

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 2023

2224 Digital Media: Neural Bodies	Andrew Witt
2227 Digital Media: Writing Form	George Legendre
2314 Responsive Environments	Allen Sayegh
2348 Representation First (!!!), Then Architecture	Jennifer Bonner
6384 Towards a new Science of Design?	Juan Ugarte
6385 Automation in Practice: Building the future of Architecture(s), Engineering, and Construction	Nathan King
6478 Informal Robotics	Chuck Hoberman
6483 Procedural Fields: Functional Design of Discrete Hyperdimensional Spaces	Jose Luis Garcia del Castillo Lopez
6485 Unsupervised Machine Learning for Designers	Sabrina Osmany

Fall 2022

2228 Digital Media: Models	Hyojin Kwon
2230 Digital Media: Errors and Omissions	Ian Miley
2458 Ecological Do-Nothing Landforms	Min Yeo
6317 Materials Systems: Digital Design and Fabrication	Nathan King, Zachary Seibold
6338 Introduction to Computational Design	Jose Garcia del Castillo Lopez
6476 Transformable Design Methods	Chuck Hoberman

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 Kaijima
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 Kaijima

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 Kaijima

6360 Digital Fabrication and Robotics

Stylianios 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

2483 Projection-Animation

Krzysztof Wodiczko

6358 Computational Geometry

Wu / Legendre

6425 Material Distributions: Digital Immersive Workflows for ...

Panagiotis Michalatos

Fall 2017

2456 Experiments in Computer Graphics

Zeina Koreitem

2481 Public Projection: Projection as a Tool for Expression and Communication...

Krzysztof Wodiczko

6317 Material Systems: Digital Design and Fabrication

Martin Bechthold

6349 Mapping II: Geosimulation

Robert Pietrusko

6338 Introduction to Computational Design

Michalatos / Kajima

6463 Hybrid Formations

Volkan Alkanoglu

6465 Deployable Surfaces: Dynamic Performance Through Multi-Material...

Hoberman / Grinham