DUBLIN CITY UNIVERSITY

FACULTY OF ENGINEERING AND COMPUTING

SCHOOL OF MECHANICAL AND MANUFACTURING ENGINEERING

Masters in Mechanical and Manufacturing Engineering

Information Booklet for Current Students

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Note: This booklet is subject to change. In all cases DCU regulations are the source of most accurate and up-to-date information.

WELCOME

Congratulations on accepting a place to study Mechanical & Manufacturing Engineering at Masters level at DCU. You are very welcome to the University and in particular to the Faculty of Engineering and Computing.

In order to help you learn more about your studies as an engineering student we've put together a list of answers to frequently asked questions. They focus on practical and academic issues which arise during your initial days and weeks, in your subsequent weeks and semesters in the Faculty and finally in your broader student life. We hope this information helps you to find your way around and to settle in quickly. It will be most beneficial to read the booklet prior to coming to DCU for orientation week, but you should also keep a copy for reference later in the year. There are four sections in the booklet

Enjoy the challenge and excitement of studying engineering. We and our colleagues look forward to working with you.

Chair of the Masters in MME programme	Dr. Tamas Szecsi		e-mail: tamas.szecsi@dcu.ie Room: S371 Extension: 8300

1. GETTING STARTED

When /where do classes start?

Classes for all programmes usually start on a Monday at the end of September. The start date of the semester can be seen in the Academic Calendar which can be found on the web page of DCU (www.dcu.ie). On the main page, follow the submenu 'STUDY AT DCU' and then 'Academic Calendar'. From the list you can find the calendar for the current academic year.
The location of your first class can be found in the timetable (see more information below).

What is the DCU Academic Calendar, and where can I find it?

The DCU Academic Calendar lists all major events during a certain academic year. The Academic Calendar can be found on the web page of DCU (www.dcu.ie). On the main page, follow the submenu 'STUDY AT DCU' and then 'Academic Calendar'. From the list you can find the calendar for the current academic year.

The most important entries of the academic calendar are listed below (there actual dates change every year).

REGISTRATION OF INCOMING FIRST YEAR POSTGRADUATE STUDENTS (ONLINE)	
ORIENTATION OF NEW POSTGRADUATE STUDENTS - TAUGHT AND RESEARCH	
BEGINNING OF SEMESTER 1 - START OF LECTURES	
"LAST DATE FOR REGISTRATION FOR FIRST YEAR AND CONTINUING STUDENTS (Late registration fee applies thereafter)"	
CHANGE OF MODULE CHOICE (Free of charge)	
LATE CHANGE OF MODULE CHOICE (Fee applies)	
CLOSE OF REGISTRATION FOR ACADEMIC YEAR 2014/15	
END OF SEMESTER 1 LECTURES	
EXAM STUDY PERIOD FOR SEMESTER 1 EXAMS	
SEMESTER 1 EXAMINATIONS	
INTER - SEMESTER BREAK	
BEGINNING OF SEMESTER 2	
PROMULGATION OF EXAMINATION RESULTS ONLINE (Semester One)	
PERIOD OF CONSULTATION FOR STUDENTS WITH FACULTY (Semester One Results)	
END OF SEMESTER 2 LECTURES	
EXAM STUDY PERIOD	
SEMESTER 2 EXAMINATIONS	
PROMULGATION OF EXAMINATION RESULTS ONLINE	
PERIOD OF CONSULTATION FOR STUDENTS WITH FACULTY	

Where does my course fit into the DCU structure?

You are studying on one of the following programmes:

- Masters in Mechanical and Manufacturing Engineering (MMME)
- Access course to the Masters in Mechanical and Manufacturing Engineering (MMAC)
- Masters Qualifier A (MMQA)
- Masters Qualifier B (MMQB)
- Pre-Masters International Foundation Programme (IFPxxx)

The abbreviation of each programme is given in brackets. With the exception of the International Foundation programme, the School of Mechanical and Manufacturing Engineering in the **Faculty of Engineering and Computing** at DCU, have responsibility for all of the above courses**.** (The IFP programme is managed by the School of Applied Language & Intercultural Studies (SALIS)). Details about the schools' academic, administrative and technical staff are available on the Web at the following address:

http://www.dcu.ie/mechanical_engineering/staff_details/index.shtml

Where do I get the timetable?

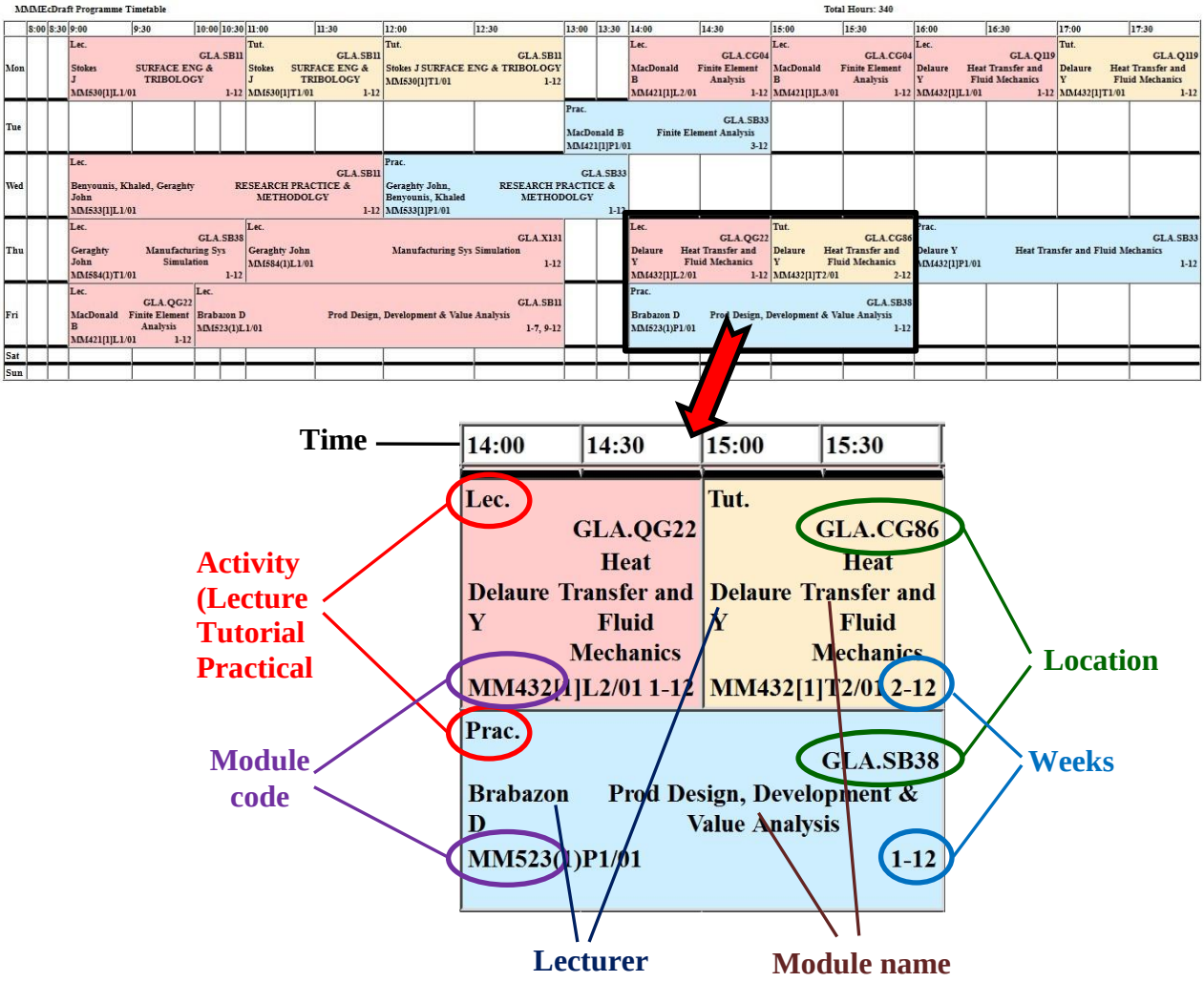
The class timetable is available at: www.dcu.ie/timetables/search.shtml. Following this link choose 'Class Timetable', press 'Submit your selection'. From the menus select the abbreviation of your programme and year according to the table below:

Programme	Programme Code	Year
Masters Course	MMME	C
Access Course	MMAC	C
Masters Qualifier A	MMQA	C
Masters Qualifier B	MMQB	C
International Foundation Programme	IFPCME	1

Select weeks 1-12, and 'Day', then 'Click here to Retrieve the Report'. This link is also available from your Portal Page (see later in this document), details of which you will have received at Registration. Please note that timetables may change slightly during the first few weeks of the Semester and it is advisable to check your portal regularly. After the first weeks, changes will usually be notified by email.

