# IC2008 Känslobaserad interaktion 7,5 hp

**Affective Interaction**

## Fastställande

Kursplan för IC2008 gäller från och med VT09

## Betygsskala

A, B, C, D, E, FX, F

## Utbildningsnivå

Avancerad nivå

## Huvudområden

## Särskild behörighet

Eligibility

For students not enrolled in a programme at KTH:

Completed upper secondary education included documented proficiency in English, and 180 ECTS credits (hp) from academic studies in Information Technology/Computer Science/Computer and Systems Sciences are required.

## Undervisningsspråk

Undervisningsspråk anges i kurstillfällesinformationen i kurs- och programkatalogen.

# Lärandemål

Course goals

Upon the completion of the course, the student should be able to:
• Design, implement and evaluate systems that address, relate to or influence user emotions
• Explain relevant emotion theories and apply them to the design of affective interactive systems
• Reflect upon and provide a coherent argument on how existing IT-application in affective interactive systems as well as other media, such as arts, cinema, music, address and influence user emotions
• Be aware of and be able to apply practical design knowledge and methods specifically aimed at affective interactive systems
• Reflect on the implications of affective interactive systems on human values, such as privacy, autonomy and equity, as well as on attitudes and behaviours in society
• Scientifically describe a designed affective interactive functionality and relate it to relevant literature and theories in the area

# Kursinnehåll

Course contents

The course will start with a set of lectures (some by invited guest lecturers) laying out the foundations in:
· Affect and cognition (Damasio, Cline, OCC-model, etc)
· Neurology
· Affect as expressed by bodily behaviors (Laban), speech (Cowie et al.), facial expressions (Ekman) in humans
· The role of affect in games, narratives, (Persson et al.)
· Affective interactive system examples (Paiva et al, Picard et al., Höök et al., and others)
· Methods for developing affective interactive systems (prototyping with tiny fingers, Wizard of Oz studies, user and function analysis, etc.)
Participants in the course are then required to work with developing project ideas using methods such as:
· how to describe and understand characteristics of the end-user group (e g Cooper, 1999),
· brainstorming, such as Random Words(http://www.randomwordgenerator.com/index.html),
· early idea evaluation, such as Six Thinking Hats (deBono, 1985),
This will result in a project description that should be referring back to the theoretical literature on affect and interaction. This project description will be the examination for the first 2 credits of the course. The course will then mainly be driven by the project work that the students implement in close collaboration with an interdisciplinary teacher team (interaction designers, HMI-experts, and software developers). The project will require lightweight user studies, workshops for interaction design and independent programming/simulation work. The project will be examined from all three perspectives, rendering another 3 credits.
Typical methods for these three phases of the project will be:
· user-centred design, such as Contextual Design(Beyer and Holzblatt, 1999) providing real-life (light-weight ethnography) input to the specific scenarios or into specific settings, such as the home (Gaver and Dunne, 1999),

· early (drama and paper-based) development of ideas for user-testing, such as Prototyping with Tiny Fingers (Rettig, 1994) or drama (Iacucci et al., 2002),
· design approaches, such as making use of ambiguity for open interpretation of affective expressions (Gaver et al., 2003)
· fake system testing for end-user interaction, such as the Wizard-of-Oz method (Dahlbäck et al, 1993, Andersson et al., 2002)

# Kursupplägg

Course disposition

The course will start with a set of lectures (some by invited guest lecturers).
In the second part of the course, participants are required to work with developing project ideas.

# Kurslitteratur

Course literature

The reading material will be a set of chapters from books and research papers.
We also require that students look for research papers in the ACM digital library and other sources to develop their own project idea.

# Examination

- TEN1 - Tentamen, 3,0 hp, betygsskala: A, B, C, D, E, FX, F
- LABA - Laborationer, 4,5 hp, betygsskala: P, F

Examinator beslutar, baserat på rekommendation från KTH:s handläggare av stöd till studenter med funktionsnedsättning, om eventuell anpassad examination för studenter med dokumenterad, varaktig funktionsnedsättning.

Examinator får medge annan examinationsform vid omexamination av enstaka studenter.

När kurs inte längre ges har student möjlighet att examineras under ytterligare två läsår.

Examination comment

The grading scale for this course is A, B, C, D, E, Fx, F. For a passing grade on the course it is required that all assignments and the exam has a passing grade.Students that are estimated to be close to a passing grade are given the opportunity to complete their examination. This means that the student may be given a passing grade (E), but no higher grade. The course principal informs the eligible students when the exam results are announced. The option to complete is limited in time and can only influence the current examination.The grade of the theoretical part will be weighed together with the grade of the practical part for each student.

# Övriga krav för slutbetyg

Requirements for final grade

The grade of the theoretical part will be weighed together with the grade of the practical part for each student.

## Etiskt förhållningssätt

- Vid grupparbete har alla i gruppen ansvar för gruppens arbete.
- Vid examination ska varje student ärligt redovisa hjälp som erhållits och källor som använts.
- Vid muntlig examination ska varje student kunna redogöra för hela uppgiften och hela lösningen.