

COURSE SYLLABUS

Vocational School

Course Code	Course Title		Credits (T–P–L)	ECTS
ISG 205	Ergonomics		(2-0-2)	5
Prerequisites	None			
Language of Instruction	Turkish	Mode of Delivery	Online	
Course Type and Level	Compulsory / Fall Semester / Associate Degree			
Instructor		Class Hours	Office Hours	İletişim
Lecturer Ayşe Tazegül		Friday 13:25–14:55	Tuesday–Thursday 10:00–16:00	ayseercan@cag.edu.tr
Course Coordinator	Lecturer Ayşe Tazegül			
Learning Outcomes				
Course Learning Outcomes	Upon successful completion of this course, the student will be able to:		Relations	
			Program Outcomes	Contribution
	1	Recall the definition, historical development, and basic principles of ergonomics.	1	5
	2	List ergonomic risk factors (physical, cognitive, organizational).	1,2	5,5
	3	Explain the relationship between ergonomics and occupational health and safety.	1,2	5,5
	4	Discuss the importance of ergonomic arrangements in office, industrial, and production environments.	1,2	5,5
	5	Demonstrate proper working postures for different work environments.	1,2	4,5
	6	Discuss the importance of ergonomic arrangements in office, industrial, and production environments.	1,2	5,5
	7	Explain human–machine interaction.	2	5
	8	Explain the relationship between occupational diseases and ergonomic factors.	1,2	5,5
Course Objective and Description	The ergonomics course focuses on designing work, work environments, and tools in the most suitable way by considering human physical and mental characteristics. The course covers the historical development, basic principles, and place of ergonomics in working life. Then, under the framework of physical ergonomics, working postures, musculoskeletal disorders, lifting and carrying techniques are discussed; under cognitive ergonomics, attention, perception, workload, and human–machine interaction are examined; under organizational ergonomics, work process design, shift systems, and working hours are analyzed. Furthermore, office ergonomics, ergonomic arrangements in industry and production lines, prevention of occupational diseases, and the relationship between occupational health–safety and ergonomics are discussed. The course is supported by case analyses, group work, and practical activities, aiming to enable students to acquire theoretical knowledge and develop applicable solutions for professional life.			

Course Contents: (Weekly Course Plan)

Week	Topic	Preparation	Teaching Method and Techniques
1	Introduction to Ergonomics: Definition, Purpose, Historical Development		Lecture, Q&A, Presentation
2	Basic Principles of Ergonomics and Its Importance in the Workplace	Research workplace examples related to ergonomics	Brainstorming, Group Work
3	Anthropometry and Workplace Design	Research how anthropometric measurements are made	Lecture, Q&A
4	Physical Ergonomics: Working Postures	Prepare visual materials showing correct/incorrect postures	Visual Explanation (correct/incorrect), Discussion
5	Musculoskeletal Disorders	Review reports on occupational accidents related to the musculoskeletal system	Case Analysis, Presentation
6	Lifting and Carrying Techniques	Watch videos of correct/incorrect lifting techniques	Demonstration, Lecture, Q&A
7	Cognitive Ergonomics: Human–Machine Interaction	Research faulty machine panel examples and share findings	Case Study, Discussion
8	Midterm Exam		
9	Midterm Exam		
10	Organizational Ergonomics	Research examples of working hours and shift systems	Group Work, Discussion
11	Office Ergonomics	Examine examples of computer, desk, and chair placement	Lecture, Q&A, Discussion
12	Ergonomic Risk Factors (Noise, Vibration)	Research examples of noise and vibration	Q&A, Lecture
13	Ergonomic Risk Factors (Lighting, Air Conditioning)	Research examples of lighting and air conditioning	Q&A, Lecture
14	Ergonomics and Health: Occupational Diseases	Research occupational disease cases	Presentation, Group Discussion
15	Guest Speaker	Research the importance of ergonomics in the field of OHS	Lecture, Q&A
16	General Evaluation	Sample workplace ergonomics analysis	Class Discussion, Q&A
17	Final Exam		
18	Final Exam		

Course Resources

Course Book	Üçüncü, K., & Acar, H. (2020). Ergonomics. Nobel Publishing. ISBN: 9786050331646.
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Recommended Resources		Durmuş, H. O. (2025). <i>Ergonomics and Occupational Safety</i> . Kitapyurdu Doğrudan Publishing.		
Assessment and Evaluation				
Activity	Number	Contribution (%)	Notes	
Midterm Exam	1	30	Written exam	
Presentation	1	15	Group work	
Final Exam	1	55	Comprehensive written exam	
Activity		Number	Hours	Total
Class Duration		14	2	28
Out-of-Class Study		14	4	56
Assignments				
Presentation		1	14	14
Project				
Midterm Exam (Duration + Preparation)		1	22	22
Final Exam (Duration + Preparation)		1	28	28
Total:				148
Total / 30:				148 / 30 = 4.9
ECTS Credit:				5