How do I interpret the timetable?

The timetable contains information on all classes for the whole semester. Lectures and tutorials are normally of one hour duration, practicals (laboratory and studio sessions) are of two or three hours. In order to assist you in reading your timetable – especially during the first few weeks of Semester 1 - an explanation of each of the codes is provided below. Please note that this is only an example; you can see your exact timetable on your Portal Page. Staff will answer questions on the timetable during orientation.



Each cell on the timetable provides the following information:

- **Activity** – Lecture (Lec or L), Practicals (P or Prac.) or Tutorial (Tut or T)
- **Module code and Module name** - In the timetabling system, modules are typically referred to by their codes and names. For example, MMME students will see references to MM533 on their timetable which is the code of the module 'Research Practice and Methodology'.
- **Location** – The location descriptor is formed by [Campus].[Building][Floor][Room]. GLA stands for DCU's Glasnevin campus. All activities of the Master programme take place on the Glasnevin campus. The first letter after the dot (.) in the location descriptor indicates the building (Q = Business School; C = Henry Grattan; H = Nursing etc). The second item indicates the floor (G = ground floor, 1 = first floor etc) and finally the room number is given. Some activities (mainly practicals) may take place simultaneously in several rooms depending on class groupings.
- **Weeks** - Activities may not take place in every week of the semester. For example, if the timetable cell displays 3, 5, 9, 11 for a tutorial, this means that the tutorial will take place in weeks 3, 5, 9 and 11 only. Confirm these dates with your lecturer during your first class.
- **Lecturer(s)** – The name of the lecturer(s) teaching this module.
- **Time** – Shows when the activity takes place.

Overview of Buildings in DCU where classrooms are located

C / CA	Henry Grattan Building
H	School of Nursing
L	School of Computing
N	Physics (Block 2)
Q	Business School
S	Engineering & Research
T	Larkin Lecture Theatre
X	Science Building

Example: GLA.SG11 means classroom No 11 on the ground floor of the Engineering and research building on the Glasnevin campus. Please note that although you are an engineering student, many of your classes will be located in buildings other than the Engineering and Research building.

Each class starts exactly on the hour and finishes 10 minutes to the hour. This allows you enough time to move to your next location. If you fail to arrive to a class on time the lecturer may refuse you entry to that class.

Because many laboratories and tutorials do not start until you've had a few lectures, the timetable in weeks 1 & 2 is often less full than later in the semester.

Where is the Engineering and Research Building?

The Engineering and Research Building is 50 m from the Collins Avenue entrance to DCU, beside the Nursing School. The DCU Campus Map is available at the following address: http://www.dcu.ie/images/campus_map.pdf. The Engineering and Research Building is marked with the letter 'S'.

What do I need to buy for this programme?

You will need to get a scientific calculator (note that if your calculator is programmable you will not be allowed to use it at the exams). Each module and lecturer has different requirements.

An extensive list of all the modules is presented at the end of this introductory manual. The lecturers in charge of coordinating the modules will present more specific requirements to you during their lectures/practicals/tutorials. For some modules you will need to purchase a text book (available from the campus bookshop), and/or access codes for a software package.

What modules do I need to study?

You will study several subjects (called modules). Each module has its own weighting, called credits, depending on the total amount of time you are to spend on it to pass it (at an average). A 5-credit module typically requires 125 hours of study to pass it.
Please check your portal page to ensure that you have registered correctly. It is the responsibility of the student to correctly register for all modules and any inaccuracies should be discussed with the **Registry** immediately. Detailed Module Descriptors can be found at:
http://www.dcu.ie/registry/module_programme.shtml
More detailed information about each module can be found at the end of this booklet.
Detailed information about the modules for each programme is given at the sections of the relevant programmes.

Where can I find detailed information about my modules?

Each module has a document called **Module Descriptor**. It contains the following major information for the module:

- General information (title, lecturer, credit rating, pre-requisites, …)
- Learning outcomes
- Workload breakdown
- Indicative content
- Assessment breakdown
- Resit categories (which part(s) of the module can be resit)
- Reading list

You can find the module descriptors at: http://www4.dcu.ie/registry/module_school.shtml. On this webpage, select the school that delivers the module, after which all modules of this school will be available.

How do I get access to the computers?

The School of Mechanical and Manufacturing Engineering maintain several computer studios for common use for all students. However, the purpose of each computer studio is different. Some are used for general-purpose tasks (like emailing, web-search); others may be allocated for special tasks (like final-year project development). Although your username/password allows you access to any of the computers in these studios, the software installed on the computers and the specification of the computers may be different in each studio (depending on the task of the studio).

All computers accessible for students in the School are connected into the MENG network. On this network you will be able to use general-purpose software for emailing, report-writing, surfing the internet and other, specialised software for modules, and they also provide access to the DCU email system and other resources.

Once you register for a programme you will be provided by registry with a student number and a DCU email address. In order to register on the MENG network, you need to contact the School's computer system manager Keith Hickey.

How can I contact/talk to a lecturer?

In general you can talk to the lecturer during or after a lecture, whichever they indicate to you. For more extensive talks, please ask for an appointment either in person or by e-mail. You can also go to the lecturer's office to see if they are available. Contact details are available on the relevant school website.

How do I find out what's happening? How do I communicate with DCU staff and students?

Mechanical Engineering staff use e-mail for most messages to students and to each other. Once registered with DCU you will be given a personal e-mail address. Most college-related information will be forwarded to this e-mail address. You should not use your other (Yahoo, Gmail, etc) e-mail addresses for communicating with DCU staff members. Some modules have special e-mail lists assigned to them and information may also circulate on these lists. Ask your lecturers about the relevant lists for your course.

E-mail Correspondence

Many interactions between students and between students and staff will occur over e-mail. E-mail can be a very efficient and effective means of communication and participants should ensure that they regularly check their DCU e-mail account for important programme/module related information.

Students are expected to use e-mail in a professional and courteous manner and refrain from any comments which could be regarded as disrespectful or offensive. Students should bear in mind that e-mails can be easily misunderstood and therefore it is important that the writer ensures the message conveys the intended tone (i.e. professional, friendly, courteous). Think of your correspondence over e-mail as practice for the work environment after university.

We expect you to use well-written English in your emails as a first step on the road to being professional engineers. Of course allowance will be made for students for whom English is not their first language, but "text-speak" or lazy writing will not necessarily engender respect for your question from the lecturer concerned.

Below are some useful tips for the effective use of e-mail communication.

Some General Tips for Writing Effective E-mails:

1. Begin the e-mail by addressing the person you are writing to (e.g. 'Dear Susan/Hello Tom)'. It is impolite to begin an e-mail without a salutation.
2. In the body of the e-mail, state who you are (e.g. student in the AC123 module), the purpose of your e-mail, make a polite request, thank the receiver and sign off properly (e.g. kind regards, best wishes).
3. Adopt a friendly and personable tone.
4. Do not write anything that you would not be happy for everyone to see.
5. Do not write anything that you would not say to the recipient's face.
6. Proof-read your e-mail before you send it. Do not give the impression that you do not wish to take the time to write properly.
7. Be careful with your user name or tagline on your e-mail ('lazysod' as a tagline may be amusing to friends, but is not appropriate if the email is sent to DCU staff or potential employers).
8. Avoid text abbreviations such as 'b4', 'gr8' etc. in an e-mail.
9. When you receive a response to a query it is polite to send a return e-mail to thank the receiver for responding.
10. Before sending an e-mail, consider whether you could find out the answer to the query yourself (e.g. from the Registry website).
11. Remember to include an informative "Subject Title" in the subject line box.
12. It is not appropriate to send the SAME general query to a number of different people at the same time. This leads to duplication of work.

