



University
of Glasgow

Calendar 2008-09

FACULTY OF ENGINEERING

DEAN: Professor Frank Coton BSc PhD CEng FRAeS

DATES OF SEMESTERS

Semester 1: 22nd September 2008 - 19th December 2008

Christmas Vacation: 22nd December 2008 - 9th January 2009

Semester 2: 12th January 2009 - 29th May 2009

Spring Vacation: 30th March 2009 - 17th April 2009

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I UNDERGRADUATE ENTRY TO FACULTY

Before applying for admission to the Faculty of Engineering, all applicants should consult the most recent edition of the University's *Undergraduate Prospectus*. The *Prospectus* sets out the normal qualifications required for admission, describes the application procedure, summarises the degree regulations and courses offered, and gives general information about the University. It is available in most U.K. schools, online at www.glasgow.ac.uk/undergraduate/prospectus or it may be obtained from The Student Recruitment and Admissions Service, University of Glasgow, Glasgow G12 8QQ, Scotland. Information is also available on the web at www.glasgow.ac.uk.

II APPEALS BY STUDENTS

The Senate is charged by the *Universities (Scotland) Acts* with a duty to superintend the teaching of the University. This is understood to include examining. The Senate has authorised the establishment of Faculty Appeals Committees to hear appeals in the first instance, as specified in the Code of Procedure for Appeals to a Faculty Appeals Committee.

A student may further appeal from the decision of the relevant Faculty Appeals Committee to the Senate.

Any appeal giving all the grounds of that appeal must be despatched in writing to the Faculty Secretary of the relevant Faculty, or to the Director of the Senate Office, as appropriate, within 10 working days of the intimation to the student of the decision against which he or she is appealing.

Students are advised to consult the Faculty Secretary of the relevant Faculty before lodging an appeal to the Faculty Appeals Committee and the Director of the Senate Office, before lodging an appeal to the Senate Appeals Committee.

The Code of Procedure for Appeals to a Faculty Appeals Committee and the Code of Procedure for Appeals to the Senate are set out in that section of the University *Calendar* entitled 'University Fees and General Information for Students', which is available online at www.glasgow.ac.uk/senate/calendar. Copies are also available for students to consult in the Faculty Office. The address of the Faculty Secretary, Faculty of Engineering is James Watt Building (South), University of Glasgow, Glasgow G12 8QQ.

III UNDERGRADUATE DEGREES IN THE FACULTY OF ENGINEERING

Resolution 582 The provisions of this Resolution, which at the time of going to print are in draft form, are as follows:

1. All undergraduate degrees of the University of Glasgow except those listed in §20 of the section entitled 'Regulations' below may be governed by common regulations (the Generic Undergraduate Regulations) and by supplementary regulations specific to each degree.
2. The Senate may make such Generic Undergraduate Regulations, which are subject to the approval of the University Court – these are stated in §1 - §19 of the section entitled 'Regulations' below.

REGULATIONS

1. Introductory and Definitions

These regulations must be read together with each degree's supplementary regulations and each degree programme's programme specification. The definitions set out in the Glossary of Terms (www.glasgow.ac.uk/senate/academic/policies/03-07-E240304.html) apply to these regulations.

2. Scope of Regulations

These regulations apply to all undergraduate degrees offered by the University of Glasgow other than those listed in §20.

3. Duration of Study

A candidate for a degree shall, subject to §4, normally attend the University of Glasgow either full-time or part-time for at least the number of academic sessions indicated as a minimum in the table below. The candidate must normally complete his or her studies for the award of a degree within the number of sessions indicated as a maximum in the degree's supplementary regulations.

Type of degree	Minimum duration of study (academic sessions)	
	Full-time	Part-time
Ordinary/designated degree ¹	3	4
Honours degree	4	5
MA Honours language degree	5	7
Integrated Masters degree ²	5	6
BVMS, MBChB, BDS	5	N/A

4. Recognition of Prior Learning

- 4.1 Credit may be awarded towards the completion of a degree programme for courses or examinations satisfactorily completed while following another programme at the University of Glasgow or at another institution or, where indicated in the degree's supplementary regulations, for other examinations satisfactorily completed. Such credit may permit a candidate entry to the second or subsequent year of the degree programme. The maximum limit for the award of such credit is, other than in exceptional circumstances and with the approval of the Clerk of Senate, 50% of the credits associated with the degree programme.
- 4.2 Although appropriate prior learning may be recognised for the award of credit, all such credit is ungraded for the purposes of the University except that credit obtained in earlier study at the University of Glasgow may be graded.
- 4.3 Graded credit may be awarded for study undertaken at an institution other than the University of Glasgow where this is done while registered for a degree programme at the University of Glasgow.

