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IAT 882 TANGIBLE COMPUTING

Antle
Spring 2018

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IAT 882 Tangible Computing

- Introductions
 - Sneak Peak: What is Tangible Computing?
 - Course syllabus/schedule
 - What course is about
 - Assessment
 - How course relates to Educational Goals for SIAT graduate program (i.e. what you will learn and why)
 - Expectations
 - Academic integrity
-
- Workshop #1

Introductions

- Alissa Antle (Instructor)
- Elgin McLaren (TA)
- You: Name, degree/year, thesis topic, supervisor, why IAT 882? What do you hope to learn?

Tangible Computing

- Tangible, physical and embodied computing is about using physical objects to interact with digital computation ...
- Hybrid/mixed physical-digital interfaces, representations and forms
- Utilize a wide range of human abilities
- Tends to rely on embodied perspective on cognition
- Tend to be objects, surfaces, or environments out in the world



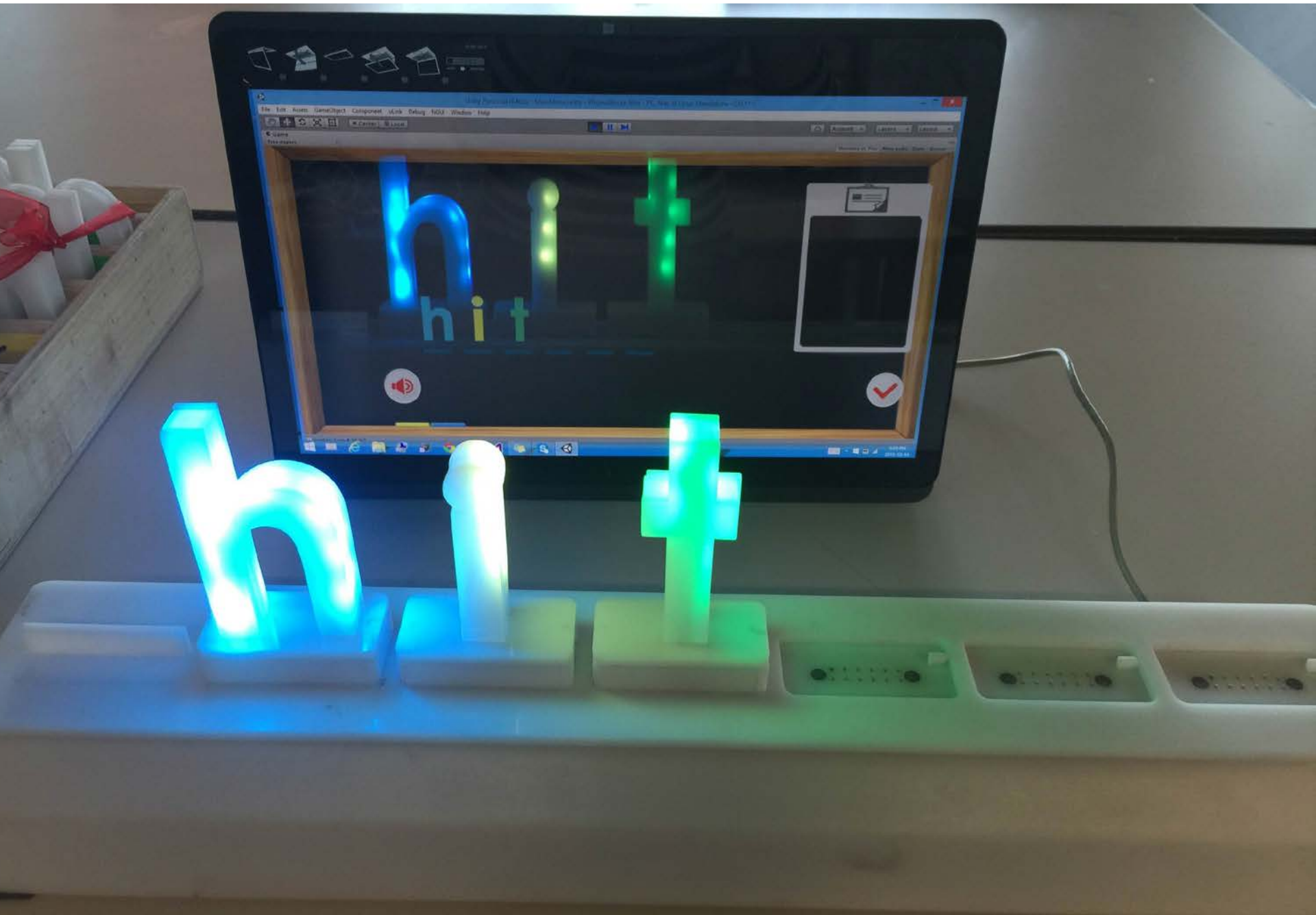






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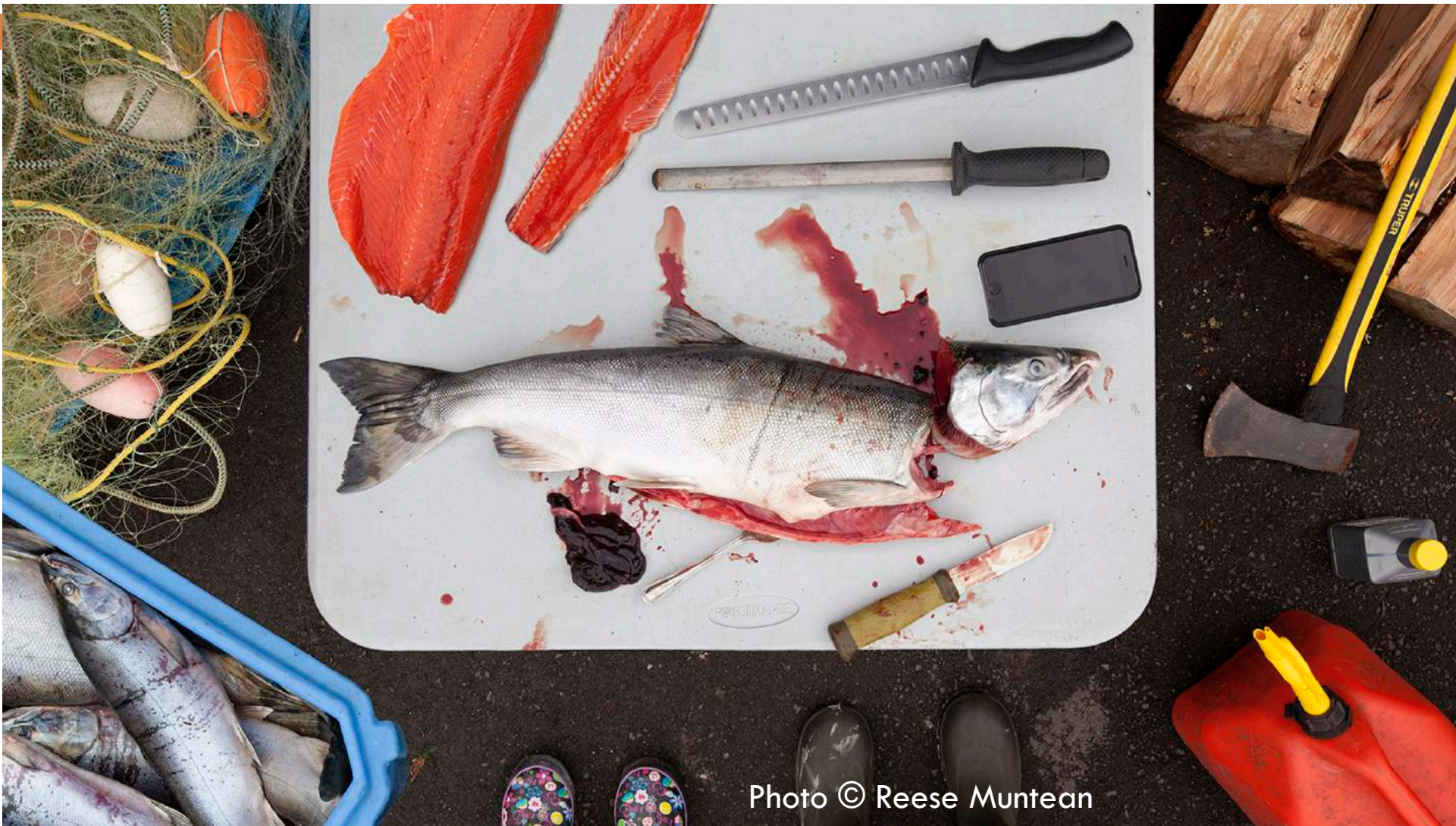


