

The University of Leeds
EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2018-19 QAT Received 11/07/2019

Part A: General Information

Subject area and awards being examined

Title and Name of Examiner:

<i>Faculty / School of:</i>	Mechanical Engineering
<i>Subject(s):</i>	Medical Engineering
<i>Programme(s) / Module(s):</i>	Medical Engineering undergraduate programme
<i>Awards (e.g. BA/BSc/MSc etc):</i>	BEng/MEng

Part B: Comments for the Institution on the Examination Process and Standards

Points of innovation and/or good practice

Please highlight areas of innovation or good practice within the programmes or processes you have been involved with in this box.
The External Examiner folder that was given to me at the start of the day was excellent and compiled all of the relevant information I needed.

Enhancements made from the previous year

Please highlight any enhancements made to the programme(s) or processes over the past year in this box.

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

For Examiners in the first year of appointment

1.	Were you provided with an External Examiner Handbook?	Y / N
2.	Were you provided with copies of previous External Examiners' reports and the School's responses to these?	Y / N
3.	Were you provided with a External Examiner Mentor?	Y / N

For Examiners completing their term of appointment

4.	Have you observed improvements in the programme(s) over the period of your appointment?	Y / N
5.	Has the school responded to comments and recommendations you have made?	Y / N
6.	Where recommendations have not been implemented, did the school provide clear reasons for this?	Y / N
7.	Have you acted as an External Examiner Mentor?	Y / N

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

8.	Is the overall programme structure coherent and appropriate for the level of study?	Y / N
9.	Does the programme structure allow the programme aims and intended learning outcomes to be met?	Y / N
10.	Are the programme aims and intended learning outcomes commensurate with the level of award?	Y / N
11.	Did the Aims and ILOs meet the expectations of the national subject benchmark (where relevant)?	Y / N
12.	Is the programme(s) comparable with similar programmes at other institutions?	Y / N
<p>Please use this box to explain your overall impression of the programme structure, design, aims and intended learning outcomes.</p> <p>Students were disappointed by the lack of medical content in the first two years. However, medical engineering tutor groups ensured a cohort identity.</p>		
13.	Is the influence of research on the curriculum and learning and teaching clear?	Y / N
<p>Please explain how this is/could be achieved (examples might include: curriculum design informed by current research in the subject; practice informed by research; students undertaking research)</p> <p>Projects are clearly research-based, as is some of the coursework.</p>		
14.	Does the programme form part of an Integrated PhD?	Y / N
<p>Please comment on the appropriateness of the programme as training for a PhD:</p>		
15.	Does the programme include clinical practice components?	Y / N
<p>Please comment on the learning and assessment of practice components of the curriculum here:</p>		
16.	Is the programme accredited by a Professional or Statutory Regulatory Body (PSRB)?	Y / N
<p>Please comment on the value of, and the programme's ability to meet, PSRB requirements here:</p> <p>Course seems to fit well with IMechE requirements.</p>		

Assessment and Feedback

17.	Does the programme design clearly align intended learning outcomes with assessment?	Y / N
<p>Please comment on the assessment methods and the appropriateness of these to the ILOs, in particular: 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.</p> <p>I note that the medical-specific modules MECH5490M and MECH5565M both had high failure rates (30% and 38%), although the mean marks were reasonable (55.9% and 54.8%). I wonder if this is because the majority of students taking these modules are not on the Medical Engineering programme and may not be adequately prepared to engage with the subject material.</p>		

18.	Is the design and structure of the assessment methods appropriate to the level of award?	Y / N
19.	Were students given adequate opportunity to demonstrate their achievement of the programme aims and intended learning outcomes?	Y / N
<p><i>Please comment on 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:</i></p> <p>Academic standards are comparable to other institutions.</p>		
<p><i>Please use this box to provide any additional comments you would like to make in relation to assessment and feedback:</i></p> <p>The level of feedback given to students on their coursework was excellent. It was obvious that a great deal of time and care had been taken over this.</p>		

The Progression and Awards Process

20.	Were you provided with guidance relating to the External Examiner's role, powers and responsibilities in the examination process?	Y / N
21.	Was the progression and award guidance provided sufficient for you to act effectively as an External Examiner?	Y / N
22.	Did you receive appropriate programme documentation for your area(s) of responsibility?	Y / N
23.	Did you receive appropriate module documentation for your area(s) of responsibility?	Y / N
24.	Did you receive full details of marking criteria applicable to your area(s) of responsibility?	Y / N
25.	Were you provided with all draft examination papers/assessments?	Y / N
26.	Was the nature and level of the assessment questions appropriate?	Y / N
27.	Were suitable arrangements made to consider your comments on assessment questions?	Y / N
28.	Was sufficient assessed work made available to enable you to have confidence in your evaluation of the standard of student work?	Y / N
29.	Were the examination scripts clearly marked/annotated?	Y / N
30.	Was the choice of subjects for final year projects and/or dissertations appropriate?	Y / N
31.	Was the method and standard of assessment appropriate for the final year projects and/or dissertations?	Y / N
32.	Were the administrative arrangements satisfactory for the whole process, including the operation of the Progression and Awards Board?	Y / N
33.	Were you able to attend the Progression and Awards Board meeting?	Y / N
34.	Were you satisfied with the recommendations of the Progression and Awards Board?	Y / N
35.	Were you satisfied with the way decisions from the School Special Circumstances meeting were communicated to the Progression and Awards Board?	Y / N
<p><i>Please use this box to provide any additional comments you would like to make on the questions above:</i></p> <p>I thought that the change to classification scoring was handled well, despite the complex consequences on classifications. Decisions were clearly made in the students' best interests at all stages.</p>		

