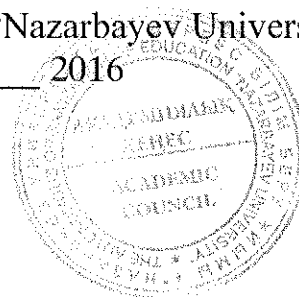


**AUTONOMOUS ORGANISATION OF EDUCATION
“NAZARBAYEV UNIVERSITY”**

**PH.D. IN SCIENCE, ENGINEERING AND TECHNOLOGY – FACULTY
GUIDELINES**

Approved by the resolution of the Academic Council of
the autonomous organization of education “Nazarbayev University”
Minutes # 61 of 30.11. 2016



Astana 2016

Table of Contents

1. General Provisions.....	1
1.1. Admission.....	1
1.2. Guidelines for Short listing of candidates.....	1
1.3. Guidelines for interviewing the candidates.....	1
2. Guidelines for Supervision.....	3
2.1. The Supervisory Committee.....	3
2.2. Responsibilities of the Supervisory Committee.....	3
2.3. Role of the Lead Supervisor.....	5
2.4. Co-supervisors and external supervisors.....	6
2.5. Approved Supervisor Register.....	6
3. Guidelines for PhD Examination Organization.....	7
3.1. The Examination.....	7
3.2. The External Examiner.....	7
4. Guidelines for Extensions and Withdrawals.....	9
4.1. Extension to the period of registration.....	9
4.2. Leave of Absence.....	9
4.3. Return to study.....	9
4.4. Withdrawal from a research degree.....	9

Abbreviations and Definitions

AC: Admissions Committee.

PhD: Doctor of Philosophy in Science and Engineering.

PPC: PhD Program Committee.

PRC: Progress Review Committee.

SDO: School's Doctoral Office.

SEng: School of Engineering, Nazarbayev University.

SST: School of Science and Technology, Nazarbayev University.

TC: Thesis Committee.

TEAC: Thesis Examination Arrangement Committee.

University: the autonomous organization of education "Nazarbayev University". For the purposes of this Handbook University is the home institution.

PhD Program Calendar

[PhD Committees]: [PPC] = PhD Program Committee, [SDO] = School Doctoral Office, [ASC] = Admissions Selection Committee, [PRC] = Progress Review Committee, [TEAC] = Thesis Examination Arrangement Committee, [TC] = Thesis Committee

	Request OCT-NOV	Approval JAN	Admissions MAR-APR	Formation APR	Short-listing APR-MAY	Interview MAY-JUN	Announcement JUN	Decision JUL-AUG
ADMISSIONS PROCESS	<ul style="list-style-type: none"> • NU requests number of places for PhD program. • PhD Program Committee membership approved • PhD project titles submission • PhD supervisors training workshops 	<ul style="list-style-type: none"> • School approval of admissions rules • Selection criteria • Scoring sheets • Advert finalization and dissemination • PhD project titles approved • PhD supervisors approved 	<ul style="list-style-type: none"> • Application submission with statement of purpose, a 4 page preliminary research proposal (Annex 1.1) and signed Potential Supervisor Agreement form (Annex 1.2) 	<ul style="list-style-type: none"> • Admissions committees formed 	<ul style="list-style-type: none"> • Shortlisting of candidates 	<ul style="list-style-type: none"> • Interviewing of candidates • Applicant presentation of research proposal • Selection decision review 	<ul style="list-style-type: none"> • Government award number of places 	<ul style="list-style-type: none"> • Offers (10-20th July) • Deferrals (20th July – August 1st) • Enrolment (27th July – 5th August)
RESEARCH PERIOD	<ul style="list-style-type: none"> • Students start • Supervisor selects discipline specific courses (Masters) (Annex 2) • Student induction (Annex 3) 	<ul style="list-style-type: none"> • 5-to-6 page research plan submission (Annex 4) • Student research presentations 	<ul style="list-style-type: none"> • Research plan approval, including host visit schedule (Annex 5) • Oral defence (Annex 6.1, 6.2) • Examination through courses selected (Masters) 	<ul style="list-style-type: none"> • Final changes to supervisory team (Annex 7) • Revised research plan approval (Annex 8) 	<ul style="list-style-type: none"> • Budget requests - mobility period commences 	<ul style="list-style-type: none"> • Progress review (Annex 9.1, 9.2, 9.3) 	<ul style="list-style-type: none"> • Research Progress reviews (Annex 9.1, 9.2, 9.3) • 6 month notice for Thesis completion (Annex 10) 	<ul style="list-style-type: none"> • Thesis submission (Annex 11) • Oral defence • Result • Conferment • Graduation
	[PPC]	[PPC]	[SDO]	[PPC]	[ASC]	[ASC][PPC]	[TEAC]	[SDO]
	Start year 1 1 st SEP	1 st Deadline NOV	End of year 1 MAR-APR	Changes AUG	Start year 2 SEP	End of year 2 MAY-JUN	Start year 3/4 SEP	End of PhD OPEN ENDED
	[SDO]	[SDO]	[PRC]	[PRC]	[PRC]	[PRC]	[TEAC]	[TC] [PPC] [SDO]

