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2 Introduction / Welcome message

Welcome to the MSc In Engineering (Environmental / Structural and Geotechnical / Sustainable Energy / Transport Engineering Policy and Planning) at the Department of Civil, Structural and Environmental Engineering, Trinity College Dublin.

This course aims to develop Engineers with specialist understanding in one of the following streams: Environmental Engineering; Structural and Geotechnical Engineering; Transport Engineering; or Sustainable Energy Engineering. In addition, the course offers students the opportunity to obtain knowledge in complimentary subject areas within Civil Engineering.

This Course Handbook provides details of the structure and methods of assessment of the programme modules, and other relevant information about the course.
3 Student Supports

Trinity College provides a wide range of personal and academic supports for its students.

3.1 Tutors

A tutor is a member of the academic staff who is appointed to look after the general welfare and development of the students in his or her care. Whilst your tutor may be one of your lecturers, the role of tutor is quite separate from the teaching role. Tutors are a first point of contact and a source of support, both on arrival in college and at any time during your time in college. They provide confidential help and advice on personal as well as academic issues or on anything that has an impact on your life. They will also, if necessary, support and defend your point of view in your relations with the college. If you cannot find your own tutor, you can contact the Senior Tutor (tel: 01 896 2551). Senior Tutor’s website: https://www.tcd.ie/seniortutor/

3.2 Student Counselling Service

The Student Counselling Service, 3rd Floor, 7-9 South Leinster Street, College.

Opening hours: 9:15 am to 5:10 pm Monday to Friday during lecture term.

Tel: 01 896 1407

Email: student-counselling@tcd.ie

Web: https://www.tcd.ie/Student_Counselling/

3.3 College Health Service

The Health Centre is situated on Trinity Campus in House 47, a residential block adjacent to the rugby pitch.

Opening hours: 09:00 – 16:40 with emergency clinics from 09:00 – 10:00.

Tel: 01 896 1591 or 01 896 1556

Web: https://www.tcd.ie/collegehealth/
3.4 Chaplaincy
The Chaplains are representatives of the main Christian Churches in Ireland who work together as a team, sharing both the college chapel and the chaplaincy in House 27 for their work and worship.

Steve Brunn (Anglican Chaplain): brunns@tcd.ie; tel: 01 896 1402
Julian Hamilton (Methodist Chaplain): julian.hamilton@tcd.ie; tel: 01 896 1901
Alan O’Sullivan (Catholic Chaplain): aeosulli@tcd.ie; tel: 01 896 1260
Peter Sexton (Catholic Chaplain): sextonpe@tcd.ie; tel: 01 896 1260
Web: https://www.tcd.ie/Chaplaincy/

3.5 Trinity Disability Service
Declan Treanor, Disability Services Coordinator

Room 3055, Arts Building
Email: dtreanor@tcd.ie
Tel: 01 896 3475
Web: https://www.tcd.ie/disability/

3.6 Niteline
A confidential student support line run by students which is open every night of term from 9pm to 2:30am.

Tel: 1800 793 793
Web: https://niteline.ie/

3.7 Students’ Union Welfare Officer
House 6, College
Email: welfare@tcdsu.org
Web: https://www.tcdsu.org/welfare
3.8 Maths Help Room
The Maths Help Room offers free assistance to students who are having difficulty with Mathematics, Statistics or related courses. It runs every week of term and at certain times out of term. The Maths help-room is a drop in centre, where you can bring in a maths or stats question and get some help.

The Help room is located in the New Seminar Room In House 20 in the School of Mathematics in the Hamilton Building.

Web: https://www.maths.tcd.ie/Info_for_Schools/Maths_Helproom.php

3.9 Student Learning Development
Student Learning Development provides learning support to help students reach their academic potential. They run workshops, have extensive online resources and provide individual consultations. To find out more, visit their website at https://student-learning.tcd.ie/

3.10 Student 2 Student (S2S)
S2S offers trained Peer Supporters for any student in the College who would like to talk confidentially with another student, or just to meet a friendly face for a chat. This service is free and available to everyone. To contact a Peer Supporter you can email student2student@tcd.ie.

Web: https://student2student.tcd.ie/peer-support/

3.11 Trinity Careers Service
As a Trinity College Dublin student you have access to information, support and guidance from the professional team of expert Careers Consultants throughout your time at Trinity. The support offered includes ‘next step’ career guidance appointments, CV and LinkedIn profile clinics and practice interviews. The Trinity Careers Service and the School of Engineering also hold an annual Careers Fair in October, which give students the opportunity to find out about careers prospects in over fifty companies.

Postgraduate study opens the doors to many opportunities but the market is competitive and you will need to differentiate yourself clearly from other candidates.
Resources:

The Careers Advisory Service (CAS) provides a wide range of resources and services to help you make and implement informed choices about your future career direction.

The Careers Information Centre at 7-9 South Leinster Street contains a range of free, career-related booklets and employer materials for you to take away.

Online, the resources section of the website (www.tcd.ie/Careers/resources) provides useful information on a range of topics from career choice and planning, to working abroad, taking a year out and everything in between.

Services:

Individual appointments to meet a Careers Consultant are also available. They work with you to identify how best to approach the next step in your career. They can also review your CV/LinkedIn profile and provide coaching to ensure maximum impact at interview.

Job opportunities from employers currently recruiting Trinity graduates as well as postgraduate courses and funding are available online.

CAS also offers a wide range of seminars; workshops and employer presentations, including postgrad specific events, throughout the year that will help you explore where your postgraduate study can take you.

MyCareer
An online service that you can use to:

• Apply for opportunities which match your preferences - vacancies including research options
• Search opportunities - postgraduate courses and funding
• View and book onto employer and CAS events
• Submit your career queries to the CAS team
• Book an appointment with your Careers Consultant

Simply login to MyCareer using your Trinity username and password and personalise your profile.

Careers Advisory Service
3.12 Co-curricular activities
Trinity College has a significant number of diverse student societies which are governed by the Central Societies Committee. They provide information on the societies including how to get involved and even how to start your own society. See http://trinitysocieties.ie/ for more details. Students are encouraged to get involved.

Trinity College also has a huge range of sports clubs which are governed by the Dublin University Athletic Club (DUCAC). See https://www.tcd.ie/Sport/student-sport/ducac/ for more details.

