EXPANDED COURSE DESCRIPTION
VISUAL ARTS
School of the Arts, Media, Performance and Design
Department of Visual Art Art History
FA / VISA 3031 6.0 SECTION A
FOUNDRY
FALL 2019 / WINTER 2020

Last Modified Date: 07/19/2019

COURSE CALENDAR DESCRIPTION

Introduces foundry processes in the creation of sculpture with the purpose of exploring the creative potential inherent in metal casting techniques when students apply them to their studio practice. Prerequisites: FA/VISA 1000 3.00, and six credits from the 203x series of courses with a grade I of C+ or better in each course.

Foundry processes in the creation of sculpture such as lost wax casting and sand casting in bronze and aluminum with the purpose of exploring the creative potential inherent in these techniques when students apply them to their work directly. Aspects of lost wax metal casting introduce mould making, working in wax directly, wax casting, coring sprueing, gating, ceramic shell forming, dewaxing, burnout, metal melting and pouring, cleaning the casing, grinding, chasing, patination and mounting. Students perform all aspects of the process except dewaxing, burnout and metal melting and pouring. Lectures, demonstrations, group critiques, group discussion and, most importantly, hands-on instruction impart the knowledge and skills required to make castings. Materials Fee: $250. Note: There are additional charges for metal based on the weight of castings produced by individual students. Prerequisites: FA/VISA 1000 3.00, and six credits from the 203x series of courses with a grade C+ or better.

INSTRUCTOR(S)

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<tr>
<th>Name</th>
<th>Section / Format / Term</th>
<th>Contact Email</th>
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<tbody>
<tr>
<td>Vickerd, Brandon J</td>
<td>Sec. A / STDO / Y</td>
<td><a href="mailto:bvickerd@yorku.ca">bvickerd@yorku.ca</a></td>
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SPECIAL FEATURES

SCHOOL OF ART, MEDIA, PERFORMANCE AND DESIGN DEPARTMENT OF VISUAL ART AND ART HISTORY - 2019-2020

Foundry
FA/VISA 3031 6.0 Wednesday 2:30 – 6:30
Course Director: Brandon Vickerd Technician: Roch Smith
Fall and Winter Term 195 CFA, Odette Centre for Sculpture
Office: 264 Centre for Fine Arts Contact: bvickerd@yorku.ca
Office Hours: Wednesday 11:30-12:30 or by appointment
Pre-requisite: 6 Credits at the 2000 level

COURSE DESCRIPTION

This course is intended as an introduction to the sculptural methods and applications of the metal casting process. Lost wax casting and sand casting in bronze will be introduced with the purpose of exploring the creative potential inherent in these techniques when they are applied by the students to their own studio practice. Through the completion of assignments students will gain practical knowledge of how to
successfully execute their ideas in cast metal. It is expected that all students will experiment with the process in order gain a personal understanding of the potential and limits of bronze casting techniques. The foundry at the Odette centre utilizes both green sand-casting and ceramic shell techniques. The ceramic shell process is a modern version of the ancient lost wax process, where an original is sculpted out of wax, encased in ceramic shell and then melted away in order to create a cavity for metal casting. The sand-casting technique uses an original pattern created from plaster, plastic or wood and then builds a two-part sand mold of the original. Once the original is removed metal is cast into the cavity. Each process involves different techniques and possibilities that will be explored and challenged in this course.

TOPICS AND CONCEPTS

Lectures, demonstrations, group critiques and most importantly, hands-on instruction are the essential means by which we will investigate the bronze casting process. Students will explore the many processes involved in metal casting including (but not limited to): mould making, working in wax, wax casting, coring, sprueing, gating, ceramic shell forming, dewaxing, burnout, metal melting and pouring, cleaning and chasing, patination, mounting, metal preservation, and so on. Students will be completing all these processes except dewaxing, burnout, metal melting and pouring. Although there will be periodic work periods, students should expect to complete most of their work outside of class time.

LIST OF LEARNING OUTCOMES AND EXAMPLES OF

The purpose of VISA 3031 Foundry is to assist students in a broader understanding of metal casting process and the potential to apply these techniques to a professional art practice. The course will explore the spectrum of issues artist must confront when working in cast metal, both technical and conceptual.

The course is divided into two terms, and three projects. The first term will include:
- Introduction of methods of working directly in wax.
- Demonstrate all stages in the transformation of a wax into finished bronze.
- Each student will make one wax patterns suitable for casting in bronze. As a practical guideline these wax patterns will be a maximum size of 6 inches x 6 inches x 6 inches (15cm x 15cm x 15cm). These patterns will be fabricated directly in wax through hand modeling.
- A minimum of one bronze casting (measuring the outlined dimensions) must be completed in the first term.
- Sand-casting will be introduced as a process, including the creation of patterns for casting and the techniques for creating series or replicas of a casting in large numbers.

The Second term will include:
- Introduce advanced wax working techniques in order to extend the range of molding and direct working methods.
- Two projects must be completed by the end of term, one lost wax casting and one sand casting project. Similar size limitations apply.

