

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:	Engineering / Civil Engineering
Subject(s):	Environmental Engineering & Project Management
Programme(s) / Module(s):	CIVE5038M Water Resources Management and Supply CIVE5185M The Management of Projects CIVE5392M Bioenergy from Wastes CIVE5532M Wastewater and Organic Waste Management CIVE5557M Solid Waste Management CIVE5563M Environment and Health Management EETM Dissertation
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.

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?

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

I have had an excellent experience as EE for this course, including excellent communication with the administrative and academic members of the team. All my suggestions for improvement have been considered, as evidenced by the detailed replies I received from the Head of School each year. Most of my suggestions were adopted and, where not adopted, a rational explanation was given or an undertaking given to adopt in the longer term.

The standard of teaching was maintained at a high level throughout my tenure, as evidenced by generally excellent awards each year. This year, but for a different Module to last year, for one Module (*Management of Projects*) there was clear evidence of where marks were awarded on exam scripts *via* written comments, and clear evidence of second marking. I would encourage adoption of this practice across the board, although I understand there is reluctance to do this, as the scripts are not returned to the

students. However, it is of great assistance to the EE and, should a student request sight of their marked scripts through e.g. a Freedom of Information request, the evidence for the mark awarded will be there.

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 ILOs are entirely appropriate for this specialised Master's course, which was logically organised for delivery in Semesters. However, the 4 x 15 Credit modules in Semester 2 might be better delivered as 2 x 30 Credit modules, to complement Semester 1 delivery (repeat of comment from previous three years). I was pleased to see the two Semester 1 modules delivered in sequential 4-week blocks, as I think this allows deeper learning and increased flexibility of delivery and I would encourage the team to adopt this practice for Semester 2, if staff availability allows. The Integrated Research Project allows students to select a project that they are particularly interested in and integrate their learning, by conducting either a critical review of the literature or a practical-based investigation.

Standards of achievement were entirely consistent with a taught Master's course (QAA Level 7).

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.*

I understand from the QAA website that the 2015 Benchmark Statement for Engineering Degrees now includes taught MSc courses. However, the threshold academic standards (Subject Benchmark) should be interpreted as the output standards set out in the Accreditation of Higher Education Programmes: UK Standard for Professional Engineering Competence.

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.*

The use of coursework and an exam for each module is commended, as it allows students with strengths in either area to demonstrate their abilities. However, I only saw evidence of moderation or second (double) marking in some of the samples of work that I had time to view.

The introduction last year of the VLE-based system for marking the Research Project (Dissertation) module ensures that Supervisor and Second Marker marks are in close agreement. However, I did not have access to this information this year. Nevertheless, I did have access to all the submitted Dissertations via Dropbox, which was an excellent opportunity to see the range of projects offered and to check that e.g. borderline students were fairly marked, which they were. Nevertheless, the marks sheet did not show evidence of both marks, only the agreed ones.

It was useful again have each piece of coursework marked as a %, with the weighting given on the marks summary sheet in a row near the top, as requested the previous year. This additional piece of information was of particular use where assessment elements have different weightings. It would also be useful to record the individual exam question marks on all the module summary sheets, not just some of them. Therefore, I would strongly recommend that all the module marks summary sheets are amended in this way to assist clarity.

As for moderation or second (double) marking, which is recommended by QAA, I suggest that this is done for any student at or near a borderline for the module, where a small change in mark might make a big difference in outcome. Therefore, this should not be too onerous a task, as relatively few students normally end up in this position, but it would ensure the fairest outcome for such students and help to ensure that the current high standards are maintained.

This cohort of students clearly included many strong candidates, however, as the Dissertations had not all been submitted or marked when I attended the taught Modules Exam Board, I am unable to comment on the overall outcome of this year's course. Nevertheless, there was evidence of strong performances again, with 3 students likely to be awarded a Distinction and 10 a Merit. Whilst

indicative of recruiting strong candidates from a healthy number of applicants, these excellent results are also indicative of strong teaching, deep learning, and robust assessment.

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.*

Given the wide range of assessments across the modules, the use of formal exams to help assess each module, and the possibilities to demonstrate their higher-level abilities provided by the 60 Credit Research Project, all students were given adequate opportunity to demonstrate individual achievement of the Aims and ILQs.

The majority of the students demonstrated a strong performance across the breadth of this challenging course. However, an increased number of students had fails in a Module at the first attempt, with one failing all units – a unique performance during my tenure. In addition, there were 11 failed Modules by 7 other students. Despite this increase in failed Modules, I consider that the majority of students were a strong cohort and benefitted from this industrially-relevant course that prepares them for employment in the water industry.

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.

I am not aware of any specific enhancements to the programme or modules since last year, apart from the clear evidence of where marks were awarded on exam scripts for one Module, although combining the four Semester 1 modules into two, to match the Semester 2 delivery, was mentioned as an objective two 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.

Each module showed evidence of content informed by the research interests of staff delivering them. For example, deep knowledge of the practical aspects of wastewater treatment were evident in the *Wastewater and Organic Waste Management* and *Environment and Health Management* Modules. The Research Project module, as anticipated, is especially strong in this area.

