

**BioArt: Sonoran and Arctic Environments**  
**ENV/IAP/LSC 394**  
Spring 2021  
Tu Th 10:30-11:45 AM  
Sands 203

**Instructors**

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Office hours: Tu 12-1 PM, W 1-2 PM (Zoom-only)  
or by appointment for 1:1 in-person

**Class info**

Semester hours: 3  
Co-requisites: None  
Course Webpage: <https://asu.instructure.com/>  
Format: Combination of lectures, workshops, and hands-on exercises in fieldwork/artwork

**Course Description**

The artificial divide that currently exists between STEM fields (Science, Technology, Engineering, Math) and Art has not always existed. Many of the skills required to be successful are common to both art and science, such as skills in observation, interpretation, creativity, and communication. This course will pair science and art students to collaborate on research projects, inspired by learning about two ecosystems that are also seemingly different yet similar: The Sonoran Desert and the Arctic.

**Course Goals**

The goal of this course is to train students in both science and art, as an integrated curriculum rather than separate fields. Doing so will allow you to hone your own skills as scientists and artists, thus setting the stage for your future success. By engaging in collaborative and interdisciplinary research, you will gain understandings of the processes commonly used by both scientists and artists. You will hone your skills in observation, interpretation, and creativity for your respective major field by practicing the methods of the other.

**Course Objectives**

Students completing this course will be able to:

- Successfully engage in collaborative and interdisciplinary research, utilizing the processes and skills common to both scientists and artists including observation, interpretation, and creativity.
- Explain how life functions in a very different environment from that of Arizona, both in terms of the human experience in these different locations, as well as a scientific expertise of the ecology and natural history of the area.
- Describe the unique cultures that have settled and remained in the 3-country border area of Finland, Norway and Sweden with its numerous fells, lakes and mountains and fjords to the north.
- Effectively communicate both scientific research and art through presentation.

**Grading**

Class participation	10%
Assignments	40%
Capstone Project	50%

**Grading Scale**

90% ≤ A ≤	100%
80% ≤ B ≤	89.9%
70% ≤ C ≤	79.9%
60% ≤ D ≤	69.9%
E ≤	59.9%

**ASU Sync**

This course also uses Sync. ASU Sync is a technology-enhanced approach designed to meet the dynamic needs of the class. During Sync classes, students learn remotely through *live* class lectures, discussions, and study groups. You can find out more information about ASU Sync for students here, <https://provost.asu.edu/sync/students> and <https://www.asu.edu/about/fall-2020>.

To access live sessions of this class go to myASU and click the "Attend via Sync" button next to this class on your schedule, or go directly to: <https://asu.zoom.us/j/209653168?pwd=VzNkc3BoV2ZxdTh6ZHd6Z3FGcUtiZz09>. In the case of internet problems, you can still join by phone for audio interaction: 602.753.0140 (meeting ID: 209 653 168, password 888059).

You have the choice of attending either entirely remotely, or to attend some class sessions in-person and be remote for other sessions to ensure we keep the room occupancy below 50%. The schedule for when you come to class will be shared with you via email prior to the start of class.

If you cannot physically be on campus due to travel restrictions or personal health concerns, you will be able to attend this class live via Zoom during the spring semester. If you will not be on-campus for the spring semester, you are expected to contact your professors to make accommodations.

### **Community of Care**

Stay Aware - Check the Novel Coronavirus webpage regularly:

<https://eoss.asu.edu/health/announcements/coronavirus>

*Masking.* Everyone will be required to wear a mask while in ASU buildings. Face coverings will also be required in outdoor community spaces where social distancing isn't possible.

*Reporting.* Please be aware that as part of our Community of Care efforts, your instructor needs to report positive COVID-19 cases to the Dean of Students. Students can also report positive COVID test results to the Dean of Students at [deanofstudents@asu.edu](mailto:deanofstudents@asu.edu)

### **Technology Requirements**

This course will utilize three pieces of technology that require you to have the proper technology and an internet connection: Canvas and Zoom. If you are not able to personally finance the equipment you need to attend class via ASU Sync, ASU has a laptop and WiFi hotspot checkout program available through [ASU Library](#).