3.13 Trinity College Students’ Union
The Trinity College Students’ Union (TCDSU) is run for the students by students. TCDSU represent students at college level, fight for students’ rights, look after students’ needs, and are here for students to have a shoulder to cry on or as a friend to chat with over a cup of tea. Students of Trinity College are automatically members of TCDSU. It has information on accommodation, jobs, campaigns, as well as information pertaining to education and welfare. For more information see https://www.tcdsu.org/

3.14 Trinity Graduate Students’ Union
Second Floor, House 6, College

Email: president@tcdgsu.ie

Web: https://www.tcdgsu.ie/

3.15 Graduate Studies
Students on our Postgraduate Taught Programmes can find information on Fees and Registration, Exams, the University Calendar and Thesis Submission on this webpage https://www.tcd.ie/graduatestudies/students/taught/
3.16 Mature Student Office
A mature student is a person over 23 years of age on the 1st January in the year of application. There is no upper age limit. To be considered as a mature student you must also be an EU applicant.

The Mature Student Office runs a Welcome Programme for incoming first year students in September; we engage a successful student led Peer Mentoring Programme and have an active Mature Student Society. These are just some of the supports you can rely on to make your transition to college a smooth one.

3.17 Emergency Procedure
In the event of an emergency, dial Security Services on extension 1999.

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 in their phone under ICE (In Case of Emergency).

3.18 Data Protection

3.19 Research Ethics
Where research is carried out under the auspices of Trinity College Dublin, the College requires compliance with the policies set out by the Research Ethics Policy Committee. Further information on the policy on good research practice, https://www.tcd.ie/research/dean/assets/pdf/FINAL_Good%20Research%20Practice%20policy_COUNCIL%20APPROVEDandminutedgg.pdf
4 Introduction

The Course Director, Dr. Liwen Xiao along with the Head of Department, Asst. Prof. Aonghus McNabola, have responsibility for the MSc in Engineering Programme. The Module Co-ordinators are identified in the relevant Module Outline sheets and should be consulted in relation to module specifics. Planning and review of the programme is undertaken in series of meetings held each summer.

4.1 Contact Details

<table>
<thead>
<tr>
<th>Year Coordinator</th>
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<tbody>
<tr>
<td>Asst. Prof. Liwen Xiao, Director of MSc in Engineering</td>
</tr>
<tr>
<td>Email: <a href="mailto:liwen.xiao@tcd.ie">liwen.xiao@tcd.ie</a></td>
</tr>
<tr>
<td>Tel: 01 896 3741</td>
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<tr>
<th>OFFICE SUPPORT</th>
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<tbody>
<tr>
<td>Mary Curley</td>
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<tr>
<td>Course Administrator</td>
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<tr>
<td>Department Office, Museum Building</td>
</tr>
<tr>
<td>Email: <a href="mailto:curleyma@tcd.ie">curleyma@tcd.ie</a></td>
</tr>
<tr>
<td>Tel: 896 1457</td>
</tr>
<tr>
<td>Daniel Wearen</td>
</tr>
<tr>
<td>Senior Executive Officer</td>
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<tr>
<td>Email: <a href="mailto:wearend@tcd.ie">wearend@tcd.ie</a></td>
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<td>Tel: 896 2217</td>
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4.2 Academic Staff

<table>
<thead>
<tr>
<th>Prof. Brian Broderick</th>
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<tbody>
<tr>
<td>Simon Perry Building</td>
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<tr>
<td>Email: <a href="mailto:bbrodrck@tcd.ie">bbrodrck@tcd.ie</a></td>
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<td>Tel: 8962348</td>
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<th>Prof. Biswajit Basu</th>
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<tr>
<td>Email: <a href="mailto:basub@tcd.ie">basub@tcd.ie</a></td>
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<th>Assoc. Prof. Brian Caulfield</th>
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<td>Simon Perry Building</td>
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<tr>
<td>Email: <a href="mailto:brian.caulfield@tcd.ie">brian.caulfield@tcd.ie</a></td>
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<td>Tel: 8962534</td>
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<th>Adj. Prof. Ravindra Dhir</th>
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<tr>
<td>Adjunct Professor</td>
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<tr>
<td>Department of Civil, Structural &amp; Environmental Engineering</td>
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<td>Trinity College, Dublin 2</td>
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<th>Asst. Prof. Breifni Fitzgerald</th>
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<td>Email: <a href="mailto:fitzgeb@tcd.ie">fitzgeb@tcd.ie</a></td>
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<td>Tel: 8961146</td>
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<th>Asst. Prof. John Gallagher</th>
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<td>Simon Perry Building</td>
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<tr>
<td>Email: <a href="mailto:j.gallagher@tcd.ie">j.gallagher@tcd.ie</a></td>
</tr>
<tr>
<td>Tel: 8961638</td>
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<tr>
<td>Name</td>
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<tr>
<td>Asst. Prof. Bidisha Ghosh</td>
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<td>Asst. Prof. Niamh Harty</td>
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<td>Asst. Prof. David Igoe</td>
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<td>Adj. Prof. Paul Johnston</td>
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<tr>
<td>Assoc. Prof. Aonghus McNabola – Head of Department</td>
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<tr>
<td>Asst. Prof. David O’Connell</td>
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<td>Prof. Alan O’Connor</td>
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<td>Assoc. Prof. Brendan O’Kelly</td>
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<td>Assoc. Prof. Sara Pavia</td>
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<td>Assoc. Prof. Roger West</td>
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<td>Prof. Laurence Gill</td>
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<td>Asst. Prof. David Igoe</td>
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<td>Assoc. Prof. Sarah McCormack</td>
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<td>Adj. Prof. Bruce Misstear</td>
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<td>Adj. Prof. Trevor Orr</td>
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<td>Assoc. Prof. Dermot O’Dwyer</td>
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<td>Assoc. Prof. Roger West</td>
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<td>Assoc. Prof. Sara Pavia</td>
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<td>Assoc. Prof. Liwen Xiao</td>
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<tr>
<td>Mr. David McAuley</td>
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<td>Mr. Eoin Dunne</td>
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<td>Mr. Patrick Veale</td>
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<tr>
<td>Mr. Michael Grimes</td>
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<tr>
<td>Ms. Mary O’Shea</td>
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<tr>
<td>Mr. Robert Fitzpatrick</td>
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<td>Mark Gilligan</td>
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5 Key Dates

Examination Dates:

Semester 1 Assessment: 9th December to 13th December 2019*

Semester 2 Assessment: 27th April to 1st May 2020*

Reassessment – Semesters 1 & 2: 24th to 28th August 2020*

Submission Dates for Projects:

CE7M05 – Research Methods

- Ethics Approval Report – Monday, 20th January 2020 [Semester 2, Wk 1]
- Experimental Design – Wednesday, 22nd January 2020 [Semester 2, Wk 1]
- Literature Review – Friday, 14th February 2020 [Semester 2, Wk 4]

CE7M04 – Engineering Project

Data Analysis: Quantitative and Qualitative Review of Research Literature

(a) Systematic mapping and meta-analysis
   submission date: Tuesday, 10th March 2020 at 17:00 hrs.

