

Undergraduate Options Studios

ARCH 463/4. Options Studio I. 5 credits, 11 contact hours (0;0;11).

Section 001 MR 12:00 PM - 5:20 PM Zarzycki, Andrzej

Media Architectures: Immersive Design Tools

The Media Architectures Studio engages emerging digital media practices and technologies as an expanded field of architecture. It looks at photogrammetry, augmented reality (AR), and virtual reality (VR) as new frameworks for design thinking and virtual habitation/immersion. It discusses the role gamification plays in enabling in-depth interactions with/in the built environment. This course points to creative opportunities associated with these technologies and demonstrates effective pipelines for a wide range of design applications. While grounding its discussion in virtually-built environments, the studio provides opportunities for broad interdisciplinary topics and creative collaborations from the media and interactivity to interiors and exhibition design.

ARCH 463/4. Options Studio I. 5 credits, 11 contact hours (0;0;11).

Section 003 MR 12:00 PM - 5:20 PM Gardner, Christopher

Radical Addenda

According to the 2018 report by the United Nations Intergovernmental Panel on Climate Change (IPCC), the world has only 12 years to halt carbon emissions before we face global catastrophe. For architecture, which accounts for 30-40% of carbon emissions, this will require immediate and radical change of our building practices. The goal of this studio is to engage both policy and vision equally, utilizing the building code itself as the mechanism for change and backing it up with compelling visions of its implementation. These “Radical Addenda” will be formulated as hypothetical additions to the upcoming IBC 2024 with the primary goal of addressing the climate crisis and reducing carbon in the atmosphere.

Undergraduate Electives

ARCH 301. Digital Modeling and Fabrication. 3 credits, 3 contact hours (3;0;0).

R 6:00 PM - 8:50 PM Vincent, Marchetto

T 2:30 PM - 5:20 PM Vincent, Marchetto

T 6:00 PM - 8:50 PM Vincent, Marchetto

Prerequisites: [ARCH 156](#). The seminar in Digital Modeling and Fabrication is a 3-credit course for upper level students exploring advanced 3-dimensional computer modeling techniques and data export for assembly and fabrication to various computer numerically controlled (CNC) hardware available at the School of Architecture. Specifically, students engage in NURBS and solid modeling using Rhinoceros 3D and export data through various Rhino plug-ins including RhinoCAM, which writes G- and M- Codes for 2 and 3D milling operations. CNC hardware available as of Spring 2010 includes two (2) Universal Laser Cutters, each with 18" x 32" beds; two (2) Z-Corporation Z-310 3 dimensional printers; and a Precix 9100 Industrial CNC Router with a 48" x 96" bed. Students model and fabricate full scale assemblies individually and in teams and contribute to a final exhibition of student work. Familiarity with various software tools available at the College of Architecture and Design is encouraged but not required. Admission to the course to students in their second year of study by discretion of instructor.

ARCH 332. Architecture: Image and Word I. 3 credits, 3 contact hours (3;0;0).

MR 10:00 AM - 11:20 AM Zdepski, M. Steve

This course will present films on Architecture in which architects are speaking about and showing their own work. What we think is true about architecture is often wrong. Single images tend to abstract and greatly simplify why and how great architecture is created. Rarely are buildings seen in their content. Rarely are climatic, cultural and technical issues of design illustrated. AS a result, we often speculate about architecture based upon superficial or incomplete information.

ARCH 335. Digital Tectonics. 3 credits, 3 contact hours (3;0;0).

T 6:00 PM - 8:50 PM Hurtado, Maria

This course uses 3D modeling tools to investigate the relationship of digital models to physical construction. The term digital tectonics refers to an idea regarding the qualities of works of contemporary architecture that seem to be influenced by the use of digital tools. In this course, students are asked to investigate this hypothesis by testing structure, skin, assemblage, form and space making methodologies that are aided by digital tools and rationalized through digital operations.

ARCH 337. Building Information Modeling. 3 credits, 3 contact hours (3;0;0).

M 6:00 PM - 8:50 PM Deen, Ikharo

W 8:30 PM - 9:50 PM Fortunato, Benjamin

Prerequisites: [ARCH 156](#) or [AD 112](#). 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.

ARCH 408. Investigations in the Contemporary Landscape. 3 credits, 3 contact hours (3;0;0).