Progress Review Stages – Minor/Major Corrections (Annex 12)

1. General Provisions

1. These Guidelines serve as detailed manual for faculty during the processes related to the PhD program. All steps are summarized in the PhD Program Calendar (see previous page).

1.1. Admission

2. SEng primarily should follow the provisions “*Rules for admission to the PhD (Doctor of Philosophy) in Science, Engineering and Technology program*”.

1.2. Guidelines for Short listing of candidates

3. After the initial screening of the applications by the Admissions Department (First stage), the AC members review the candidate’s application package and prepare the shortlist of eligible candidates (Second stage) who will be interviewed based on the strength of the candidate’s previous academic performance, suitability of character for the PhD Program and strength of the research topic (Third stage). All short-listed candidates must have an interview before an offer can be made. The potential PhD supervisor will also be invited to partake in the Admissions’ interview and can give their recommendation to the AC panel.

4. Normally all eligible applicants will be invited for an interview with exceptions as follows:

- 1) There is no suitable supervisory committee available
- 2) There are insufficient University resources or facilities to support the work
- 3) The research proposal is not worthy of consideration
- 4) The candidate lacks too many critical areas in the background knowledge that cannot be gained by attending the Masters courses available

In any of these instances, the application does not normally merit consideration by a full supervisory committee meeting and are rejected by the ASC.

1.3. Guidelines for interviewing the candidates

5. AC members should check the following points are addressed by all potential applicants at the interview:

1) Is the academic background of the student adequate and does it provide an appropriate starting point for the proposed research degree program? Does the candidate require enrolling in specific Master’s courses to complete missing areas of knowledge?

2) What is the student’s motivation? Why does the student want to study at University? Can the student demonstrate that their character is appropriate for conducting a PhD research topic?

3) Is the research idea credible, innovative, original? Is the research idea capable of producing sufficient results in order to meet the conferment requirements



of the PhD title? Is it feasible to conduct the research idea according to the plan provided; are there suitable resources accessible during the candidate's PhD studies? Are there any ethical issues involved and can these be approved by the University Research Ethics Committee?

4) Is there an appropriate supervisory committee The PhD Admissions Committee should be convinced that committee has the necessary attributes, including: current research in the area of the proposal suggested by the candidate; at least 2 successful supervisions of PhD students to completion; and sufficient time to dedicate to the task of supervision.

5) Are the communication skills of the applicant, in particular, English language proficiency, sufficient to understand questions and hold the discussion without difficulty?

6) If a collaborating establishment is proposed, the precise nature and expectations of the collaboration should be clearly described. If a potential lead supervisor has been identified, intellectual property issues should be resolved.

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2. Guidelines for Supervision

6. The supervision of the PhD student and his/her research is the responsibility of the Supervisory Committee as defined in the *PhD Graduate Programs Framework*. All PhD supervisors must have successfully completed University's PhD Supervisory Training Workshop and be listed on the Approved PhD Supervisor's Register regardless of prior experience and training conducted outside of University.

2.1. The Supervisory Committee

7. Supervisors should have adequate time for dedicated supervision and be reliably and regularly available to their students. The allocation of University supervisor time of 45 hours total per supervisor per student per year for a full-time student (with a supervisory committee of two members) will be taken into account in school workload planning. At least one annual meeting of the student and the full Supervisory Committee is required, whether by video conference or in person.

