Rules and Requirements of the Ph.D. Program in Computer Science

1. General
   a. The Ph.D. Program in Computer Science will enable holders of appropriate academic legal degrees to develop independent research and scientific writing capabilities at a high academic level.
   b. Studies for a Doctor of Philosophy (Ph.D.) in Computer Science degree constitute the highest stage in the curriculum for a degree at the IDC Herzliya.
   c. A student enrolled for Ph.D. studies will be known as a “Ph.D. student” or a “Research Student.”
   d. The curriculum includes:
      1) Course studies.
      2) Writing a scientific dissertation – a research paper which contributes, in an innovative and unique way, to the promotion of science and which is formulated according to conventional structural, terminological and stylistic standards in the professional literature.

2. Overseeing Bodies in the Ph.D Program
   a. The Higher Committee for Ph.D. Students (hereinafter: “The Higher Committee”)
      1) The Higher Committee will be appointed by the Higher Academic Committee of the IDC Herzliya and is authorized to conduct overall academic oversight with respect to the Ph.D. Program and Research Students at the IDC Herzliya.

      The Higher Committee will consist of five to seven members ranked as Full Professors.

      2) The Higher Committee for Ph.D. Students answers to the Higher Academic Committee in all matters related to the Ph.D. Students and the quality of their research, including the control of the level of academic instruction for Ph.D. students and the promotion of excellence in the Ph.D. degree studies.

      3) The main roles of the Higher Committee are:

         - Approval of the research proposals and approval of the candidate as a Ph.D. student, including his or her course of studies and supervisors, as will be recommended by the School Committee.

         - Periodic follow up of progress made by Ph.D. students.

         - Termination of the studies of a Ph.D. student.

         - Appointment of reviewers for Ph.D. dissertations.

         - Approval of a Ph.D. dissertation, following external review and a positive recommendation from the School Committee.
- Recommendations for changes in the Rules and Requirements for Ph.D. Students and determining ongoing work procedures.

b. **Efi Arazi Computer Science School Committee for Ph.D. Students (hereinafter: “The School Committee”)**

The School Committee is responsible for advanced studies at the Efi Arazi Computer Science School at IDC Herzliya.

The main roles of the School Committee are:

- Making recommendations to the Higher Committee in the matter of the enrollment of students for Ph.D. degree studies at the Efi Arazi Computer Science School.

- Making recommendations to the Higher Committee with respect to the subjects of dissertation proposals, research programs, or, as the case may be, supervisors and reviewers.

- Ongoing monitoring of the course of studies of the Ph.D. students at the Efi Arazi Computer Science School, through receiving ongoing reports from the supervisor/s.

- Designing the course studies curriculum in coordination with the supervisors.

- Approving financial support to Ph.D. Students.

Five faculty members of the Efi Arazi Computer Science School will serve on the Committee, chaired by a faculty member at the rank of Full Professor. In discussions regarding Ph.D. students whose paper is interdisciplinary, a faculty member from the relevant discipline, who ranks, at minimum, as an Associate Professor, will join the committee, ad hoc.

c. The tenure of a member of the Higher Committee and/or the School Committee will be for a term of five years, for up to two successive terms. Should a member be unable to serve or retire from the Committee, another member will be appointed in his stead.

d. **Supervisors**

1) **Supervisor**

Supervisors will be drawn from the faculty of the Efi Arazi Computer Science School, being of a ranking of at least Senior Lecturer. Under exceptional circumstances, the School Committee can, with the approval of the Higher Committee, recommend a retired faculty member as a sole supervisor.

2) **Joint Supervisor**
Insofar as circumstances dictate, an additional supervisor will be appointed. Any faculty member of the school who qualifies to serve as a sole supervisor, can be appointed as a joint supervisor. Likewise, any faculty member of any other school at the IDC Herzliya, or any faculty member from a recognized academic institution in Israel or abroad, of a ranking of at least Senior Lecturer, can serve as a joint supervisor, as well as a retired faculty member whose field of expertise is relevant to the Ph.D. dissertation.

3) Main Roles of a Supervisor

(a) Providing advice at the planning and execution stages of the study.

(b) Approving the research proposal prior to submitting it to the School Committee.

(c) Ongoing communications with the Ph.D. student during the course of the Ph.D. studies.

