

Course Delivery Format:	<i>In-person</i>
Instructor: Office: Email: Office Hours: TA Name and Email:	<i>Dr. J. R. Parker</i> <i>AB 606 (403) 220 6784</i> <i><a href="mailto:jparker@uclaqy.ca">jparker@uclaqy.ca</a></i> <i>MTWR 1:00 PM</i> <i>none</i>
Day(s), time(s) and location of class:	<i>Tuesday-Thursday 2:3:15 PM</i> <i>SS 018</i>
Course description:	This course intends to conform to the 'Topics in Art' description which states "Topics related to contemporary studio and curatorial practices such as spirituality, exhibitions, digital storytelling, new media, or public art.  Art 311 deals specifically with generative art, which is the use of automation and algorithms to create artworks. We will discuss computer representations of images, graphics primitives, algorithms for describing visual artworks, the process of design in a generative context, and existing systems including artificial intelligence.
Prerequisites and/or co-requisites:	<i>none</i>
Course Objectives:	By the completion of this course, successful students will be able to: 1. Describe the process of creating a specific piece of visual art before it is started. 2. Identify graphical operations that a computer can perform. 3. Use knowledge of computer images to manipulate them at a pixel level. 4. Incorporate randomness as an element of their work.
Required Textbooks of Readings:	<b>Generative Art: Algorithms as Artistic Tool</b> James R. Parker, UpRoute (2019)
Course Schedule:	Week 1. Introduction. What is generative art. Generative artists and works. Week 2. Randomness. Introduction to its use in art. Hans Arp, Francis Picabia, Paul Klee. Week 3. Basic principles. Simple tools for the computer Week 4. Computer graphics Week 5. Basics of computer programming Week 6. Colour. Representation and design. Week 7. Reality. Making computer rendered art look real. Week 8 Nodebox. Week 9. Images, pixels, image processing. Week 10. Animation. Week 11. Vision, human and machine. Week 12. Elements of art. Week 13. Important algorithms. Generative Adversarial networks. AI tools.

## Assignments & Evaluation

Assignment	Description	Due Date	Worth
Assignment 1	Create an artwork that uses, in its creation, a controlled degree of randomness. Do NOT use a computer. It is difficult to estimate <i>how</i> random something like this is, but give it a try and explain your reasoning. What parts are deterministic, what parts are random?	September 22	12%
Assignment 2	Photograph a scene – landscape, still life, portrait, etc. Paint it using oil or acrylic. Now give that photograph to two systems that will apply a ‘painterly’ rendering. Describe how the real painting is similar to the renderings and how different. How do you think the algorithm works? OR Photograph a scene – landscape, still life, portrait, etc. Draw it using pencil or pen or charcoal. Now give that photograph to two systems that will apply a filter for human drawing. EG (but not exclusively) <a href="https://www.imgkits.com/anime-filter">https://www.imgkits.com/anime-filter</a> <a href="https://www.picturetopeople.org/photo_sketch/best_pencil_sketch_photo_effects.html">https://www.picturetopeople.org/photo_sketch/best_pencil_sketch_photo_effects.html</a> Describe how the real drawing is similar to the renderings and how different. How do you think the algorithm works?	October 6	12%
Assignment 3	Create a generative piece using basic shapes (lines, ellipses, polygons) using Processing, Python, Nodebox, or Houdini. The piece should be based on your concept of <i>time</i> .	October 20	12%
Assignment 4	Use an image as the starting point for a generative piece of your choice. The image should initially contain colour, but the final result need not. Use any tool you like: Processing, Python, Gadget. Remember, Photoshop is not a generative tool.	November 17	12%
Assignment 5	Use at least two of the available AI tools to create 5 works each based on the same prompt. How do the results differ? Do an analysis of the images to try and determine some of the methods used by each system to create the results. Where does randomness get used? How Are colours chosen? Are real images used? If so, how are they selected? Analysis should be as detailed as possible, and between 5-10 pages.	December 1	12%
Term Project	Create a generative work using any tool you choose using one of the following themes: <ul style="list-style-type: none"> <li>- Quantum mechanics</li> <li>- Climate Change</li> <li>- Autumn</li> <li>- The Human Journey</li> <li>- Green</li> </ul> <p>This is NOT supposed to be an illustration or data display, but should be a personal interpretation of the subject. Describe the techniques used, your artistic vision, and (if possible) sidetracks and errors made during the process. In other words, accompany the piece with a report that tells me about it.</p>	December 7	30%
Class Participation	In-class exercises		5%
Critical incident questionnaires	1. What concrete incidents/comments/reactions in tonight's session caught your attention? 2a. What excited you? b. What frustrated you? 3a. What trends do you see emerging in the sessions? b. What are the implications of these for your learning and thinking? 4a. What might be your next steps as a learner-participant in this project (course)? b. What support would you like in taking those steps?	Must hand in five of these, at least one each month. Evaluated on Oct 1, Nov 1, Dec 1, and Dec 7	5% total, 1% each.

