

DTES 599 - User Experience Design for Emergency Situations

Instructor: Aykut Coşkun

Office Location: SOSZ11C

Office Phone: 0212 338 1186

Lab: KUAR-Design Lab

Email: aykutcoskun@ku.edu.tr

Course Description and Objectives

Foundations of user experience (UX); definition of key terms and concepts for UX research and design. Introduction to UX design for emergency situations. State of art assessment of current literature on UX design for emergency situations. Understanding how individuals behave and perform during emergency situations. Assessment of UX design cases in emergency situations according to UX design principles. Extracting design guidelines for UX design for emergency situations.

Course Objectives

This course aims to,

- teach the fundamentals of UX research and design,
- expand this understanding into UX design for emergency situations,
- help students understand the difference between traditional UX and UX for emergency situations

Learning Objectives

Students successfully completing this course will,

- be able to demonstrate an understanding of the fundamental concepts of UX research and design,
- be familiar with atypical UX cases, i.e. designing better UX for emergency situations
- be competent in eliciting design guidelines via an investigation into existing good and bad UX design cases
- acquire a basic knowledge of UX research and design terminology.

Course Assessment and Grading

1. Weekly Meetings

The students meet the instructor weekly to discuss about their project. The students come to each meeting prepared to discuss about the readings or research progress. These meetings will count **20%** of the student's grade.

2. Literature search

The students will conduct a literature search on UX design studies for emergency situations to familiarize themselves with the topic and acquire state of the art knowledge of the field. An initial list of resources will be provided to students. Their task will be to extend this list during the course. At the end of this search, they will prepare a presentation summarizing and discussing around the main premise of reviewed sources. This presentation will count **25%** of the student's grade.

3. Analysis of existing UX design cases in emergency situations

The students will select at least 10 UX design cases in emergency situations. Then, they will analyze UX design solutions proposed in these cases via considering UX design principles. They will prepare a presentation summarizing and discussion good and bad practices from the selected cases. This presentation will count **25%** of the student's grade.

4. UX Design guidelines for emergency situations

The students will extract UX Design guidelines for emergency situations based on the results of literature search and UX case analysis. These guidelines will be submitted in the form of a report aimed at supporting future designers who would like to design solutions for emergency situations. This report will count **30 %** of the student's grade.

Grading Summary

Weekly Meetings	20%
Literature search	25%
UX case analysis	25%
Report	30%
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Total	100%

Initial Reading List

1. Dreyfuss, H. (2003). *Designing for people*. Skyhorse Publishing Inc..
2. Norman, D. (2013). *The design of everyday things: Revised and expanded edition*. Basic books
3. Garrett, J. J. (2010). *The elements of user experience: user-centered design for the web and beyond*. Pearson Education.
4. Sanders, M. S., & McCormick, E. J. (1998). Human factors in engineering and design. *Industrial Robot: An International Journal*.
5. Law, E. L. C., Roto, V., Hassenzahl, M., Vermeeren, A. P., & Kort, J. (2009, April). Understanding, scoping and defining user experience: a survey approach. In *Proceedings of the SIGCHI conference on human factors in computing systems*(pp. 719-728). ACM.
6. Wickens, C. D. (1996). Designing for stress. *Stress and human performance*, 279-295.
7. Kim, J. W., & Jung, W. (2003). A taxonomy of performance influencing factors for human reliability analysis of emergency tasks. *Journal of Loss Prevention in the Process Industries*, 16(6), 479-495.
8. Woodcock, B., & Au, Z. (2013). Human factors issues in the management of emergency response at high hazard installations. *Journal of Loss Prevention in the Process Industries*, 26(3), 547-557.
9. Kremer, K. (2017). Anticipative interfaces for emergency situations. *Information Design Journal*, 23(1), 32-38.
10. Nilsen, K. L., & Bjelland, H. (2006). Unpleasant emotions: Designing for stress The need for guidelines when developing products or systems for use in stressful situations. In *Design & Emotion Conference* (Vol. 2446).
11. Simões-Marques, M., Correia, A., Teodoro, M. F., & Nunes, I. L. (2017, July). Empirical studies in user experience of an emergency management system. In *International Conference on Applied Human Factors and Ergonomics* (pp. 97-108). Springer, Cham.
12. Simões-Marques, M., & Figueira, J. R. (2018, July). How Can AI Help Reduce the Burden of Disaster Management Decision-Making?. In *International Conference on Applied Human Factors and Ergonomics* (pp. 122-133). Springer, Cham.
13. Xu, S., Song, F., Li, Z., Zhao, Q., Luo, W., He, X., & Salvendy, G. (2008). An ergonomics study of computerized emergency operating procedures: presentation style, task complexity, and training level. *Reliability Engineering & System Safety*, 93(10), 1500-1511.
14. Nass, C., Jung, J., Groen, E. C., Villela, K., & Holl, K. (2018). Interaction Modes for Emergency Mobile Apps. *Mobile Information Systems*, 2018.