8. No student may leave a supervisor without the approval of the Director of PhD Studies or the PPC. To change the supervisory committee, the PhD Supervisory Committee Changes Form (as per PhD Student Handbook Annex 7) must be completed and submitted to the Director of PhD Studies, who will convene a meeting with the student and/or the current supervisory committee. A decision can then be made and a progression plan of changing supervisors can be implemented. No student can remain in the PhD program without a supervisory committee. The supervisory committee composition is defined in the Graduate Program Framework document and currently is a minimum of 2 internal supervisors, where 1 supervisor (either main or co-supervisor) is from one of the Schools, and 1 supervisor external to the University.

9. If intellectual property or confidentiality issues arise during the PhD, an agreement with the external supervisor must be agreed. See the PhD Student Handbook for more details.

2.2. Responsibilities of the Supervisory Committee

10. It is the responsibility of the Supervisory Committee to foster the PhD student's development as an independent professional researcher. The Supervisory Committee should also provide the necessary academic guidance and support throughout all stages of research and writing. This will involve:

- 1) helping define the research direction, the research question and formulate possible hypotheses;
- 2) providing guidance on the management of the research project;
- 3) providing advice on existing scholarly debate and present state of knowledge;

 *Agreed*

- 4) an introduction to the major sources of information in the field of inquiry;
- 5) help with both general and advanced research techniques appropriate to the field of inquiry;
- 6) introducing the candidate into the relevant research community;
- 7) ensuring that the distinction between mastering existing knowledge and developing original work is made explicit and reflects the requirements of the regulations;
- 8) making clear the standard of work required for doctoral thresholds, both in conceptual and methodological terms.

11. Besides the general points above, the Supervisory Committee has a number of other specific responsibilities as outlined below:

- 1) to initiate and oversee the research plan approval;
- 2) to maintain regular monitoring and evaluation of the candidate's progress and to report on this as required;
- 3) to agree a schedule of regular meetings with the student, in accordance with the regulations and in the light of discussion of arrangements with the student;
- 4) to approve written records of supervisory meetings, as drafted by students and to ensure that they are sent to School Office and kept on the student's file;
- 5) to be accessible to the student at appropriate times when he or she may need advice;
- 6) to give guidance about the nature of research and the standard expected, the planning of the research program, literature and sources and the problem of plagiarism;
- 7) to request written work as appropriate, and return such work with constructive criticism and in reasonable time;
- 8) to arrange as appropriate opportunities for the student to talk about his or her work to peers, at national and international conferences, meetings, etc.;
- 9) to ensure that the student is aware of the University regulations on Intellectual Property and that he or she adheres to the requirements and observes the principles contained therein;
- 10) to provide training in the ethical, legal and other conventions used in the conduct of research, and support the student in the consideration of these as appropriate;
- 11) to conduct the initial assessment, and on-going review, of the student's training and skills development needs;
- 12) to ensure that the student is aware of institutional-level sources of advice and support, including careers guidance, health and safety legislation, equal opportunities policies and disabled student support services;
- 13) to maintain and develop the necessary skills and expertise in order to perform all facets of the role effectively (including taking up appropriate continuing professional development opportunities);

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14) to ensure, as far as possible, that disabled students and students with specific learning difficulties have an equal opportunity to partake in Research Degrees;

15) if working in a potentially hazardous research environment, to ensure and monitor that the student possesses adequate technical competence in any relevant research techniques, so that he or she presents no undue risk to themselves, others, and/or the facilities of the University or its partner organizations;

16) to give detailed advice on the necessary completion of successive stages of work so that the whole may be submitted within the scheduled time;

17) to ensure that the student is made aware of inadequacy of progress or of standards of work below that generally expected;

18) to identify prospective external and internal examiners to the PPC.

12. Wherever possible, supervisors will encourage candidates to collaborate with colleagues from other organizations during their program of research by facilitating introductions to contacts with mutual research interests, identifying networking opportunities such as research seminars and conferences, and by providing opportunities for reciprocal visits and joint working.

13. If the Supervisory Committee is unable to provide the expertise on a particular aspect of the project they must ensure the provision of appropriate advice either from within the University or from outside. All supervisory committee changes must be submitted (as per PhD Student Handbook Annex 7) for approval.

14. Throughout, supervisors should seek to be flexible and sensitive to changes in candidate's circumstances (professional and personal) and be prepared to discuss alternative strategies if candidates encounter problems in maintaining the agreed plan of work.

