

Structure and Organization of the Doctoral Study

[The list of obligatory and elective courses and/or modules with the number of hours of active teaching necessary for their implementation and number of ECTS credits](#)

In the introductory part of the doctoral study, the classes are auditory (obligatory and elective), while in the later semesters they are auditory and in form of project tasks.

The project tasks are performed in the form of consultations, with individual work of the doctoral student on the given subject from the narrower area of research.

All classes of the doctoral study are performed in one semester. The auditory classes consist of 15 or 30 hours of teaching (classes, seminars and practicum) and bring 2 or 4 ECTS points. The project tasks comprise of 50 hours, which represents the individual semesterly engagement of the professor with the individual doctoral student (consultations, review of the paper, periodic and final report), but does not include the individual research performed by the doctoral student.

The courses of the doctoral study are divided into three categories:

[Obligatory courses](#)

The study includes two obligatory courses, Selected Math Chapters and Methodology of Scientific Research. The course Selected Math Chapters comprises of 30 hours of teaching. The doctoral student obtains 4 ECTS points by passing this exam. The course Methodology of Scientific Research comprises of 15 hours of teaching. The doctoral student obtains 2 ECTS points by passing this exam.

[Elective courses](#)

The purpose of elective courses is to direct the knowledge of the doctoral student toward the narrower area of scientific research in textile technology.

The elective courses are divided into two categories:

- **Elective courses in the field of textile technology and**
- **General elective courses**

The doctoral student is obliged to enroll into and pass at least five of the courses from the catalogue: [Elective courses](#) from the field of textile technology and one elective course from the catalogue: [General elective courses](#).

Depending on the personal interests, the doctoral student may replace the General elective course with the course from the catalogue of doctoral programs of other institutions of higher education.

In each semester, the doctoral student must attend the number of courses that would enable the sum of his ECTS points to at least match the sum shown in the table.

Project tasks

The project tasks from the narrower field of research (in third, fourth and fifth semester) are proposed by the professors from the field of current scientific research work. The project tasks are harmonized with the changes in scientific research projects with the approval of the council of the doctoral study. Depending on the persons interests, the doctoral student may, in agreement with the mentor or professor, propose the subject of the project task that is not shown in the [table](#).

The project tasks must be performed with the performed by the doctoral student in the time period determined for the drafting of one project tasks that represents a textile technology project.

Obligatory and elective activities (participation in seminars, conferences, roundtables, etc.) and criteria for their expression in ECTS credits

The plan of the doctoral study shown in table 1 lists the obligatory and elective activities of the doctoral student:

- the doctoral student is obliged to pass two obligatory courses, obtaining 6 ECTS credits.
- Among the offered elective courses in the field of textile technology, the doctoral student is obliged to pass five courses and one of the offered general elective courses, cumulatively obtaining at least 24 ECTS credits.
- Starting from the third semester, the doctoral students will perform three project tasks (one each in the third, fourth and fifth semester), obtaining 18 ECTS points. The doctoral student may select the project tasks from the current areas of scientific research, in agreement with the mentor or professor.

The project task is completed by drafting and presenting the task. The doctoral student drafts at least one project task under the supervision of the mentor, while respect the requirement that the same professor cannot be the holder of all (3) project tasks.

During the doctoral study, the doctoral student is obliged to obtain at least 62 ECTS credits by publishing the research papers that are scored as shown in the [table](#).

The ECTS credits shown apply to published papers authored by up to three authors. For published papers authored by more than three authors, the number of ECTS credits is calculated as follows (75% if there are four authors, 50% if there are 5, 6 or more authors - each per $(100/N)\%$, N=number of authors).

Description of each course and/or module

The description of the courses is in the attachment. The evaluation of the doctoral student's obligations is performed pursuant to the ECTS system. Generally speaking, this means that all obligations of the doctoral student in one semester and evaluated pursuant to the table 1, and that a each obligation, including all activities of the doctoral student related to it, provides him with the number of ECTS credits proportional to its share in the obligations of the doctoral student. Through the selection of the course, the doctoral student may obtain more than 30 ECTS credits, but he/she cannot use this surplus to settle other minimum requirements shown in the table 1.

The quality and success of the implementation of the curriculum are tracked by the doctoral study council and the council of the Faculty. The doctoral students fill out an anonymous survey for each course after the fulfilment of all obligations related to the course organized by the professor in question, if the number of doctoral students who enrolled to the course is greater than 5.

The rhythm of studies and the obligations of the doctoral student. The requirements for advancement through the study, enrolment to the next semester or trimester or the next year of the study, and preconditions for enrolment to a certain course or a group of courses

To prove the successful fulfilment of study obligations and acquire the right to further study, the doctoral students need to satisfy the minimum requirements for the continuation of the study in the certain phase of study.

