



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

School of Engineering

# Engineering with Management Junior Fresh Handbook 2023-2024



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**Note:**

Alternative formats of the handbook can be made available on request.

All students are encouraged to fully familiarise themselves with college rules and general regulations which can be found here:

[https://www.tcd.ie/calendar/undergraduate-studies/general-regulations-and- information.pdf](https://www.tcd.ie/calendar/undergraduate-studies/general-regulations-and-information.pdf)

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

# 1. Introduction

## **Welcome**

On behalf of all the staff and students of the Discipline of Mechanical, Manufacturing & Biomedical Engineering we would like to welcome you to Trinity College Dublin, but more particularly as a student of this Discipline on the degree programme in Engineering with Management.

Engineering with Management is hosted in the Discipline of Mechanical, Manufacturing & Biomedical Engineering (Parsons Building) and has input from statistics, business and computer science colleagues within Trinity College Dublin. Typically, between 20 to 30 new students enter first year allowing us to offer dedicated modules with small group problem-based learning approaches, as well as the more traditional large podium style teaching and learning shared with the Integrated Engineering programme. The Discipline of Mechanical, Manufacturing & Biomedical Engineering is your home Discipline and has 26 academic, 10 technical, three administrative staff, and 50 postgraduate research students. As a Discipline we have a well-deserved reputation for good teaching and research, but above all we take particular pride in being student friendly and in maintaining a good working atmosphere. So if you should experience any difficulties whether personal or academic, particularly in your first few weeks at TCD, do not hesitate to contact either of us, or indeed any other member of the academic staff. The intake of students into a degree programme is a very significant event for any Discipline. You are therefore a special and unique group of students who along with your lecturers will experience exciting changes over the next few years. Technology is changing at an ever increasing pace and this is particularly so within the field of engineering with management. Consequently over the next few years you will cover a course of study that will provide you with the knowledge to understand the fundamentals of engineering, science, and management, but more importantly you will develop skills that will enable you to use this knowledge in the rapidly changing environment of engineering with management. This degree programme is one of two accredited engineering degrees provided in TCD, and a lot of hard work has gone in, and continues to go in, to ensure its continued success. We have no doubt that if you work hard,

yet become involved and enjoy College life, you too will succeed. For our part, we will do our very best to assist you.

Enjoy the next 4 or 5 years here in TCD!

**Stephen Spence**

Head of Discipline

Mechanical, Manufacturing & Biomedical Engineering

**Daniel Trimble**

Academic Director

Engineering with Management

September 2023.

## 2. Contacts

Director of Engineering with Management Stream

Daniel Trimble (✉ [dtrimble@tcd.ie](mailto:dtrimble@tcd.ie))

Junior Sophister Co-ordinator

Professor Conor McGinn (✉ [cmcginn@tcd.ie](mailto:cmcginn@tcd.ie))

Senior Sophister Co-ordinator

Rocco Lupoi (✉ [lupoir@tcd.ie](mailto:lupoir@tcd.ie))

Erasmus / Unitech / Year Abroad Co-ordinator

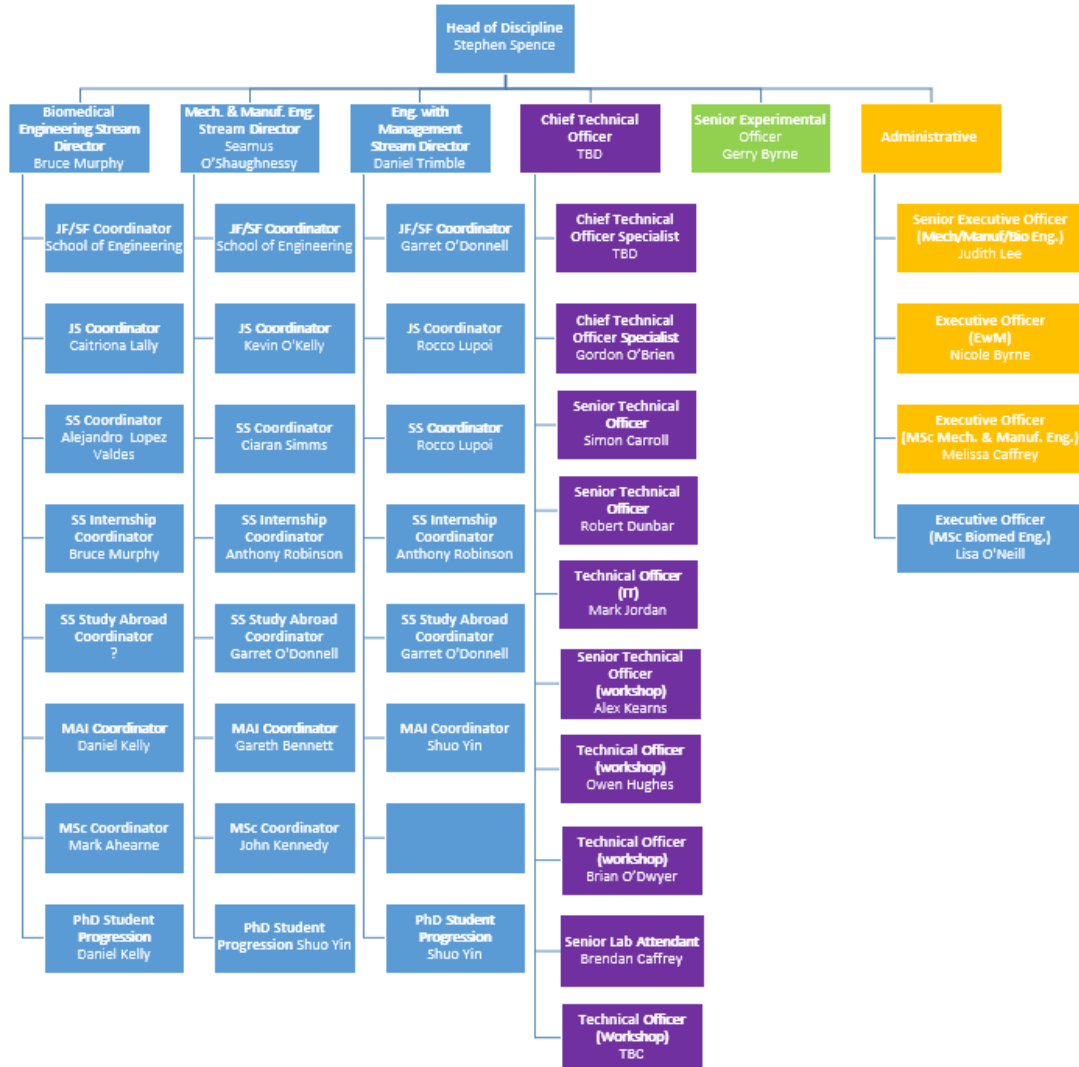
Professor Garret O'Donnell (✉ [odonnege@tcd.ie](mailto:odonnege@tcd.ie))

