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| **DEPARTMENT OF CIVIL ENGINEERING** | | | | | | | | | | | | | | | | | | | | | |
| **COURSE CODE** | | **COURSE NAME** | | **CREDIT** | | | | | | | | | | | | | | **PRE-REQUISITE** | | **CO-REQUISITE** | |
| **Y** | **S** | | **T** | | **A** | | **L** | | | **C** | | **R/E** | |
| PHYS 1851 | | GENERAL PHYSICS I | | 1 | 1 | | 3 | | 0 | | 2 | | | 6 | | R | | - | | - | |
| CHEM 1853 | | GENERAL CHEMISTRY | | 1 | 1 | | 3 | | 0 | | 2 | | | 6 | | R | | - | | - | |
| MATH 1851 | | CALCULUS I | | 1 | 1 | | 4 | | 0 | | 2 | | | 6 | | R | | - | | - | |
| ENG 1801 | | ACADEMIC WRITING AND ORAL PRESENTATION SKILLS I | | 1 | 1 | | 2 | | 2 | | 0 | | | 4 | | R | | - | | - | |
| CENG 1801 | | IT FOR ENGINEERS | | 1 | 1 | | 2 | | 0 | | 0 | | | 4 | | R | | - | | - | |
| TDB 1801 | | TURKISH I | | 1 | 1 | | 2 | | 0 | | 0 | | | 2 | | CR | | - | | - | |
| CE 1001 | | INTRODUCTION TO CIVIL ENGINEERING | | 1 | 1 | | 2 | | 0 | | 0 | | | 2 | | R | | - | | - | |
|  | |  | |  |  | |  | |  | | **ECTS** | | | **30** | |  | |  | |  | |
| **COURSE CODE** | | **COURSE NAME** | | **CREDIT** | | | | | | | | | | | | | | **PRE-REQUISITE** | | **CO-REQUISITE** | |
| **Y** | **S** | | **T** | | **A** | | **L** | | | **C** | | **R/E** | |
| PHYS 1852 | | GENERAL PHYSICS II | | 1 | 2 | | 3 | | 0 | | 2 | | | 6 | | R | | - | | - | |
| ENG 1802 | | ACADEMIC WRITING AND ORAL PRESENTATION SKILLS II | | 1 | 2 | | 2 | | 2 | | 0 | | | 4 | | R | | - | | - | |
| MATH 1852 | | CALCULUS II | | 1 | 2 | | 4 | | 2 | | 0 | | | 6 | | R | | - | | - | |
| ECON 1852 | | ECONOMICS | | 1 | 2 | | 3 | | 0 | | 0 | | | 3 | | R | | - | | - | |
| CE 1002 | | TECHNICAL DRAWING | | 1 | 2 | | 2 | | 0 | | 2 | | | 3 | | R | | - | | - | |
| CE 1004 | | STATICS | | 1 | 2 | | 3 | | 0 | | 0 | | | 6 | | R | | MATH 1851 | | - | |
| TDB 1802 | | TURKISH II | | 1 | 2 | | 2 | | 0 | | 0 | | | 2 | | CR | | - | | - | |
|  | |  | |  |  | |  | |  | | **ECTS** | | | **30** | |  | |  | |  | |
|  | |  | |  |  | |  | |  | |  | | |  | |  | |  | |  | |
| **COURSE CODE** | | **COURSE NAME** | | **CREDIT** | | | | | | | | | | | | | | **PRE-REQUISITE** | | **CO-REQUISITE** | |
| **Y** | **S** | | **T** | | **A** | | **L** | | | **C** | | **R/E** | |
| MATH 2853 | | DIFFERENTIAL EQUATIONS | | 2 | 3 | | 3 | | 0 | | 0 | | | 4 | | R | | MATH 1852 | | - | |
| CE 2001 | | STRUCTURE AND BEHAVIOR OF CIVIL ENGINEERING MATERIALS | | 2 | 3 | | 2 | | 0 | | 2 | | | 5 | | R | | - | | - | |
| ATB 2801 | | PRINCIPLES OF KEMAL ATATURK I | | 2 | 3 | | 2 | | 0 | | 0 | | | 2 | | CR | | - | | - | |
| CE 2003 | | DYNAMICS | | 2 | 3 | | 3 | | 0 | | 0 | | | 6 | | R | | CE 1004 | | - | |
| CE 2005 | | MECHANICS OF MATERIALS | | 2 | 3 | | 3 | | 0 | | 2 | | | 6 | | R | | CE 1004 | | - | |
| GEOE 2801 | | EARTH SCIENCE | | 2 | 3 | | 2 | | 0 | | 0 | | | 2 | | R | | - | | - | |
|  | | **FREE ELECTIVE (DE/NDE)** | | 2 | 3 | |  | |  | |  | | | **5** | | **E** | | - | | - | |
|  | |  | |  |  | |  | |  | | **ECTS** | | | **30** | |  | |  | |  | |
| **COURSE CODE** | | **COURSE NAME** | | **CREDIT** | | | | | | | | | | | | | | **PRE-REQUISITE** | | **CO-REQUISITE** | |
| **Y** | **S** | | **T** | | **A** | | **L** | | | **C** | | **R/E** | |
| ATB 2802 | | PRINCIPLES OF KEMAL ATATURK II | | 2 | 4 | | 2 | | 0 | | 0 | | | 2 | | CR | | - | | - | |
| CE 2002 | | STRUCTURAL SYSTEMS I | | 2 | 4 | | 2 | | 0 | | 2 | | | 6 | | R | | CE 1004 | | - | |
| CE 2004 | | FLUID MECHANICS | | 2 | 4 | | 3 | | 0 | | 0 | | | 6 | | R | | CE 1004 | | - | |
| MATH 2852 | | NUMERICAL METHODS | | 2 | 4 | | 3 | | 0 | | 0 | | | 4 | | R | |  | | - | |
| STA 2802 | | STATISTICS AND PROBABILITY FOR ENGINEERS | | 2 | 4 | | 3 | | 0 | | 0 | | | 3 | | R | | - | | - | |
| BIO 2852 | | ECOLOGY & ENVIRONMENT | | 2 | 4 | | 3 | | 0 | | 0 | | | 3 | | R | | - | | - | |
| CE 2006 | | SOIL MECHANICS I | | 2 | 4 | | 3 | | 0 | | 2 | | | 6 | | R | | - | | - | |
|  |  | |  | | |  | |  | |  | |  | **ECTS** | | **30** | |  | |  | |  | |

