

# Network Art (IA 252.01, Spring 2014)

## Class Details

Location: BR206

Time: Friday, 9:00 am - 3:00 pm

Instructor: Sam Sheffield

Office: BR312 (Hours by appointment)

Email: [ssheffield@mica.edu](mailto:ssheffield@mica.edu)

Class Website: <http://samsheffield.com/netarts14>

## Course Description

Students will learn and apply various new media methods and technologies to create networked art projects. Sound, electronics, games, gaming, play and beyond will be used for the creation of participatory net/web events. Students will work both individually and collaboratively throughout the semester. Studio work and techniques will be supplemented by readings, lectures and discussions on current and historical perspectives on new media, electronic art, systems, and networks.

## Course Goals

*"The real voyage of discovery consists not in seeking new landscapes but in having new eyes" - Marcel Proust*

In this class, you will experiment with current network technologies to create interactive works bridging digital and material space. In addition, you will become familiar with the contemporary and historical uses of networks in the arts, which will provide critical context for the work you develop this semester.

## Learning Objectives

Upon completion of this course, you will...

- ↳ be able to create work which utilizes the network as a means of both transmission and communication.
- ↳ have strengthened your understanding of programming concepts introduced in IA1.
- ↳ have experience working with OSC and SpaceBrew to communicate between screen-based and non-screen based work.
- ↳ have experience with using the Arduino to add physical presence (input and output) to your networked projects.
- ↳ have produced 2 personally-driven projects using network technologies to create interactive, connected spaces.
- ↳ be familiar with critical and historical uses of networks in the arts.

## Important Dates

- ↳ Last day to drop class (no transcript record): February 18th
- ↳ Last day to withdraw from class (W on transcript): March 4th
- ↳ Last day of class: May 9th

## Required Materials

- ↳ Laptop (Mac or PC)\*
- ↳ Sketching materials (notebook/sketchbook, drawing/writing tools)
- ↳ External hard drive or cloud-based file backup (Dropbox, Google Drive, Github, BitBucket, etc.)
- ↳ Arduino or Makey Makey (after Spring Break)

*\* A laptop is ideal, as it provides you with the greatest deal of flexibility, but a combination of lab computer + personal desktop computer is OK too! Also, if you share a computer, make sure you have administrator privileges before the second week of class.*

## Suggested Reading

- ↳ *Processing: A Programming Handbook for Visual Designers and Artists* by Casey Reas and Ben Fry (Solid reference book... a bit dated)
- ↳ *The Nature of Code: Simulating Natural Systems with Processing* by Daniel Shiffman (Incredible reference for coding complex behaviors)
- ↳ *Processing: Creative Coding and Generative Art in Processing 2* by Ira Greenberg, Dianna Xu and Deepak Kumar (Most up to date!)
- ↳ *Getting Started with Arduino* by Massimo Banzi (Small, gentle introduction)
- ↳ *Making Things Talk* by Tom Igoe (Connect anything together! In need of an update.)

## Online Resources

- ↳ Official Processing Reference (<http://processing.org/reference/>) and Examples (<http://processing.org/examples/>)
- ↳ For Your Processing (<http://fyprocessing.tumblr.com>)
- ↳ OpenProcessing (<http://www.openprocessing.org>)
- ↳ Creative Applications (<http://www.creativeapplications.net>)
- ↳ Prosthetic Knowledge (<http://prostheticknowledge.tumblr.com>)
- ↳ TRIANGULATION BLOG (<http://www.triangulationblog.com>)
- ↳ Turbulence.org (<http://turbulence.org>)

## Grading

Grades are based on attendance, class participation, timely completion of assignments and their overall quality, and individual progress.

### Grading Breakdown

- ↳ A, A- Excellent work, exceeds all the basic requirements, meeting all deadlines, excellent attendance and punctuality, good attitude and work ethic.
- ↳ B+, B, B- Good work, shows clear conceptualization, presentation and execution, and fulfills all requirements, meeting all deadlines, attendance and punctuality, good attitude and work ethic.
- ↳ C+, C, C- Average work, satisfies the basic requirements, meeting most deadlines, decent attendance and punctuality, poor attitude or work ethic.
- ↳ D+, D, D- Below average work, nearly meets requirements but does not fully succeed in its execution, meeting some deadlines, poor attendance or punctuality, poor attitude or work ethic..
- ↳ F Failure to meet the class's basic requirements, 4 or more absences, missing all deadlines, poor attitude and work ethic.

### Deliverables

- ↳ 2 Projects - 40%
- ↳ Homework Assignments - 40%
- ↳ Attitude and Participation - 20%

## Your Responsibilities

### Attendance

Attendance is mandatory for success in this course.

- ↳ If you miss a class you are still responsible for all of the material covered as well as any assigned homework.
- ↳ Please provide basic documentation of the classwork due on the day of your absence.
- ↳ 4 or more unexcused absences will automatically result in a failing grade.

### Punctuality

Please arrive to class no later than 9:00am. We'll begin each class with brief homework presentations, so it is important to arrive prepared and on time. Being habitually late is disruptive and can have a negative impact on your final grade in this class.

### Deadlines

All projects and homework are to be completed by the start of class on assigned due date. Unfinished work will not be discussed in class. Once completed, documentation of late work can be submitted directly to me with a penalty of a letter grade per week.

### Classwork

Classwork related to concepts introduced in class will be assigned each week as homework. Whenever possible, you'll be given time in class to begin experimenting with these materials. This work will be loosely thematic, but feel free to approach it in any manner which feels personally exciting to you. The source code for all homework will be due no later than May 9th.