2.3. Role of the Lead Supervisor

15. In each supervisory committee, one supervisor will be identified as the lead supervisor. This supervisor will have primary administrative responsibility for the student and will also be responsible for annually reporting on the student's progress. A supervisor shall not normally act as lead supervisor for more than six students at any one time, and therefore in each year should not take more than two PhD students as their lead supervisor. Typically, each main supervisor should be spending around 2 hours per week per PhD student. According to the PhD Framework, the lead supervisor should be a full-time faculty member of a School. Although it is desirable that the lead supervisor has already experience of successful supervision of PhD students to completion, it is not compulsory provided that collectively the Supervisory Committee members have such experience.

16. The lead supervisor will also have responsibility for planning the financial expenditure of the PhD project and its timely submission to the School management for inclusion in the School's budget. According to the financial regulations of the Republic of Kazakhstan, the financial year coincides with the

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calendar year starting 1 January and ending 31 December of each year and the lead supervisor should ensure through negotiations with School management team that the proposed financial expenditure is included in the School budget.

2.4. Co-supervisors and external supervisors

17. An external co-supervisor or co-supervisors with the expertise complementary to that of the internal supervisors and necessary for the PhD student supervision and additional training should be appointed as members of the Supervisory Committee. External supervisors must be identified on the basis that they meet the University's supervisor criteria. An external supervisor cannot be the lead supervisor.

18. Since PhD students are required to experience work in an international environment, the external supervisor should be selected so that he/she can provide the student with complementary expertise and technical facilities not available at the home University to undertake a part of the research work.

19. The external supervisor is expected to participate in discussing the PhD proposal research plan, annual project progress meetings and other activities of the Supervisory Committee.

20. It is desirable that the external co-supervisor attends some meetings in person, at least twice in the course of the PhD project.

21. The costs of such visits should be covered by the home institution.

22. The external co-supervisor and the host institution are responsible for arranging the training and research of the PhD student during his/her secondment.

23. The exact roles and responsibilities of the home and the host institution during organization and realization of the secondment will be formulated in an agreement between the two parties.

2.5. Approved Supervisor Register

24. PhD supervisors must have successfully completed the PhD Supervisor Training workshop to be entered on the PhD Supervisor Register and will have to undertake periodic training every 5 years to maintain their registration.

25. PhD supervisors must complete the PhD Supervisor Training workshop in order to be entered on the Approved PhD Supervisor Register regardless of prior experience outside of the University.

26. PhD supervisors who are not registered or whose registration has lapsed will not be able to apply for new PhD students or join the Supervisory Committee of other PhD students.

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3. Guidelines for PhD Examination Organization

3.1. The Examination

27. All forms must be completed by the TC (Annex).

3.2. The External Examiner

28. The selection of the External Examiner is made by the TEAC. The Supervisory Committee will recommend the External Examiner (as per PhD Student Handbook Annex 10) to the TEAC for consideration. The External Examiner must read the student's thesis and should lead the viva voce examination (viva). The External Examiner must in particular come to a view as to whether the student's research work and knowledge are of a sufficient standard to be awarded the PhD title. Therefore, the External Examiner must be an expert in the field of the student's topic of research and hold a professional status which is equivalent to a University Professor, Reader, Lecturer or teacher.

29. The External Examiner must not have a conflict of interest, which is defined under the following criteria:

1) It is accepted that examiners may be acquainted with the supervisor, and sometimes the candidate, and this in itself is not a bar to acting as an examiner, however there should be no personal link or financial dependence between the examiner and the candidate or their supervisor.

2) The examiners appointed should not have had any significant research or other contact with the candidate or supervisor which might inhibit a completely objective examination.

3) A member of faculty of another institution should not be invited to act as an External Examiner if s/he are an University graduate who graduated within the last three years. Also, ex-members of faculty of University who left the University less than three years previously and holders of honorary appointments for which remuneration is given at University should not be permitted to act as External Examiners.

4) Emeritus Professors and academic faculty who have been retired for more than three years should not be permitted to act as External Examiners unless it can be demonstrated that they continue to be research active.

5) Supervisors are asked to avoid repeatedly nominating the same person as an examiner, and this will not normally be permitted within a two year period.

6) Reciprocal examining with a supervisor from another institution is not permitted.

30. The External Examiner will be contacted by the SDO and will agree to the timeline of the examination process and return of a report and documentation connected with the evaluation of the thesis. The External Examiner will also be bound by a confidentiality agreement.