(b) Literature review and peer review process
   Submission date: Tuesday, 31st March 2020 at 17:00 hrs.

GIS Assignment
   Submission date: Monday, 24th February 2020 at 17:00 hrs.

Lunchtime Lectures (6 reports)

Semester 1 (a) Lunch Time Lecture – 3 reports
   Submission date: Tuesday, 29th October 2019 at 12:00 hrs.

Semester 2 (b) Lunch Time Lecture – 3 reports
   Submission date: SEMESTER 2: Monday, 2nd December 2019 at 12:00 hrs.
5.1 Timetable

MSc in Engineering timetable will be issued with the handbook. The timetable will be available on the main notice board in the Simon Perry Building and the Museum Building.

CE7M03 – Dissertation

- Interim Poster Presentation – 2\textsuperscript{nd} March 2020 [Semester 2, Wk 7]
- Final Dissertation Submission – 10\textsuperscript{th} August 2020 [Wk 51]
- Final Presentation – date to be advised – September 2020
6 Key Locations

Lectures will be held in the **SPSR Room**, Simon Perry Seminar Room and the Demo Room, **Demonstration Room** in Simon Perry Building.
6.1 Computing Facilities

Students have access to College computing facilities. In addition, the computer laboratory in the Old Civil Engineering Building (Red Brick Building) may be used by MSc students, when not in use by other scheduled classes.

6.2 Keys

Keys to the front doors of the Simon Perry Building can be obtained from Mr. David McAuley, Chief Technician, damcaley@tcd.ie, for a returnable deposit.

7 Health and Safety Statements

In any safety queries or complaints arise, they should be brought to the attention of the Departmental Safety Officer (Dr. David Igoe, igoed@tcd.ie, Red Brick Building) or another member of the technical staff. All students working in the laboratories must be aware of the safety procedures of the laboratory and must wear appropriate footwear. Students working on-site must wear appropriate footwear and hard hats.
### Easter Mondays highlighted

#### 2019-20

**Semester 1**
- **Michaelmas Term**
  - 26-Aug-19 to 09-Sep-19: Teaching and Learning 6 weeks
  - 02-Sep-19 to 16-Sep-19: Study/Review week
  - 19-Sep-19 to 23-Sep-19: Orientation week
- **Winter session**
  - 28-Sep-19 to 02-Oct-19: Revision week
  - 05-Oct-19 to 09-Oct-19: Assessment week
- **Hilary Term**
  - 12-Oct-19 to 16-Oct-19: Christmas Period
- **Trinity Term**
  - 26-Oct-19 to 30-Oct-19: Study/Review week
  - 31-Oct-19 to 04-Nov-19: Revision week
- **Summer session**
  - 07-Nov-19 to 11-Nov-19: Teaching and Learning 5 weeks

**Semester 2**
- **Michaelmas Term**
  - 13-Dec-19 to 17-Dec-19: Reassessment - Semesters 1 & 2
  - 20-Dec-19 to 24-Dec-19: Marking/Results week
  - 27-Dec-19 to 31-Dec-19: Orientation week
- **Winter session**
  - 03-Jan-20 to 07-Jan-20: Teaching and Learning 6 weeks
  - 10-Jan-20 to 14-Jan-20: Study/Review week
  - 17-Jan-20 to 21-Jan-20: Revision week
- **Hilary Term**
  - 24-Jan-20 to 28-Jan-20: Teaching and Learning 5 weeks
  - 31-Jan-20 to 04-Feb-20: Study/Review week
  - 07-Feb-20 to 11-Feb-20: Revision week
  - 14-Feb-20 to 18-Feb-20: Teaching and Learning 6 weeks
- **Trinity Term**
  - 21-Feb-20 to 25-Feb-20: Study/Review week
  - 28-Feb-20 to 03-Mar-20: Revision week
- **Summer session**
  - 06-Mar-20 to 10-Mar-20: Teaching and Learning 5 weeks
  - 13-Mar-20 to 17-Mar-20: Study/Review week
  - 20-Mar-20 to 24-Mar-20: Revision week
  - 27-Mar-20 to 31-Mar-20: Teaching and Learning 6 weeks

**Academic Year Structure 2019/20**

- **Michaelmas Term**
  - 26-Aug-19 to 11-Nov-19
- **Winter session**
  - 14-Nov-19 to 09-Dec-19
- **Hilary Term**
  - 12-Dec-19 to 01-Feb-20
- **Trinity Term**
  - 04-Feb-20 to 23-Mar-20
- **Summer session**
  - 26-Mar-20 to 30-Jun-20

**Key Dates**
- **Reassessment - Semesters 1 & 2**: 13 February 2019
8 Programme Overview

8.1 MSc in Engineering Structure

Programme Learning Outcomes:
This course aims to develop engineers with specialist understanding in one of the areas: Environmental Engineering; Structural and Geotechnical Engineering; Transport and Planning Engineering; or Sustainable Energy Engineering. In addition, the course offers students the opportunity to obtain knowledge in complementary subject areas within the Civil Engineering Discipline.

8.2 Programme Learning Outcomes:
This course aims to develop engineers with specialist understanding in one of the areas: Environmental Engineering; Structural and Geotechnical Engineering; Transport and Planning Engineering; or Sustainable Energy Engineering. In addition, the course offers students the opportunity to obtain knowledge in complementary subject areas within the Civil Engineering Discipline.