Making Appointments with DCU Staff:

Although members of staff will not have any problem with you dropping in if you have an issue to discuss, the best way to make an appointment with members of staff at DCU is to send an email requesting this. You may be able to provide some details regarding what you need to discuss, which will make the meeting more productive. If you have a personal issue to discuss, simply state this in the e-mail. Public Offices (e.g. Registry Student Information Point / Student Advice Centre / School Offices) have Opening Hours which are clearly marked on the doors and on the relevant website.

How can I find the email address or phone number of a staff member?

If you know the name of the person, you can search the University Telephone Directory at:
http://www.dcu.ie/info/staff.shtml

What is Loop?

Loop is DCU's online learning environment that allows DCU staff to provide students with access to electronic teaching and learning materials (such as lecture notes and links to useful websites) and activities (such as discussion fora, group assignments, reflective journals and quizzes).

The use of Loop in DCU varies from module to module. In some cases, Loop resources and activities may be additional supplements to your lectures and tutorials; in others, Loop activities may be fully integrated into your coursework. Individual lecturers will speak to you about the Loop requirements for their module. It is essential to become comfortable with this environment as soon as possible, as it will be used throughout your studies at the University.
Weblink: http://loop.dcu.ie/

Is there a place on Loop where I can find common information related to all MME taught masters students?

Once you register on any of the MME taught masters programmes (MMME, MMAC, MMQA, MMQB, IFPxx), you will automatically gain access to an entry in Loop called 'MME_Taught_Masters'. This entry appears in the list of 'My courses'. All information that is not module-related but rather of interest for all students will appear in this entry. For example, you can download the electronic version of this booklet from this entry.

2. ACADEMIC LIFE IN THE FACULTY

Do I have to go to the Library? Why?

You will receive a list of textbooks usually during the first lectures of each module – books that are recommended by the lecturers. It is strongly recommended to go to the library and borrow some of those books and read the sections related to the material presented in the lectures. In general, only brief information on certain subjects is presented during the lectures, and textbooks need to be referred to for more detailed information. There is an online library site at: www.library.dcu.ie. Please note, however, that for each module there is only a limited set of textbooks in the library and there will be a time limit within which you can keep the book at your possession.

Some lecturers provide comprehensive module notes for their modules usually in soft-copy format. Although the notes may be sufficient to get prepared for exams and continuous assessment, it is still advisable to also consult textbooks that are listed in the module notes.

The 'Engineering, Computing & Open Education Librarian' (see at: http://www.dcu.ie/library/people/index.shtml) can assist you in engineering-specific library resources.

What types of classes will I have?

There are three main types of classes: lectures, tutorials, and practicals (labs). During a **lecture,** the lecturers present the most important material related to the content of the taught subject. Your presence is not compulsory, but it is ***strongly recommended*** that you attend all of them, as the lectures are the most important means for you to acquire information about each module. You are always welcome to ask questions – the lecturer may answer it on the spot, defer it to later, or point you at some source of information. Feel free to use email to ask questions as well. You are advised to bring your module notes/text book with you to the lecture so that you can add comments to the text and do not have to write down too much.

Tutorials are provided to enable you to ask questions, receive answers, solve problems, etc. They are very important, as this is the place where you can clarify some aspects that you have not fully understood from the lectures or from your own study. During some of the tutorial session you will be solving exam-type questions so that you can appreciate what sort of questions you might get at the real exams.

Practicals (Lab Sessions) are an important component of some modules, giving you an opportunity to exercise the theoretical knowledge to which you have been exposed, or teeing up problems for subsequent treatment in lectures. They are *compulsory* and are supervised by both Demonstrators and Technical Staff. Usually you have to complete certain exercises and write a report on the results *before the end* of each session, or within a certain timeframe. The report is marked and contributes a percentage of your final grade for that module. Some practicals are performed in a lab on laboratory equipment/rigs; others are studio sessions in a computer room.

How is my progress assessed?

Your progress may be assessed in two ways: through exams and/or continuous assessment. Each module has a different combination of assessment with different weighting factors for each element. For all assessment components and component elements, the assessment methodology, set of assessment criteria and weightings are provided in advance to students. In a module, the final mark will be calculated in accordance with the assessment breakdown outlined in the approved module

descriptor (details at: http://www.dcu.ie/registry/module_programme.shtml). The required pass mark of modules for the different programmes is given below:

Programme	Module pass mark
MMME	40%
MMAC	50%
MMQA	50%
MMQB	Level 8 modules: 50%
	Level 9 modules: 40%

The minimum pas mark listed above has to be achieved in each individual module.
Where different components of assessment within a module (continuous assessment and final exam assessment) contribute to the final mark, the module will not require that either one of these components be passed separately.

Exams are organised after the 12-week semester. You usually get a 2-week study period before the exams start. Most exams are written exams and the whole class answers the same set of questions. Where a module has an exam element it usually has a relatively high weighting factor (50% or above) in the final mark. Your exam timetable will be accessible through your Portal Page.
In DCU, all exams are anonymous. This means that your identity is only revealed to the marker after they mark your exam.

Continuous assessment (CA) takes place during the 12-week semester. It can take the form of lab reports, class tests, presentations, assignments and others. The schedule of the CA elements is given to you at the beginning of the semester.

Every *single* sentence in an assignment must either have been composed by yourself, OR IF NOT, then you must put it in quotation marks and give a full reference to the source where you found it. If you hand up an assignment claiming that it is your own work, and one whole sentence within it is the unacknowledged work of someone else, then that is *plagiarism*. See, for example www.dcu.ie/ExL/pdfs/Workingwithsources.pdf.

Assignments are a set of exercises to be completed on your own, based on the material learnt from the lectures, tutorials and practicals. They must be submitted by the stated deadline. The lecturers or tutors will grade the assignments and their results also contribute to your final grade for those modules. Please ensure that you are clear about procedures and cut-off dates for assignments and discuss any difficulties you may have with your module lecturer or Programme Chairperson well in advance of this date. The module coordinator will let you know in advance in what form the assignment is to be submitted (written and printed report and/or soft-copy).

Note: you will receive feedback from the CA element of the module shortly after you submit your work for assessment. However, exam results are not promulgated immediately, and the full module marks will be available to you only after the Progression and Award Board have discussed and approved them.

For how many modules do I have to register?

Since the maximum duration of any MME taught master programme and its related courses in full-time mode is one academic year, and you can only start any programme at the beginning of the academic year (in September), full-time students register for all modules of the programme/course at the beginning of the academic year. The MMME, MMAC, IFP and CAMQ courses are all offered in a one-year mode only. However, the MMME programme in part-time mode takes two

academic years. At the beginning of each academic year, part-time MMME students register for the modules that they will be taking during that academic year (in both semesters).
The modules required for each programme, major and course are listed further in the document.
Note: it is the responsibility of the student to register for the correct number of modules.

What modes of study are available, and what is the programme duration?

Full-time/Part-time mode

The programmes/courses can be studied in Full-time or Part-time mode (depending on the course). In full-time mode, the student registers for modules with a total of 30 credits per semester. In part-time mode, the student registers for modules with a total of 15 credits per semester.

Below is the duration and distribution of modules per semester/year:

MEng in Mechanical and Manufacturing Engineering (DC814/DC816)

The MEng programme is available in full-time or part-time mode.

MEng		**Year 1**			**Year 2**		
		Semester 1	Semester 2	Summer	Semester 1	Semester 2	Summer
Full-time	Taught modules	30 credits (4 modules at level 9)	30 credits (4 modules at level 9)				
	Project	30 credits, level 9 (year-long)					
Part-time	Taught modules	15 credits (2 modules at level 9)	15 credits (2 modules at level 9)		15 credits (2 modules at level 9)	15 credits (2 modules at level 9)	
	Project				30 credits, level 9 (year-long)		

Access Course to the MEng in Mechanical and Manufacturing Engineering (DC812)

Access Course		**Year 1**		
		Semester 1	Semester 2	Summer
Part-time	Taught modules	15 credits (3 modules at level 8)	15 credits (3 modules at level 8)	

Note: Module credits from the Access Course are not carried over to the MEng programme.

Qualifier Programme A for the MEng in Mechanical and Manufacturing Engineering (DC832)

Masters Qualifier A		**Year 1**			**Year 2**		
		Semester 1	Semester 2	Summer	Semester 1	Semester 2	Summer
Masters Qualifier A (Part-time)	Taught modules	15 credits (2 modules at level 8)	15 credits (2 modules at level 8)				
MEng (Part-time)	Taught modules				15 credits (2 modules at level 9)	15 credits (2 modules at level 9)	
	Project				30 credits, level 9 (year-long)		

Note: Module credits from the qualifier programme are carried over to the MEng programme.

