MSc degrees – James Watt
School of Engineering

Dr Steven L Neale
Convener of Postgraduate Taught Programmes
School of Engineering

Research Divisions

- Aerospace Sciences
- Biomedical Engineering
- Electronics and Nanoscale Engineering
- Infrastructure and Environment
- Systems, Power and Energy
School of Engineering

Teaching Disciplines

• Aerospace Engineering
• Biomedical Engineering
• Civil Engineering
• Electronics and Electrical Engineering
• Mechanical Engineering

Aerospace Engineering MSc programmes

• Aerospace Engineering (with specialisations in Aeronautics and Systems)
• Aerospace Engineering and Management (taught in conjunction with the Adam Smith Business School)
School of Engineering

Teaching Disciplines

- Aerospace Engineering
- Biomedical Engineering
- Civil Engineering
- Electronics and Electrical Engineering
- Mechanical Engineering

Biomedical Engineering MSc Programmes

- Biomedical Engineering
- Medical Device Engineering – No Jan start
School of Engineering

Teaching Disciplines
- Aerospace Engineering
- Biomedical Engineering
- Civil Engineering
- Electronics and Electrical Engineering
- Mechanical Engineering

Civil Engineering MSc Programmes
- Civil Engineering
- Civil Engineering and Management (taught in conjunction with the Adam Smith Business School)
- Structural Engineering – No Jan start
School of Engineering

Teaching Disciplines
- Aerospace Engineering
- Biomedical Engineering
- Civil Engineering
- Electronics and Electrical Engineering
- Mechanical Engineering

Electronics and Electrical Engineering MSc Programmes
- Computer Systems Engineering
- Electronics and Electrical Engineering
- Electronics and Electrical Engineering and Management (taught with the Adam Smith Business School)
- Nanoscience and Nanotechnology
- Sustainable Energy
- Electronics and Photonics Manufacturing
- Robotics and AI
School of Engineering

Teaching Disciplines
• Aerospace Engineering
• Biomedical Engineering
• Civil Engineering
• Electronics and Electrical Engineering
• Mechanical Engineering

Mechanical Engineering MSc Programmes
• Mechanical Engineering
• Mechanical Engineering and Management (taught in conjunction with the Adam Smith Business School)
• Mechatronics
• Product Design Engineering (taught in conjunction with the Glasgow School of Art) – No Jan start
Advising System

• You can find the name of your Adviser of Studies on your MyCampus pages

• Adviser of Study is responsible for:
  – Choice of elective courses (if applicable)
  – Reassessment (if required)
  – Health or personal problems affecting student studies
  – Directing student to appropriate student support services

• Make sure you know the name of your Adviser of Study

• Senior Adviser (Dr Euan McGookin) and Chief Adviser (Dr Douglas Thomson) also provide support in exceptional cases
Postgraduate Degree Schedule for Sep starts

Semester 1: September - December
Core Subjects + elective subjects [60 credits]
Examinations in December for most courses

Semester 2: January - March
Core Subjects + elective subjects [60 credits]
Examinations in April/May

Summer: May - September
Individual Project [60 credits]
Resit Exam Diet & Dissertation Submission in August
Poster Conference in August/September

+ Academic Skills
Writing Programme
ASWP
Postgraduate Degree Schedule for Jan starts

Semester 2: January - March
Core Subjects + elective subjects [60 credits]
Examinations in April/May

Summer: May - September
Individual Project [60 credits]
Resit Exam Diet & Dissertation Submission in August
Poster Conference in August/September

Semester 1: September - December
Core Subjects + elective subjects [60 credits]
Examinations in December for most courses
How do we teach?

- Lectures – (planned online for 2021-22 academic year)
- Tutorials
- Practical Labs
- Computational Labs
- Project Work
- Self-study
- Exams – (May be online)
- https://www.gla.ac.uk/schools/engineering/it/howto/zoom/
- Physical resources; library, study spaces, social events.
### Typical Timetable

#### Degree timetable - MSc Mechanical Engineering (Materials) (Semester 1)

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>09:00</td>
<td>Laboratory, 10:00AM, Work 3, Semester 1, Mechanics of Solids &amp; Structures (JWS 4351/141)</td>
<td>Lecture, 10:00AM, Control (JWS 427B)</td>
<td>Lecture, 09:00AM-11:00AM, Semester 1, Laser, JWS 427B</td>
<td>Lecture, 09:00AM-11:00AM, Semester 1, Mechanics of Solids &amp; Structures (JWS 4351/141)</td>
<td>Lecture, 10:00AM, Control (JWS 3344/141)</td>
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<td>10:00</td>
<td>10:00AM, Control (JWS 427B)</td>
<td>Lecture, 11:00AM-12:00PM, Control (JWS 3344/141)</td>
<td>Lecture, 11:00AM-12:00PM, Semester 1, Innovative Engineering Design (JWS 427A)</td>
<td>Lecture, 09:00AM-11:00AM, Semester 1, Mechanics of Solids &amp; Structures (JWS 4351/141)</td>
<td>Lecture, 10:00AM, Control (JWS 3344/141)</td>
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<td>11:00</td>
<td>12:00PM, Control (JWS 427B)</td>
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Published 05/10/2010 13:58:45 - University of Glasgow, Department of Mechanical Engineering - CELCAT Timetabling
Moodle

