



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

Department of Mechanical &  
Manufacturing Engineering

# Senior Sophister Handbook 2015–2016



## **Mission Statement**

The Department's main objective is the pursuit of excellence in teaching and research in Mechanical & Manufacturing Engineering with the central aim of producing graduate engineers with a capacity for independent thought in problem solving and creative analysis & design.

### To achieve this, we must:

- instil in students an enthusiasm for the art and practice of Engineering;
- teach the engineering science and mathematics which underpin the subject areas of Mechanical & Manufacturing 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
- 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
- the needs of Irish and European industry in the undergraduate curriculum

## **TABLE OF CONTENTS**

	<b>PAGE</b>
Note on Handbook	4
Introduction	4
Year Overview	5
Modules	7
Facilities	9
Senior Sophister Internships	10
Prerequisite Modules	10
Examinations & Assessments	13
College Regulations	13
European Credit Transfer System (ECTS)	14
Attendance & Non-satisfactory Attendance	14
Key Dates 2015/2016	16
Student Information System	16
Academic Year Structure 2015/2016	17
Module Descriptions	18
Plagiarism	25
Anonymous Marking	25
Student Disability Office	26
College Health Service	26
S2S Peer Support	27
Safety in the Department	27
Industrial Visits	28
Student Liaison	28
Lecture Timetable	29
Tutorial Timetable / Laboratory Timetable	30
TCD Orientation Tube Map	31
Departmental Staff	32

## **A NOTE ON THIS HANDBOOK**

This handbook applies to all students taking SS Mechanical and Manufacturing Engineering. It provides a guide to what is expected of you on this programme and the academic and personal support available to you. Please retain for future reference.

The information provided in this handbook is accurate at time of preparation. Any necessary revisions will be notified to students by e-mail. Please note that, in the event of any conflict or inconsistency between the General Regulations published in the University Calendar and information contained in course handbooks, the provisions of the General Regulations will prevail.

## **INTRODUCTION**

Welcome back to the Department for your fourth year of study in College. This is an extremely important year for you all and it will be a busy one. Outlined below is some information and advice to help you through. We hope you enjoy your year and wish you all success in your exams and in the future. It is extremely important that you organise and use your time responsibly and effectively. What follows are some rough guidelines to help you to do this. If you are doing a project, you should get started immediately and spend at least 8-10 hours/week in the first semester ensuring that you can achieve a reasonable level of success. This does not mean that you neglect your lecture modules and laboratory/assignment work. In general, you should aim to work for about 40 hours/week. With about 24 hours timetabled, this means a minimum of 16 hours of private study. Otherwise, continue the other well serving techniques that you will have perfected in your JS year.

## **YEAR OVERVIEW**

### **BAI stream**

SS students who have not opted to progress to the MAI programme take modules equating to 45 ECTS and undertake an individual final year project worth 15 ECTS. Students must take 4E1 Management for Engineers and 4B7 Computer Aided Engineering, both of which run in the first semester, and a further seven 5 ECT modules spread over the two semesters. **First semester modules will be examined in January 2016.** The final year project dissertation must be submitted in March 2016 (**date to be confirmed**).

### **MAI stream**

Note:

**Should students wish to undertake the fifth year for the M.A.I. degree, fees will apply.**

Eligible students who have elected to complete the MAI programme follow one of three modes.

### **Mode 1**

Students spend both semesters in Trinity College. In the first semester students take 4E1 Management for Engineers and 4B7 Computer Aided Engineering, and a further fifty ECT credits worth of modules spread over the two semesters.

### **Mode 2**

Students spend one semester in Trinity College taking a total of six modules including 4E1 Management for Engineers and 4B7 Computer Aided

Engineering. However, in the other semester, students complete an industry-based project. This project is worth 30 ECTs and represents a substantial body of work. Students following this mode will have two project supervisors: a staff member of the host industry, and a member of the Department's teaching staff.

### **Mode 3**

Students may opt to spend the fourth year on the Cluster / Unitech programme in a partner University or on an Erasmus exchange.



## **SENIOR SOPHISTER MODULES**

A detailed syllabus for each of the modules taken by students in the Department is available on the School of Engineering website

(<https://www.tcd.ie/Engineering/undergraduate/baiyear4/mechanical/>).

Modules undertaken by Senior Sophister students in the Department in 2015/2016 are listed below.