Qualifier Programme B for the MEng in Mechanical and Manufacturing Engineering (DC838)

Masters Qualifier B		**Year 1**			**Year 2**		
		Semester 1	Semester 2	Summer	Semester 1	Semester 2	Summer
Masters Qualifier B	Taught modules	15 credits (2 modules at level 8/9)	15 credits (2 modules at level 8/9)				
MEng	Taught modules				15 credits (2 modules at level 8/9)	15 credits (2 modules at level 8/9)	
	Project				30 credits, level 9 (year-long)		

Note: Module credits from the qualifier programme are carried over to the MEng programme.

Note: the maximum number of academic sessions during which the student is registered for a programme (including repeated and deferred years) is four. This means that each programme/course has to be completed within four academic sessions.

On-campus/Off-campus mode

In order to provide greater flexibility for students, each of the programmes/courses can be studied in either on-campus or off-campus mode.

On-campus mode:

On-campus mode is the preferred mode of study for full-time students. It means that the student attends all classes (lectures, tutorials, labs).

Off-campus mode:

Off-campus mode is usually preferred by part-time students who have a part-time job, or due to other restrictions (remote location, etc.) are unable to attend classes regularly. In off-campus mode students would mainly study independently (from module notes and textbooks provided by the module lecturer) without attending lectures. However, they would be required to attend some labs (depending on the module).

Note: **off-campus** students sit their exams at Dublin City University together with the on-campus students.

How do I progress between semesters?

If your programme lasts for more than a semester (the only single-semester course is the IFP single-semester course), there is automatic progression from Semester 1 to Semester 2 regardless of your Semester 1 results. After the first semester, your partial results are discussed by an Exam Board (PBERC) before making the module marks available to you. These marks, however, are provisional, and your final marks will only be available after the full set of your results is available and approved by the Progression and Awards Board (PAB).

When do I find out if I passed a programme/course?

At the end of the academic year when all your marks are available, the Progression and Award Board discusses and approves all your marks. The results are then promulgated through your Portal

page. These results show the marks for each module, and if you have failed any module the elements that you need to resit/repeat. (Note: for part-time MMME students the complete set of marks is only available after the second year of study).
The timeline for obtaining your module marks is shown below:

Programme	PBERC Jan.	PBERC June	PAB June	PBERC Sept.	PAB Sept.	PAB Nov.
MMME	Provisional Semester 1 marks	Provisional Semester 1&2 marks		Provisional Semester 1&2 **resit** marks		Final Semester 1&2 marks
MMAC			Final Semester 1&2 marks		Final Semester 1&2 **resit** marks	
MMQA						
MMQB						

In order to proceed to the next academic year (in case of part-time MMME students), a student must have passed all modules (core modules and options) taken in that academic year, as prescribed by his/her programme of study. At the end of each academic year, a Progression & Award Board, comprising the examiners of all modules and external examiner(s), reviews the results of each student on the degree programme. For each student, the Board considers the overall weighted average mark and approves the overall classification.
It is not permitted to carry failed modules into the next academic year.

Detailed regulations for assessments, progression and awards can be found in DCU's **Marks and Standards** document: http://www4.dcu.ie/registry/examinations/index.shtml

How do I progress/transfer from one qualification to another?

In order to proceed to the next level of study (for example from the Access Course to the Masters Programme), a student must have passed all modules (core modules and options), as prescribed by his/her programme of study. It is not allowed to carry failed modules to the next level of study. Once the student has passed the MMAC, MMQA, MMQB or IFPxxx programme, they are automatically qualified for the MMME programme starting the following academic year.

Can I appeal the decision of the Progression and Award Board?

Students have the right to appeal the decisions of a Progression and Award Board. Such Appeals will be processed in accordance with the procedures detailed by Academic Council:
http://www.dcu.ie/registry/examinations/regulations.shtml#14

Please note, however, that there are only a limited number of reasons for an appeal to be upheld. When you submit your appeal form you will be required to pay a fee. However, if the appeal is upheld the fee is reimbursed.

I failed some modules. Will I have to repeat the year?

Not necessarily. There is a Resit Exam session that takes place in August, and some modules set resit coursework also. However, if you still have even one module outstanding after the August exams, you must take that module afresh (participating in all elements of the module), and will not progress to the next level of study. The programme regulations state that "Students will not be permitted to 'carry' modules except in exceptional circumstances and subject to the approval of the Progression and Award Board and mode of delivery permitting". You have only two academic

sessions (years) in which to pass any module. In other words, you have one chance to repeat a module in the academic session following the one in which you first attempt the module. In each attempt at a module, you have whatever resit opportunities are available for that module in that session. (This may be none in the case of a project-based module!). After that you have to withdraw from the programme.
Note the difference between ***resit*** and ***repeat***: a *resit* assessment (exam or CA) is a second opportunity to pass the element of the module within the same academic session; a *repeat* attempt at a module requires that a student registers for that module in the next academic session (without progressing to the next year of study).

I have failed a module – can I compensate?

According to the Marks and Standards document of DCU, "Compensation is not permitted for taught postgraduate programmes". This means that you must pass all modules with the minimum pass mark specified for the module.

I have failed a module; do I have to resit the CA aspect of the module?

- If you have passed the continuous assessment component, you do not have to resit this component.
- If you have failed the continuous assessment and the module overall, then if a CA resit is available, you are expected to resit the CA component. Failing to do so will result in a zero mark of the CA element (regardless of the original mark of the CA element).
- If you have failed a module that is 100% CA and there is no resit available, you must repeat the module in the next academic session.
- If you have failed the CA element of a module, then if a CA resit is not available, you are given the opportunity to resit the exam component in order to compensate for the failed CA component, regardless of the original exam mark (you can resit the exam even if you have already passed it).

Whether a resit is available for the CA aspect of the module depends on the resit category of the module (see below).

What is the resit category of a module?

Which elements of a module you can resit depends on its resit category. Each module has one of three resit categories:

1 = A resit is available for all components of the module
2 = No resit is available for 100% continuous assessment module
3 = No resit is available for the continuous assessment component

Most modules are of category 1: it means that all of its components (CA and Exam) can be resit. The exam is resit in August, and the CA element is usually resit during the Summer period (you need to discuss it with the lecturer of the module to find out when and what type of work you need to do to resit CA). Note that the resit assignment for CA resit may be different from the original assignment.

If you fail a category 2 module you need to repeat the module in the next academic year.

Some modules are of category 3. This means that you can only resit the exam component of the module, but not the CA component. If you have already passed the exam but failed the module overall because of the failed CA, you can resit the exam (even though you have passed it already) in order to improve the overall module mark.

You can check if a resit is available for a CA component of any module from the module descriptor. You can access this from this webpage: http://www.dcu.ie/registry/module_contents.php where all DCU modules are listed in alphabetical order.

The resit category of each module is also listed at the end of this booklet, in the module listing.

The following table summarises the resit opportunities depending on the resit category of the module:

	Resit category		
Module components, Failed components	**Category 1**	**Category 2**	**Category 3**
Module: Exam + CA Failed: Exam	Exam: resit CA: carried forward	N/A	Exam: resit CA: carried forward
Module: Exam + CA Failed: CA	Exam: carried forward CA: resit	N/A	Exam: resit (even if passed already) CA: carried forward
Module: Exam + CA Failed: Exam & CA	Exam: resit CA: resit	N/A	Exam: resit CA: carried forward
Module: 100% CA Failed: CA	N/A	Repeat module next year	N/A
Module: 100% Exam Failed: Exam	Exam: resit	N/A	N/A

How many attempts at a module do I have?

You have 2 Academic Sessions (years) only; *for some modules this means four possible attempts if resits are available; for modules with no resits, this means two possible attempts*. The Progression and Awards Board may, in exceptional circumstances and with documented evidence, grant an additional academic session.

What is plagiarism, and what are the consequences?

