

**The University of Leeds**  
**EXTERNAL EXAMINER'S REPORT**  
**ACADEMIC YEAR: 2013– 2014**

**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 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 Quality Assurance**  
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*

None.

**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*

The School runs a very effective system for examinations and assessment. The standards have been high for each of the years I have been External Examiner.

The system for viewing and inputting marks into various systems seems to have regressed. In my first year the School had a system where it was easy to view student performance and track performance through the years. This year it was not possible to track students through the years.

After four years I have yet to totally get my head around the point of the 2 to 9 classification grade scale. If marking schemes are correctly written then the full use of zero to 100% can be used for any subject.

## Standards

**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 Medical Engineering programme and intended learning outcomes are appropriate for BEng and MEng. The Medical Engineering programme has a good balance between core mechanical engineering subjects (years 1 and 2) and specialised medical engineering modules (years 3 and 4). I found the academic standards of the Medical Engineering degree programme to be high. The School is prepared to fail students in examinations and project assignments where they do not achieve the intended learning outcomes of assessment.

**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. The aims and intended learning outcomes meet the expectation of UK-SPEC.

**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.

During my visit I mainly concentrated on looking at project work. For individual projects there were marks spanning the full range from 46% to 79%. There was a clear difference in quality between the projects across the range of marks.

**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 meet the programme learning outcomes. In Medical Engineering there were final degree classifications for 11 students (BEng and MEng). There was one 1<sup>st</sup>, five at 2i and five at 2ii. The performance is comparable to other Medical Engineering programmes I am aware of and they compared well to Leeds students on the Mechanical Engineering programme.

**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.*

The School has made changes to the Medical Engineering programme for future years 3 and 4. I think these module changes will enhance the student experience.

**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 Medical Engineering programme is strongly influenced by the research undertaken in the Institute of Medical and Biological Engineering. Individual and group projects in medical engineering offered connected with the research.

**8. Where the programme forms part of an Integrated PhD, please comment on the appropriateness of the programme as training for a PhD**

N/A

**For Examiners involved in mentoring arrangements**

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

I acted as a Mentor to the new External Examiner <>. We had a telephone conversation to go through the process and discussed any issues that arose from previous years.

**The Examination/Assessment Process**

**10. 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.*

Marked examination papers, group project reports and individual project reports were all available for my visit. I also had access to the VLE. As mentioned previously, it would be helpful to be able to track students through all the years of their study.

**11. 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.

**12. 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.

**13. 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 reports that covered the full range of marks. The examination papers had marks and annotations on them. The project reports had good evidence that double marking was involved with the names of both markers visible.

**14. 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.

**15. 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.

I was able to attend the Final Board of Examiners on 19 June 2014. All discussions were fair and I am satisfied with the recommendations of the Board.

**16. 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**

This was the first year that no Medical Engineering students were available to meet with me. I think it is very important for External Examiners to meet with a group of students and ways to ensure this happens in the future years should be looked at.

School of Mechanical Engineering

University of Leeds  
Leeds LS2 9JT



**UNIVERSITY OF LEEDS**

4 February 2015

Dear

**RE: School Response to External Examiner's Report 2013/14**

Thank you very much for your External Examiner's Report for our Medical Engineering undergraduate programme last session.

We note your very positive comments and will look to address any deficiencies you may have raised. In particular we will aim to clarify that the marking of all examination scripts is arithmetically checked by requesting the checker to annotate the corner of every page of each script.

I regret that for the time being we are unable to update the current system for collating and viewing individual student marks due to software development limitations. We will however, endeavour to improve the transparency of the process and aim to make module mark standard deviations available as well as the mean marks.

We will aim to have more students available for meetings with the external examiners in the future.

As this was your last year as an external examiner on our undergraduate programme, I would like to thank you very much for all your efforts over the last few years and wish you the very best for the future.

Kind Regards

Head of School

cc

**Head of School**

Professor of Solid Mechanics