





Computer Science (COMP) 482

Human Computer Interaction (Revision 6)

Status:

Replaced with new revision, see the [course listing](#)  for the current revision 

Delivery mode:

Individualized study online 

Credits:

3

Area of study:

Science

Prerequisites:

COMP 206 or **COMP 268** and **COMP 361** or permission of the coordinator.

Precluded:

None

Challenge:

COMP 482 has a challenge for credit option.

Faculty:

[Faculty of Science and Technology](#) 

Notes:

Students who are concerned about not meeting the prerequisites for this course are encouraged to contact the **course coordinator** before registering

Overview

This course teaches students to design user interfaces based on the capabilities of computer technology and the needs of human factors. Students design a user interface for a system and implement a prototype from a list of informal requirements. The project is developed over three assignments by a design process based on current human–computer interaction principles.

Outline

Unit 1: Foundations of Human–Computer Interaction

- Section 1: Human Capabilities
- Section 2: The Computer
- Section 3: The Interaction
- Section 4: Paradigms

Unit 2: The Design Process

- Section 1: Interaction Design Basics
- Section 2: HCI in the Software Process
- Section 3: Design Rules
- Section 4: Universal Design

Unit 3: Implementation Support

- Section 1: Implementation Tools

Unit 4: Evaluation and User Support

- Section 1: Evaluation
- Section 2: User Support

Unit 5: Users Models

- Section 1: Cognitive Models
- Section 2: Socio-organizational Issues and Stakeholder Requirements

Unit 6: Task Models and Dialogs

- Section 1: Analyzing Tasks
- Section 2: Dialog Notations and Design

Unit 7: Groupware, Ubiquitous Computing, Virtual and Augmented Reality, Hypertext and Multimedia

- Section 1: Groupware and Computer-supported Collaborative Work
- Section 2: Ubiquitous Computing
- Section 3: Virtual Reality and Augmented Reality
- Section 4: Hypertext, Multimedia and the World Wide Web

Learning outcomes

Upon completion of the course, students should be able to:

- Explain the capabilities of both humans and computers from the viewpoint of human information processing.
- Describe typical human–computer interaction (HCI) models and styles, as well as various historic HCI paradigms.
- Apply an interactive design process and universal design principles to designing HCI systems.
- Describe and use HCI design principles, standards and guidelines.
- Analyze and identify user models, user support, socio-organizational issues, and stakeholder requirements of HCI systems.
- Discuss tasks and dialogs of relevant HCI systems based on task analysis and dialog design.
- Analyze and discuss HCI issues in groupware, ubiquitous computing, virtual reality, multimedia, and World Wide Web-related environments.

Evaluation

To **receive credit** [↗](#) for COMP 482, you must achieve a course composite grade of at least **D (50 percent)** [📄](#), including a grade of 50 percent on the final examination and a grade of at least 50 percent on each of the assignments. The weighting of the composite grade is as follows:

Activity	Weight
Assignment 1	25%
Assignment 2	25%
Assignment 3	20%
Final Exam	30%
Total	100%

The **final examination** for this course must be requested in advance and written under the supervision of an AU-approved exam invigilator. Invigilators include either ProctorU or an approved in-person invigilation centre that can accommodate online exams. Students are responsible for payment of any invigilation fees. Information on exam request deadlines, invigilators, and other exam-related questions, can be found at the **Exams and grades** [↗](#) section of the Calendar.

To learn more about assignments and examinations, please refer to Athabasca University's **online Calendar** [↗](#).

Materials

Dix, A., Finlay, J., Abowd, G.D., & Beale, R. (2004). *Human computer interaction* (3rd ed.). Prentice Hall. ISBN 0-13-046109-1. <http://www.hcibook.com/e3/plain/about/book/> [📄](#) (Print)

Sharp, H. Preece, J., and Rogers, Y. (2019). *Interaction design: Beyond human-computer interaction* (5th ed.) John Wiley & Sons Ltd. ISBN 978-1-119-54730-3. (referred to as *Interaction* in the study guide) <http://>

Special Course Features

The remainder of the learning materials for Computer Science 482 are distributed in electronic format. Those materials will include:

- *Computer Science 482 Study Guide.*
- Detailed descriptions of the requirements for the individual assignments.
- A course evaluation form is on the World Wide Web.

Additional supporting materials of interest to students of Computer Science 482 may occasionally be made available electronically. COMP 482 is offered by computer mediated communications (CMC) mode and can be completed at the student's workplace or home. Students are expected to supply their own software for their projects.



Challenge for credit

Overview

The challenge for credit process allows you to demonstrate that you have acquired a command of the general subject matter, knowledge, intellectual and/or other skills that would normally be found in a university-level course.

Full information about [challenge for credit](#)  can be found in the Undergraduate Calendar.

Evaluation





To **receive credit**  for the COMP 482 challenge registration, you must achieve a grade of at least **D (50 percent)**  on the examination and D (50 percent) on the project.

Activity	Weight
Project	50%

Activity	Weight
Exam	50%
Total	100%

 **Challenge for credit course registration form**

Important links

- > [Academic advising](#) 
- > [Program planning](#) 
- > [Request assistance](#) 
- > [Support services](#) 

Athabasca University reserves the right to amend course outlines occasionally and without notice. Courses offered by other delivery methods may vary from their individualized study counterparts.

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View [previous revision](#) 
