PhD Program: Algebra
Professional Branch: 4.5. Mathematics
Major Field of Study: Algebra
Faculty: Mathematics and Natural Sciences
Department: Mathematics

Brief Annotation: Aim of the PhD Program in Algebra is to select and prepare experts with potential in scientific research, provide training to obtain specialized scientific knowledge to contribute conduction of basic and applied research in algebra. The PhD Program aim, on one hand, is to present scientific achievements in this area of research, and on the other hand, to encourage the creative abilities of the PhD students to achieve their own scientific results.

Training in the doctoral program in Algebra aims to build on and enrich the knowledge and skills acquired by students during their studies at "Bachelor" and "Master" degree in accordance with the latest advances in this field. The main purpose and objectives of the educational activities in the doctoral program is the creation of highly qualified scientists in the field who possess knowledge and skills to solve complex scientific problems.

Competences of PhD students completed this program:
PhD students, completed this program, acquire the following professional qualities and competences:
- possess rich professional culture and communication skills;
- professionally prepared for successful implementation of regional, national and international research;
- have the ability to self-assessment of the achievements of the research work, autonomy and responsibility;
- create and interpret new knowledge resulting from their own research or other scientific research;
- use scientific language and style, characterized by accurate scientific terminology, clarity and consistency in the facts and results;
- possess research capabilities with a high degree of development and cognitive thinking;
- have built style of scientific communication (talking, in consultation and debate, for defense of scientific position, teamwork, etc.);
- possess a good level foreign language and information technology;
- independence and initiative oriented to provide personal information awareness and facilitate professional contacts with Bulgarian and foreign scientists.

Curriculum:
PhD students' education is based on an individual curriculum, approved by the Faculty Council, which is developed according to the topic of PhD Dissertation. Assessment is made by exam on the basis of six-grade system.

Sample list of courses
- Abstract algebra – Assoc. Prof. Ilinka Dimitrova, PhD
- Discrete mathematics – Assoc. Prof. Slavcho Shtrakov, DSc
- Semigroup theory – Assoc. Prof. Ilinka Dimitrova, PhD
- Transformation semigroups – Assoc. Prof. Ilinka Dimitrova, PhD
- Permutation groups in algebras of functions – Assoc. Prof. Slavcho Shtrakov, DSc
- Stable varieties – Assoc. Prof. Slavcho Shtrakov, DSc
- Discrete algebraic structures – Assoc. Prof. Slavcho Shtrakov, DSc
- Coding and cryptography – Prof. Peter Boyvalenkov, DSc
- Computer algebra – Assoc. Prof. Krasimir Yordzhev, DSc
- Computer methods in scientific research – Assoc. Prof. Krasimir Yordzhev, DSc
- Project management – Prof. Georgi Apostolov, PhD
- Specialized foreign language – Assist. Prof. Milena Levunlieva, PhD

In the Individual Curriculum of a PhD student, several courses are included among the courses of the above Sample list of courses and/or other courses, proposed and approved by the graduate advisor, the Department Council of Department of Mathematics and Faculty Council of Faculty of Mathematics and Natural Sciences, as well as Foreign Language.

Graduation:
- Exams from the Individual Curriculum
- Defense of PhD Dissertation