

In the event of any inconsistencies between the English version and the Hebrew version of this document, the provisions of the Hebrew version shall prevail

Regulations of the Faculty of Engineering's Unit Committee for Research Students

The Unit Regulations below serve as an appendix to the [University Research Students Regulations](#) (The equivalent section numbers in the University Regulations appear in parenthesis). In case of any contradiction between the Unit Regulations and the University Regulations, the University Regulations will prevail.

1. Introduction: Doctoral Studies in the Faculty of Engineering

A. Nature of Doctorate

Doctoral studies in the Faculty of Engineering are intended to prepare the student to become a global expert in his or her field of expertise with knowledge and the proven capability to conduct independent research work, with broad versatility in technology and science and equipped with the tools to effectively contribute to society and the economy. The research dissertation, which is the main component of the doctoral studies, will include, at the first stage, identification of the frontiers of knowledge in the field of expertise and practical criticism of what was done in the past, posing the research objectives, the formulation of an original dissertation plan and a description of the methods and means for researching these objectives, while keeping within the time frame determined in the Regulations. During the research the student will prove original thought and operational and analytical skills. The dissertation will be written in fluent scientific and grammatical language. It will summarize all aspects of the research in a practical and critical manner, emphasize the results of the research and the contribution of the research to the area of specialization. The student will also develop scientific curiosity and will expand his or her knowledge on the technical and scientific subjects associated with his or her area of specialization.

B. Powers of Unit Committee in the Faculty of Engineering

The Unit (Faculty) Committee operates as one unit, which is the source of authority and from which both regulatory decisions and individual decisions are issued. Its composition is determined to reflect the diverse areas of research in the Faculty. Members of the Committee will be appointed by the Dean upon the recommendation of the units.

2. Stage I Registration and Admission Conditions

2.1 Regular Track

- A. A person with a master's degree (M.Sc.) from a faculty of engineering is entitled to apply to the Unit Committee with a request to be admitted as a "Stage I Research Student" in the regular track. The final grade average in the master's degree studies will be at least 80 and the final thesis grade will be at least 85. (38)
- B. The candidate will submit to the Unit Committee secretariat the following documents:
 - 1) The consent of a faculty member who is authorized to advise a research student, to serve as advisor, and also the consent of the head of the School/Department to accept the candidate.
 - 2) At least two letters of recommendation from university faculty members or professionals from the industry (with a doctoral degree) who are familiar with the candidate, and at least one recommendation from the candidate's master's thesis advisor.
- C. The holder of a master's degree as stated in section A above who did not submit a final thesis within the scope of his or her studies will be treated by the Committee as stated in section 39 of the University Research Students Regulations.
- D. A candidate holding a master's degree from a non-engineering faculty, but whose training is in a related scientific field to the academic content handled in the Faculty of Engineering units, such as exact sciences, computer sciences or life sciences and medicine, will be required to undertake with a grade of minimum 80, several courses at the recommendation of the supervisor and with the approval of the Unit Committee. The advisor may approach the Unit Committee with a detailed letter requesting an exemption from any supplementary courses for the candidate.
- E. The final decision with regard to admission or rejection of a candidate is within the authority of the Unit Committee.

2.2 Direct Track

2.2.1 "Regular" Direct Track

- A. Master's students in the Faculty of Engineering who have completed at least one and not more than four semesters may apply to the Unit Committee with a request for admission to this track. In particular, students studying in the

direct track for a master's degree in the Faculty of Engineering, and who are entitled to a bachelor's degree, may request admission into the direct track for a doctoral degree.

- B. The candidate will satisfy all the following conditions:
 - 1) Holds a bachelor's degree with a grade average of at least 85. (44)
 - 2) Studied courses for a master's degree within a scope of at least 9 credits, with a final grade average of at least 90, including a mandatory faculty course and a mandatory departmental course.
 - 3) Has written a research report equivalent to an article in a scientific journal. The report will be evaluated by a committee (advisor + one faculty member).
 - 4) Full-time student (must complete a residency within the University).
- C. The candidate will submit the following documents to the secretariat:
 - 1) The consent of a faculty member who is authorized to advise a research student, to serve as advisor and the consent of the head of the School/Department to accept the candidate. (49)
 - 2) An extended recommendation of the advisor on the candidate's skills and on the suitability of the research topic.
- D. Admission to Stage I of the direct track is conditional, until being admitted to Stage II.

2.2.2 Further Guidelines to Students who Have Studied in Accumulated Studies for a Master's Degree

- A. All the provisions of section 2.2.1 above will apply, where the duration of accumulated studies (no more than three years) will not be included within the four semesters mentioned therein.
- B. A further condition for admission to the regular track is that the student was in compliance with all the requirements relating to the stage of accumulated studies in the Master's Degree Regulations.

