

Programme Regulations 2009/10

Degree of Engineering Doctorate

See also:

Regulations for Student Candidates for the Degree of Engineering Doctorate

Note: postgraduate research students are responsible for making themselves familiar with the Guidelines for Research Students approved by Senate from time to time which are available to them each academic year.

Introduction

1. Candidates for the degree of Engineering Doctorate are required to demonstrate:

(a) a systematic acquisition and understanding of a substantial body of knowledge which is at the forefront of engineering or area of related professional practice;

(b) the creation and interpretation of new knowledge, through original research or other advanced scholarship, of a quality to satisfy peer review, extend the forefront of engineering research, and merit publication;

(c) the general ability to conceptualize, design, implement and adjust a project for the generation of new knowledge, applications, or understanding at the forefront of the discipline. Where appropriate, also to demonstrate the ability to formulate and test hypotheses and to generate alternative explanations for the data available;

(d) a detailed understanding of applicable techniques for research and advanced academic enquiry in engineering;

(e) a range of advanced professional and key skills relevant to employment within the engineering professions, including the ability to communicate their ideas and conclusions clearly and effectively to specialist and non-specialist audiences.

2. A doctoral thesis or portfolio of research projects should exhibit substantial evidence of original scholarship and contain material worthy of publication.

Note: Throughout these regulations, the term 'thesis' is deemed to include a portfolio of cognate research projects.

3. Applicants who are approved for admission as candidates for the degree of Engineering Doctorate under these regulations will be required to pay the student fees for the degree as set out in the annual *Fees Schedule*.

Admission as a Candidate for the Degree of Engineering Doctorate

4. An applicant may be approved for admission as a candidate for the degree by a Postgraduate Admissions Selector in accordance with the Guidelines for the Approval of Postgraduate Applications approved by respective Deans for each Faculty, where the applicant:

(a) is a graduate of this or another approved university or other approved degree-awarding body or holds other qualifications approved by the Dean;

(b) meets the EPSRC Guidelines on Qualifications for Entry to EngD programmes, if applicable;

(c) has completed an approved application form in which is set out:

(i) an indication of the intended field of advanced study and research;

(ii) evidence of the applicant's suitability to become a candidate in terms of ability and prior training and experience;

(d) has supplied such references and evidence of prior qualifications and experience as the Postgraduate Admissions Selector and/or the Dean may require.

5. In considering an application for admission as a candidate for the degree, a Postgraduate Admissions Selector must be satisfied not only as to the suitability of the applicant, but also as to the availability to the applicant of appropriate supervision and suitable facilities once the applicant is admitted as a candidate. It is the responsibility of the relevant Head of School, directly or through a Postgraduate Admissions Selector, to ensure that appropriate supervision and suitable facilities will be available to an applicant once admitted as a candidate.

General Pre-conditions to the Award of the Degree of Engineering Doctorate

6. Before being awarded the degree of Engineering Doctorate, a student must:

(a) satisfy the entrance requirements for the degree;

(b) register for and satisfactorily complete the programme of study. The programme shall comprise 180 credits drawn from taught modules with professional and business skills training, as well as a thesis or portfolio;

(c) satisfy the examiners in the assessments specified in the relevant programme regulations for the EngD.

Supervision of Candidature

7. A candidate for the degree of Engineering Doctorate must engage in advanced study and research under the direction of a teacher in the University, who shall be a member of the academic staff appointed by the Postgraduate Admissions Selector in consultation with the relevant Head of School as the candidate's supervisor. To be eligible to supervise candidates for the Degree of Engineering Doctorate, a member of staff must hold the degree of Doctor of Philosophy or an equivalent research degree or have equivalent research expertise. The appropriateness of an equivalent research degree or expertise should be determined by the Postgraduate Admissions Selector in consultation with the relevant Head of School. The Postgraduate Admissions Selector may, if appropriate, designate in addition another member of academic staff or suitably-qualified representative of a collaborating industrial organization to act as a secondary supervisor. In any case where students are studying outside the University at another institution, arrangements may also be made for local supervision and support to be provided to the student by staff at that institution (see regulation 10 (d)). Any reference to the supervisor in these regulations or in the *Guidelines for Research Students* or in other documents describing the role of the supervisor shall be deemed to be a reference to the primary supervisor.