Assessment expectations:	<p><u>Guidelines for Submitting Assignments:</u> Assignments can be submitted on paper or by Email. Email header must contain the text “Art 311 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 previous 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. Consequently, instructors may use their assessment of writing quality as a factor in the evaluation of student work. Please refer to the Undergraduate Calendar E.2 Writing Across the Curriculum policy for details.</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.

## 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"> <li>• A computer with a supported operating system, as well as the latest security, and malware updates</li> <li>• A current and updated web browser</li> <li>• Webcam (built-in or external)</li> <li>• Microphone and speaker (built-in or external) or headset with microphone</li> <li>• Current antivirus and/or firewall software enabled</li> <li>• Broadband internet connection</li> </ul>
Academic Standing:	For more information go to <a href="http://www.ucalgary.ca/pubs/calendar/current/f.html">http://www.ucalgary.ca/pubs/calendar/current/f.html</a>
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 <a href="https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations">https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations</a>.</p> <p>Students needing an accommodation based on disability or medical concerns should contact Student Accessibility Services (SAS) in accordance with the Procedure for</p>

	<p>Accommodations for Students with Disabilities (<a href="https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf">https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf</a>). 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 <a href="http://www.ucalgary.ca/access/">www.ucalgary.ca/access/</a></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  <a href="http://www.ucalgary.ca/pubs/calendar/current/k.html">http://www.ucalgary.ca/pubs/calendar/current/k.html</a>  or <a href="http://www.ucalgary.ca/pubs/calendar/current/e-2.html">http://www.ucalgary.ca/pubs/calendar/current/e-2.html</a>  Additional information is available on the Academic Integrity Website at <a href="https://ucalgary.ca/student-services/student-success/learning/academic-integrity">https://ucalgary.ca/student-services/student-success/learning/academic-integrity</a></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 <a href="https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Acceptable-Use-of-Electronic-Resources-and-Information-Policy.pdf">https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Acceptable-Use-of-Electronic-Resources-and-Information-Policy.pdf</a></p>
Deferral of Term work and exams	<p>For more information about deferring a final exam go to <a href="https://www.ucalgary.ca/registrar/exams/deferred-exams">https://www.ucalgary.ca/registrar/exams/deferred-exams</a>  For more information about deferral of term work go to <a href="http://www.ucalgary.ca/pubs/calendar/current/g-7.html">http://www.ucalgary.ca/pubs/calendar/current/g-7.html</a>  <a href="https://www.ucalgary.ca/live-uc-ucalgary-site/sites/default/files/teams/14/deferred_termwork-feb-2020_revised.pdf">https://www.ucalgary.ca/live-uc-ucalgary-site/sites/default/files/teams/14/deferred_termwork-feb-2020_revised.pdf</a></p>
Intellectual Property & Copyright:	<p>All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<a href="https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Acceptable-Use-of-Material-Protected-by-Copyright-Policy.pdf">https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Acceptable-Use-of-Material-Protected-by-Copyright-Policy.pdf</a>) and requirements of the copyright act (<a href="https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html">https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html</a>) 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  <a href="https://www.ucalgary.ca/pubs/calendar/current/k.html">https://www.ucalgary.ca/pubs/calendar/current/k.html</a></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 <a href="https://www.ucalgary.ca/registrar/student-centre/privacy-policy">https://www.ucalgary.ca/registrar/student-centre/privacy-policy</a></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 <a href="http://www.ucalgary.ca/pubs/calendar/current/e-5.html">http://www.ucalgary.ca/pubs/calendar/current/e-5.html</a> or <a href="https://www.ucalgary.ca/research/researchers/ethics-compliance/chreb">https://www.ucalgary.ca/research/researchers/ethics-compliance/chreb</a></p>
Student Support:	<p>Please visit this link for important information on:</p> <ul style="list-style-type: none"> <li>• Wellness and Mental health resources</li> <li>• Emergency Evacuation/Assembly Points</li> <li>• Student Success and more....</li> </ul> <p><a href="https://www.ucalgary.ca/registrar/registration/course-outlines">https://www.ucalgary.ca/registrar/registration/course-outlines</a></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><a href="https://www.ucalgary.ca/risk/emergency-management/covid-19-response">https://www.ucalgary.ca/risk/emergency-management/covid-19-response</a>  <a href="https://www.ucalgary.ca/risk/emergency-management/covid-19-response/covidsafe-campus">https://www.ucalgary.ca/risk/emergency-management/covid-19-response/covidsafe-campus</a></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 <a href="mailto:ascarts@ucalgary.ca">ascarts@ucalgary.ca</a>.</p> <p>You can also visit the Faculty of Arts website at <a href="http://arts.ucalgary.ca/undergraduate">http://arts.ucalgary.ca/undergraduate</a> which has detailed information on common academic concerns.</p>
Faculty of Graduate Studies:	<p>For graduate studies email: <a href="mailto:graduate@ucalgary.ca">graduate@ucalgary.ca</a> or call 403 220 4938.</p> <p>Visit the Faculty of Graduate Studies for more details: <a href="https://grad.ucalgary.ca/">https://grad.ucalgary.ca/</a></p>