

# HIST9832: Interactive Exhibit Design

## Short Course Description

History 9832b is a studio course on interactive exhibit design, intended primarily for public historians and digital humanists. Students will learn how to create interactive exhibits through a series of hands-on projects that teach the basics of interaction design, physical computing, and desktop fabrication. No prior experience is necessary.

## Evaluation

You will be graded on three assignments, each worth 20%, due periodically throughout the course. In those assignments, you will document your application of the skills and technologies used in the course to that point. A larger project at the end of the course is worth 40%, and will reflect upon the development of your project, and implications of the technology, design and application. Your final grade will reflect how much you've learned or accomplished in this course, rather than any overall level of technical attainment.

## Office Hours

Office hours will be immediately following class on Wednesdays, or by appointment. If you would like to arrange a meeting, send an email to [dellio4@uwo.ca](mailto:dellio4@uwo.ca) or we can arrange an appointment before or after class on Wednesdays.

## Schedule

N.B. This is a representative list of topics, but the schedule will be adjusted to accommodate student interests and projects.

- Jan 10 – Introduction to tools:
  1. Hardware: Arduino Starter Kit
  2. Software: Arduino IDE <https://www.arduino.cc/>; Processing IDE <https://processing.org/>
  3. *Arduino Projects Book*: Ch. 00
  - Background reading:
    1. Sayers, Elliott, Kraus, Nowviskie and Turkel. "[Between Bits and Atoms](#)," *A New Companion to Digital Humanities* (Wiley: 2015).
    2. Elliott, MacDougall and Turkel. "[New Things Old: Fabrication, Physical Computing, and Experiment in Historical Practice](#)." *Canadian Journal of Communication*, Vol 37 (2012): 121-128.
    3. Belojevic. "[Kits for Cultural History](#)." 20 Sep 2014.
    4. Sayers. "[Why Fabricate?](#)" *Scholarly and Research Communication*, Vol 6, Issue 3 (2015).
  
- Jan 17 – Digital Interactions
  - Basic electronics theory; digital inputs and outputs
  - Switches; LEDs; resistors
  - *Arduino Projects Book*: Chs. 01 & 02
  
- Jan 24 – Analog Experiences
  - Analog inputs; monitoring and using analog signals
  - Potentiometers; photoresistors; temperature sensor
  - Pulse width modulation (PWM)
  - *Arduino Projects Book*: Chs. 03 & 04
  
- Jan 31 – Movement
  - Differences between different types of motors and how each is controlled
  - DC motor; servo motor; stepper motor
  - MOSFET, H-Bridge
  - *Arduino Projects Book*: Chs. 05, 09 & 10

- Feb 07 – Sounds and screens
  - Adding speakers and screens to your projects
  - Creating tones; displaying characters
  - Piezo speaker; LCD screen
  - *Arduino Projects Book*: Chs. 06, 07 & 11
- Feb 14 – Processing: interaction, drawing, images, sounds
- Feb 21 – NO CLASS – READING WEEK
- Feb 28 – Working with Data from the Web
- Mar 07 – Combining Arduino and Processing
- Mar 14 – Work on projects
- Mar 21 – Work on projects
- Mar 28 – Work on projects
- Apr 04 – Project demonstrations

## Statement on Academic Offenses

Plagiarism is a serious academic offense. Graduate students must understand and recognize plagiarism to grade undergraduate work as teaching assistants or markers. More than this, plagiarism is unacceptable in work produced by graduate students. Graduate students should be fully aware of university expectations regarding academic integrity and can expect that all scholastic offences will be dealt with through the university process. Student are urged to read thoroughly this official information on graduate scholastic offenses: [https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_grad.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf)

Information on the appeals procedures for graduate students can be found here:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/appealsgrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/appealsgrad.pdf)

## Health and Wellness

As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western's Campus Recreation Centre. Numerous cultural events are offered throughout the year. Please check out the Faculty of Music web page: <http://www.music.uwo.ca/>

and our own McIntosh Gallery: <http://www.mcintoshgallery.ca/>

Information regarding health- and wellness-related services available to students may be found at

<http://www.health.uwo.ca/>

Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant administrators in their unit. Campus mental health resources may be found at [http://www.health.uwo.ca/mental\\_health/resources.html](http://www.health.uwo.ca/mental_health/resources.html)

To help you learn more about mental health, Western has developed an interactive mental health learning module, found here: [http://uwo.ca/health/mental\\_wellbeing/education/module.html](http://uwo.ca/health/mental_wellbeing/education/module.html)

This module is 30 minutes in length and provides participants with a basic understanding of mental health issues and of available campus and community resources. Topics include stress, anxiety, depression, suicide and eating disorders. After successful completion of the module, participants receive a certificate confirming their participation.