**Administrative contacts**

Nicole Byrne Executive Officer (Part-time) (✉ [nbyrne3@tcd.ie](mailto:nbyrne3@tcd.ie))

Judith Lee, Senior Executive Officer (✉ [julee@tcd.ie](mailto:julee@tcd.ie))

## 2.3 Discipline overview/structure



# 3. Key dates

## 3.1 Academic year calendar

### Academic Year Calendar 2023/24

Academic Calendar Week	Week beginning	2023/24 Academic Year Calendar		Term / Semester
		UG continuing years / PG all years	UG new first years	
1	28-Aug-23	Reassessment * (Semesters 1 & 2 of 2022/23)		← Michaelmas Term begins/Semester 1 begins
2	04-Sep-23	Orientation (Postgraduate, Visiting & Erasmus); Marking/Results		
3	11-Sep-23	Teaching and Learning		← Michaelmas teaching term begins
4	18-Sep-23	Teaching and Learning	Orientation (JF UG)	
5	25-Sep-23	Teaching and Learning	Teaching and Learning	
6	02-Oct-23	Teaching and Learning	Teaching and Learning	
7	09-Oct-23	Teaching and Learning	Teaching and Learning	
8	16-Oct-23	Teaching and Learning	Teaching and Learning	
9	23-Oct-23	Study/Review	Study/Review	
10	30-Oct-23	Teaching and Learning (Monday, Public Holiday)	Teaching and Learning (Monday, Public Holiday)	
11	06-Nov-23	Teaching and Learning	Teaching and Learning	
12	13-Nov-23	Teaching and Learning	Teaching and Learning	
13	20-Nov-23	Teaching and Learning	Teaching and Learning	
14	27-Nov-23	Teaching and Learning	Teaching and Learning	
15	04-Dec-23	Revision	Revision	
16	11-Dec-23	Assessment *	Assessment * ~	← Michaelmas term ends Sunday 17 December 2023/Semester 1 ends
17	18-Dec-23			
18	25-Dec-23	Christmas Period - College closed	Christmas Period - College closed	
19	01-Jan-24	22 December 2023 to 1 January 2024 inclusive	22 December 2023 to 1 January 2024 inclusive	
20	08-Jan-24	Foundation Scholarship Examinations ^	Foundation Scholarship Examinations ^	
21	15-Jan-24	Marking/Results	Marking/Results	← Hilary Term begins/Semester 2 begins
22	22-Jan-24	Teaching and Learning	Teaching and Learning	← Hilary teaching term begins
23	29-Jan-24	Teaching and Learning	Teaching and Learning	
24	05-Feb-24	Teaching and Learning (Monday, Public Holiday)	Teaching and Learning (Monday, Public Holiday)	
25	12-Feb-24	Teaching and Learning	Teaching and Learning	
26	19-Feb-24	Teaching and Learning	Teaching and Learning	
27	26-Feb-24	Teaching and Learning	Teaching and Learning	
28	04-Mar-24	Study/Review	Study/Review	
29	11-Mar-24	Teaching and Learning	Teaching and Learning	
30	18-Mar-24	Teaching and Learning (Monday, Public Holiday)	Teaching and Learning (Monday, Public Holiday)	
31	25-Mar-24	Teaching and Learning (Friday, Good Friday)	Teaching and Learning (Friday, Good Friday)	
32	01-Apr-24	Teaching and Learning (Monday, Easter Monday)	Teaching and Learning (Monday, Easter Monday)	
33	08-Apr-24	Teaching and Learning	Teaching and Learning	
34	15-Apr-24	Revision	Revision	← Hilary Term ends Sunday 21 April 2024
35	22-Apr-24	Trinity Week (Monday, Trinity Monday)	Trinity Week (Monday, Trinity Monday)	← Trinity Term begins
36	29-Apr-24	Assessment *	Assessment *	
37	06-May-24	Marking/Results (Monday, Public Holiday)	Marking/Results (Monday, Public Holiday)	
38	13-May-24	Marking/Results	Marking/Results	
39	20-May-24	Marking/Results	Marking/Results	
40	27-May-24	Research	Research	← Trinity Term ends Sunday 2 June 2024/Semester 2 ends
41	03-Jun-24	Research (Monday, Public Holiday)	Research (Monday, Public Holiday)	
42	10-Jun-24	Research	Research	
43	17-Jun-24	Research	Research	
44	24-Jun-24	Research	Research	
45	01-Jul-24	Research	Research	
46	08-Jul-24	Research	Research	
47	15-Jul-24	Research	Research	
48	22-Jul-24	Research	Research	
49	29-Jul-24	Research	Research	
50	05-Aug-24	Research (Monday, Public Holiday)	Research (Monday, Public Holiday)	
51	12-Aug-24	Research	Research	
52	19-Aug-24	Research	Research	

\* Note: additional/contingency days may be required outside of the formal assessment/reassessment weeks.  
 ~ Note: it may be necessary to hold a small number of JF examinations/assessments outside of semester 1.  
 ^ Note: it may be necessary to hold some examinations/assessments in the preceding week.



