საქართველოს ტექნიკური უნივერსიტეტი
GEORGIAN TECHNICAL UNIVERSITY

Approved by
Resolution № 733 of the Academic Council of GTU dated July 6, 2012

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PhD Educational Program

Program Title

პროფესიული უსაფრთხოება და ჯანმრთელობა
Occupational safety and health

Faculty

სამთო - გეოლოგიური
Mining and Geology Faculty

Program Head / Heads

Professor Nino RATIANI

Qualification to be Awarded and the Extent of the Program in terms of Credits

Doctor of Occupational Safety

is awarded if the educational component of the educational program, which is 50 credits, is mastered and if the research component is completed. Duration of study is not less than 3 years.

Language of Teaching

Georgian

Prerequisite for Admission to the Program

A person who has a master's qualification or an academic degree equivalent to it, who meets the requirements for enrollment in a doctoral program in accordance with the current rules of GTU, has the right to study at the doctoral educational program. When enrolling in a doctoral educational program, the following are taken into account:

- existence of scientific publications;
- participation in scientific conferences;
- other documents and materials related to educational/research activities (certificates, deeds, patents, etc.).

Persons wishing to enroll in the program must submit a research project that outlines the applicant's research purpose and direction, as well as an appropriate international certificate proving English lamguage proficiency at least at the B2 level. In the absence of the above certificate, the applicant will take an English language exam at the GTU examination center. A doctoral candidate who has completed an English-speaking program (Bachelor's and/or Master's degree) is not required to take the exam and present the certificate.

A doctoral candidate is interviewed by the Faculty's provisional commission. The procedure for admission to the doctoral program and admission conditions are posted on the University website.

It is possible to enroll in a program twice a year on the basis of mobility within the deadlines set by the Ministry of Education, Science, Culture and Sport of Georgia, following the mandatory procedures and rules set by the University.

Admission to the program or transfer from a recognized higher education institution in a foreign country is carried out in accordance with the rules defined by the legislation of Georgia.

Program Description

The program is compiled using the European credit transfer system ECTS. 1 credit is equal to 25 hours, including contact and independent work hours. The distribution of credits is presented in the program curriculum. The program lasts at least 3 years (6 semesters).

he objectives of the educational component are the sectoral and methodological preparation of the doctoral candidate for the implementation of the goals of the doctoral educational program. The educational component helps the doctoral candidate in the successful preparation of the PhD thesis, in the future pedagogical and scientific activities. The educational component of the doctoral program is 50 credits.

Before the beginning of the semester, the rector of the university issues an order on the progress of the educational process, which will be posted on the website..

The first semester includes five compulsory study courses (30 credits) of study components. The second semester includes one study-compulsory (5 credits) and study-elective courses (5 credits), professor's assistantship (10 credits). The second and subsequent semesters provide for the performance of research components, which include: research project/prospectus, colloquium - 1, colloquium - 2, colloquium - 3, preliminary defense, thesis completion and defense.

The research component is evaluated once, at the final stage of the thesis (final evaluation).

Detailed information is provided on the website of the GTU

Program Objective

The purpose of the program is:

- Training of scientific and pedagogical personnel equipped with knowledge based on the latest achievements in the field of occupational health and safety to solve the most difficult problem of developing methods of protection against industrial risks and technogenic hazards, which is related to organizational-technical issues of occupational health and labor safety.
- Implementation of research projects to solve complex problems related to the development of professional risks using innovative methods in accordance with international standards, development of original ideas to ensure production safety, minimization of negative ecological consequences and individual safety.
- Critically evaluate existing safety concepts and theories, plan, design and develop a holistic safety management system for the needs and challenges of a specific work environment.