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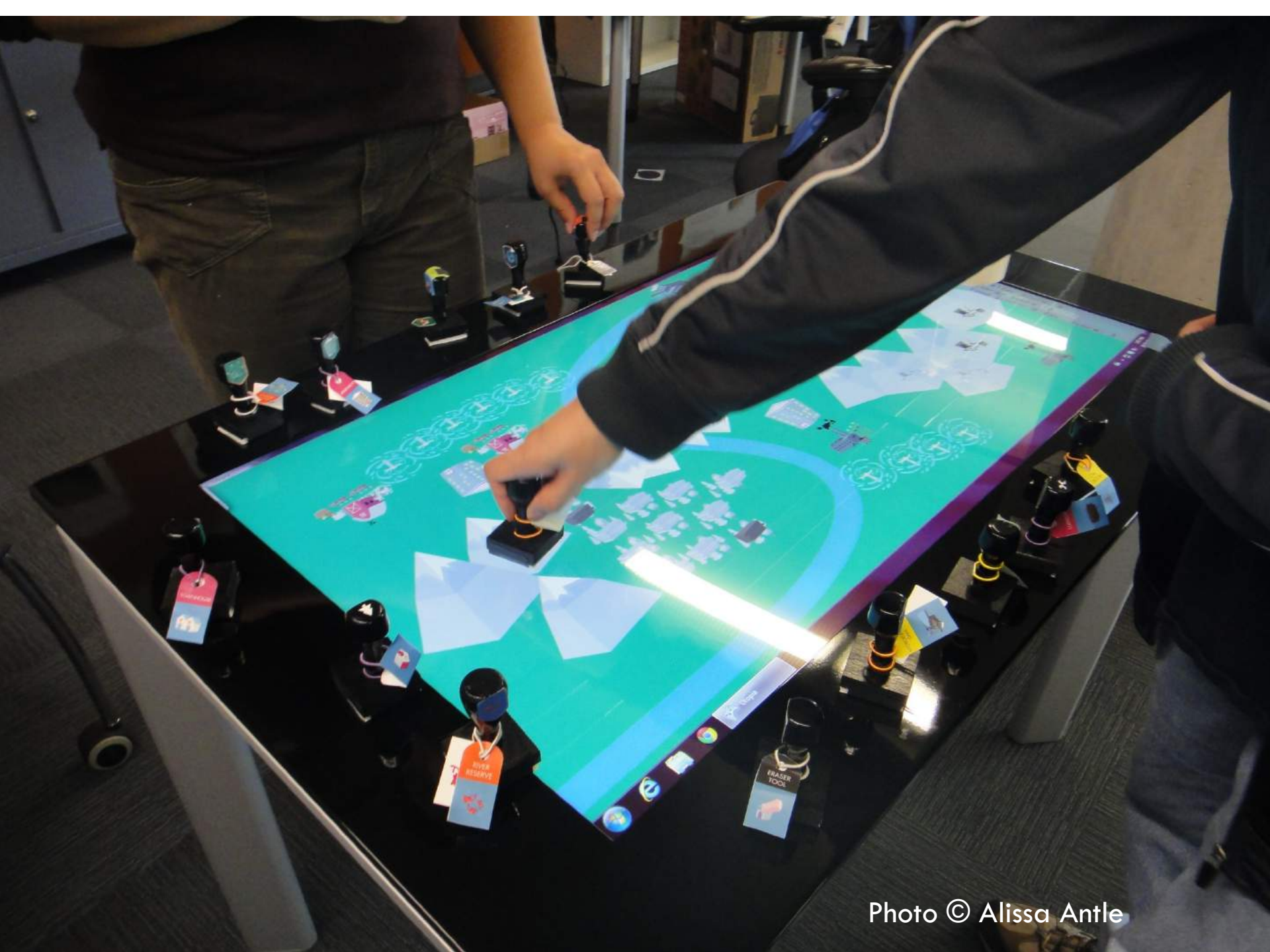






Photo © Saskia Bakker





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Come in all sorts of shapes and forms

- Each prototype addresses a specific research question(s) that solves a research problem
- Each is based on theories of how and why embodied interaction matters to cognition, learning, felt experience, emotion, values ... in humans.
- You're going to make a tangible research prototype ...

