

| Course Description | | | | | |
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| Name | Code | Semester | T+A Hour | Credit | ECTS |
| STRUCTURE I | KTP1224110 | Spring Semester | 2+2 | 3 | 3 |
| Prerequisites Courses | STRÜKTÜRÜN TEMELLERİ | | | | |
| Recommended Elective Courses | | | | | |
| Language of Instruction | Turkish | | | | |
| Course Level | First Cycle (Bachelor's Degree) | | | | |
| Course Type | Required | | | | |
| Course Coordinator | Assist.Prof. Tahir AKKOYUNLU | | | | |
| Name of Lecturer(s) | Assist.Prof. Ahmet TUZ | | | | |
| Assistant(s) | | | | | |
| Aim | Teaching basic engineering calculations for design elements, Comprehension of principles of structural systems in practice, Teaching basic principles of giving dimension to structural design elements, Teaching constructive principles of structural members. (This course involves specifications in subject details and examples particular to the Industrial Design Program. Such specializations are shown in brackets in the lesson flow.) | | | | |
| Course Content | This course contains; Orientation Week,Briefly review of basic of structures,Introduction to internal forces and cross section effects 1 (normal force, shear force, bending moment),Introduction to internal forces and cross section effects 2,Frame systems (truss) (1),Frame systems (truss) (2),Introduction to strength and basic concepts (internal force, stress),Introduction to strength and basic concepts (internal force, stress),Introduction to strength and basic concepts (hook law, deformation),Simple strength states (1) (axial force, buckling),Simple strength states (2) (shear force),Simple states of strength (3) (torsion and bending moment),Space frame system, Examples from World,Space Frame System, Examples from World (Presentations). | | | | |
| Course Learning Outcomes | | | Teaching Methods | Assessment Methods | |
| 1. basic engineering calculations for design elements | | | 12, 2, 6, 9 | A, F, G | |
| 2. comprehension of principles of structural systems in practice | | | 12, 2, 6, 9 | A, F, G | |
| 3. constructive principles of structural members | | | 12, 2, 6, 9 | A, F, G | |
| Teaching Methods | 12: Problem Solving Method, 2: Project Based Learning Model, 6: Experiential Learning, 9: Lecture Method | | | | |
| Assessment Methods | A: Traditional Written Exam, F: Project Task, G: Quiz | | | | |
| Lecture Schedule | | | | | |
| Sequence | Topics | Preliminary Preparation | | | |
| 1 | Orientation Week | | | | |
| 2 | Briefly review of basic of structures | | | | |
| 3 | Introduction to internal forces and cross section effects 1 (normal force, shear force, bending moment) | | | | |
| 4 | Introduction to internal forces and cross section effects 2 | | | | |
| 5 | Frame systems (truss) (1) | | | | |
| 6 | Frame systems (truss) (2) | | | | |
| 7 | Introduction to strength and basic concepts (internal force, stress) | | | | |
| 8 | Introduction to strength and basic concepts (internal force, stress) | | | | |
| 9 | Introduction to strength and basic concepts (hook law, deformation) | | | | |
| 10 | Simple strength states (1) (axial force, buckling) | | | | |
| 11 | Simple strength states (2) (shear force) | | | | |
| 12 | Simple states of strength (3) (torsion and bending moment) | | | | |
| 13 | Space frame system, Examples from World | | | | |
| 14 | Space Frame System, Examples from World (Presentations) | | | | |
| Evaluation Methods | | Weight(%) | | | |
| Midterm Exam | | 50 | | | |
| General Exam | | 50 | | | |

| Resources |
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| to be distributed by the lecturer.1. Why Buildings Stand up? Mario Salvadori 2. Statics and Strength of Materials for Architecture and Building Construction, Barry Onouye, Kevin Kane 3. Principles of Structures, Ariel Hanaor |