TENTATIVE WEEKLY CLASS SCHEDULE

Week	Date	Topics
1	Sep 16 – 20	Course introduction
2	Sep 23 – 27	Discussion on the assigned readings
3	Sep 30 – Oct 4	Discussion on the assigned readings
4	Oct 7 – 11	Preliminary assessment for the literature survey
5	Oct 14 – 18	Discussion on assigned readings
6	Oct 21 – 25	Discussion on assigned readings
7	Oct 28 – Nov 1	Presentation of literature search
8	Nov 7 – 11	Searching for UX design cases in emergency situations
9	Nov 14 – 18	Determining the assessment methodology
10	Nov 21 – 25	Discussion on selected cases
11	Nov 28 – Dec 1	Presentations on UX design case analysis
12	Dec 4 – 8	Comparing and synthesizing the results of literature search and UX cases analysis
13	Dec 11 – 15	Identifying initial guidelines
14	Dec 18 – 22	Discussion on the proposed guidelines and refinement
		Final Report due by Dec 28

Academic Integrity

Students are expected to follow Koç University policy for academic conduct. Please review the information provided on the University main homepage from the following links:

Rules and Regulations: <http://dos.ku.edu.tr/regulations>

Classroom Code of Conduct: <http://vpaa.ku.edu.tr/academic/classroom-code-of-conduct>

Student Code of Conduct: <http://vpaa.ku.edu.tr/academic/student-code-of-conduct>

Academic Dishonesty

Koç University Statement on Academic Honesty with Emphasis on Plagiarism

Koç University expects all its students to perform course-related activities in accordance with the rules set forth in the Student Code of Conduct (<http://vpaa.ku.edu.tr/academic/student-code-of-conduct>). Actions considered as academic dishonesty at Koç University include but are not limited to cheating, plagiarism, collusion, and impersonating. This statement's goal is to draw attention to cheating and plagiarism related actions deemed unacceptable within the context of Student Code of Conduct:

All individual assignments must be completed by the student himself/herself, and all team assignments must be completed by the members of the team, without the aid of other individuals. If a team member does not contribute to the written documents or participate in the activities of the team, his/her name should not appear on the work submitted for evaluation.

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Assist Prof Dr. **Aykut Coşkun**, e-mail: aykutcocukun@ku.edu.tr

Office: SOS Z11C, hours: Tuesdays 15.30-16.30

Phone: 0 212 338 1186

Plagiarism is defined as ‘borrowing or using someone else’s written statements or ideas without giving written acknowledgement to the author’. Students are encouraged to conduct research beyond the course material, but they must not use any documents prepared by current or previous students, or notes prepared by instructors at Koç University or other universities without properly citing the source. Furthermore, students are expected to adhere to the Classroom Code of Conduct (<http://vpaa.ku.edu.tr/academic/classroom-code-of-conduct>) and to refrain from all forms of unacceptable behavior during lectures. Failure to adhere to expected behavior may result in disciplinary action.

There are two kinds of plagiarism: Intentional and accidental. Intentional plagiarism (Example: Using a classmate’s homework as one’s own because the student does not want to spend time working on that homework) is considered intellectual theft, and there is no need to emphasize the wrongfulness of this act. Accidental plagiarism, on the other hand, may be considered as a ‘more acceptable’ form of plagiarism by some students, which is certainly not how it is perceived by the University administration and faculty. The student is responsible from properly citing a source if he/she is making use of another person’s work.

If you are unsure whether the action you will take would be a violation of Koç University’s Student Code of Conduct, please consult with your instructor before taking that action.