

UNIVERSITY OF CALGARY
FACULTY OF ARTS
DEPARTMENT OF ART AND ART HISTORY
Art 315 – Programming for Artists
Fall 2022

Course Delivery Format:	<i>In-person</i> **PLEASE NOTE: While masks are currently not required at UCalgary, they are <u>strongly encouraged</u> for all on-campus spaces
Instructor: Office: Email: Office Hours: TA Name and Email:	<i>Dr. J. R. Parker</i> <i>AB 606 (403) 220 6784</i> <i>jparker@ucalgary.ca</i> <i>MTWR 1:00 PM</i> <i>none</i>
Day(s), time(s) and location of class:	<i>Monday/Wednesday 2:00 - 3:15 PM Lab 3:15-4:30 PM</i> <i>SS 018</i>
Course description:	An introduction to computers and programming within the context of artistic practice. Algorithms within the arts domain, and applications, including interactive and dynamic applications, across range of artistic practices including: images, audio, animation, multimedia, web, and installations. Students will develop in-class and take-home projects, as well as a final project of their own design. This course, at this time, uses the Processing language.
Prerequisites and/or co-requisites:	One half-course in Art or consent of the Department.
Course Objectives:	Upon successful completion of this course, students should: 1. Be able to write basic programs in Processing; 2. Understand the ideas behind generative art, and the use of algorithms in a creative process; 3. Be able to create artistic works using these paradigms in a specified language; 4. Be familiar with basic techniques in visualization using a computer; 5. Understand basic strategies for interaction design and their implementation; 6. Understand how to create and manipulate computer images..
Required Textbooks of Readings:	<u>An Artist's Guide to Programming: A Graphical Introduction</u> James Parker, 2022. No-Starch Press Optional: Reas, C. and McWilliams, C., LUST. FORM+CODE in Design, Art, and Architecture . Princeton Architectural Press, New York. 2010. Parker, J.R. Generative Art: Algorithms as Artistic Tool , Durville Publications Shiffman, D. Learning Processing - A beginner's guide to programming images, animation, and interaction . Morgan Kaufmann Burlington, MA. 2008. Parker, J. An introduction to Game Development Using Processing . Mercury Learning & Information, 2014. http://www.amazon.ca/Introduction-Game-Development-Using-Processing/dp/1937585409
Course Schedule:	1. Introduction. Tools, generative art 2. Processing. Geometry. 3. Computers. 4. Lines, drawing. Algorithms. IF

	<p>Course outline page: - 2 -</p> <p>5. Loops. Drawing pixels. FOR. WHILE</p> <p>6. Animation, motion.</p> <p>7. Arrays.</p> <p>8. Style. 2D Arrays.</p> <p>9. Images.</p> <p>10. Advanced pixels – particles, image processing</p> <p>11. Three dimensions</p> <p>12. Audio, video</p> <p>13 Games</p>
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Assignments & Evaluation

Assignment	Description	Due Date	Worth
<i>Assignment 1</i>	Mondrean (Create art in the style of Piet Mondrean)	October 1	8%
<i>Assignment 2</i>	Paint (Build a simple paint program)	October 22	12%
<i>Assignment 3</i>	Animation (Procedural animation of an object)	November 15	8%
<i>Assignment 4</i>	Game (a playable computer game with sound)	December 1	12%
<i>Term Project</i>	You will have the whole semester to build a generative art piece. These will be shown to the class and assessed in the last week.	December 7	30%
<i>In-Lab assignments</i>	Exercises to be completed in the lab each week based on the lecture material.	Weekly	30%

Assessment expectations:	<p><u>Guidelines for Submitting Assignments:</u> Assignments can be submitted by Email. Email header must contain the text “Art 315 assignment solution N”, where N is the assignment number.</p> <p><u>Missed or Late Assignments:</u> Assignments are expected to be on-time unless previously discussed with the instructor. Deadlines could be changed in-class, but will never be advanced. Assignments not handed in will not be graded. Assignments handed in on time can be resubmitted for reassessment within 2 weeks of the due date.</p> <p><u>Expectations for Writing:</u> Writing skills are important to academic study across all disciplines. Any written work needs to meet English grammatical rules and reasonable standards for composition.</p>
Additional Costs and Information:	Students are expected to have access to a computer to complete their assignments. It is possible to complete the class without software expense, but any extra software needed will be at the student’s own expense.
Portfolios and Assignments:	The Dept of Art and Art History will not assume responsibility for lost or stolen portfolios or course work given to instructors for grading.

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Other Important Dates

For more information on term dates, add/drop/swap/withdraw dates from course deadlines and refund/payment deadlines, please see: <https://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html>

Grading Method and Grading Scale

Undergraduate: <https://www.ucalgary.ca/pubs/calendar/current/f-1-1.html>

- A grade of "C-" or below may not be sufficient for promotion or graduation, see specific faculty regulations.
- The number of "D" and "D+" grades acceptable for credit is subject to specific undergraduate faculty promotional policy.

