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: *INDUSTRIAL REVOLUTIONS AND THE ENTREPRENEURIAL PROCESS*
2. Course code: B.45.010.3
3. Type of the course: *Facultative*
4. Level: *Bachelor*
5. Year of study:: *First*
6. Semester: *First*
7. Number of credits: 3
8. Name of the lecturer: *Prof. Dr. Miglena Temelkova*
9. Course learning outcomes:

The aim of the course is to give students in a systematic way basic (fundamental) knowledge in the field of industrial development of the economy and the development of the entrepreneurial process as a basic prerequisite for the welfare of society.

Students who have completed their training in the discipline *must acquire:*

Basic knowledge of the nature and specifics of industrial revolutions and the entrepreneurial process.

Practical skills for distinguishing basic similarities and differences in industrial and entrepreneurial processes.

Competencies: Upon completion of the course, students must be competent to study, collect, analyze and synthesize economic, statistical and historical data for educational purposes.

10. Teachingmethods:

The method of teaching is "experience-based learning", as the material is presented in seminar form, in the form of business games and case studies. The use of a group dynamic process allows students to master the basic concepts related to the discipline and to form specific skills.

The training is individualized and the learner is considered to be an active self-organizing individual. Active learning is achieved through action (making), interaction, multimedia, virtual and interactive platforms, through which students independently reach knowledge and apply it in specific practical cases.

11. Prerequisites:

Students should have in-depth knowledge of the high school course of study.

Courses using the discipline are: Fundamentals of digital entrepreneurship, Entrepreneurial and leadership digital competences, Engineering logistics, Cyber-physical production systems.

12. Course contents:

The course deals with current topics related to the development of industrial revolutions and the entrepreneurial process over time. The factors and conditions, as well as the consequences of the industrial revolutions and the entrepreneurial process are highlighted. In the course the topics are structured in two main sections: Development of industrial revolutions in the time when all industrial revolutions and their main characteristics are traced, and Entrepreneurial process, which defines the fundamentals of the entrepreneurial process and its determining factors and environmental conditions .

13. Bibliography

Basic literature:

1. **Isaacson, W.** The Innovators: Die Vordenker der digitalen Revolution von Ada Lovelace bis Steve Jobs. C. Bertelsmann Verlag. 2018.
2. **Schwab, K., Pyka, P.** Die Vierte Industrielle Revolution. Pantheon Verlag. 2016.
3. **Schwab, K., Pyka, P.** Die Zukunft der Vierten Industriellen Revolution: Wie wir den digitalen Wandel gemeinsam gestalten. Deutsche Verlags-Anstalt. 2019.
4. **Temelkova, M.** Development of Controlling in the Organizations from the Service Sector under the Conditions of the Forth Industrial Revolution. International Journal of Advanced Research in Management and Social Sciences, Volume 6, Issue 3, March 2017.
5. **Temelkova, M.** Model of the relation "digital leadership - digital entrepreneurship" in the realities of industry 4.0. International Journal “Information Theories and Applications”, Vol. 26, Number 4, 2019.

Additional literature:

1. **Temelkova, M.** A Model determining Leadership in the Business Organizations under the Conditions of the Forth Industrial Revolution. Current Scientific Resarch - Collection of scientific articles. Monreal, Canada, 2017.
2. **Temelkova, M.** Skills for digital leadership – prerequisite for developing high-tech economy. International Journal of Advanced Research in Management and Social Sciences. Volume 7, Issue 12, December, 2018.

14. Assessment methods and criteria:

The achievement of the set goal of the training is controlled during the semester through *ongoing assessment* in the form of individual and team assignments, test during the lectures. The assessment is formed by a point scale, taking into account the participation in the practical classes and the individual work of the student during the semester.

1. Requirements for forming the six-point rating system

A part of the grade in the course is formed on the basis of a point system and the maximum number of points that students can receive is 100 (Table 1).

The final grade is formed by a theoretical test during the exam session and results from the cases and business games performed during the group dynamic process, taking into account the activity of students during the learning process during the semester.

Burden of evaluation:

- ✓ Assessment in the learning process - individual work, research, case studies and business games, group dynamic process - carries 50% weight in the final assessment;
- ✓ Theoretical exam online test of 20 questions with a duration of 40 minutes - carries 50% weight in the final grade. The evaluation of the test is according to the following criteria: up to 50% correct answers – Fall 2; up to 70% correct answers - Satisfactory 3; up to 80% correct answers - Good 4; up to 90% correct answers - Very good 5 and over 91% - Excellent 6).

2. Formation of the final assessment

The formation of the final grade (CA) is based on the results of the exam test in the course of training and group dynamic process (TC) and the result of the theoretical test (TT), as the correspondence between the number of points and the grade on the six-point system is given in *Table 1.*

$$КО = 0,5\ ТТ + 0,5\ ТК$$

The knowledge acquired by the students, expressed in percentages, is assessed according to the six-point system as follows:

To 50%	Fall (2)
51% – 70%	Satisfactory (3)
71% – 80%	Good (4)
81% – 90%	Very good(5)
Over 90%	Excellent 6 (6)

15. Language of instruction: *Bulgarian*