

Studio Course Syllabus/Course Outline

Course title	Core Studio Interaction Design		
Course mnemonic	INTD 210	Day + time	T 12:30PM - 3:20PM F 1:00PM - 3:50PM
Section number	S002	Term start date	January 5, 2017
Credits	6	Term end date	April 22, 2017
		Location	SB 392
Prerequisites			

Instructor Information

Instructor	Sabrina Hauser Markus Schilling	Email	shauser@ecuad.ca markusschilling@ecuad.ca
Office number	TBA	Office hours	Per appointment
Office telephone	NA		

Website Catalogue Description | www.ecuad.ca

Course Content

Interaction design is a sub-discipline of design that is concerned with the design of artifacts, products, systems, environments, and services that ought to be interacted with. Herbert Simon's well-cited definition characterizes design as aiming to '*change existing situations into preferred ones*' (Simon, 1969) and brought forward a notion of design being concerned with '*how things ought to be*' as standing in opposition to the natural sciences, which are concerned with 'how things are'.

Design is a solution-oriented discipline, which uses many different methods to arrive at a design result following a to some extent generalizable process. Moreover, design is concerned with real and evolving lifeworld complexity filled with "potentially infinite and limitless sources of information, requirements, demands, wants and needs, limitations, and opportunities" (Stolterman 2008). This is often characterized as dealing with '*wicked problems*', a term coined by Rittel and Webber (1973) describing ambiguous and complex real-world problems. In the complexity and wickedness design operates in, designers find a(!, not 'the') solution to a problem. This solution has been termed *ultimate particular*. Nelson & Stolterman (2003) describe: "[d]esign is a process of moving from the particular, general and universal to the *ultimate particular*-the specific design" (ibid, p33) when implementing '*intentional change in an unpredictable world*' (ibid, book title).

Despite being situated in complex real-world situations and the reflective and in ways subjective nature of design, there are general processes, methodologies, and tools used in design endeavors. In fact, design has been acknowledged as a discipline and area of knowledge production on par with science and art having its own epistemological traditions of inquiry and action (Cross, 1982; Nelson & Stolterman, 2003) entailing '*reflection in and on action*' (Schön, 1983). Within the practice and tradition of design, '*designerly ways of knowing*' (Cross, 1982) are at play, which entail fundamental and strategic actions such as 'interpretation and measurement', 'imagination and communication', 'judgment', 'composing and connecting', and aspects of 'craft and material' (Nelson and Stolterman, 2003).

In this course, students will deepen their understanding of interaction design and interaction design practice, revisit the design process and develop further their practice as designers-to-be. Students will engage into three consecutive interaction design projects and master techniques and methods including research methods like user research and secondary research, empathy building techniques like personas and scenarios, analysing techniques like Kano analysis and information architecture, design techniques for graphical user interfaces, concept iterations, prototyping techniques, and presentation and evaluation techniques.

Course Design Projects

There are three studio projects for the course; one is developed individually and two are group-based. Students will work in class to share theory, process, methods, and resources. Each project focuses on a different aspect of interaction design as well as a

different part of the design process. This way students will gain an insight into different design disciplines while getting familiar with the single parts of iterative design process.

Project 1: Re-design an Application

This project is individual work. Using UI design tools and strategies (Kano model, Flow Charts, Personas, etc), students will analyze, restructure, and redesign a software or app with a specific user and user scenario in mind. Through GUI development (type, icons, color) and rapid prototyping tools, the outcome of the project will be a small, interactive redesign of the software or app.

Project 2: Exploring Interaction

This project is group work. Students will design and build a physical interface to control a HSB color picker. Next to learning practical building and electronic prototyping skills, students will engage with form, material, and affordances of a user interface. The outcome of the project is a physical interface to control a Processing sketch that displays the selected color.

Project 3: Designing Futures

This project is group work. Students will leave the grounds of design projects driven by efficiency and productivity and learn how interaction design projects can be explorative by either applying other design theories (e.g., Slow Technology, Ludic Design) or by exploring the possibilities of cutting edge or future technology. In the course students will receive a detailed project topic and assignment description. The outcome of the project will take the form of either a concept movie, a prototype, or screen designs.

