ARCH 101 - PRINCIPLES OF ARCHITECTURE I - ORDER
Short Title: PRINCIPLES OF ARCHITECTURE I
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 6
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: This introductory studio frames architecture as a discipline through a set of short problems that examine the relationship between formal and spatial ordering, technical and material concepts, and issues of use and program, culminating in a small synthetic project. Permission Required by Director of Undergraduate Studies, Rice School of Architecture. Department Permission Required.

ARCH 102 - PRINCIPLES OF ARCHITECTURE II - REPRESENTATION
Short Title: PRINCIPLES OF ARCHITECTURE II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 6
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Lower-Level
Prerequisite(s): ARCH 101
Description: What is the role of information and representation within the design process? This studio introduces and explores the tools and concepts of notation and representation in architecture and how they serve as instruments of inquiry in a design processes. The use of precedents is a focus early in the semester, in which students analyze a project and its formal concepts that inform the design of a small architectural project in the second part of the course.

ARCH 105 - ENVIRONMENT, CULTURE & SOCIETY
Short Title: ENVIRONMENT, CULTURE & SOCIETY
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group II
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: This introductory course in environmental studies helps students to better understand the complex interrelationship between human cultures and their social and physical environments. Lectures and assignments draw upon the methods and expertise of architecture, the humanities and the social sciences. This is a core course of Rice's Environmental Studies minor. Cross-list: ENST 100.

ARCH 201 - PRINCIPLES OF ARCHITECTURE III - ORGANIZATION
Short Title: PRINCIPLES OF ARCHITECTURE III
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 6
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Lower-Level
Prerequisite(s): ARCH 102
Description: What is the relationship between diagrammatic organization systems and the tectonic systems of construction? What is the relationship between the internal organization of a building's program and its immediate external context? The potentials of different structural systems in relationship to programmatic diagrams are foregrounded to develop an architectural proposal for a public program of medium size.

ARCH 202 - PRINCIPLES OF ARCHITECTURE IV - EFFECTS
Short Title: PRINCIPLES OF ARCHITECTURE IV
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 6
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Lower-Level
Prerequisite(s): ARCH 201
Description: What is the relationship between material, technique and spatial or formal effects? This studio focuses on developing a student's understanding and experimentation with material and tectonic systems, building envelopes, and issues of sustainability.

ARCH 207 - TECHNOLOGY I
Short Title: TECHNOLOGY I
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group III
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: The course will introduce students to historical and contemporary structures through multi-media presentations, computer-based visualizations, field trips, and hands-on experiments with materials of construction and physical models of structures. This course also addresses sustainability issues specific to structural systems such as embodied energy, life-cycle cost, and material recycling. This is the introductory course on the art and science of designing engineered structures and is the first of four required courses in the architectural technology sequence. It is intended for first or second year students interested in both civil engineering and architecture. Graduate/Undergraduate Equivalency: ARCH 507. Mutually Exclusive: Cannot register for ARCH 207 if student has credit for ARCH 507.
ARCH 225 - INTRODUCTION TO ARCHITECTURAL THINKING
Short Title: INTRO ARCHITECTURAL THINKING
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group I
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: Introduction to architectural thought. Lectures and discussions focusing on practice and ideas that have exercised a significant influence on the discourse and production of architecture and urbanism. Cross-list: HART 225. Graduate/Undergraduate Equivalency: ARCH 525. Mutually Exclusive: Cannot register for ARCH 225 if student has credit for ARCH 525.

ARCH 238 - SPECIAL TOPICS
Short Title: SPECIAL TOPICS
Department: Architecture
Grade Mode: Standard Letter
Course Type: Internship/Practicum, Lecture, Seminar, Laboratory
Credit Hours: 1-4
Restrictions: Enrollment is limited to Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: Topics and credit hours may vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

ARCH 301 - INTERMEDIATE PROBLEMS IN ARCHITECTURE I - SITUATION
Short Title: INTERMEDIATE PROBLEMS ARCH I
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 6
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): ARCH 202
Description: What is the relationship between the building and larger systems of the environment, constructed and natural, in which it sits and affects? This studio focuses on issues of architecture's relationship to site and landscape environmental considerations and the relationship between systems and processes across the scales of architecture, urban and infrastructure.

