



Меѓународен Универзитет Визион - International Vision University
 Universiteti Ndërkombëtar Vizion - Uluslararası Vizyon Üniversitesi

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SYLLABUS

| COURSE NAME | COURSE CODE | SEMESTER | COURSE LOAD | ECTS |
|---------------------|-------------|----------|-------------|------|
| STEEL CONSTRUCTIONS | 3031 | 6 | 180 | 6 |

| | |
|------------------------|------|
| Prerequisite(s) | None |
|------------------------|------|

| | |
|---|--|
| Course Language | Turkish |
| Course Type | Elective |
| Course Level | First Cycle |
| Course Lecturer | |
| Course Assistants | |
| Classroom | |
| Extra Curricular Office Hours and Location | Meeting: Consultancy: |

| | |
|---------------------------------|--|
| Course Objectives | To provide the knowledge of steel behaviour as a structural material and advantages/disadvantages. To teach the design and calculation of steel connections and connection members/design. To provide knowledge for design of beams subjected to tension and/or bending. To provide knowledge for design of steel elements subjected to compression. To teach the arrangement of steel trusses and design rules. To teach the multi-storey steel buildings arrangement and their calculations. |
| Course Learning Outcomes | <ul style="list-style-type: none"> • Achieves the knowledge on the behaviour of steel material. • Has the knowledge about steel connection methods and ability to design connection members. • Can solve the design and control problems of steel members subjected to tension. • Will be able to design steel trusses and joint details. • Has the knowledge of basic design rules of structural steel members subjected to bending. • Can solve the design and control problems of steel members subjected to compression. • Has the knowledge on multi-storey steel structures design. |
| Course Contents | Design of steel structures, material properties of steel, connections, tension members, compression members, bending members, dimensioning and arrangement of steel trusses, multistorey steel buildings arrangement principles and examples. |

WEEKLY SUBJECTS AND RELATED PREPARATION STUDIES

| Week | Subjects | Related Preparation |
|-------------|--|------------------------------------|
| 1 | Introduction, Steel Material Behavior, Advantages and Disadvantages | Related Chapters of Course Sources |
| 2 | Connection Types of Steel Members, Welded and Bolted Connection Design | Related Chapters of Course Sources |
| 3 | Problem Session 1- Welded and Bolted Connection Design | Related Chapters of Course Sources |
| 4 | Design of Tension Members 3 Problem Session 2- Tension Members | Related Chapters of Course Sources |
| 5 | Design of Compression Members | Related Chapters of Course Sources |
| 6 | Design of Compression Members | Related Chapters of Course Sources |
| 7 | Mid-term Exam | Related Chapters of Course Sources |
| 8 | Problem Session 2- Compression Members | Related Chapters of Course Sources |
| 9 | Design of Bending Members | Related Chapters of Course Sources |
| 10 | Introduction to Steel Truss Systems and Arrangement Principles, Joint Design of Truss 6 Members | Related Chapters of Course Sources |
| 11 | Problem Session 3- Introduction to Steel Truss Systems and Arrangement Principles, Joint Design of Truss 6 Members | Related Chapters of Course Sources |
| 12 | Multi-Storey Steel Structures, Arrangement Principles and Examples, Frame Types | Related Chapters of Course Sources |
| 13 | Multi-Storey Steel Structures, Arrangement Principles and Examples, Frame Types | Related Chapters of Course Sources |
| 14 | General Application | Related Chapters of Course Sources |
| 15 | Final Exam | Related Chapters of Course Sources |

ECTS / WORKLOAD TABLE

| | | | |
|---|----|----------|----|
| Presentation / Seminar | | | |
| Hours for off-the-classroom study (Pre-study, practice) | 14 | 3 | 42 |
| Midterm Exam | 1 | 12 | 12 |
| Final examination | 1 | 14 | 14 |
| Total Work Load | | | |
| ECTS | | 6 | |

GENERAL PRINCIPLE RELATED WITH COURSE

Dear students,

In order to be included, learn and achieve full success that you deserve in the courses you need to come well prepared by reading the basic and secondary textbooks. We are expecting from you carefully to obey to the course hours, not to interrupt the lessons unless is very indispensable, to be an active participant on the courses, easily to communicate with the other professor and classmates, and to be interactive by participating to the class discussions. In case of unethical behavior both in courses or on exams, will be acting in framework of the relevant regulations. The attendance of the students will be checked in the beginning, in the middle or at the end of the lessons. Throughout the semester the students who attend to all lectures will be given 15 activity-attendance points in addition to their exam grades.

SOURCES

COMPULSORY LITERATURE

| No | Name of the book | Author's Name, Publishing House, Publication Year |
|----|---------------------------------------|---|
| 1 | Çelik Yapılar - Sanayi Yapıları | Cemal EYYUBOV, Birsen Yayınevi, 2014 |
| 2 | Structural Steel Design (5th edition) | Jack C. McCormac, Stephen F. Csernak, Prentice Hall, 2012 |
| 3 | | |

ADDITIONAL LITERATURE

| No | Name of the book | Author's Name, Publishing House, Publication Year |
|----|------------------|--|
| 1 | Çelik Yapılar | Özden Çağlayan, Erdoğan Uzgider, Filiz Piroğlu, Hilmi Deren, Çağlayan Kitabevi, 2000 |
| 2 | Steel Design | William T. Segui, Cengage Learning, 2011 |
| 3 | | |

EVALUATION SYSTEM

| Underlying the Assessment Studies | NUMBER | PERCENTAGE OF GRADE |
|--|---------------|----------------------------|
| Attendance/Participation | 15 | %10 |
| Project / Event | 1 | %20 |
| Mid-Term Exam | 1 | %35 |
| Final Exam | 1 | %35 |
| TOTAL | 17 | %100 |

ETHICAL CODE OF THE UNIVERSITY

In case of the students are cheating or attempt to cheat on exams, and in the case of not to reference the sources used in seminar studies, assignments, projects and presentations, in accordance to the legislations of the Ministry of Education and Science of Republic of Macedonia and International Vision University, will be applied the relevant disciplinary rules. International Vision University students are expected never to attempt to this kind of behavior.