Method and Format

Instructional methods of this studio course are:

- Faculty-led short lectures, presentations, discussions, demonstrations, reviews, and critiques
- In-class studio work on projects and exercises, which may include a combination of project production, one-on-one/group tutorials, and desk critiques
- Student presentations and critiques

The course is divided into two 3-hour weekly studio classes. Topics, case examples, demonstrations and design challenges are introduced in class. Attendance and participation is required and critical to learning and success. Students who do not regularly attend and participate are unlikely to achieve their full potential or pass the course. Students are responsible for managing their time effectively, and for maintaining an inviting and respectful work environment. For every hour of course contact you should expect to work a minimum of two to three additional hours per week on your own. Students are expected to complete and document three design projects.

Course Learning Outcomes

Since the course covers many facets of interaction design practice, the learning outcomes are as manifold as they are vital for design practice. Since interaction design is a very broad field and can be applied in many different forms and fields, it is important to understand the varied applications and implications of interaction design. Therefore the three projects in this course all have a different focus:

Redesigning an application- *Understanding user needs for a software or application. Focus on examining and restructuring a software and designing a UI (Type, Color, Icons).*

Exploring Interaction - *Understanding and designing the counterpart of UI design. Focus on Form, Material, Affordances and electronic prototyping to test and evaluate the design.*

Designing Futures - *Understanding design approaches that stand in opposition to generic design approaches. Focus on invention and ethics of design practice while designing the future.*

As an introductory course to Interaction Design, these project will give the students an understanding of the depth and breadth of IxD - while at the same time equip them with the necessary tools and theories to understand, handle, and communicate their future projects.

Methods and techniques covered in this course may include but are not restricted to:

Personas, Icons/Type/Color in UI Design, Wireframing, Flowcharts, Use Cases, User Scenarios, Arduino, Processing, Material/Form/Affordances in Physical Interfaces, Storyboarding, (Electronic) Prototyping tools, Ethics in Design, Theories of design (e.g. Critical Design / Slow Technology / Reflective practice), Adobe Creative Suite (Fireworks, Photoshop, Illustrator, After Effects).

Resource Materials

Materials needed

- Markers for sketching
- Sketchbook (one designated for this course only)
- Post-its
- Emily Carr print and photocopy card
- Digital camera (or smart phone camera)
- Laptop with Adobe Creative Suite Master Collection 6 and a productivity suite such as iWork, Microsoft Office or OpenOffice
- Digital storage media such as a flash drive, memory stick, CD-Rs or external drive for backup
- Arduino Board (preferably Arduino UNO) + needed sensors (will be discussed in class)

Selected Recommended References

- Banzi, Massimo. *Getting Started with Arduino*. O'Reilly Media (2009).
- Bret, Victor, *A Brief Rant on the Future of Interaction Design*, 2011.
- Hanington, Bruce, and Bella Martin. *Universal methods of design: 100 ways to research complex problems, develop innovative ideas, and design effective solutions*. Rockport Publishers, 2012.
- Kolko, Jon. *Thoughts on interaction design*. Morgan Kaufmann, 2010.
- Löwgren, Jonas, and Erik Stolterman. *Thoughtful interaction design*. (2004).
- Moggridge, Bill, and Bill Atkinson. *Designing interactions*. Vol. 14. Cambridge: MIT press, 2007.
- Norman, Donald A. *The design of everyday things: Revised and expanded edition*. Basic books, 2013.
- Nelson, H.G. and Stolterman, E., 2003. "The design way: Intentional change in an unpredictable world: Foundations and fundamentals of design competence". Educational Technology.
- Papanek, Victor. *Design for the Real World 2nd Edition*. (2005)
- Quesenbery, W. and Brooks, K., 2010. *Storytelling for user experience: Crafting stories for better design*. Rosenfeld Media.
- Saffer, Dan. *Designing for interaction: Creating innovative applications and devices (voices that matter)*. Berkeley, CA: New Riders (2009).
- Reas, Casey and Fry, Ben. *Processing: A Programming Handbook for Visual Designers and Artists*. The MIT Press (2007).