5. Recognition of Prior Experiential Learning

Where indicated in the degree's supplementary regulations, a candidate may be awarded credit for prior experiential learning. The procedure for approval of such credit is set out in the policy which can be found at: www.glasgow.ac.uk/senate/academic/policies/aplguidelines.html.

6. Composition of Degree Programmes

- 6.1 Each degree programme shall be composed of courses, each of which is characterised by the academic level at which it is set and the number of credits which it conveys. The course level will be expressed as 1, 2, 3, H or M, these corresponding to levels 7 to 11 in the Scottish Credit and Qualifications Framework. Each course shall convey either 10, 15, 20, 30, 40, or 60 credits, or exceptionally a different number of credits where approved by the Faculty.
- 6.2 In each academic session a full-time candidate will normally take courses conveying a total of 120 credits.
- 6.3 The structure of a degree programme, including the compulsory and optional courses of which it is composed, is shown in the degree's supplementary regulations and the programme specification.

7. Pre-requisites, Co-requisites and Excluded Combinations

- 7.1 Each course may have pre-requisite and/or co-requisite course(s). To be admitted to a course:
- The candidate must normally have attained a grade D or better in each pre-requisite course. If the course follows a pre-requisite course in the same academic session, however, it shall be sufficient for the candidate to have attended the pre-requisite course.
 - The candidate must either have attended, or be concurrently attending, each co-requisite course.
- 7.2 Where a candidate's curriculum includes courses which form an excluded combination, credits from only one of these courses may be counted towards the requirements for award of a degree or other qualification.

8. Approval of Curriculum

The curriculum of each candidate must be approved at the start of each session by the candidate's Adviser of Studies. Once approved, the curriculum may not be altered except with the approval of an Adviser of Studies.³

¹ The minimum duration of study for the ordinary degrees of Bachelor of Technical Education and MA Religious and Philosophical Education with Secondary Teaching Qualification is four academic sessions.

² In a minority of cases the minimum duration of study for an integrated Masters degree is four academic sessions.

³ Where a candidate is in the third or subsequent year of an Honours or integrated Masters programme, the approval of the Adviser extends to Honours/Masters status and not to individual courses.

9. Assessment

Assessment and re-assessment are governed by the Code of Assessment which is contained in the Fees and General Information for Students section of the *University Calendar*.

10. Progress

10.1 The progress of candidates shall be reviewed annually.

10.2 The requirements for a full-time candidate to progress are set out in the degree's supplementary regulations.

10.3 For a part-time candidate, the minimum achievement required to progress will be determined for and communicated to the candidate at the start of each session by the Principal/Senior/Chief Adviser for the degree on which the candidate is enrolled. A candidate who fails to meet this progress requirement must apply for re-admission to the Principal/Senior/Chief Adviser.

11. Administration of Progress

11.1 Decisions on progress shall be taken by the Faculty Progress Committee or a sub-committee thereof. The committee shall have the power to exclude a candidate or to impose conditions regarding a candidate's future progress.

11.2 The Faculty shall publish to all candidates the arrangements for identifying any candidate who does not comply with progress requirements. The Faculty shall notify such candidates of the date of the meeting of the committee and the procedures to permit a candidate to make representations at or prior to the committee meeting.

11.3 Appeal against decisions of the Faculty Progress Committee may be made following the Codes of Procedure set out in the Fees and General Information for Students section of the *University Calendar*.

12. Award of a Certificate in Higher Education

12.1 A candidate who has completed courses totalling at least 120 credits with a grade point average of at least 8.5 shall be eligible to receive a Certificate of Higher Education, unless the candidate proceeds immediately to a diploma or degree programme. This does not preclude the use in subsequent completion of a degree programme of credit counted towards the award of a Certificate of Higher Education.

12.2 The Certificate of Higher Education shall be awarded with Merit where the grade point average is at least 12, and with Distinction where the grade point average is at least 14.

12.3 Where the candidate has accumulated more than 120 credits, the credit counted in the calculation of the grade point average shall be reduced to 120 credits by discarding all or part of the credit for certain of the courses in such a way as to maximise the grade point average while meeting all other requirements of the regulations.

13. Award of a Diploma of Higher Education

13.1 A candidate who has completed courses totalling at least 240 credits, of which at least 80 credits are for courses at level 2 or above, with a grade point average of at least 8.5, shall be eligible to receive a Diploma of Higher Education, unless the candidate proceeds immediately to a degree programme. This does not preclude the use in subsequent completion of a degree programme of credit counted towards the award of a Diploma of Higher Education.