*Zoom.* This course will be live streamed during our assigned class time, accessible anywhere with the proper technology. We encourage you to use a PC or Apple laptop or desktop equipped with a built-in or standalone webcam. You will need an internet connection that can effectively stream live broadcasts. It is recommended that your internet download speed is at least 5.0 mbps. You can use this [tool to test your current connection](#).

*Canvas.* The Canvas site for this course will be our hub for sharing course materials, downloading and submitting assignments, and grading and feedback. Check the site regularly.

### **Course Reading**

There are no required textbooks for this class. However, there will be occasional assigned readings from the published literature in both the sciences and arts. These readings are listed in the "Reading List" on Canvas and available online through ASU's library's electronic journals. A demonstration on how to access and use Electronic Journals will be made during the first class.

### **Class Participation**

We will have in-class discussions and activities nearly every class period. Your participation in these discussions and activities with the class will be monitored. The professor will also evaluate whether you've done the readings and whether you're paying attention in class using questions or activities. It is crucial that you actively participate in these activities, as 10% of your grade will reflect this. Note that your failure to attend class guarantees you the worst participation score possible!

### **Assignments**

There are several assignments that will introduce and practice basic concepts in Sonoran Desert and Arctic ecology, research methods, and the creative process to reinforce topics covered in lecture. Assignments will be assigned and explained during class. Written assignments must be word-processed and spell-checked. Use of the Writing Center is strongly encouraged (<http://studentsuccess.asu.edu/writingcenters>). Please submit your work electronically using the Assignment feature on Canvas. Unless otherwise specified, assignments are *due by 8:00 A.M. on the date assigned in the syllabus*. All assignments must be turned in on time for full credit; 10% of your grade will be automatically deducted *per day* for days 1 and 2 late. Assignments will not be accepted more than 2 days late. No late assignments will be accepted for full credit without *prior* permission of the instructor.

### **Instructor communication:**

The best way to contact me is by email. I will typically respond within 24-48 hours. If I do not respond in 2 days, call or email again. A lack of response should never be interpreted as agreeing to your request! If I have not responded, it is because I did not receive your email, and you need to try again.

ASU email is an official means of communication among students, faculty, and staff. Students are expected to read and act upon email in a timely fashion. Students bear the responsibility of missed messages and should check their ASU-assigned email regularly. **All instructor correspondence will be sent to your ASU email.**

### **Course Policies and Expectations:**

*Attendance/absence policy.* In addition to the instructor's general policy on absences and missed work, excused absences and conditions for making up work include "Accommodation of Religious Practices" (<https://www.asu.edu/aad/manuals/acd/acd304-04.html>) and "Missed Classes Due to University-Sanctioned Activities" (<https://www.asu.edu/aad/manuals/acd/acd304-02.html>). Students must notify their instructors of these absences as early as possible in the semester. However, if an emergency arises that causes you to miss class, **communication is key!** Contact the professor and/or classmates to learn what you missed, and **you will be required to provide evidence of the emergency** (e.g., doctor's note, obituaries, police report, etc.) if your absence caused you to miss an exam or assignment. Please note that work schedules, vacation travel, meetings on other campuses, homework load, and sleepiness *do not* count as emergencies.

*Study and Preparation Time.* The Arizona Board of Regents specifies that students are expected to spend at least two hours per week on course-related research and scholarly activities per course credit. This means that each week you should expect to spend at least eight hours preparing for class.

*Academic Integrity.* <https://provost.asu.edu/academic-integrity> Each student has an obligation to act with honesty and integrity, and to respect the rights of others in carrying out all academic assignments. Violations of the University Academic Integrity policy will not be ignored. Penalties include reduced or no credit for submitted work, a failing grade in the class, a note on your official transcript that shows you were punished for cheating, suspension, expulsion and revocation of already awarded degrees. The university requires that the implementation of any of these penalties for violations of the academic integrity policy be reported to the College's Academic Integrity Officer. The Academic Integrity Policy defines the process to be used if the student wishes to appeal this action.

*ASU Student Code of Conduct.* <https://eoss.asu.edu/dos/srr/codeofconduct> Students are expected to follow the student code of conduct, especially when communicating with your peers and instructors. Violations of the student code of conduct may result in withdrawal from the class.

