

| Course Title-Course Code: CE 573 CONCRETE BRIDGES 1 | | | | | | | Name of the Programme:CIVIL ENGINEERING | | |
|---|--|--------|------|-------------|-----|-------|---|----------------------------|-------------|
| Semester | Teaching Methods | | | | | | | Credits | |
| | Lecture | Recite | Lab. | Field Study | H W | Other | Total | Credit | ECTS Credit |
| 1-2 | 42 | 0 | 0 | 0 | 42 | 146 | 188 | 3 | 7.5 |
| Language | Turkish | | | | | | | | |
| Compulsory / Elective | Elective | | | | | | | | |
| Prerequisites | - | | | | | | | | |
| Course Contents | Historical background and basic definitions; choice of location and bridge layout; Aesthetics in Bridge Design; foundation conditions; crossing the rivers; comparison of different types of bridges; Arch Bridges; reinforced concrete and prestressed concrete bridges; box girder bridges; cable stayed and suspension bridges; examples from some applications; Loads; lateral and longitudinal forces on superstructure and substructures; AASHTO Specifications and loading applications; Structural members of bridge; Reinforced and prestressed concrete bridge design; design of superstructure; seismic design considerations; design of bearings; design of substructure; abutments; piers and walls; foundations; numerical examples. | | | | | | | | |
| Course Objectives | Upon completing this class students are expected to have the basic skills necessary to perform preliminary design of simple highway bridges satisfying AASHTO LRFD code requirements. | | | | | | | | |
| Learning Outcomes and Competences | Gaining the skill of handling and solving the prestressed and reinforced concrete highway bridges. | | | | | | | | |
| Textbook and /or References | 1 Raina V.K. “Concrete Bridge Practice, Analysis, design and economics, Mc.Graw Hill,1991 2 Demetrios, E., Tonia, P. E. “ Bridge Engineering”, Mc. Graw Hill, New York, 1995, 470 p 3 Standard Specifications for Highway Bridges, AASHTO , 1998 4 Celasun H., “ Betonarme Köprüler”, Çağlayan Kitabevi, 1980 5 Ekiz, İ., “ Köprü Problemleri, Çağlayan kitabevi, 1976 6 Yol Köprüleri için Teknik Şartname , TCK yayını, No.207,1973 7. BS 5400 | | | | | | | | |
| Assessment Criteria | | | | | | | | <i>If any, mark as (X)</i> | Percent (%) |
| | Midterm Exams | | | | | | | X | 25 |
| | Quizzes | | | | | | | | - |
| | Homeworks | | | | | | | | - |
| | Projects | | | | | | | | - |
| | Term Paper | | | | | | | X | 5 |
| | Laboratory Work | | | | | | | | - |
| | Other | | | | | | | | - |
| | Final Exam | | | | | | | X | 70 |
| Instructors | Asst. Prof. Dr. Meral BEGİMGİL | | | | | | | | |