**\*Note that the availability of modules, or combinations of modules, is subject to departmental resources, timetabling constraints and sufficient student numbers.**

4E1	Management for Engineers	(5 credits)
4E2	Engineering Project	(15 credits)
4E5	Innovation in Product Development	(20 credits)
4B1	Mechanics of Solids	(5 credits)
4B2	Forensic Materials Engineering	(5 credits)
4B3	Thermodynamics	(5 credits)
4B4	Heat Transfer	(5 credits)
4B5	Manufacturing Technology	(5 credits)
4B6	Manufacturing Systems & Project Management	(5 credits)
4B7	Computer Aided Engineering	(5 credits)
4B9	Mechatronics & Systems	(5 credits)
4B12	Acoustics	(5 credits)
4B13	Fluid Mechanics 2	(5 credits)
4B17	Multibody Dynamics	(5 credits)

4B19 Biomechanics	(5 credits)
4B20 Biomaterials	(5 credits)
4A8 Transportation	(5 credits)

In fourth year (Senior Sophister), all students are required to take 4E1 Management for Engineers and 4B7 Computer Aided Engineering. Students completing their studies at the end of their Senior Sophister year must also be registered for 4E2 Mechanical Engineering Project and seven other modules (4E5 is not available to these students). Students intending on continuing with their studies to the M.A.I. degree must take fifty credits worth of modules from among those offered.

The SS modules offered reflect the very wide research and technological interests of the academic staff. There will be small group tutorials for all subjects organised by staff and teaching assistants. Each module has at least one laboratory session or assignment, to ensure students have the capacity to apply the theoretical knowledge gained in coursework to practical systems. In addition, the project (4E2), undertaken under the direct supervision of a member of staff, represents a significant element of the work load for those students exiting with the B.A.I. A preliminary report on the project is written at the end of the first semester, with an oral presentation of the project being made during the second semester. Professor Craig Meskell is the 4<sup>th</sup> Year Project Co-ordinator. Further details are included in the module descriptors.



## **FACILITIES**

The Department is located in the Parsons Building. The modules in the Sophister years are supplemented by a full programme of laboratory work. The laboratories are well equipped for undergraduate work and, in addition, we have extensive research facilities, which are available for project work. The Department has its own well-equipped workshops and technicians to support project work. It is critical that you develop good lines of communication with the Chief Technician, Mr. Mick Reilly, in order to have your workshop requests serviced in a timely and professional manner. The two Computer Applications Laboratories are administered by Mr. John Gaynor and house state of the art workstations, which are used extensively for taught modules and project work in fourth year. In general, students are encouraged to make use of these facilities though they will be unavailable at certain times when classes take place.

## **SENIOR SOPHISTER INTERNSHIPS**

### **TRINITY-INTERNSHIP PARTNERSHIP PROJECTS IN ENGINEERING**

<b>Module Title:</b>	<b>4E4 Trinity-Internship Partnership Project</b>
<b>Code:</b>	<b>ME4E4</b>
<b>Level:</b>	<b>Senior Sophister (Integrated Engineering)</b>
<b>Credits:</b>	<b>30</b>
<b>Semester:</b>	<b>2</b>
<b>Co-ordinator:</b>	<b>Professor Garret O Donnell (<a href="mailto:ODONNEGE@tcd.ie">ODONNEGE@tcd.ie</a>)</b>
<b>Supervisors:</b>	<b>To be agreed on project case basis</b>

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4E4.pdf>

---

### **PREREQUISITE MODULES**

The MAI programme is structured to facilitate delivery of higher-level content through prerequisite modules. The term 'prerequisite' indicates a module which it is strongly recommended to complete prior to engaging a new one. Only in exceptional circumstances will a student be permitted not to complete prerequisite modules. Some of the fourth year modules are prerequisites for some of the fifth-year modules and some MAI projects in the different disciplines. In general, it will not be possible to take fifth-year modules or MAI projects without having completed the required prerequisites for these activities (see module descriptors for details). Accordingly, for students opting for a placement in their fourth year, or for those following Unitech/Erasmus or

another period of study abroad, it will be necessary to ensure prerequisites are met for a suitable set of modules and the project work in the fifth-year.

Meeting the prerequisites in cases where a student opts for a placement in their fourth year, or for those following Unitech/Erasmus or another period of study abroad might be achieved by:

1. in the case of a half-year placement, the student taking the prerequisite modules for their intended fifth-year modules/project work in the semester they spend at College (this will generally be the first semester). Prerequisite modules will, where possible, be timetabled for the first semester.
2. in the case of a period of study abroad, the student taking modules equivalent to the prerequisites for their intended fifth-year modules/project work during their period of study abroad in their fourth year
3. by the student taking only fifth-year modules/projects which do not have prerequisites
4. by student taking fourth year prerequisite modules in the first semester of their fifth-year. However, for the latter option, since this would be on a case-by-case basis, the timetable cannot be specifically arranged to facilitate this.