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| **COURSE CODE** | | **COURSE NAME** | **CREDIT** | | | | | | | **PRE-REQUISITE** | **CO-REQUISITE** |
| **Y** | **S** | **T** | **A** | **L** | **C** | **R/E** |
| CE 3000 | | SUMMER PRACTICE I  (30 WORKDAYS) | 3 | 5 | 0 | 0 | 0 | 4 | R | - | - |
| CE 3001 | | REINFORCED CONCRETE I | 3 | 5 | 3 | 0 | 0 | 6 | R | CE 2005 | - |
|  | | **DEPARTMENTAL ELECTIVE (DE)** \* | 3 | 5 |  |  |  | **20** | **E** |  |  |
| CE 3501 | | TRANSPORTATION ENGINEERING I (T)\* | 3 | 5 | 2 | 0 | 2 | 5 | E | - | - |
| CE 3503 | | STRUCTURAL SYSTEMS II (S)\* | 3 | 5 | 2 | 0 | 2 | 5 | E | CE 2002 | - |
| CE 3505 | | MATERIALS OF CONSTRUCTION (S)\* | 3 | 5 | 2 | 0 | 2 | 5 | E | - | - |
| CE 3507 | | TRAFFIC ENGINEERING (T)\* | 3 | 5 | 3 | 0 | 0 | 5 | E | - | - |
| CE 3509 | | SOIL MECHANICS II (G)\* | 3 | 5 | 3 | 0 | 0 | 5 | E | CE 2006 | - |
| CE 3511 | | MEASUREMENT OF SOIL PROPERTIES (G)\* | 3 | 5 | 1 | 0 | 4 | 5 | E | CE 2006 | - |
| CE 3513 | | HYDRAULICS (H)\* | 3 | 5 | 2 | 0 | 2 | 5 | E | CE 2004 | - |
| CE 3515 | | HYDROLOGY (H)\* | 3 | 5 | 3 | 0 | 0 | 5 | E | - | - |
|  | |  |  |  |  |  | **ECTS** | **30** |  |  |  |
| **COURSE CODE** | **COURSE NAME** | | **CREDIT** | | | | | | | **PRE-REQUISITE** | **CO-REQUISITE** |
| **Y** | **S** | **T** | **A** | **L** | **C** | **R/E** |
|  | **FREE ELECTIVE (DE/NDE)** | | **3** | **6** |  |  |  | **5** | **E** |  |  |
|  | **DEPARTMENTAL ELECTIVE (DE)** \* | | **3** | **6** |  |  |  | **25** | **E** |  |  |
| CE 3502 | INTRODUCTION TO STRUCTURAL DYNAMICS (S)\* | | 3 | 6 | 3 | 0 | 0 | 5 | E | CE 2003 | - |
| CE 3504 | FOUNDATION ENGINEERING I (G)\* | | 3 | 6 | 2 | 0 | 2 | 5 | E | CE 2006 | - |
| CE 3506 | INTRODUCTION TO COASTAL ENGINEERING (H)\* | | 3 | 6 | 3 | 0 | 0 | 5 | E | CE 2004 | - |
| CE 3508 | REINFORCED CONCRETE II (S)\* | | 3 | 6 | 3 | 0 | 0 | 5 | E | CE 3001 | - |
| CE 3510 | SURVEYING (T)\* | | 3 | 6 | 1 | 0 | 4 | 5 | E | - | - |
| CE 3512 | INTRODUCTION TO SOIL DYNAMICS & EARTHQUAKE ENGINEERING (G)\* | | 3 | 6 | 3 | 0 | 0 | 5 | E | CE 2006 | - |
| CE 3514 | TRANSPORTATION ENGINEERING II (T)\* | | 3 | 6 | 2 | 0 | 2 | 5 | E | CE 3501 | - |
| CE 3516 | WATER RESOURCES ENGINEERING (H)\* | | 3 | 6 | 3 | 0 | 0 | 5 | E | CE 3513 CE 3515 | - |
|  |  | |  |  |  |  | **ECTS** | **30** |  |  |  |