3. Duration of Studies and Research

3.1 Stage I Student

3.1.1 Student Obligations

- A. Study program: The student will complete the supplementary courses imposed on him or her and also courses of 6 credits with a grade of at least 80 for each course, out of the courses imposed on a research student (see section 3.2.1 A below) until the date of submission of the research proposal.
- B. Research proposal:
 - 1) The student will submit to the Unit Committee a detailed research program signed by the advisor within a year and a half from the date of his or her admission. (40)
 - 2) A student in the direct track will submit the research program within one year of the date of his or her admission to the direct track.
 - 3) The research proposal will be submitted in English. The Unit Committee will approve its being written in Hebrew after submission of a detailed request by the student with the advisor's recommendation, at least three months prior to the date of submission of the proposal. (76)
 - 4) The research proposal signed by the advisor will be submitted according to the guidelines on the Faculty of Engineering website.

3.1.2 Candidacy Examination and Admission as Stage II Research Student

- A. Stage II Admission Conditions:
 - 1) The student must pass the candidacy examination. The examination may be taken at most twice.
 - 2) Students in the direct track – the candidacy examination will be held in the format of the qualifying examination required in the University Regulations. (47)
- B. Appointment of examiners for the candidacy examination:
 - 1) The examiners committee will be appointed by the Unit Committee upon the recommendation of the advisor.

- 2) The committee will be composed of the advisor(s) and at least two examiners who are faculty members in institutions of higher education with authority to grant doctoral degrees and at the rank of at least senior lecturer. At least one of the additional examiners must be a faculty member outside of the Faculty of Engineering. If there is more than one advisor, the number of examiners that are not advisors must be larger than the number of advisors.
- 3) An expanded examiners committee will be created for a student in the direct track to include the advisor(s) and 4 examiners at the rank of senior lecturer and above, as set forth in section 2 above, and where 2 of them must be faculty members outside of the Faculty of Engineering.
- 4) The members of the committee to be selected are experts in the fields of the research topics and related topics.
- 5) In special cases an expert may be appointed (in addition to the members of the committee as mentioned above) who is not a faculty member at an institution of higher education and whose expertise is likely to contribute to the task of judging.

C. Evaluation of Research Proposal:

- 1) The examiners will be requested to evaluate the research proposal on a special form before the examination date. The candidacy examination will take place after receipt of the forms.

D. Candidacy Examination:

- 1) The examination will examine the proposed research with regard to its novelty, contribution, scope and the chance of bringing it to a successful conclusion.
- 2) The student's proficiency in the research tools and relevant research methods and his or her proficiency of the research topic and topics related to the research program will also be examined within the scope of the examination.
- 3) According to the results of the examination, one of the following decisions will be adopted: approval of the continued research work, approval of the continued research work after implementing amendments/compliance with conditions required by the examiners committee, holding a second examination or discontinuation of the research work.

- 4) A student in the direct track who did not pass the candidacy examination will have his or her studies in the direct track discontinued and the courses he or she studied within this framework will be deemed part of the master's degree studies. (48)

3.2 Stage II Student

3.2.1 Student Obligations

A. Program of Studies:

- 1) Up until the submission of the doctoral dissertation, the student will complete courses in a scope of at least 12 credits with an average grade of at least 80.
- 2) A student in the direct track will complete up until the submission of the doctoral dissertation, courses in a scope of 30 credits with an average grade of at least 80. These studies in a scope of 30 credits include 9 or more credits that accumulated up until the transition to the direct track. (46)
- 3) Where the student has failed a course, the grade will remain in effect without any credit (and will appear in any certificate of studies). Where there is no fail, the right to request not to include one course in the average grade will remain. This course will not be credited with points. (64). A doctoral degree course can entitle a student to no more than 3 credits.
- 4) The advisor will recommend to the student a program of studies. If necessary, the committee will obligate the student to additional courses upon the recommendation of the examiners at the candidacy examination.
- 5) "Supervised Reading" courses may be taken in addition to the required 12 credits.

B. Annual Progress Report:

- 1) A doctoral student will submit to the advisor a progress report once a year, upon the commencement of the academic year.
- 2) The report will include details on the following: progress since the previous report, including a work plan and time frame for the objectives, progress during the research, scientific publications and active participation in scientific conferences and performance of a residency year.

- 3) The progress report will be approved by the advisor and will bear his or her signature.
- 4) The report will be approved by the Doctorate Unit Committee. (68)

C. Residency Year:

- 1) A research student must reside within the University for at least one consecutive year in the period of his or her studies (a year = an academic year). (67)
- 2) The student's research will be conducted at the University or at one of its affiliated research institutes. In special cases the Unit Committee may permit the research to be conducted at an academic institution or other recognized research institute.
- 3) A student who is not a full time student at the University will specify the performance of the residency year including dates with the advisor's approval.
- 4) A special sub-committee operates within the framework of the University Committee for Research Students whose function is to examine and approve the performance of doctoral dissertations at the workplace of the student. Any request on the part of a new student wishing to perform the doctoral dissertation at his or her workplace will be passed on for the approval of this committee.

D. Languages:

A research student will be obligated to pass the "technical writing – English" course. (65)

E. Thesis Seminar:

The student must give at least one lecture within the scope of a departmental seminar of the School/Department in which he or she is studying within the scope of the requirements for obtaining a degree. The lecture will be given by the date of submission of the doctoral dissertation.