Learning Outcomes/Competences (general and professional)

- discusses concepts and theories of occupational safety, national and international standards, technical regulations, principles of assessment of labor conditions, rules and regulations for action in an emergency situation, new, original ways of solving problems arising in the field of organizational-technical safety of the research object
- with a critical understanding of the field of professional safety, determines the measures to be carried out at a specific workplace;
- using innovative methods, based on the specifics of the situation, discusses ways to eliminate potential production risks and dangerous factors;
- under conditions of complex or incomplete information, identifies the hazards of the production environment, validates the results of experimental research methodology and integrated data.
- summarizes the expected results caused by technological hazards, risk factors for industrial safety violations, the level of their impact on people, psychological and biological effects that affect the safety of the professional environment;
- plans industrial safety management strategy, measures to reduce industrial risk factors, measures for their prevention, localization and elimination based on the analysis of technological emergency situations, major industrial accidents and disasters;
- evaluates the measures to be taken in order to normalize the situation, the sanitary-hygienic conditions of work, the expected risks and the reliability of the fire safety system, the effect of the impact of harmful factors and chooses the ways to reduce them to the maximum allowable value;
- develops new research and analytical methods for ensuring professional labor safety and healthy production conditions, working environment recommendations for providing comfortable conditions, innovative methods of forecasting production risks, assessment and reliable management systems.
- prepares research projects in the field of occupational safety and health, following the principles of academic integrity and taking into account innovative methods based on the latest achievements of the field in the field of interdisciplinary research.

Methods of Achieving Learning Outcomes (teaching-learning)

☒ Lecture ☒ Seminar (group work) ☐ Scientific and thematic seminar ☐ Practical
☐ Laboratory ☒ Practice ☒ Independent work ☒ Consultation
☒ Research component ☒ Structure of the thesis ☒ Thesis defense

In the learning process, depending on the specifics of a particular study course program, the following activities of the teaching-learning methods are used, which are outlined in the relevant study course programs (syllabi): discussion/debate, problem-based learning; demonstration; analysis; synthesis; oral or verbal work; deduction; brain storming; writing work; explanation; action-oriented learning; case study; project development and presentation.

Student's Knowledge Assessment System

Assessment is done on a 100-point system. Assessment of the learning component:
Positive grades are:

- (A)-Excellent - 91- 100 points;
- (B)-Very Good – 81-90 points;
- (C)-Good – 71-80 points;
- (D)-Satisfactory – 61-70 points;
- (E)-Sufficient – 51-60 points.

Negative grades are:

- (FX) - Failed to pass – 41-50 points, which means that the student needs more work to pass and is allowed to take an additional exam once with independent work;
- (F) - Failed - 40 points or less, which means that the work done by the student is insufficient and he/she will have to study the subject again.

Assessment of the scientific research component(s):

a) with the highest praise (summa cum laude) - excellent performance;
b) with great praise (magna cum laude) - result exceeding the requirements in all parameters;
c) with honor (cum laude) - a result that exceeds the requirements;
d) satisfactory (bene) - an average level work that meets the basic requirements;
e) sufficient (rite) - a result that, despite its shortcomings, still meets the requirements;
f) insufficient - an unsatisfactory level work that cannot meet the requirements due to significant deficiencies in the work;
g) completely unsatisfactory (sub omni canone) - a result that completely fails to meet the requirements

The research component is assessed once, at the thesis defense stage, with a final grade.

Fields of employment

Enterprises of any field (energy, mechanical engineering, light industry, transport, mining, geological, chemical and food technology, metallurgy, communication and telecommunications, informatics and management systems, civil engineering, hydraulic engineering), planning and design organizations, scientific-research institutions, state supervision bodies and labor inspections, specialized vocational education schools, colleges, higher educational institutions, relevant profile government structures.

Human and material resources needed to implement the program

The university infrastructure available to students and appropriate logistical resources are utilized to achieve the learning outcomes of the program.

The educational program is provided with appropriate textbooks and methodological literature. The library of the University provides students with actual printed and electronic educational, methodological and scientific literature envisaged by the programs of educational courses, as well as the database of the library's book fund and electronic catalog posted on the University's website.

The program will be implemented by academic, research, and visiting staff. Additional information about the program head and implementers can be found in the attached documents.

Number of attached syllabi: 9