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| **COURSE CODE** | **COURSE NAME** | **CREDIT** | | | | | | | **PRE-REQUISITE** | **CO-REQUISITE** |
| **Y** | **S** | **T** | **A** | **L** | **C** | **R/E** |
| CE 4000 | SUMMER PRACTICE II (30 WORKDAYS) | 4 | 7 | 0 | 0 | 0 | 4 | R | - | - |
| CE 4001 | CIVIL ENGINEERING DESIGN\*\* | 4 | 7 | 4 | 2 | 0 | 6 | R | CONSENT OF THE INSTRUCTOR | - |
|  | **FREE ELECTIVE (DE/NDE)** | **4** | **7** |  |  |  | **5** | **E** |  |  |
|  | **DEPARTMENTAL ELECTIVE (DE)** \*\*\* | **4** | **7** |  |  |  | **15** | **E** |  |  |
| CE 4501 | FUNDAMENTALS OF STEEL DESIGN (S)\*\*\* | 4 | 7 | 2 | 0 | 2 | 5 | E | CE 2005 CE 2002 | - |
| CE 4503 | ADVANCED MECHANICS OF MATERIALS (S)\*\*\* | 4 | 7 | 3 | 0 | 0 | 5 | E | CE 2005 | - |
| CE 4505 | INTRODUCTION TO FINITE ELEMENTS METHOD (S)\*\*\* | 4 | 7 | 3 | 0 | 0 | 5 | E | CE 3503 | - |
| CE 4507 | CIVIL ENGINEERING SYSTEM ANALYSIS (S)\*\*\* | 4 | 7 | 3 | 0 | 0 | 5 | E | - | - |
| CE 4509 | EARTH STRUCTURES (G)\*\*\* | 4 | 7 | 2 | 0 | 2 | 5 | E | CE 3504 | - |
| CE 4511 | ADVANCED STRUCTURAL ANALYSIS (S)\*\*\* | 4 | 7 | 3 | 0 | 0 | 5 | E | CE 2005 | - |
| CE 4513 | GEOGRAPHICAL INFORMATION SYSTEMS (H)\*\*\* | 4 | 7 | 1 | 0 | 4 | 5 | E | - | - |
| CE 4515 | WATER SUPPLY AND SEWERAGE ENGINEERING (H)\*\*\* | 4 | 7 | 3 | 0 | 0 | 5 | E | CE 3513 CE 3516 | - |
| CE 4517 | PROJECT MANAGEMENT (S)\*\*\* | 4 | 7 | 3 | 0 | 0 | 5 | E | - | - |
| CE 4519 | CONCRETE MAKING MATERIALS (S)\*\*\* | 4 | 7 | 2 | 0 | 2 | 5 | E | - | - |
| CE 4521 | FOUNDATION ENGINEERING II (G)\*\*\* | 4 | 7 | 2 | 0 | 2 | 5 | E | CE 3504 | - |
| CE 4523 | GEOTECHNICAL EARTHQUAKE ENGINEERING (G)\*\*\* | 4 | 7 | 3 | 0 | 0 | 5 | E | CE 3512 | - |
| CE 4527 | COASTAL ZONE MANAGEMENT (H)\*\*\* | 4 | 8 | 3 | 0 | 0 | 5 | E | - | - |
|  |  |  |  |  |  | **ECTS** | **30** |  |  |  |