4. Duration of Studies

According to the University Regulations, the duration of studies for a doctoral degree is five years. A full-time student at the Faculty is required to complete studies in four years. (71)

In the event of any deviation from the time frame at each of the stages, the student and the advisor will submit detailed explanations why they deviated from the time frame allocated in the Regulations and will submit a detailed time frame for the date of submission of the thesis together with a progress report.

5. Submission of Doctoral Dissertation and Judging Procedures

A. The Dissertation

- 1) The doctoral dissertation will be submitted to the Unit Committee for judging after completion of all the degree obligations.
- 2) Since the supply of dissertation referees who read Hebrew is limited and according to section 76.3 of the University Regulations, the doctoral dissertation will be submitted in English. The Unit Committee will approve writing the dissertation in Hebrew after submission of a detailed request by the student with the advisor's recommendation at least six months prior to the date of submission of the dissertation. (76)
- 3) The student may, with the approval of the advisor, publish part of his or her research in the course of conducting the research work. (70)
- 4) The submission of a collection of articles: approval may be requested from the Unit Committee for the submission of a dissertation in the format of a collection of articles, subject to the [university procedure](#) .
- 5) Upon completion of writing the doctoral dissertation, the student will submit to the PhD secretariat two copies of the doctoral dissertation to which will be attached an abstract of the dissertation, curriculum vitae and list of publications.
- 6) The doctoral dissertation composed of articles will all be written in the same language. The method of submission is subject to section 76 of the University Regulations. In the event the dissertation is submitted in English, an abstract in Hebrew will also be attached as required.

B. Judging the Dissertation

- 1) Collection of articles: the judging procedures of a doctoral dissertation composed of articles will be the regular procedures. (77)
- 2) The advisor will submit to the secretariat the following documents:
 - A) A detailed review to include the main findings and results, noting the student's original contribution to the dissertation. The review will include

the advisor's reference to the fact the dissertation was made according to the approved research program.

- B) Suggested list of referees, including investigators suitable to serve as referees, at the rank of at least senior lecturer on the regular track, at institutions of higher education – having authority to grant a doctoral degree to their students. (78). A referee having close research ties to a student or a advisor on the doctorate topic will not be suggested. (80)
 - C) Approval that the dissertation underwent proofreading and editing.
- 3) The Unit Committee will appoint at least two experts in the field of the research to serve together with the advisor(s) as referees of the doctoral dissertation. At least one of the experts to be appointed by the Committee will be from outside the Faculty of Engineering and he or she must be from another institution of higher education having authority to grant a doctoral degree to its students. (77). Where there is more than one advisor, the number of referees shall be greater by one from the number of advisors.
 - 4) The doctoral dissertation shall be sent by the research students secretariat to the referees for examination and receiving a written review that will be submitted within two months. The review of the doctoral dissertation shall be comprised of a short summary of the dissertation, and whether it is to be accepted as is, with minor corrections to be approved by the advisor, with material corrections necessitating rejudging the dissertation, or that it be rejected. Furthermore, in the event corrections are needed, the referee shall designate the required changes. The referee shall also be required to detail topics that he or she wants the student to refer to in the examination. The reviews shall be collected by the committee secretariat for research students and collectively sent to the advisor and student before the oral examination.
 - 5) Where the student has not published at least three international publications that meet the University criteria for a submitted the thesis in the format of a collection of articles before the submission of their doctoral dissertation, the dissertation shall also be sent to an additional referee anonymous to the advisor and student. The referee must provide his or her review by the date of the oral examination.
 - 6) After collecting all the reviews (including from the anonymous referee where applicable) and in the event one review recommends rejecting the doctoral dissertation, the Unit Committee shall recommend the appointment of another special referee. (81)
 - 7) The advisor shall set a date for the oral examination with the participation of the referees that are not anonymous. The examination will be held after all the reviews are received by the research students secretariat, and provided that at least one week has passed after receiving all the reviews. Reviews that are received will be

available to all the referees (omitting the anonymous referee's name). All of the referees (apart from the anonymous referee) and advisors must be present (physically – for those located in Israel and via teleconference – for those located overseas) at the oral examination. In the event the referees required minor corrections in their reviews, this will not delay the holding of the examination, and the student will correct the dissertation after the examination.

- 8) The oral examination will be an hour to two hours long, during which time the student will present the main conclusions in his/her thesis and will be asked questions on his/her thesis by the referees (apart from the anonymous referee of course). At the end of the oral examination the referees will need to complete a brief report with respect to the student's knowledge of the material covered by the written thesis, and whether there is any bar to approving the degree to the student. The summary of the oral examination shall be submitted by the advisor within two days from the conclusion of the oral examination to the secretariat of research students for a decision.
- 9) The Unit Committee will discuss the referees' reviews and summary of the oral examination and submit a recommendation to the University Committee to grant or not grant a doctoral degree.
- 10) In the event that after the examination it becomes apparent that one of the referees is ineligible to serve as a referee, and in the event another referee is needed in order to approve the degree, the Unit Committee shall appoint a further anonymous referee.