### Projects

There will be 2 projects in this class, intended to give you an opportunity to further explore the concepts and materials in directions which are personally exciting or interesting to you. For these projects, you will be responsible for providing edited documentation for both projects, including images and/or video, as well as source code. Specific details regarding documentation formats will be provided when appropriate.

## Presentations & Critiques

In the past, I've had experience with students who have not completed their projects deciding to skip, or come particularly late, on the day of critiques. I consider this kind of behavior particularly disrespectful and self destructive. Critiques not only provide valuable feedback on your own work, they help establish a dialogue which defines standards and expectations for good work in this class. If you find yourself in this situation, which I sincerely hope will not be the case, you will still be able to contribute to the class discussion by being present.

## Backing Up Your Work

It is your responsibility to backup and archive your work throughout the semester. Be sure to save often and make multiple copies of your in-progress projects during the semester. Dropbox and online version control systems like Github or Bitbucket are great for this!

## Participation

As a citizen of the classroom, you are expected to actively participate in class exercises, discussions, and critiques. In addition, this class is intended to function as a *peer learning* environment. I encourage you to support and talk to one another during class, particularly if you are experiencing any difficulty.

## Collaboration

Collaboration on projects is welcomed! However, each team member must carry their own weight in the development and documentation of a project. Afterwards, each collaborator will fill out a brief Peer Review form, which will allow you to discretely provide feedback on your collaborators. Grades will be given individually, and this feedback will be taken into account when factoring grades.

## Help me!

*"Anyone who has never made a mistake has never tried anything new." - Albert Einstein*

We'll be covering a lot of material this semester which may be completely new to you. Please keep in mind that acquiring any new skill can be slow and difficult process. If you think you need help outside of class, please let me know as soon as possible, so we can set up a time to meet.

## Last Minute Help Requests

Naturally, I want everyone to feel successful in this course. However, it's unrealistic for me to provide any significant help with problems you might be experiencing late on Thursday night or early on Friday morning.

## MICA Policies

### Americans with Disabilities Act

Any student who may need an accommodation based on the potential impact of a disability should contact the Learning Resource Center at 410-225-2416, in Bunting 458, to establish eligibility and coordinate reasonable accommodations.

### Environmental Health and Safety (EHS)

It is the responsibility of faculty and students to follow health and safety guidelines relevant to their individual activities, processes, and to review MICA's Emergency Action Plan and attend EHS training. It is each faculty member's responsibility to coordinate with the EHS Office to ensure that all risks associated with their class activities are identified and to assure that their respective classroom procedures mirror the EHS and Academic Department guidelines. Each of these policies and procedures must be followed by all students and faculty. Most importantly, faculty are to act in accordance with all safety compliance, state and federal, as employees of this college and are expected to act as examples of how to create art in a way to minimize risk, and reduce harm to themselves and the environment. Faculty must identify and require appropriate personal protective equipment for each art making process, for each student, in all of their classes, when applicable. Students are required to purchase personal protection equipment appropriate for their major. Those students who do not have the proper personal protection equipment will not be permitted to attend class until safe measures and personal protection are in place.

## Plagiarism

Each discipline within the arts has specific and appropriate means for students to cite or acknowledge sources and the ideas and material of others used in their own work. Students have the responsibility to become familiar with such processes and to carefully follow their use in developing original work.

## Policy

MICA will not tolerate plagiarism, which is defined as claiming authorship of, or using someone else's ideas or work without proper acknowledgment. Without proper attribution, a student may NOT replicate another's work, paraphrase another's ideas, or appropriate images in a manner that violates the specific rules against plagiarism in the student's department. In addition, students may not submit the same work for credit in more than one course without the explicit approval of the all of the instructors of the courses involved.

## Consequences

When an instructor has evidence that a student has plagiarized work submitted for course credit, the instructor will confront the student and impose penalties that may include failing the course. In the case of a serious violation or repeated infractions from the same student, the instructor will report the infractions to the department chair. Depending on the circumstances of the case, the department chair may then report the student to the Office of Academic Affairs, which may choose to impose further penalties, including suspension or expulsion.

## Class Schedule (tentative):

The schedule has been left intentionally loose in order to give us room to reshape the class based on your personal and collective needs.

### Part I (Weeks 1-5)

During the first half of the semester:

- ↳ Get reacquainted with Processing
- ↳ Objects, subclassing, polymorphism
- ↳ Introduction to the OSC protocol
- ↳ Conversational (one-to-one) and collaborative (one-to-many) models of communication
- ↳ Exploring local spaces
- ↳ Net.art, the telematic embrace, and historical manifestations of the network in the arts

### Project I (Weeks 6-8)

- ↳ Week 6: work session, discuss project direction through sketches/storyboards and a brief project writeup
- ↳ Week 7: work session, review project prototypes
- ↳ Week 8: project presentations

### Part II (Weeks 10-13)

In the second half of the semester:

- ↳ Physical computing (Arduino, Makey Makey)
- ↳ Introduction to SpaceBrew
- ↳ Browser as interface
- ↳ Getting more distance
- ↳ Internet of Things, networked bodies, and the blurring of digital and material space.

### Project II (Weeks 14-16)

- ↳ Week 14: work session, discuss project direction through sketches/storyboards and a brief project writeup
- ↳ Week 15 work session, review project prototypes
- ↳ Week 16: project presentations