New York City College of Technology
The University of New York

Department of Entertainment Technology

MTEC 2120 – Interaction Media Systems Design
Fall 2017, Tuesdays & Thursdays 4-5:40pm
V-314

Instructor:
Grayson Earle
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Office hours: V-203, Tuesday: 6-7:30pm & Thursday 12:30-2 and 6-7:30pm, and by appointment

Description:
An overview of protocols used in the production of interactive media. In this course we will explore theories, models, and frameworks that enable new media projects to traverse the digital physical membrane, online and offline networks, the video pipeline, wireless channels, and more. Students will demonstrate an understanding of these topics by completing weekly lab assignments and larger collaborative projects.

After taking this course, students will be able to: Program and distribute graphical, interactive applications; Recognize and utilize the appropriate terminology for interactive systems; Create and utilize open source code; Enlist physical devices to transmit wireless information to digital systems; Understand digital graphics theory in a production environment; Understand and leverage the video pipeline with Syphon & Unity.

Pre/co-requisite(s): METC 1102

Attendance:
Punctuality is one of the most respected virtues in the industry. If you have a reputation for showing up on time, you will always find people willing to trust you and to hire you. Use this class as an opportunity to build the habit of punctuality. It will be very difficult for you to learn the material if you are not in class. If you must come in late, please be respectful of the class and try not to disturb anyone as you enter. If you know ahead of time that you will be late or absent, please contact me before the start of class so we can arrange for you to make up material you will be missing.

Please refer to the latest student handbook for the university-wide policy on attendance.

Academic Integrity Standards:
You are responsible for reading, understanding and abiding by the NYC College of Technology Student Handbook, "Student Rights & Responsibilities," section "Academic Integrity Standards." Academic dishonesty of any type, including cheating and plagiarism is unacceptable. "Cheating" is misrepresenting another student's efforts/work as your own. "Plagiarism" is the representation of another person's work, words or concepts as your own.

Grading:
Participation/Attendance: 20%
Readings/Responses: 15%

Projects: 45%
Quizzes: 20%

Schedule:

Week 1: Introduction to Course & Unity
Tuesday:
Course overview
Artists & Projects: Francis Tseng

Thursday:
Unity: 3d Space

Homework:
Play Francis Tseng's *The Founder* and respond
Extra-credit: Go see Ian Cheng's Emissary trilogy at PS1 (hurry! closes soon) & write about it

Week 2: Introduction to Unity
Tuesday:
Dynamic processes, scripts, randomness
Artists & Projects: Ian Cheng, hoodxghandi, Jack Sachs

Thursday:
Unity Lab: Scripts, Object Generation, Fun with Random

Homework:
Read Benjamin's *Art in the Age of Mechanical Reproduction*

Week 3: Logic & Loops
Tuesday:
Conditional Logic, Iteration
Artists & Projects: Sol Lewitt

Thursday:
Unity & Conditional logic: if, while

Homework:
Read Reas' *Software & Art excerpt*

Week 4: Input
Tuesday:
Controllers: Makey Makey, Team Mario
Unity: Handling Input
Artists & Projects: Kaho Abe, Rakete

No class on Thursday

Week 5: Project 1
Tuesday:
Introduce Project 1: Control

Thursday:

Project 1 Workshop

Week 6: Video Pipeline
Tuesday:
Project 1 wrap-up

Thursday:
Video pipeline: Syphon

Week 7: Projection Mapping
Tuesday:
Video projection mapping: MadMapper, open source
Interventions
Artists & Projects: Richard The, Guerrilla Girls, The Yes Men, Dread Scott, Eva and Franco Mattes, Krzysztof Wodiczko, Ali Momeni, Graffiti Research Lab, Chika

Thursday:
Projection Mapping Lab

Week 8: Checkin / Project 2
Tuesday:
Course check-in, midterm grades
Introduce Project 2: Intervene, Guerrilla Video Projection

Thursday:
Project 2 Workshop

Week 9: Computer Vision & Augmented Reality
Tuesday:
Computer vision
Cyborgs
Projects & Artists: Camille Utterback, Rain Room, Daniel Rozin, Claire Hentschker, The Cyborg Foundation

Thursday:
AR Lab: Augmented T-shirts

Homework:
Read Donna Harraway's *Cyborg Manifesto*

Week 10: Twitterbots
Tuesday:
Twitterbots
Projects & Artists: Katie Rose Pipkin, Ben Rubin

Thursday:
Twitterbot Lab

Week 11: Wireless / Data-transfer

Tuesday:
Fast, wireless data transfer: OSC, Bluetooth

Thursday:
Mobile-device-to-Unity Lab

Week 12: Software to Hardware
Tuesday:
Arduino: Software -> Hardware
Projects & Artists: Zimoun, Tristan Perich, Taeyoon Choi

Thursday:
Actuating mechanical objects via digital systems Lab

Week 13: Interactivity and The Internet
Tuesday:
Introduce Project 3: Transgress, To the Internet and Back
Projects & Artists: Allison Burtch, Beatriz DeCosta

Week 14: Project 3
Tuesday:
Project 3 workshop

Thursday:
Project 3 wrap-up

Control:

Create a Unity Environment that responds to simple user input. This can be very intentional in terms of interaction design or experimental and playful. Possible input devices include keyboard, mouse, microphone, any "buttons" rigged up with the Makey Makey.

Intervene:

In groups, create a prototype for a guerrilla video-projection-intervention. This can be single channel, text, or interactive (a la Graffiti Research Lab). You must construct a model of the building/environment in question using cardboard and paper. Complete a manifesto or statement detailing the reasons behind your intervention, as though you have actually projected on site.

Transgress:

Either solo or as a team (3 people max), create a project with components that move between digital, physical, and cyber spaces. In your proposal include a flowchart detailing the interaction between these systems and spaces.