Plagiarism and University Regulations:

- Plagiarism is a major offence in the University.
- It is the act of taking and using another person's thoughts or work as your own.
- It includes inadequate referencing, reproducing the work (even with small changes) of another person taken from books, journals, articles, TV programmes, the Internet, lectures and so on.
- It also includes copying another person's work, with or without his/her consent.
- Also included is collusion where a group of people collaborate or collude to present an assessment or a substantial part thereof, when the examiner required individual research and outcome.
- These offences will be dealt with by the University with the utmost gravity.
- You should be very clear how to reference your assessed work.
- You should not use another student's assessed work -either with or without their consent unless you attribute it to him/her.
- You should not give your assessed work to another student for him/her to copy.

- You should familiarise yourself with the University's Regulations on Plagiarism, Copying and Collusion (see Registry Website).
- You must sign and submit the declaration which is included on the Regulation on Plagiarism, Copying and Collusion with EACH piece of assessed work you submit.
- You can expect a penalty concomitant with the seriousness of an offence against the Regulation.

The University Library offers an e-tutorial on Information Literacy for students that require assistance with the correct procedures for citing and referencing.
Link: http://www.dcu.ie/~library/index.html.

When is it acceptable to work together with other students?

Unless specified (as in group projects or assignments), it is expected that work submitted for assessment is solely the work of an individual (yourself). Typically, for assignments you will be asked to sign a cover sheet (http://www.eeng.dcu.ie/resources/assign_cover.pdf) which among other things has the following statement:

> "*I hereby declare that the attached submission is all my own work, that it has not previously been submitted for assessment, and that I have not knowingly allowed it to be used by another student. I understand that deceiving or attempting to deceive examiners by passing off the work of another as one's own is not permitted. I also understand that using another student's work or knowingly allowing another student to use my work is against the University regulations and that doing so will result in loss of marks and possible disciplinary proceedings*."

You can find the university policy at the following URL:
http://www.dcu.ie/info/regulations/plagiarism.shtml

But what about study groups?

Discussing course material with your friends is an excellent way to study course material. There is a great benefit in pooling resources either in having someone explain something that is confusing you, or in having to explain something so they also understand it. We strongly support the formation of these groups. But … assignments are to assess ***your*** grasp of the material, not the group's. Therefore, ***please do*** discuss the concepts pertaining to the assignments, but try to ***avoid*** sitting around in a group doing the assignment at the same time, as this will potentially lead to worryingly similar-looking assignments.

If I miss a Lab Session (Practical), does it matter?

YES! Since lab sessions may strongly contribute to the final mark of a module, it is strongly advised that all lab sessions are attended in order to ensure that the module is passed. We do **not** make arrangements for students to catch up if they are absent. Absence (or extreme lateness) means that you will get zero mark for that lab if you do not have a good certifiable reason for being absent! You may not be able to resit a failed or missed lab, as resits in this case are generally not possible. An opportunity to catch up on a missed lab session *may* be provided, *if* a genuine reason for the absence at the original session is provided and if it possible within resource constraints.

If I fail to undertake continuous assessments, does it matter?

YES! Some modules include a significant continuous assessment contribution. It is strongly advised that all continuous assessment is undertaken. We do **not** make alternative arrangements for students if they fail to submit continuous assessments without a good certifiable reason.

If I get sick and miss a lab or continuous assessment submission, what should I do?

Talk to the lecturer. S/he will discuss the matter with you. If missing a lab or assessment is caused by extenuating circumstances and is likely to affect your academic performance, see the section dealing with 'Extenuating circumstances'.

If my academic performance is affected by illness or other circumstances, what should I do?

Your academic performance may be adversely affected by illness (physical or psychological), accident, pregnancy, maternity, bereavement or other personal circumstances. These guidelines deal with cases where the above and similar circumstances:

- cause you to miss a substantial number of lectures, tutorials or labs
- significantly affect your ability to study over a long period
- prevent you from completing an assessment on time
- negatively impact your performance in a continuous assessment exercise
- cause you to miss an examination
- cause you to perform badly in examination

Whatever the circumstances, you should fill in an R30 'Extenuating Circumstances' form and submit it to Registry ***at least 7 days before*** the meeting of the Progression and Awards Board (usually held the week before the publication of May and August exam results). You should support your case with evidence (for example, medical cert). You should also inform the programme chairpersons, and also discuss your situation with the coordinators of those modules that are affected. You can download the R30 form from:
http://www.dcu.ie/registry/forms/pdfs/R30.pdf
For more information, look at the website for exam regulations at:
http://www.dcu.ie/registry/examinations
and/or
http://www.dcu.ie/registry/examinations/regulations.shtml

By filling in the R30 form (and providing supporting evidence) the chairperson and/or the Progression and Awards Board will decide how the extenuating circumstances had affected your progress and what action to take. The decision may be to grant you a deferral (to allow 'first-sit' of a module during the resit session), or in borderline cases the Board may credit you with extra marks.

If I am unable to sit an exam, what should I do?

Should you be unable to sit an examination, you should officially inform the University about your situation by filling in an R30 'Extenuating Circumstances Form' downloadable from:
http://www.dcu.ie/registry/forms/pdfs/R30.pdf.
A copy of this should be submitted to the Registry at least 7 days prior to the Progression and Awards Board (see Academic Calendar for dates). Keep a copy for your own records. You should

also, if at all possible, inform the chairperson, and discuss your situation with the lecturer of the module(s) concerned.

3. STUDENT LIFE IN DCU

What is the Student Union?

You can learn more about the Student's Union at the following web address: http://www.dcu.ie/prospective/students_union.shtml?section=6

I want to know about DCU clubs and societies. Where do I go?

DCU Student Union is the best place to ask for more information. It is physically located in the Hub and it has its own web site that can be accessed at: http://life.dcu.ie/. There you can also learn more information about the Student Events Day, where all Clubs and Societies present their activities.

Is there an Engineering Society at DCU?

Yes, the Engineering Society is one of DCU's newest societies. You can access its own web page at: http://www.redbrick.dcu.ie/~engsoc/. Once you become a member, you can have access to many of the activities organised by the society: trips, competitions, tutorials/grinds, socialising. You can also gain access to the N109 common room (shared by members of the Engineering Society and the Redbrick Networking Society).

I have a health problem? What do I do?

You can visit the DCU Health Centre situated on the Ground Floor of the Henry Grattan Building, room - CG13. The service is private and confidential. Nurses can be seen on a walk-in basis, while doctor appointments are scheduled as required. Call 7005143 and make an appointment with Paula. Students with any medical conditions in need of on-going care are advised to register with the Student Health Service at the beginning of term. You can get more information at the following web address: http://www.dcu.ie/students/health/index.shtml

I have a special need. Who can help me?

The University has a unit dedicated to facilitating people with all forms of Special needs called **Disability & Learning Support Service.** Every student with a disability or specific learning difficulty in DCU has access to a range of reasonable supports and services, including assistive technology, learning support and exam accommodations. These are based on each student's individual needs. More information relating to Special needs can be obtained by phone: (01) 700 5927, email disability.service@dcu.ie or at the following Web address: http://www.dcu.ie/students/disability/index.shtml.

Where can I get a drink / meal?

Catering is organised at different locations within DCU campus. They are located at the School of Nursing, Library, Hub and Main Canteen. There is also a Spar shop where you can buy sandwiches, and there are several vending machines.

What do I do if I have a finance Issue?

The DCU Finance Office web address can help you: http://www.dcu.ie/students/finance/index.shtml All queries regarding fees and other charges are dealt with by the Fees Office at (01) 700 8836 or email fees@dcu.ie.

Can I apply for a grant or financial assistance?

The Higher Education Authority has a very useful website, which provides useful information about grants: http://www.studentfinance.ie/.

Each year, the government, with assistance from the European Social Fund, provides some emergency funding for students that have come into financial difficulty and whose performance at University is therefore being affected. This fund is relatively small but *full-time* students are entitled to apply for it. Unfortunately the regulations exclude part-time students from this funding. Further information at: http://www.dcu.ie/students/finance/index.shtml

I have an administrative issue. Who can help me?

The Registry (www.dcu.ie/registry/index.shtml), which is located in the Street in the Henry Grattan Building may be able to help you. Opening hours: 9.30–12.30/2–5pm. The Registry holds your official records and supports you through your application procedure, registration, examinations, etc. Should you have any queries, kindly call in during the Opening Hours or phone (01) 700 5338 or email registry@dcu.ie. Certain administrative issues are dealt with by the Faculty Office on the first floor of the L building. If you are not sure which is the correct one, please ask.