The minimum requirements for enrolment into certain semesters are the following:

- The doctoral students are required to regularly participate in all prescribed forms of teaching.
- The doctoral students may enroll into the next academic year if they fulfilled the obligations from the previous year.
- To enroll into the third semester, it is required to achieve at least 12 ECTS credits by passing exams.
- To enroll into the fifth semester, it is required to achieve at least 32 ECTS credits by passing exams and presenting one project task.
- For the presentation of the doctoral thesis, the doctoral student must achieve at least 110 ECTS credits by:
 - passing all 8 courses,
 - completing 3 project tasks and
 - publishing scientific papers in the field of research, of which at least one internationally reviewed scientific paper was published in connection to the doctoral research (in which the doctoral student is the only or one of the main authors of a paper written by at most three authors).

The preconditions for enrolling into a certain course or a group of courses are listed in the description of the course.

The elective courses and project tasks can be partially replaced by participation in national training courses and/or summer/winter schools for doctoral students, with the approval of the doctoral study council. The selection of the training courses is approved by the mentor. The work performed at the national training courses and/or summer schools for doctoral students is performed pursuant to the document issued by the institution attended by the doctoral student.

The document must contain the number of acquired ECTS credits.

The system of counseling and study management, manner of approving the selections made by the doctoral student, obligations of study counselors, doctoral thesis mentors and doctoral candidates

The doctoral study council during the enrolment procedure performs the interview with each applicant, when the requirements necessary for timely completion of the study are defined. During enrolment to the first year of the study, the doctoral study council will appoint a study counselor to the doctoral student, who will help him with work and fulfilment of the plan of obligations (doctoral student's portfolio). During the first year of the doctoral study, the doctoral student proposes the mentor and the subject, and arranges the conditions of working and research financing. The quality of the doctoral student's work is evaluated in the annual evaluation procedure on the form of the University, which is performed by the doctoral study council in the form of a report filed by the doctoral student, with potential presentation of the research.

The list of courses and/or modules that the doctoral students may select from other postgraduate doctoral and specialist study programs

The doctoral student is given the option to enroll, at his/her own volition, into an elective course offered by other doctoral programs at the Faculty of Textile Technology, or one offered by other higher education institutions, in agreement and with the approval of the mentor. Within the minimum requirements of the doctoral study, the doctoral student may enroll to at most one course offered by the doctoral programs of higher education institutions.

The manner of completion of the study and requirements for registration of the subject of the doctoral thesis. The procedure and requirements for the evaluation of the doctoral thesis. The manner and requirements for the presentation of the doctoral thesis

The postgraduate doctoral study for obtaining the Ph.D. title is completed by fulfilling all obligations defined by table 1 and by drafting and publicly presenting the doctoral thesis.

The requirements for the registration and presentation of the doctoral thesis are the following:

- Registering the subject, proposal of the mentor and financing conditions proposed by the doctoral student during the first year.
- The doctoral student initiates the procedure for accepting the subject of the doctoral thesis by submitting the application to the doctoral study council.
- At the proposal of the doctoral study council, the council of the Faculty appoints the Commission for evaluation of the subject and the mentor, consisting of 3 or 5 members.
- The majority of members of the Commission must be the holders of courses at the doctoral study and active researchers in the field of the subject or in related field. At least one member must be not be a professor or employee of the Faculty of Textile Technology. If the subject possesses the elements of interdisciplinarity, then the ratio may be different. The mentor must provide explanation that must be approved by the doctoral study council and council of the Faculty.

- The mentor must write an explanation for each member of the Commission, who must have at least five papers written in the field of the doctoral thesis.
- The member of the Commission must be selected at least to the research and teaching position of the docent or to the research position of the research assistant. His/her research and teaching or research position must be stated in the procedure of application, evaluation and presentation of the doctoral thesis.
- The doctoral student publicly presents the subject of the doctoral thesis before the Commission for the evaluation of the thesis and proposal of the mentor (appropriateness of the subject).
- The abovementioned Commission proposes the assessment of the original scientific or artistic contribution and assessment of the financial and organizational feasibility, and proposes the mentor, at least 3 months after the application was submitted. The council of the Faculty must respond to the proposal of the Commission before the enrolment of the doctoral student to the fourth semester.
- prior to the initiation of the assessment of the doctoral thesis, the candidate must obtain at least 110 ECTS credits. The candidate obtains this number of credits by passing exams (30 ECTS credits), presenting 3 project tasks (18 ECTS credits) and publishing papers (at least 62 ECTS credits).
- Prior to the presentation of the doctoral thesis, the doctoral student must:
 - obtain the credits pursuant to table 1
 - settle the potential debts toward the Faculty.

The Commission for the evaluation of the doctoral thesis and the Commission for the presentation of the doctoral thesis are established at the doctoral study. The doctoral thesis is usually evaluated through a joint report of all members of the Commission. The mentor of the doctoral student cannot serve as the member of the Commission for the evaluation of the doctoral thesis, except in exceptional circumstances approved by the Senate at the proposal of the council of the field in question. The Commission for the presentation of the doctoral thesis may have the same members as the Commission for evaluation of the doctoral thesis. The mentor participates in the procedure of presentation of the doctoral thesis, but cannot participate in grading, except in exceptional circumstances, pursuant to Article 17, paragraph 4 of the Ordinance on the Doctoral Studies of the University of Zagreb, Faculty of Textile Technology, 2011.