Note: Specific readings including parts of the above references and others will be assigned in class.

Evaluation Criteria

Design project grades account for 70% of the course grade. The projects' Process and Documentation account for 15%. Through Attendance, as well as Preparedness, Participation, and Motivation, students can achieve the remaining 15%. In the latter category students can also influence their overall grade negatively, e.g., in case of very poor participation.

Attendance	5 %
Preparedness, Participations, Motivation	-20 - 10%
Process & Documentation	15 %
Design Project 1 Re-design and Application	30 %
Design Project 2 Exploring Interaction	20 %
Design Project 3 Designing Futures	20 %
Total	100%

Evaluation Criteria Definitions

Attendance

Attendance is taken at the start of each class. "Class attendance at Emily Carr University is mandatory and unexcused absences may result in failure and/or suspension from the Institute."

The class starts at the scheduled times whether students are there or not. If students are late it will be noted and negatively affect their grade (and work!). Other than medical reasons there is no excuse for being absent and if a student misses several classes for medical reasons s/he should consider a medical leave or withdrawal for extenuating circumstances. Students are responsible for the class material.

Preparedness, Participation and Motivation

Students are expected to prepare for each class. Assigned readings should be done, requested work should be completed in stages as defined in class. Current project work should be organized so students can present it quickly.

Students are expected to be generally interested in learning to become a great designer and actively participate in class through engagement and interest in class lectures, responding to and asking questions and taking notes, class work and critique sessions, as well as respectful and helpful treating of classmates.

Process & Documentation

Students are expected to use a sketchbook (e.g., 11" x 14") on a daily basis for a range of purposes-for example: course notes, ideation processes, observational studies, practicing of techniques, concept sketches, different drawing strategies (conceptual, pictorial, orthographic), fabrication research and details, user criteria, critical observations of designs you see or use, and examples of designer's work that are sources of inspiration/information.

Additionally, for each design project of this class, students are expected to create a process booklet/ documentation, which will be marked.

Design Projects

There are three projects for the course; one is individually based, which accounts for 30% of the overall course grade, and two are team projects, which each accounts for 20% of the course grade. Usually, team members receives the same grade for a project. The grading of design projects is done by evaluation of the (differently weighed) several project stages and their deliveries (see table below).

The following table shows the maximum point values for items in this course:

	Project 1 30%	Project 2 20%	Project 3 20%
Research	10	5	30
Analysis	60	5	30
Concept	60	20	40
Iteration	40	50	20
Prototyping	30	50	10
Final Design Outcome	50	40	40
Final Presentation	50	30	30
<i>Total Project Points</i>	<i>300</i>	<i>200</i>	<i>200</i>
Attendance		50	
Attitude and Preparation		100	
Process and Documentation		150	

Total Possible
Points

1000

Grade Scale

Letter Grade

Grade Points

Percentage

Equivalent Description

Expanded Description

A+	4.33	95-100	Distinguished Achievement	For coursework of distinction, demonstrating a Distinguished, level of understanding of the subject matter, concepts, and techniques achieved in satisfying the learning objectives of a course.
A	4.00	90-94	Outstanding Achievement	For coursework of distinction, demonstrating an Outstanding level of understanding of the subject matter, concepts, and techniques achieved in satisfying the learning objectives of a course.
A-	3.67	85-89	Excellent Achievement	For coursework of distinction, demonstrating an Excellent level of understanding of the subject matter, concepts, and techniques achieved in satisfying the learning objectives of a course.
B+	3.33	80-84	Commendable Achievement	For coursework demonstrating a Commendable level of understanding of the subject matter, concepts, and techniques achieved in satisfying the learning objectives of a course.
B	3.00	75-79	Very Good Achievement	For coursework demonstrating a Very Good level of understanding of the subject matter, concepts, and techniques achieved in satisfying the learning objectives of a course.
B-	2.67	70-74	Good	For coursework demonstrating a Good level of understanding of the subject matter, concepts, and techniques achieved in satisfying the learning objectives of a course.
C+	2.33	65-69	Competent	Coursework demonstrates a competent level of understanding of the subject matter, concepts, and techniques achieved in satisfying the learning objectives of a course.