In relation to point 4, the following guidelines apply across all stream of the M.A.I.:

“To enable an appropriate fifth-year study plan for all students who go on internship in the second semester of their fourth year and for those students who have studied abroad for all or part of their fourth year, it will be allowable in some circumstances for fifth-year students to take **up to 10 ECTS** of appropriate fourth-year modules. These modules must be chosen so as to strengthen their chosen area of specialism and, where possible, also support their fifth-year project work. The choice of modules for the fifth-year for all students intending on going on internship should be made with the agreement

of the Head of Discipline or his/her delegate. Note: timetabling requirements will prevail and may prevent particular combinations of modules which are acceptable from an academic perspective. In these limited cases where fifth-year students do take some fourth year modules (up to a maximum of 10 ECTS), different assessment procedures will apply, and hence different module codes and MAPS will be needed. In general, the pass requirement for fifth-year students will be 50%. “

---

## **EXAMINATIONS AND ASSESSMENT**

Examinations in all subjects are held at the end of the relevant semester. See individual modules for percentages awarded for written exam and labwork or coursework.

For the 4<sup>th</sup> Year Project (4E2) a thesis is submitted and examined by two members of staff. In addition, marks are awarded for the preliminary report and the oral presentation. All project work, including the thesis, must be completed by the end of week 8 in semester 2. The breakdown of marks for the project is as follows:

- Initial report (5%)
- Final presentation (15%)
- Thesis (80%)

Students must achieve a pass mark in the project in order to obtain a BAI degree.

All marks for labs/assignments are provisional until after the court of examiners meet.

---

## **B.A.I. EXAMINATION RULES 2015/2016**

**Examination Regulations can be found using the link below to the School of Engineering website:**

[https://www.tcd.ie/Engineering/undergraduate/pdf/ExaminationRules\\_1516.pdf](https://www.tcd.ie/Engineering/undergraduate/pdf/ExaminationRules_1516.pdf)

## **DESCRIPTION OF THE 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 and learning outcomes 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, and so on.

For more information and ECTS documentation, see the EU Commission website at [http://ec.europa.eu/education/lifelong-learning-policy/doc48\\_en.ht](http://ec.europa.eu/education/lifelong-learning-policy/doc48_en.ht)

## **ATTENDANCE, NON-SATISFACTORY ATTENDANCE, MODULE WORK**

Please note the following extract from the University Calendar: *“For professional reasons, lecture and tutorial attendance in all years is compulsory in the School of Engineering.”* Attendance at practical classes is also compulsory.

All students must fulfil the requirements of the School with regard to attendance and module work. Students whose attendance or work is unsatisfactory in any year may be refused permission to take all or part of the annual examinations for that year. Where specific attendance requirements are not stated, students are non-satisfactory if they miss more than a third of a required module in any semester

At the end of the teaching semester, students who have not satisfied the department or school requirements may be returned to the Senior Lecturer's Office as non-satisfactory for that term. In accordance with the regulations laid down by the University Council, non-satisfactory students may be refused permission to take their annual examinations and may be required by the Senior Lecturer to repeat their year. See also the sections dealing with College and engineering examination regulations.

Further details on the academic regulations concerning attendance, non-satisfactory attendance and module work are given in the University Calendar.

***Please note that you must attend the particular tutorial and 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.***



## **KEY DATES**

### **Semester 1 (Michaelmas Term)**

12 weeks      Monday 28 September to Friday 18 December 2015.

### **Semester 2 (Hilary Term)**

12 weeks      Monday 18 January to Friday 8 April 2016.

### **Revision/Examinations/Results (Trinity Term)**

Annual Examinations commence Tuesday 3 May 2016 and finish at the latest on Friday 27 May 2016.

