

Code: 8,,Material Science and Technology”

ECTScredits: 5	Number of hours per week: 2+0+2
Forms of assessments: Exam	Types of assessment: Exam - written
Department, providing instruction on the discipline: Department: MATERIALS SCIENCE AND TECHNOLOGY FACULTY OF MECHANICAL ENGINEERING AND TECHNOLOGIES	

Lecturer: Assoc.Prof. S.Kirov

Department: MATERIALS SCIENCE AND TECHNOLOGIES

Tel..

e-mail: [..]

Annotation: The discipline is of a common technical kind intended to give basic knowledge on machine building, methods of material treatment when obtaining, shape changing and characteristics improvement by thermal and complex methods. The structure and parameters of metals materials are of interest. During the course the main engineering materials are discussed like iron alloys and other metals : Al, Cu, Mg, Ti. A main part is dedicated for the nonmetals – polymers, ceramics, composites and other specific materials. One of the main targets of this course is the students to obtain knowledge on metallurgical problems, material treatment as casting, plastic deformation, welding, thermal treatment for different materials.

Main issues of the syllabus content:

- Structure and properties of materials
- Fundamentals of engineering materials
- Basics and theory of thermal treatment
- Nonmetals – polymers, ceramics, composites
- Production and main technological operations of material shape changes

Content presentation:

Lectures and Laboratory exercises, multimedia included. The lectures material is granted to the students in form of magnetic source.