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.

I was provided with a printed copy of the External Examiner Handbook 2014-2015 well in advance of my visit, which provided the necessary information for me to carry out my duties. I also find the HEA Handbook for External Examining a useful supplement to the EEH, and I notice that there is a link to this on the Leeds EE website.

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, in November last year, I received a copy of the Assessment CoP, u/g & p/g Hbk & mini-Hbk for p/g in Civ Eng.

Copies of the programme specification or module handbooks were provided previously, as summaries of the syllabus and assessments for each module.

The links to internal and external documentation on the EE website are a useful resource for understanding the University policies, e.g. on disability.

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?

I was provided with draft exam questions and model answers for both Semester 1 and 2 exams. The nature and level of these questions were entirely appropriate and any queries or comments were addressed. However, I did take issue with the provision of PowerPoint slide images in place of model answers for one of the Modules.

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 exam scripts were made available to me, so I was able to confirm that appropriate marks were awarded. The marking notation was explained to me and one Module (CIVE5185M, *Management of Projects*) had clear evidence of second marking/moderation on the scripts, as well as evidence that the marks entry had been checked (via use of red and green ink). This practice is exemplary and other Module leaders are encouraged to adopt it, as recommended last year and referred to in my "final year" comments, above.

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

An appropriate choice of subjects for dissertations was evident, although the burden has fallen on a limited number of staff again this year, owing to others being already busy with PhD students.

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?

The administrative arrangements were exemplary and the individual concerned is to be congratulated on her professionalism, attention to detail, clear understanding of the Regulations, and for her cheerful disposition!

I was able to attend the Taught Modules Exam Board on September 11th, when all Modules except the Project were discussed. I also saw the August Resit results and had access to all the submitted Dissertations, via Dropbox.

I was entirely satisfied with the recommendations of the Board and felt that the students who failed a module, and others who were near borderlines, were dealt with adequately and fairly.

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

There was extensive discussion of Mitigating Circumstances, with one member of the Exam Board unhappy that, for some students, this seemed to be a way to obtain an unjustified extension. However, the majority of the Board accepted that some students do suffer quite serious issues, which are dealt with fairly but rigorously, and that it is impossible to differentiate if the students in question have submitted independent evidence.

Other comments

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

It was extremely useful to meet some of the students during my visit for the September Exam Board. There were a small but communicative group and were, on the whole, highly complementary about the course. Typical comments were:

- *expectations met, challenging course, interesting and relevant project, challenging lab work, especially bacterial contamination, lack of some equipment for project, e.g. temperature & agitation control*

- *able to cope with course and found biochemistry background from first degree very helpful, calculations challenging but able to cope; opportunity to gather data from local authority sources was useful*

- *found course hard, especially chemistry aspect as don't have background in Chemistry, allocated chosen project, mostly mathematical modelling, OK at maths*

- *Enjoyed most: acquiring new knowledge; will be useful in future careers; use of industry experts an excellent feature; visited Esholt, MWF (bioaerosols, and solid wastes course), river Aire (Malham), Treasure Hunt was fun! Acquired better appreciation of natural water systems, up to date with current research, had highly relevant to career in Malawi, working for drinking water supply company*

- *Constructive Criticism: Semester 1 had 1 exam, Semester 2 had 4 assignments & exams; maybe to break students in gently? (EE confirmed at Exam Board) Still think it could be balanced a bit better*

- *Dissertation issue, eqpt broke down after 3 weeks, so had to agree to a new topic at very short notice (3 days: Fri to Mon); new topic caused big headaches. However, I pointed out that these things happen and unless the choice of a new project had been made with little notice, then issues of time availability would have occurred. (This opinion was confirmed at the Exam Board.)*

Plans: return home and find relevant job: this comment is evidence that the course develops knowledge and skills that are highly relevant to employment in this field.

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1 February 2016



UNIVERSITY OF LEEDS

Dear

MSc(Eng) Environmental Engineering and Project Management

Many thanks for the examiner's report relating to the MSc(Eng) in Environmental Engineering and Project Management. We very much appreciate the time and the support which you have provided to the process in this, your last year as our External Examiner.

We are grateful for the positive comments you have given and the suggestions for improvement that you have suggested. It is good to see that you recognise the standard of teaching on the programme and that you liked the fact that most modules contain an exam and coursework element to the assessment and that this gives students with different strengths opportunities to demonstrate their abilities.

I am aware that once again you have highlighted the fact that the MSc programme may benefit from being taught as four 30 credit modules. As mentioned previously, however, the modules in semester 2 are offered as optional modules to our MEng students and this can only continue if they remain as 15 credit modules. The other suggestions that you have put forward regarding individual exam question marks and double/second marking will be discussed with the programme teaching team. With regard to your comments on dissertation marking, this is carried out independently by the primary and secondary supervisors using the VLE. We regret that access was not available to you and will seek to remedy this in future.

Once again may I take this opportunity to thank you for your continued support as external examiner.

With best wishes

Yours sincerely