



**ESOGU Faculty of Art and Design
Industrial Design Department
COURSE INFORMATION FORM**

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| SEMESTER | Spring |
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|--------------------|--------|--------------------|---------------------------------------|
| COURSE CODE | 1411xx | COURSE NAME | Human Factors in Industrial Design II |
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| SEMESTER | WEEKLY COURSE PERIOD | | | COURSE OF | | | |
|----------|----------------------|----------|------------|-----------|------|-----------------------------|----------|
| | Theory | Practice | Laboratory | Credit | ECTS | Type | Language |
| 4 | 2 | 0 | 0 | 2 | 3 | COMPULSORY () ELECTIVE (X) | Turkish |

| COURSE CATEGORY | | | | |
|-----------------|--------|-----------------------------|----------------|-----|
| Basic Education | Design | Natural and Applied Science | Social Science | Art |
| | X | X | | |

ASSESSMENT CRITERIA

| | Evaluation Type | Quantity | % |
|-----------------|-----------------|----------|----|
| MID-TERM | 1st Mid-Term | 1 | 40 |
| | 2nd Mid-Term | | |
| | Quiz | | |
| | Homework | | |
| | Project | | |
| | Report | | |
| | Others (.....) | | |

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| FINAL EXAM | | 1 | 60 |
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| PREREQUIEITE(S) | N/A |
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| COURSE DESCRIPTION | This course is designed to teach the importance and basic principles of the human factor in product design. The course content consists of information about human perception, senses and cognitive characteristics and limitations. |
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| COURSE OBJECTIVES | This course aims to teach students the human cognitive characteristics and constraints required to design safe products. |
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| ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION | This course teaches you how to prevent health risks that may arise from product-user interaction. |
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| COURSE OUTCOMES | <ol style="list-style-type: none"> 1. Identify what cognitive data is required to design a safe product. 2. Apply the cognitive data needed to design a safe product. 3. Determine if any product is designed to be perceptually appropriate and cognitively safe. |
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| TEXTBOOK | <ol style="list-style-type: none"> 1. Salvendy, G. (Ed.). (2012). Handbook Of Human Factors And Ergonomics. John Wiley & Sons. 2. McCauley-Bush, P. (2011). Ergonomics: foundational principles, applications, and technologies. CRC Press. |
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| OTHER REFERENCES | <ol style="list-style-type: none"> 1. Tidwell, J. (2010). Designing interfaces: Patterns for effective interaction design. " O'Reilly Media, Inc." 2. Kirlik, A. (Ed.). (2006). Adaptive perspectives on human-technology interaction: Methods and models for cognitive engineering and human-computer interaction. Oxford University Press. 3. NASA, (2010). NASA Human Integration Design Handbook |
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| | (HIDH)-NASA (Vol. 3407). SP-2010. |
| TOOLS AND EQUIPMENTS REQUIRED | N/A |

WEEKLY COURSE SYLLABUS

| WEEK | TOPICS |
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| 1 | Introduction to Perception and Gestalt principles |
| 2 | Introduction to Senses |
| 3 | Senses: Touch, Pressure and Vibration; Surface Properties in Design |
| 4 | Senses: Sight; Lighting in Design |
| 5 | Senses: Hearing; Sound in Design |
| 6 | Senses: Taste and Smell; Taste and Fragrance in Design |
| 7 | Senses: Balance |
| 8 | Mid-Term |
| 9 | Introduction to Cognitive Ergonomics and Cognitive Workload |
| 10 | User-Physical Product Interface |
| 11 | Analog Interfaces, Control Panels |
| 12 | User-Software Interfaces |
| 13 | Haptic Interfaces |
| 14 | Graphical User Interfaces (GUI) |
| 15 | Auditory Interfaces |
| 16 | Final Exam |

| NO | PROGRAM OUTCOMES | Contribution Level | | |
|----|--|--------------------|---|---|
| | | 3 | 2 | 1 |
| 1 | Within cultural, historical and artistic context the ability to integrate theoretical knowledge about production and consumption mechanisms into the design practice; | | | X |
| 2 | The ability to plan the design process, to choose and use appropriate methods and techniques; | X | | |
| 3 | The ability to identify design problems and related sub-problems and to produce creative solutions with a critical and dialectical approach; | | X | |
| 4 | The ability to design in terms of spatial thinking using design principles and elements; | | X | |
| 5 | The ability to make applications in the interaction of aesthetics and function using design elements and means and to evaluate these applications; | | | X |
| 6 | The ability to visualize and present using two and three dimensional design tools; | | | X |
| 7 | The ability to follow and apply technological developments, current design approaches, sustainable production methods, materials and innovations in the field of informatics in design projects; | | | X |
| 8 | The ability to use field knowledge in industrial design projects by considering the needs and interests of the society and target users within the scope of environmental awareness, professional ethics and the laws; | X | | |
| 9 | The ability to carry out the design process effectively individually or in a team; | | | X |
| 10 | The ability to take an active role in discipline-specific or interdisciplinary studies at the national and international levels. | | | X |

1: None. 2: Partial contribution. 3: Complete contribution.

Instructor(s): Asst. Prof. Dr. Nazife Aslı KAYA ÜÇÖK

Signature:

Date: