CoAD ELECTIVES -- Fall 2018

Undergraduate Electives

In addition to the electives below, students may take regularly offered courses under **AD, ARCH, DD, ID, and INT course numbers to fulfill design and/or arch elective requirements**. The schedules for these courses can be found on the Registrar's Course Schedule website under the course prefixes noted above.

Course No.	Course	Instructor
AD 490-001	**Motion Capture** **Tues 2:30 – 5:30**	**Wendell**
AD 490-103	**Advanced Production Compositing** **Tues 6:00 – 9:00**	**Wendell**
AD 490-101	**Life Drawing** **Tues 6pm -9pm**	**Ross**
Arch 337-101	**Building Information Modeling** **Wed 6:00 – 9:00**	**Benanti**
Arch 419-001	**Architecture Photography** **Fri 1:00 -4:00**	**Prantis**
Arch 536-001	**Landscape and the American Culture** **Wed 11:30 – 2:30**	**Navin**
Arch 538-001	**Sustainable Architecture** **Wed 8:30 – 11:30**	**Liaukus**
Arch 541-001	**Material Systems for Design** **Wed 11:30 – 2:30**	**Ogorzalek**
Arch 574-001	**Case Study in Community & Urban Design** **Thurs 8:30 – 11:30**	**Zarzycki**
Arch 583-001	**Exploring the Wide World of Design with Kids** **Wed 11:30 – 2:30**	**Moore**
Arch 583-003	**Material Inventions and Innovations** **Wed 8:30 – 11:30**	**Decker**

Graduate Electives

Undergraduate students with cumulative g.p.a. of 2.8 or higher are encouraged to take 600-level graduate level electives. For special permission to do so, print and fill out the form at the back of this document, obtain the approval of your undergraduate advisor and the graduate architecture advisor, and submit the completed form to the Office of the Registrar.

Masters students are also encouraged to take 700-level doctoral electives. For special permission to do so, contact the course instructor. Once her approval is conveyed to the graduate advisor, you will be given permission to enter the course.

Course No.	Course	Instructor
Arch 662-001	Parks, Past and Present Tues 10:00 – 1:00	Franck
Arch 662-101	Global Metropolis Wed 6:00 – 9:00	Esperdy
Arch 686-001	Research Methods for Environmental Design Tues 2:30 – 5:30	Franck
MIP 631-001	History and Theory of Infrastructure Thurs 8:30 – 11:30	Theodore
MIP 652-101	Geographic Information Systems Wed 6:00 -9:00	Marini
MIP 675-101	Elements of Infrastructure Planning Tues 6:00 – 9:00	LeCavalier

AD 490-001 Motion Capture (Wendell)
(please contact instructor directly for pre-requisites & course details)

AD 490-003 Advanced Production and Compositing (Wendell)
(please contact instructor directly for pre-requisites & course details)

AD 490-101 Life Drawing (Ross)
This course will offer students the opportunity to draw from live models which is an invaluable training experience for understanding basic anatomy, gesture, form, and expression. We will learn how to exhibit emotion through poses, facial expression, and lighting.
We will also be covering other topics within life drawing such as costumes, drapery, how to render various materials, and how we can use costumes and props to develop various character archetypes. We will explore how to capture the look and personality of people of different ethnicities, cultures, and backgrounds, so that students can learn to appreciate and replicate the diversity of the world we live in. This course is helpful for all design majors and is especially valuable for those interested in pursuing a career in character design for video games, film, and print. Students interested in 3D character modeling will significantly benefit from content covered in this course, as crucial knowledge of musculature, anatomy, and posing are required knowledge bases for this skill set.

Arch 337-101 Building Information Modeling (Benanti)
This course explores both technical and philosophical approaches to the use of the computer in architectural analysis, design development, information management, and document delivery. Autodesk Building Systems and Autodesk Revit Building will be used for 3D modeling and 2D documentation employing a systems-approach framework for spatial allocation, energy analysis, and structural considerations. The workings of the foundational information databases of the respective software will be thoroughly explored. Projects requirements will include building program resolution, solar analysis, asset scheduling, document layout, and design visualization. Proficiency with Autodesk Autocad (2D) and understanding of general CAD principles are required prerequisites; the formal prerequisite course is Arch 316/647.

Arch419-001 Arch Photography (Prantis)
Prerequisite: ARCH 264. Gives a wide range of photographic solutions for presentations and portfolios. Lectures consist of orientation on general topics, including light and space, using relevant text selections and slide presentations for reinforcement. Includes basic demonstrations of darkroom techniques and unorthodox methods to encourage experimentation.

Arch536-001 Landscape and the American Culture (Navin)
The course will combine the viewing of film clips with discussion about weekly readings that will address a variety of thematic topics. These topics will explore different issues relating to our attitudes about the landscapes that we inhabit and how they reflect our cultural condition. Each student will also select an independent research topic to investigation in further depth and will make a presentation of these findings to the rest of the class. May be of particular interest to Digital Design students.