(d) Authorization and tracking of the Ph.D. student’s progress reports and the submission thereof to the School Committee and the Higher Committee.

(e) Authorization for the submission of a final version of the Ph.D. dissertation for review.

(f) Submitting a recommendation to the School Committee regarding the appointment of reviewers to assess the Ph.D. Dissertation.

(g) Reviewing of the Ph.D. dissertation.

(h) Providing a recommendation to the School Committee, pursuant to the considered opinion of the dissertation reviewers, with respect to the approval of the dissertation or regarding revisions.

(i) Assistance in and overseeing revisions, amendments or supplements to the Ph.D. dissertation, pursuant to the opinion of the dissertation reviewers, and authorization of the execution thereof.

4) Replacement of a Supervisor

The School Committee will consider the replacement of a supervisor in the following cases:

1) Preclusion, demise of the supervisor or the absence of one of the supervisors from Israel in a manner which does not facilitate proper ongoing advising.

2) One of the supervisors requests that his or her appointment as a supervisor be withdrawn.

3) A student requests that the supervisor be replaced.

Insofar as practically feasible, the School Committee will request written input from the current supervisor and from the intended supervisor.
The School Committee will submit recommendations regarding this matter to the Higher Committee.

e. Reviewers of the Ph.D. Dissertation

The Ph.D. dissertation will be reviewed by at least four reviewers, as follows.

1) The dissertation supervisor.

2) Three additional reviewers in the field of the study, at least two of which are from other academic institutions in Israel or abroad, of a ranking of at least Senior Lecturer.

The appointment of the reviewers will be made by the Higher Committee, through consultation with the School Committee and with the dissertation supervisor.

A person whose relationship with the student poses a possibility of a conflict of interests, including due to family or business relations, cannot be appointed as a reviewer.

The duties of the reviewers are:

1) a) To assess the dissertation, including, in the case of unique distinction, determining that the grade of the dissertation will be “Excellent.”

   The reviewer can approve the dissertation as complying with the requirements of awarding a Ph.D. degree, or to require changes be made to it, or to determine that the dissertation does not comply with the requirements of a dissertation.

   b) To submit their considered opinion to the School Committee no later than three months after receiving the dissertation. Should this three month period overlap with the summer recess, the reviewer will be granted a one month extension.

   c) When a revised dissertation has been submitted following the reviews, the reviewers will assess the revised dissertation within two months.

2) Should the reviewer not meet the deadlines laid down for reviewing, the Higher Committee may replace him.

3. Registration and Admission

   a. Registration

   Those wishing to register for Ph.D. degree studies, will submit, together with the candidacy form for the degree studies, original copies of the academic degrees conferred upon them, as well as an original document indicating the final
weighted grade for the stated degrees; a list of academic publications (insofar as such exist); a personal bio and three names of recommenders and/or letters of recommendation. Candidates who have written a Master’s thesis, will submit it and will produce an original confirmation with respect to the grade awarded to the thesis (in the regular track). In addition, candidates are requested to present an agreement in principle of a faculty member from the school to serve as the Ph.D. supervisor.

The general rules of registration will be as detailed in the Registration and Admission brochure.

b. Terms and Conditions for Admission

Candidates who will comply with the terms and conditions of one of the tracks detailed below and will satisfy the School Committee that they have research capability at the level required of IDC Herzliya Ph.D. Students, will be recommended by the School Committee to be admitted as “Research Students.”

1) The Regular Track

Candidates holding a Master's Degree (M.SC.) in Computer Science with a thesis, with a grade of at least 85 and a thesis grade of at least 88, are eligible to submit their candidacy for the Regular Track.

In cases of exceptional research or professional circumstances, the school committee can approve an exception from the minimum requirements with the approval of the higher committee.

2) The Direct Track

Students who started their studies towards M.Sc. degree in the Efi Arazi Computer Science school can request transfer to the direct track of Ph.D. studies if they fulfill the following conditions:

a. The student has a Bachelor’s degree (B.Sc.) in computer science with distinction, provided that the weighted grade of their undergraduate studies is at least 88.

b. The student finished all mandatory M.Sc. courses in the school.

c. In addition to the mandatory M.Sc courses, the student finished at least 15 credits in courses from the M.Sc. program, with an average grade of at least 88 in these courses, and a minimum grade of at least 80.

d. The student passed a candidacy exam that will check his knowledge and proficiency in the field of his studies and his abilities to conduct independent research. The date, content, form of the exam, and the examiners will be determined by the school committee.

