

Visualization and Prototyping 2014

COURSE SYLLABUS

MICA + JHU CAREY BUSINESS SCHOOL |
MBA/MA DESIGN LEADERSHIP PROGRAM

FALL 2014: OCT 21—DEC 16, 2014

MT. ROYAL STATION BUILDING
1400 CATHEDRAL STREET
BALTIMORE, MD 21201

Tuesdays, 9a-1p
ROOM S103

INSTRUCTOR:
Amy Lee Walton
awalton@mica.edu

ASSISTANTS:
Nate Gulledge
ngulledge@mica.edu

REIMAGINE > RECREATE > REDESIGN > REDEVELOP > REVOLUTIONIZE >
REFORM > RESTART > REINVENT > REFASHION > REFABRICATE > RETOOL >
REPURPOSE > REDO > RECONSTRUCT > REBUILD > RECRAFT

In today's world innovation is all around us and the ability to innovate is at our fingertips. If you have an iPhone, Android, or Windows phone you're already carrying one of the world's most sophisticated self-tracking tools. The GPS, accelerometer, the microphone, all of these tiny sensors make up a great set of tools you can use to understand how you move around the world.

This class is an interactive workshop focused around three main models: 1) the start-up model: sharing concepts internally (between classmates on github) and externally (via blogs and github) and 2) open-source data: collecting, accessing and visualizing data sources, 3) fabrication: creating abstracted forms influenced by your data narratives – using digital fabrication tools such as the 3D printer, laser cutter, 3D modeling, and traditional low-tech methods.

Students will get familiar with traditional hand and foot mapping, then move on to the more advanced science of mapping. They will build and maintain a Jekyll blog using Github, document their research and workflow, while testing and prototyping to determine their final projects. Students will be taught how to quickly gather and analyze their data. As well as techniques and processing for fabrication of this data. We will cover 3D printing, laser cutting and interactive methods of making. Finally students will be expected to produce a final project, showing the accumulation of their research, interests and learning.

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DELIVERABLES

- » A 3D prototype or 2D design object
- » 4 blog posts
- » A complete design & research document including process, sketches, outcomes and final results
- » Public presentation of project consisting of:
 1. Prototype/design object
 2. Digital presentation explaining the process and end result

ASSESSMENT CRITERIA

- » Depth of research and reflection; through design, research, document and active participation in class meetings and group critiques.
- » Quality of concept through research, document and final prototype/ design object.
- » Exhibiting thorough use of technical workshops, including experiments, tests, through process documentation.
- » Convincing and precise translation of final concept into design, through prototype / design object.
- » Paying careful attention to the aesthetics and technical execution of the final design, through prototype/design object.
- » Communicating the concept and process of your design clearly and effectively through public presentation and documentation of project.
- » Consistent attendance

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SCHEDULE

Tuesday 10/21 :: Intro and Maps

- » Introduction of class and assignment
- » **Lecture:** Roles, responsibilities and duties
- » **Activites:** Hand + Memory Mapping
- » **Homework:** Github account, download Github desktop App, download Moves App and start logging, watch Jekyll and Github on Lynda.com, read <http://mapschool.io/>, think about ideas for projects & groups

Tuesday 10/28 :: Blogging your Process

- » Data mapping with Moves
- » **Workshop:** Setting up your Jekyll blog on Github
- » **Visiting Guest:** Tom MacWright, <http://mapschool.io/>
- » **Homework:** Presentations of 3 project concepts, blog post (1)

Tuesday 11/4 :: The Space between Art and Cartography

- » Student Presentations — 3 project ideas
- » **Lecture:** The Space between Art and Cartography
- » **Workshop:** Mapbox Studio & Data Wrangling
- » **Homework:** Explore abstractions of final project proposals, blog post your explorations (2), read <https://www.mapbox.com/blog/weekend-hack-printing-3d-tiles/>

Tuesday 11/11 :: Laser-cut Maps

- » **Demo:** Laser-cut topographic map
- » **Workshop:** 3D Modeling with Rhino, prep files for: laser-cutting
- » **Homework:** Start physical output and form studies, start wrangling data, make blog post (3), and read RepRap workflow

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SCHEDULE (continued)

Tuesday 11/18 :: 3D Printed Maps

- » Student Presentations — Final projects
- » **Workshop:** 3D Modeling with Rhino, prep files for: RepRat
- » **Demo:** 3D print a map
- » **Homework:** Group meetings, keep exploring, blog post (4)

Tuesday 11/25 :: No Classes

- » Group meetings
- » Keep exploring and blogging

Tuesday 12/2 :: Work Session

- » **Guest Workshop:** Ian Villeda — Advanced data styling with Studio, https://twitter.com/ian_villeda
- » **Visiting Guest:** Tatiana Van Campenhout — Designing fast, scalable systems (and having fun doing it), <http://tatiana.be/>
- » Group / individual project progress updates
- » **Homework:** Final project and documentation

Tuesday 12/9 :: Work Session

- » Sign-up for final presentations
- » Group / individual project progress updates
- » **Skype Guest:** Koen De Lombeart - Digital & Remote Diagnostics
- » **Homework:** Complete final project and documentation

Tuesday 12/16 :: Final Presentation

- » Final Student Presentations! (and final documentation delivery!)
- » **Guest Critique:** Annet Couwenberg & Ryan Hoover
- » **Celebrate:** Snacks and chat!