## **STUDENT INFORMATION SYSTEM (SITS) – ACCESS VIA [my.tcd.ie](http://my.tcd.ie)**

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

**ACADEMIC YEAR STRUCTURE**  
2015 / 2016

Cal. Wk	Dates 2015/16 (week beginning)	Outline Structure of Academic Year 2015/16	Notes
1	31-Aug-15	Supplemental Examinations	Statutory Term (Michaelmas) begins
2	07-Sep-15		
3	14-Sep-15		
4	21-Sep-15	Freshers' Week/Undergraduate Orientation Week	
5	28-Sep-15	Teaching Week 1	Michaelmas Lecture term begins
6	05-Oct-15	Teaching Week 2	
7	12-Oct-15	Teaching Week 3	
8	19-Oct-15	Teaching Week 4	
9	26-Oct-15	Teaching Week 5 (Monday, Public Holiday)	
10	02-Nov-15	Teaching Week 6	
11	09-Nov-15	Teaching Week 7 - Study Week	
12	16-Nov-15	Teaching Week 8	
13	23-Nov-15	Teaching Week 9	
14	30-Nov-15	Teaching Week 10	
15	07-Dec-15	Teaching Week 11	
16	14-Dec-15	Teaching Week 12	← Michaelmas term ends Friday 18 December 2015
17	21-Dec-15	Christmas Period (College closed 24 December 2015 to 3 January 2016, inclusive)	
18	28-Dec-15		
19	04-Jan-16		
20	11-Jan-16	Foundation Scholarship Examinations	Note: it may be necessary to hold some exams in the preceding week.
21	18-Jan-16	Teaching Week 1	Hilary Term begins
22	25-Jan-16	Teaching Week 2	
23	01-Feb-16	Teaching Week 3	
24	08-Feb-16	Teaching Week 4	
25	15-Feb-16	Teaching Week 5	
26	22-Feb-16	Teaching Week 6	
27	29-Feb-16	Teaching Week 7 - Study Week	
28	07-Mar-16	Teaching Week 8	
29	14-Mar-16	Teaching Week 9 (Thursday, Public Holiday)	
30	21-Mar-16	Teaching Week 10 (Friday, Good Friday)	
31	28-Mar-16	Teaching Week 11 (Monday, Easter Monday)	
32	04-Apr-16	Teaching Week 12	← Hilary Term ends Friday 8 April 2016
33	11-Apr-16	Revision Trinity Week (Monday, Trinity Monday)	Trinity Term begins
34	18-Apr-16	Revision	
35	25-Apr-16	Revision	
36	02-May-16	Annual Examinations 1 (Monday, Public Holiday)	Annual Examination period: Four weeks followed by five weeks for marking, examiners' meetings, publication of results, Courts of First Appeal and Academic Appeals.
37	09-May-16	Annual Examinations 2	
38	16-May-16	Annual Examinations 3	
39	23-May-16	Annual Examinations 4	
40	30-May-16	Marking/Courts of Examiners/Results	
41	06-Jun-16	Marking/Courts of Examiners/Results (Monday, Public Holiday)	
42	13-Jun-16	Marking/Courts of Examiners/Results	
43	20-Jun-16	Marking/Courts of Examiners/Results/Courts of First Appeal	
44	27-Jun-16	Courts of First Appeal/Academic Appeals	
			← Statutory (Trinity) Term ends Friday 1 July 2016
45 to 52	04 Jul 2016 - 22 Aug 2016	Postgraduate dissertations/theses/Research 1-8	Eight weeks between end of statutory (Trinity) term and commencement of statutory (Michaelmas) term. This period is also used for writing up Masters dissertations and research theses due for submission in September. ← Ends Friday 26 August 2016

## **SENIOR SOPHISTER (4<sup>th</sup> YEAR) MODULE OPTIONS**

---

**Module Title:** 4B1 Mechanics of Solids  
**Code** ME4B01  
**Level:** Senior Sophister (Optional module)  
**Credits:** 5  
**Semester:** 2  
**Lecturer(s):** Prof. Danny Kelly ([kellyd9@tcd.ie](mailto:kellyd9@tcd.ie))

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B1.pdf>

---

**Module Title:** 4B2 Forensic Materials Engineering  
**Code:** ME4B002  
**Level:** Senior Sophister (Optional module)  
**Credits:** 5  
**Semester:** 2  
**Lecturer(s):** Professor David Taylor ([dtaylor@tcd.ie](mailto:dtaylor@tcd.ie))  
Ms Sarah Reid  
**Semester:** 2

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B2.pdf>

---

**Module Title:** 4B3 Thermodynamics

**Code:** ME4B03

**Level:** Senior Sophister (Optional module)

**Credits:** 5

**Semester:** 1

**Lecturer(s):** Professor Darina Murray ([dmurray@tcd.ie](mailto:dmurray@tcd.ie))

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B3.pdf>

---

**Module Title:** 4B4 Heat Transfer

**Code:** ME4B04

**Level:** Senior Sophister (Optional module)

**Credits:** 5

**Semester:** 1

**Lecturer(s):** Professor Darina Murray ([dmurray@tcd.ie](mailto:dmurray@tcd.ie))

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B4.pdf>

---

**Module Title:** 4B5 Manufacturing Technology

**Code:** ME4B05

**Level:** Senior Sophister (Optional module)

**Credits:** 5

**Semester:** 2

**Lecturer(s):** Professor Rocco Lupoi [lupoir@tcd.ie](mailto:lupoir@tcd.ie)

Professor John Monaghan [jmonaghan@tcd.ie](mailto:jmonaghan@tcd.ie)

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B5.pdf>

**Module Title:** 4B6 Manufacturing Systems & Project Management

**Code:** ME4B06

**Level:** Senior Sophister (Optional module)

**Credits:** 5

**Semester:** 1

**Lecturer(s):** Professor Kevin O'Kelly ([okellyk@tcd.ie](mailto:okellyk@tcd.ie))

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B6.pdf>

---

**Module Title:** 4B7 Computer Aided Engineering

**Code:** ME4B7

**Level:** Senior Sophister

**Credits:** 5

**Semester:** 1 & 2

**Lecturer(s):** Professor Henry Rice ([hrice@tcd.ie](mailto:hrice@tcd.ie))

Professor David Taylor ([dtaylor@tcd.ie](mailto:dtaylor@tcd.ie) )