In addition to these casting techniques, students are expected to finish their sculptures once cast in bronze. Sprues, gates, flashing and other remnants of the casting process must be removed by cutting, grinding and filing. You will explore the possibilities of chasing and blending the surface of your sculpture.

GRADED ASSESSMENT

The 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.
Evaluation

Participation 15%
Presentation 10%
Project #1 (first term) 25%
Project #2 (second term) 25%
Project #3 (second term) 25%

Failure to complete any project or to participate in discussion, lectures and readings will result in failure of this class.

Project #1 will be marked on Wednesday November 27th, 2019. Project #2 will be marked Wednesday March 4th, 2020.

Project #3 will be graded on Wednesday April 1st, 2020.

An unofficial term grade will be assigned at the completion of the fall term.

Work to be marked for course credit will be submitted in the sculpture studio on the scheduled date for class critique. Periodic meetings with the instructor will be scheduled to discuss works in progress. All work submitted for evaluation will be original work created in full by the student. Plagiarism will result in a failing grade.

Work that is primarily a reproduced casting of an existing object will not be accepted. York students are required to maintain high standards of academic integrity and are subject to the Senate Policy on Academic Honesty (http://www.yorku.ca/secretariat/legislation/senate/acadhone.htm).

If a student is suspected of plagiarism it is their responsibility to present drafts of their project and associated research material to prove otherwise – it is highly recommended you retain all relevant material.

Lateness Penalty: Assignments received later than the due date will be penalized one-half letter grade (1 grade point) per day that the assignment is late.

Exceptions to the lateness penalty for valid reasons such as illness will be given consideration only if documentation such as a doctor’s letter is provided.

GRADING CRITERIA:
- Quality of the work produced, including the student’s sensitivity to materials
- 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

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<tr>
<th>Grade</th>
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<tr>
<td>A+</td>
<td>9</td>
<td>90-100</td>
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<td>A</td>
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<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>
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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. 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 withdrawal from the course. It is also imperative that students attend class on time; if you are late you may be penalized 5% for each offence.

All classes will begin on time and students must be prepared to work bringing the proper safety gear and necessary tools to each class.

NOTE: The last day to withdrawal from Term Y courses without receiving a grade is February 3, 2020

**ADDITIONAL INFORMATION**

Required Readings for this course will be posted on Moodle and can be accessed by students at the appropriate time.

The Cost of Casting/ Course Fee:

There will be a course fee of $250 to cover the cost of materials and consumables – students may pay additional cost of metal as the semester progresses. This fee also covers the cost of a grinding and finishing disc that will be provided to you when necessary – due to the expensive nature of these materials, each student has a set limit of consumables supplied, after which additional products can be purchased from the technician. At the completion of each project students will be notified of any outstanding balance owed to the foundry – your grade will not be submitted until this amount has been paid.

Relative to other processes of sculpture, bronze casting is costly. Relative to having a wax cast in bronze by a commercial art foundry, the cost at York is exceedingly low. A price per pound will be levied based on weight of the final casting. This per pound rate covers the cost of lost wax, ceramic shell, and bronze of aluminum ingot. We will (when possible) weigh each piece at four stages. There will be material sheets given to students for documenting these weights. This will allow the technician and faculty to track your material use – failure to properly fill out this document and present it when requested will result in an incomplete grade and your project not being cast.

The four stages that your project must be weighed at are:

1) As a sprued and gated wax, ready for ceramic shell coating. This wax weight can then be converted (x9) to give the bronze weight - important information for metal pouring.

2) When the ceramic shell has been completed.

3) As a bronze casting prior to removal of gates.

4) As a finished casting.

It is technically feasible but labor intensive to recycle finished castings if you do not like your final product, however, at this stage all the material and labor input has been consumed, as such we will not be recycling castings.
Studio After Hours Access Policy

For security purposes, students enrolled in sculpture courses who are accessing the sculpture area facilities after hours are required to sign in with their name and arrival time and sign out upon leaving. Sign in sheets are provided in each area and will be monitored by the technical staff and student monitors.

Students are only permitted to have access to the facilities when a technician, faculty member or student monitor is present. The hours for available usage of the shop will be posted ASAP, but students can expect these hours to take effect in early October.

If a student is found accessing the facility outside of the posted hours, without proper supervision their grade will be affected, they may be asked to withdraw from the course, and/or have their access to the facilities limited.

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. If a technician or faculty member observes a student not following proper safety procedures you will be given a warning, on the second infraction you will be asked to leave the studio for 24 hours, on the third infraction you will be banned from the studio for a week. No student will be given an extension under these circumstances.

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.

Health and safety risk may not be immediately obvious (ex. hot wax gives off fumes). You will receive specific safety instructions pertinent to each aspect of the process when these processes are being demonstrated.

The foundry process can be done safely if you take responsibility for using personnel safety equipment and use the designated dust and fume extraction equipment.

