

Periodic Subject Review (PSR)

Review of Electronics and Electrical Engineering

Report Summary

The following is a brief summary of the full report of the review carried out in Electronics and Electrical Engineering. *Periodic Subject Review* is an internal subject review focused on the quality of provision as experienced by students. The review looks at the range of programmes, course content, the teaching methods employed, assessment, facilities and much more.

The full report of the review is available publicly at:

http://www.gla.ac.uk/media/media_214087_en.pdf

Further information about the PSR process can be found at:

<http://www.gla.ac.uk/services/senateoffice/qea/psr/>

Italicised words are explained in a glossary below.

Conclusions

The Panel was impressed with the dedication and enthusiasm of the staff and *Graduate Teaching Assistant* (GTA) groups, and with the firm focus on practical work and employability. The undergraduate group in particular were enthusiastic and positive, and a credit to the Discipline.

EEE demonstrated a number of strengths, as well as an awareness of the areas requiring improvement. The most substantive of these are reflected in the recommendations that follow.

Key Strengths

- The commitment to laboratory provision [*Paragraphs 3.4.3 and 3.7.3*];
- The provision of rich, well-supported project opportunities for undergraduate students [*Paragraph 3.4.7*];
- High quality staff/student liaison procedures [*Paragraph 5.5*];
- The commitment to the inclusion of extensive practical and project work within courses and programmes, including an *industrial project* for MEng programmes, demonstrating

academic and professional engagement and enhancing students' *employability* [Paragraph 3.7.7];

- The inclusive approach that had been taken to preparation for the review [Paragraph 1.1.3];

Areas to be improved or enhanced¹

1. Overall aims of the Department's provision and how it supports the University Strategic Plan

- Discussion should take place within the School, and with the *Student Lifecycle Project* team, to ensure that, when the *Campus Solutions* system goes live in August 2011, the different subject areas, and their courses and programmes, within the School of Engineering are clearly identifiable [Paragraph 2].
- Consideration be given by the School of Engineering to the suitability of the term 'discipline' given its negative connotations, the potential for confusion and its lack of use elsewhere in the University [Paragraph 2].

2. Aims and Intended Learning Outcomes

- Revise *Programme Specifications* in line with University policy to ensure each provides aims specific to each individual programme, rather than providing generic aims and referring the reader to the Student Handbook [Paragraph 3.1.2].
- Revise *Programme Specifications* in line with University policy to ensure each provides *Intended Learning Outcomes* specific to each individual course or programme, rather than providing generic aims and referring the reader to the Student Handbook [Paragraph 3.2.2].
- *ERASMUS* students receive full information about available courses in good time for selection prior to arrival in Glasgow, in order to assist them with course selection [Paragraph 3.2.3].

3. Assessment and Feedback

- Communicate clearly to students any delays in feedback being returned to students, and gives a clear indication of when feedback on assessment can be expected. Alternative feedback mechanisms might also be used to make more prompt feedback possible. [Paragraph 3.3.8].
- A specimen or past examination paper, with worked solutions, be made available for each examined course, in order to assist students with their revision [Paragraph 3.3.10].
- Provide adequate feedback on project work in the same way as for other coursework, and that guidance on how to perform well in projects, perhaps in the form of *grade descriptors*, is provided to students [Paragraph 3.3.11].

¹ Numbers refer to the paragraphs in the full report that contain the relevant discussion.

4. Curriculum Design, Development and Content

- Consider the request by undergraduate students to assess the viability of moving the choice between a language or a design project from Year 4 to Year 2, as students believed it was rather detached from the rest of the Year 4 curriculum [Paragraph 3.4.8].
- Assess the viability of extending Data Acquisition for Music Processing 3 into a 20 credit course and discontinuing the existing additional 10 credit course which follows it [Paragraph 3.4.9].
- Discussion take place between the Head of Discipline (EEE) and the Head of the Business School with a view to identifying ways in which integration of the two subjects could be improved, and thereby enhance the experience of students on the MSc Electronics and Electrical Engineering with Business [Paragraph 3.4.11].
- Training on *cleanroom* procedures should be provided to all relevant students as early as possible in their degrees [Paragraph 3.4.12].

5. Student Recruitment

- Investigate the possibility of making the postgraduate *induction* session more closely tailored to the needs of engineering students [Paragraph 3.5.10].

6. Student Progression, Retention and Support

- The Subject Area consider the possibility of implementing support mechanisms for those students who are unavoidably delayed in joining their programme. Additionally, student expectations should be managed more effectively, giving clear indications of expected timescales for feedback provision and how delays will be handled [Paragraph 3.6.8].
- Efforts be made to foster a sense of belonging amongst the postgraduate students. This might include meetings with senior members of staff, one-to-one meetings, or inclusion in social events currently only provided for undergraduate students. *Focus groups* could also be arranged by the *Learning and Teaching Centre* in order to ascertain the precise nature of student dissatisfaction [Paragraph 3.6.8].
- The tutorial group structure be communicated clearly to all concerned, in order to facilitate support for all students in tutorial groups [Paragraph 3.6.10].

