

SYLLABUS

1. Course title:

Material Handling - Internal transportation systems I

2. Code:

(max. 20 characters)

3. Cycle of study:

1

4. ECTS credits:

6

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

(max. 110 characters)

7. Class restrictions:

None

8. Duration / semester:

1

6

9. Weekly contact hours:

9.1. Lectures:

3

9.2. Seminars:

1

9.3. Laboratory/Practice classes:

1

10. Faculty:

Faculty of Mechanical Engineering Tuzla

11. Department/study program:

Manufacturing Mechanical Engineering

12. Lecturer:

Ph.D. Alan Topčić, Associate Professor

13. Lecturer's e-mail:

alan.topcic@untz.ba

14. Web site:

www.mf.untz.ba

15. Course aims:

Understanding the concept, components and structure of conventional internal transport systems within production. Mastering the contemporary approaches to designing of conventional transport systems within production. Understanding the role of conventional transport systems in the production process, the ways of interconnecting and harmonizing the operation of individual transport equipment and devices into a conventional transport system within production.

16. Learning outcomes:

Identify and execute the categorization of conventional internal transport systems components; Make a calculation of individual components and technical-technological characteristics of the components, as well as, a calculation of the conventional transport system as a whole; Designing and create project documentation of components, devices and for conventional internal transport system as a whole; Solve the problem of interconnection and synchronization of transport equipment and devices in efficient internal transportation system, connected with manufacturing equipment within production system

17. Course content:

The concept and definition of the internal transportation systems and materijal handling within production; Concept and structure of the internal transport system; Types of transport activities and transport equipment and devices; Selection of transport equipment and devices for continuous and cyclic transport; Dimensioning of elements of transport equipment and devices for continuous and cyclic transport; Transfer and hand-over segments of internal transportation systems; Manual and motorized industrial vehicles, Conveyors, Cranes and lifting machines, Elevators, Cable cars, Inertial transporter, Hidraulic and pneumatic transport by pipelines

18. Learning methods:

LECTURES - theoretical lectures with the aim of acquiring theoretical skills supported by usage of multimedia tools and applying of active two-way communication on relation student - professor; AUDITORIAL EXERCISES – solving of practical calculation tasks related to the subject matter of attached items, supported by of active two-way communication on relation student - assistant; LABORATORY EXERCISES - work in the laboratory and in the field with the aim of acquiring practical skills related to the subject matter of attached items; Preparation and presentation of Seminar paper, Report about solving of practical problem and Reports on laboratory exercises - activities based on solving specific project issues from subjects of studie

19. Assessment methods:

PRE-EXAM REQUIREMENT: Students write two tests from Lecture - theoretical part (after half semester - first test and at the end of the semester - second test) and two tests from the auditorial exercises (after half semester - first test and at the end of the semester - second test). Tests include previously treated topics within lectures and auditorial exercises. Theories tests are consist from of multiple choice tasks, tasks of simple recollection or essay tasks, where each correct answer is scored with 1 point, ie., the student can collect up to 8 points per test - 16 points for two tests. Tests from auditorial exercises are consist from calculation tasks, where each correct solution is scored with 1 point, ie., the student can collect up to 5 points per test - 10 points for two tests. All the tests are taken by all students in the course at the same time thereby achieving uniformity of the level of knowledge that is being tested, as well as the conditions under the which a students takes the exam.

As part of the pre-exam requirement, students are required to prepare an individual Seminar paper and Report about solving of practical problem that will cover a specific topic from the content of the subject. The same must be submitted in writing to the subject teacher for review, evaluation and presentation. For the Seminar paper, respectively, Report about solving of practical problem the student can collect a maximum of 5 points for each obligation. Students prepare, submit and presents a Report from laboratory exercises for which they can collect a maximum of 4 points.

For a continuous activity on lectures and exercises throughout the semester, the student can collect 15 points in lectures, 7,5 points at auditorial exercises, and 7,5 points at laboratory exercises.

The exam is oral. The right to access to the exam have a students who have fulfilled all the pre-exam requirement with more than 50% success, and were present in more than 70% of lectures and exercises. At the oral examination the student answers on five questions from the program of the subject treated in lectures and exercises. An oral exam can be passed if the student answers to all questions. The maximum number of points that student can achieve at the oral exam is 30 points. Checks on all forms of knowledge are recognized as a cumulative exam. In order to pass the course student must achieve a minimum of 54 cumulative points.

20. Assessment components:

The requirement for a signature in Index - presence in 70% of the lectures. The rating is based on the total number of points which student earned by completing pre-exam requirements and on exam. The maximum number of points are 100. Points are collected by fulfilling the obligations according to the following scale: attendance to the lecture (15 points), tests from theory (2 tests × 8 points), Seminar paper (5 points), attendance to the auditorial exercise (7,5 points), attendance to the laboratorial exercise (7,5 points), Calculation tasks tests (2 tests × 5 points), Report about solving of practical problem (5 points), Laboratory Exercise Report (4 points), Exam (30 points)

GRADING SYSTEM:

- from 0 to 53 points - grade: 5 (five)
- from 54 to 63 points - grade: 6 (six)
- from 64 to 73 points - grade: 7 (seven)
- from 74 to 83 points - grade: 8 (eight)
- from 84 to 93 points - grade: 9 (nine)
- from 94 to 100 points - grade: 10 (ten)

21. Required reading list:

Dedijer S (2001) „Osnovi transportnih uređaja“, Beograd
Tošić S.B. (1999) „Transportni uređaji - mehanizacija transporta“, Mašinski fakultet Beograd
Olujić Ć. (1991) „Transport u industriji – rukovanje materijalom“, Sveučilište u Zagrebu, Zagreb

22. Web sources:

(max. 687 characters)

23. Applicable starting from the academic year:

2015/2016.

24. Adopted in the Faculty/Academy session:

03.06.2015.