### **3.2 Teaching weeks**

Semester 1: 11 September to 1 December 2023 inclusive

Semester 2: 22 January to 12 April 2024 inclusive

### **3.3 Annual Assessment Sessions**

Semester 1: 11 – 16 December 2023 inclusive

Semester 2: 29 April – 4 May 2024 inclusive

#### **Re-assessment session**

To be confirmed, likely from 26<sup>th</sup> August 2024.

### **3.4 Submission dates for projects and coursework**

Individual staff will inform you of appropriate dates during their introductory lectures and will keep you informed via Blackboard of changes.

## 4. Key locations



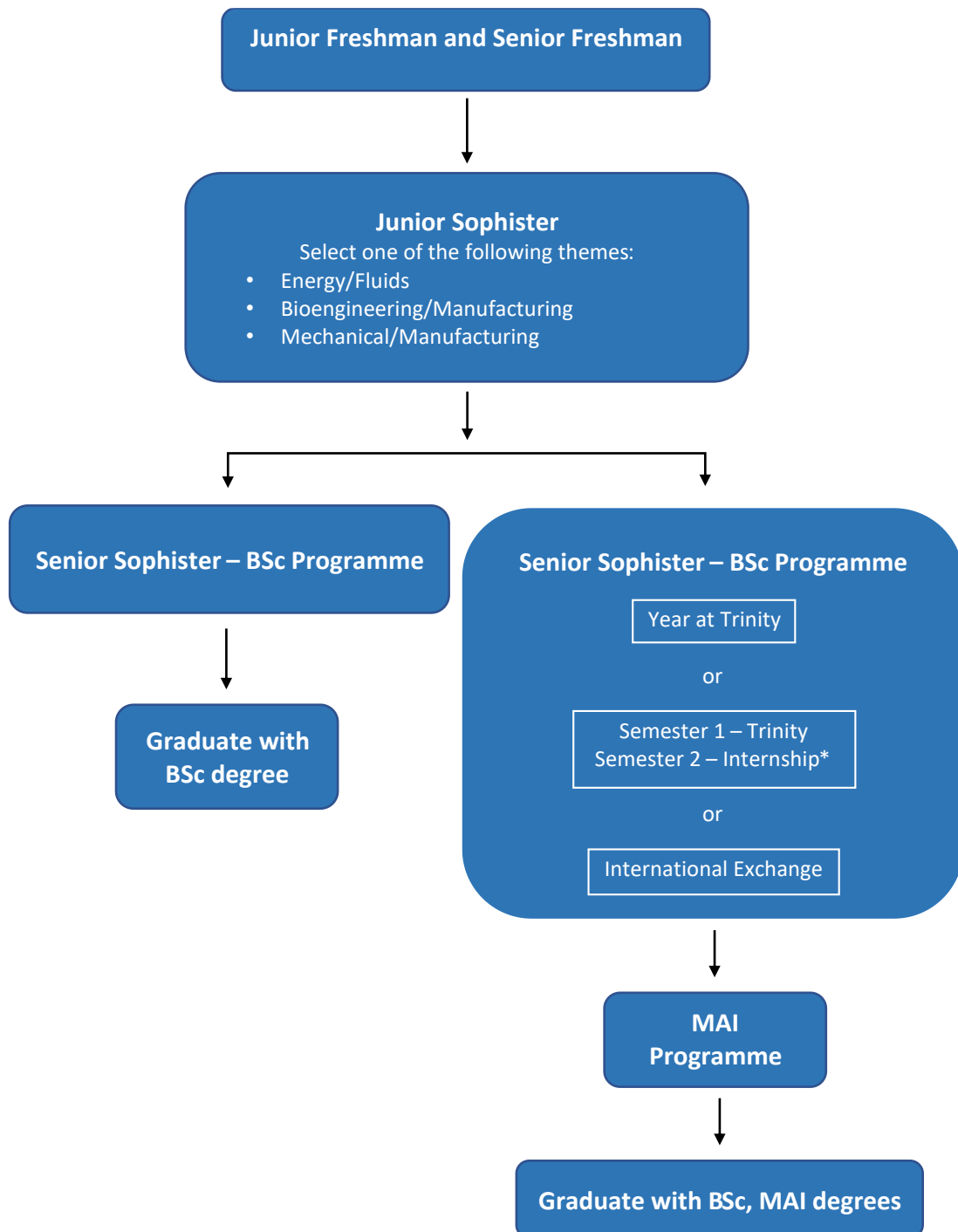
PARSONS

## 5. Timetable

<https://www.tcd.ie/Engineering/assets/student-resources/EM-Timetable-1-JF.pdf>

## 6. Programme overview

### 6.1 Engineering course structure



The integrated BSc(Ing)/MAI degree programme is professionally accredited by [Engineers Ireland](#) and meets the educational requirements for corporate membership of this professional institution and registration as a chartered engineer. Further information can be found [here](#).

## **6.2 Award routes**

### **6.2.1 MAI (integrated masters)**

Students must pay a tuition fee for the MAI year. More information is available [here](#). To be eligible to proceed to the fifth year of the M.A.I. programme, students in the Senior Sophister year must achieve a minimum overall BAI mark of 60 per cent for the combined Junior Sophister and Senior Sophister years (on a 30:70 basis) at the first attempt at the annual assessment session of the BSc degree year. Students eligible for MAI will be sent a list of available MAI projects at the end of the Senior Sophister year and asked to rank their preferences from 1 to 10. The allocation is made based on a student's Junior Sophister ranking.

## **6.3 Degree award routes**

### **6.3.1 BA**

Students who complete the third year by examination and who choose not to proceed to, or fail to complete satisfactorily, the fourth year of the Engineering with Management course may elect to be conferred with the ordinary degree of BA (this is not a BA in Mathematics).

### **6.3.2 BSc**

Awarded to those Engineering students who exit the course by fulfilling all 3 criteria below:

1. obtained the required credit for years 1 to 4 of the course.
2. successfully completed a Senior Sophister capstone project.
3. spent their final semester in the University of Dublin, Trinity College.