There are a few articles each student will need to purchase in order to participate in this course:

1) Safety Glasses - buy a pair and wear them in the studio for most activities.
2) Leather work gloves - to be worn at various stages of the process, must me tight fitting and free of holes or tears.

Regarding Clothing

1) Wear clothing that you don’t mind getting permanently stained and which is not readily flammable. As synthetic fibers can catch fire easily, cotton is recommended. Always be aware that open flame is in constant use, as well as power tools, as such clothing should not be loose for fear of combustion or getting caught in moving parts.
2) Wear clothing you can wash easily and frequently, especially during the dusty aspects of the process. Silicon dust should be washed out of clothes frequently.
3) Long hair should be held back. You will be working in close proximity to other people and open flame.

It is essential for all students to be constantly aware of their surroundings and any potential risk to themselves or others. Due to this no earphone devices are to be worn in the studio. Turn your cellphone off before you enter the sculpture studio and put it in your locker. If your phone rings during class, or you are caught talking on your phone in the studio at anytime you will be asked to leave and you grade will be adversely affected.

For key stages of the process that involve working with melted wax and or welding with hot knives etc., ventilation is essential. There are a set number of dedicated workstations with appropriate wax fume ventilation. Some accommodation and co-operation is necessary to deal with this physical reality.

It is important to stress that this not simply a class, it is a community; you will be relying on each other for assistance at various points in the semester, as such it is recommended that you treat each other, and each
other’s projects with respect. Due to the communal nature of our foundry, we all rely on the same expensive equipment for our projects to succeed – if one person breaks or damages a tool then every person is adversely affected. I recommend everyone in this class take collective responsibility for the facilities and tools, as this will ensure everyone’s success. These issues will be addressed as the class progresses class and your input is welcomed.

There are a few stages in this process that students are not allowed to participate in (i.e. dewaxing, metal pouring), and it will be necessary for the instructor and technician to physically complete these processes. Since these processes are very hazardous the faculty and technician reserve the right to refuse to pour or dewax your project if they feel it compromises their safety. To avoid this situation, it is recommended that your clearly communicate with the technician and faculty when you are asked too.

The foundry is equipped and licensed to melt bronze and aluminum ingot of known composition - we will not be melting scrap metal.

Access/Disability

This course is physical in nature, requiring students to actively participate in several processes that can be physically demanding. If you are of average health you should be fully capable of participating, however, if you have a pre-existing condition or physical impediment that may prevent you from accomplishing projects it is essential that you discuss the situation with the instructor. Disabilities can and will be accommodated but students must be proactive in addressing the situation. Any dissuasions pertaining to physical limitations will be private and confidential.

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 is available at www.yorku.ca/disabilityservices or from disability service providers:

• Learning and Psychiatric Disabilities Programs - Counselling & Development Centre: 130 BSB, 416-736-5297, www.yorku.ca/cdc

Your instructor is available to discuss any health and safety related topic and will do so while respecting your right to confidentiality and discretion.

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://www.yorku.ca/secretariat/legislation/senate/harass.htm

York University’s Code of Student Conduct is available online at: http://www.yorku.ca/scdr/CodeOfConduct.html

Foundry Course Schedule

Week 1(Sept 4) Course Introduction, slide presentation, Intro to foundry facility, Safety review of studio, Wax working demonstration
Week 2 (Sept 11)        Wax working Demo (continued)
Week 3 (Sept 18)        Wax and molding demo continued, review of student’s project in process, sprue bar demo
Week 4 (Sept 25)        Sprueing demo continued, review of projects in progress
Week 5 (Oct 2)          First Wax Pattern Complete. Discussion of gating and sprueing, Begin gating and sprueing first wax pattern. Ceramic shell introduction.
Week 6 (Oct 9)          Ceramic shell demo. Begin ceramic shell application on sprued and gated pattern.

Oct 16th Fall Reading Week, no class

Week 7 (Oct 23)        De-wax and burnout;
*Last Day to Dip in Ceramic Shell*

Week 8 (Oct 30)        Demo pattern making for sand casting. De-shelling demo
Week 9 (Nov 6)         Finishing Demo followed by patination demo.
Week 10 (Nov 13)       Last day of fall semester to pour bronze. Work period. Week 11 (Nov 20) Work period
Week 12 (Nov 27)       Last Class of Fall Semester - Class Critique, First Project Due
Week 13 (Jan 8)        Demo pattern for sand casting
Week 15 (Jan 22)       Sand Casting, Advanced Wax Working – flexible molds
Week 16 (Jan 29)       Sand Casting. Advanced Wax Working – hollow forms
Week 17 (Feb 5)        Sand Casting
Week 18 (Feb 12)       Final Sand-Casting Day

Feb 19th - Winter Reading Week, no class

Week 19 (Feb 26)       Work Period
Week 20 (Mar 4)        Sand Casting Project Due
Week 21 (Mar 11)       De-wax, burn out, pour bronze. Final day for Ceramic Shell.
Week 22 (Mar 18)       Bronze pour, de-shelling, cleaning. Final day for pouring Bronze
Week 24 (April 1)      Final Class – All projects due.

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