master of science: digital technologies
The Master of Science concentration in Digital Technologies (MS_DT) is a 2.5 semester (fall, winter, spring half) post-professional degree in architecture that supports cutting-edge research in advanced fabrication techniques and computational-aided design, computational software and hardware, data manipulation, and synthetic applications of hardware/software.

Project-based research in the college’s state of the art Digital Fabrication Lab (FABLab) – with emerging design faculty and practitioners – provides a powerful platform for motivated participants to explore novel approaches to constructing designed objects, buildings, installations, and environments at multiple scales. The FABLab’s resources include: Five 6+ axis robotic systems for additive, subtractive, forming, and assembly research; two 3-axis and one 5-axis CNC Routers that machine wood, foam, or aluminum based on a digital model; two CNC Mills that machine metals, including stainless and aluminum, manually or using CAM software; a CNC Waterjet that cuts 2-dimensional profiles from sheets of material; a Zund Knife Cutter that cuts through fabric, plastic, and paper; a 3D Digitizer that allows one to generate points in a digital modeling program based off a physical model, and five 3D printers, both ABS and plaster-based, allowing rapid prototyping directly from 3D models.

As architecture integrates advanced technologies from the aerospace, automotive, and shipbuilding industries, it has altered both the way buildings are conceived and the manner in which they are manufactured. CAD/CAM (computer-aided design / computer-aided manufacturing) technologies have transformed traditional professional boundaries and forced architects to reconsider their role in response to changing contractual relationships, expansion of client services, and concerns for ecological and sustainable thinking.

MS_DT attracts ambitious designers, architects, faculty and engineers who seek to disrupt conventional design processes by attaining new skills and applying new techniques to real-world situations. Entrepreneurs will find an inviting environment for support of new business ideas and networks of alumni and resources at the University of Michigan.

The program builds upon a tradition of cutting-edge technical research at Taubman College, the University of Michigan, and in the Detroit area. The University of Michigan offers unmatched excellence in digital fabrication and access to world-class lab and production facilities and regional linkages to industry.
TAUBMAN COLLEGE
architecture + urban planning

MS_DT required courses
(36 credit hours required for the degree)

- MS Proseminar (3 credits)
- MS Practicum (6 credits)
- MS Capstone (6 credits)
- Virtual Engagement in Digital Technologies (3 credits)
- Material Engagement in Digital Technologies (3 credits)
- Theories in Digital Technologies (3 credits)
- 2 architecture elective courses (6 credits)
- 2 cognate courses (6 credits)

For more information, please visit:
taubmancollege.umich.edu/msdt

"La Voûte de LeFevre" by faculty member Wes McGee and studio collaborator Brandon Clifford