The BSc mark combines the average mark achieved in the Junior Sophister year (30% towards overall average) and the Senior Sophister year (70% towards overall average). Students on the MAI track who take the Senior Sophister internship and successfully complete the Senior Sophister year have previously, in some cases, been eligible to exit with the BA and BSc degrees following review by the Head of Discipline of Mechanical, Manufacturing, & Biomedical Engineering and the School of Engineering Director for Undergraduate Teaching & Learning (DUTL). However, this path to BA and BSc awards is under review for the academic 2023-24 and students are strongly discouraged from pursuing this path. Students risk having to do an additional capstone project to fulfil the award criteria detailed above.

### **6.3.3 MAI**

Awarded to those Engineering students admitted in 2016-17 onwards who exit the course by fulfilling all 3 criteria below:

1. obtained the required credit for years 1 to 5 of the course.
2. successfully completed a MAI capstone project.
3. spent their final semester in the University of Dublin, Trinity College.

#### **6.4 School of Engineering examination regulations**

Available on the School of Engineering website, or [here](#).

#### **6.5 External examiner**

Doctor Tanvir Hussain, University of Nottingham, UK

## 7. Stream learning outcomes

The Discipline's main objective with regard to the engineering with management programme is the pursuit of excellence in teaching and research in engineering with management with the central aim of producing graduate engineers with a capacity for independent thought in problem solving and creative analysis & design together with strong business and management context.

To achieve this, we must:

- instill in students an enthusiasm for the art and practice of Engineering contextualized by business and management principles
- teach the engineering science and mathematics which underpin the subject areas of Mechanical, Manufacturing & Biomedical Engineering
- demonstrate the application of these principles to the analysis, synthesis and design of engineering components and systems;
- foster the development of team working skills;
- encourage students to exercise critical judgement and develop the communication skills necessary to make written and oral presentations of their work.

These objectives are underpinned by:

- undertaking both basic and applied research
- building strong industry links in collaborative projects at graduate and undergraduate levels
- provision of advanced facilities for students to undertake graduate research degrees
- the development of academic staff in teaching and research by ensuring that adequate resources are available to assist them
- ensuring that the research work is of the highest international standard by participation in international conferences and publication in learned journals

In addition, we must consider the requirements of the relevant professional institutions and the needs of Irish and European industry in the undergraduate curriculum.

## 8. Graduate Attributes

Throughout their time at Trinity, our students will be provided with opportunities to develop and evidence achievement of a range of graduate attributes that support their academic growth. Graduate attributes can be achieved in academic and co- and extra-curricular activities.

### Trinity Graduate Attributes

#### To Act Responsibly

##### A Trinity Graduate

- Acts on the basis of knowledge and understanding
- Is self-motivated and able to take responsibility
- Knows how to deal with ambiguity
- Is an effective participant in teams
- Has a global perspective
- Is ethically aware

#### To Develop Continuously

##### A Trinity Graduate

- Has a passion to continue learning
- Builds and maintains career readiness
- Commits to personal development through reflection
- Has the confidence to take measured risks
- Is capable of adapting to change



#### To Think Independently

##### A Trinity Graduate

- Has a deep knowledge of an academic discipline
- Can do independent research
- Thinks creatively
- Thinks critically
- Appreciates knowledge beyond their chosen field
- Analyses and synthesises evidence

#### To Communicate Effectively

##### A Trinity Graduate

- Can present work through all media
- Is expert in the communication tools of a discipline
- Connects with people
- Listens, persuades and collaborates
- Has digital skills
- Has language skills

## 9. General programme information

### 9.1 Modules and module descriptors

In your studies you should aim to work a minimum of 50 hours per week. With a timetabled schedule of about 25 hours per week, this means you should be planning independent study of at least 25 hours per week. This includes reading course material prior to lectures – you should not expect to be given all the module material in the lectures and tutorials. The table below details the modules, credit value and coordinator.

Course Code	Module Title	ECTS	Semester	Coordinator
MAU11E01	Engineering Mathematics I	5	1	Patrick Fritzsich
MAU11E02	Engineering Mathematics II	5	2	Anthony Brown
<b>MEU11EM4</b>	Introduction to Computing	5	2	Kevin Kelly
PYU11E04	Physics	5	2	Stefan Hutzler
CHU11E05	Chemistry	5	1	Richard Hobbs
EEU11E06	Electrical Engineering	5	2	Naomi Harte
CEU11E07	Mechanics	5	2	Dermot O'Dwyer
<b>STU11004</b>	Introduction to Management Science	10	1&2	Susan Conolly
<b>MEU11EM1</b>	Introduction to Manufacturing	5	1	Rocco Lupoi
MEU11E12	Engineering Materials and Their Applications	10	1	Roger West

Module descriptors are available at the following link:

<https://www.tcd.ie/mecheng/engman/current/jf.php>



## **9.2 Laboratories**

Students are expected to keep a logbook recording the details of every experiment performed and to write a technical report about each experiment. Each student is required to submit her/his report neatly presented and by the date specified to avoid penalty. Guidelines as to the required length and format of each report will be specified by the lecturer concerned.

Laboratory groups and timetable will be published at the beginning of the semester. Please note that you must attend the particular laboratory sessions to which you have been assigned. Students cannot swap sessions because of the complexity of the timetable, the large numbers in the year and the limited accommodation available.

A no show at a lab may result in a zero mark even if a report is submitted. No report submitted may mean a zero mark even if the lab was attended. Labs cannot be taken in the summer/autumn periods if missed during the year.

**Laboratory Timetables:** Laboratory timetables will be forwarded to students via email and posted on the noticeboards in Parsons Building

## **9.3 Coursework requirements**

### **9.3.2 Policy on late submission**

Coursework and assessment is an essential part of a student's learning to reinforce aspects of module content. For all years and **ALL** modules within the Discipline of Engineering with Management the following applies:

#### **Individual Coursework**

1. Coursework received within two weeks of the due date will be graded, but a penalty will be applied

- Up to 1 week late = minus 15%
- From 1 week to 2 weeks late = minus 25%

2. Any submissions received two weeks after the due date will not be accepted and will receive a zero grade.

3. Submission dates may be extended in exceptional and extenuating circumstances. Students must apply directly (via email) to the module coordinator requesting an extension and provide an explanation and/or evidence for such (e.g. medical cert). Please note that the module coordinator reserves the right to refuse granting of an extension.