Period of Study and Registration Requirements

8. The period of advanced study and research in the University shall normally be four years of full-time study. Approved candidates shall be required to abide by the University's *General Regulations*.

9. Departures from Regulation 8 may be permitted where programme regulations for the EngD provide for part-time study. In such cases, the minimum period of study and registration shall be as set out in the programme regulations for the EngD.

Study Undertaken Outside the University

10. With respect to the research elements of the degree, any candidate may be permitted to study outside the University if specified by the programme regulations; or by the Dean, on the

recommendation of the relevant supervisor and Head of School, provided that in respect of any period of study not undertaken in the University the Dean is satisfied before the beginning of that period of study that:

(a) the candidate will have access to adequate facilities and resources;

(b) sufficient time for study and research will be available to the candidate;

(c) appropriate arrangements have been made for the candidate's supervision during the period of study outside the University, including arrangements for the candidate's supervisor to maintain contact with and to meet with the candidate as often as is necessary;

(d) appropriate arrangements have been made in any case where the candidate is attached to or working at an institution outside the University and is offered local supervision and support by staff at that institution.

Attendance and Progress

11. A student registered as a candidate for the degree of Engineering Doctorate shall:

(a) attend and complete the requirements of, and satisfy the examiners in the prescribed assessments for, the taught elements of the programme as set out in the relevant programme regulations for the EngD;

(b) in addition to attending the taught elements of the programme, attend the University as frequently and at such intervals as the candidate's supervisor shall require. In accordance with the *Guidelines for Research Students* approved by Senate, students in attendance at the University, whether registered full time or part time, will be required to have formal meetings with their supervisors at least once per term.

(c) complete and submit an Annual Report Form in the second and subsequent years of registration for the degree.

(d) take note of and abide by all other provisions of the *Guidelines for Research Students*.

12. The progress of all students registered as candidates for the degree of Engineering Doctorate shall be reviewed at the end of the first twelve months by the relevant Board of Examiners in consultation with the supervisor and Head of School in order for a decision to be made as to whether or not they have demonstrated the potential to succeed on the full programme. Such a review shall

be carried out in accordance with procedures agreed for each programme. In cases where it is decided that students have not demonstrated the potential to succeed on the full programme, they may, subject to Regulation 15, be awarded a Master's degree.

13. The progress of students in years other than the first year shall be reviewed annually by the relevant supervisor and Head of School. Such reviews shall be carried out in accordance with procedures agreed in each Faculty and School and may involve consideration of a candidate's work by a Review Committee. Each supervisor shall submit an Annual Report Form concerning the progress of the candidate's research for review by the appropriate Dean.

14. In the case of any student whose progress is deemed to be unsatisfactory at any stage, the Board of Examiners or supervisor and Head of School may recommend:

(a) that, where the relevant programme regulations for the EngD allow re-examination in the taught elements of the programme, the student be re-examined in the failed modules in accordance with the programme regulations for the EngD;

(b) that the student be required to produce additional work and/or to undergo further review after an additional period of study and research;

(c) that the candidate be considered for the award of a Master's Degree in accordance with Regulation 15;

(d) that the student be not permitted to remain a registered student or a candidate either for the degree of Engineering Doctorate or for a Master's Degree and that the student's candidature be terminated.

Award of a Master's Degree

15. In the case of students who have not demonstrated the potential to succeed on the full programme, or who choose not to continue on the full programme, at the end of twelve months, or where the progress of students is deemed unsatisfactory at subsequent stages, they may be considered for the award of a Master's degree. In order to qualify for the award of a Master's degree, a student must have demonstrated achievement of all the learning outcomes of the degree to be awarded. The appropriate Master's degree will be named in the programme regulations for the EngD.

16. A Master's degree may be awarded with Merit or Distinction subject to and in accordance with the regulations for the relevant Master's degree.

Evidence of Failure to Make Satisfactory Progress and Procedures to be Followed

17. Aspects of performance and attendance that may be deemed to constitute evidence of failure to make satisfactory progress, and the procedures for dealing with cases of unsatisfactory progress and for reviews of decisions on unsatisfactory progress shall be as set out in the University's *Taught Postgraduate Master's Degree Entrance and Progress Regulations*, regulations 5 to 8.