A student who meets these requirements will be eligible to register for the Ph.D. program in Computer Science in the Regular Track.

Anyone who completed an M.Sc. without a thesis, with an average grade of at least 88, will be eligible to register for the Ph.D. program at the Efi Arazi Computer Science School conditionally. These conditions will include:

a) The student must fulfill all conditions of the regular track (apart from having a Thesis).

b) Writing a paper that is equivalent in quality and scope to a thesis of a grade of at least 88.

Anyone completing these above requirements, will be eligible to submit his or her candidacy for a Ph.D. in Computer Science degree in the Regular Track.

4) Language Proficiency

The candidates for studies will have to prove sufficient command of the English language for purposes of writing a scientific paper (a high level of reading capability and proper written expressive capability).

c. Enrollment

1) The School Committee will consider and recommend enrolling a Ph.D. student in light of the information and recommendations submitted to it.

2) In order to reach a decision, the School Committee will consider all the candidate’s record and achievements including the quality of the M.Sc. thesis, articles and papers of academic value written by the candidate.

3) Should the Committee deem it fitting, the Committee will summon the candidate for a personal interview before the Committee or before any of the members thereof.

4) In exceptional cases, the Committee can approve a deviation from the minimum grade of an undergraduate degree or of a graduate degree by no more than 3 points, on condition that the candidate has published scientific publications at a high level of professional esteem.

5) A student regarding whom the School Committee recommended his enrollment and the Higher Committee approved this, will become a Stage I Ph.D. Student.

4. The Studies

a. The Course of Studies

The Ph.D. Degree in Computer Science studies will be held in two main stages.
1) Stage 1

At this stage, the Research Student will be required:

(1) To conclude his or her course studies obligations as will be determined by the School Committee.

(2) To prove a command of the English language as stipulated in the enrollment terms and conditions, and insofar as the obligation of a good command of language has been imposed, to prove such command thereof at the required level.

(3) Within one year of beginning his or her studies, to receive the consent of Efi Arazi School Faculty member, that is authorized, to become his/her supervisor.

(4) To draw up a detailed research proposal approved by the supervisor. The research proposal will be submitted to the School Committee.

(5) To pass an oral examination in front of examiners that will be determined by the School Committee in coordination with the supervisor. The exam purpose is to approve the research plan and test the student’s capabilities for research.

Unless otherwise stated (finding an supervisor within a year), the student will have to complete the stated Stage 1 assignments within two years of enrollment.

2) Stage 2

Writing up the Ph.D. Dissertation

The duration of the studies in the Regular Track (Stages 1 and 2), will not exceed 5 consecutive years.

b. Course Studies

1) The School Committee at the Efi Arazi Computer Science School will set the course studies curriculum leading up to Ph.D. degree studies.

These studies will be taught, by and large, at the IDC Herzliya campus and will include courses related to the subject of the Ph.D. dissertation. The courses will be offered as part of M.Sc. courses at the Efi Arazi Computer Science School at IDC Herzliya.

The School Committee may approve taking some course studies at another academic institution, as long as the scope thereof will not exceed 4 credits.

2) The scope of course studies in the Regular Track will be 16 credits. In exceptional cases, taking the additional education and the candidate’s record
into account, the School Committee may grant an exemption from some or all of the course studies, with the Dean’s approval.

Course studies include:

a. A yearlong Research Workshop in English for Ph.D. students in Computer Science – 4 credits.

b. A seminar from the M.Sc. program – 3 credits.

c. Three courses from the M.Sc. degree curriculum of electives offered at the Efi Arazi school of Computer Science – 9 credits.

3) The Ph.D. Student must attend regularly the Efi Arazi School of computer science weekly faculty colloquium.

c. Submitting a Dissertation Proposal and Enrollment as a Stage 2 Research Student

1) The dissertation proposal will be submitted to the School Committee and will include:

- The subject of the dissertation.
- A review of existing literature on the question of the study.
- A detailed plan of the study.
- Research methodology.
- Details of the expected research contribution of the study, envisaged conclusions and a preliminary bibliography list.