31. If the viva is to be conducted in private, due to IPR issues, this will be discussed with the External Examiner in advance.

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4. Guidelines for Extensions and Withdrawals

4.1. Extension to the period of registration

32. When considering proposals for an extension to the period of registration, the PRC should assure itself that the interests of the student are being served, that the period proposed is appropriate, and that the new completion date is realistic. Extensions will normally only be considered for a maximum of one year at a time for full-time students. Such changes will be recorded on the Extension of Research Degree form by the student and returned to the Doctoral School Office.

33. Extensions beyond the maximum periods prescribed by the regulations will only be permitted in exceptional circumstances, and must be supported by a detailed plan of completion. Any such exceptional extensions beyond the maximum period of registration are required to be ratified by the PPC.

4.2. Leave of Absence

34. Refer to Graduate APP where all leave of absence and dismissal procedures are explained.

4.3. Return to study

35. Following any period of leave of absence, students are required to attend (either in person or by video conference) a meeting to consider arrangements made to facilitate return to study. The meeting should be convened within one month of return. When embarking on suspension the School Doctoral Office will forward the return to study form, for completion by the student and supervisors prior to the meeting. Return to Study meetings will consider matters normally addressed at the PRC, and additionally:

- 1) arrangements to facilitate return to study;
- 2) provision made to re-accommodate minimum required study time;
- 3) supervisory arrangements and a plan of work.

36. Where there has been no progression in the project since the student's last progression review, due to the length of suspension, the previous year's PRC forms can be used. Failure to participate in the PRC/return to study meeting will result in a second PRC being convened.

4.4. Withdrawal from a research degree



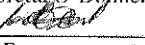

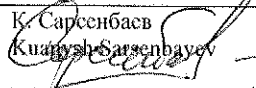
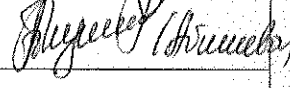

37. Proposed withdrawal from the university should, where possible, be discussed by the PRC and / or Director of PhD Studies and all alternative courses of action for the student explored. Withdrawals should be recorded on a Research

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Student Withdrawal form. Continuation of a student's registration is dependent on satisfactory progress of the research degree; this is assessed in the annual PRC meeting. If a student is not making satisfactory progress, then this must first be discussed with the student by the Program Director. Continuation of registration is also dependent on annual enrolment, and the submission of Research Plan, and other documentation as required by the Doctoral School Office within given timescales. Students who fail to attend, meet deadlines or are not progressing academically can be severed from PhD program. This will be on the recommendation of the Supervisory Committee, the PRC, the PPC or the PhD Director to the Dean. Should the student be severed from the program, they will have the right to appeal through the Academic Appeals Committee of the University.

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КЕЛЕСУ ПАРАҒЫ/APPROVAL SHEET /ЛИСТ СОГЛАСОВАНИЯ
PH.D. IN SCIENCE, ENGINEERING AND TECHNOLOGY – FACULTY GUIDELINES
РУКОВОДСТВО ППС PH.D. В ОБЛАСТИ НАУКИ, ИНЖЕНЕРИИ И ТЕХНОЛОГИИ
ҒЫЛЫМ, ИНЖИНИЕРИЯ ЖӘНЕ ТЕХНОЛОГИЯ САЛАСЫНДАҒЫ PH.D. ОПК-ТЫҢ НҰСҚАУЛЫҒЫ

Item/ Атауы/ Наименование	Structural subdivision/ Құрылымдық бөлімшенің атауы/ Наименование структурного подразделения	Name and signature of a responsible person, date of approval/ Т.А.Ж., жауапты тұлғаның қолы, визаның қойылған күні / Ф.И.О., подпись ответственного лица, дата визирования	Position, name and signature of a resp. person, date of approval / Лауазымы, Т.А.Ж., нақты орындаушының қолы, визаның қойылған күні / Должность, Ф.И.О., подпись конкретного исполнителя, дата визирования
DEVELOPMENT/ ӨЗІРЛЕУ/ РАЗРАБОТКА	School of Engineering / Инженерия мектебі / Школа инженерии	А.Вахгельт Anatoli Vakhguel't 	Р.Уитби Raymond Whitby 
	Vice Provost for Academic Affairs/ Академиялық мәселелер жөніндегі Вице-привост/ Вице-привост по академическим вопросам/	Л. О'Доннелл Loretta O'Donnell 	
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