Assistant Professor Tim Persoons ([persoont@tcd.ie](mailto:persoont@tcd.ie) )

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B7.pdf>

---

**Module Title:** 4B9 Mechatronics and Systems

**Code:** ME4B09

**Level:** Senior Sophister (Optional module)

**Credits:** 5

**Semester:** 2

**Lecturer(s):** Professor John Kennedy ([kennedj@tcd.ie](mailto:kennedj@tcd.ie) )

Professor Frank Boland ([frank.boland@tcd.ie](mailto:frank.boland@tcd.ie))

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B9.pdf>

---

**Module Title:** 4B12 Acoustics  
**Code:** ME4B12  
**Level:** Senior Sophister (Optional module)  
**Credits:** 5  
**Semester:** 2  
**Lecturer(s):** Professor Henry Rice ([hrice@tcd.ie](mailto:hrice@tcd.ie))

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B12.pdf>

---

**Module Title::** 4B13 Fluid Mechanics  
**Code:** ME4B13  
**Level:** Senior Sophister (Optional module)  
**Credits:** 5  
**Semester:** 1  
**Lecturer(s):** Professor Craig Meskell ([cmeskell@tcd.ie](mailto:cmeskell@tcd.ie))

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B13.pdf>

---

**Module Title:** 4B17 Multibody Dynamics  
**Code:** ME4B17  
**Level:** Senior Sophister (Optional module)  
**Credits:** 5  
**Semester:** 2  
**Lecturer:** Professor Ciaran Simms ([csimms@tcd.ie](mailto:csimms@tcd.ie))

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B17.pdf>

**Module Title:** 4B19 Biomechanics  
**Code:** ME4B19  
**Level:** Senior Sophister (Optional module)  
**Credits:** 5  
**Semester:** 1  
**Lecturers:** Professor Bruce Murphy ([murphb17@tcd.ie](mailto:murphb17@tcd.ie))  
Professor Clive Lee ([tclee@rcsi.ie](mailto:tclee@rcsi.ie))  
Professor Mark Ahearne  
<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B19.pdf>

---

**Module Title:** 4B20 Biomaterials  
**Code:** ME 4B20  
**Level:** Senior Sophister (Optional module)  
**Credits:** 5  
**Semester:** 1  
**Lecturer(s):** Professor Conor Buckley ([conor.buckley@tcd.ie](mailto:conor.buckley@tcd.ie))  
Professor Bruce Murphy ([bruce.murphy@tcd.ie](mailto:bruce.murphy@tcd.ie))  
Professor David Taylor ([dtaylor@tcd.ie](mailto:dtaylor@tcd.ie))  
<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4B20.pdf>



---

**Module Title:** 4A8 Transportation  
**Code:** CE4A8  
**Level:** Senior Sophister (Optional module)

**Credits:** 5  
**Semester:** 2

**Lecturer(s):** Professor Brian Caulfield ([brian.caulfield@tcd.ie](mailto:brian.caulfield@tcd.ie))  
Professor Bidisha Ghosh ([bghosh@tcd.ie](mailto:bghosh@tcd.ie))  
Professor Dermot O'Dwyer ([dwodwyer@tcd.ie](mailto:dwodwyer@tcd.ie))

<https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4A8.pdf>

---

**Module Title:** 4E1 Management for Engineers

**Code:** CS4E1 (Section A) and EE4E1 (Section B)  
**Level:** Senior Sophister (Mandatory module)  
**Credits:** 5  
**Semester:** 1

**Lecturer(s):** Professor Marie Redmond([marie.redmond@scss.tcd.ie](mailto:marie.redmond@scss.tcd.ie))  
Professor Sonja Hermann ([hermanns@tcd.ie](mailto:hermanns@tcd.ie))

[https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4E1\\_B.pdf](https://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4E1_B.pdf)

---

**Module Title:** 4E2 Engineering Project

**Code:** ME4E2

**Level:** Senior Sophister

(Mandatory module for students not continuing to Year 5)

**Credits:** 15

**Semester:** 1 & 2

**Co-ordinator:** Professor Craig Meskell ([cmeskell@tcd.ie](mailto:cmeskell@tcd.ie))

[http://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4E2\\_B.pdf](http://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4E2_B.pdf)

---

**Module Title:** 4E5 Innovation in Product Development

**Code:** ME4E5

**Level:** Senior Sophister (Optional module)

**Credits:** 20

**Semester:** 1 & 2

**Lecturer(s):** Professor Kevin Kelly ([kevin.kelly@tcd.ie](mailto:kevin.kelly@tcd.ie))

<http://www.tcd.ie/Engineering/undergraduate/baiyear4/modules/4E5.pdf>

---

## **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>. 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>**

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.