8.3 Graduate Attributes:
Trinity College Dublin has identified specific Graduate Attributes that students are expected to demonstrate upon graduation. They are important because they will:

- Enhance your learning. Working on them will help you become a better and more successful student,
- Help to prepare you for your future and lifelong learning give the changing nature of society,
• Enhance your employability as they are highly desired skills by employers

The Trinity **Graduate Attributes** are:

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### 8.4 Admission Requirements:
Candidates for this course must normally hold a first or second class, first division Honors Bachelor degree in Engineering, Science or a cognate discipline and pursue the course full-time for a period of not less than 12 consecutive months. Alternatively the course may be taken part-time over two or three years. Students register on the Masters course in the first instance.

### 8.5 Course Structure:
Candidates must take twelve modules, namely the four mandatory modules (CE7M01, CE7M03, CE7M04 and CE7M05), together with at least four of the modules in their chosen specialisation and four other modules, which in total amount to 90 credits.

**Full-time Programme**
In the first semester, candidate pursuing the course full time must take modules CE7M01, CE7M04 and CE7M05 along with four five-credit modules selected...
from options (including at least two from their selected specialisation), listed below.

In the second semester, candidates pursuing the course full time must take module CE7M03 along with four five-credit modules selected from options (including at least two from their selected specialisation), listed below.

**Mandatory modules**

- CE7M01 Civil Engineering Management (10 credits)
- CE7M05 Research Methods 1 (5 credits)
- CE7M03 Research Dissertation (30 credits)
- CE7M04 Engineering Project (5 credits)

**Environmental Engineering**

- CE7E01 Hydrological Processes and Hydrometry (5 credits)
- CE7E03 Air Pollution (5 credits)
- CE7E04 Waste Management and Energy Recovery (5 credits)
- CE7E05 Water Quality and Hydrological Modelling (5 credits)
- CE7E06 Water Resource Planning and Climate Change (5 credits)
- CE7E07 Sustainable Water Supply and Sanitation (5 credits)

**Structural and Geotechnical Engineering**

- CE7S01 Geotechnical Engineering (5 credits)
- CE7S02 Advanced Structural Analysis (5 credits)
- CE7S03 Wind and Earthquake Engineering (5 credits)
- CE7S04 Bridge Engineering (5 credits)
- CE7S05 Advanced Concrete Technology (5 credits)
- CE7S06 Offshore Geotechnical Engineering (5 credits)
- CE7S07 A Unified Theory of Structures (5 credits)
- CE7S09 Advanced Theory of Structures (5 credits)

**Sustainable Energy**

- CE7J01 Wind Energy (5 credits)
- CE7J02 Solar Energy Conversion and Applications (5 credits)
- CE7J04 Energy Policy and Demand (5 credits)
- CE7J06 Wave and Hydro Energy (5 credits)

**Transport Engineering, Policy and Planning**

- CE7T01 Transportation Policy (5 credits)
- CE7T02 Transportation Modelling and Planning (5 credits)
CE7T04  Intelligent Transportation Systems (ITS) (5 credits)
CE7T05  Transport Design (5 credits)

Common
CE7C04  Façade Engineering (5 credits)
CE7C05  Advanced Spatial Analysis using GIS (5 credits)

Some of the module options in either semester may be withdrawn from time to time and some new modules may be added, subject to demand. In the event, that insufficient module options are available to meet the minimum module requirements of a particular specialisations then an alternative specialisation or a general Civil Engineering specialisations may be chosen.

Postgraduate Diploma candidates will be assessed on the basis of written examinations and successful completion of the Research Methodology and Engineering Project modules. M.Sc. candidates will, in addition, completed a substantial research project and submit a dissertation of approximately 30,000 words.

Part-time Programme
Candidates may also take the course part-time over two years. In this case, during the first year, the candidates take eight modules, namely: the mandatory modules CE7M01, CE7M04 and CE7M05 along with five of the module options (including at least two from their chosen specialisation), which together amounts to 45 credits. During the second year, candidates must complete the compulsory CE7M03 module together with three other module options (including at least two from their chosen specialisation) which amounts to 45 credits. By the end of the course, part-time candidates must have completed the mandatory modules including the research dissertation, and at least four of their specialisation module options and four of the other module options, together with the compulsory modules, amounting to a total of 90 credits.

8.6 Assessment
The pass mark for all elements is 50%. The overall mark for the course is the credit-weighted average of the mark awarded for each module. To qualify for the award of M.Sc. degree, students must achieve an overall average mark of at least 50%, achieve a pass mark in CE7M03 Dissertation module and either i) pass taught modules amounting to 60 credits or ii) pass taught modules amounting to at least 50 credits and have a mark of not less than 40% in the failed modules.
Those students who achieve an overall average of 70% or above both for the course and in the CE7M03 Research Dissertation will be awarded the M.Sc. with Distinction. A Distinction cannot be awarded if a candidate has failed any credit during the course.

Assessment methods used include:
- Continuous Assessment
- Formal Examination
- Oral Presentations of Individual Projects
- MSc Dissertation

**Continuous assessment**
Continuous assessment will form a significant part of certain modules, particularly CE7M5 and CE7M4 which are based on continuous assessment only. Continuous assessment includes class attendance, tutorials, class tests, reports, essays and other coursework. Failure to attend lectures will be reflected in the marks for the continuous assessment. **Coursework submitted after the deadline without permission will not be marked.**

**Formal Examinations**
Examinations will be held from 9th December until 14th December 2019 in Semester 1 and 27th April until 2nd May 2020 in Semester 2. They consist of unseen written questions of a variety of types including short questions, mathematical problems and essays. They serve to test factual knowledge and the development of theoretical understanding of the subjects. All annual examinations will be three hours in duration, unless stated otherwise.

Formal examination questions are based on the content of the taught courses. The best guarantee of success there is to work steadily throughout the course, reviewing the contents of each lecture using both your notes and standard texts. Past papers are available to download through the Exam Papers link on the TCD homepage.

**8.7 Failure and Reassessment**
The Board of Examiners meet twice during the academic year: once in January following the semester one examinations, and again during September. There is one sitting of the annual examinations for each module offered during the academic year. There are no special examinations after the annual examinations. Students who miss examinations due to an explained absence, and on permission of the Board of Examiners, may take the examination during the annual examination period the following academic year.
Note that students who complete the examination requirements of all the selected modules, except CE7M3, may on the recommendation of the Board of Examiners be awarded a Postgraduate Diploma in Engineering (60 ECTS credits).