M 6:30PM-8:50PM Jeffrey, Stevens

Prerequisites: [ARCH 211](#) or ([ARCH 381](#) and [ARCH 382](#)). Introduces the design, construction and management of contemporary landscape projects through case studies, field trips, and personal contact with prominent practicing landscape architects. A historical perspective of landscape architecture is used as a context for discussion.

ARCH 429. Advanced Structures. 3 credits, 3 contact hours (3;0;0).

TF 1:00 PM-2:50 PM Taher, Rima

Prerequisite: [ARCH 304](#). This course covers advanced topics in structural analysis, design of reinforced concrete structures, and design of steel connections, in addition to some topics in masonry structures. The course also includes design examples in relation to various types of foundation systems. It focuses on indeterminate structures in structural analysis and integrated structural systems in designing structures. Case studies of some well-known buildings are covered. Some BIM applications with computerized calculations are included.

ARCH 432. P3 Post Presentation Processing. 3 credits, 5 contact hours (3;0;0).

M 6:00 PM-8:50 PM Savaskan, Dincer

The project is deemed Architecture, with a capital A, but there remain nagging questions: What would the project be like if viewed stereoscopically? If it were rendered as a 360-degree panoramic view, what would the space be like? If it was accurately superimposed into the site (lighting, color, texture, camera angle), does the design improve when in the context? Would rendering styles using "natural media" be more descriptive? What would the architecture be like at night?

ARCH 483 ST: Preservation of Modern Architecture 3 credits, 3 contact hours (3;0;0).

TR 10:00 AM - 11:20 AM Dassing, Gene

As the oldest landmarks of the Modernist period approach 100, many have started to show their age. Preservation of these modern historically significant buildings requires architects to employ a robust skill set - preserving the past and envisioning the future. This course will examine several landmark buildings, recently reborn and originally built within the past century, and provide students with a foundational toolkit of preservation techniques. Preservation architects lead and collaborate with diverse teams including historians, skilled craftspeople, and consultants. They also must be open to the input of review boards and the public. Students in this course will engage with practicing architects and preservation consultants to synthesize the unique challenges and opportunities of historic preservation and rehabilitation. We will delve into the history of the design, construction, use, and eventual disrepair of modern landmarks and study the vision, preservation methods, technical challenges, and economic engine powering their preservation and rebirth. Assignments will include the analysis of original drawings, sketch problems tackling bite-size preservation tasks, and site visits. The semester capstone project will tackle a hypothetical historic rehabilitation and presentation for a theoretical landmarks board approval.

ARCH 483 ST: Contract Documents 3 credits, 3 contact hours (3;0;0).

R 6:00 PM - 8:50 PM Kim, Donghyun

In the Contract Document Design course, students can learn the basic logic and processes of contract documents. They will learn the differences between large-scale documents, small-scale documents, RCPs, power plans, elevations, and their relationships with each other. The course might also cover the basics of specifications, partition details, transition details, and door schedules.

ARCH 483 ARE 5.0 Review Course 3 credits, 3 contact hours (3;0;0).

M 6:00 PM - 8:50 PM Ferraro, Matteo

This elective will provide a roadmap and help students navigate becoming a licensed Architect in the state of NJ, with a focus on the examination component of licensure. This is a great course for those looking to start the path to licensure, are close to completing their Architectural Experience Program (AXP), or have begun to take exams. Most of the course will be structured to prepare students to pass the 6 divisions of NCARB's Architectural Registration Exam 5.0 (ARE 5.0), while some nuances of practicing in New Jersey will be discussed. The course will concentrate on topics covered in the exam and will provide a framework to organize and review content for the examination.

ARCH 483 ST: Architecture of Sports 3 credits, 3 contact hours (3;0;0).

T 6:00 PM - 8:50 PM Gardner, Chris

The first half will focus on the analysis of existing sports through research, documentation, and representation. Through a workshop component, students will use the representational tools and methods

of architecture to examine the sport in time and space. In the second half students will be tasked with designing new sports or re-designing existing sports, deploying the discussions and representation techniques of the first half. These “new” sports will aim to combine spatial considerations with specific political, cultural, and ecological intentions much in the same way one would with a speculative design project for a studio. Concurrently, the seminar discussion will focus on readings by architects whose work reflects a similar sensibility, and critical studies of sport from sociology, anthropology, and geography. The seminar will also feature field trips to sites of sport throughout Newark and New York City to experience the variety present in sports landscapes both private and public, professional and amateur, formal and informal. *In testing this hypothesis that sports are a type of architecture, the seminar’s goal is to reveal a new territory for the architectural agency.*”

ARCH 483 ST: Architectural Glass Design & Prototyping 3 credits, 3 contact hours (3;0;0).