### **Group Coursework**

1. The same penalties for late submissions will apply to group coursework as outlined for “Individual Coursework”.
2. In addition, certain modules may also adopt an additional grading scheme whereby group projects/assignments will be graded as a function of lecture attendance. Please consult module coordinator.

### **9.3.3 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 may be required by the Senior Lecturer to repeat the year.

Further details of the procedure for reporting a student as non-satisfactory can be viewed on the [College Undergraduate Studies](#) website.

## 10 Prizes and Scholarships

### 10.1 Foundation Scholarship

Foundation Scholarship is a College institution with a long history and high prestige. The objective of the Foundation Scholarship examination is to identify students who, at a level of evaluation appropriate to the Senior Freshman year, can consistently demonstrate exceptional knowledge and understanding of their subjects.

The questions that are asked in the engineering scholarship exams are very challenging. They test a student's ability to think laterally, to solve unfamiliar problems and to tackle problems from first principles. Although the syllabi for the scholarship exams and the end of year exams are the same, the nature of the questions in the scholarship exams is more challenging. A good scholarship question will require a creative leap or a deep insight of the fundamental principles. The most important skill that is developed in an engineering education is problem solving. The most difficult problems to solve are those that are unfamiliar, that require a fundamental understanding of the basic principles and that require the student to make a creative or innovative leap.

Senior Freshman Engineering with Management students take the following three-hour exams:

- Engineering Science I: General mathematics, management and computer science
- Engineering Science II: General mechanics and materials
- Engineering Science III: General manufacturing and electricity

Further information is available at the following link:

<https://www.tcd.ie/Engineering/undergraduate/foundation/>.

## **10.2 Prizes**

### **BOOK PRIZES**

A prize of a book token to the value of €13 is awarded to candidates who obtain a standard equivalent to an overall first class honors grade (70% and above) at the first attempt of the semester 1 and semester 2 assessment. Book Prizes will be available for collection in November of the following academic year from the Academic Registry. These prizes are issued in the form of book tokens and can be redeemed at Hodges Figgis and Co. Ltd.

### **E.R. STUART PRIZE IN ENGINEERING**

This prize, established in 1982 from funds subscribed by colleagues to mark Mr E. R. Stuart's retirement, is awarded to the first-year engineering student who is judged by the School of Chemistry to have given the best performance in the first-year engineering chemistry module of that year. Value, €200.

### **VICTOR W. GRAHAM PRIZES**

These prizes, founded in 1986 from funds subscribed by friends and pupils to mark Mr V.W. Graham's retirement, are awarded to the first-year engineering student who obtains the highest marks in engineering mathematics (modules 1E1 and 1E2) at the annual class examination and to the second-year engineering student who obtains the highest mark in engineering mathematics (modules 2E1 and 2E2) at the regular annual class examination. Value, first year prize €750, second year prize €1,000.

## **10.3 Scholarships**

### **KINSELLA SCHOLARSHIP**

This scholarship was established in 2016 by Barbara and Eric Kinsella, Chairman of Jones Engineering Group. The scholarships are awarded to students in their Senior Freshman year. Valued at €5,000 per annum, each scholarship will be renewed annually for the duration of the student's studies. The scholarships will be awarded on the basis of marks obtained in the Engineering Project Design modules with selected students being invited to go forward to an interview stage.

Preference will be given to candidates not already holding scholarship awards of significant value.

## **11. Health and Safety**

It is the Department's policy to ensure, in so far as possible, the health, safety and welfare of all its staff and students in accordance with the College Safety Policy, the Safety, Health and Welfare at Work Act of 2005 and relevant, later, subsidiary legislation and statutory instruments. All reasonable steps will be taken to ensure that no persons – be it staff, students, or others – health, safety and welfare is put at risk by, or as a result of the activities of the Department.

Students are expected to co-operate by taking proper care for their own health and safety and the safety of others who may be affected by their acts or omissions. Students are expected to follow any instructions in safe practices and procedures and ensure they do not intentionally or recklessly interfere or misuse anything provided in the interest of health safety and welfare. Failure to comply with safe procedures or instructions may result in the commencement of disciplinary procedures by the college.

The Safety, Health and Welfare at Work Act 2005 requires that you take all precautions, as far as is reasonably practicable, to avoid endangering yourself or others by your activities. The Health and Safety Statement and Codes of Practice for the Department areas are set out in the MMBE Safety Statement. <https://www.tcd.ie/mecheng/safetystatement/safety-statement/> You are required to read, understand, and abide by them. **You must also complete the Safety Statement Acknowledgement Form. Students and staff will be excluded from all laboratories and workshops until they have completed this Acknowledgement.**

The Departmental Safety Statement supplements the University Safety Statement and University Policies which are accessible on the Trinity College Dublin's website.

## 11.1 Risk Assessments

All members of the college must carry out a risk assessment where their work has the potential for harm to themselves and others.

All experimental work requires a risk assessment that:

- includes and addresses any potential hazard, including lone working.
- is updated if there is a significant change to experimental equipment or procedures.
- is reviewed and updated annually.
- is signed by the responsible PI/supervisor.

Preferably, your risk assessments will be included in a Project Safety Statement. The Project Safety Statement will include but is not limited to the following;

- Title block
- Student & Lab info
- Emergency contacts
- Overview of project
- Registered users form
- Activity details
- SOPs
- Safety Data Sheets
- Risk Assessments
  - in 5x5 format

Some projects may require multiple risk assessments. Completed Project Safety Statements should be uploaded to the Projects SharePoint. Previous examples can be found on SharePoint.

## **11.2 New Hazard Safety Document**

This document is required for new High-Risk Hazards such as Chemicals, Compressed Gas, Cryogenics, etc. The document should provide an overview of the hazard (why the hazard is required, hazard location, duration the hazard is required for, etc.).