7. Resources for Learning and Teaching

- Ensure all *GTAs* receive the training required by Senate regulations [Paragraph 3.8.6].
- Devise, and adhere to, a systematic means of communicating to *GTAs* the progress of student groups through the course material, in order to ensure that the *GTAs* have sufficient time to prepare laboratory and tutorial materials that match students' progress through the course [Paragraph 3.8.7].
- The College of Science and Engineering give careful consideration to the issue of updating essential teaching equipment, given the detrimental effect of not doing so on current students and on recruitment [Paragraph 3.8.8].

- The School, the College, and Estates and Buildings work together to identify suitable social/study space and make it available as soon as is practically achievable [*Paragraph 3.8.11*]

8. Assuring and Enhancing the Quality of the Students' Learning Experience

- In communication with Registry, ensures that all grades from *ERASMUS* institutions appear on students' *Websurf/Campus Solutions* records in order to provide students with a comprehensive record of their studies [*Paragraph 5.4*].
- In order to improve engagement (particularly amongst postgraduate students) with the *Staff/Student Liaison Committee*, clear information about the meeting dates, representatives and actions taken be posted prominently on *Moodle* (or other widely viewed page), with a link emailed to students [*Paragraph 5.6*].
- Give consideration to arranging a careers session where postgraduate students can hear about the employment gained by previous students, to give them a better idea of the type of careers they could expect on graduation [*Paragraph 5.10*].

Glossary of terms/acronyms used

Campus Solutions

Campus Solutions is the brand name for the Oracle student information system product that manages all aspects of student records, including personal information, coursework, final grades, timetables, fees, financial aid and debt management. It will integrate with other corporate systems (such as Finance, Accommodation, Moodle) to provide a seamless interface for users and is known as 'MyCampus' (<http://www.gla.ac.uk/services/studentlifecycleproject/>).

Cleanroom

A cleanroom is an environment, typically used in scientific research, that has a low level of environmental pollutants such as dust, airborne microbes, aerosol particles and chemical vapors.

Employability

Employability is about more than being able to get a job after University. It is about acknowledging and being able to demonstrate achievements, understanding and personal attributes that will contribute to success both during, and after, University.

ERASMUS

Erasmus is a European Commission exchange programme that enables students in 31 European countries to study for part of their degree in another country. The Erasmus programme is available to current students at the University of Glasgow who would like to study at an exchange-partner university in Europe. The University of Glasgow has exchange agreements with around 250 universities throughout Europe.

Focus Groups

A focus group is a form of qualitative research in which a group of people are asked about their perceptions, opinions, beliefs and attitudes towards a service, concept or idea. Questions are asked in an interactive group setting where participants are free to talk with other group members.

Grade Descriptors

Grade descriptors are verbal descriptions against which a student's work is judged. The marker decides which descriptor matches the work most closely and awards the corresponding grade. University-wide grade descriptors are set out in the Code of Assessment but may be customized to apply to a particular subject area or School.

Graduate Teaching Assistant or GTAs

Graduate Teaching Assistants, Tutors and Laboratory Demonstrators are students, usually research students, who assist with teaching in the form of tutorials, labs and other activities that are part of undergraduate programmes in the subject/school. They are paid an hourly rate by the University.

Industrial Project (M.Eng)

A six month industrial project, usually working within an interdisciplinary engineering team. This is usually abroad and includes development of M.Eng thesis, whilst on this placement.

Induction

Induction is a series of events planned by the University, Colleges, Schools, Suubjects and the Student's Representative Council to welcome new students and provide them with information to prepare them for their studies and the forthcoming year at University. Events usually take place during the first week of the academic year.

Intended Learning Outcomes or ILOs

Intended Learning Outcomes or ILOs describe what all students should be able to do or demonstrate, in terms of particular knowledge and understanding, qualities, skills and other attributes when they successfully complete the course or programme that the ILOs relate to.

Learning and Teaching Centre

The Learning and Teaching Centre is a University Service whose role is to "help implement and develop the University's Learning and Teaching strategy, identify, assess and disseminate new developments and good practice which serve to enhance the student learning experience, and will work with colleagues throughout the University to bring about change".

Moodle

Moodle is the University's supported Virtual Learning Environment (VLE).

Programme Specifications

Programme specifications are documents that aim to provide the core factual information about a programme of study to a range of stakeholders, including students or potential students, e.g. Level of award, number of credits, programme aims, intended learning outcomes, etc.

Staff:Student Liaison Committee or SSLCs

Staff:Student Liaison Committees are Subject/School committees which provide a formal opportunity for Student Representatives to discuss matters with, and give feedback to their subject area.

Student Lifecycle (Project)

The phrase “student lifecycle” refers to the relationship and contact the University has with each student from enquiry through to graduation and beyond. It came into use with the beginning of the Student Lifecycle Project, an ambitious and far-reaching project to transform the student information system. The new system is called Campus Solutions and has just been rolled out across the University (August 2011).