W 6:00 p.m. - 8:50 p.m. Pawlowska, Gosia

This course will examine glass as a material in the built environment, both through case study analysis of architectural glass detailing and also through a hands-on prototyping exercise. Juxtaposing traditional craft processes and digital fabrication technologies, students will learn mold-making and kiln-forming techniques for glass that will inspire a closer investigation of unconventional applications of glass in architectural glazing and facade design.

For the hands-on component of the class, we will go over best practices for 3-D modeling and prototyping for digital fabrication. Students will eventually create CNC-milled forms to be used as patterns for refractory molds for glass (using workshop facilities at NJSOA). At the end of the semester, we will take these molds to a local glassblowing studio, Grassroots located in Newark, where students will be able to participate in making a final prototype by having their glass molds fired in a kiln and see a demonstration of traditional glassblowing techniques.

ARCH483 ST: Resilience for Architects 3 credits, 3 contact hours (3;0;0).

T 6:00 p.m. - 8:50 p.m Hutchinson, Robert

In an era marked by rapid urbanization, climate change, and social upheaval, architects play a pivotal role in shaping resilient built environments that can withstand and adapt to emerging challenges. This course empowers architecture students with the knowledge, skills, and mindset necessary to design resilient structures and communities capable of thriving in dynamic and uncertain conditions.

Through a blend of theoretical study, case studies, design exercises, and guest lectures from industry experts, students will explore the multifaceted concept of resilience and its application within the architectural profession. From understanding the fundamentals of resilience to integrating innovative design strategies, participants will embark on a journey to reimagine architecture in the context of uncertainty and change.

ARCH 483 ST – Architect as Influencer 3 credits, 3 contact hours (3;0;0).

M 6:00 p.m. - 8:50 p.m Berlingieri, Joseph

The evolving digital geographies of the nascent social media age are swiftly rendering the traditional architectural portfolio obsolete. Be they electronic or hard copy, the “artifact” portfolios of the past are neither agile nor dynamic enough to represent professionals and their work in the 21st century. It is critical that emerging architects have a polished digital and social media presence to enter the profession. This seminar will utilize rigorous critique of conventional architectural representation and analyses of successful online presences in a variety of fields. Through this research, students will redefine “portfolio” as a digital strategy and create a well-curated, cross-platform presence that represents and promotes their architectural work and professional persona.

ARCH 483. ST:. Prefabricated Architectural Construction 3 credits, 3 contact hours (3;0;0).

TR 10:00 AM - 11:20 AM Garcia Figueroa, Julio

Critical to meeting a sustainable approach to building is the rethinking of our current methods of construction. This course proposes pre-fabrication as a critical part to the required revision to construction strategies, in order to address the climate change challenge. Prefabricated construction explores recent approaches in architectural design that use green building methodologies that deliver more efficient and precise buildings. This course will explore the role of offsite fabrication in the making of architecture.

Synthesizing history, theory, and technical information and constraints of off-site construction, the course will investigate and explain the decisions that lead to the development of current prefabrication systems.

ARCH 531. History of Modern Architecture. 3 credits, 3 contact hours (3;0;0).

W 6:00 PM - 8:50 PM TBD

Prerequisites: [ARCH 211](#). This course examines the major tendencies of architectural practice and theory in the 20th century. Formal and cultural evolution of modernism is considered in relation to social, political, economic, and technological developments that informed its key buildings, projects, and texts.

ARCH 533. History of American Architecture. 3 credits, 3 contact hours (3;0;0).

TF 10:00 AM - 11:20 AM TBD

Prerequisite: [ARCH 211](#). This course investigates the emergence and development of architecture and urbanism in what is now the United States, from before European contact to the early 20th century. The focus is on building typologies and urban morphologies that contributed to a definition of a distinctive "American" approach to form, style, and settlement. The complex and enduring influence of colonization, enslavement, industrialization, and immigration is emphasized throughout.

ARCH 535. History of Architectural Ideas. 3 credits, 3 contact hours (3;0;0).

