

The University of Leeds
EXTERNAL EXAMINER'S REPORT
ACADEMIC YEAR: 2014– 2015

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

Faculty / School of:	School of Mechanical Engineering
Subject(s):	
Programme(s) / Module(s):	Medical Engineering MECH3900, MECH3730
Awards (e.g. BA/BSc/MSc etc):	BEng, MEng

Name and home Institution / affiliation of Examiner**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.

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?

I was provided with both the previous medical engineering external examiners response and the School's response. It appears that there continues to be a challenge in bringing in students at the time of the exam board as this year there were only 5 mechanical engineers present. I believe that this can be resolved by attending the poster presentation, and if these could be grouped by programme, so that for example all the medical engineers presented on one day it would mean I could have talked to more of these students whilst they are available.

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

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 strong emphasis in mechanical engineering subjects (years 1 and 2) when only additional lectures appear to provide the students with medical engineering inputs. There are specialised medical engineering modules (years 3 and 4). The academic standards of the Medical Engineering degree programme appear to be at the appropriate level.

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 appear to be comparable with other Mechanical Engineering programmes in the UK, based on my experience of External Examining at other institutions. 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 and individual projects, laboratories and other innovative group exercises. These assessment methods allow students to demonstrate their knowledge and understanding of core mechanical engineering, and in particular medical engineering. In some of the coursework only modules (in particular MECH3200) the marks were not very widely spread and the mean was very high. I would suggest that this module could be partly assessed by examination.

During my visit this year I mainly concentrated on looking at 3rd year project work. For individual projects there were marks across a wide range. There were clear differences in quality between the projects across the range of marks, although for some markers the projects appeared to have been generously marked.

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 the opportunity to meet the programme learning outcomes. In Medical Engineering there were final degree classifications for a small number (7) of students (BEng and MEng), with six 1st, three 2i and one 2ii honours awarded. The performance is comparable to other Medical Engineering programmes and 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.

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 projects in medical engineering offered were connected with the research. Some of the specialist modules are also informed from the research activities

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

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

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, and individual project reports were available for my visit. I also had access, after a small delay, to the useful VLE.

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. I was impressed by the standard of the questions

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, coursework 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 two markers had been involved with the names of both markers visible. However the projects did not appear to have been independently blindly double marked that would have been appropriate.

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 excellent and they run a very smooth examination process.

I was able to attend the Final Board of Examiners on 23 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

I met with some of the medical engineering students when I came up to view a selection of project posters, earlier in the summer. These were from the 1st and 2nd years and were very engaging. I talked informally to some of the 3rd year medical engineers at their posters. Unfortunately, I did not meet any 4th year medical engineers this year nor did I see any of their group project work.

School of Mechanical Engineering

University of Leeds
Leeds LS2 9JT



UNIVERSITY OF LEEDS

21 September 2015

Dear

RE: School Response to External Examiner's Report 2014/15

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

On the subject of double blind marking of projects, the School has recognised that there is the need to make our current processes more transparent. A recent projects theme team meeting has recommended that the two markers (supervisor and examiner) prepare independent reports showing marks for the project report itself in advance of the viva. The intention is that these independent reports will be available for the external examiners to view alongside the student project report.

Regarding the coursework only modules such as MECH3200, I believe is reviewing the situation to see if a greater element of formal examination could be introduced in order to give a wider spread of marks.

Finally we agree that it would be beneficial for you to meet more Medical Engineering students in their fourth year. We do have a presentation event for fourth year team projects similar to the poster event for third years and I will ask to send you the date of this event when this is known (it is usually in February).

Assuming that you are happy with these responses, all that remains is for me to thank you again for your efforts as an external examiner in the School and to look forward to your contributions over the coming year.

Kind Regards

Head of School

cc

Head of School

Professor of Solid Mechanics