

**Department of Design & Technology**  
**College of Architecture, Art, and Planning at Cornell University**

**Summary and Background**

- The new department of Design & Technology at the Cornell College of Architecture, Art, and Planning will advance design & technology broadly alongside other design units at Cornell, including HCD, ENG, CIS, and Cornell Tech. The department will apply and advance AAP's expertise in the design arts, design theory, and methods towards actualizing digital tools, products, materials, visualizations, and environments by bridging disciplines and domains. Specifically, we will build upon AAP's strengths in computational design, ai-augmented design, data visualization, digital fabrication, design & XR technologies, bioinspired design, and sustainable + responsive materials.
- The new department of Design & Technology at AAP is the outcome of over a year and a half of work collaboratively developed by a multi-disciplinary and multi-college faculty task force and two years of conversations between the Deans of AAP, Human Ecology, Engineering, Bowers CIS, and Cornell Tech on how best to strengthen and expand design education and research in emerging technologies at Cornell. The new Department of Design & Technology at AAP will be a node within a collaborative university-wide initiative for the advancement of the design arts, design research, technological innovation, scholarship, and collaboration across disciplinary boundaries at Cornell.
- The new Design & Technology department at AAP will partner with Cornell Tech to deliver a M.S. in Design Technology. The department will also play a significant role in the Design and Technology Radical Collaboration Initiative at Cornell.

**New Opportunities**

- The new department will better allow us to bring together the field's contributing disciplines and methodologies; coalesce partners across design and technology in academia and industry; and capitalize on Cornell's distinct strengths in professional education, design, hands on learning and impact-focused design research. To be housed in the College of Architecture, Art, and Planning (AAP) and work collaboratively with CIS, CHE, ENG, A&S and Cornell Tech, the department will fill a need for timely design technology research + education and will spearhead rigorous multi-directional and multi-disciplinary investigations and teaching that can help shape the future trajectories of applied design and research. The new department will be home to a new M.S. in Design Technology in collaboration with Cornell Tech and promote a culture of multi-disciplinary teaching and training across departments and colleges in Ithaca, including co-mentoring students in project-based design learning to expand offerings in emerging technology areas critical to enhance the University's impact on this growing field.
- Based on findings from a 3-year successful pilot collaboration between AAP and Cornell Tech, a new M.S. in Design Technology was proposed in spring of 2022 and is positively supported by Cornell Tech and Architecture faculty along with the graduate field of architecture and the General Committee of the Graduate School. The new M.S. in Design Technology builds upon the current M.S. in Matter Design Computation (MDC) program started by Prof. Sabin in 2016. The M.S. in Design Technology builds upon the foundation and transdisciplinary mission of the current MDC program, refines the foundation courses in the first year, and provides a new stream that makes stronger links to industry and practice through a formal collaboration with Cornell Tech. This will bolster the primary program objectives by promoting transdisciplinary collaboration and hybrid thinking in design to prepare students for emerging careers in both the academy and in practice and industry. In an era when we are witnessing one of the most significant paradigm shifts in the conceptualization and creation of our environments, objects, and interfaces, the reimagined M.S. in Design Technology is the first of several degree offerings that will be part of the new University-wide Design + Technology Radical Collaboration Initiative that will advance design research and education across disciplines and domains at Cornell and beyond.
- The University recently announced Design + Technology as a new Radical Collaboration Initiative. The new department will catalyze multi-disciplinary expertise, exploration, innovation, and collaboration in several collective emerging technology areas, including design + interaction; design + materials; design + media, and design +

environments. This synergistic and cross-disciplinary approach will pioneer new modes, methods, and applications, and redefine existing practices in the advancement of experimental design and technology.

- The new department will be represented by multi-disciplinary faculty and foster joint faculty appointments as well as affiliated faculty, invited Design Fellows at AAP, as well as with CHE, ENG, CIS, A&S, and Cornell Tech. The Design Tech Faculty & Fellows will share resources, engage in collaborative research and workshops, and co-teach transdisciplinary design studios and seminars. The Department will be a node for applied research and will administer new multi-college program(s), including the development of graduate degrees (M.S., PhD) and an undergraduate minor and potential major.

### **Expertise**

- The success of the 3-year pilot program with Cornell Tech and the M.S. MDC program demonstrates that we are educating broader, anti-disciplinary, design leaders that engage and develop hybrid creative synthetic thinking in design through generative processes, digital fabrication, emerging technologies, and applications across disciplines.
- AAP has the breadth, creative imagination, and design excellence as demonstrated by our world-renowned highly ranked programs in architecture, art, and planning.
- Design & Technology at Cornell is poised for significant enhancement as the university re-envision its position to maximize Cornell's impacts on Design Technology education, industry, practice, and policy. The new Department of Design & Technology at AAP will be a node within a collaborative university-wide initiative for the advancement of the design arts, design research, technological innovation, scholarship, and collaboration across disciplinary boundaries at Cornell.

### **Impacts**

- The development of the new Department in Design & Technology will not only facilitate bridging fields and faculty already at Cornell in design, engineering, biology, computer science, medicine, arts & sciences, and the built environment, but will also fill gaps that are in demand in areas concerning design across the university in product design, interaction design, and digital media design. This work will offer an effective tool to recruit and train students at the undergraduate, graduate, and doctoral levels in a highly integrated research and educational environment.
- This synergistic approach will pose, develop, and answer questions in applied design and technology that will define new models for transdisciplinary design, thought, and content. The Department for Design & Technology is envisioned to create a more robust and structural link between design + research and applied design + education. The benefits of developing a unique department will position the unit to successfully compete for NSF, DOE, and/or NIH program grants that will contribute to institutional recognition, domestically and internationally, and create a catalytic context for pedagogy in design and research in the world.