13.2 The Diploma of Higher Education shall be awarded with Merit where the grade point average is at least 12, and with Distinction where the grade point average is at least 14.

13.3 Where the candidate has accumulated more than 240 credits, the credit counted in the calculation of the grade point average shall be reduced to 240 credits by discarding all or part of the credit for certain of the courses in such a way as to maximise the grade point average while meeting all other requirements of the regulations.

14. Award of an Ordinary/Designated Degree

14.1 Subject to further requirements contained in the degree's supplementary regulations, the candidate, to be eligible for the award of an ordinary/designated degree, must have obtained at least 360 credits and achieved an overall grade point average of 10. Within these 360 credits:

a) at least 120 must be at level 2 or higher, **and**

b) at least 280 must be at grade D or better including at least 60 at level 3 or higher.

14.2 Subject to further requirements contained in the degree's supplementary regulations, the ordinary/designated degree shall be awarded with Merit where the grade point average is at least 12, and with Distinction where the grade point average is at least 14.

14.3 Where the candidate has accumulated more than 360 credits, the credit counted in the calculation of the grade point average shall be reduced to 360 credits by discarding all or part of the credit for certain of the courses in such a way as to maximise the grade point average while meeting all other requirements of the regulations.

14.4 The ordinary/designated degree may be awarded to candidates on Honours programmes who fail to meet the requirements of the Honours degree, including any progress requirements, provided that the requirements of (a) above are met. The supplementary regulations for a degree programme shall specify any provision for candidates who have been assessed at level H to be reassessed at level 3.

15. Entry to an Honours or Integrated Masters Degree Programme

15.1 In order to obtain entry to an Honours or integrated Masters degree programme, a candidate must normally:

- (a) meet the requirements set out in the degree's supplementary regulations; and
- (b) meet any additional requirements set by the Department or Departments in which the candidate is applying for entry to the Honours or integrated Masters programme.

15.2 The Faculty and Department will provide all candidates with written information on the specific level of performance required to obtain entry to each Honours and integrated Masters degree programme in the Department. This information will be made available to candidates at the start of the session preceding that in which Honours study normally commences.

15.3 Admission to an Honours or integrated Masters degree programme does not guarantee admission to a particular course. A candidate must apply for admission to a particular course in accordance with the instructions issued by the Department. Admission to a particular course cannot be guaranteed even for a candidate who satisfies the minimum admission requirements. Where there are more applicants for a particular course than there are places available, selection of candidates will be based on criteria published in course documentation and/or department web pages.

15.4 Additional regulations relating to Honours or integrated Masters degree programmes shall be included in the degree's supplementary regulations.

16. Award of an Honours Degree

16.1 To be eligible for the award of an Honours degree, the candidate must have obtained at least 480 credits, including at least 120 at level H, completed a piece of independent work worth at least 20 credits, and complied with the other requirements set out in the degree's supplementary regulations.

16.2 A scheme of assessment may permit a candidate for Honours in a single subject to be assessed in not more than 25% of the total assessment for Honours from the scheme of assessment in one other subject.

17. Award of an Integrated Masters Degree

To be eligible for the award of an integrated Masters degree, the candidate must have obtained at least 600 credits, including at least 120 credits at level M, completed a piece of independent work worth at least 20 credits, and complied with the other requirements set out in the degree's supplementary regulations.

18. Award of an MBChB, BVMS or BDS Degree

Eligibility for the award of an MBChB, BVMS or BDS degree is defined in the degree's supplementary regulations.

19. Award of Certificates for Graduates Studying at Undergraduate Level

A graduate of the University of Glasgow, or of another institution of tertiary education recognised for this purpose by the Senate, may be permitted by a Department in consultation with the Clerk of the Faculty to enrol in a course, complete the assessment elements of the course, and receive certification of the outcome of the assessment.

20. Degree Programmes not Subject to these Regulations

Faculty of Medicine

Degree of Bachelor of Science in Medical Science

Faculty of Medicine: Dental

Degree of Bachelor of Science in Dental Science

Faculty of Veterinary Medicine

Degree of Bachelor of Science in Veterinary Science

Free Church of Scotland College

Degree of Bachelor of Theology

Glasgow School of Art

- Degree of Bachelor of Architectural Studies
- Degree of Bachelor of Arts in Design (Part-Time) in a Designated Subject
- Degree of Bachelor of Arts in Fine Art
- Degree of Bachelor of Arts in Product Design
- Degrees in Product Design
- Degrees in Product Design Engineering
- Diploma in Architecture and Master of Architecture (By Conversion) Degree

