

The University of Leeds

EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2015– 2016

Part A: General Information

Subject area and awards being examined

Faculty / School of:	School of Electronic and Electrical Engineering
Subject(s):	
Programme(s) / Module(s):	Undergraduate programmes, MSc
Awards (e.g. BA/BSc/MSc etc):	BEng, MEng, 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.

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?

No

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

N/A

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.*

I was satisfied that in each case the programme aims and intended learning outcomes were commensurate with the level of the award.

I was also satisfied that the standards set are appropriate for the awards under consideration.

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 aims and intended learning outcomes are comparable to those of similar programmes at other institutions of equivalent standing (i.e. Russell Group) and meet national benchmarks.

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.*

It seems that the School of Electronic and Electrical Engineering (SEEE) has a "philosophy" of asking students to answer, per paper, 3 (out of 4) examination questions that probe the in-depth understanding of students rather than asking them to address a wider range of topics but in less depth in separate questions, seeking to address the intended learning outcomes via assessing problem-solving skills and verbal reasoning. This is a traditional approach and one wholly appropriate to an engineering discipline in which 2nd Year modules build on knowledge and understanding gained in the 1st Year of study, 3rd Year modules build on 2nd and 1st Year courses etc, and professional practice depends not only on this hierarchy of knowledge but also on problem solving skills.

SEEE sets high standards of itself in its examining practices and demands high standards of its students in return. Using student examination performance as the measure, it is evident that the assessment method at the 2nd Year and higher levels provides a searching but fair test of student learning that conforms to the best national standards. In my experience, such levels of student performance could not be achieved unless the general quality of teaching was high.

Any concerns about this "philosophy" are restricted to its uniform application to all 1st Year examinations, as well as later years in the degree programmes. The current attrition rate of students failing to meet the requirements for entry into the 2nd Year of undergraduate degree programmes, or meeting them only after extensive campaigns of re-examination, could well reflect a need to consider a more varied unseen examination methodology for 1st Year students.

It has to be borne in mind that even after the recent changes in the practice of examining A levels these remain different in nature from the school leaving examinations that older faculty members took. A view gaining currency in some quarters of the UK academic engineering community is that "dumbing down" curricula will not resolve the mismatch between A levels and the demands of 1st Year engineering degree programmes. Rather, it could be more useful to review university assessment practices at the 1st year level.

In this respect, I do not recommend recourse to multiple choice question tests, as they rarely test problem-solving skills in a robust way. Nor do I recommend more continuous assessment, because it increases the already near-unmanageable workload on academic staff in research-led universities notably in providing formative feedback to students in a timely way. The consequence of such over-work is too often more superficial, easy-to-mark assessments that fail adequately to address the problem-solving skills essential to engineering education. A better solution could be to restructure at least some of the unseen 1st Year examination papers to contain a mix of shorter questions and longer, more probing questions. Sectioned papers in which students are obliged to answer at least one question per section to force breadth and depth of learning, could also help.

If SEEE decide collegiately that the attrition in student numbers passing from the 1st to 2nd Year of their undergraduate programmes is a manageable problem, or one tractable by other means, then there is no need to review their unseen examination paper format. Their existing approach works; it produces robust results and high standards overall, but it is perhaps a bit of a culture shock for uninitiated (1st Year) students.

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.*

Yes. The unseen examinations produce average marks and spreads of marks commensurate with the distributions expected for well-taught, able and motivated 2nd-4th Year students. The "below average" tail of the distributions of marks for several 1st year courses is possibly evidence of a mismatch in A level unseen examination procedure and that of SEEE and therefore exposes too starkly weaknesses in the depth of understanding of "below average" students. This problem seems to correct itself after students have progressed to the 2nd year of their studies.

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.

Enhancements seem to have been made to the management of the examination paper setting and moderation process, rather than to programmes and modules.

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.

Not able to comment

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

N/A

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.

Yes: the briefings from the Head of School and examinations officer were particularly useful.

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?

Yes.

The nature and level of the questions for all the units were appropriate.