- Moodle is a Virtual Learning Environment used to support learning in all courses

- General Information for MSc PGT Programmes in Engineering:
  
  http://moodle2.gla.ac.uk/course/view.php?id=1813

- Information on MSc Projects
  
  http://moodle2.gla.ac.uk/course/view.php?id=1814

- PGT Staff Student Liaison Committee
  
  http://moodle2.gla.ac.uk/course/view.php?id=1815
MSc Project

- Project Selected from a list of topics published in February *(you can also suggest a project)*
- Project topic reflects the nature of the degree programme
- Project formally starts after Progression Board allows progression in July
- Student and supervisor normally meet once per week throughout the summer
- Projects assessed by Continual Assessment, Report and Poster
- Report usually about 40 pages plus appendices
- Project Report submitted in August
- Poster presented at the Poster Conference in September
Any MSc student on the Engineering and Management programmes may apply for a project in the Business School (September intake only).

There are only 17 project places offered each year.

Students wishing to apply must propose a topic.

Only students who have obtained at least C3 (12) in all the management subjects should apply (not possible for January starts).

January intake students can only select a project from the School of Engineering.
Poster Conference

• As part of their project assessment process, students are required to display and present an A1 poster of their project at the Poster Conference.

• It usually takes place during the first week in September.

• This event provides a chance for students to view the work of their peers and for staff to assess their student’s work and to compare it with the work of other students.

• Industry Advisory Board (IAB) member invited.

• Poster conference may have to be online.
Dental Drill: Bearing Analysis Unit

Introduction
A study was conducted to investigate possible ways to analyze dental drill-bearing failure and to develop a device which will analyze early signs of damage to the bearing before it needs to be replaced. This will be achieved by monitoring the vibrations of the bearing and analyzing them using a computer program. The program will be able to detect if the bearing is damaged and will provide a warning to the user.

Approach
The main focus of the product design specification was to develop a small portable unit at low cost. Low weight was not a priority, and the unit is designed to be handheld. The main aim was to develop a unit that can be used in a clinical setting. The system consists of two separate systems due to their small size and ease of use. The first system consists of two modules, a module for the control system, and a module for the analysis system. The second system consists of a module for the control system and a module for the analysis system.

Initial Bearing Analysis
Dental Drill bearings are subject to a lot of wear and tear and can last up to 10-20 years with proper maintenance. CAMO can replace 1 out 4 bearings and is therefore very popular in the market as it is an easy and cost-effective way of increasing repair costs.

Design Generation
The Dental Drill Bearing Analysis Unit highlighted the concerns of wear and fatigue affecting the unit housing, this was overcome by adding a flexible component to the housing which will not affect the mechanical properties. This will also allow for easier maintenance and repair. The unit is designed to be hand-held and easy to use, and the analysis system can be used in a clinical setting.

Product Design
The Dental Drill Bearing Analysis Unit is designed to be easy to use and maintain. The design is robust and can be easily repaired if necessary.

Conclusion
The bearing analysis unit will analyze the dental drill bearings and monitor any changes to the bearings for any signs of damage. This will help to prevent the bearing from overheating and reduce the chance of breakdown. The analysis system is also easy to use and can be used in a clinical setting.
Staff Student Liaison Committee

- The above committee meets once per semester and once during the summer weeks.

- You could become a student representative on this committee – see your handbook for details.

- The aim of the committee is to try to ensure the smooth running of the PGT programmes and to make improvements as required. It also gives students a chance to influence how the programmes and courses are run in the future.
Graduation

• Graduations take place in the Bute Hall

• The main MSc Graduation is held in December

• Other Graduation Ceremonies take place in July

• Post Graduate Diploma and Post Graduate Certificates are not awarded at a Graduation Ceremony
Coronavirus

- Facts and Questions;
- https://www.gla.ac.uk/myglasgow/coronavirus/faqs/#

Handbook

- Further info available in handbook;
- https://www.gla.ac.uk/media/Media_762870_smxx.pdf

Moodle for UG induction;
https://moodle.gla.ac.uk/course/view.php?id=21643

Teaching office Moodle;
https://moodle.gla.ac.uk/course/view.php?id=23606
Thank you for listening – time for your questions!