8.8 Prizes
The student who achieves the highest overall mark based on the annual MSc in Engineering examinations is awarded the Robert Friel Prize, valued at €200. The student who achieves the highest overall mark based on their dissertation is awarded the best project prize, valued at €200.

8.9 Degree Award
Upon completion of the MSc in Engineering, graduates who have achieved a pass / pass with distinction. The following is an extract from the College Calendar outlining the College Policy on Assessment and Progression:

To qualify for the award of the Masters degree. Students must, as a minimum and in addition to above,

(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 non-compensatable, and
(iii) Achieve a pass mark in the research element or dissertation, and
(iv) Either (a) pass taught modules amounting to 60 credits, or (b) pass modules amounting to at least 60 credits and achieve a minimum mark of 40% (or 30% where the pass mark is 40%) in any failed module(s).
(v) Students failing to pass taught modules according to (iv) above may present for supplemental examination or re-submit required work within the duration of the course. If and as provided for in the course regulations.
(vi) Students who, following the supplemental examination or re-assessment, have failed to pass taught modules according to (iv) above will be deemed to have failed overall, and may apply to repeat the course.

Students who have passed taught modules according to (iv) above, but who do not achieve a pass mark in the research element or dissertation, will be deemed to have failed overall. Such students may apply to repeat the year or may be awarded the associated Postgraduate Diploma, where this is provided for the course regulations.

9 College Calendar
Further information on the College Calendar.
Web: https://www.tcd.ie/calendar/graduate-studies-higher-degrees/
## General Programme Information

### 10 Modules and module descriptors

<table>
<thead>
<tr>
<th>Mandatory modules</th>
<th>Civil Engineering Management (10 credits)</th>
<th>Asst. Prof. Niamh Harty (<a href="mailto:Niamh.harty@tcd.ie">Niamh.harty@tcd.ie</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE7M01</td>
<td>Research Methods 1 (5 credits)</td>
<td>Asst. Prof. Bidisha Ghosh (<a href="mailto:bghosh@tcd.ie">bghosh@tcd.ie</a>)</td>
</tr>
<tr>
<td>CE7M05</td>
<td>Research Dissertation (30 credits)</td>
<td>Your Project Supervisor</td>
</tr>
<tr>
<td>CE7M03</td>
<td>Engineering Project (5 credits)</td>
<td>Prof. Biswajit Basu (<a href="mailto:basub@tcd.ie">basub@tcd.ie</a>)</td>
</tr>
</tbody>
</table>

#### Environmental Engineering

<table>
<thead>
<tr>
<th>CE7E01</th>
<th>Hydrological Processes and Hydrometry (5 credits)</th>
<th>Asst. Prof. Liwen Xiao (<a href="mailto:Liwen.Xiao@tcd.ie">Liwen.Xiao@tcd.ie</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE7E03</td>
<td>Air Pollution (5 credits)</td>
<td>Asst. Prof. John Gallagher [<a href="mailto:j.gallagher@tcd.ie">j.gallagher@tcd.ie</a>]</td>
</tr>
<tr>
<td>CE7E04</td>
<td>Waste Management and Energy Recovery (5 credits)</td>
<td>Asst. Prof. Liwen Xiao (<a href="mailto:Liwen.Xiao@tcd.ie">Liwen.Xiao@tcd.ie</a>)</td>
</tr>
<tr>
<td>CE7E05</td>
<td>Water Quality and Hydrological Modelling (5 credits)</td>
<td>Prof. Laurence Gill (<a href="mailto:Laurence.gill@tcd.ie">Laurence.gill@tcd.ie</a>)</td>
</tr>
<tr>
<td>CE7E06</td>
<td>Water Resource Planning and Climate Change (5 credits)</td>
<td>Prof. David O’Connell (<a href="mailto:oconnedw@tcd.ie">oconnedw@tcd.ie</a>)</td>
</tr>
<tr>
<td>CE7E07</td>
<td>Sustainable Water Supply and Sanitation (5 credits)</td>
<td>Prof. Laurence Gill (<a href="mailto:Laurence.gill@tcd.ie">Laurence.gill@tcd.ie</a>)</td>
</tr>
</tbody>
</table>

#### Structural and Geotechnical Engineering

<table>
<thead>
<tr>
<th>CE7S01</th>
<th>Geotechnical Engineering (5 credits)</th>
<th>Assoc. Prof. Brendan O’Kelly (<a href="mailto:bokelly@tcd.ie">bokelly@tcd.ie</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE7S02</td>
<td>Advanced Structural Analysis (5 credits)</td>
<td>Assoc. Prof. Dermot O’Dwyer (<a href="mailto:dwodwyer@tcd.ie">dwodwyer@tcd.ie</a>)</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
<td>CE7S03</td>
<td>Wind and Earthquake Engineering (5 credits)</td>
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<tr>
<td>CE7S04</td>
<td>Bridge Engineering (5 credits)</td>
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<tr>
<td>CE7S05</td>
<td>Advanced Concrete Technology (5 credits)</td>
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<tr>
<td>CE7S06</td>
<td>Offshore Geotechnical Engineering (5 credits)</td>
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<tr>
<td>CE7S07</td>
<td>A Unified Theory of Structures (5 credits)</td>
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<tr>
<td>CE7S09</td>
<td>Advanced Theory of Structures (5 credits)</td>
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<tr>
<td><strong>Sustainable Energy</strong></td>
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<tr>
<td>CE7J01</td>
<td>Wind Energy (5 credits)</td>
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<tr>
<td>CE7J02</td>
<td>Solar Energy Conversion and Applications (5 credits)</td>
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<tr>
<td>CE7J04</td>
<td>Energy Policy and Demand (5 credits)</td>
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<tr>
<td>CE7J06</td>
<td>Wave and Hydro Energy (5 credits)</td>
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<tr>
<td><strong>Transport Engineering, Policy and Planning</strong></td>
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<tr>
<td>CE7T01</td>
<td>Transportation Policy (5 credits)</td>
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<tr>
<td>CE7T02</td>
<td>Transportation Modelling and Planning (5 credits)</td>
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<tr>
<td>CE7T04</td>
<td>Intelligent Transportation Systems (ITS) (5 credits)</td>
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<tr>
<td>CE7T05</td>
<td>Transport Design (5 credits)</td>
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<tr>
<td><strong>Common</strong></td>
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<tr>
<td>CE7C04</td>
<td>Façade Engineering (5 credits)</td>
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<tr>
<td>CE7C05</td>
<td>Advanced Spatial Analysis using GIS (5 credits)</td>
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</tbody>
</table>

You will find all information on this link: [https://www.tcd.ie/Engineering/undergraduate/maiyear5/civil/](https://www.tcd.ie/Engineering/undergraduate/maiyear5/civil/)
11 Selection of Modules

An important decision that you will have to make early in the programme, is which optional modules you are going to take examinations in. **You must confirm which module options you are taking in both the first and second semesters by completing the form and submit it by Wednesday, 18th September 2019.** You will not have access to modules on blackboard or in your student portal until you have registered your selection as instructed here.