Interruption of Study

18. The Dean may permit the interruption of a candidate's programme of study for a period to be specified by the Dean.

Teaching Duties

19. Candidates for the degree of Engineering Doctorate may undertake paid duties in the University during term in any period of full-time study, with the agreement of their supervisor about the time that may be devoted to such duties and provided that they do not contravene the terms of any studentship that they might hold.

Assessment of the Taught Elements

20. The modes of assessment, pass marks and rules relating to re-assessment for the taught elements of the degree shall be as set out in the programme regulations for EngD.

Submission of Thesis or Portfolio

21. The results of a candidate's advanced study and research must be embodied in a thesis in the approved form in accordance with the *Rules for the Submission of Work for Higher Degrees* and the *Rules for the Form of Theses*. The length of a thesis shall meet the requirements laid down, or guidance issued, if any, by the candidate's Faculty. The thesis must be submitted, together with the necessary submission form and other material, to the Student Progress Section.

22. The exact title of a candidate's thesis must be submitted on the appropriate form for approval by the Dean not less than one month before the thesis is submitted.

23. The thesis must normally be submitted for examination within five years of the date appointed as the beginning of the period of study.

24. Where programme regulations for the EngD allow part-time study, those regulations shall state the number of years in which the thesis must be submitted.

25. Except with the permission of the appropriate Dean, a candidate may not submit a thesis earlier than the beginning of the last term of the prescribed period of study.

Extensions of Time for Submission

26. In exceptional cases, an extension of time for submission of the thesis may be granted by the appropriate Dean, subject to the presentation by the candidate of a case justifying such an extension, supported by the candidate's supervisor. Candidates granted extensions of time in accordance with this provision, but who do not register, shall be required to pay such extension fees as the University shall prescribe from time to time.

Candidates in Continuation

27. A candidate who has completed the minimum required period of registration specified in regulation 8 but who remains eligible to submit a thesis, either in accordance with the provisions of regulations 22 and 23 or under the terms of any extension of time granted in accordance with regulation 25, is not required to continue as a registered student unless the candidate is making use of University facilities commensurate with such registration. Candidates who require the continued use of University library and computing facilities but who are completing the writing of their thesis and do not need normal supervision may be permitted on the recommendation of their supervisor in consultation with the appropriate Head of School to register as 'full-time (writing-up)' or 'part-time (writing up)' candidates. The full-time (writing-up) mode of registration is not open to candidates who have, under programme regulations for the EngD, been allowed to register as part-time candidates.

Note: since candidates at the writing-up stage will have completed all experimental work and data collection, those who are registered under either of the writing-up categories will not be permitted to work in laboratories or to take part in field trips (unless they have the authority of the appropriate Head of School to do so for teaching or demonstrating purposes).

28. A candidate who is neither required to register nor chooses to register after the completion of the minimum required period of registration specified in regulation 8 is deemed to be in continuation. A candidate in continuation shall be required to submit an Annual Report Form for each year in continuation.

Examination of Thesis

29. A candidate's thesis shall be examined by examiners appointed by Senate on the recommendation of the Dean acting on behalf of the appropriate Faculty. The examination shall consist of a review and assessment of the candidate's thesis by the examiners appointed and of an oral examination on the content of the thesis and subjects related thereto. A candidate may also be encouraged to give a presentation of the work embodied in the thesis in the form of a public lecture or seminar. In exceptional circumstances, on sufficient grounds submitted by the examiners, the Dean may exempt a candidate from the oral examination.

30. There shall ordinarily be one external examiner and one internal examiner appointed for each candidate. The examiners will be nominated by the relevant Head of School in consultation with the candidate's supervisor. Such nominations shall be submitted on the approved form at the same time as the candidate submits an application for approval of thesis title (see regulation 22).

31. A supervisor will not normally be appointed as an internal examiner unless the Dean concerned is satisfied that no other member of the University is competent to undertake the examination. In such a case an additional external examiner shall be appointed. The supervisor, if not an examiner, shall not be present during the oral examination. However, the supervisor, if not an examiner, shall be available to be consulted by the examiners on the occasion of the oral examination and shall have the right to confer with the examiners on request. The supervisor will co-ordinate the arrangements for the oral examination.

