

Doctor of Philosophy Program

Faculty Guidelines for the Qualifying Examination

Version 1, 2015

What Is the Qualifying Examination?

The Qualifying Examination is an examination administered to a Ph.D. student prior to the formation of the student's Individual Doctoral Committee and that normally takes place about one year, but no later than two years, after the student is admitted to the Program. The exact timing of the Qualifying Examination is at the discretion of the Supervisor. It typically follows the completion of most coursework, although there is some flexibility about this, especially for doctoral students who were admitted to Skoltech before the Ph.D. Policy was developed and implemented. The Policy also allows the exam to be taken earlier than one year after admission, if the student and the student's supervisor feel it is appropriate to do so.

The primary goal of the Qualifying Examination is to provide an assessment of a student's ability and inclination to conduct high-quality research and to provide a learning experience in which students may both strengthen their field-specific knowledge and scientific methodology for conducting scholarly research. In short, the Qualifying Examination is intended to test whether a student has achieved a basic doctoral-level mastery of his or her academic field before going on to produce original advanced research. Please note that not all students will successfully pass their Qualifying Examination or complete their Ph.D. program.

What Are the Basic Rules Related to the Qualifying Examination?

A faculty Qualifying Exam Committee should be formed to administer the qualifying exam for each student. The committee will consist of three people appointed by the *Institute-wide Doctoral Research Committee*. The Qualifying Exam Committee members will normally be Skoltech faculty members, but other suitably qualified persons with doctoral degrees or equivalent may be appointed to the committee with the approval of the Institute-wide Doctoral Research Committee.

The Chair of the committee must be approved by the *Institute-wide Doctoral Research Committee*. In the future, the Supervisor would not typically be a member of the Qualifying Exam Committee; however, in Skoltech's initial phase this is allowable and will likely be a regular occurrence. In such a case, the Supervisor may not serve as the Chair. The student's Supervisor may lead the process of designing the content and form of the exam.

In order to be allowed to take the qualifying exam, the doctoral candidate should normally have maintained an average grade during her or his previous coursework at Skoltech above a threshold defined in advance by the Institute. The student will normally be expected to have achieved an average grade of least "B" according to Skoltech's standard grading scale.

What Procedures Should Be Followed for the Qualifying Examination?

The following four procedures should be followed in organizing the Qualifying Examination. Typically, the details will be unique to each student. However, it is possible to organize a similar examination, with a similar committee composition, for several students who have followed the same path in their early studies, for at least part of the exam. Regardless, all students will have separate examination committees formally, even if the members of each committee associated with a particular supervisor are the same.

1. Establishing the Committee Composition and Confirmation of the Chair. The Supervisor should first determine the composition of the Qualifying Examination Committee, including deciding upon the Chair. Once the Chair has confirmed his or her willingness to participate, the Supervisor should submit the names of the proposed committee members, including the recommended Chair, to the *Institute-wide Doctoral Research Committee*, using a standard template form, which can be obtained from the Education Office. The Education Office can also facilitate this communication.
2. Setting the Date. The Supervisor must determine the date of Qualifying Examination, in consultation with the examination committee members. The Education Office can facilitate this process. The date of the examination should be communicated to the student no later than two months before the exam.
3. Deciding the Format and Content of Exam. The Supervisor is responsible for organizing the format and delivery mode of the exam, as per details further below. Once this is agreed upon the Education Office can communicate the details to the student.
4. Communicating the Exam Outcome to the Student. The Chair of the Qualifying Examination Committee should complete a simple report form, which can be obtained from the Education Office. The possible outcomes are explained in more detail below. Each member of the committee should date and sign the form, which will then be made a part of the student's permanent record.

What Is the Format of the Qualifying Examination?

Skoltech faculty members should tailor the format and delivery mode of the Qualifying Examination to best suit the requirements of their particular academic program and the particulars of the individual student's study program. A typical qualifying exam might include the following two components:

- A *general knowledge exam* on a disciplinary or field-specific choice of the candidate. The exam may be offered either in oral or written form. The goal of the general knowledge exam would be to ensure that the candidate possesses the required knowledge to conduct state-of-the-art research in his or her field of choice.
- A *research exam* whereby the candidate presents the research upon which she or he has been working during his or her early research work. This exam will typically be offered as an oral exam. The goal of the research exam will be to assess the critical thinking abilities of the candidate, as well as his or her ability to formulate a research problem, devise a research approach, understand the limitations of various approaches and the impact of underlying assumptions, and his or her ability to answer questions by the examiners. The research examination may also consist of a research presentation in front of the Qualifying Exam Committee (together with other observers), using a similar format to presentations delivered at international conferences.

The above suggestions concerning the format of the examination are suggestions only. The Supervisor and the Chair of the Qualifying Examination Committee are free to decide upon an appropriate format.

What Are the Possible Outcomes for the Qualifying Examination?

The Qualifying Examination may have the following outcomes:

- *Pass*, whereby the candidate will be permitted to continue in the doctoral program.
- *Marginal Pass*, whereby the candidate will be offered the opportunity to retake the general knowledge exam, or the research exam, or both. Under normal circumstances, candidates will be permitted to retake the Qualifying Examination only once.
- *Fail*, whereby the candidate will not be permitted to continue any further in the doctoral program.

Normally, a candidate who fails the Qualifying Examination may not be re-admitted to the Skoltech doctoral program at a later date, in any field of study.