreneurship/Tangent	http://www.tcd.ie/tangent/
Global Room	http://www.tcd.ie/study/international/trinity-life/global-room/

3.4 Financial Support

Senior Tutor's Office*	http://www.tcd.ie/seniortutor/students/undergraduate/financial-assistance/
Students' Union Welfare Loans	http://www.tcdsu.org/welfare/
Bursaries/Prizes (Undergraduate)	http://www.tcd.ie/calendar/undergraduate-studies/ (Part D: 11 - Prizes and other awards)
Bursaries/Prizes (Postgraduate)	https://www.tcd.ie/calendar/graduate-studies- higher-degrees/ (Section XI: Postgraduate Awards and Travel Funds)
Exhibitions	http://www.tcd.ie/calendar/undergraduate-studies/ (Part D: 8 - Entrance Awards)
Scholarships	http://www.tcd.ie/study/undergraduate/scholarships-funding/

*Remember, you can ask your Tutor for advice and guidance about anything and they will point you in the right direction

3.5 Administrative Support

Your Tutor	http://www.tcd.ie/seniortutor/
Postgraduate Advisory Service	http://www.tcd.ie/seniortutor/students/postgraduate
Academic Registry	http://www.tcd.ie/academicregistry/

3.6 Your Tutor

The Programme Director is the Tutor for the postgraduate students that are registered on the programme.

You should see your Tutor whenever you have a question or are worried or concerned about any aspect of College life or your personal life, in particular if this is affecting your academic work.

Everything you say to your Tutor is in strict confidence. Whilst your Tutor may not be able to solve the underlying problem, they can find the best way to limit the impact of your situation on your College work.

Tutors can help with **academic advice, changing course, withdrawing from College, exam regulations, financial assistance and personal advice**.

3.7 Postgraduate Advisory Service

The Postgraduate Advisory Service offers free, independent, and confidential support, guidance and advocacy to registered postgraduate students. They are here to provide support on any matter that may impact upon your time as a postgraduate at Trinity.

Some of the most common issues students come to PAS to discuss include: study-related stress or worry; concerns about academic progress; supervisor-relationship concerns; extensions and going off-books; queries regarding regulations and academic appeals; bullying; plagiarism and disciplinary cases, financial assistance. Academic Registry

3.8 Academic Registry