32. Following the first submission and examination of a candidate, the examiners may make the following recommendations:

(a) that the candidate be admitted to the degree of Engineering Doctorate;

(b) that the candidate be permitted to submit the thesis in a revised form for re-consideration by the internal examiner only, within a period of up to six months as specified by the examiners, and without further oral examination;

(c) that the candidate be permitted to revise and re-submit the thesis within twelve months and, if the examiners so require, be re-examined orally;

(d) that the candidate's thesis be deemed to be of a satisfactory standard, but that the candidate be adjudged to have failed to satisfy the examiners in the oral examination and that the candidate therefore be required to submit within six months either for a second oral examination or for a written examination, as the examiners shall determine;

(e) that the candidate has reached the standard required for an appropriate Master's degree and should be awarded that degree instead;

(f) that the candidate be permitted to submit the thesis in a revised form for the degree of Master of Philosophy for reconsideration by the internal examiner only, and without requirement for a further oral examination, within a period of up to six months as specified by the examiners;

(g) that the candidate be permitted to revise and re-submit the thesis for the degree of Master of Philosophy within twelve months and, if the examiners so require, be re-examined orally;

(h) that no degree be awarded and that the candidate be adjudged to have failed.

33. Recommendations 32 (a) or (e) may be made subject to a requirement that the candidate correct minor textual errors before the deposit of a copy of the thesis in the University Library in accordance with the *Rules for the Submission of Work for Higher Degrees*. In such cases, the candidate shall normally be required to make the corrections within one month of receiving formal notification of the corrections to be made. It shall be the responsibility of the candidate's supervisor to certify that the necessary corrections have been made before a Pass List can be issued. In exceptional cases, an extension of time for making the corrections may be granted by the appropriate Dean, subject to the presentation by the candidate of a case justifying such an extension, supported by the candidate's supervisor.

34. In the case of a candidate subject to recommendations 32 (b) or (f) above, it shall be the expectation that the thesis will not require referral back to the external examiner and that the candidate will not be expected to undergo a further oral examination. However, if the internal examiner feels that any recommendation other than recommendations 32 (a) or (e) respectively is appropriate following re-consideration of the thesis after its re-submission, the internal examiner shall refer the thesis to the external examiner. Where a thesis is thus referred to the external examiner, the examiners may determine that a further oral examination is required and may subsequently make any of the recommendations normally open following full revision and re-submission as set out in regulation 37.

35. In the case of a candidate subject to recommendations 32 (c) or (g) above, the revisions expected of the candidate shall be more substantial than in the case of a recommendation under regulations 32 (b) or (f). However, these recommendations shall nonetheless only be made where the examiners are of the view that the thesis is basically acceptable for the degree concerned and/or that it is reasonable to expect the candidate to be able to attempt to revise and re-submit the thesis successfully in the normal time available and without conducting significant further basic research.

36. In all cases where a candidate is required to make corrections to a thesis or to revise a thesis, it shall be the responsibility of the examiners to provide details of the corrections and/or revisions required of the thesis. These details shall be given in writing to the candidate and the candidate's supervisor by the examiners as soon as possible after the oral examination and a copy attached to the examiners' final report. The final report shall be forwarded to the candidate and the supervisor by the Registrar's Office.

37. Where a candidate has been permitted to revise and re-submit a thesis in accordance with regulations 32 (c) or (g), the options open to the examiners when re-examining the thesis shall be those set out in regulations 32 (a), (e) or (h) only. Where the candidate's oral performance on the first occasion of examination was satisfactory and the examiners are agreed, after considering the re-submitted thesis, that a further oral examination is not required, they may submit their recommendations without re-examining the candidate orally.

38. In the case of a candidate subject to recommendation 32 (d) above, the options open to the examiners following the further oral or written examination shall be those set out in regulations 32 (a), (e) or (h) only.

Language of Submission

39. A candidate's thesis must be written in English and any viva voce examination must be conducted in English.

Notes

(i) Forms of application for admission as a candidate and forms to accompany a thesis on submission may be obtained from the Academic Registrar.

(ii) The University cannot undertake to arrange the examination of a thesis immediately after its submission. Candidates are warned that several weeks may elapse between the submission of their theses and the completion of the examination, and should consult with their supervisors well in advance.