12 Selection of Research Project for M.Sc. Dissertation

The MSc Dissertation is a very important part of the MSc programme. It allows the students to carry out in-depth research about a topic and to carry out laboratory/field/numerical work. In the first semester, a list of possible projects will be compiled by the academic staff and distributed to the MSc class. The students will be requested to choose a project in their specialisation (Environmental / Structural and Geotechnical / Sustainable Energy / Transport, Policy and Planning) for their MSc Dissertation, having discussed and agreed beforehand with the relevant supervisor. Students are also welcome to suggest their own topics for projects and they may proceed with these projects once a suitable supervisor has been found from the academic staff. **The students must confirm which research project they are taking for their MSc dissertation by Wednesday, 25th September 2019.** The students should contact their potential supervisors to discuss the research projects as soon as possible, these will be issued on a first come basis.

13 MSc Dissertation

MSc dissertation will contribute to 90% of marks in CE7M03 module, which will run from semester one until the end of August 2020; and include a significant research component. An additional 10% of M3 marks will be awarded based on an interim project presentation. The MSc dissertation is a major undertaking requiring maturity, planning, analysis and a considerable amount of hard work. **Two soft-bound copies must be handed in no later than Tuesday, 4th August 2020. The MSc dissertation submitted after the deadline without permission will not be marked.**

Two hardbound copies of the dissertation, including corrections where necessary, must be submitted by the end of September 2020. Recommendations for the format and presentation of dissertations are given in an appendix.

The marks for the dissertation (90%) are awarded on the following basis:
1. Presentation = 25%
2. Amount of own work done = 25%
3. Understanding and difficulty = 25%
4. Conclusions = 25%

Also important are the initiative and commitment shown by the student and two presentations. It is mandatory that students make a presentation of the project to their class and the Civil Engineering Staff, normally June, and also to the External Examiner in September. The dates, schedule and format of presentations will be issued closer to the date.

14 Teaching Methods

A wide range of teaching methods are employed on the program. The teaching method reflects the teaching objectives and includes formal lectures, seminars, group design projects and site visits. Students are encouraged to ask questions during or after lectures or seminars if points require clarification, or if their own experience provides useful insight into the subject in hand.

15 Learning Methods

Success on the course is strongly linked to study skills. While each individual has a different style of learning, the following points will help you do well on the course.

1. **Work steadily**
   Successful students take a serious and committed attitude to their subject from the first day of the course. Last minute rushes to meet deadlines and panic cramming invariably decreases the quality of learning.

2. **Review all teaching promptly and thoughtfully**
   Most effective learning takes place outside the lecture theatre. It is advisable to go through lecture notes as soon as possible after each lecture, even if only a few minutes are spent for each lecture. Compare what has been heard and discussed with the information in the reference and recommended texts. Consider the information and distinguish between learning single facts and understanding the subject matter. The lecturer will be happy to clarify any queries that may arise at the next lecture or personally, by appointment, at a later date.

3. **Attend regularly**
No lecturer is likely to explain material in a lecture a second time to someone who was absent the first time. Failure to attend lectures will be reflected in the marks for the relevant assessment.

4. Plan your time carefully
It maybe helpful to draw up a schedule of commitments: reviewing lectures, preparing laboratory reports, essays and exam revision. An estimate should be made of how much time will be needed for each task, working backwards from each deadline to find out when the next task should be started.

5. Working with colleagues
Working with a few colleagues in a group will often help everyone to learn effectively. For example, it maybe necessary to set time aside each day to review lecture notes together. Working together may help with your personal discipline, while discussing a subject often clarifies many of the issues and concepts involved. However, it should be pointed out that working together is not the same as copying another person’s work. Copying another person’s work is considered as plagiarism. Plagiarism is considered as a major offence, and subject to the disciplinary procedures of the University. More information about plagiarism can be found in the Calendar, Part III, General Regulations & Information, section 67:

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


Declaration text for submitted assignments: https://libguides.tcd.ie/plagiarism/declaration

16 Feedback and Evaluation
The Staff/Student Committee meets once a semester to discuss matters of interest and concern to student and staff. It comprises class representatives from each year. A programme level survey is issued online to students towards the end of Semester 2.
17 The European Credit Transfer and Accumulation System (ECTS)

The European Credit Transfer and Accumulations System (ECTS) is an academic credit system based on the estimated student workload required to achieve the objectives of a module or programme of study. It is designed to enable academic recognition for periods of study, to facilitate student mobility and credit accumulation and transfer. The ECTS is the recommended credit system for higher education in Ireland and across the European Higher Education Area.

The ECTS weighting for a module is a measure of the student input or workload required for that module. Based on factors such as the number of contact hours, the number and length of written or verbally presented assessment exercises, class preparation and private study time, laboratory classes, examinations, clinical attendance, professional training placements, ad so on as appropriate. There is no intrinsic relationship between the credit volume of the module and its level of difficulty.

The European norm for full-time study over one academic year is 60 credits. 1 credit represents 20-25 hours estimated student input, so a 10-credit module will be designed to require 200-250 hours of student input including class contact time, assessments and examinations.

ECTS credits are awarded to a student only upon successful completion of the programme year. Progression from one year to the next is determined by the programme regulations. Students who fail a year of their programme will not obtain credit for that year even if they have passed certain component. Exceptions to this rule are one-year and part-time visiting students, who are awarded credit for individual modules successfully completed.

18 Guidelines on Grades

The following descriptors are given as a guide to the qualities that assessors are seeking in relation to the grades usually awarded. A grade is the anticipated degree class based on consistent performance at the level indicated by an individual answer. In addition to the criteria listed examiners will also give credit for evidence of critical discussion of facts or evidence.