The designated supervisor for the dissertation will approve the proposal and give his or her consent to serve as a supervisor for the candidate.

2) The School Committee will assess the dissertation proposal, and will refer it for a considered opinion of at least three experts, at a rank of at least Senior Lecturer in the field of the study, for purposes of participating in the oral examination and formulating a decision. In exceptional circumstances, it will be possible to refer to an expert at the rank of Lecturer to obtain a considered opinion. It is recommended but not mandatory that these examiners will also be the reviewers of the final Ph.D. Thesis once submitted.

3) The oral examination will include the three experts and the supervisor, and at its end a recommendation will be given to the School Committee.

The Committee will be entitled to recommend the approval of the proposal, to reject it, or to require revisions and changes.
A Stage 1 Research Student, whose dissertation proposal was submitted and approved by the School Committee and the Higher Committee, will be enrolled as a Stage 2 Research Student.

d. The Report by the School Committee

The School Committee will provide regular reports of its discussions to the Higher Committee.

The Higher Committee will be authorized to approve the decisions of the School Committee, to reject them, or to request of the School Committee to go back and discuss the matter pursuant to the guidelines put out by the Higher Committee. In the case of a negative decision, the Higher Committee will detail its reasons to the student and his supervisor. Insofar as it deems fitting, the Higher Committee may consult with experts in the field.

e. Appeal

The Research Student and/or the supervisor will be permitted to appeal, before the Higher Committee, a decision taken by the School Committee. To this end, they can receive the main point of the reasons of the School Committee and the main points of the considered opinions submitted to it, but with no information regarding the identification of those expressing a position or providing considered opinions.

f. Partial Publication

A student may publish part of his or her study during the course of writing the dissertation, provided that he or she have obtained authorization from his or her supervisor. The supervisor will report of the approval as stated, to the School Committee. The student, in such a case, must stipulate that the publication is part of a dissertation that is being written at IDC Herzliya and will indicate the name of the supervisor.

5. The Obligations of the Student

a. To act in accordance with the advice and guidance of the supervisor.

b. To meet the supervisor on a regular basis and not less than once every three months. A supervisor who lives abroad may maintain contact via correspondence. The student is to inform the supervisor and the School Committee of any absence from Israel, during the course of the academic year, for periods of time exceeding two months.

c. To submit to the School Committee, once a year, with the approval of the supervisor, a progress report, that will include: details of the courses taken by the student, details of the research that was carried out and a report of the chapters and articles written during the course of the year and the estimate of the date of completion of the Ph.D. dissertation.
d. To submit the Ph.D. dissertation within five years from the date of enrollment as a Stage 1 Research Student. In special cases, if the School Committee is convinced that the student is on the cusp of completing his or her Ph.D. dissertation and with the recommendation of the supervisor, then the School Committee may approve an additional one-year extension.

e. A Research Student should participate in faculty seminars held as part of the Efi Araz Computer Science School.

6. Ph.D. Dissertation

a. Requirements of the Ph.D. Dissertation

1) The Length of the Paper

The length of the Ph.D. dissertation will not exceed 250 double spaced A4 pages, printed in an accepted 12 point font in English. Appendices, keys and the bibliography will not be counted in the maximum pages tally of the dissertation.

The School Committee may approve a deviation from this length.

2) The Language of the Dissertation

The Ph.D. Dissertation and the study program will be written in the English Language, which is the accepted language for research in the field.

In exceptional cases and upon a request on the part of the student and with the consent of the supervisor, the School Committee may approve writing the dissertation and/or submitting the dissertation proposal in the Hebrew language.

A synopsis, title page and table of content page, written in the Hebrew language and approved by the supervisor, will be attached to a Ph.D. dissertation written in the English language, as long as such does not exceed 5% of the length of the dissertation. A synopsis, title page and table of contents page as above, written in the English language, will be attached to a Ph.D. Dissertation written in the Hebrew language.

