Course Unit Descriptor

Study Programme: Engineering Management

Course Unit Title: Principle of engineering management

Course Unit Code: IM1007

Name of Lecturer(s): Slavica Mitrović Veljković

Type and Level of Studies: bachelor

Course Status (compulsory/elective): mandatory

Semester (winter/ summer): winter

Language of instruction: english

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 6

Prerequisites: none

Course Aims:.

The following are the educational objectives of the course of Principles of engineering management as a scientific and teaching discipline: 1) to study and analyze the nature, purpose and domain of management in the industrial system; 2) to understand the success factors of the industrial system; 3) to introduce students with the basic engineering/managerial functions, methods, techniques, principles, knowledge and skills and 4) to study modern approaches in management.

Learning Outcomes:

After mastering the subject relating to the principles of engineering management, students will be able to understand and apply the basic principles, methods, and functions of engineering management (planning, organizing, leading and controlling), as well apply modern approaches in management, with the aim of creating conditions for permanent growth in productivity and efficiency, as a basis for improving the business quality of industrial systems.

Syllabus.

Theoretical instruction: Introduction to Management. Management as skill, science and profession. Management in the past and nowadays. Interdisciplinary of management. Engineering management in modern business. Engineers as managers. The views and goals of engineers-managers. Management skills and knowledge. Principles and functions of engineering management. Planning: Planning basics, planning process, decision-making. Organizing: The necessity of organizing, designing organizational structures, departmentalization, models of organizational structure. Leadership (management): the role of communication in management (process and types), the importance of motivation in management, leadership as a determinant of engineering management. Controlling: Basic functions of controlling, types, styles, and process of controlling; Modern approaches in engineering management: green management, CRM, BSC, LEAN, managing diversity. The future of engineering management. Practical instruction: exercises using practical examples from the field of management, and analyzing and resolving case studies and assignments.

Required Reading:

Relevant literature in English, tbd

Weekly Contact Hours:2	**Lectures: 3**	**Practical work: 2**

Teaching Methods:

Lectures are presented in terms of analyzing theoretical concepts and resolving specific problems from the area of managing industrial systems. Part of the course consists of lectures presented by visiting managers of industrial systems. Exercises include group work, writing and presenting seminar papers and visiting successful industrial systems.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Attendance			
Computer exercises			
Tests (4x)			