MR 10:00 AM - 11:20 AM Bonomi, Aurora

Prerequisites: [ARCH 211](#) or ([ARCH 381](#) and [ARCH 382](#)). Discusses seminal architectural ideas in the western world from Vitruvius to the present day. Read books written by leading architectural theorists and analyze them in detail.

ARCH 536. Landscape and American Culture. 3 credits, 3 contact hours (3;0;0).

M 6:00 PM - 8:50 PM James, Coleman

Prerequisites: [ARCH 324](#). As in architecture, the parallel discipline of landscape architecture involves artistic intention set in conjunction with utilitarian concerns. As such, designs on the land include the integration of the arts and sciences of human culture with nature. Discusses landscape as a manifestation of American culture.

ARCH 541. Material Systems in Design. 3 credits, 3 contact hours (3;0;0).

T 1:00pm - 3:50pm Ogorzalek, Thomas

Prerequisites: [ARCH 396](#). 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 contemporary architectural theory and praxis. Focused on the exploration and understanding of material systems, this course will provide students with the intellectual underpinnings for the re-conceptualization of matter within their own design processes.

ARCH 543. Lighting. 3 credits, 3 contact hours (3;0;0).

MW 10:00 AM - 11:20 AM Feris, Manny

Prerequisites: [ARCH 314](#) or [INT 222](#). Explores, through modeling and calculation, the means by which architectural form and detail influence the luminous environment. Perceptual responses such as visual comfort and delight are examined. Topics include daylighting footprints, model design and testing, and computer-assisted light level analysis. Areas of investigation include the relationship between daylight and electric light in architecture; the variations of light with time; analysis of seasonal and weather differences; role of task in lighting strategies; and means of control for light quantity and quality.

ARCH 545. Case Studies in Architectural Technology. 3 credits, 3 contact hours (3;0;0).

W 6:00 PM - 8:50 PM Hurtado, Maria

Prerequisite: [ARCH 224](#). Technological systems involved in the construction and use of buildings. Students conduct in-depth investigation of technology-related problems in architecture and construction. Case study method is used. Construction documents and reports are analyzed. Field visits are required.

ARCH 557. Problems in Modern Housing. 3 credits, 3 contact hours (3;0;0).

M 6:00 PM - 8:50 PM Diskina, Viktoria

Prerequisite: [ARCH 211](#). Attempts to provide decent, affordable and well-designed housing for broad segments of society are examined. Dwelling is examined through analysis of proto-typical design solutions in urban environments.

ARCH 572. Mapping Urbanism. 3 credits, 3 contact hours (3;0;0).

TF 10:00 AM-11:20 AM Wenschhof, Karen

Prerequisites: [ARCH 211](#). This seminar provides the critical tools necessary to examine the city as both a representation and a reality in flux. Through an interdisciplinary framework, students study urban history, theory, visual thinking and information design. Parallel to learning about global cities, their urban challenges, and transformative design strategies, students learn to employ a diverse set of representational techniques to create inventive mappings.

ARCH 574. Case Studies in Community and Urban Design. 3 credits, 3 contact hours (3;0;0).

MW 8:30 AM-9:50 AM Harp, Cleve

Prerequisites: [ARCH 396](#) or [ARCH 364](#). In-depth investigation of specific real-world problems of urban or community design carried out using case method approach. Current practices in the U.S. and other countries studied using interviews with designers, developers, community groups and government agencies. Site visits, reports and other documents provide important sources of information. Final report with supporting documentation required.

ARCH 576. Architecture of Utopia. 3 credits, 3 contact hours (3;0;0).

M 6:00PM - 8:50PM Matei, Denes

Prerequisites: [ARCH 211](#). Seminar for the review of utopian projects that have attempted to embody and strengthen social ideas through transformations in the structuring of space. Architectural implications of different literary and philosophical utopias analyzed with an emphasis on those experimental proposals which were realized, in whole or in part, in built form.

ARCH 583. ST.: Newark Since 1967 3 credits, 3 contact hours (3;0;0).