Additionally, an in-depth account of the hazard should include safety information and documentation, MSDS and any additional safety documentation relevant to the hazard. All new hazards will require risk assessments and approval.

## **11.3 After Hours Working**

It is now compulsory to use the SafeZone App while in MMBE labs or offices outside of normal working hours. The normal working hours for the Department are 8am to 5pm, Monday to Friday. Outside of MMBE normal working hours, the use of SafeZone app is mandatory. Extended hours for the Department are 5pm to 10pm, Monday to Friday and 10am to 4pm Saturday and Sunday. There will be no access to Parsons Building outside of these hours.

Working on experimental systems (or machinery) outside normal working hours is not permitted without prior authorization of the project supervisor (or person-in-charge) after he/she has conducted a full assessment of risk and devised a safe system of work.

No staff member, postdoctoral worker or student will be permitted to carry out experimental or technical work of any kind in the Department at any time outside normal working hours unless there is another person close by, who is aware of their presence so that they can summon assistance in the event of an accident.

Isolated individuals must never carry out potentially hazardous work or activities and should apply for Lone Working approval.

Please download the SafeZone app and see the University lone working policy and the MMBE Protocol for After Hours Working.

## 11.4 General Safety Action

When you enter a building in the University, MMBE or otherwise:

- Find out how to get out in an emergency.
- Know the location of the emergency evacuation assembly point.
- Know where the nearest alarm call point is.
- Read the hazard information signs (fire, first aid, chemical, biological, radiation, laser etc.).
- Emergency numbers are:
  - 1999 or 01 8961999 – Main Campus
  - 3999 or 01 8963999 – TBSI

## 11.5 Fire Action

**What to do if you discover a fire:**

- Raise the alarm at the nearest break glass unit or alarm call point.
- Leave your building immediately using the nearest exit route.
- Do not use lifts.
- Close doors behind you as you leave.
- Do not take risks.
- Notify Security at 1999 or mobile 01 896 1999, informing them that the alarm has been raised and in which area. TBSI numbers are: 3999 or 01 8963999.
- Notify a Fire Warden of your findings if there is one outside the building.
- Report to your designated Assembly Point, do not congregate at the building entrance.
  - **Parsons Building & SNIAM** **Point D**
    - Grass triangle ('Flat Iron') at east end of Boardwalk (College Park).
  - **WATTS** **Point E**
    - Between the Lloyd and O'Reilly Buildings, near the Arches.



○ **TBSI**

**Points G and F**

- To the sides of the Institute on Cumberland St South and Sandwich Street.

**What to do if the fire alarm sounds**

- Obey, promptly, all instructions given by the Fire Wardens/Safety Officer.
- Leave your building immediately using the nearest exit route.
- Do not use lifts.
- Close doors behind you as you leave.
- Do not take risks.
- Move away from the building.
- Report to your designated Assembly Point, do not congregate at the building entrance.
- Do not re-enter building for any reason until authorised to do so and fire alarm is switched off.



## 11.6 First Aid

First Aid will not take the place of professional treatment. In the case of minor injuries such as cuts or burns, assistance may be sought from members of the Department who possess a qualification in First Aid. For serious injuries during normal office hour's emergency medical attention can be obtained from the University Health Services by contacting Ext. 1556.

Updated lists of first aiders in the Department are located near first aid boxes installed throughout the Department. Make sure to familiarise with the location of the nearest first aid box.

Current MMBE first aiders can be contacted through the Mechanical workshop.

Should the local first aiders be unavailable then the emergency services can be contacted on Ext. 1999 for the Main campus or 3999 for the TBSI building.

## 11.7 MMBE Safety Contacts

### First Aid

- Mr. Michael Reilly ext. 1557
- Mr. Alex Kearns ext. 1463 (workshop)

### MMBE Safety Officer

- Mr. Gordon O'Brien ext. 2396 email: [gordon.obrien@tcd.ie](mailto:gordon.obrien@tcd.ie)

Specialist Safety Area contacts (Chemical, Laser, Electrical, Fire Wardens, etc.) and University Safety contacts can be found in Section 6 of the MMBE Safety Statement.

## 11.7 Safety Links

### MMBE Website Safety Section

- <https://www.tcd.ie/mecheng/safetystatement/>

### Projects SharePoint Safety Section

- <https://tcdud.sharepoint.com/sites/TCDGroup-PeterandGerry/Safety/Forms/AllItems.aspx>

### SafeZone App

- <https://safezoneapp.com/>

### MMBE Lone and Out-of-Hours Working Policy

- <https://www.tcd.ie/mecheng/safetystatement/mmbe-lone-and-out-of-hours-working/>

### Risk Assessments

- <https://www.tcd.ie/mecheng/safetystatement/risk-assessments/>
- <https://tcdud.sharepoint.com/:f:/r/sites/TCDGroup-PeterandGerry/Safety/Sample%20Risk%20Assessments?csf=1&web=1&e=Fwjfe3>

### Risk Assessment / Project Safety Statement Upload

- <https://tcdud.sharepoint.com/:f:/r/sites/TCDGroup-PeterandGerry/Safety/Completed%20Risk%20Assessments?csf=1&web=1&e=oN6i3X>

University Safety Office

- <https://www.tcd.ie/safetyoffice/>

If you are working in Trinity Centre for Bioengineering Laboratories in Trinity Biomedical Sciences Institute, please contact Mr Simon Carroll, Senior Technical Officer at [scarrol6@tcd.ie](mailto:scarrol6@tcd.ie) to complete necessary Health and Safety paperwork prior to completing any laboratory work.

Please ensure you comply with the instructions given in these important documents. Failure to behave in a safe manner may result in you being refused the use of discipline facilities.

## 12. Student Supports

Trinity College provides a wide range of [personal and academic supports](#) for its students.

### 12.1 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/>

### 12.2 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](mailto:student-counselling@tcd.ie)

Web: [http://www.tcd.ie/Student\\_Counselling](http://www.tcd.ie/Student_Counselling).

