

SYLLABUS

1. Course title:

The basics of mechanical power transmissions

2. Code:**3. Cycle of study:**

1

4. ECTS credits:

3

5. Type of course: Mandatory Elective**6. Prerequisites:**

no

7. Class restrictions:

Students of the second year of study at the Faculty of Mechanical Engineering (I cycle of study)

8. Duration / semester:

1

4

9. Weekly contact hours:

9.1. Lectures:

2

9.2. Seminars:

1

9.3. Laboratory/Practice classes:

0

10. Faculty:

Faculty of Mechanical Engineering

11. Department/study program:

Production Machinery, Power Engineering, Mechatronics

12. Lecturer:

Dr. Sc. Denijal Sprečić, full professor

13. Lecturer's e-mail:

denijal.sprecic@untz.ba

14. Web site:

<http://mf.untz.ba/>

15. Course aims:

Provide basic knowledge in the field of mechanical power transmissions

16. Learning outcomes:

At the end of the semester, successful students who continued to perform their duties throughout the course of the teaching process will be trained to master the basic knowledge of mechanical power transmissions.

17. Course content:

- Concept, division and purpose of mechanical power transmissions, basic terms
- Systematization of mechanical power transmissions
- Structure, parts (members), joints, structural groups
- The basics of transmission kinematics, kinematic parameters analysis, kinematic analysis methods
- The basics of transmission dynamics, force and force analysis, kinetostatic, kinetostatic analysis methods
- Planar transmissions of forces and movements, types
- Chain power transmission, classification, marking, coupling
- Working capacity criteria and dimensioning of chain power transmission components, materials
- Other power transmissions with flexible connections, basic characteristics, load schedule
- Dimensioning of power transmission components with flexible connections
- Gear power transmission , structure, transmission ratio
- Dimensioning of gear power transmission components
- Planetary gear power transmission, material, definition, kinematics
- Other mechanical power transmissions

18. Learning methods:

- Lectures (dealing with teaching units that are defined by the content of the course),
- Auditorial exercises (held in accordance with the intended curriculum and monitoring the works within teaching units),
- Colloquy (continuous knowledge examination),
- Seminar papers,
- Consultation

19. Assessment methods:

The methods of knowledge checking are: seminar papers, colloquia, final exam.

- Regular attendance and teaching activities (lectures and exercises) carry a maximum of 10 points,
- Seminar papers are self-addressed topics that the student has to defend and submit to the end of the semester. The total number of points a student can win for a given seminar papers is a maximum of 15 points.
- Columns represent the form of continuous checks that are defined during the semester and within which students solving tasks from certain areas. The sum of the points from each colloquium that a student can win is a maximum of 30 points.
- Final exams are submitted in writing after the pre-fulfilled conditions regarding regular attendance and teaching activity and dedicated seminar papers. At the final exam, the student can win a maximum of 45 points.

Rating system: $(10) + (15) + (30) + (45) = (100)$ points

Rating	Descriptive	Slow	For a score of points
5 (five)	"Fails"	"F"	0-53 points
6 (six)	"sufficient"	"E"	54-63 points
7 (seven)	"good"	"D"	64-73 points
8 (eight)	"superb"	"C"	74-83 points
9 (nine)	"outstanding"	"B"	84-93 points
10 (ten)	"excellent"	"A"	94-100 points

In order for a student to receive a signature and access the final exam, it is necessary to fulfill the following conditions:

- attend to 80% of lectures and exercises,
- to submit seminar papers,
- to fulfill all the other conditions that the subject teacher places during the semester.

Summarized points are collected from all student activities during the semester to the final exam. If the student has obtained the required score for the pass grade, the grade can be entered in the index. If the student has not achieved the required number of points, additional points can be obtained on the final exam.

20. Assessment components:

The assessment of the exam is based on the total number of points the student has obtained by fulfilling the pre-requisites and passing the exam according to the quality of the acquired knowledge and skills, and it contains a maximum of 100 points and is determined according to the following scale:

- attendance and activity on lectures (lectures and exercises) - maximum 10 points,
- seminar papers - maximum 15 points,
- colloquiums - maximum 30 points,
- final exam (written) - maximum 45 points.

21. Required reading list:

1. S.Veriga; Mašinski elementi III, MF, Beograd
2. M.Opalić; Prijenosnici snage i gibanja, FSB, Zagreb
3. K. H.Decker; Elementi strojeva, Tehnička knjiga, Zagreb

22. Web sources:**23. Applicable starting from the academic year:**

2015/2016

24. Adopted in the Faculty/Academy session:

01.06.2015