C	2.00	60-64	Satisfactory	Coursework demonstrates a satisfactory level of understanding of the subject matter, concepts, and techniques achieved in satisfying the learning objectives of a course.
C-	1.67	55-59	Pass	Coursework demonstrates a passing level of understanding of the subject matter, concepts, and techniques achieved in satisfying the learning objectives of a course.
D	1.00	50-54	Marginal Pass	Coursework demonstrates a marginal or barely adequate level of understanding and ability for satisfying the learning objectives of a course.
F	0.00	0-49	Fail	
Grade Notation				See below for grading definitions.
AEG			Aegrotat Standing	
P/F			Pass/Fail	
CR			Credit granted	
I			Incomplete Grade	
W			Withdrawal from a course	

DEFINITIONS - GRADING

Grade Point Average: A Grade Point Average (GPA) is an average of the grade point values earned for credit courses.

Semester Grade Point Average

The average of the grade point values that you have earned for all courses attempted in a semester.

Cumulative Grade Point Average

The average of the grade point values for all of the credit courses attempted while at ECU, including repeated courses.

Grade Point Average Calculation: Grade point values range from 0.00 (F grade) to 4.33 (A+ grade). Each letter grade has a corresponding value. GPA is calculated by taking the total amount of the grade point values assigned for grades and dividing that total by the number of credits earned.

Aegrotat grade (AEG): Aegrotat (AEG) standing may be used where a student is unable to complete their course work due to significant medical or other extenuating circumstances beyond their control. AEG may be used where a student has successfully completed a minimum of 60 percent of a course. A grade assignment of AEG will carry credit, and satisfy pre-requisite and degree requirements, but will be GPA neutral

Incomplete grade: Incomplete grades may be granted by the instructor, for cases where the student has been unable to complete the course work because of extenuating circumstances beyond their own control. Such circumstances may be medical or of a personal nature and the student may be required to provide documentary evidence.

Pass/Fail/Credit Grades - Grades of 'Pass' (P), 'Fail' (F) or 'Credit' (CR) may be assigned to select courses that identify P/F/CR as the grading method approved at Senate. Grades of P/F/CR are GPA neutral and will not impact grade point average positively or negatively.

Withdrawal from a course - Grades of 'W' will be assigned where a student officially de-registers from a course in advance of the withdrawal deadline each semester. Grades of W bear no academic penalty and will not be calculated as part of a student's GPA, but will appear on a student's academic transcript.

Additional Policies and Information

University Attendance Policy

You are required to attend all classes. Absence and lateness will affect your grade for the course. Therefore, you should be aware of the following criteria:

- You will receive a 5% penalty for each absence and a 2.5% penalty for each time that you are late for class.
- You will be considered late if you arrive after attendance is taken, when the class has formally begun. Furthermore, you are subject to the same penalty if you leave the session before it has properly ended.
- Being more than one hour late is equivalent to being absent.
- More than three unexcused absences in a class will result in failure of the course.
- To formally excuse an absence due to illness or emergency, students must phone or send an email to the instructor by the end of the day. You may be required to give proof of a legitimate excuse, such as a doctor's note.
- It is also your responsibility to determine what you missed and what you must do to complete any assigned work.

University Participation

100% attention is required during critiques and meetings. Thoughtful and serious engagement, critical thinking and sensitivity regarding other students and their work are crucial. You are expected to be present and engaged in every class, and well prepared for every meeting and critique.