Percentage	Grade	G.P.V.	Grade Definition
96-100	A+	4.0	Outstanding performance
90-95	A	4.0	Excellent-superior performance, showing comprehensive understanding of subject matter.
85-89	A-	3.7	Approaching excellent performance
80-84	B+	3.3	Exceeding good performance
75-79	B	3.0	Good – clearly above average performance with knowledge of subject matter generally complete.
70-74	B-	2.7	Approaching good performance
65-69	C+	2.3	Exceeding satisfactory performance
60-64	C	2.0	Satisfactory – basic understanding of the subject matter.
55-59	C-	1.7	Approaching satisfactory performance
53-54	D+	1.3	Marginal Pass. Insufficient preparation for subsequent courses in the same subject
50-52	D	1.0	Minimal pass – marginal performance; generally insufficient preparation for subsequent courses in the same subject.
0-49	F	0	Fail – Failure to meet course requirements.

Graduate: <https://www.ucalgary.ca/pubs/calendar/current/f-1-2.html>

- All grades of "C+" or lower are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements. Individual programs may require a higher passing grade.

Learning Technologies and Requirements:	<p>There is a D2L site for this course which contains required readings and other relevant class resources and materials (d2l.ucalgary.ca).</p> <p>To successfully engage in their learning experiences at the University of Calgary, students taking online, remote, and blended courses are required to have reliable access to the following technology:</p> <ul style="list-style-type: none"> • A computer with a supported operating system, as well as the latest security, and malware updates • A current and updated web browser • Webcam (built-in or external) • Microphone and speaker (built-in or external) or headset with microphone • Current antivirus and/or firewall software enabled • Broadband internet connection
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Academic Standing:	For more information go to http://www.ucalgary.ca/pubs/calendar/current/f.html
Academic Accommodation:	<p>It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The Student Accommodations policy is available at https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations.</p> <p>Students needing an accommodation based on disability or medical concerns should contact Student Accessibility Services (SAS) in accordance with the Procedure for Accommodations for Students with Disabilities (https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf). Students who require an accommodation in relation to their coursework based on a protected ground other than Disability should communicate this need in writing to their Instructor.</p> <p>SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/</p>
Academic integrity, plagiarism:	<p>Academic Misconduct refers to student behavior which compromises proper assessment of a student's academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.</p> <p>For more information go to http://www.ucalgary.ca/pubs/calendar/current/k.html or http://www.ucalgary.ca/pubs/calendar/current/e-2.html Additional information is available on the Academic Integrity Website at https://ucalgary.ca/student-services/student-success/learning/academic-integrity</p>
Internet and electronic communication device:	<p>The use of laptop and mobile devices is acceptable when used in a manner appropriate to the course and classroom activities. Please refrain from accessing websites and resources that may be distracting to you or for other learners during class time.</p> <p>Students are responsible for being aware of the University's Internet and email use policy, which can be found at https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Acceptable-Use-of-Electronic-Resources-and-Information-Policy.pdf</p>
Deferral of Term work and exams	<p>For more information about deferring a final exam go to https://www.ucalgary.ca/registrar/exams/deferred-exams For more information about deferral of term work go to http://www.ucalgary.ca/pubs/calendar/current/g-7.html https://www.ucalgary.ca/live-uc-ucalgary-site/sites/default/files/teams/14/deferred_termwork-feb-2020_revised.pdf</p>
Intellectual Property & Copyright:	<p>All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Acceptable-Use-of-Material-Protected-by-Copyright-Policy.pdf) and requirements of the copyright act (https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html) to ensure they are aware of the consequences of unauthorized sharing of course materials (including presentations, textbooks, posted notes, labs, case studies, assignments, and exams).</p>

	<p>Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy https://www.ucalgary.ca/pubs/calendar/current/k.html</p>
Freedom of Information and Protection of Privacy:	<p>Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary.</p> <p>For more information go to https://www.ucalgary.ca/registrar/student-centre/privacy-policy</p>
Ethics	<p>Whenever you perform research with human participants (i.e., surveys, interviews, or observation) as part of your university studies, you are responsible for following university research ethics guidelines. Your instructor must review and approve of your research plans and supervise your research.</p> <p>For more information go to http://www.ucalgary.ca/pubs/calendar/current/e-5.html or https://www.ucalgary.ca/research/researchers/ethics-compliance/chreb</p>
Student Support:	<p>Please visit this link for important information on:</p> <ul style="list-style-type: none"> • Wellness and Mental health resources • Emergency Evacuation/Assembly Points • Student Success and more.... <p>https://www.ucalgary.ca/registrar/registration/course-outlines</p>
Studio Procedures:	<p>Please view current updates from RISK and the Covidsafe page links to information on rapid testing, masking rules, vaccination regulations and documentation as well as a FAQs page, which must all be followed while in Studios.</p> <p>https://www.ucalgary.ca/risk/emergency-management/covid-19-response https://www.ucalgary.ca/risk/emergency-management/covid-19-response/covidsafe-campus</p>
Arts Students' Centre Program Advising:	<p>Have a question but not sure where to start? The Arts Students' Centre is your information resource for everything in the Faculty of Arts. Call us at 403-220-3580 or email us at ascarts@ucalgary.ca.</p> <p>You can also visit the Faculty of Arts website at http://arts.ucalgary.ca/undergraduate which has detailed information on common academic concerns.</p>
Faculty of Graduate Studies:	<p>For graduate studies email: graduate@ucalgary.ca or call 403 220 4938.</p> <p>Visit the Faculty of Graduate Studies for more details: https://grad.ucalgary.ca/</p>