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

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

Yes (for final year projects dissertations)

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 to all questions

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

There was a marked and welcome reduction in the number of errors (mainly typographical) in the examination papers between Semester 1 and Semester 2, reflecting a tightening of procedure for examination paper checking and moderation.

Director of Student Education

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UNIVERSITY OF LEEDS

4 January 2017

Dear

Thank you for sending us your External Examiner's Report for the 2015-16 session and, in particular, for some thoughtful suggestions concerning 1st Year assessment. We certainly share the concern you expressed that many students are unprepared for the step change in assessment style between A-Levels and university, and we also agree that the current 1st Year attrition rate is not acceptable.

As far as having a different format for 1st Year examination questions is concerned, this is an interesting suggestion. The three-out-of-four in-depth questions format is consistent across all our 1st, 2nd and 3rd Year examinations and it could be argued that changing this for 1st Year papers (in favour of shorter questions covering a wider range of topics) might simply defer the step change until 2nd Year. Our preferred approach would be to ensure that all examination questions (including 1st Year) are constructed in such a way that the first ten marks essentially address broad but not in-depth knowledge, and the remaining ten marks probe deeper understanding. The introduction of an exam paper 'scrutiny panel' last year was intended to try to monitor this and we will be paying particular attention to the 1st Year examination papers.

In terms of moving to continuous assessment, again we agree that this is not really the right approach. We currently believe that the volume of in-term coursework is too high and creates unrealistic workloads (for students as well as staff!) at certain times of the academic year. Accordingly, we have commenced a review of coursework volumes and we plan to reduce the level of this form of assessment over the coming months.

Thank you again for your continued service as an External Examiner – we very much appreciate your input.

Yours sincerely,

Director of Student Education

The University of Leeds

EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2015– 2016

Part A: General Information

Subject area and awards being examined

Faculty / School of:	Engineering, School of Electronic and Electrical Engineering
Subject(s):	Electrical and Electronic Engineering
Programme(s) / Module(s):	
Awards (e.g. BA/BSc/MSc etc):	BEng and MEng

Name and home Institution / affiliation of Examiner

Completed report

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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 that I can see.

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

N/A

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 degree programmes have good standards and are delivered competently by the Department. The quality and standard of assessment are good and comparable to other institutions of similar standing.

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.*

Yes, the programmes' aims and objects meet the expectation of the national subject benchmark. In particular, the programmes offered are all accredited by our national accreditation body (i.e. IET).

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.*

In the past two years, I have raised concerned about a couple of modules which had very low average marks. I am very pleased to find that this problem has been resolved.

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.*

Yes, students appear to do well on the courses and with the small number of students I met, they are happy with the provision and support by the Department.

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.

Under the leadership of both the Head of Department and Head of UG Studies, the programmes has improved over the past few years. It is now a stronger course than when I first started as External three years ago.

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 Department is one of the top research departments in EEE in the country and this is reflected in some of the advances courses offered in the last two years of the four year programme.

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

N/A

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.

The materials provided to me were both appropriate and sufficient.

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. All documents were supplied in a timely manner.

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, they were provided in advance.

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?

All examination papers and students' answer scripts were made available in the morning of the Examiners' Meeting. I was also able to talk with a small number of student during the External Examiner's visit.

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

Yes, the choice and assessment were appropriate.

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 meeting was conducted effectively and efficiently. Since most decisions were made according to well defined rules, there was not much to be done at the Board of Examiners meeting.

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

The Department continues to offer a high quality degree programme in electronics and, jointly with others, in mechatronics. The students I have spoken to were happy with the provision by the Department. Staff appear to be engaged and administrative staff are efficient.

Director of Student Education

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UNIVERSITY OF LEEDS

4 January 2017

Dear

Many thanks for sending us your External Examiner's Report for the 2015-16 session, and please accept my apologies for the delay in responding. As we discussed when you visited in June, I have now taken over the role of DSE from [redacted] and so your report has been passed on to me.

You mentioned that it appears that our efforts to improve the modules with low average marks (which you have commented on in previous years) have yielded improvements. Of course, we are also pleased to see this!

Thank you again for your continued service as an External Examiner – we very much appreciate your input.

Director of Student Education