What do I do if I am not happy with my accommodation?

An accommodation officer is available for you to contact and to provide you with help. For more information see http://www.dcuaccommodation.ie/.

Where would I go to avail of counselling?

The Counselling service http://www.dcu.ie/counselling/index.shtml offers a professional and confidential service to all DCU students and works with students who may be experiencing distressing situations for whatever reason.

Is there any spiritual guidance?

The Inter Faith Centre: http://www.dcu.ie/students/chaplaincy/index.shtml offers spiritual guidance, provides hospitality and welcomes all students attending the University. Students can attend religious gatherings or simply gather in the amenity in between classes for a cup of coffee and a chat. It is a place where many friendships develop and where many Clubs and Societies often meet to conduct their general business. This is situated next to The Hub in the centre of the campus.

Can I get any general advice?

At times, you may have a query which does not fit neatly into a particular category and you may wish to get some informal advice and guidance/information about how to approach a particular situation. Staff in the ***Student Advice Centre*** have a sound knowledge of the complexities of the University system, and may be able to advise you on your academic or personal life at DCU. Ring (01) 700 7165 or email student.support@dcu.ie to make an appointment.

Can anyone advise International students?

The International Office promotes and supports international activities in DCU and offers additional assistance to international students in the University, in the form of advice, guidance and administrative support from the initial application through to graduation. Information is provided if you contact the office at: (01) 700 7411 or via email international.office@dcu.ie. More details one can find at: www.dcu.ie/international/index.shtml.

Is there any IT support?

ISS (Information Systems and Services) is located opposite the main student canteen and offers a walk-in assistance service for all students. Their website www.dcu.ie/iss/index.shtml also offers valuable information for students, including online training in some applications such as Windows. Phone the Helpdesk at (01) 700 5007 or email helpdesk@dcu.ie.

The School computer network (MENG) is maintained by the School's IT technician. If you encounter problems with software installed on these local networks you may seek support from the corresponding technician.

Is there any general student support service?

There is a Student Advice Centre in the Henry Grattan Building which can provide student support & development advice. For details see http://www.dcu.ie/students/index.shtml.

What do I do if the Fire Alarm rings?

Leave the building immediately via the nearest fire exit!

- do not stop to retrieve belongings
- do not use lifts
- assemble at the nearest assembly point (not at the doorways)
- do not reenter the building until given the all clear by fire wardens.

Please note that it is intended that every student-occupied building on campus will have a Fire Drill during the first two weeks of the new academic year.

Where can I find answer to other questions?

During Induction Week you will be supplied with quite an amount of information through the School, Faculty, Administrative and Student Support Units. The following websites may also be of particular relevance during your initial period at DCU:

Important Websites:

All administrative forms can be downloaded from the Registry Website at:

http://www.dcu.ie/registry/index.shtml

Your Timetable can be found at:

http://www.dcu.ie/timetables/search.shtml

The detailed Academic Calendar is located at:

http://www.dcu.ie/timetables/ac-12-13.shtml

Student Support Services:

http://www.dcu.ie/study_at_dcu.shtml

Frequently Used Contacts during First Year:

Letters confirming you are a student	Registry
Getting letters stamped for child allowance purposes	Registry
Questions on Grant Payments	Registry
Academic Advice	Programme Chairperson / Individual Lecturers / Student Advice Centre
Advice on optional modules	Programme Chairperson / Individual Lecturers
Online Academic Support	Full range of services detailed at: http://www.dcu.ie/students/academicsupport.shtml
Careers Advice	Careers Office http://www.dcu.ie/students/careers/index.shtml
Personal problems (loneliness, difficulty settling in, disorientation etc.)	Student Advice Centre, Henry Grattan Building / Students' Union / Personal Tutor / Year Head
Medical Assistance	DCU Health Centre / your own doctor
Accommodation problems	Campus Accommodation / Student Advice Centre / Students' Union
Fees Issues	Fees Office http://www.dcu.ie/finance/index.shtml
Joining a Club or Society	Open Days in The Hub Student Centre on 6th & 7th October

Student Portal Page:
The DCU Student Portal Page is your personalised portal, which provides crucial information at all times of the year. You should regularly check your portal pages for postings that may be of interest / important to you.

4. PROGRAMME INFORMATION

4.1. Masters (MEng) in Mechanical and Manufacturing Engineering (MMME)(DC814 FT/DC816 PT)

The *MEng* programme is a one-year (full-time) level 9 Master programme. It is also offered in part-time mode (over two years). It starts in September of each academic year.

Modules
There are two types of modules:

- Level 8 modules from existing undergraduate programmes (MM4**)
- Level 9 modules (MM5**)

Note: Modules for which you have been awarded credits in your undergraduate degree should not be selected for the MMME qualification!

Credit ratings, requirements
Each module is worth 7.5 credits (apart from the Project, which is 30 credits). For a Masters award, you need to accumulate 90 credits; at least 60 credits must come from level 9 modules; the remaining 30 credits can be from level 8 modules. The project is 30 credits (and is a level 9 module), so you need at least four more level 9 modules.

Module listing

Semester 1:

Module Code	CORE module (MUST take it)	Credit
MM533	Research Practice and Methodology	7.5

Module Code	Optional modules (select THREE modules)	Credit
MM421*	Finite Element Analysis	7.5
MM432*	Heat Transfer and Fluid Mechanics	7.5
MM523	Product Design, Development and Value Analysis	7.5
MM530	Surface Engineering and Tribology	7.5
MM584	Manufacturing Systems Simulation	7.5

Semester 2:

Module Code	Optional modules (select FOUR modules)	Credit
MM524	Advanced FEA (pre-requisite: MM421 Finite Element Analysis or similar)	7.5
MM532	Computational Thermo-Fluid Dynamics (pre-requisite: MM432 Heat Transfer and Fluid Mechanics or similar)	7.5
MM555	Manufacturing Process Analysis & Tool Design	7.5
EE507	Entrepreneurship for Engineers	7.5

* Select MM421 and MM432 if you had not studied them or similar modules, as they are pre-requisites for modules in semester 2.

Year-long module:

Module Code	CORE module (MUST take it); Code depends on Major!	Credit
MM542/544/546	Project	30

Majors

The MEng in Mechanical and Manufacturing Engineering programme offers two majors:

- Major in Biomedical Engineering
- Major in Sustainable Systems/Energy

The type of project the student selects determines the area of the Major. If the project is in a different area (project code MM542), a Major is not awarded.

Note: the PAC code does not depend on the Major the student may select. The student selects a Major (optional) when they register for the appropriate project.

Major in Sustainable Systems/Energy
There is a growing international market for Engineers in sustainable energy and development, eco–innovation, resource efficiency and clean–tech sectors. There are lots of career opportunities in the growing fields of Energy/Renewable Energy (wind, wave, solar, biomass etc.); a national priority area for Ireland.

Major in Biomedical Engineering
This discipline integrates the necessary aspects of biology and medicine with the technical engineering aspects required to engineer medical devices. The world of medicine is evolving and expanding rapidly, with new treatments and new diseases appearing all the time. As Ireland is a major player in Bioengineering, this Major provides graduates with specialisms required by industry.

Masters award classification

After accumulating 90 credits (60 at level 9), the precision mark (or weighted aggregate mark WAM) determines the award classification:

Precision Mark	Award
less than 60%	Pass
60 – 69%	2nd Class Honours
70 – 100%	1st Class Honours

Note: the WAM is calculated based on the module mark at first attempt. If you fail a module and resit it, it is still the original (first sit) mark that counts. However, the transcript will indicate both the original and resit marks.

Masters Project

Each student on the MMME programme must complete a Masters Project (worth 30 credits). The project is a year-long module and spans over the Summer as well. *The project coordinator is Dr. John Geraghty; he is responsible for its administration.*
Depending on the type of Masters award you want to achieve (whether you want to major in an area) the following Masters Project codes are used:

Award	Project Code
MEng in Mech. & Manuf. Eng. (no Major)	MM542
MEng in Mech. & Manuf. Eng. with Sustainable Systems/Energy Major	MM544
MEng in Mech. & Manuf. Eng. with Biomedical Engineering Major	MM546

You need to make sure that you are registered for the correct module. Once registered, you need to contact the project coordinator and select a suitable project in the correct area.

EI Accreditation

The MEng in Mechanical and Manufacturing Engineering programme is accredited by Engineers Ireland at level 9.