*Copyright Infringement.* Students should be aware that they must refrain from uploading to any course shell, discussion board, or website used by the course instructor or other course forum, material that is not the student's original work, unless the students first comply with all applicable copyright laws; faculty members reserve the right to delete materials on the grounds of suspected copyright infringement.

*Reasonable Accommodations for Students with Disabilities.* The Disability Resource Center (DRC) provides information and services to students with any documented disability who are attending ASU West. Individualized program strategies and recommendations are available for each student as well as current information regarding community resources. Students also may have access to specialized equipment and supportive services and should contact the instructor for accommodations that are necessary for course completion.

*Final Exam Make-up Policy.* The final exam schedule listed in the Schedule of Classes will be strictly followed. Exceptions to the schedule and requests for make-up examinations can be granted only by the Associate Director of the School of Mathematical and Natural Sciences for one of the following reasons: 1) religious conflict; 2) the student has more than three exams scheduled on the same day; 3) two finals are scheduled to occur at the same time. Make-up exams will NOT be given for reasons of non-refundable airline tickets, vacation plans, work schedules, weddings, family reunions, or other such activities. Students should consult the final exam schedule before making end-of-semester travel plans. If there is a last-minute personal

or medical emergency, the student may receive a grade of Incomplete and makeup the final within one calendar month. The student must provide written documentation and be passing the class at the time to receive an Incomplete. A signed "Request for Grade of Incomplete" must be submitted by the student and approved by the student's instructor and the Associate Director of the School of Mathematical and Natural Sciences.

*The Grade of Incomplete.* A grade of incomplete will be awarded only in the event that a documented emergency or illness prevents a student who is doing acceptable work from completing a small percentage of the course requirements at the end of the semester. The guidelines in the current general ASU catalog regarding a grade of incomplete will be strictly followed. **A grade of incomplete will NOT be awarded unless there is documented evidence of extreme personal or immediate family hardship.** Changes in work hours, child-care emergencies, or other similar personal problems will not be approved as reasons for awarding incompletes. The Director of the School of Mathematical and Natural Sciences must approve all incomplete grade requests.

*Course/Instructor Evaluation.* The course/instructor evaluation for this course will be conducted online 7-10 days before the last official day of classes of each semester or summer session. Your response(s) to the course/instructor are anonymous and will not be returned to your instructor until after grades have been submitted. The use of a course/instructor evaluation is an important process that allows our college to (1) help faculty improve their instruction, (2) help administrators evaluate instructional quality, (3) ensure high standards of teaching, and (4) ultimately improve instruction and student learning over time. Completion of the evaluation is not required for you to pass this class and will not affect your grade, but your cooperation and participation in this process is critical. About two weeks before the class finishes, watch for an e-mail with "NCIAS Course/Instructor Evaluation" in the subject heading. The email will be sent to your official ASU e-mail address.

*Withdrawals.* It is the student's responsibility to be aware of their registration status. **The instructor will NOT withdraw students for any reason.** Specifically, students should be aware that non-attendance will NOT automatically result in their being dropped from the course. Therefore, if a student does not attend class during the first week or for any extended period of time during the semester, they should not presume that they are no longer registered.

**Please note the following dates:**

Drop/Add Deadline	January 17, 2021
Course Withdrawal Deadline	March 28, 2021
Complete Session Withdrawal Deadline*	April 23, 2021

\*As part of a complete session withdrawal a student must withdraw from all classes in a session. Beginning the first day of classes, undergraduate students are required to work with a Student Retention Coordinator to facilitate the withdrawal process. Please refer to <http://students.asu.edu/StudentRetention>. Any withdrawal transaction must be completed by the deadline date in accordance to the appropriate session at the registrar's office. If not, you will still be officially enrolled and you will receive a grade based on your work completed. For additional information about ASU's withdrawal policy and the possible consequences of withdrawing from a class, contact Registration Services or your academic counselor. **Students are responsible for their registration status!**

*Emergencies/Campus Power Outage.* In the event of a campus power outage or other event affecting the ability of the University to deliver classes, any decision to cancel classes will be announced using the ASU emergency notification system. For this reason, it is imperative that students register with the ASU emergency notification system at: <https://cfo.asu.edu/emergency-alert>. In cases in which a limited number of buildings are affected, students should check the university website and/or call the School office at (602) 543-6050.

