Technologies of Visualization and Fabrication – Distributional Electives

Description
Architectural design processes and techniques have been dramatically reorganized in response to advances in digital technologies over the past few decades, which have changed everything in the design practice, from data visualization, to project presentation, to building component fabrication and project delivery. The GSD has remained at the forefront of the critical thinking and use of these technologies through their study in core courses, studios, and electives. The distributional elective requirement asks students to investigate these technologies in greater depth by taking one or more selected electives in the 2000 or 6000 curriculum areas. These courses expose students to an ever expanding repertoire of computational media and techniques in the areas of both design visualization and conceptualization, and object fabrication.

Archive of Past Approved Courses
Note: For a course to count towards a requirement, it must be taken in the year that it was listed as valid.

Spring 2022
2224 Digital Media: Neural Bodies                        Andrew Witt
2225 Digital Media: Design Systems                      Sawako Kaijima
2227 Digital Media: Writing Form                        George Legendre
2314 Responsive Environments: Poetics of Space          Allen Sayegh
2361 Discourse and Advocacy in the Spaces of Curation   Mark Pasnik
6368 Pre- and Post-                                      Hyojin Kwon
6384 Towards a new Science of Design?                    Martin Bechthold, Juan Ugarte
6385 Automation in Practice                             Nathan King
6478 Informal Robotics/New Paradigms for Design & Construction Chuck Hoberman
6483 Artifacts as Media: Signals, Data, Information and Technology Jose Luis Garcia del Castillo Lopez
6484 Data Science for Building Performance Simulation and Architectural Design Optimization Ellie Han
6485 Introduction to Machine Learning for Designers     Sabrina Osmany

Fall 2021
2228 Digital Media: Models                              Hyojin Kwon, Zachary Seibold
2229 Digital Media: Not Magic                           Michelle Chang
6317 Materials Systems: Digital Design and Fabrication  Nathan King, Zachary Seibold
6338 Introduction to Computational Design               Jose Garcia del Castillo Lopez
6359 Interface Design: Integrating Material Perceptions Sawako Kaijima
6476 Transformable Design Methods                       Chuck Hoberman

Spring 2021
2225 Digital Media: Design Systems                      Sawako Kaijima
2227 Digital Media: Writing Form                        George Legendre
2229 Digital Media: Not Magic                           Michelle Chang
6365 Enactive Design: Creative Applications through Concurrent Human-Machine Interaction Jose Garcia del Castillo Lopez
6368 Pre- and Post-                                      Hyojin Kwon
6478 Informal Robotics/New Paradigms for Design & Construction Chuck Hoberman

Fall 2020
2223 Digital Media: Telepresence, Empathy, and Spatial Immersion Allen Sayegh
2228 Digital Media: Artifacts
Hyojin Kwon, Zachary Seibold

2314 Responsive Environments: Episodes in Experiential Futures
Allen Sayegh

2481 Public Projection: Projection as a Tool for Expression and Communication in Public Space
Krzysztof Wodiczko

6317 Materials Systems: Digital Design and Fabrication
Nathan King, Zachary Seibold

6338 Introduction to Computational Design
Jose Garcia del Castillo Lopez

6359 Interface Design: Integrating Material Perceptions
Sawako Kaijima

6476 Transformable Design Methods
Chuck Hoberman

Spring 2020

2223 Digital Media: Ambiance
Allen Sayegh

2227 Digital Media: Writing Form
George Legendre

2314 Responsive Environments: Episodes in Experiential Futures
Allen Sayegh

2349 MAKE/BELIEVE
Dan Borelli

6365 Enactive Design: Creative Applications through Concurrent Human-Machine Interaction
Jose Garcia del Castillo Lopez, Zachary Seibold

6368 Pre- and Post-
Hyojin Kwon

6478 Informal Robotics/New Paradigms for Design & Construction
Chuck Hoberman

Fall 2019

2228 Digital Media: Manipulations
Hyojin Kwon, Zachary Seibold

2229 Digital Media: Composition
Michelle Chang

2481 Public Projection: Projection as a Tool for Expression and Communication in Public Space
Krzysztof Wodiczko

6317 Materials Systems: Digital Design and Fabrication
Nathan King

6338 Introduction to Computational Design
Jose Garcia del Castillo Lopez

6476 Transformable Design Methods
Chuck Hoberman

Spring 2019

2223 Digital Media: Ambiance
Allen Sayegh

2227 Digital Media: Writing Form
George Legendre

2314 Responsive Environments: Episodes in Experiential Futures
Sayegh / Andreani

2352 Sections of Every Thing
Jungyoon Kim

6359 Interface Design: Integrating Material Perceptions
Sawako Kajima

6432 Computational Design 2: Time/Design as Signal
Panagiotis Michalatos

6459 Mechatronic Optics
Andrew Witt

6478 Informal Robotics/New Paradigms for Design & Construction
Chuck Hoberman

Fall 2018

2225 Digital Media: Design Systems
Sawako Kajima

2226 Digital Media: Image
Zeina Koreitem

2349 MAKE/BELIEVE
Dan Borelli

2350 Graphic / Volume Conflations
Viola Ago

2481 Public Projection: Projection as a Tool for Expression and Communication in Public Space
Krzysztof Wodiczko

6317 Material Systems: Digital Design and Fabrication
Nathan King

6338 Introduction to Computational Design
Sawako Kajima

6360 Digital Fabrication and Robotics
Stylianos Dritsas

6465 Deployable Surfaces: Dynamic Performance Through Multi-Material Architectures
Chuck Hoberman

Spring 2018

2224 Digital Media II
Andrew Witt

2346 Near Drawing
Volkan Alkanoglu

2453 Graphic Narratives
Michael Rock
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