T 6:00 PM - 8:50 PM Antunes, Manuel

Newark Since 1967 is a historical seminar course focused on the history, politics, and social developments within the city after the tumultuous events of the summer of 1967. The riots/rebellion of that summer represent an inflection point between the Newark of historical imagination—a city of industrial innovation, immigration, and dynamism—and our contemporary reality—a renewed city with a lot of promise but facing many issues from those same historical forces. The course, which spans from the summer of 1967 to the COVID-19 crisis, will include primary and secondary sources such as books from Newarkers, films about the city, newspaper articles, and contemporary accounts of events. We will also feature a handful of guests from the community to speak to specific historical moments that occurred in Newark. Aside from participation in the seminar, students will be evaluated on a writing assignment that will require them to an article explaining a contemporary news story in Newark through the lens of a historical event that occurred in the city.

ARCH 583. ST.: E/Quality Architecture 3 credits, 3 contact hours (3;0;0).

TR:10:00 AM - 11:20 AM Gibbs, Carrie

The course critically examines exemplary contemporary international architecture focusing on how diverse voices are shaping today's practice. The course is set within an equitable landscape where students engage in readings-based conversations and self-motivated research projects on themes of inquiry including: What qualities create great architecture? Given today's social and environmental crises, what forces are shaping our homes, cities, and the places we inhabit? How do feminism, intersectionality, inclusion, decolonization, and equity shape architecture today? How do the contemporary tools architects use impact the architecture they create? How can these conversations as a whole lead to the creation of new architectures? The course will also engage directly with diverse voices in contemporary architecture and culminate in a final project that emphasizes creative, visual modes of representing original research.

ARCH 583. ST: Urban Fabric Reforged: Reimagining Cities and Workspace for the Digital Economy 3 credits, 3 contact hours (3;0;0).

W 6:00 PM - 8:50 PM Marsh, Melissa

The urban landscape, once synonymous with towering office buildings and daily commutes, is undergoing a seismic shift. Disrupted by the rise of the gig economy, telework, and automation, the traditional office and its impact on city planning are being fundamentally re-evaluated. This course delves into the challenges and opportunities presented by this paradigm shift, equipping students with critical frameworks to analyze and reimagine the future of both workplaces and urban design. This course challenges students to move beyond traditional models of work and urban planning. By analyzing the transformative impact of gig work and digitization, students will develop critical thinking skills and creative solutions to shape the future of our workplaces and cities for the benefit of individuals, businesses, and the environment.

ARCH 583. ST.: Architectural Criticism Since 1900 3 credits, 3 contact hours (3;0;0).

R 6:00 PM - 8:50 PM Shaw, Matt

This course will trace the history of Architectural criticism from the beginnings of Modernism in the 18th century up until today. It will chart the rise of the public intellectual from salons and printed newspapers through social media and beyond. It will focus on key figures from the discipline, tracing a history of ideas alongside developments in architecture, technology, and culture. Sample figures include: John Ruskin, Lewis Mumford, Ada Louise Huxtable, Robert Venturi, and Denise Scott Brown.

ARCH 583. ST.: Zoning for Opportunity 3 credits, 3 contact hours (3;0;0).

T 6:00 PM - 8:50 PM Watson, Christopher

Housing and housing affordability, building complete neighborhoods, robust transportation accessibility, industry and the commerce it drives, parks and recreation, education, health care, civic institutions, and the places we bury and mourn our dead all seems to have a unified vernacular in our daily discourse. Yet, often we discuss these places and the policies that allows the physical presence of the structures that house these uses are often not given the full discourse needed to understand their approximation to each other, and how they're related to our sense of living connected life courses.

As of today, affordability has crossed over the divided lines of haves and have nots, and has taken over the imagination of academics as to how we solve for true access to the resources that allows for equity in neighborhoods. How do we provide for residents without them having to no longer move to opportunities? What do this mean and what are the tools available to us as architects and planning, to remedy some of the access disparity we witness today in society?

ARCH 583 is designed to tackle the core of this very question, what are we solving for and how do we solve for same. Zoning for opportunity will introduce students to the power of zoning, a tool used for organizing and sorting the built environment. The course will allow for student to gain insights to the power of zoning, and how it can literally solve for some of the most pressing issues we face in society today, by reorganizing what in the built environment is where and why.

ARCH 583. ST: Building Materials & Tectonics 3 credits, 3 contact hours (3;0;0).

TR 10:00 AM - 11:20 AM Harp, Cleve

In this seminar-workshop we will look into a deeper understanding of modern building design, how these structures were conceptualized and how they were developed. A number of iconic architects and their work in the evolution of architectural Modernism will be examined, with an emphasis on their choices and uses of materials and tectonics, their signature interests and points-of-view, and key parameters of their practices which led to the realization of distinguished and distinctive building designs.

