EXPANDED COURSE DESCRIPTION
VISUAL ARTS
School of the Arts, Media, Performance and Design
Computational Arts
FA / VISA 3033 3.0 SECTION A
MODELLING FOR 3D FABRICATION
FALL 2018 / WINTER 2019

COURSE CALENDAR DESCRIPTION

Introduces students to the possibilities for creating digital objects using advanced 3D design software and 3D scanning technologies, and the related conceptual concerns. Prerequisite: three credits from FA/VISA 203x 3.00 series of courses; for DIGM students: FA/DATT 2050 3.00.

Introduces students to the possibilities for creating digital objects using advanced 3D design software and 3D scanning technologies, and the related conceptual concerns. Compulsory Supplementary Fees apply.

Prerequisite: VISA: 6 credits of 203x 3.0 with a minimum B average, DIGM: FA/DATT 2050 3.0.

Crosslisted to FA/DATT 3940 3.00

Course Listed Courses: DATT 3940

INSTRUCTOR(S)

<table>
<thead>
<tr>
<th>Name</th>
<th>Section / Format / Term</th>
<th>Contact Email</th>
<th>Contact Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith, P. Roch</td>
<td>Sec. A / STDO / F</td>
<td><a href="mailto:roch@yorku.ca">roch@yorku.ca</a></td>
<td></td>
</tr>
</tbody>
</table>

SPECIAL FEATURES

This course is intended to introduce undergraduate students to the realm of possibilities for creating digital objects (objects that exist as computers file) and the challenges and strategies associated with modeling 3D objects using 3D design software. The proliferation of digital design software and digital fabrication techniques are having a major impact on how artists design, conceptualize, and fabricate contemporary cultural artifacts. The tools now available to artists are not simply tools but entirely new processes that need to be examined from a fresh conceptual standpoint that in turn requires the development of novel ways of thinking about objects. The main goal of this course is to provide the students with the technical and conceptual framework to position their practice in relation to these new technologies.

Students will be introduced to advanced 3D design software packages such as RHINO 5, Google Sketch Up, Meshmixer, Meshlab, and Sculptris. Potential output equipment/technology includes a laser etcher/cutter and several 3D printers. Students will learn how to create user-generated forms in these software programs and how to import physical objects into virtual space using 3D scanning devices. Students will also investigate multiple strategies for disseminating digital objects through online archives and file exchange networks. In addition to the development of these skills, students will explore the social and cultural implications of digital objects transcending the screen into the physical world. Issues for examination include how this technology impacts our notions of the object, authenticity, intellectual ownership, and craftsmanship. The conceptual framework of related research in this field will be addressed through in class lectures, readings, critiques and discussions.

Lectures, tutorials, demonstrations, group critiques and most importantly, hands-on instruction are the essential means by which we will investigate these processes. Due to the highly specialized nature of the technology utilized in this course, and the desire of many students to access these facilities, enrolment in this course is limited.

This course will utilize part of the Digital Sculpture Laboratory (DSL) at York University, a one of a kind facility developed with funding from several faculty research awards and dedicated to examining the impact
of emerging digital technologies on contemporary sculptural practices. This facility seeks to integrate several advanced 3D printing systems, 3D design software, and 3D scanning devices into the contemporary discourse surrounding studio and post-studio based art making practices. Student’s participation in this course will provide them with the experience and technical skills needed to take advantage of the recent boom in computer-aided production and research. The DSL’s unique approach to examining and manipulating the operating structures of divergent software will lead to the training of a new hybrid of artist/researcher who understands the mechanics of the production processes and who are also capable of evolving their skills as new technological innovations emerge. Students will develop skills in utilizing 3D design software, 3D scanning devices and 3D file exchange networks in the execution of their independent research. Students will also develop an understanding of the emerging conceptual and cultural issues surrounding this technology.

TOPICS AND CONCEPTS

COURSE SCHEDULE

Week One (Sept 5)                        Course Introduction
                                            Presentation

Week Two (Sept 12)                       Introduction to RHINO
Week Three (Sept 19)                     RHINO (continued)
Week Four (Sept 26)                      RHINO (continued)
Week Five (Oct 3)                         Demonstration of Laser Cutter and 3D printers in DSL
                                            Class discussion relating to 3D printing
                                            Intro to Project #1

October 10th NO CLASS – FALL READING WEEK
Week Six (Oct 17)                        Introduction to Sculptris
                                            Discussion of draft files/progress for Project #1
Week Seven (Oct 24)                      Introduction to Meshmixer & Meshlab
                                            Discussion of Digital Archive/Dissemination
                                            Intro to Project #2
Week Eight (Oct 31)                      Introduction of SketchUP
                                            * Project # 1 due
                                            * Submission deadline for tutorials 1 – 4
Week Nine (Nov 7)                        Introduction to 3D Scanner
                                            Intro to Project #3
Week Ten (Nov 14)                        Work Period
                                            * Project #2 due
Week Eleven (Nov 21)                     Class Discussion
                                            Work period
Week Twelve (Nov 28)                     * Project #3 due
                                            * Submission deadline for tutorials 5 – 8
                                            * Individual Presentations of Term Work

GRADED ASSESSMENT

EVALUATION:
Active participation in class and critique discussions 10% Tutorials (8 @ 4%) - 32%
Project #1 – User generated 3D form - 20%  Project #2 – 3D File Dissemination Project - 18%  Project #3 – Digitally Imported Object - 20%

**Project #1 is due on October 31, 2018**

**Project #2 is due on November 14, 2018**

**Project #3 is due on November 28, 2018**

Periodic meetings with the instructor will be scheduled to discuss works in progress. Any physical objects to be marked for course credit will be submitted in the sculpture studio on the scheduled date for class critique. Failure to complete any project or to participate in discussion, lectures and readings will result in failure of this class.

