1 Course Details

1.1 Calendar Description

This is an advanced course which focuses on a specific topic, concept or technique in sculpture. Subject matter will vary according to the instructor or instructors and will consist of topics not otherwise available in the curriculum. Topics may include, for example, digital media, public art, mold making, and installation.

**Pre-Requisites:** SART*3300

**Restrictions:** Registration is limited to students registered in the Art History or Studio Art specializations with an average of 70% in all ARTH and SART course attempts.

1.2 Course Description

This course will examine the increasing role of the computer in manufacturing objects, in particular how this technology is used in and for the production of art. We will examine a number of digital processes currently used by contemporary artists working in sculpture and public art such as: Computer-aided Design (CAD), 3D printing and scanning and Computer-aided manufacturing (CAM), in addition to a number of readings exploring the effect of technology on art.

Throughout history new technology has had an important and lasting effect on the direction and development of various art disciplines. The modern computer, a combination of hardware and software, influences almost every facet of our daily life from the production of objects to the structure of our social relations. This ubiquity has made it difficult to imagine a world without digital devices; devices that not only assist and monitor our behavior, but devices that also seem to operate with increasing autonomy.

The vast majority of manufactured objects in our built environment pass at least once through some form of digital manipulation: a form of mediation that for many objects entirely excludes the touch of the human hand, an often valued aspect of the work of art. This difference between the digital, machine-made object and the hand-made will form a
theoretical ground to consider the types of objects that many artists make and the accompanying tensions and contradictions that these can elicit in the experience of the art object.

The adoption of digital technology in art is used not only for the creation of more complex or mathematically precise objects, but also to discover new forms and qualities through a variety of different methods and varying degrees of automation; a common generative process that surrenders control to the computer program to generate and manufacture forms.

In this course students will learn the basics of working in a free CAD program, capturing information and digitizing existing objects for use in CAD and preparing and producing designs for the 3D printer and laser cutter at the school. In addition to the practical applications of this technology for the production of objects and the potential it has in art as both a formal and critical tool, a selection of essays on technology and art will help guide the student towards a more critical reflection on the impact of digital technology on art and culture.

In keeping with the University of Guelph’s emergency response to COVID-19, SART*4870 will be primarily delivered online using a variety of software platforms:

- CourseLink for accessing course documents and for class announcements.
- CourseLink DropBox for submitting reading responses
- Microsoft Teams and Autodesk 360 for hosting synchronous tutorials, lectures, class discussions, critiques and one-on-one meetings
- LinkedIn Learning and YouTube for supplementary asynchronous tutorials.

Course materials will be available for pickup at the start of the semester at a designated location in the Sculpture studio or should this not be possible for the student, sent to them via Canada Post.

3d printing and laser cutting will be conducted by either the Sculpture or Print technician and the instructor. A synchronous presentation of the 3D printing and Laser cutting operations will be included in the class so students have an understanding of how to operate the machines. Student 3D and laser cut projects will be available for pickup at a designated location in the Sculpture studio or should this not be possible for the student, sent via Canada Post.

NOTE: This is a 0.5 credit course. Each week, students are expected to spend approximately 4-6 hours outside of class on related course work.

Students interested in the course who do not have the prerequisites can be admitted with instructor consent. Please contact the instructor for the course waiver form as soon as possible.
1.3 Timetable

Timetable is subject to change. Please see WebAdvisor for the latest information.

1.4 Final Exam

Exam time and location is subject to change. Please see WebAdvisor for the latest information.

2 Instructional Support

2.1 Instructional Support Team

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email</th>
<th>Telephone</th>
<th>Office</th>
<th>Office Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor</td>
<td>Nestor Kruger</td>
<td><a href="mailto:krugern@uoguelph.ca">krugern@uoguelph.ca</a></td>
<td>+1-519-824-4120 x56852</td>
<td>ZAV 414</td>
<td>By Appointment</td>
</tr>
<tr>
<td>Lab Technician</td>
<td>Paul Lovell</td>
<td><a href="mailto:plovell@uoguelph.ca">plovell@uoguelph.ca</a></td>
<td>+1-519-824-4120 x56110</td>
<td>ZAV 112A</td>
<td></td>
</tr>
</tbody>
</table>

3 Learning Resources

Students in SART*4800 for F20 will use a variety of technologies for remote learning:

- CourseLink for accessing course outline and syllabus, assignment and reading outlines and for class announcements.
- CourseLink DropBox for submitting reading responses.
- Microsoft Teams for class meetings, lectures, discussions, critiques, sharing of resources including required and supplementary readings, group collaborations, and submitting final work for critique.
- Autodesk Fusion 360 student edition for 3D design
- Autodesk 360 for collaboration and reviewing of 3D designs
- LinkedIn Learning and YouTube for tutorials

Some computer experience is recommended, but no prior experience in the software is necessary.

3.1 Required Resources

Autodesk Fusion 360 (Software)
You are required to create a personal account with Autodesk before you can download the free student software.

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Design and complete simple objects in CAD for 3D printing and laser cutting, selecting and implementing a variety of appropriate building methods.

2. Independently solve a variety of basic technical and design problems using online resources and create an effective aesthetic and conceptual foundation for self-directed projects.

3. Participate and communicate effectively in group projects using a number of online collaboration tools.

4. Discuss and identify a number of essential theories and concepts related to art and technology; describe examples of related art historical precedents and formulate critical and clear verbal responses to readings, presentations and works of art.