3) The Dissertation Format

a) The dissertation will comply with accepted uniform citation rules.

b) The dissertation will contain a full and accurate description of the sources of information, will stipulate the reliance upon preceding studies and what lead the student to reach conclusions.

c) The dissertation will be based upon independent and original research carried out by the student, which constitutes an original contribution to promoting the knowledge and the understanding of the research subject.
d) The supervisor’s authorization regarding the completion of the dissertation, it being qualified for submission for review and the considered opinion of the supervisor, will be attached to the paper.

e) An abstract in the Hebrew or English language, of a length of approximately 5% of the length of the dissertation, will be attached to the paper.

f) The Ph.D. dissertation will be submitted to the School Committee in 3 copies and in a pdf format.

g) A bound copy of the dissertation will be submitted to the library, together with a pdf file. The Efi Arazi Computer Science School may make the dissertation public online and in other formats.

b. Changes to the Subject of the Dissertation

The Research Student will be entitled to change the subject of the research, to narrow it or expand it, with the consent of the supervisor, with the consent of the School Committee, and with the approval of the Higher Committee.

In the case of a change of the subject of the study, the School Committee will decide with respect to the student’s period of studying prior to the change in the subject of the study, whether to take this period of time into account and to what extent.

c. Carrying out the Ph.D. dissertation outside of IDC Herzliya

As a rule, the Ph.D. dissertation will be carried out at IDC Herzliya.

The Higher Committee is authorized to permit a Ph.D. student to conduct part of the research at another institution of higher education, in Israel or abroad, that is qualified to award a Ph.D. in Computer Science degree, as long as one of the supervisors is a faculty member at this academic institution.

d. Submission of a Ph.D. Dissertation based upon Published Essays (or Chapters of Books)

A student who wishes to submit a Ph.D. dissertation that includes essays or chapters of a book, which have been written by the student and which are directly related to the subject of the dissertation, will be permitted, with the approval of the School Committee, to write a Ph.D. dissertation that includes these essays or chapters as long as the Ph.D. dissertation will have a significant additional contribution, over and above the stated published essays or chapters out of books.

After the publication of one of the essays, the student will submit a request, to the School Committee, to write a Ph.D. dissertation based on the essays. The request will include:
1) The reasons for the request.

2) A copy of each one of the essays, stipulating where it was published.

3) An abstract of the dissertation.

4) The approval of the copyright holder, with respect to incorporating the essay or the chapter in the dissertation and authorization with respect to the publication of the material in the Ph.D. dissertation.

The School Committee can recommend to the Higher Committee, which will discuss and decide whether to approve the dissertation in this format.

Should the format of the dissertation be approved, as stated, the student will submit the Ph.D. dissertation in the required format pursuant to the rules and requirements and will also refer to the following topics therein:

1) An introduction chapter that will include a broad and up-to-date review of the fields of the research included in the paper.

2) A special chapter that will include a description of the research methods over and above that described in the essays abstracts.

3) A findings chapter that will consist of the essays that the student published. The essays will be in accordance with the structure of the dissertation and will be duplicated to uniform size and format and will be bound together.

4) A discussion chapter that will include a reference to the described research, the results and the significance thereof, the innovations and the contribution of the study.

5) The language of the dissertation will be as stipulated above (Paragraph 6a, subparagraph 2). The essays will appear in the dissertation in the language in which they were published.

6) That stipulated in this section does not refer to essays or chapters from books that were written as part of the Ph.D. dissertation and which the student has been permitted to publish during the course of writing the Ph.D. dissertation.

e. Submission of the Ph.D. Dissertation

1) The Ph.D. Student who has been enrolled for at least two years and who has fulfilled all the requirements that he is obligated to fulfill, will be entitled to submit his Ph.D. dissertation for review. In the case of extraordinary excellence, the School Committee will be able to approve a shorter period than that.

2) The dissertation will be submitted to the Higher Committee together with the authorization of the supervisor and the recommendations of the School Committee.

f. Review of the Dissertation
1) The Higher Committee will appoint at least three experts in the field of the study who will serve, together with the supervisors, as reviewers of the dissertation that was submitted pursuant to the stated rules.

In exceptional cases, the Higher Committee may appoint a reviewer with respect to whom the above stated conditions do not apply.

2) During the course of the review process, the reviewers may not be contacted in any matter related to the Ph.D. dissertation, except through the School Committee.

3) The duration of the review period will be about three months.

4) Each reviewer will submit a detailed opinion, in writing, in which he or she will recommend one of the following alternatives:

- The approval of the dissertation and the awarding of a degree of Doctor of Philosophy (Ph.D.).