### **12.3 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/>

### **12.4 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](mailto:brunns@tcd.ie); tel: 01 896 1402

Julian Hamilton (Methodist Chaplain): [julian.hamilton@tcd.ie](mailto:julian.hamilton@tcd.ie); tel: 01 896 1901

Alan O'Sullivan (Catholic Chaplain): [aeosulli@tcd.ie](mailto:aeosulli@tcd.ie); tel: 01 896 1260

Peter Sexton (Catholic Chaplain): [sextonpe@tcd.ie](mailto:sextonpe@tcd.ie); tel: 01 896 1260

Web: <https://www.tcd.ie/Chaplaincy/>

### **12.5 Trinity Disability Service**

Declan Treanor, Disability Services Coordinator

Room 3055, Arts Building

Email: [mdtreanor@tcd.ie](mailto:mdtreanor@tcd.ie)

Tel: 01 896 3475

Web: <https://www.tcd.ie/disability/>

### **12.6 Niteline**

A confidential student support line run by students for students which is open every night of term from 9pm to 2.30am.

Tel: 1800 793 793

Web: <https://niteline.ie/>

## **12.7 Students' Union Welfare Officer**

House 6, College

Email: [welfare@tcdsu.org](mailto:welfare@tcdsu.org)

Web: <https://www.tcdsu.org/welfare>

## **12.8 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 Helproom 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](https://www.maths.tcd.ie/Info_for_Schools/Maths_Helproom.php)

## **12.9 Undergraduate Programming Centre**

The Programming Centre is available to all Computer Engineering students free of charge. The centre operates as a drop-in service where you can get help with any problems you might have with programming in your courses.

For further information, please visit <http://www.scss.tcd.ie/ugpc/>.

## **12.10 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/>.

## **12.11 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](mailto:student2student@tcd.ie). Web:

<https://student2student.tcd.ie/peer-support/>.

### **12.13 Trinity Careers Service**

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

- Visit <https://www.tcd.ie/Careers/> for career and job search advice
- Sign into [MyCareer](#) to book appointments, find information about vacancies and bursaries, and book your place on upcoming employer events.
- Follow the service on Instagram for career news and advice [@trinity.careers.service](#)

### **12.14 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 [http://www.tcd.ie/Sport/student-sport/ducac/?nodeId=94&title=Sports\\_Clubs](http://www.tcd.ie/Sport/student-sport/ducac/?nodeId=94&title=Sports_Clubs) for more details.

### **12.15 Trinity College Students' Union**

The Trinity College Students' Union (TCDSU) is run for 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/>.

## 13. General Regulations

### 13.1 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 provide 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:

*18 Students must attend College during the teaching term. They must take part fully in the academic work of their class throughout the period of their course. Lecture timetables are published through my.tcd.ie and on school or department notice-boards before the beginning of Michaelmas teaching term. The onus lies on students to inform themselves of the dates, times and venues of their lectures and other forms of teaching by consulting these timetables.*

*19 The requirements for attendance at lectures and tutorials vary between the different faculties, schools and departments. Attendance is compulsory for Junior Freshers in all subjects. The school, department or course office, whichever is relevant, publishes its requirements for attendance at lectures and tutorials on notice-boards, and/or in handbooks and elsewhere, as appropriate. For professional reasons lecture and tutorial attendance in all years is compulsory in the School of Engineering, the School of Dental Science, the School of Medicine, the School of Nursing and Midwifery, the School of Pharmacy and Pharmaceutical Sciences, for the B.S.S. in the School of Social Work and Social Policy, and for the B.Sc. in Clinical Speech and Language Studies. Attendance at practical classes is compulsory for students in all years of the moderatorship in drama and theatre studies and drama studies two-subject moderatorship.*



*20 In special circumstances exemption from attendance at lectures for one or more terms may be granted by the Senior Lecturer; application for such exemption must be made in advance through the tutor. Students granted exemption from attendance at lectures are liable for the same annual fee as they would pay if attending lectures. Students thus exempted must perform such exercises as the Senior Lecturer may require. If these exercises are specially provided, an additional fee is usually charged.*

*21 Students who in any term have been unable, through illness or other unavoidable cause, to attend the prescribed lectures satisfactorily, may be granted credit for the term by the Senior Lecturer and must perform such supplementary exercises as the Senior Lecturer may require. The onus for informing the Senior Lecturer of illness rests with individual students who should make themselves familiar with the general and more detailed school or course regulations regarding absence from lectures or examinations through illness. In addition, issues with students may arise from time to time, which in the opinion of the Senior Lecturer affect a student's ability or suitability to participate in his or her course. If required by the Senior Lecturer, students (other than those subject to §28 below) are obliged to undergo a medical examination or assessment by a doctor or specialist nominated by the Senior Lecturer at the expense of the College for the purpose of obtaining an opinion as to the student's medical fitness to continue with his/her studies or as to his/her ability or suitability to participate in his/her course to the standards required by the College. Students found to be unfit following such a medical examination or assessment may be required to withdraw until such times as they are deemed fit to resume their studies. Students who fail to attend such a medical examination or assessment within a reasonable period may be required by the Senior Lecturer to withdraw until such time as they attend the aforementioned medical examination or assessment and are deemed fit to resume their studies.*

*22 Students who are unable to attend lectures (or other forms of teaching) due to their disability should immediately contact the Disability Service to discuss the matter of a reasonable accommodation. Exceptions to*

*attendance requirements for a student, on disability grounds, may be granted by the Senior Lecturer following consultation with the student's school, department or course office, and the Disability Service.*

*23 Students who find themselves incapacitated by illness from attending lectures (or other forms of teaching) should immediately see their medical advisor and request a medical certificate for an appropriate period. Such medical certificates should be copied to the school, department or course office, as appropriate, by the student's tutor.*

#### *Course work*

*24 Students may be required to perform course work as part of the requirements of their course of study. The assessment of course work may be based on the writing of essays, the sitting of tests and assessments, attendance at practical classes and field trips, the keeping and handing in of practical books, the carrying out of laboratory or field projects, and the satisfactory completion of professional placements. The school, department or course office, whichever is appropriate, publishes its requirements for satisfactory performance of course work on school notice-boards and/or in handbooks and elsewhere, as appropriate.*