5. Assess and implement appropriate methods for the presentation of their artwork in different contexts.

5 Teaching and Learning Activities

6 Assessments

The requirements for the course include:

- All assignments, group exercises and reading responses handed in on time.
- Prompt and regular attendance and participation in all classes.
- Timely and thorough preparation for class discussions (written notes).
- Professional presentation of work for midterm and final critiques.
- Willingness to engage with ideas and peers, and to tackle a variety of technical and conceptual challenges.
Grades will be assigned according to university grading procedures:

https://www.uoguelph.ca/registrar/calendars/undergraduate/2014-2015/c08/c08-grds-proc.shtml

6.1 Assessment Details

**EX01: Fusion 360: Sketching (5%)**
- **Date:** Wed, Sep 23
- **Learning Outcome:** 1, 2, 3
  A detailed description of the assignment will be distributed during the first class.

**EX02: Fusion 360: Create Tools (5%)**
- **Date:** Wed, Oct 7
- **Learning Outcome:** 1, 2, 3

**EX03: Fusion 360: Surfaces (5%)**
- **Date:** Wed, Oct 28
- **Learning Outcome:** 1, 2, 3

**EX04: Fusion 360: Forms (5%)**
- **Date:** Wed, Nov 11
- **Learning Outcome:** 1, 2, 3

**READINGS & REVIEWS (10%)**
- **Date:** Fri, Dec 4
- **Learning Outcome:** 4, 5

**A01: Cut/Fold: Laser Cutting (15%)**
- **Date:** Mon, Oct 19
- **Learning Outcome:** 1, 2, 4, 5

**A02: Adapters: 3D printing (35%)**
- **Date:** Fri, Dec 4
- **Learning Outcome:** 1, 2, 4, 5

**Research Sketchbook (10%)**
- **Date:** Fri, Dec 4
- **Learning Outcome:** 2, 4, 5

**Participation (10%)**
- **Date:** Fri, Dec 4
- **Learning Outcome:** 3, 4, 5
  Critiques are an essential part of this class, both in terms of articulating our own ideas and in assessing those of our peers and contemporaries. Attendance at mid-semester and final critiques is mandatory. Participation marks will be based on students’ performance in critiques and contributions to class discussions.

6.2 Grading Criteria
Assignments are evaluated by the following criteria:

- The artwork meets or exceeds the challenges posed by the assignment criteria and student objectives of the project.
- The artwork and preparatory work demonstrate experimentation with materials and processes and meets professional standards.
- The artwork demonstrates relevant links between the aesthetic and the conceptual objectives of the project.
- The student presents evidence of research and preparatory work.
- The artwork demonstrates an innovative use of materials and processes and a novel interpretation of the assignment criteria.
- The artwork and preparatory work demonstrate the development of technical and analytical skills.

Participation will be based on the following criteria:

- The student regularly attends and participates in formal and informal critiques and discussions.
- The student shows active participation in class by arriving on time, arriving prepared and ready to work during class time, and the creative exploration, conceptual development and analysis, and free exchange of ideas with other students.
- The student participates in fostering a creative and dynamic class environment.

---

7 Course Statements

7.1 Lab Fees

A compulsory materials fee of $60.00 will be charged for materials and services provided in support of required course projects. The amount will be invoiced by the Office of the Bursar and paid directly with your tuition payment.

THE LAB FEE WILL NOT BE REFUNDED AFTER THE THIRD WEEK OF CLASSES.

ITEMS PROVIDED BY THE LAB FEE:

- (1) 2lb. block of brown modelling clay
- (2) 12" X 20" sheets of 1/8th in. Baltic Birch plywood
- (1) 6" Vernier Caliper
- PLA filament for 3D printing
• (1) Instant Adhesive

ITEMS PROVIDED BY THE STUDENT:

Students are free to choose their own materials and objects that they wish to combine in relation to each assignment.

The following is a list of basic materials students should have at all times. Please adapt this list to meet your specific needs.

• Small or medium Sketchbook
• Scissors
• Utility knife (large blade for heavy-duty cutting)
• Craft knife (small blade for precision cutting) optional
• Drawing Tools: Pencils, pens, markers, pencil sharpeners
• 12” Steel Ruler or larger
• White glue
• Glue Gun and glue optional
• Basic clay sculpting tools optional
• Staple gun optional

PLEASE NOTE: Under no circumstances should a student be required to pay any additional monies for supplies needed to complete course assignments – excluding items listed under “Items Provided by the Student”. All supplies are to be paid for using Lab Fee monies. If you are being charged additional monies, please report to Nicola Ferguson (nifergus@uoguelph.ca) in the main office (Zavitz Hall rm. 201) immediately.

7.2 Safety

All students registered in SART*4870 can complete this course entirely on an online basis. All assignments, discussion and evaluation will take place remotely.

7.3 Accessibility

While all course content for SART*4870 will be delivered remotely, Public Health and University guidelines may permit some limited access to the assigned studio spaces for this class for students wishing take the option.

The timetable for such access and the conditions under which it will be available are all TBA.

Any decisions regarding access to studios and on campus facilities will be in compliance with
those guidelines. The primary purpose will be to ensure the safety of everyone involved.

8 University Statements

8.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

8.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals
https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

Graduate Calendar - Grounds for Academic Consideration
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions
https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml

8.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses
https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml

Graduate Calendar - Registration Changes
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-regregchg.shtml

Associate Diploma Calendar - Dropping Courses
https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml

8.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be
asked to resubmit work at any time.

8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

For Guelph students, information can be found on the SAS website https://www.uoguelph.ca/sas

For Ridgetown students, information can be found on the Ridgetown SAS website https://www.ridgetownc.com/services/accessibilityservices.cfm

8.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community-faculty, staff, and students-to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study, faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct
https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml

Graduate Calendar - Academic Misconduct
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml
8.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

8.8 Resources

The Academic Calendars are the source of information about the University of Guelph’s procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars
https://www.uoguelph.ca/academics/calendars