**NOTE: The last day to withdrawal from Term F courses without receiving a grade is November 9, 2018.**

York students are required to maintain high standards of academic integrity and are subject to the Senate Policy on Academic Honesty:

http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/

Students are also expected to review the materials on the Academic Integrity website:

https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/

All work submitted for evaluation will be original work created by the student. Plagiarism will result in a failing grade. In terms of this class, having another person (student, friend, parent, hired hand) produce or assist in producing your work will be considered plagiarism.

Quality of the work produced, including the student’s sensitivity to material & form

• Engagement of the student in their research studies as well as their curiosity and motivation to learn and achieve
• The student’s openness to new ideas
• The degree to which students can set challenges for her or himself
• The student’s willingness to engage in class discussions
• Attendance in class is imperative

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Point</th>
<th>Percent Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>9</td>
<td>90-100</td>
<td>Exceptional</td>
</tr>
<tr>
<td>A</td>
<td>8</td>
<td>80-89</td>
<td>Excellent</td>
</tr>
<tr>
<td>B+</td>
<td>7</td>
<td>75-79</td>
<td>Very Good</td>
</tr>
<tr>
<td>B</td>
<td>6</td>
<td>70-74</td>
<td>Good</td>
</tr>
<tr>
<td>C+</td>
<td>5</td>
<td>65-69</td>
<td>Competent</td>
</tr>
<tr>
<td>C</td>
<td>4</td>
<td>60-94</td>
<td>Fairly Competent</td>
</tr>
<tr>
<td>D+</td>
<td>3</td>
<td>55-59</td>
<td>Passing</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>50-54</td>
<td>Marginally Passing</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>Marginally below 50</td>
<td>Marginally Failing</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>Below 50</td>
<td>Failing</td>
</tr>
</tbody>
</table>

Evaluation will be based on cumulative achievement, regular attendance and the student’s participation in discussions and critiques. You are expected to show a commitment to experimenting with the medium and serious ambition in the execution of all projects and assignments.

Please note that **attendance in all classes is mandatory**. An absence is an absence - whether or not a reason or an excuse is presented. This is particularly true in studio classes where the process is as important as the end result - the project. **Failure to attend classes will result in a 5% penalty on your final mark, and a second absence will result in a request that the student withdraw from the course.** It is imperative that students attend class on time; if you are late you may be penalized 5% for each offence.

Exceptions to the absence/lateness penalty for valid reasons such as illness, compassionate grounds, etc., may be entertained by the Course Instructor but may require supporting documentation.
Required Readings for this Course will be posted on Moodle and can be accessed by students at the appropriate time. All tutorials and instructions for completing projects will also be posted on Moodle.

ADDITIONAL INFORMATION

SAFETY:

Safety is an essential component of this course. Repeated failure to observe instruction on proper safety procedure will result in the instructor requesting a student withdrawal from the course. Many of the process utilized in this course can be hazardous to your immediate and long-term health; as such it is imperative that you observe all instruction and protocol when participating in this course. If you are unsure of the necessary safety precautions, ask the instructor or a technician.

Cell phones, earphone devices (iPods) and stereos are not permitted in the sculpture studio. These devices cause distractions and increase the chance of serious injury. Turn your cell phones off before entering class and/or the studio. Failure to comply with this rule will have an adverse affect on your final grade and could lead to failure of this class.

If you have an existing medical condition that may impact your ability to successfully complete this course or could possibly impact your ability to use the studio in a safe manner it is strongly recommended that you speak with your instructor about the situation. If a student has environmental allergies or has a high degree of chemical sensitivity it is recommended you do not use the sculpture studio. Your instructor is available to discuss any health and safety related topic and will do so while respecting your right to confidentiality and discretion.

The Odette Sculpture Studio is a safe work environment that adheres to strict rules and regulations to ensure student safety however accidents do occur. If you or a fellow student is injured please notify the individual responsible for the studio immediately (faculty member, technician, or monitor) and follow their direction.

The studio is monitored by technicians and/or student monitors when a faculty member is not present, it is imperative that you treat these people with respect and follow their direction. Failure to do so will result in academic penalty.

This is a communal studio environment and in order to be successful in this course it is necessary for you to take responsibility for the studio. If you observe a student using tools in a dangerous manner please notify the studio supervisor. If you recognize that a tool is damaged and has become unsafe please bring it to the attention of the studio supervisor immediately in order to ensure other students’ safety is not put at risk.

ACCESS/DISABILITY:

York provides services for students with disabilities (including physical, medical, learning, and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. It is the student’s responsibility to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs. Failure to make these arrangements may jeopardize your opportunity to receive academic accommodations.

Additional information www.yorku.ca/disabilityservices or from service providers:

• Learning and Psychiatric Disabilities Programs - Counseling & Development Centre:

130 BSB, 416-736-5297, www.yorku.ca/cdc
• Atkinson students - Atkinson Counseling & Supervision Centre:

• Glendon students - Glendon Counseling & Career Centre:


STUDENT CONDUCT:

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect and to refrain from actions disruptive to such a
relationship. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and the responsibility of the student to cooperate in that endeavor. Further, the instructor is the best person to decide in the first instance whether such an atmosphere is present in the class.

A statement of the policy and procedures involving disruptive and/or harassing behavior by students in academic situations is available on the York website: http://secretariat-policies.info.yorku.ca/policies/workplace-harassment-policy/

York University’s Code of Student Conduct is available online at: http://www.yorku.ca/oscr/pdfs/CodeofRightsandResponsibilities.pdf

Many courses utilize Moodle, York University’s course website system. If your course is using Moodle, click here to access it.

Moodle @ York University