Arch 538-001 Sustainable Architecture (Liakus)
Follows two precepts: accepting responsibility for the consequences of design decisions upon human well-being, and the long-term viability of natural systems. Topics include sustainable site design and development, environmentally sensitive building materials, lifecycle cost benefit analysis of building systems, and adaptive reuse.

Arch 541-001 Material Systems for Design (Ogorzalek)
Prerequiste:4th year undergraduate standing or approval from instructor This seminar will allow students to exam material systems that give design agency to matter as a creative and technical force in the making of architecture. In doing so, it will provide students an opportunity to understand and explore the role material matters play in comtemporary architectural theory and praxis. focused on the exploration and understanding og material systems, this course will provide students with the intellectual underpinnings for the re-conceptionalization of matter within thier own design processes.

Arch 574-001 Case Studies in Community and Urban Design: Frameworks for Intelligent Buildings and Cities (Zarzycki)
This course discusses and researches current frameworks for intelligent building and cities. It surveys current state-of-the-art practices with in-depth analyses of smart buildings, adaptive designs, and networked cities. Student will research various aspects and scales of smart designs; starting with adaptive building components such as facades to entire building, urban, and smart-infrastructure ecosystems. As part of the course, students will develop a research paper and conduct a case study that investigates an intelligent building or cities.
This course is intended for the research-minded students, particularly for those who are looking to develop research agenda intended to apply for graduate and post-graduate programs.

Arch 583-003 Material Inventions and Innovations (Decker)
The goal of this course is to introduce students to invention and innovation in architecture and design through the lens of IDR, that allows for an accelerated development of emergent materials and technologies. As such, the course engages a number of issues that are important for, and relevant to, the continuing advancement of all design disciplines. Emergent materials and technologies hold the promise to solve critical issues in the constructed environment and enable inventions in the design fields. They can assist in the creation of novel designs that are for example active and reactive, adaptive, resilient, or sustainable.

Arch 583-001 Exploring the Wide World of Design with Kids (Moore)
(please contact instructor directly for pre-requisites & course details)

Arch 662-001 Parks, Past and Present (Franck)
In a great many cities and towns, one can find an open space, large or small, that is free of traffic, that offers a respite from the buzz of urban life. It can be a place to relax, to play, to exercise, to picnic, to let the dog run free. A park. What a great invention. While we are all very familiar with parks, in this seminar we will try to see them anew and from a research and analytic perspective We will consider the history and changes of this type of public space, its many variations in location, size, design, use and management. Students will make field trips to parks in New Jersey or New York and make presentations to the class. Students will also pursue course-long research project on topics of their choice.

Arch 662-101 Global Metropolis (Esperdy)
This seminar examines the formal & cultural evolution of the global metropolis in historical, contemporary & theoretical perspectives, with a focus on transnational developments in the industrial & post-industrial eras. The course emphasizes the intersection of social, economic, political, geographic & environmental conditions that shaped metropolitan areas & influenced urban populations for more than 3 centuries. Course includes a chronological overview of metropolitan settlement, growth, decline & revitalization & case studies that consider past/present of specific urban areas in the developed & developing worlds. We look at the global migration of urban/suburban morphologies & architectural typologies during the past half-century, especially as they relate to changing infrastructures. Weekly meetings include lectures, discussions, presentations.

Arch 686-101 Research Methods for Environmental Design (Franck)
Course introduces methods of inquiry useful to professionals planning and designing buildings, communities and cities. Skills developed in defining research questions and applying appropriate methods include on-site observation, focus groups, questionnaire design focus groups, modeling and spatial analysis. Open to undergraduates with permission of instructor.

MIP 631-001 History and Theory of Infrastructure (Theodore)
The historical role of infrastructure in the formation of cities and the relation of planning theories to urban culture. Case studies are used to develop effective ways of learning urban design; method and substance are equally emphasized. Concentration on the social, economic, political, technological and topographic factors that affect urban form; analysis of urban design schemata and their relation to patterns of use; and the critical appraisal of planning ideologies and strategies. Same as ARCH 631H.

MIP 652-101 Geographic Info Systems (Marini)
Prerequisite: course or working knowledge of CADD or permission of instructor. Geographical/Land Information System (GIS/LIS) is a computerized system capable of storing, manipulating and using spatial data describing location and significant properties of the earth's surface. GIS is an interdisciplinary technology used for studying and managing land uses, land resource assessment, environmental monitoring and hazard/toxic waste control, etc. Introduces this emerging technology and its applications. Same as CE 602 and Tran 602.

MIP 675-101 Elements of Infrastructure Planning (LeCavalier)
Introductory survey of the basic principles, operation and design of physical infrastructure systems including roads, public transportation, community facilities, public open space, surface drainage, and electric, gas, water, waste disposal, and telecommunications services. Same as Arch 675.