

# Human Factors (Samskipti Manns og Tölvu)

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## Course Material

**Wickens, C.** and Hollands J. G. (2000). *Engineering Psychology and Human Performance* (3<sup>rd</sup> ed.). Upper Saddle River, NJ: Peterson Education.

**Sharp, H., Rogers, Y., and Preece, J.** (2007). *Interaction Design (2nd edition)*. Hoboken, NJ: John Wiley and Sons, Inc.

Various articles and book chapters (photocopies/links provided).

**For pleasure:** Norman, D. (2002). *The design of everyday things*. Basic Books.

Vicente, K. (2005). *The Human Factor*. Routledge.

## Class Evaluation

A minimum grade of 5 is required in term assignments. An average grade of 6 is required in the course.

### Course assignment (in three parts) 30%

This is a group assignment, group sizes 2-4 persons. You get 2-3 weeks for each part.

Assignments will be handed out September 3<sup>rd</sup>, October 8<sup>th</sup> and November 13<sup>th</sup>.

### Student presentation 10%

Individual assignment. Each presentation around 10 minutes. Subjects assigned in first lesson. *If you don't have a subject CONTACT ME!*

### Final exam 60%

## Lesson Organization

Lectures will be twice a week; Tuesdays and Wednesdays. I want to encourage you to discuss and criticize, to suggest and to argue during lectures!

## Class Organization

### Week 1

August 25<sup>th</sup>

Introduction to the course and Human Factors.  
Chapters 1 in Wickens and 1 and 3 in Sharp.

August 27<sup>th</sup>

Introduction to Human Factors continued.

### Week 2

September 1<sup>st</sup>

User centered design.  
Chapters 2, 9 and 10 in Sharp.

September 3<sup>rd</sup>

User centered design.  
Part I of assignment assigned.

### Week 3

September 8<sup>th</sup>

Human Information Processing  
Attention.  
Chapter 3 in Wickens.

September 10<sup>th</sup>

Attention contd.  
Student lecture – [www.skjarinn.is](http://www.skjarinn.is)  
Sveinn

### Week 4

September 15<sup>th</sup>

Memory.  
Chapter 7 in Wickens

September 17<sup>th</sup>

Memory  
Chapter from Norman

### Week 5

September 22<sup>nd</sup>

Decision making and display design  
Chapter 8 in Wickens

September 24<sup>th</sup>

Decision making and display design  
Articles by Rasmussen and Fadier and La Garza

### Week 6

September 29<sup>th</sup>

Decision making and Representing information  
Chapter 4 and 9 in Wickens.

October 1<sup>st</sup>

Representing information a.k.a. Communication  
Part I of assignment handed in.  
Chapter 6 in Wickens  
Video presentation – Roesling

**Week 7**

October 6<sup>th</sup>  
Human Error and Workload  
Chapters 11 and 12 in Wickens

October 8<sup>th</sup>  
Workload and Stress  
Part II of assignment assigned.

**Week 8**

October 13<sup>th</sup>  
Complex systems - Manual Control  
Chapters 10 and 13 in Wickens

October 15<sup>th</sup>  
Manual Control and Automation

**Week 9**

October 20<sup>th</sup>  
Reinforcement of behavior  
<http://allpsych.com/psychology101/learning.html>  
[http://employees.csbsju.edu/tcreed/pb/schedule\\_s.html](http://employees.csbsju.edu/tcreed/pb/schedule_s.html)  
Design evaluation – What to measure, when and why?  
Chapters 12 and 13 in Sharp

October 22<sup>th</sup>  
Design evaluation – What to measure, when and why?

**Week 10**

October 28<sup>th</sup>  
Usability metrics - Design  
Chapters 7 and 8 in Sharp  
Part II of assignment handed in.

October 30<sup>th</sup>  
Usability metrics – Usage (incl. Questionnaires)  
Demonstrations!

**Week 11**

November 4<sup>th</sup>  
Usability studies  
Chapters 14 in Sharp

November 6<sup>th</sup>  
Usability studies

**Week 12**

November 13<sup>th</sup>  
Usability testing  
Chapters 14 and 15 in Sharp  
Part III of assignment assigned

November 14<sup>th</sup>  
Usability evaluations  
Methodology  
Articles by Vicente and Molich

**Week 13**

November 20<sup>th</sup>  
Return on investment of Usability  
Chapters from Bias and Mayhew

November 21<sup>st</sup>  
ROI of Usability

**Week 14**

November 27<sup>th</sup>  
The top steps in the Human Tech ladder  
Chapter from Vicente

November 28<sup>th</sup>  
The top steps in the Human Tech ladder

**Week 15**

December 4<sup>th</sup>  
Results, Human Factors Ethics  
Part III of assignment handed in

December 5<sup>th</sup>  
Revision