Graduate Diploma in Mechanical and Manufacturing Engineering

The Graduate Diploma (GD) is an alternative exit from the MMME programme for students who are not eligible for the MMME award (not enough credits and/or not enough level 9 credits). If a student has accumulated 60 credits from level 9 modules, he/she may be awarded a Graduate Diploma in Mechanical and Manufacturing Engineering. The necessary 60 credits can be accumulated in two ways:

- Masters Project (30 credits) plus four level 9 modules (4 x 7.5 credits) OR
- Eight level 9 modules (8 x 7.5 credits)

Note: for the GD the number of credits from level 8 modules is irrelevant; only credits from level 9 modules are counted.

The GD is at level 9 (major award) according to the NFQ.

Note: you cannot apply for GD directly through PAC, nor can you register for it. It is an alternative exit from the MMME programme.

Graduate Certificate in Mechanical and Manufacturing Engineering

The Graduate Certificate (GC) is an alternative exit from the MMME programme for students who are not eligible for the MMME or GD awards (not enough credits and/or not enough level 9 credits). If a student has accumulated 30 credits from level 9 modules, he/she may be awarded a Graduate Certificate in Mechanical and Manufacturing Engineering. The necessary 30 credits can be accumulated in two ways:

- Masters Project (30 credits) OR
- Four level 9 modules (4 x 7.5 credits)

Note: for the GC the number of credits from level 8 modules is irrelevant; only credits from level 9 modules are counted.

The GC is at level 9 (minor award) according to the NFQ.

Note: you cannot apply for GC directly through PAC, nor can you register for it. It is an alternative exit from the MMME programme.

4.2. Access Course (MMAC)(DC812)

The Access Course provides an alternative entry route to the MEng programme for students who do not have a primary degree in Mechanical and/or Manufacturing Engineering but have a Science/Technology based degree or a degree in other areas of engineering (Electronic Engineering, Civil Engineering, etc.). It aims at equalising the student's knowledge to level 8 Mechanical/Manufacturing Engineering by providing core Level 8 modules from existing undergraduate programmes. The Access Course itself does not carry an award.

The Access Course is a part-time, one year programme. It start in September of each academic year. It includes six five credit level 8 core (compulsory) modules with a total credit of 30. The student must pass each module with a minimum mark of 50%. The credits from the Access Course are not carried over to the MEng programme. After successful completion of the Access Course the student is eligible to register for the MEng in Mechanical and Manufacturing Engineering programme. Once they complete the Access Course and are eligible to transfer to MEng they will be transferred internally; no need to apply through PAC again. They can register for MEng in September of the next academic year. Credits from the Access Course are not carried forward into the MEng programme.

Module listing

Module Code	Module Title (MUST take ALL modules)	Level	Credit	Semester
EM201	Engineering Mathematics III	8	5	1
MM252	Manufacturing Processes 1	8	5	1
MM306	Mechanics of Machines 2	8	5	1
EM202	Engineering Mathematics IV	8	5	2
MM212	Strength of Materials II	8	5	2
MM227	Thermofluid Mechanics	8	5	2

4.3. Master Qualifier A for the MEng in Mechanical and Manufacturing Engineering Programme (MMQA)(DC832)

The Master Qualifier Programme A is an alternative entry route to the MEng programme for students who do not meet the normal MEng entry requirements but have a **level 7** degree in Mechanical and/or Manufacturing Engineering and several years of relevant work experience. Its aim is to give students the knowledge, experience and skills required to study level 8 modules and to enter the Masters programme in Mechanical & Manufacturing Engineering. It is a one-year part-time course. Successful completion of the Qualifier A programme allows the student to progress to the MEng programme. The Qualifier programme itself does not carry an award, but the credits from it are transferred to the MEng programme.

The Qualifier Programme A is a part-time, one year programme. It starts in September of each academic year. It includes four 7.5 credit level 8 modules with a total credit of 30. The student must pass each module with a minimum mark of 50%. After successful completion of the Qualifier Programme the student is eligible to register for the MEng in Mechanical and Manufacturing Engineering programme. Once they complete the Qualifier Programme and are eligible to transfer to MEng they will be transferred internally; no need to apply through PAC again. They can register for MEng in September of the next academic year.

All modules are from year 4 of existing undergraduate programmes offered by the School. Since all Qualifier A modules are at level 8, after transferring to MEng all further modules have to be at level 9 in order to accumulate 60 credits at level 9.

Modules

Semester 1:

Module Code	Module Title (MUST take BOTH Modules)	Level	Credit
MM421	Finite Element Analysis	8	7.5
MM432	Heat Transfer and Fluid Mechanics	8	7.5

Semester 2:

Module Code	Module Title (Select TWO Modules)	Level	Credit
MM401	Mechanical Engineering System Simulation	8	7.5
MM451	Design for Manufacture and Assembly	8	7.5
MM485	Operations Research Methods	8	7.5

4.4. Master Qualifier B for the MEng in Mechanical and Manufacturing Engineering Programme (MMQB)(DC838)

The Master Qualifier Programme B is an alternative entry route to the MEng programme for students who do not meet the normal MEng entry requirements but have a **level 8 H3** degree in Mechanical and/or Manufacturing Engineering and several years of relevant work experience. Its aim is to give students the knowledge, experience and skills required to study level 8 and 9 modules at sufficient level and to enter the Masters programme in Mechanical & Manufacturing Engineering. It is also useful for students who had not studied some of the pre-requisite modules of the modules in the MEng programme. It is a one-year part-time course and starts in September of each academic year. Successful completion of the Qualifier B programme allows the student to progress to the MEng programme. The Qualifier programme itself does not carry an award, but the credits from it are transferred to the MEng programme.

The Qualifier Programme B is a part-time, one year programme. It includes four 7.5 credit modules at level 8 or 9 with a total credit of 30. The student must pass each level 8 module with a minimum mark of 50%, and each level 9 module with a minimum mark of 40%. After successful completion of the Qualifier Programme the student is eligible to register for the MEng in Mechanical and Manufacturing Engineering programme. Once they complete the Qualifier Programme and are eligible to transfer to MEng they will be transferred internally; no need to apply through PAC again. They can register for MEng in September of the next academic year.
The module listing is the same as for the MEng programme, but only four modules are selected (two per semester). Students selecting level 8 modules need to be aware that after transferring to MEng at least 60 credits have to be accumulated from level 9 modules (including the project).

Modules

Semester 1:

Module Code	Optional modules (Select TWO modules)	Level	Credit
MM533	Research Practice and Methodology	9	7.5
MM421*	Finite Element Analysis (pre-requisite for MM524)	8	7.5
MM432*	Heat Transfer and Fluid Mechanics (pre-requisite for MM532)	8	7.5
MM523	Product Design, Development and Value Analysis	9	7.5
MM530	Surface Engineering and Tribology	9	7.5
MM584	Manufacturing Systems Simulation	9	7.5

* Select MM421 and MM432 if you had not studied them or similar modules, as they are pre-requisites for modules in semester 2.

Semester 2:

Module Code	Optional modules (Select TWO modules)	Level	Credit
MM524	Advanced FEA (pre-requisite: MM421 Finite Element Analysis or similar)	9	7.5
MM532	Computational Thermo-Fluid Dynamics (pre-requisite: MM432 Heat Transfer and Fluid Mechanics or similar)	9	7.5
MM555	Manufacturing Process Analysis & Tool Design	9	7.5
EE507	Entrepreneurship for Engineers	9	7.5

4.5. Pre-Masters International Foundation Programme (IFPCME, IFPSCM)

The International Foundation Programme (IFP) is for non-native English speakers who wish to prepare themselves for a Masters degree in Mechanical and Manufacturing Engineering (MMME). It is an alternative entry route to the MEng programme for students who are non-native English speakers and do not meet DCU's English language requirements. The IFP helps students to achieve the English language skills necessary for DCU postgraduate programmes, prepares students for the adjustment to university learning, and allows them to sample modules from the MMME degree programme. Students who successfully complete this course will be guaranteed a place on the MMME programme. They will also be entitled to exemptions from modules successfully completed during the Foundation programme (the credits from the IFP are carried forward into the MEng programme). This will improve the chances of obtaining excellent grades in the postgraduate programme and ease the strain of transition to a new education system. There is a corresponding reduction in fees.