18.1 Guidelines on Grades for Essays and Examination Answers
<table>
<thead>
<tr>
<th>Mark Range</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>IDEAL ANSWER; showing insight and originality and wide knowledge. Logical, accurate and concise presentation. Evidence of reading and thought beyond course content. Contains particularly apt examples. Links materials from lectures, practicals and seminars where appropriate.</td>
</tr>
<tr>
<td>80-89</td>
<td>OUTSTANDING ANSWER; falls short of the ‘ideal’ answer either on aspects of presentation or on evidence of reading and thought beyond the course. Examples, layout and details are all sound.</td>
</tr>
<tr>
<td>70-79</td>
<td>MAINLY OUTSTANDING ANSWER; falls short on presentation and reading or thought beyond the course but retains insight and originality typical of first class work.</td>
</tr>
<tr>
<td>65-69</td>
<td>VERY COMPREHENSIVE ANSWER; good understanding of concepts supported by broad knowledge of subject. Notable for synthesis of information rather than originality. Sometimes with evidence of outside reading. Mostly accurate and logical with appropriate examples. Occasionally a lapse in detail.</td>
</tr>
<tr>
<td>60-64</td>
<td>LESS COMPREHENSIVE ANSWER; mostly confined to good recall of coursework. Some synthesis of information or ideas. Accurate and logical within a limited scope. Some lapses in detail tolerated.</td>
</tr>
<tr>
<td>55-59</td>
<td>SOUND BUT INCOMPLETE ANSWER; based on coursework alone but suffers from a significant omission, error or misunderstanding. Usually lacks synthesis of information or ideas. Mainly logical and accurate within its limited scope and with lapses in detail.</td>
</tr>
<tr>
<td>50-54</td>
<td>INCOMPLETE ANSWER; suffers from significant omissions, errors and misunderstandings, but still with understanding of main concepts and showing sound knowledge. Several lapses in detail.</td>
</tr>
<tr>
<td>45-49</td>
<td>WEAK ANSWER; limited understanding and knowledge of subject. Serious omissions, errors and misunderstandings, so that answer is no more than adequate.</td>
</tr>
<tr>
<td>Mark Range</td>
<td>Criteria</td>
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<tr>
<td>40-44</td>
<td>VERY WEAK ANSWER; a poor answer, lacking substance but giving some relevant information. Information given may not be in context or well explained but will contain passages and words which indicate a marginally adequate understanding.</td>
</tr>
<tr>
<td>35-39</td>
<td>MARGINAL FAIL; inadequate answer, with no substance or understanding, but with a vague knowledge relevant to the question.</td>
</tr>
<tr>
<td>30-34</td>
<td>CLEAR FAILURE; some attempt made to write something relevant to the question. Errors serious but not absurd. Could also be a sound answer to the misinterpretation of a question.</td>
</tr>
<tr>
<td>0-29</td>
<td>UTTER FAILURE; with little hint of knowledge. Errors serious and absurd. Could also be a trivial response to the misinterpretation of a question.</td>
</tr>
</tbody>
</table>

Guidelines on Marking Projects/Dissertation Assessment

<table>
<thead>
<tr>
<th>Mark Range</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>Exceptional project report showing broad understanding of the project area and exceptional knowledge of the relevant literature. Exemplary presentation and analysis of results, logical organisation and ability to critically evaluate and discuss results coupled with insight and novelty/originality. Overall an exemplary project report of publishable quality (e.g. peer reviewed scientific journal/patent application).</td>
</tr>
<tr>
<td>80-89</td>
<td>An excellent project report clearly showing evidence of wide reading far above that of an average student, with excellent presentation and in-depth analysis of results. Clearly demonstrates an ability to critically evaluate and discuss research findings in the context of relevant literature. Obvious demonstration of insight and novelty/originality. An excellently executed report overall of publishable quality (e.g. short peer reviewed conference paper such as IEEE) with very minor shortcomings in some aspects.</td>
</tr>
<tr>
<td>Score Range</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>70-79</td>
<td>A very good project report showing evidence of wide reading, with clear presentation and thorough analysis of results and an ability to critically evaluate and discuss research findings in the context of relevant literature. Clear indication of some insight and novelty/originality. A very competent and well-presented report overall but falling short of excellence in some aspects. Sufficient quality and breadth of work similar to the requirements for an abstract at an international scientific conference.</td>
</tr>
<tr>
<td>60-69</td>
<td>A good project report which shows a reasonably good understanding of the problem and some knowledge of the relevant literature. Mostly sound presentation and analysis of results but with occasional lapses. Some relevant interpretation and critical evaluation of results, though somewhat limited in scope. General standard of presentation and organisation.</td>
</tr>
<tr>
<td>50-59</td>
<td>A moderately good project report which shows some understanding of the problem but limited knowledge and appreciation of the relevant literature. Presentation, analysis and interpretation of the results at a basic level and showing little or no novelty/originality or critical evaluation. Insufficient attention to organisation and presentation of the results.</td>
</tr>
<tr>
<td>40-49</td>
<td>A weak project report showing only limited understanding of the problem and superficial knowledge of the relevant literature. Results presented in a confused or inappropriate manner and incomplete or erroneous analysis. Discussion and interpretation of result severely limited, including some basic misapprehensions, and lacking any novelty/originality or critical evaluation. General standard of presentation poor.</td>
</tr>
<tr>
<td>20-39</td>
<td>An unsatisfactory project containing substantial errors and omissions. Very limited understanding, or in some cases misunderstanding of the problem and very restricted and superficial appreciation of the relevant literature. Very poor, confused and, in some cases, incomplete presentation of the results and limited analysis of the results including some serious errors. Severely limited discussion and interpretation of the results revealing little or no ability to relate experimental results to the existing literature. Very poor overall standard of presentation.</td>
</tr>
</tbody>
</table>
A very poor project report containing every conceivable error and fault. Showing virtually no understanding or appreciation of the problem and of the literature pertaining to it. Chaotic presentation of results, and in some cases incompletely presented and virtually non-existent or inappropriate or plainly wrong analysis. Discussion and interpretation seriously confused or wholly erroneous revealing basic misapprehensions.