Other comments

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

I would have appreciated an opportunity to talk to students about their experiences of the programme. I found that a particularly valuable part of the process last year and would appreciate the opportunity to repeat it in future.

Name of School and Head of School (or nominee)

Title and Name of Examiner:

Subject(s):

Medical Engineering

Programme(s) / Module(s):

Medical Engineering undergraduate programme

Awards (e.g. BA/BSc/MSc etc):

BEng/MEng

Title and Name of Responder:

Position*:

Head of School

Faculty / School of:

Mechanical Engineering

Address for communication:

Leeds, LS29JT

Email:

Telephone:

*If the individual responding to the report is not the Head of School please state their position within the School.

Completing the School response

The completed School response (including the full original report) should be attached to an e-mail and sent to the Pro-Dean for Student Education in the relevant Faculty. Following approval by the Pro-Dean for Student Education, the School must send the response (including the full original report) directly to the External Examiner. A copy must also be emailed to the Quality Assurance Team at gat@leeds.ac.uk. External Examiners should receive a formal response no later than six weeks after receipt of the original report.

Response to Points of innovation and/or good practice

“The External Examiner folder that was given to me at the start of the day was excellent and compiled all of the relevant information I needed.”

“The level of feedback given to students on their coursework was excellent. It was obvious that a great deal of time and care had been taken over this.”

“I thought that the change to classification scoring was handled well, despite the complex consequences on classifications. Decisions were clearly made in the students’ best interests at all stages.”

We are very pleased with the comments made by the Examiner in general in his report and in these areas in particular.

Response to Enhancements made from the previous year**Response to Matters for Urgent Attention**

If any areas have been identified for urgent attention before the programme is offered again please provide a specific response to them here:

None identified

Response to questions 1-7 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

Not all documentation was provided to the examiner at the time of the review.

Program leaders could be asked prior to the external examiners visit to ensure the necessary documentation is available for an effective review as in this case the program manager was unaware of

what was and what was not available. The SSO is often too busy to follow this up/chase so better to get the Program manager to chase.

However, during the November STSEC it was discussed the best way moving forward in the short term is to put all the necessary information on a USB stick to give to the examiner.

Standards

Response to questions 8 to 16 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

Students were disappointed by the lack of medical content in the first two years. However, medical engineering tutor groups ensured a cohort identity.

This is a common complaint and indeed has been reflected back in previous years. The 1st 2 years of the course are focussed on fundamental Mechanical Engineering Science. This is very clearly communicated to the students on open days and applicant days. The reasoning behind this is very clear; to equip the students firstly with strong fundamental engineering skills. As the course progresses, students are then encouraged to apply these skills at levels 3 and 4, where the majority of the medical content is delivered. We have been progressively increasing the medical content at Level 1 and 2 in the Design and Manufacture modules with the addition of the L1 Bioarm and L2 Colonoscopy, and we aim to eventually focus all of these into medical. For example, there are also plans in progress to introduce a Fractured Neck of Femur DHS device in the L1 design assembly aspect.

Assessment and Feedback

Response to questions 17 to 19 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

I note that the medical-specific modules MECH5490M and MECH5565M both had high failure rates (30% and 38%), although the mean marks were reasonable (55.9% and 54.8%). I wonder if this is because the majority of students taking these modules are not on the Medical Engineering programme and may not be adequately prepared to engage with the subject material.

Interestingly, MECH5565M – “Medical Engineering Experimental Design and Analysis” had exceptionally high student feedback, scoring 100% in many of the criteria including gold standard criteria. There were a number of assessment changes that were implemented during this cycle to perhaps explain a higher failure rate than higher years. It is anticipated however, that this module will be replaced for the 20/21 term by a more generalised experimental design module that will run across all MSc courses. Therefore, no concerns moving forward.

MECH5490M – “Biomaterials” went through its first cycle as a linear course during this term. Again, there was a positive feedback from students. As noted there was a slightly higher cases of failure than previous years, but a number of plagiarism cases have contributed to this. No Concerns.

The Progression and Awards Process

Response to questions 20-35 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

Other comments

Response to items included in the 'Other Comments' section of the report

I would have appreciated an opportunity to talk to students about their experiences of the programme. I found that a particularly valuable part of the process last year and would appreciate the opportunity to repeat it in future.

This is again a recurring complaint, however the majority of students have moved on to other locations and are hence not available. A list of 4th year summer interns could be given to the SSO to improve the feedback that the external examiner gets during this time when students have generally already left.