Course Syllabus/Schedule

- Schedule: <http://www.antle.iat.sfu.ca/courses/iat884/>
- Workshops:
<http://www.wiki.iat.sfu.ca/IAT884/index.php>
- Emailed links to students registered in course yesterday afternoon.

If didn't receive it:

1. You are not registered
2. Get it from someone in class

What's in the course

- Seminar: theories, frameworks, concepts, methodologies for designing and evaluating, exemplars, mine and other people research.
 - ▣ Based on readings, lectures, discussions, videos, prototype deconstructions, Q&A
 - ▣ Based on student analysis/presentations of papers
- Workshops: learn and practice technical skills in electronics, microprocessors, sensors, motors, communications etc
 - ▣ Based on readings, hand-outs, tutorials, exercises

What's in the course

- Project Proposal: a tangible prototype that is designed to (1) specifically address a research problem and a research question taken from the literature **and** (2) that is designed based on one or more concepts/theories of how humans think/perceive/feel/act according to embodied cognition
- Prototype: build, test, document (video)
- Paper: Argue why your prototype is a viable research instrument to address the research problem and question and how/why it is based on embodied cognition

Assessment

- Workshop exercises 10%
- Paper presentation 15%
- Prototype (and video) 40%
- Paper 35%

Educational Goals & 882

Educational Goals for IAT 882 (SIAT Graduate Program)

A. Research, Scholarship and/or Creative Production

Students will be able to:

- Master the substantive constituents of the chosen field of knowledge and/or creative practice [field: Tangible Computing and Embodied Interaction]
- Identify and conduct independent and original research, scholarship and/or creative practice
- Draw from and apply scholarly and artistic reference material

Educational Goals & 882

B. Methodological Tools and Processes

Students will be able to:

- Conduct their work using research methodological tools and processes appropriate to their disciplinary and/or interdisciplinary field
- Use iterative and integrative creative methods and processes where appropriate

Educational Goals & 882

C. Critical Thinking, Problem Solving, Oral and Written Communication and Dissemination

Students will be able to:

- Think critically and creatively, and identify and solve problems in their/**this** field of study.
- Demonstrate excellent communication skills in their field of study through scholarly writing, creative exhibitions and presentations.

Educational Goals & 882



D. Technical proficiency

Students will be able:

- To demonstrate their computational literacy through the use of a programming language and/or electronic prototyping frameworks [882: physical-digital prototypes]
- Choose and use technical tools and processes appropriate to their field of research and/or creative production.

Expectations

- ❑ Come to class prepared
- ❑ Come to class on time
- ❑ Turn off all external communications
- ❑ Take responsibility for your own learning
- ❑ Leverage your peers
- ❑ Do readings/ask questions about readings
- ❑ Be engaged, be polite, be curious!
- ❑ Advance notice if not at class
- ❑ Don't hand in things late – just don't.

Academic Integrity

- ❑ Plagiarism – if you borrow/copy ideas, words, designs, code, images, forms you must cite references, use quotes, and provide copyright information.
- ❑ Only use images/videos under CC or with permission.
- ❑ Doubling up – no submitting work for two courses
- ❑ Copying/cheating – do your own work
- ❑ Gear – Don't take anyone else's gear. If you lose/break gear tell us and replace it. Return gear at end of course in same condition. If you sign out gear return it.
- ❑ Speak/write respectfully to others – no matter what!
- ❑ Authorship – discuss/give credit .. Vancouver convention

SFU Policy

- Expect you to read and be familiar with SFU policy on Academic Honest and Integrity

<https://www.sfu.ca/policies/gazette/student/s10-01.html>

(google it and read it).