**General Regulations**

**19 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.

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 or performance. Students who do not provided a satisfactory explanation can be prevented from sitting the annual examinations. The following is an extract from the College Calendar outlining the College policy on attendance and related issues:

6 *Graduate students on taught courses must normally attend College or one of its affiliated institutions whenever instruction is scheduled for their course in the College. In certain cases, all or part of a course may be undertaken outside of the physical confines of the College or one of its affiliated institutions and graduate students are under the same obligation as above to attend for instruction. However, the above requirements for physical attendance are relaxed, as appropriate, for distance learning and e-learning courses. In the case of these courses, attendance at the venue to which the material is delivered is equated to attendance at College or one of its affiliated institutions at the time of delivery.*
Students must take part fully in the academic work of their class throughout the period of their course.

The requirements for attendance at lectures and tutorials are published locally and vary between the different taught courses. The onus lies on graduate students to inform themselves of the dates, times and venues of their lectures and other forms of teaching by consulting these timetables.

Where a graduate student is undertaking a dissertation as part of a taught course, the regulations in relation to attendance are those outlined in Section 2 (above).

20 Absence from examinations

The following is an extract from the College Calendar outlining the College Policy on absence from Examinations:

10 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 Course/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 course handbooks or from Course Co-ordinators/Directors.

11 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 Course Co-ordinator/Director. The Course Co-ordinator/Director will then make representations to the Dean of Graduate Studies requesting that permission be granted for absence from the examination.

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

21 Examination of Dissertation

The following is an extract from the College Calendar outlining the College Policy on Examination of Dissertation:

14 Graduate students who require an extension on the submission date of their dissertation (on medical or ad misericordiam grounds) must contact their Course
Co-ordinator/Director prior to the submission date and must provide documentary evidence to support their case. Such extensions will be at the discretion of the course committee. Where a course requires graduate students to undertake an oral examination of the dissertation work, this will take place before the examination board meeting takes place. Dissertations may be graded fail/pass/pass with distinction. Graduate students who have achieved a pass/pass with distinction for their dissertation may, subject to the approval of the course committee, be granted a one-month extension free of fees for minor revisions/corrections prior to submitting the final hardbound copy of the dissertation. No extensions to this period will be permitted.

15 Where failure of a dissertation is contemplated and an oral examination has not been held as a matter of course, graduate students are entitled to an oral examination. This must take place prior to, or during the examination board meeting. The candidate must be informed of the reason for the oral examination. Candidates who have attended an oral examination as a matter of course may not avail of another. The format of an oral examination is at the discretion of the course committee.

22 Assessment and Progression Regulations

The following is an extract from the College Calendar outlining the College Policy on Assessment and Progression:

16 The following regulations apply in all courses of student 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 attendance at lectures and tutorials, by carrying out the required course work, and by successful completion of examinations or other designated assignments. Students may be required to attend a viva voce examination. Courses may follow one of two assessment models: either (a) where the final mark is based on a credit-weighted average of the mark awarded in each module; or (b) where the overall credit-weighted average mark for taught modules contributes 40%, and the dissertation or research element contributes 60%, to the final mark. Regulations for individual courses are given under their respective entries, listed alphabetically on the following page, and are supplemented by further details in course handbooks.

17 To qualify for the award of the Masters degree. Students must, as a minimum and in addition to above,

(vii) Achieve an overall pass mark which is normally the credit-weighted average mark for all taught modules taken, and
(viii) Achieve a pass mark in all modules designated non-compensatable, and
(ix) Achieve a pass mark in the research element or dissertation, and
(x) Either (a) pass taught modules amounting to 60 credits, or (b) pass modules amounting to at least 60 credits and achieve a minimum mark of 40% (or 30% where the pass mark is 40%) in any failed module(s).
(xi) Students failing to pass taught modules according to (iv) above may present for supplemental examination or re-submit required work within the duration of the course. If and as provided for in the course regulations.
(xii) Students who, following the supplemental examination or re-assessment, have failed to pass taught modules according to (iv) above will be deemed to have failed overall, and may apply to repeat the course.

Students who have passed taught modules according to (iv) above, but who do not achieve a pass mark in the research element or dissertation, will be deemed to have failed overall. Such students may apply to repeat the year or may be awarded the associated Postgraduate Diploma, where this is provided for the course regulations.

18 In order to qualify for the award of Masters with Distinction students 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.

19 A distinction cannot be awarded if a candidate has failed any credit during the period of study.

20 Students who have passed taught modules according to (iv) above, but who do not choose to complete the dissertation or research element, may be awarded the associated Postgraduate Diploma, where this is provided for the course regulations. Postgraduate Diploma courses may only be offered in conformity with, and if their existence is signalled in, the regulations for individual courses listed in this part of the University Calendar: direct entry is therefore not permitted to some Postgraduate Diplomas.
1. To qualify for the award of the Postgraduate Diploma, students must, in addition to above,
   
   (i) Achieve an overall pass mark which is the credit-weighted average mark for all modules taken, and
   
   (ii) Achieve a pass mark in all modules designated non-compensatable, and
   
   (iii) Either (a) pass modules amounting to 60 credits, or (b) pass modules amounting to at least 50 credits and achieve a minimum mark of 40% (or 30% where the pass mark is 40%) in any failed module(s).

2. In order to qualify for the award of Postgraduate Diploma with Distinction students must, in addition to 3.9.1 above, 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 the 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.

21 The following information relates to all examination result:

i. All postgraduate examination results are published anonymously under a student’s registered number.

ii. Students who successfully complete their course will have the qualification, where appropriate, awarded under their registered name and within grade.

23 Plagiarism

The following is an extract from the College Calendar outlining the College Policy on Plagiarism:

66 Plagiarism

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.

67 Examples of Plagiarism

Plagiarism can arise from actions such as:

(a) Copying another student’s work;
(b) Enlisting another person or persons to complete an assignment on the student’s behalf;
(c) Procuring, whether with payment or otherwise, the work or ideas of another;
(d) Quoting directly, without acknowledgement, from books, articles or other sources, either in printed, recorded or electronic format, including websites and social media;
(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:

(i) Fail to distinguish between their own ideas and those of others;
(ii) Fail to take proper notes during preliminary research and therefore lose track of the sources from which notes were drawn;
(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.

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

Further information can be found on the calendar - https://www.tcd.ie/calendar/graduate-studies-higher-degrees/complete-part-iii.pdf

Further information the Plagarism policy and range of penalties applied, please click on the link.