



**ÇANKAYA UNIVERSITY**  
**FACULTY OF ENGINEERING**  
**Department of Industrial Engineering**  
**IE 417**  
**OCCUPATIONAL HEALTH AND SAFETY**  
**Fall 2020**



## COURSE SYLLABUS

Course Code: IE 417

Credit Hours : (3 0 3) 4

Students : Non-IE Semester : Fall'20

Course Title : Occupational Health and Safety

Pre-requisites : ---

Year : 4

Sections : 01, 02

Instructor:

**Assistant Prof. Dr. Benhür SATIR**

Office No: Engineering Faculty, L - 307 Office Tel: (+90312) 233 1368 E-mail: [benhur@cankaya.edu.tr](mailto:benhur@cankaya.edu.tr)

Research Assistant:

**Hale AKKOCAOĞLU ÇATMAKŞ**

Office No: Engineering Faculty, L - 321 Office Tel: (+90312) 233 1362 E-mail: [hale@cankaya.edu.tr](mailto:hale@cankaya.edu.tr)

**Course Description:** This course is designed to teach the fundamentals of occupational health and safety with the emphasis on civil engineering activities. The topics covered in the course are statistical analysis of the accidents and injuries in civil construction sites, the economic aspects of accidents and injuries in construction sites, operational structure of agencies related to occupational health and safety, type of injuries and occupational hazards in construction related activities, engineering and management side of health and safety in construction, and legal aspects and standards in Turkey.

**Course Outline:** The following topics will be covered:

Weeks	Title
1	Statistical Analysis of Turkish Construction Accidents (TUISAG datum)
2	Why are Health and Safety Regulations Needed
3	Occupational Health and Safety Law #6331
4	Health and Safety Organizations in the World and Turkey
5	Comparison of Construction Health and Safety in the World and in Turkey
6	Analysis of Injuries and Various Health Problems Related to Construction Activities
7	Physical Work Environment (Different Types of Construction Sites)
8	Physiology and Anthropometry Aspects of Manual Work
9	Physiology and Anthropometry Aspects of Mechanical Work
10	Cognitive Ergonomics in Construction Machinery
11	OHSAS 18001 and TS 18001 Standards
12	Invited Speaker about Health and Safety Issues in Turkish Construction Sites
13	ISO 45001 Standards
14	No lecture (due to official holidays)

**Textbook:** No textbook will be used.

**References:** The following useful reference books are available in the University Library:

- Phil Hughes, Ed Ferrett, Introduction to Health and Safety in Construction, Routledge, 2011, 978-0-08-097068-4
- Allan St John Holt, Principles of Construction Safety, Blackwell, 2001, 9781405134460

**Lectures:** In lectures the instructor will attempt to summarize and explain only selected important concepts and points as clearly as possible. To be familiar with the material presented in lectures and participate in class discussions, students are expected to read the material covered in the previous lectures prior to the class meeting. Students will then find the lectures more interesting, and will benefit from the discussion if they come well prepared.

### **Class Meeting Hours:**

Section 1	Thu. 14:20-17:10
Section 2	Fri. 09:20-12:10

- Lectures on 29.10.2020, 31.12.2020 and 01.01.2021 cannot be conducted. Announcement for the make-up of the lost lecture on 29.10.2020 will be made later.

**Homework:** Students should form groups of at most **4 students** in order to homework. Detailed information on homework description, grading, etc. will be given on course's web page.

**Exams:** All examinations will be based on lectures. To pass these exams students will need to have studied the material well in advance in order to understand the concepts, procedures and techniques. To discourage last minute cramming, the instructor and the assistants will not answer any questions from students on the day of an examination. Descriptions of these examinations are as follows:

Midterm Exam: There will be one midterm examination that cover all the material up to the date of the examination.

Final Exam: The Final Examination will cover all the material studied throughout the semester and has the same structure as in the midterm examination.

**Make-up Exam:** Make-up exam will be given based on Çankaya University Regulations for unanticipated absences and with valid excuse ONLY (e.g., illness with a doctor's report). Since a student will have more time for preparation to a makeup exam, makeups will be harder than the regular exams. If a student misses midterm exam and/or final exam with a valid excuse, then she/he will get one make-up exam for each.

### **Attendance to Invited Speaker's Lecture (Week 12):**

Invited speaker will talk about Health and Safety Issues in Turkish Construction Sites at week 12. All students have to attend those sessions. One of the homework will be on this speech and non-attending students will get no points. Therefore, a penalty of 10% (full-letter grade!) will be effective for absenteeism.

**Academic Dishonesty:** Any act not suitable for a university student will not be tolerated and may lead to formal disciplinary action. Example of this are: getting someone else to take the examinations for you, misrepresentation of your own answer sheet as another's work, cheating, knowingly assisting other students to cheat, abusing the tolerance or breaking the discipline of the class.

**Honor Code:** Every student should declare her/his understanding and belief in the Honor Code stated by the department for the examinations and assignments:

#### *Exam:*

Please read the following Honor Code carefully. Then write I agree. [Kabul ediyorum.] and sign underneath to show your understanding and belief in the Honor Code.

*I hereby declare that I have neither given nor received any aid during the exam. [Sınav sırasında hiç kimseden hiçbir şekilde yardım almadığımı ve hiçbir kimseye hiçbir şekilde yardım etmediğimi beyan ederim.]*

#### *Assignment:*

For individual assignments, each student (for team work assignments, only one member of the study team) should write the following Honor Code with her/his own handwriting on the cover page of your assignment report, and each student should sign underneath.

*I(We) hereby declare that, except where I(we) have indicated, the work I(we) am(are) submitting in this assignment (project, report, ...) is my(our) own work. [Sunmakta olduğum (olduğumuz) bu ödevin (projenin, raporun,...), belirttiğim (belirttiğimiz) kısımların haricinde, tamamen kendi eserim (eserimiz) olduğumu beyan ederim(ederiz).]*

**Grading Policy:** Grading will be made w.r.t. the below percentages, besides the instructors reserve the right to modify these percentages in case he finds it necessary. All exams will be closed book and closed notes. Letter grades will be mainly based on the catalogue grading system described in Çankaya University regulations.

Homework (10%each)	30 %
Midterm Exam	30 %
Final Exam	40 %
<b>TOTAL</b>	<b>100 points</b>

### **Conditions leading to the letter grade NA:**

*Any of the following will lead to letter grade NA.*

- \_ If you fail to take the midterm exam (or its makeup), you will NOT be able to take the final exam and you will receive the letter grade NA.
- \_ If you are eligible to take the final exam but fail to take it (or its makeup), you will receive the letter grade NA.

### **Web page:**

Every student is responsible to check the web site of the course, at [webonline.cankaya.edu.tr](http://webonline.cankaya.edu.tr), regularly (at least twice a week). All the related announcements, lecture notes, grades, attendance and other information will be uploaded. You are responsible for all announcements made in class and on class web page, as well as for printing the materials from the class web page.

**NOTE THAT EVERYTHING ON THIS SYLLABUS IS SUBJECT TO CHANGE. STUDENTS WILL BE NOTED ABOUT ANY CHANGE.**