

# CE410 - CIVIL ENGINEERING DESIGN

SPRING SEMESTER 2016 - 2017

## TENTATIVE COURSE OUTLINE

### ACADEMIC STAFF:

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### COURSE ASSISTANT:

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### GEOTECHNICS ASSISTANT:

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### REFERENCES:

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2. American Association of State Highway & Trans., 4th Edition. *AASHTO LRFD Bridge Design Specifications*, USA.
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21. Turizm K1y1 Yapıları Master Plan Çalışması Sonuç Raporu [http://astarte.ce.metu.edu.tr/ce410/Turizm-yapilari-master-plan-sonuc-raporu-20110527\\_122423\\_10288\\_1\\_10315.pdf](http://astarte.ce.metu.edu.tr/ce410/Turizm-yapilari-master-plan-sonuc-raporu-20110527_122423_10288_1_10315.pdf)
22. Ulaştırma K1y1 Yapıları Master Plan Çalışması Sonuç Raporu [http://astarte.ce.metu.edu.tr/ce410/Ulastirma-yapilari-master-plan-sonuc-raporu-20110527\\_122423\\_10288\\_1\\_10315.pdf](http://astarte.ce.metu.edu.tr/ce410/Ulastirma-yapilari-master-plan-sonuc-raporu-20110527_122423_10288_1_10315.pdf)
23. Balıkçılık K1y1 Yapıları Durum ve İhtiyaç Analizi Sonuç Raporu CILT 1 [http://astarte.ce.metu.edu.tr/ce410/BALIKCILIK-CILT-1-IHTIYAC-ANALIZI-20110527\\_151837\\_10288\\_1\\_46492.pdf](http://astarte.ce.metu.edu.tr/ce410/BALIKCILIK-CILT-1-IHTIYAC-ANALIZI-20110527_151837_10288_1_46492.pdf)
24. Balıkçılık K1y1 Yapıları Durum ve İhtiyaç Analizi Sonuç Raporu CILT 2 [http://astarte.ce.metu.edu.tr/ce410/BALIKCILIK-CILT-2-IHTIYAC-ANALIZI-20110527\\_152022\\_10288\\_1\\_46492.pdf](http://astarte.ce.metu.edu.tr/ce410/BALIKCILIK-CILT-2-IHTIYAC-ANALIZI-20110527_152022_10288_1_46492.pdf)

**TENTATIVE GRADING POLICY:**

Mid-Term & Seminar Quizzes	: 20% (subjects selected from lecture hours)
Progress Report & Interim Evaluation	: 30% (2% Group – 15% Report – 13% Presentation)
Final Report & Presentation	: 45 % (3% Group – 20 % Report – 17 % Presentation – 5% Poster)
Performance	: 15% (attendance to lecture hours, quizzes and active participation to project work)

**WEB PAGE:**

<http://144.122.100.214>

For structural analysis, the analysis shall be limited to linear elastic analysis. Software that can perform design and develop design drawings by just importing architectural drawings as an input are not allowed.

REPORTS WILL BE GRADED BASED ON THE FOLLOWING TOPICS:

- Format
  - Contents
  - Steps
  - Consistency
  - Clarity
- Design criteria
- Load analysis
- Preliminary design (*Not included in final design*)
- Analysis
- Structural design
- Structural drawings
  - Plan
  - Sections
  - Details.
- Geotechnical design
- Civil design (Transportation Design, Drainage, Infrastructure...etc.)
- Quantity and unit prices

**TENTATIVE COURSE SCHEDULE – SPRING 2016-2017**

WEEK	DATE		INSTRUCTOR	TOPIC
1	Feb 22, 2017	11 <sup>40</sup> -12 <sup>30</sup>	Academic Staff	Introduction & Projects (at DR - 1)
2	Mar 1, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Dr. Erhan Karaesmen	Design Process in Civil Engineering
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Meeting with Instructors
3	Mar 8, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Işıl Sencar Ertosun Dr. Mustafa Can Yücel	Architectural Aspects Programming Approaches and Frameworks
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Preliminary Design Stage
4	Mar 15, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Prof. Ufuk Ergun Dr. Murat Güler	Geotechnical Design Issues Pavement Design Issues
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Preliminary Design Stage
5	Mar 22, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Dr. Ahmet Cevdet Yalçiner Hakan Güvengiz	Coastal Systems and Design Against Extreme Conditions TBA
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Preliminary Design Stage
6	Mar 29, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Dr. Rifat Sönmez Mustafa Hafizoğlu	Cost Estimation and Quantity Take-Off Project Management
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Preliminary Design Stage - Submit draft report to your instructor
7	Apr 5, 2017	11 <sup>40</sup> -17 <sup>30</sup>	<b>Jury</b>	<b>Interim Presentations</b> , submit two copies of Report & Drawings
8	Apr 12, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Ayhan Baş Evren Yıldız	Water Hammer Concept General Directorate State Hydraulic Works
		13 <sup>40</sup> -15 <sup>30</sup>	Academic staff	Advanced design
9	Apr 19, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Dr. Haluk Sucuoğlu Dr. Fikri Acar	Earthquake Resistant Design Principles TBA
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Advanced design, analysis, detailed drawings
10	Apr 26, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Dr. Erhan Karaesmen	Special Structures
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Advanced design, analysis, detailed drawings.
11	May 3, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Raşit Unuvar Nurdan Apaydın	FIDIC practices and ethical issues General Directorate of Highways
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Advanced design, analysis and detailing.
12	May 10, 2017	11 <sup>40</sup> -13 <sup>30</sup>	Mega Engineering Zafer Kınacı	TBA TBA
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Advanced design, analysis and detailing.
13	May 17, 2017	11 <sup>40</sup> -13 <sup>30</sup>	<b>MIDTERM</b>	<b>MIDTERM EXAM</b>
		13 <sup>40</sup> -15 <sup>30</sup>	Academic Staff	Advanced Design – Submit draft report to your instructor
14	May 24, 2017	11 <sup>40</sup> -17 <sup>30</sup>	<b>Jury</b>	<b>Final Presentations</b> , submit two copies of Report & Drawings

- Consult Dr. Ufuk Ergun for geotechnical, Dr. Haluk Sucuoğlu for earthquake design and Işıl Sencar Ertosun for architectural issues.
- You can ask your questions regarding geotechnical design to the course geotechnics assistant.
- You are expected to submit soft copies of your interim and final reports as well as two hard copies.