Academic Accommodations

Accessibility Services (formerly Disability Services) provides accommodations to the learning environment for students with speech, hearing, visual, physical, mental health and neurological disabilities (learning, attention deficit hyperactivity disorder, autism spectrum disorders), as well as chronic health conditions and acquired brain injury. To receive an accommodation, students need to establish their eligibility through supporting documentation and become registered with the Accessibility Services Coordinator. An Accommodation Notice will be prepared for the student to submit to their Faculty. Faculty can then facilitate the accommodation. If you have a disability and have not yet registered with Accessibility Services, please visit <https://www.ecuad.ca/student-services/accessibility>

University General Policies

- Students must maintain an appropriate standard of conduct. They must demonstrate respect for all persons on the campus, and display mature conduct. All students must abide by the university's Student Conduct Policies and the university's Harassment Policies (see Emily's A to Z). Failure by students to maintain appropriate standards of conduct may result in the initiation of disciplinary action by the university. Instructors are responsible for managing the classroom. Students whose behaviour is disruptive, challenging or intimidating will be addressed and may be excused from class. If the behaviour continues, disciplinary measures (see Emily's A to Z) will be employed.
- The instructor may modify the material or schedule specified in this outline. Any changes will be announced in class.
- Late assignments or projects may be penalized as specified in the course outline.
- It is plagiarism to present someone else's work or ideas as one's own. Plagiarism may result in failure of an assignment, of the course, and, if repeated, expulsion from the university. Assistance with the ethical practices of attribution and documentation is available from the Writing Centre or online at www.ecuad.ca/wc
- A student may be required to provide proof of a legitimate excuse, such as a doctor's note, for illness or absence which causes any missed assignments, tests, projects, exams, etcetera, or for absences of more than two classes. At the discretion of the instructor, the student may complete the work for a prorated grade.
- Students must demonstrate that they understand and practice the safe use of tools and other equipment, materials, and processes used in their course projects. They must conduct themselves in a responsible manner that does not endanger themselves or others, and must adhere to area procedures regarding authorized operation of equipment, handling of materials, and use of space.
- Professional counselling and therapy is available at no charge to students who have concerns of a personal nature. Information shared is held in strict confidence. To make an appointment, call 604-630-4555 or email counselling@ecuad.ca or come in to the Counselling Centre.
- The Writing Centre is a service that Emily Carr provides to all students, staff, and faculty from every program area who would like to improve their reading, writing, critical thinking, and research skills. This is a free, voluntary, and confidential service. Writing Centre instructors can help you at every stage of your writing, from developing ideas to final revision. This applies to any kind of writing, from a three line artist's statement to a twenty page academic paper. Please check out the Writing Centre blog site for more information and to sign up for an appointment <http://blogs.eciad.ca/wc/> Telephone: 604-629-4511; Coordinator: Heather Fitzgerald

- Email is an official means of communication with Emily Carr students by faculty, administration and other service providers on campus. Email routing will be confined to the university's internal communication network, and delivered to an officially assigned and verifiable University Email Address. All users are bound by the provisions of Emily Carr Policy 415: Code of Conduct for Appropriate Use of Information Technology Facilities and Services (outlined on the Emily Carr website and in Emily's A to Z). Instructors will outline and detail the expected extent and parameters of email use in the course in the first class, and clarify the timeframe for checking and responding to emails.

- Emails will be answered in a timely manner, usually within 48 hours after receiving the email. Emails will not, however, be answered on weekends or the day before an assignment is due if the email relates to the assignment.

Important Dates

Important Dates:

January 3, Tuesday: University Reopens

January 5, Thursday: Spring semester classes begin

February 12-18, Sunday - Saturday - Study Week: No Classes

February 13, Monday - Family Day: University Closed

April 5, Wednesday - Last day of regularly scheduled classes

April 7 -13, Friday - Thursday - Critique, exam + assessment week

April 7 - 13, Friday - Thursday - Design Reviews - Final Critiques

April 7 - 13, Friday - Thursday - Review Panels for Visual Art, ILUS, PHOT, FVIM, ANIM, ISMA, CRCP + CGIA

April 14, Friday - Good Friday: University Closed

April 17, Monday - Easter Monday: University Closed

April 18-21, Tuesday - Friday - Assessment + grading week

April 18-21, Tuesday - Friday - Design review + assessment week (follow up, individual meetings with students, project documentation, and program events)

April 21, Friday - Spring Semester Ends

May 5, Friday- Graduation ceremony and exhibition opening