

**The University of Leeds**  
**EXTERNAL EXAMINER'S REPORT**

QAT Received 05/01/2017

ACADEMIC YEAR: 2016-17

**Part A: General Information**

**Subject area and awards being examined**

Faculty / School of:	School of Chemical and Process Engineering
Subject(s):	Nanotechnology
Programme(s) / Module(s):	BSc Nanotechnology, Materials modules (undergraduate and MSc)
Awards (e.g. BA/BSc/MSc etc):	BSc

**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 BSc Nanotechnology programme itself is multidisciplinary and quite innovative in the UK, although I fully appreciate that student demand is limited so as not to make such a programme viable. The experimental research-informed projects are excellent - it was really pleasing to see undergraduate students given exposure to state-of-art research equipment with such engaging projects.

**Enhancements made from the previous year**

*Please highlight any enhancements made to the programme(s) or processes over the past year in this box.*  
This was the final cohort for the BSc Nanotechnology programme, with just a year 3 cohort graduating, and so sensibly no significant changes had been made. It was good to be provided with all the mark-sheets for the project reports this year, all accurately completed with informative comments.

**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*  
I think the School should review its process for marking, annotating, and arithmetic checking of exam scripts, particularly when answers booklets have a second supplementary answer booklet attached. During my visit I found the second/supplementary answer booklets for two students in one exam had not been marked at all. There was an indication on the front of the main answer booklet in each case that an arithmetic check had been undertaken, but clearly both examiner and checker had completely missed answers in the second booklet. Subsequent marking of the unmarked answers increased the exam marks in these two cases by 5% and 13%. Clearly the moderation/arithmetic checking process had not worked in these cases.

**For Examiners in the first year of appointment**

1.	Were you provided with an External Examiners Handbook?	Y / N
2.	Were you provided with copies of previous relevant External Examiners' reports and the response of the School 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 a 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
9.	Does the programme structure allow the programme aims and intended learning outcomes to be met?	Y
10.	Are the programme aims and intended learning outcomes commensurate with the level of award?	Y
11.	Did the Aims and ILOs meet the expectations of the national subject benchmark (where relevant)?	Y
12.	Is the programme(s) comparable with similar programmes at other institutions?	Y

*Please use this box to explain your overall impression of the programme structure, design, aims and intended learning outcomes.*

The BSc Nanotechnology programme is an interesting multi-disciplinary undergraduate programme dealing with a very broad range of topics and ILOs, many of which are very much at the research end of science and engineering. In many ways it makes for a really interesting and research-led degree programme, although perhaps more appropriate for the masters level.

13.	Is the influence of research on the curriculum and learning and teaching clear?	Y
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*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)*

I was once again very impressed to see so many experimental research-informed final-year dissertation projects had been undertaken. The students I met also really appreciated the opportunity they had to work in research groups on their projects, and although the projects had often been demanding when at the limits of their prior discipline experience, they reported excellent levels of supervision and support from academic staff and research students.

The nanotechnology programme in general incorporates many aspects of academic staff research interests, evidenced by the numerous case studies used in teaching, and academic staff engagement with the programme.

14.	Does the programme form part of an Integrated PhD?	N
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*Please comment on the appropriateness of the programme as training for a PhD:*

15.	Does the programme include clinical practice components?	N
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*Please comment on the learning and assessment of practice components of the curriculum here:*

16.	Is the programme accredited by a Professional or Statutory Regulatory Body (PSRB)?	N
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*Please comment on the value of, and the programme's ability to meet, PSRB requirements here:*

## Assessment and Feedback

17.	Does the programme design clearly align intended learning outcomes with assessment?	Y
<p><i>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.</i></p> <p>The exams and coursework, including project-work, set high expectations of students, but are entirely appropriate for the subject and ILOs at this level. Most exam papers and module assessment strategies seem sensible. As mentioned last year, I do feel that one or two exam papers probably contain too much choice of questions.</p> <p>From talking with students on the course, they really appreciated the dedication of their teaching staff and the quality of the teaching they had received, which was reflected in their performance.</p>		
18.	Is the design and structure of the assessment methods appropriate to the level of award?	Y
19.	Were students given adequate opportunity to demonstrate their achievement of the programme aims and intended learning outcomes?	Y
<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>The standards and student performance appear to be comparable with those on other similar courses that I am familiar with, including at my own University. The number of students is small so it is not possible to generalise about their specific strengths or weaknesses. The standards of student work in assessments is generally high, and it is clear that they have been well taught.</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>		