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| **COURSE CODE** | **COURSE NAME** | **CREDIT** | | | | | | | **PRE-REQUISITE** | **CO-REQUISITE** |
| **Y** | **S** | **T** | **A** | **L** | **C** | **R/E** |
| CE 4002 | CIVIL ENGINEERING ELECTIVE DESIGN | 4 | 8 | 3 | 2 | 0 | 5 | R | CONSENT OF THE INSTRUCTOR | - |
|  | **FREE ELECTIVE (DE/NDE)** | **4** | **8** |  |  |  | **10** | **E** |  |  |
|  | **DEPARTMENTAL ELECTIVE (DE)** \*\*\* | **4** | **8** |  |  |  | **15** | **E** |  |  |
| CE 4502 | STRUCTURAL DESIGN: CONCRETE STRUCTURES (S)\*\*\* | 4 | 8 | 3 | 0 | 0 | 5 | E | CE 3001 CE 3508 | - |
| CE 4504 | DESIGN OF TALL BUILDING STRUCTURES (S)\*\*\* | 4 | 8 | 3 | 0 | 0 | 5 | E | CE 2002 CE 3503 | - |
| CE 4506 | IRRIGATION AND DRAINAGE (H)\*\*\* | 4 | 8 | 3 | 0 | 0 | 5 | E | CE 3513 | - |
| CE 4508 | GROUND IMPROVEMENT (G)\*\*\* | 4 | 8 | 2 | 0 | 2 | 5 | E | CE 3504 | - |
| CE 4510 | EARTHQUAKE RESISTANT DESIGN OF STEEL STRUCTURES (S)\*\*\* | 4 | 8 | 3 | 0 | 0 | 5 | E | CE 2005 CE 4501 | - |
| CE 4512 | COMPUTER APPLICATIONS IN STRUCTURAL ENGINEERING (S)\*\*\* | 4 | 8 | 2 | 0 | 2 | 5 | E | CE 2002 CE 3503 | - |
| CE 4516 | CONSTRUCTION ENGINEERING & MANAGEMENT (M )\*\*\* | 4 | 8 | 3 | 0 | 0 | 5 | E | - | - |
| CE 4518 | COMPUTER APPLICATIONS IN FOUNDATION ENGINEERING (G)\*\*\* | 4 | 8 | 2 | 0 | 2 | 5 | E | CE 3504 | - |
| CE 4520 | SLOPE STABILITY (G)\*\*\* | 4 | 8 | 3 | 0 | 0 | 5 | E | CE 2006 | - |
| CE 4522 | NONDESTRUCTIVE TESTING METHODS (S)\*\*\* | 4 | 7 | 2 | 0 | 2 | 5 | E | - | - |
| CE 4524 | PROPERTIES OF FRESH AND HARDENED CONCRETE (S)\*\*\* | 4 | 8 | 2 | 0 | 2 | 5 | E | - | - |
| CE 4526 | PORT PLANNING AND DESIGN (H)\*\*\* | 4 | 8 | 3 | 0 | 0 | 5 | E | - | - |
|  |  |  |  |  |  | **ECTS** | **30** |  |  |  |

R:Required

CR:Common Required

E:Elective

DE: Departmental Elective

NDE: Non-departmental Elective

Y:Year

S:Semester

A:Application

L:Laboratory

C:Credit

|  |
| --- |
| **Departmental Elective \***: Totally 45 ECTS Departmental Elective Courses are going to be selected at 5th and 6th semesters from the courses marked with an asterisk “**\***”. 20 ECTS of them must be from the same **division**. The courses are given with the following abbreviations.  **Divisions**: S - Structure, G – Geotechnical, H – Hydaulics, T - Transportation |
| **Civil Engineering Design \*\***: **Division** of the CE 4001 Civil Engineering Design course must be same with the **division** of selected 20 ECTS Departmental Elective Courses at 5th and 6th semesters. |
| **Non-Departmental Elective \*\*\*:** 30 ECTS Departmental Elective Courses are going to be selected at 7th and 8th from the courses marked with three asterisks “\*\*\*”. At least 10 ECTS of these courses must be selected from the same **division** which 20 ECTS Departmental Elective Course was taken at 5th and 6th semesters. |
| **Note 1:** The student can select Departmental Elective (DE) and Non-Departmental Elective course (NDE) as a Free Elective course. Non-Departmental Elective (NDE) courses can be taken at any term or year, however, the Departmental Elective (DE) courses cannot be taken from the elective courses given in higher classes. |
| **Note 2:** The student can supply the elective course credit by taking more than one lecture. The students must take at least 100 credits elective course for graduation, without considering taking during the required period and success status, regardless the departmental or free elective courses. |

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| MINIMUM ECTS CREDIT FOR GRADUATION | | | **240** |
| REQUIRED COURSE ECTS CREDIT | COMMON REQUIRED (CR) | **8** | **140** |
| DEPARTMENTAL REQUIRED (R) | **132** |
| ELECTIVE COURSE ECTS CREDIT | DEPARTMENTAL ELECTIVE (DE) | **75** | **100** |
| FREE ELECTIVE (DE/NDE) | **25** |