Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
INF 606	Affective Computing	2	3	0	0	3	8

Prerequisites	
Admission Requirements	

Language of Instruction	English
Course Type	Elective
Course Level	Doctoral Degree
Objective	Emotions are a key determinant of human interaction. Affective computing is the study of the impact of emotions on intelligent, interactive computer systems. The course aims to provide students with a basic understanding of emotion models and to help them understand how technology can enhance a user's ability to interact emotionally and socially with a computer. It provides students with information about the background and various types of affective computing research, and offers insights from different perspectives, such as interpreting and conveying emotional information and simulating internal emotions using machine learning methods. Students will demonstrate their ability to understand and analyze affective computing systems and to solve problems arising from uncertainties related to emotions. Additionally, as a term project, they will design, develop, and evaluate their own affective computing applications.
Content	This course teaches students how to develop technologies that help people measure and communicate their emotions. It demonstrates how affective computing works, various methods for detecting a user's emotional states, how emotional states can be generated on a computer through affective information processing, and how computers can interact with users based on the detection and changes in their emotional states. Students will research and evaluate various affective computing methods. The course includes hands-on lab sessions and projects.
References	Picard R., Affective Computing, MIT Press, Jeon, M, Emotions and Affect in Human Factors and Human-Computer Interaction. Academic Press, 2017 Calvo, R., D'Mello, S., Gratch, J. and Kappas, A., The Oxford Handbook of Affective Computing. Oxford University Press.2014

Theory Topics

Week	Weekly Contents
1	Human-Computer Interaction: General Concepts
2	Fundamentals of Affective Informatics
3	Emotion Recognition Using Physiological Signals
4	Emotion Recognition Using Physiological Signals: study on literature and collected data
5	Emotion Recognition from Facial Expressions
6	Emotion Recognition from Facial Expressions: study on literature and collected data
7	Emotion Recognition from Voice and Speech Cues
8	Emotion Recognition from Voice and Speech Cues: study on literature and collected data
9	Sentiment Analysis of Text
10	Sentiment Analysis of Text: study on literature and collected data
11	Multi-Modal Emotion Recognition
12	Multi-Modal Emotion Recognition: study on literature and collected data
13	Future Projections for Artificial Intelligence and Affective Computing
14	Project Presentations