How does an accomplished architect go about designing a strong piece of work?

How are the choices made re materials and tectonics instrumental in that success?

ARCH 583. ST.: ST: Decoding the Codes: Lessons on Fire and Life Safety 3 credits, 3 contact hours (3;0;0).

T 6:00 PM - 8:50 PM Wang, Tiffany

Visionary architecture is limitless but constructed structures are bound by not only the laws of physics but also by regulatory laws and industry standards. A majority of local government agencies reference the model codes set forth by the International Code Council. What are model codes? What is the International Code Council? Why do these matter to Architects?

This course is an in-depth investigation into one of the pre-design components: codes and standards. Codes and standards embody what is more commonly understood as fire and life safety, governs this industry. This course examines the upcoming 2024 International Building Code, Fire Code, and Existing Building Code as well as different industry standards set forth by organizations such as the National Fire Protection Agency.

Graduate Electives

Note: undergraduates who wish to take graduate electives can do so by enrolling in the BS/MS program. Enrollment is cost-free and easy. This also allows you to take up to 12 credits of coursework that will count toward BOTH an undergraduate and graduate degree at NJIT.

ARCH 626. Building Dynamics. 3 credits, 3 contact hours (3;0;0).

TR 10:00 AM - 11:20 AM Parlac, Vera

This course focuses on theories and practice of adaptive architectural solutions. It will examine architecture in relation to the latest research in biology, material science, embedded systems and robotics. Students will research technologies, review case studies, and design adaptive proposals for architecture. In general, they will consider the role architecture as a discipline plays in climate challenges we are facing today. This class is interested in the territory where new technological and scientific advances, and architecture meet. It explores the importance of new technologies in contemporary design and their implications on architectural attitudes.

ARCH 630. Critical Theories in Architecture. 3 credits, 3 contact hours (3;0;0).

M 6:00 PM - 8:50 PM Peter, Dumbadze

Prerequisites: ARCH 528G, ARCH 529G. This seminar is structured around notable readings on architectural history, theory and criticism to provide students with a sound basis for critical analysis and assessment. It is recommended for students who select history and theory as their area of concentration.

ARCH 646. Designing and Optimizing the Building Enclosure. 3 credits, 3 contact hours (3;0;0).

R 6:00 PM - 8:50 PM TBD

Restriction: completion of core sequence. Considers the "building envelope," the boundary dividing the inside of a structure from the outside environment. Students study and design optimal enclosures considering energy exchange, the relationship between energy and lighting, and life cycle costs.

ARCH 647. Visualizing Urbanism. 3 credits, 3 contact hours (3;0;0).

R 6:00 PM - 8:50 PM Rodin, Carsten

Restriction: completion of core sequence. Evaluation and use of computer graphics hardware and software for architectural applications. Focus is on computers as tools, operating systems, and methods of data manipulation. Two- and three-dimensional modeling software are discussed, and assignments using such software are given to provide an understanding of the modeling of built environments.

ARCH 650. Economy Of Building. 3 credits, 3 contact hours (3;0;0).

R 6:00 PM - 8:50 PM Hutchinson, Robert

Restriction: completion of core sequence or equivalent. Economic consequences of design decisions. Topics include the relationship among economy, efficiency and quality; life-cycle cost of design; improving the economy of building processes and products through innovation; and environmental concerns. This course is required for the dual degree M.Arch./Master of Science in Management program. It can also be used as an elective in the M.Arch. program.

ARCH 622. Life Cycle Assessment and Design. 3 credits, 3 contact hours (3;0;0).

MW 8:30 AM - 9:50 AM Cays, John

Prerequisites: ARCH 500G and ARCH 555G or equivalent (or ARCH 396, or INT 364, or ID 364). This course tracks Life Cycle concepts as first applied to inanimate objects and systems by the U.S. military in the mid-20th Century through their development as an important part of the modern global environmental movement. It also provides opportunities for architecture and design students to integrate data driven design decisions through methodologies and tools that translate formal Life Cycle Assessment into their own design workflows.

ARCH 677. Geographic Information Systems. 3 credits, 3 contact hours (3;0;0).

W 6:00 PM - 8:50 PM Calvin, Ellis

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.