#### *Non-satisfactory attendance and course work*

*25 All students must fulfil the course requirements of the school or department, as appropriate, with regard to attendance and course work. Where specific requirements are not stated, students may be deemed non-satisfactory if they miss more than a third of their course of study or fail to submit a third of the required course work in any term.*

*26 At the end of the teaching term, students who have not satisfied the school or department requirements, as set out in §§19, 24 and 25 above, may be reported as non-satisfactory for that term. Students reported as non-satisfactory for the Michaelmas and Hilary terms of a given year may be refused permission to take their annual examinations and may be required by the Senior Lecturer to repeat their year. Further details of*

procedures for reporting a student as non-satisfactory are given on the College website at:

<https://www.tcd.ie/undergraduate-studies/academic-progress/attendance-course-work.php>

### **13.2 Absence from examinations**

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

*35 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 tutor within three days of the beginning of the period of absence from the examination. The tutor must immediately forward the certificate to the Senior Lecturer. Medical certificates must state that the student is unfit to sit examinations. Medical certificates will not be accepted in explanation for poor performance.*

*(a) Where a student becomes ill prior to the commencement of the annual examination, they may seek permission through their tutor from the Senior Lecturer to withdraw and take the supplemental examination in that year.*

*(b) Where illness prevents a student from completing any part of the annual examination and they withdraw from the examination, permission may be given for a supplemental examination to be taken in that year.*

*(c) Where illness occurs during the writing of an examination paper, it should be reported immediately to the chief invigilator. The student will then be escorted to the College Health Centre. Every effort will be made to assist the student to complete the writing of the examination paper.*

*Students who consider that other grave cause beyond their control may prevent them from attending an examination (or any part thereof) should consult their tutor who should make representations immediately to the Senior Lecturer that permission be granted for absence from the examination. Regulations (a) and (b) also apply in the case of absence from annual examinations due to other grave cause beyond a student's control.*

*Regulations (a) and (b) apply only to examinations which are non-final non-degree examinations. However, regulations (a) and (b) apply in all years of those professional courses which permit supplemental examinations in final or degree years.*

### **13.3 Plagiarism**

In the academic world, the principal currency is *ideas*. As a consequence, you can see that *plagiarism* – i.e. passing off other people’s ideas as your own– *is tantamount to theft*. It is important to be aware the plagiarism can occur knowingly or unknowingly, and the offence is in the action not the intent.

Plagiarism is a serious offence within College and the College’s policy on plagiarism is set out in a central online repository hosted by the Library which is located at [http://tcd- ie.libguides.com/plagiarism](http://tcd-ie.libguides.com/plagiarism). This repository contains information on what plagiarism is and how to avoid it, the College Calendar entry on plagiarism and a matrix explaining the different levels of plagiarism outlined in the Calendar entry and the sanctions applied.

Undergraduate and postgraduate new entrants and existing students, are required to complete the online tutorial ‘**Ready, Steady, Write**’. Linked to this requirement, all cover sheets which students must complete when submitting assessed work, must contain the following declaration:

**I have read and I understand the plagiarism provisions in the General Regulations of the University Calendar for the current year, found at: <http://www.tcd.ie/calendar>**

**I have also completed the Online Tutorial on avoiding plagiarism ‘Ready, Steady, Write’, located at [http://tcd- ie.libguides.com/plagiarism/ready-steady-write](http://tcd-ie.libguides.com/plagiarism/ready-steady-write)**

Plagiarism detection software such as “Turnitin” and Blackboard’s

“SafeAssign” may be used to assist in automatic plagiarism detection. Students are encouraged to assess their own work for plagiarism prior to submission using this or other software.

### **13.4 University regulations, policies and procedures**

Academic Policies - <https://www.tcd.ie/teaching-learning/academic-policies/>

Student Complaints Procedure -

[https://www.tcd.ie/about/policies/160722\\_Student%20Complaints%20Procedure\\_PUB.pdf](https://www.tcd.ie/about/policies/160722_Student%20Complaints%20Procedure_PUB.pdf)

Dignity and Respect Policy - <https://www.tcd.ie/equality/policy/dignity-respect-policy/>

### **13.5 Data protection**

A short guide on how College handles student data is available here:

[https://www.tcd.ie/info\\_compliance/data-protection/student-data/](https://www.tcd.ie/info_compliance/data-protection/student-data/)

## **14. General Information**

### **14.1 Feedback and evaluation**

The Staff/Student Liaison Committee meets once a semester to discuss matters of interest and concern to students and staff. It comprises class representatives from each year. A programme level survey is issued online to students towards the end of semester 2.

### **14.2 European Credit Transfer System (ECTS)**

The European Credit Transfer and Accumulation 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 effort 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, and so on as appropriate. There is no intrinsic relationship between the credit volume of a 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 effort, so a 5-credit module will be designed to require 100-125 hours of student effort 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-year visiting students, who are awarded credit for individual modules successfully completed.

### 14.3 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.

#### Guidelines on Grades for Essays and Examination Answers

Mark Rang	Criteria
90-100	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.
80-89	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
70-79	MAINLY OUTSTANDING ANSWER; falls short on presentation and reading or thought beyond the course but retains insight and originality typical of first class work.
65-69	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.
60-64	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
55-59	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

50-54	INCOMPLETE ANSWER; suffers from significant omissions, errors and misunderstandings, but still with understanding of main concepts and showing sound knowledge. Several lapses
45-49	WEAK ANSWER; limited understanding and knowledge of subject. Serious omissions, errors and misunderstandings, so that answer is no more than adequate.
40-44	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.
35-39	MARGINAL FAIL; inadequate answer, with no substance or understanding, but with a vague knowledge relevant to the
30-34	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.
0-29	UTTER FAILURE; with little hint of knowledge. Errors serious and absurd. Could also be a trivial response to the misinterpretation of a question.



#### **14.4 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 contact in their phone under ICE (in Case of Emergency).