## The Progression and Awards Process

20.	Were you provided with guidance relating to the External Examiners role, powers and responsibilities in the examination process?	Y
21.	Was the progression and award guidance provided sufficient for you to act effectively as an External Examiner?	Y
22.	Did you receive appropriate programme documentation for your area(s) of responsibility?	Y
23.	Did you receive appropriate module documentation for your area(s) of responsibility?	Y
24.	Did you receive full details of marking criteria applicable to your area(s) of responsibility?	Y
25.	Were you provided with all draft examination papers/assessments?	Y
26.	Was the nature and level of the assessment questions appropriate?	Y
27.	Were suitable arrangements made to consider your comments on assessment questions?	Y
28.	Was sufficient assessed work made available to enable you to have confidence in your evaluation of the standard of student work?	Y
29.	Were the examination scripts clearly marked/annotated?	N

30.	Was the choice of subjects for final year projects and/or dissertations appropriate?	Y
31.	Was the method and standard of assessment appropriate for the final year projects and/or dissertations?	Y
32.	Were the administrative arrangements satisfactory for the whole process, including the operation of the Progression and Awards Board?	Y
33.	Were you able to attend the Progression and Awards Board meeting?	Y
34.	Were you satisfied with the recommendations of the Progression and Awards Board?	Y
35.	Were you satisfied with the way decisions from the School Special Circumstances meeting were communicated to the Progression and Awards Board?	Y

*Please use this box to provide any additional comments you would like to make on the questions above:*

The Progression and Award Board was efficiently organised, and appropriate consideration was given to all students and decisions made were appropriate and justified.

There was quite a lot of variation between modules in terms of the performance of students (averages and failure rates), and it was not always clear as to why this variation was occurring. It would therefore be useful for the External Examiners to be provided with the Minutes of the pre-meeting held before the Progression and Awards Board at which module performance was discussed.

I have already commented above (in Matters for Urgent Attention) about the checking and marking of exam scripts.

I would like to acknowledge the helpfulness of all the academic and administrative staff involved in the examination process, and the hospitality I received on my visit.

#### Other comments

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

**Name of School and Head of School (or nominee)**

Title and Name of Responder:

Position\*:

Faculty / School of:

Address for communication:

Email:

Telephone:

Head of School	
Chemical and Process Engineering	
University of Leeds Leeds LS2 9JT	

\*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 [qat@leeds.ac.uk](mailto:qat@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**

We are happy to receive your comments. Student numbers, unfortunately, never maintained sustainable levels. We believe it is important to expose our students to state of the art research techniques and contemporary issues in their final year projects.

**Response to Enhancements made from the previous year**

Once again, our apologies for not providing a complete set of project mark sheets last 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:

Thank you for your diligence which has enabled attention to be drawn to this problem. Clearly this could lead to unfortunate outcomes for student graduation and classification. Assessors and checkers are issued with detailed guidelines prior to receipt of examination scripts but we will review these to try to close any loopholes which may have led to this issue.

**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:

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**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:

Thank you for your comments on the standards of this programme. We are looking at broadening the pathways available in the Materials Science and Engineering Masters programme and it is likely that an additional one in the area of nanotechnology will be made available. As noted above, we are committed to offering students the opportunity to work within research groups on current research topics as part of their final year project.

**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:*

Thank you for your evaluation of the assessment and feedback on this programme and for reporting of the students satisfaction with the processes and dedication of the staff. Where modules will continue to be taken by students in the School, we will review the degree of choice offered to ensure it is compatible with the module learning outcomes – if possible, could you identify any modules where you have this concern?

**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:*

The Nanotechnology programmes are unusual in terms of the breadth of materials which is covered and this had traditionally exposed the different subject strengths and weaknesses of students. The provision of the minutes of the marks approval meeting is a good point – we will ensure that these are made available to all External Examiners in future. Please see earlier response with regards to the annotation of examination scripts.

**Other comments**

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