Scottish Agricultural College

- Degree of Bachelor of Arts (Scottish Agricultural College)
- Degree of Bachelor of Science (Scottish Agricultural College)

IV DEGREES OF MASTER OF ENGINEERING⁴, BACHELOR OF ENGINEERING AND BACHELOR OF SCIENCE IN ENGINEERING

RESOLUTION

The Degrees of Master of Engineering, Bachelor of Engineering and Bachelor of Science in Engineering are governed by Resolutions of the University Court. The provisions of Resolution No. 582 supporting the Generic Undergraduate Regulations are set out above; the provisions of Resolution No. 596, which at the time of going to print is in draft form, are as follows:

1. The Degrees of Master of Engineering (MEng), Bachelor of Engineering (BEng), and Bachelor of Science in Engineering (BSc) may be awarded by the University of Glasgow in the Faculty of Engineering (the Faculty) in such designations as may be prescribed by Regulations.
2. The award of the Degree shall be governed by the Generic Undergraduate Regulations which are governed by Resolution No. 582 of the University Court.
3. The Senate may make supplementary regulations governing the award of the Degree which are subject to the approval of the University Court - these shall be as stated under 'Regulations' below.
4. The Degree of Bachelor of Science in Engineering may be awarded either as a Degree with Honours or as an Ordinary Degree. The early exit awards of Diploma of Higher Education in Engineering Studies (DipHE(Engineering Studies)) and Certificate of Higher Education in Engineering Studies (CertHE(Engineering Studies)) are also included in the Regulations.

REGULATIONS**1. Recognition of Prior Learning**

- 1.1 Assessed prior experiential learning cannot be counted on these degrees.
- 1.2 Non-university examinations can permit entry with advanced standing. Such examinations give entry with advanced standing as follows: GCE Advanced level or SQA Advanced Higher in subjects and with grades as detailed in the University of Glasgow prospectus;
- 1.3 (a) A candidate already registered on a programme at the University may not be admitted to the MEng programme later than the start of year 4.
- (b) A candidate from an institution other than the University of Glasgow may not be admitted to the BEng or MEng programmes later than the start of year 3 except in accordance with the terms of an articulation agreement.
- (c) A candidate who enters with advanced standing may be required to attend and perform satisfactorily in special courses held prior to the commencement of the session.

2. Maximum Period of Study

There is no set maximum period of study. Candidates may continue their studies provided that they comply with the progress regulations set out at §3 below.

⁴ For the purposes of these regulations, a candidate admitted to a 4 year accelerated MEng programme will be considered as a direct entrant to year 2.

3. Progress

3.1 Generic Undergraduate Regulations §10 and §11 apply with the following additional requirements:

- (a) A candidate who fails to satisfy the requirements for progress on the degree for which they are registered as detailed in §3.2 - §3.4 below will have their performance reviewed in terms of the progress regulations for lower level degrees; and may, in the light of this review, be transferred from one programme to another (e.g. MEng to BEng).
- (b) At any stage, a candidate who fails to meet the progress regulations will be considered for the early exit awards of Diploma of Higher Education and Certificate of Higher Education.
- (c) Pre-requisite regulations, as detailed in the appropriate Undergraduate Student Handbook, may also prevent progress.

3.2 BSc Ordinary

The minimum requirements for progress to a succeeding year of study are as follows:

- | | |
|-----------------------|--|
| After one session: | the candidate must have obtained at least 80 credits, of which at least 60 must be at grade D or better and achieved a grade point average of at least 9. |
| After two sessions: | the candidate must have obtained at least 160 credits of which at least 120 must be at grade D or better and achieved a grade point average of at least 9. |
| After three sessions: | the candidate must be in a position to complete the requirements for the award of a BSc ordinary degree in one further session of full-time study |

3.3 BEng or BSc Honours

The minimum requirements for progress to a succeeding year of the curriculum are satisfaction of the requirements set out in §3.2 with the following additional requirements:

- (a) achievement of a grade point average of at least 10; and
- (b) achievement of grade E or better in all courses.

3.4 MEng

In addition to meeting the requirements set out in §3.3, a candidate must achieve a grade point average of 13 in order to progress to the next year of the curriculum.

A candidate who fails to meet the progress requirement at the end of year 4 will be required to complete any missing components of the corresponding BEng or BSc Honours programme and will then be considered for the degree of BEng or BSc Honours in the normal way.

A candidate who fails to complete the curriculum of year 5, or whose overall performance falls below the standard required for the MEng degree, will be required to complete any missing components of the corresponding BEng or BSc Honours programme and will then be considered for the degree of BEng or BSc Honours in the normal way.