### ***Anonymous Marking***

32 The College has approved the practice of anonymous marking for undergraduate examinations. This does not apply to continuous assessment and term tests. All undergraduate examination results are published anonymously by student number on school, department or course office notice-boards, as appropriate.

<http://www.tcd.ie/calendar/1516-2/part-2-undergraduate-courses-and-other-general-information/general-regulations-and-information/academic-progress/>

## **Student Disability Services**

If you have a disability or a specific learning disability (such as dyslexia) you may want to register with Student Disability Services.

Do you know what supports are available to you in College if you have a disability or a specific learning disability? Further information on our services can be found at [www.tcd.ie/disability](http://www.tcd.ie/disability)

**Declan Reilly** is the Disability Officers in College. You can make an appointment to see him by phoning 8963111, or emailing [disab@tcd.ie](mailto:disab@tcd.ie).

---

## **College Health Service, House No 47**

*The Clinical staff in the College Health Service:*

Medical Director:	Dr. David McGrath
Assistant Medical Director/Psychiatrist:	Dr. Niamh Farrelly
Doctors:	Dr. Niamh Murphy
	Dr. Mary Sheridan
	Dr. Aisling Waters
	Dr. Colette Horgan
Physiotherapist:	Ms. Karita Saar Cullen
Health Promotion Officer:	Ms. Martina Mullin

<https://www.tcd.ie/collegehealth/> Tel. 01 8968555 / 8961556 / 8961591

---

## **S2S Peer Support**

S2S Peer Support is all about one student listening to another student and providing information and assistance. Peer Supporters are available for any student in the College and are there for anything you might want to talk through with them. You don't need to be in distress or crisis to talk to a Peer Supporter, but they can help with the larger problems as well as the smaller things. Our volunteers are highly trained, confidential and professional, but they're also fellow students who can offer some genuine empathy and a friendly ear.

If anything is on your mind and you'd like to share it with a good listener then a Peer Supporter would love to help. You can email us directly at [student2student@tcd.ie](mailto:student2student@tcd.ie) or request a meet-up with a Peer Supporter by calling 01 896 2438 or filling out an online form.

S2S website: <http://student2student.tcd.ie>

---

## **Safety in the Department**

Dear Student,

The Department of Mechanical & Manufacturing Engineering operates a 'safe working environment' policy and we take all practical precautions to ensure that hazards or accidents do not occur. We maintain safety whilst giving you the student very open access to the departmental facilities. Thus safety is also your personal responsibility and it is your duty to work in a safe manner when within the department. By adopting safe practices you ensure both your own safety and the safety of others.

Please read the Safety Document on the Departmental website: <http://www.mme.tcd.ie/> and comply with the instructions given within. Failure to behave in a safe manner may result in your being refused the use of departmental facilities.

Mr Gerry Byrne

Departmental Safety Officer

## **INDUSTRIAL VISITS**

Industrial visits are arranged throughout the SS year. Companies are selected to give the students exposure to a range of manufacturing environments. Professor Tony Robinson is the Industry Liaison contact and co-ordinates these visits.

## **STUDENT LIASION**

Professor Tony Robinson will be available by appointment to meet with class representatives to discuss matters of interest and concern to students and staff.

# LECTURE TIMETABLE 2015/2016

SENIOR SOPHISTER ENGINEERING, 2015/16 - MECHANICAL AND MANUFACTURING ENGINEERING										
		Date of issue: 24th September, 2015								
DAY		0900 - 1000	1000 - 1100	1100 - 1200	1200 - 1300	1300 - 1400	1400 - 1500	1500 - 1600	1600 - 1700	1700 - 1800
MONDAY	First semester	4B4 [CLT]	4B6/3MEMS\$ [CLT]	Tutorials [PBSR1/2/4]	4B6/3MEMS\$ [CLT]			4B13 [CLT]	4B20 [HAM4]	4E1 [HAM4]
	Second semester	4B9/4C3 [M17]		Tutorials [PBSR1/2/3]		4B2 [M17]	4B12 [M17]	4B17 [LTEE3]		4B1 [M17]
TUESDAY	First semester	4B6/3MEMS\$ [CLT]	Mechanical and Manufacturing Engineering Laboratories/Projects			4B7 [M17]	4B3/3MEMS\$ [CLT]	4B4 [CLT]	4E1 [HAM4]	
	Second semester	Tutorials [PBSR1/2/4]		4A8 [M20]		4B9/4C3 tutorial [LB04]		4B9/4C3 laboratories [UG/LAB/CAD/LAB]	4B9/4C3 [2037]	4B5/3MEMS1 [CLT]
WEDNESDAY	First semester	4B6/3MEMS\$ [CLT]	Tutorials [PBSR1/2/3]			4B19 [M17]		Tutorials [PBSR1/2/4]	4E5 [DESIGN LOFT/PBSR4]	
	Second semester	4B5/3MEMS1 [CLT]		4B9/4C3 [2039]	4A8 [M20]	4B2 [M17]	4B5/3MEMS1 [CLT]	Tutorials [PBSR1/4/CLT]	4E5 [DESIGN LOFT/PBSR4]	
THURSDAY	First semester	4B20 [HAM5]		4B19 [HAM1]	4B13 [CLT]	4B7 [CLT/ECAL]	Tutorials [PBSR3/4/CLT] 4B7 Tutorials [ECAL]	Tutorials [PBSR3/4/CLT]	4B20 [HAM4]	4B19 [LB04]
	Second semester	4B1 [LB08]	4A8 [CLT]		4B12 [CLT]		4B1 [LB08]	4A8 tutorials [M21] (odd weeks)	4B17 [M17]	
FRIDAY	First semester	4B3/3MEMS\$ [CLT]	4B4 [CLT]		Tutorials [PBSR1/2/4]		Mechanical and Manufacturing Engineering Laboratories/Projects		4E5 [DESIGN LOFT/PBSR3]	
	Second semester	Tutorials [PBSR3/4]	Tutorials [PBSR1/2/4]	4B2 [LB04]	4B17 [M20]		Mechanical and Manufacturing Engineering Laboratories/Projects		4E5 [DESIGN LOFT/PBSR3]	



