Faculty: FACULTY OF TELECOMMUNICATIONS AND MANAGEMENT
Department: GENERAL ENGINEERING
Professional Field: 5.13. GENERAL ENGINEERING
Specialty: DIGITAL ENTREPRENEURSHIP AND HIGH TECHNOLOGY
Educational-qualification degree: BACHELOR

LEARNING COURSE DESCRIPTION

1. Course title: *ENGINEERING - I (HIGH TECH PRODUCTIONS)*
2. Course code: B.45.025.1
3. Type of the course: *Compulsory*
4. Level: *Bachelor*
5. Year of study: *Second*
6. Semester: *Third*
7. Number of credits: *3*
8. Name of the lecturer: *Assoc. Prof. Siyka Dimitrova Demirova, PhD*
9. Course learning outcomes:

The aim of the course is to give students a systematic knowledge of fundamental knowledge in the field of engineering in high-tech industries. Students who have completed their training in the discipline must acquire:

Basic knowledge of theoretical and practical problems of engineering in high-tech industries.

Students will know and apply the basic requirements in the approaches, methods and technical means, will gain skills for analyzing technical solutions on the issue, and in accordance with their interests to develop new knowledge and opportunities in this subject area.

Practical skills for application of technical solutions of the type of engineering in industrial and high-tech projects and systems.

Competencies: After completing the course, students will know the basic concepts in engineering of high-tech industries, approaches and methods used to build modern high-performance engineering solutions.

10. Teaching Methods:

The teaching method is in lectures and discussion form, according to the specifics of the subject matter. Emphasis is given on fundamental management issues, using multimedia in the classroom.

11. Prerequisites:

Students should have a thorough knowledge of the Fundamentals of engineering design, Enterprise economy, Production management, Fundamentals of digital entrepreneurship.

Courses using the discipline are Engineering logistics, Engineering - II, Cyberphysical production systems, Innovation management systems in highly automated production, Production logistics, Innovation management of high technologies.

12. Course contents:

The course focuses on important issues that affect the basic requirements in the approaches, methods and technical means of engineering in high-tech industries. The various features of the development and application of engineering are considered. There is also a place for the principles and signs of recognizability of the elements of engineering. The course deals with current topics related to the design of engineering solutions and their importance in the field of high technology. Emphasis is also placed on competitive engineering and the possibilities for its application to the modern requirements of the smart industry.

13. Bibliography

Basic literature:

1. **Братанов П., Василев Г.,** Основи на компютърното проектиране, изд.ТУ-Варна, 2013.
2. **Даков И.,** Производствен инженеринг, изд. Люрен, 2003.
3. **Даков И., Ениманев К.,** Индустриален инженеринг**,** изд. Софттрейд, 2006.
4. **Дамянов Д.,** Конкурентен инженеринг, изд. Примакс Русе, 2000.
5. **Ениманев К.,** Производствен инженеринг, изд. Софттрейд, 2003.
6. **Khan M.,** Industrial Engineering, Publi.: New Age International Pvt Ltd, 2009.

Additional literature:

1. **Ганева Н. и кол.,** Основи на инженерното проектиране, изд. Софттрейд, 2008.
2. **Лепаров М. и кол.,** Основи на инженерното проектиране, изд. Софттрейд, 2011.
3. **Лефтерова Т.,** Ръководство по инженеринг, изд. Софттрейд, 2006.

4. **Lloyd C., Frazier J.,** Engineering, e-book, 2016.

14. Assessment methods and criteria:

The course ends with an *exam.* The student's individual and team work is taken into account during the semester - ongoing control during lectures and practice.

1. Requirements for the assessment of the six-point system

The course grade is formed by a point system, the maximum number of points students can receive is 100 (see Table 1). They are formed by one practical assignment, developed in a team of several students, assigned by the lecturer of the course (according to the topics of the syllabus) and two assignments in the seminars - presentation of course work (at the choice of the student from the specified directions, ie topics and a practice for learning. With the assessment that is formed by the resulting sum of points (from lectures and exercises), ie. with ongoing control, the student is formed according to pre-announced criteria.

2. Formation of the final mark

The formation of an ongoing assessment in the training course is based on the points received and their arrangement according to the six-point system given in Table 1.

Table 1.

Number of points	**Assessment According to the 6-point Scale System**
0 – 20	Fail 2 **(**F)
20 – 39	Fail 2 (FX)
40 – 49	Satisfactory 3.00 (E)
50 – 59	Satisfactory 3.00 (D)
60 – 69	Good 4.00 (C)
70 – 84	Very good 5.00 (B)
85 – 100	Excellent 6.00 (A)

15. Language of instruction: *Bulgarian*