Any candidate who is transferred to a BEng or BSc Honours programme must complete any missing components within one further session of study.

3.5 A candidate failing to achieve the requirements stated in §3.3 or §3.4 may be permitted one opportunity to improve the assessment result in accordance with §16.7 - §16.8 of the Code of Assessment contained in the Fees and General Information for Students section of the *University Calendar*

4. Courses Available to Candidates

The available courses are detailed in the appropriate Undergraduate Student Handbook.

5. Programme Requirements for the Award of the Degrees

§16 and §17 of the Generic Undergraduate Regulations apply. §5.1 - §5.4 below set out additional requirements.

5.1 MEng, BEng and BSc Honours

To be eligible for any BEng or MEng degree, a candidate must obtain a grade D or better in the final year project.

For MEng, BEng and BSc, the final Honours classification will be based only on the results from the **first attempt** at courses in year 3 and above.

Other programme requirements are detailed in the appropriate programme specification.

5.2 BSc Ordinary

Compulsory courses for each subject and any other special requirements for BSc Ordinary degree are specified in the appropriate programme specification.

Ordinary candidates may be eligible to enrol for level H and M courses, but there will be no opportunity for reassessment in these courses during the same session as the first assessment.

A candidate for the BSc ordinary degree may graduate with a **Specialisation in Engineering Management** if he or she has:

- completed a graduating curriculum under the foregoing regulations;
- included in the graduating curriculum an approved minimum of 80 credits, all completed with grade D or better, from a list of Selected Subjects available in the appropriate programme specification.

5.3 Diploma of Higher Education (Engineering Studies)

A candidate may be awarded the Diploma in Higher Education (Engineering Studies) where at least 120 of the credits contributing to the award correspond to courses in Engineering subjects.

5.4 Certificate of Higher Education (Engineering Studies)

A candidate may be awarded the Certificate of Higher Education (Engineering Studies) where at least 60 of the credits contributing to the award correspond to courses in Engineering subjects.

6. List of Degree Programmes

Full details of the curriculum for each Degree Programme are provided in the appropriate Undergraduate Student Handbook (available from each Department) and must be read in conjunction with this Calendar.

Department	Programme	MEng	Accelerated MEng	MEng European	BEng	BSc Hons	BSc Ord ⁵
Aerospace Engineering	Aeronautical Engineering	✓			✓		✓
	Avionics	✓			✓		✓
Civil Engineering	Civil Engineering	✓			✓		✓
	Civil Engineering with Architecture	✓			✓		✓
Electronics & Electrical Engineering	Electronics and Electrical Engineering	✓	✓	✓	✓		✓
	Audio and Video Engineering	✓	✓	✓	✓		✓
	Microcomputer Systems Engineering	✓		✓	✓		✓
	Electrical Power Engineering	✓	✓	✓	✓		✓
	Electronics with Music			✓	✓		✓
	Avionics (administered by the Department of Aerospace Engineering)	✓		✓	✓		✓
	Electronic and Software Engineering	✓		✓	✓		✓
	Electronic Engineering and Physics			✓	✓		✓

⁵ BSc Ordinary is also offered with specialisation with Engineering Management. See section 5.2.

Department	Programme	MEng	Accelerated MEng	MEng European	BEng	BSc Hons	BSc Ord ⁶
Mechanical Engineering	Mechanical Engineering	✓	✓		✓	✓	✓
	Mechanical Engineering (European Curriculum)	✓	✓		✓	✓	✓
	Mechanical Engineering with Aeronautics	✓	✓		✓	✓	✓
	Mechanical Design Engineering	✓	✓		✓	✓	✓

7. Naval Architecture and Ocean Engineering

In August 2001, the Department of Naval Architecture and Ocean Engineering, University of Glasgow and the Department of Ship and Marine Technology, University of Strathclyde merged to form the Department of Naval Architecture and Marine Engineering. The regulations for Degree Programmes and Higher Degrees offered by the merged Department are detailed in the University of Strathclyde Calendar.

Degree of Bachelor of Science in Nautical Science

Since the merger described above, undergraduate teaching of students of the merged department has taken place on the John Anderson Campus, University of Strathclyde. Students undertaking the Degree of Bachelor of Science in Nautical Science therefore attend courses at the University of Strathclyde and the Glasgow College of Nautical Studies. From Session 2003/04 the Regulations for this Degree Programme are detailed in the Calendar of the University of Strathclyde. Students registered at the University of Glasgow prior to Session 2003/04 should consult the Regulations in the 2002-2003 edition of the Calendar of the University of Glasgow.

⁵ BSc Ordinary is also offered with specialisation with Engineering Management. See section 5.2.