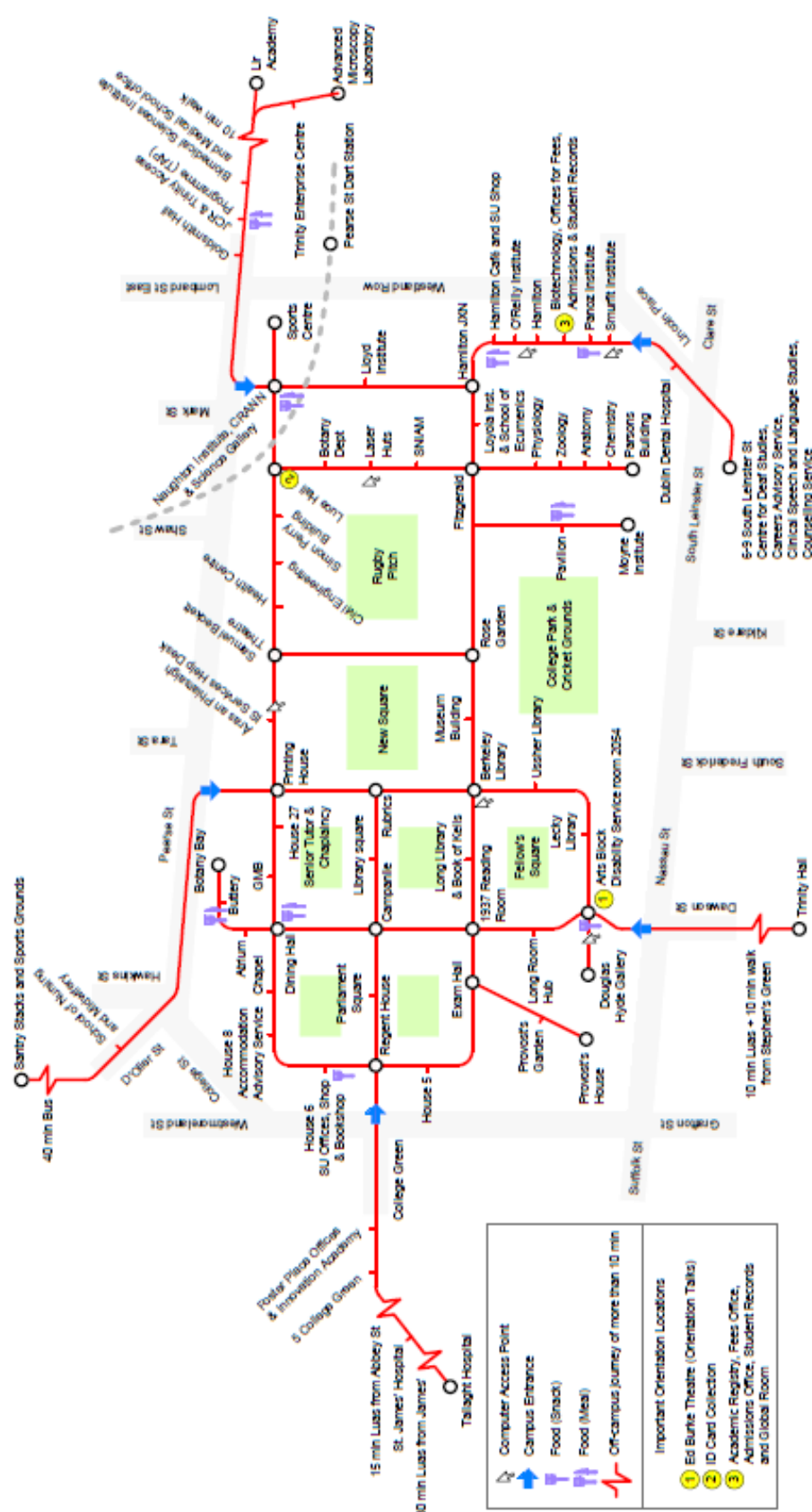
## **TUTORIAL TIMETABLES**

Tutorial timetables will be forwarded to students via email and posted on the noticeboards in Parsons Building

