

Code: 24,,Strength of Materials”

ECTScredits: 6

Number of hours per week: 2+1+1)

Forms of assessments:Exam

Types of assessment: Exam - written with oral discussion

Department, providinginstruction on the discipline:

Department: *MECHANICS AND MACHINE ELEMENTS*

*FACULTY OF MECHANICAL ENGINEERING AND TECHNOLOGIES*

Lecturer: Assoc. Prof. D.Dimitrov

Department: *MECHANICS AND MACHINE ELEMENTS*

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Annotation: The discipline of Strength of Materials is fundamental for all mechanical engineers. The main objective of the course is to acquire the students the skills for strength and deformation calculation of structures under static load. In order to acquire the learning materials, the knowledge acquired by the subjects Mathematics, Mechanics (Statics) and Material Science should be used as a basis. During the course the students acquaint themselves with the main types of resistance - tension /compression, twist of round sections especially bending as well as with the most common in the mechanical practice combined load - torsional bending, the question of stability of the balance of pressed bars is discussed briefly and the knowledge obtained is the basis for the successful understanding the subsequent disciplines.

Main issues of the syllabus content:

- Introduction to material strength
- Rod structures
- Deformations at center tension/compression
- Pure torsion
- Special bending
- Combined load.
- Buckling of pressed rods

Content presentation:

Lecture, Laboratory exercises and seminars