

**Course number: SET 10920****Technical Mechanics****Study Level: Bachelor /
Undergraduate****Prof. Dr. Lazar Boskovic****Language of Instruction: English****ECTS Credits: 5****Subject-specific competencies:**

The students know the basics of statics, in particular the calculation of forces and moments that are effective on components.

Methodological competencies:

The students know the methods and calculation methods of statics and can apply them to components.

Personal competencies:

The students are able to classify the importance of structural analysis in the design of components and gain important prerequisites for further teaching.

Teaching content:

- Basic Concepts
- Forces with a Common Point of Application
- General Systems of Forces, Equilibrium of a Rigid Body
- Center of Gravity, Center of Mass, Centroids
- Support Reactions
- Trusses
- Beams, Frames, Arches
- Work and Potential Energy
- Static and Kinetic Friction
- Tension and Compression in Bars
- Stress
- Strain, Hooke's Law