

## The University of Leeds

## EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2012– 2013

**Part A: General Information****Subject area and awards being examined**

Faculty / School of:	Mechanical Engineering
Subject(s):	Medical Engineering
Programme(s) / Module(s):	Programme: Medical Engineering Modules: MECH 2600, 2610, 3730, 3835, 3900
Awards (e.g. BA/BSc/MSc etc):	BEng/MEng

**Completed report**

The completed report should be attached to an e-mail and sent as soon as possible, and no later than six weeks after the relevant meeting of the Board of Examiners, to [exexadmin@leeds.ac.uk](mailto:exexadmin@leeds.ac.uk).

Alternatively you can post your report to: **Head of Academic Quality and Standards**  
Academic Quality and Standards Team  
Room 12:81, EC Stoner Building  
The University of Leeds, Leeds LS2 9JT

**Part B: Comments for the Institution on the Examination Process and Standards****Matters for Urgent Attention**

*If there are any areas which you think require urgent attention before the programme is offered again please note them in this box*

No.

**Only applicable in first year of appointment**

*Were you provided with copies of previous relevant External Examiners' reports and the response of the School to these?*

N/A

**For Examiners completing their term of appointment**

*Please comment on your experience of the programme(s) over the period of your appointment, remarking in particular on changes from year to year and the progressive development and enhancement of the learning and teaching provision, on standards achieved, on marking and assessment and the procedures of the School*

N/A

**1. Please indicate the extent to which the programme Aims and Intended Learning Outcomes (ILOs) were commensurate with the level of the award**

- *The appropriateness of the Intended Learning Outcomes for the programme(s)/modules and of the structure and content of the programme(s);*
- *The extent to which standards are appropriate for the award or award element under consideration.*

The aims of the programme and intended learning outcomes are appropriate for BEng and MEng. The Medical Engineering programme has a good balance between core engineering subjects and specialised medical engineering modules. I found the academic standards of the Medical Engineering degree programme to be high. The School is prepared to fail students that do not achieve the intended learning outcomes of modules.

**2. Did the Aims and ILOs meet the expectations of the national subject benchmark (where relevant)?**

- *The comparability of the programme(s) with similar programme(s) at other institutions and against national benchmarks and the Framework for Higher Education Qualifications.*

The standards are comparable with other top Mechanical Engineering Schools in the UK, based on my experience of External Examining at other institutions and being a member of the Institution of Mechanical Engineers Academic Standards Panel, which involves accreditation visits.

**3. Please comment on the assessment methods and the appropriateness of these to the ILOs**

- *The design and structure of the assessment methods, and the arrangements for the marking of modules and the classification of awards;*
- *The quality of teaching, learning and assessment methods that may be indicated by student performance.*

A wide range of assessment methods are used including examinations, group projects, individual projects and laboratories. These assessment methods allow students to demonstrate their knowledge and understanding of core mechanical engineering, as well as medical engineering. I met with a group of five students and they were happy that the different assessment methods allowed them to adequately demonstrate their knowledge and understanding of subjects.

During my visit I mainly concentrated on looking at project work and the year 4 Medical Engineering Modules. For individual projects there were marks spanning the full range from 1<sup>st</sup> class to fail. The quality of the 1<sup>st</sup> class work was high. Failed projects showed a very poor understanding of engineering. The group of students I met all commented that the quality of teaching in the school was high.

**4. Were students given adequate opportunity to demonstrate their achievement of the Aims and ILOs?**

- *The academic standards demonstrated by the students and, where possible, their performance in relation to students on comparable courses;*
- *The strengths and weaknesses of the students as a cohort.*

The different assessment methods enable students ample opportunity to meeting the programme learning outcomes. In Medical Engineering there were final degree classifications for six students with five of them achieving a 1<sup>st</sup> or 2i. The group of students I met were all bright and articulate.

**5. For Examiners responsible for programmes that include clinical practice components, please comment on the learning and assessment of practice components of the curriculum**

N/A

**6. Please comment on the nature and effectiveness of enhancements to the programme(s) and modules since the previous year**

*It would be particularly helpful if you could also identify areas of good practice which are worthy of wider dissemination.*

I am not aware of any major changes to the programme or modules.

**7. Please comment on the influence of research on the curriculum and learning and teaching**

*This may include examples of curriculum design informed by current research in the subject; practice informed by research; students undertaking research.*

The research undertaken in the Institute of Medical and Biological Engineering strongly influences the Medical Engineering degree programme, with individual and group research projects in medical engineering offered. A number of the students I met stated that the research in the school was the main reason for choosing the University of Leeds.

**For Examiners involved in mentoring arrangements**

**8. If you have acted as a mentor to a new External Examiner or have received mentor support please comment here on the arrangements**

N/A

## The Examination/Assessment Process

**9. The University and its Schools provide guidance for External Examiners as to their roles, powers and responsibilities. Please indicate whether this material was sufficient for you to act effectively as an External Examiner.**

- *Whether External Examiners have sufficient access to the material needed to make the required judgements and whether they are encouraged to request additional information.*

I had access to all the material that I required. Marked examination papers, group project reports and individual project reports were available for my visit. I also had access to the VLE.

**10. Did you receive appropriate documentation relating to the programmes and/or parts of programmes for which you have responsibility, e.g. programme specifications or module handbooks, marking criteria?**

- *The coherence of the policies and procedures relating to External Examiners and whether they match the explicit roles they are asked to perform.*

Yes, I was given all the information required.

**11. Were you provided with all draft examination papers/assessments? Was the nature and level of the questions appropriate? If not, were suitable arrangements made to consider your comments?**

Yes. The examination papers I reviewed were of a good quality that allowed students to demonstrate both knowledge and understanding of the subjects.

**12. Was sufficient assessed / examined work made available to enable you to have confidence in your evaluation of the standard of student work? Were the scripts clearly marked/annotated?**

Yes. I was able to view a range of examination papers and project work that covered the full range from fail to 1<sup>st</sup> class. The examination papers had marks on them. The projects had good evidence that double marking was involved with both markers names visible.

**13. Was the choice of subjects for dissertations appropriate? Was the method and standard of assessment appropriate?**

Yes. The project areas were wide and varied and mapped to the research interests of the Institute of Medical and Biological Engineering.

**14. Were the administrative arrangements satisfactory for the whole process, including the operation of the Board of Examiners? Were you able to attend the meeting? Were you satisfied with the recommendations of the Board?**

Yes. The staff in the Student Support Office were very good and they run a very smooth examination process. It would be helpful if all examination papers can be sent at the same time, as a few of them arrived late.

I was able to attend the Final Board of Examiners on 13 June 2013. All discussions were fair and I am satisfied with the recommendations of the Board.

**15. Were appropriate procedures in place to give due consideration to mitigating circumstances and medical evidence?**

Yes. The School gave due consideration to students with mitigating circumstances. A clear explanation of each decision was made at the Board of Examiners.

## Other comments

**Please use this box if you wish to make any further comments not covered elsewhere on the form**

In year 4 there is a good range of modules offered in Medical Engineering. However, as the cohort is small there were a number of modules that only had one student studying. I would ask the school to consider if it is viable to run modules with a single student. A number of the Medical Engineering modules (Biotribology, Biomaterials, Functional Joint Replacement Technology, etc.) appear to have teaching material that overlaps. The school may wish to consider rationalising the number of modules offered in Medical Engineering.