

MAKING DECISIONS

MS DMT Practicum

ARCH 700 / FALL 2020 M Th 1-6

Locations: FABLab, MS Research Space, and online via Zoom.

Instructors: Mark Meier and Catie Newell

meier@umich.edu / cnewell@umich.edu

Practicum serves as an intensive launch into the Digital and Material Technologies program with 3 major goals:

1. **An intensive tooling-up:** students acquire the skill sets to operate a suite of machines and softwares, and to recognize tool capacities and strategies.
2. **The development of production logics:** students critically discuss and develop tools, jigs, and methods of making to advance fabrication technique and material insight.
3. **Conscious decision assessment:** students carefully investigate, reveal, and respond to the extended consequences of design decisions ranging in topics from energy use, material health, production efficiencies, machine access, environmental impact, cost, performative effects, and impacted populations.

LEARNING MODE:

Practicum will be a hybrid course. Many sessions will be remote and online for safety. Lab training sessions and hands-on machine learning will be in the FABLab with safety protocols in place.

COURSE OBJECTIVES:

Making. Decisions. Making Decisions.

MS Practicum provides students with an opportunity to directly engage specific tools, processes and decisions. The expertise and specific skills from this course will inform future work across all of the other courses within the concentration. This course provides a platform to teach a range of software and hardware skills that are essential for all designers within this realm of architecture. This course incorporates construction and fabrication issues such as tolerances, material properties, assembly, material efficiency, machine-time vs. quality of product, all through directed design-based short projects. Students will be expected to synthesize accumulated skills and issues and experience through a deeper investigation into the relationships between digital / physical, design / making, and tools / output all the while recognizing and communicating synergies between what they build and its impacts in the larger material or digital environment.

AT STAKE:

Building our lived environments within the reach of computationally-driven design and fabrication technologies is an effort that requires constant experimentation and the ability to recognize both opportunity and error. It requires us to observe material behavior, follow the flow of machine logics, create new tools for new tasks, and understand the wisdom in collaboration. And now more than ever, it requires us to give more greatly to the world; its humans and its environment. We must recognize that we are creating the near future.