*Evacuation Plan.* Students should be aware of the evacuation route posted on the exit door of each classroom. Students who cannot walk down stairs should notify the instructor as early in the course as possible so the instructor can provide information regarding the location of the designated meeting area on each upper floor of the building (marked with a blue sign that states Emergency Evacuation Response Area).

*Title IX.* Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>. As mandated reporters, faculty are obligated to report any information of which they become aware regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish discuss any concerns confidentially and privately.

*Policy against Threatening Behavior.* <http://www.asu.edu/aad/manuals/ssm/ssm104-02.html> In the classroom and out students are required to conduct themselves in a manner that promotes an environment that is safe and conducive to learning and conducting other university-related business. All incidents and allegations of violent or threatening conduct by an ASU student will be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students. Such incidents will be dealt with in accordance with the policies and procedures described in Section 104-02 of the Student Services Manual.

*Assessments.* Please be aware that student scores on exams or other graded work may be used for assessment of program goals of degrees offered by the School of Mathematical and Natural Sciences.

*Recording of Lectures.* Our aim is to create a learning environment where all feel free to contribute; thus any recording of class sessions is prohibited (with the exception of those who have a DRC-approved accommodation), or the express consent of the instructor). No one should post any verbatim accounts of class discussion or say anything that could identify a class member on social media without the express permission of the class member.

*Copyright Infringement.* Students must refrain from uploading to any course shell, discussion board, or website used by the course instructor, or any other forum/site not owned by the instructor, material that is not the student's original work, unless the students first comply with all applicable copyright laws. Faculty members reserve the right to delete materials on the grounds of suspected copyright infringement. This right does not exempt posting to any site class notes, discussions, homework, exams, and any other course-related materials to include study materials without the instructors permission. Such posting explicitly violates copyright laws and the ASU academic integrity policy. *Subject to Change.* All class syllabi are subject to minor changes as necessary to accommodate the needs of the instructor, school, or class.

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<b>Week</b>	<b>Date</b>	<b>Topic</b>	<b>Assignments Due</b>
1	Tu 1/12	Fundamental principles of science and art Outline research project parameters	
	Th 1/14	Intro to Sonoran & Arctic ecosystems Student forum: science & art interests	
2	Tu 1/19	BioArt: past and present Biological illustration exercise	<b>Read &amp; respond</b>
	Th 1/21	Sonoran & Arctic ecosystems, cont.	
3	Tu 1/26	Field Exercise: Sonoran Desert Field safety	<b>Illustration exercise</b>
	Th 1/28	Student forum: field debrief Intro to techniques in science and art	
4	Tu 2/2	Tools of the trade(s)	<b>Field report</b>
	Th 2/4	Communication in science & art	
5	Tu 2/9	Arctic & Sonoran culture & history	<b>Poster critiques</b>
	Th 2/11	Team mini-projects	
6	Tu 2/16	Presentation of team mini-projects	<b>Presentation materials</b>
	Th 2/18	Student forum: science & art ideas Brainstorm/discuss research project ideas	
7	Tu 2/23	Research project background & planning Resources for researchers	<b>Research topics</b>
	Th 2/25	Research project planning	
8	Tu 3/2	Research project methodology	<b>Research plans</b>
	Th 3/4	Science communication to the public	
9	Tu 3/9	Research projects	
	Th 3/11	Color	
10	Tu 3/16	Research projects	<b>Research project progress report</b>
	Th 3/18	Texture	
11	Tu 3/23	Research projects	
	Th 3/25	Symbiosis & interdisciplinarity	
12	Tu 3/30	Research poster & art drafts	
	Th 4/1	Landscapes	
13	Tu 4/6	Research poster & art drafts	<b>Poster &amp; art drafts</b>
	Th 4/8	Research project refinement	
14	Tu 4/13	People	
	Th 4/15	Research projects refinement	
15	Tu 4/20	Research poster & art drafts	<b>Updated drafts</b>
	Th 4/22	Independent project presentations & interviews	
	Tu 4/27	Final exam week (no in-person meeting)	<b>Research projects due</b>