

## 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):	<i>Tissue Engineering and Regenerative Medicine - Innovation in Medical &amp; Biological Engineering</i>
Programme(s) / Module(s):	MSc (Medical Engineering) Integrated MSc (CDT Medical & Biological Engineering)
Awards (e.g. BA/BSc/MSc etc):	MSc

**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](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*

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?*

No. This is a new course.

**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*

Not applicable.

## 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 new CDT TERM-iMBE PhD programme, incorporating the Medical Engineering and Integrated MSc programmes of the Institute Medical and Biological Engineering, reflects well its core research strengths in cardiovascular medicine, joint replacement, skin repair and dentistry. The programme follows a common syllabus in Year 1, with students required to attain a pass and 100 taught credits in order to progress, 60 of which credits are assessed on the basis of specialist training and development activities, including a laboratory placement and systematic review on a topic of their choosing; a further 40 credits achieved from optional modules from a catalogue of classes covering a wide range of discipline-specific topics that reflect the broad nature of the subject. The balance of taught provision in Year 2 includes generic themes such as project management, experimental design and analysis, and professional development and skills training. Together these form an integrated MSc that provides a solid grounding in the underlying principles and practice of Tissue Engineering and Regenerative Medicine, and prepares students for their doctoral research project in later years.

### 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.*

Based on the information provided in the course handbook, and the selection of examination papers and scripts I was invited to scrutinise, I consider that the standards to be comparable to similar programmes elsewhere with which I am familiar: the aims and learning objectives are consistent with taught and research programmes at this level, and with national priorities that seek to build capacity in the fields of Tissue Engineering and Regenerative Medicine, and biomedical engineering in general.

### 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 range of innovative teaching and assessment methods is employed to support the learning needs of a diverse cohort of students. Detailed module guidance, marking schedules and criteria are provided for compulsory modules and associated coursework.

### 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.*

Before the October board meeting I had the opportunity to meet students enrolled on the programme (CDT TERM iMBE) and explored various aspects of the programme with them, including project selection, opportunities for networking. A majority of students in the first-year cohort came from a life-sciences background; those in Year 2 were engaged on projects based in different faculties/departments, reflecting the multi-disciplinary nature of the programme. My impressions were wholly positive, the students commenting favourably on the level of support and pastoral care offered by the administrative office. I note also that a student mentoring scheme is in place.

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

Not applicable.

### 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.*

Not applicable.

### 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 Institute of Medical & Biological Engineering at Leeds is internationally renowned for its research and educational programmes in biomedical engineering. The CDT, in particular, provides a high quality research environment for the development and training of students in what is a highly multi-disciplinary field of enquiry. All of the taught modules and training elements are informed by research, as are the students' research skills, which are developed through poster and oral presentations, peer-to-peer training, and from being embedded within the research groups of their respective supervisory teams. Examples of research and knowledge exchange activities include industry workshops and placements in later years, and participation in annual networking events, seminars and conferences.

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

It is clear from the syllabus that the programme provides a solid grounding in the underlying principles and practice of Tissue Engineering and Regenerative Medicine, and prepares students for their doctoral research projects in later years.

**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**

Not applicable.

**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.*

In addition to the course handbooks, the external examiner handbook contains all relevant web links and contact details.

**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.

**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?**

No. This is a new course. I understand that all draft examination papers/assessments were reviewed by my predecessor.

**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?**

I was, however, given the opportunity to review a selection of examination papers and scripts prior to the Board of Examiners' meeting.

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

Yes.

**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 arrangements were satisfactory. I was satisfied with the conduct of the Board and the recommendations made.

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

Yes.

**Other comments**

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

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**UNIVERSITY OF LEEDS**

25 April 2016

Dear Richard

Thank you for acting as External Examiner for our CDT Tissue Engineering and Regenerative Medicine programme.

Please find attached a response form the CDT Director, \_\_\_\_\_, which I hope you find satisfactory.

I look forward to seeing you again at this year's MSc examiners' meeting in October.

Regards

Cc

**Head of School**

Professor of Solid Mechanics

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UNIVERSITY OF LEEDS

21<sup>st</sup> April 2016

**Response to External Examiners report for 2014 -15 for the Centre for Doctoral Training in Tissue Engineering & Regenerative Medicine – Innovation in Medical Engineering (CDT TERM-iMBE)**

I would like to thank [redacted] for taking the time to thoroughly review our programme and for meeting with the students, reviewing their work etc during his visit to Leeds in October 2015.

I am pleased no issues were identified with the programme and that the CDT TERM-iMBE was recognised as a programme offering a high quality research environment for the development and training of students in what is a multidisciplinary field. [redacted] recognised that the programme reflects our core research strengths and that the programme modules cover a wide range of discipline-specific topics, reflecting the broad nature of the subject. Teaching and assessment procedures were recognised as being innovative to support the needs of the diverse cohort and it was also recognised that detailed module guidance, marking schedules and criteria were provided for coursework across the programme.

[redacted] had an opportunity to meet with a number of students from the first two cohorts of the PhD programme during [redacted] visit. The students gave good feedback on the programme, and [redacted] impressions were "wholly positive". In particular, they highlighted the high quality pastoral support they receive.

I am also pleased that the examiner highlighted that the programme provides a solid grounding in the underlying principles and practice of Tissue Engineering and Regenerative Medicine, and prepares students for their doctoral research projects in later years. I look forward to welcoming [redacted] to review the programme next year.

Yours sincerely