---

## **LABORATORY TIMETABLES**

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



<b>Head of Department</b>	Professor Darina Murray	<a href="mailto:dmurray@tcd.ie">dmurray@tcd.ie</a>	1.01
<b>Chief Technical Officer</b>	Mr Mick Reilly	<a href="mailto:mireilly@tcd.ie">mireilly@tcd.ie</a>	1.08
<b>SEO</b>	Ms Judy Lee	<a href="mailto:julee@tcd.ie">julee@tcd.ie</a>	1.03
<b>Executive Officer</b>	Ms Nicole Byrne	<a href="mailto:nbyrne3@tcd.ie">nbyrne3@tcd.ie</a>	1.03
<b>Executive Officer</b>	Ms Melanie Apied	<a href="mailto:apiedm@tcd.ie">apiedm@tcd.ie</a>	1.03
<b>Executive Officer</b>	Ms June O'Reilly	<a href="mailto:tcbe@tcd.ie">tcbe@tcd.ie</a>	BioSciences

<b>STAFF NAME</b>	<b>EMAIL ADDRESS</b>	<b>OFFICE LOCATION</b>
Prof Gareth Bennett	<a href="mailto:bennetgj@tcd.ie">bennetgj@tcd.ie</a>	2.09
Prof Conor Buckley	<a href="mailto:cbuckle@tcd.ie">cbuckle@tcd.ie</a>	2.12
Mr John Gaynor	<a href="mailto:jgaynor@tcd.ie">jgaynor@tcd.ie</a>	3.10
Prof Dermot Geraghty	<a href="mailto:tgerghy@tcd.ie">tgerghy@tcd.ie</a>	3.02
Prof David Hoey	<a href="mailto:dahoey@tcd.ie">dahoey@tcd.ie</a>	3.06
Prof Danny Kelly	<a href="mailto:kellyd9@tcd.ie">kellyd9@tcd.ie</a>	0.02
Professor Kevin Kelly	<a href="mailto:kevin.kelly@tcd.ie">kevin.kelly@tcd.ie</a>	2.06
Prof John Kennedy	<a href="mailto:kennedj@tcd.ie">kennedj@tcd.ie</a>	2.01
Prof Catriona Lally	<a href="mailto:lally@tcd.ie">lally@tcd.ie</a>	2.10
Prof Rocco Lupoi	<a href="mailto:lupoir@tcd.ie">lupoir@tcd.ie</a>	2.07
Prof Conor McGinn	<a href="mailto:mcginncl@tcd.ie">mcginncl@tcd.ie</a>	2.05A
Prof Craig Meskell	<a href="mailto:cmeskell@tcd.ie">cmeskell@tcd.ie</a>	2.13
Prof John Monaghan	<a href="mailto:jmonghan@tcd.ie">jmonghan@tcd.ie</a>	3.05A
Prof Bruce Murphy	<a href="mailto:bruce.murphy@tcd.ie">bruce.murphy@tcd.ie</a>	3.12
Prof Garret O'Donnell	<a href="mailto:odonnege@tcd.ie">odonnege@tcd.ie</a>	2.08
Prof Kevin O'Kelly	<a href="mailto:okellyk@tcd.ie">okellyk@tcd.ie</a>	3.03
Prof Tim Persoons	<a href="mailto:persoont@tcd.ie">persoont@tcd.ie</a>	2.11
Prof Richard Reilly	<a href="mailto:richard.reilly@tcd.ie">richard.reilly@tcd.ie</a>	Level 3 Bio-Sciences
Prof Henry Rice	<a href="mailto:hrice@tcd.ie">hrice@tcd.ie</a>	1.03B
Prof Tony Robinson	<a href="mailto:arobins@tcd.ie">arobins@tcd.ie</a>	3.11
Prof Ciaran Simms	<a href="mailto:csimms@tcd.ie">csimms@tcd.ie</a>	3.04
Prof David Taylor	<a href="mailto:dtaylor@tcd.ie">dtaylor@tcd.ie</a>	1.03C
Prof Daniel Trimble	<a href="mailto:dtrimble@tcd.ie">dtrimble@tcd.ie</a>	Watt Building