The IFP is composed of two groups of modules:

- Core (compulsory) modules in Academic English, English Language Development and Communication and Presentation Skills.
- Optional level 8 modules from the undergraduate programmes of the School of Mechanical and Manufacturing Engineering. The student must select one 7.5 credit module in each semester.

Note: The International Foundation Programme for all Master programmes is managed by the School of Applied Language & Intercultural Studies (SALIS). More information can be found at:
http://www.dcu.ie/prospective/deginfo.php?classname=IFP&originating_school=61

Engineering Modules

Semester 1:

Code	Optional modules (select ONE module)	Level	Credit
MM421	Finite Element Analysis	8	7.5
MM432	Heat Transfer and Fluid Mechanics	8	7.5

Semester 2:

Code	Optional modules (select ONE module)	Level	Credit
MM401	Mechanical Engineering System Simulation	8	7.5
MM451	Design For Manufacture and Assembly	8	7.5
MM485	Operations Research Methods	8	7.5

Note: the language modules offered by SALIS are not listed in this table.

List of modules for the MEng programme and Qualifier B course:

Code	Title	Credits	NFQ level	Semester	Assessment	Resit categ.	Notes
MM533	**Research Practice and Methodology**	7.5	9	1	CA: 50% Exam: 50%	1	Core for MEng
MM421	**Finite Element Analysis**	7.5	8	1	CA: 40% Exam: 60%	1	Pre-requisite for MM524
MM432	**Heat Transfer and Fluid Mechanics**	7.5	8	1	CA: 30% Exam: 70%	1	Pre-requisite for MM532
MM523	**Product Design, Development and Value Analysis**	7.5	9	1	CA: 20% Exam: 80%	1	
MM530	**Surface Engineering and Tribology**	7.5	9	1	CA: 20% Exam: 80%	1	
MM584	**Manufacturing Systems Simulation**	7.5	9	1	CA: 50% Exam: 50%	1	
MM524	**Advanced FEA**	7.5	9	2	CA: 40% Exam: 60%	1	Pre-requisite: MM421
MM532	**Computational Thermo-Fluid Dynamics**	7.5	9	2	CA: 50% Exam: 50%	1	Pre-requisite: MM432
MM555	**Manufacturing Process Analysis & Tool Design**	7.5	9	2	CA: 20% Exam: 80%	1	
EE507	**Entrepreneurship for Engineers**	7.5	9	2	CA: 50% Exam: 50%	1	
MM542	**Project (Masters)**	30	9	1 & 2 & Summer	CA: 100%	2	Core for MEng (No Major)
MM544	**Project (Masters) in Sust. Systems/Energy**						Core for MEng with Sustainable Major
MM546	**Project (Masters) in Biomedical Engineering**						Core for MEng with Biomed Major

List of modules for the Access Course:

Code	Title	Credits	NFQ level	Semester	Assessment	Resit category	Notes
EM201	**Engineering Mathematics III**	5	8	1	CA: 30% Exam: 70%	3	Core
MM252	**Manufacturing Processes 1**	5	8	1	CA: 20% Exam: 80%	1	Core
MM306	**Mechanics of Machines 2**	5	8	1	CA: 20% Exam: 80%	1	Core
EM202	**Engineering Mathematics IV**	5	8	2	CA: 30% Exam: 70%	1	Core
MM212	**Strength of Materials II**	5	8	2	CA: 20% Exam: 80%	3	Core
MM227	**Thermofluid Mechanics**	5	8	2	CA: 20% Exam: 80%	3	Core

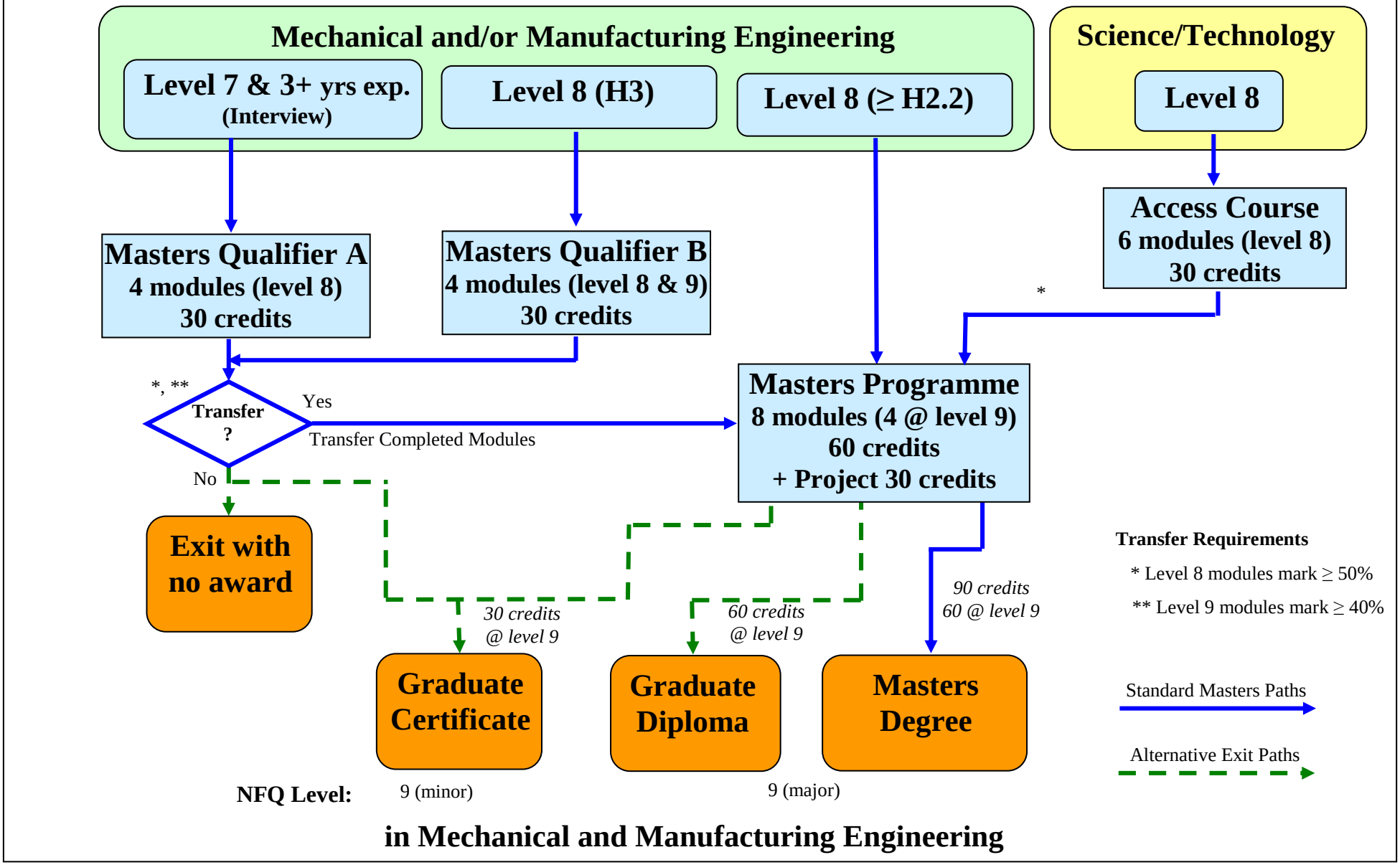
List of modules for the Masters Qualifier A course:

Code	Title	Credits	NFQ level	Semester	Assessment	Resit category	Notes
MM421	**Finite Element Analysis**	7.5	8	1	CA: 40% Exam: 60%	1	Core
MM432	**Heat Transfer and Fluid Mechanics**	7.5	8	1	CA: 30% Exam: 70%	1	Core
MM401	**Mechanical Engineering System Simulation**	7.5	8	2	CA: 40% Exam: 60%	1	Optional*
MM451	**Design for Manufacture and Assembly**	7.5	8	2	CA: 20% Exam: 80%	1	Optional*
MM485	**Operations Research Methods**	7.5	8	2	CA: 30% Exam: 70%	1	Optional*

* Select two modules

Note: **Resit Categories**:
1 = A resit is available for all components of the module
2 = No resit is available for 100% continuous assessment module
3 = No resit is available for the continuous assessment component

Taught Post-Graduate Programme Structure



in Mechanical and Manufacturing Engineering