- The approval of the dissertation subject to revisions and changes.

- The rejection of the dissertation.

- The Ph.D. dissertation will not be awarded a grade. However, in cases of extraordinary excellence, with the recommendation of all the reviewers, the School Committee can recommend the granting of a grade of “Excellent.” This recommendation will be submitted to the Higher Committee, which will be able to approve it.

5) Approving the dissertation as being eligible for a Ph.D. degree will require the authorization of a majority of the dissertation reviewers. A student whose dissertation was not approved, will be entitled to appeal the decision regarding the rejection of the dissertation before the Higher Committee, within three months from the date of rejection. The Higher Committee will be able to reject the appeal or to appoint a renowned expert who will arbitrate among the reviewers, in consultation with the Dean of the School and members of the Higher Committee.

6) A dissertation that was rejected will be returned to the student. The student will be permitted to publish the paper under his or her personal responsibility and may not mention, in the publication, that the paper was written as a Ph.D. dissertation at the IDC Herzliya.

7. Miscellaneous

   a. Termination and/or Suspension of the Studies
1) A student who decided to terminate his or her studies will be obligated to inform the School Committee to this effect, in writing.

2) Should it transpire that a student has not complied with one of the stated rules of the Rules and Regulations of the Ph.D. Program in Computer Science, the School Committee will be entitled to recommend to the Higher Committee to terminate the student’s studies.

3) With respect to a student whose studies were suspended, whether at the student’s initiative or at the initiative of the IDC Herzliya, the student can approach the School Committee with a request to renew his or her studies. The Committee will consider whether to recommend to the Higher Committee to accept the student’s request. Such a request can be submitted no later than one year after the suspension of studies. This rule does not apply to a student whose studies were terminated due to his or her not complying with the academic requirements.

4) In special cases, the student can, upon the recommendation of the supervisor and with the approval of the School Committee, submit a request for the suspension of his studies for a period of up to one year. Should such a suspension have been approved, the suspension period will not be included in the maximum time period for the Research Student to complete his or her obligations.

5) With respect to a student who does not make proper progress in his or her studies or in his or her research, the School Committee will be entitled to recommend, upon consultation with the supervisor, the termination of the student’s enrollment. Special weight will be given to cases in which a research proposal, that has been submitted more than once, has not been approved.

Prior to the student’s enrollment being terminated, he will be given the chance to make his or her claims before the School Committee.

b. Copyright

1) A student who writes a Ph.D. Dissertation is solely responsible for all content therein and including the data upon which his Ph.D. dissertation was based, the gathering thereof and the reliability of the presentation thereof, and all that this entails.

2) A Ph.D. holder, whose degree was conferred by IDC Herzliya, whose dissertation has been approved by the qualified academic institutions and who publishes all or part of the results of his research, will stipulate that the dissertation was written at IDC Herzliya as part of fulfilling his obligations for obtaining the degree.

3) Copies of a paper that has been approved as a Ph.D. dissertation by the Higher Committee for Ph.D. Students will be deposited with the library at IDC Herzliya. A student whose dissertation has been approved, will produce copies of his dissertation to any organization that the Computer Science obligates books published in Israel be handed over to.

8. Awarding the Degree
After all procedures of approval been completed as stipulated in these Rules, and the Higher Committee has announced the awarding of the degree, a ceremony will be held at which the President of IDC Herzliya or the Provost (Vice President for Academic Affairs) will declare the awarding of a degree of Doctor of Philosophy.

9. **The Ph.D. Diploma**

The student will receive the Ph.D. Diploma at the annual Ceremony for Awarding Degrees.

The wording of the diploma will be:

The IDC Herzliya

The President of IDC Herzliya, the Provost, and the Higher Academic Committee confer upon Mr. / Ms.

the Degree of Doctor of Philosophy (Ph.D.)

following the approval of her dissertation

(title of the dissertation)

by the Efi Arazi Computer Science School and the Higher Academic Committee

and received a grade of “Excellent” (a line that will be added with respect to dissertations that received a grade as stated)

Herzliya (date)

Signed by

The President / The Provost / The Chair of the Higher Academic Committee

**Comment**

Anywhere in the Rules and Requirements of the Ph.D. Program in Computer Science where “Supervisor” appears, the intention is also “Supervisors.”