SYLLABUS

Usability 7.5 credits P7031A

Användbarhet

Course syllabus admitted: Autumn 2019 Sp 1 - Spring 2021 Sp 4

DECISION DATE
2019-02-18

Luleå University of Technology 971 87 Luleå, Sweden
Phone: +46 (0)920 49 10 00 • Corporate Identity: 202100-2841

LULEÅ TEKNISKA UNIVERSITET

Usability 7.5 credits P7031A

Användbarhet

Second cycle, P7031A

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Industriell design	Other Subjects within Technology

Entry requirements

At least 120 credits in the subject Design Engineering which should include the course Human-Machine-Interaction (P0067A) or equivalent.

Selection

The selection is based on 30-285 credits

Examiner

Jörgen Normark

Course Aim

The aim of the course is to develop and deepen the student's proven experience in the field of usability that is based on human conditions and needs.

Knowledge and understanding.
The student should after the course be able to:

- give an account of scientific methods for measuring and evaluating the usability of a system or a product.
- describe the work environment-related, social, societal, ethical and economic implications that can affect users or company because of poor usability.
- have an understanding of relevant research in usability.

Skills and ability.
The student should after the course be able to:

- select and apply scientific methods for measuring and evaluating the usability of a system or a product, be able to perform the necessary data processing using advanced knowledge in mathematics and statistics.
- present the results of usability evaluations, orally and in writing.
- offer suggestions on improvements, orally and in writing, in the system for a better adaptation to human needs, conditions, understanding and user experience with a focus on usability and accessibility. Improvement proposals should be based on the student's previous knowledge and experience in product design and production.

Judgment and approach.
The student should after the course be able to:

- demonstrate capacity for critical analysis and evaluation of existing systems that require interaction with humans.
- demonstrate an ability to take a position on the aesthetic, perceptive and cognitive aspects on the basis of people's needs and environment considerations to meet good usability, accessibility and user experience.
- evaluate and select methods of evaluating usability.

Contents

The course deals with the concept of usability and its definition and theory related to this. Usability measurement as a tool for product and system development. The most important measuring methods and qualitative evaluation methods, their application and how data from these are processed and presented. How usability measurements might be affected by the user's individual requirements and properties such as needs, gender, age etc. Technology limitations and opportunities based on the conditions and needs as well as the responsibility to adapt the technical solution to these.

Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
Lectures regarding methods for usability, laboratory where measurements are demonstrated and practiced as well as problem solving in data processing and statistical analysis. During this course the students work individually and in project form in groups with usability problems in technical solutions. These usability problems are analyzed, evaluated, measurements are performed and processed, and a proposal of improvement measures are given. Results and conclusions as well as reflection on the relevance and nature of the deficiencies as well as insights into the skills that may need to be obtained in order to get to the heart of usability problems are reported orally and in writing. The students also get insight into current research and development activities with a focus on usability within LTU through guest lectures or laboratory work with relevant scientists. If the option is available to students ' own usability measurements may be carried out within a research project.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided.
The written and oral reports examine the student's knowledge and understanding of the factors that form the basis for good usability as well as the implications of poor usability, the ability to critically analyze systems with respect to usability from the human point of view, critical selection of methods for analyzing and evaluating system, the ability to implement a good usability evaluation, as well as the ability to use prior knowledge to make suggestions based on relevant theory. The presentation of these assignments examine also the students ' ability to reflect on the choices made and the knowledge that would need to be obtained for continued learning.

Remarks

Students must register for the courses themselves, or contact ETKS educational administration eduetks@ltu.se , not later than three days after the quarter commences. Failure to do so can result in the place being lost. This rule also applies to students with a guaranteed place.

Overlap

The course P7031A is equal to D7019A

Literature. Valid from Spring 2018 Sp 4

Tullis, T. & Albert, B. (2013). Measuring the User Experience,
Collecting, Analyzing, and Presenting Usability Metrics. Burlington MA: Elsevier.
Patrick Jordan (1998) An Introduction to Usability. ISBN 9780748407620
PMs, articles and exercises.

Course offered by

Department of Social Sciences, Technology and Arts

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Written presentation	G U 3 4 5	6	Mandatory	A09	
0002	Oral presentation	G U 3 4 5	1.5	Mandatory	A09	

Last revised

by Director of Undergraduate Studies Daniel Örtqvist, Department of Business Administration, Technology and Social Sciences 2019-02-18

Syllabus established

The syllabus has been confirmed by the Department of Human Work Sciencies 2008-12-02