ARCH 302 - INTERMEDIATE PROBLEMS IN ARCHITECTURE II - LEGIBILITY
Short Title: INTERMEDIATE PROBLEMS ARCH II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 6
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): ARCH 301
Description: How do questions of legibility in architecture engage a global milieu? This typically travel focused studio develops a large and complex architectural project in an urban context, examining through design the relationship between a specific locale and culture on the one hand and on the other a global economy and discipline.

ARCH 305 - ARCHITECTURE FOR NON-ARCHITECTS
Short Title: ARCH FOR NON-ARCHITECTS
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group I
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course is designed to increase awareness and appreciation of broad range of architectural issues through lectures, comparative building studies, design exercises, readings, and discussion. Intended for non-majors in architecture, this course will provide students the opportunity to understand the architectural design process through hands-on experience. Enrollment limited to 15 and requires instructor permission. Instructor Permission Required.

ARCH 309 - TECHNOLOGY II
Short Title: TECHNOLOGY II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group III
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course is the second part of the introduction to contemporary building structures. The topics covered are the design of concrete structures and design of specialized structures including tilt wall, long span, and high rise. Each structural type is explored in terms of overall performance, design of individual components, and the relation of structure to other building subsystems such as foundations, enclosure, and interiors. This course also addresses sustainability issues specific to structural systems and is the second of four required courses in the architectural technology sequence. Graduate/Undergraduate Equivalency: ARCH 509. Recommended Prerequisite(s): Prior completion of Technology I. Mutually Exclusive: Cannot register for ARCH 309 if student has credit for ARCH 509.

ARCH 310 - VIRTUAL RECONSTRUCTION OF HISTORICAL CITIES
Short Title: VIRTL RECONSTR HISTORCL CITIES
Department: Architecture
Grade Mode: Standard Letter
Course Type: Research
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course, part of the HRC's Digital Humanities Initiative, is devoted to the virtual reconstruction of ancient urban landscapes with focus on individual buildings in their urban settings. All course activities will be based around interdisciplinary student teams who will work together through the semesters to complete a virtual reconstruction project. Instructor Permission Required. Cross-list: ANTH 346, COMP 316, HART 316.
ARCH 311 - HOUSTON ARCHITECTURE
Short Title: HOUSTON ARCHITECTURE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group I
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course consists of a series of illustrated lectures and walking tours that describe and analyze the architecture of Houston from the city's founding in 1836 to the present. Characteristic building types and exceptional works of architecture are identified; tours stimulate an awareness of the historical dimension of urban sites. Mutually Exclusive: Cannot register for ARCH 311 if student has credit for ARCH 611.

ARCH 313 - CASE STUDIES IN SUSTAINABLE DESIGN
Short Title: CASE STUDIES IN SUSTAIN DESIGN
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course will explore sustainable design from initial sustainable facility concepts and team organizations, to enlisting community support and process assessment. The course will develop into details about sustainable design, lessons learned, processes and outcomes. Space is limited and registration does not guarantee a space in this course. The final course roster is formulated on the first day class by the individual instructor. Cross-list: ENST 313. Graduate/Undergraduate Equivalency: ARCH 613. Mutually Exclusive: Cannot register for ARCH 313 if student has credit for ARCH 613.

ARCH 314 - TECHNOLOGY III
Short Title: TECHNOLOGY III
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: The building envelope is the collection of material assemblies that separate a building's interior from the exterior environment. This course examines the interaction of those assemblies with natural forces such as temperature, moisture, and solar radiation and the details of construction which have evolved to mitigate them. The subject matter includes both traditional building exterior wall and roof construction and newer technologies such as rainscreen, green roof, and building surface media systems. This course addresses sustainability issues related to enclosure systems through energy cost and carbon footprint analysis. It is the third of four required courses in the architectural technology sequence. Graduate/Undergraduate Equivalency: ARCH 514. Mutually Exclusive: Cannot register for ARCH 314 if student has credit for ARCH 514.

Short Title: BRAZIL BUILT
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: From Brazil Builds, MOMA's 1943 celebrated exhibition to Brasilia, the supermodern capital created ex-nihilo in the middle of nowhere, to today's worldwide attention on Brazil, this seminar examines the built environment - natural and architectural - as the main transmitter of modernism in Brazil. This is a seminar on Brazilian modernism and its discontents. Cross-list: HART 310. Graduate/Undergraduate Equivalency: ARCH 515. Mutually Exclusive: Cannot register for ARCH 315 if student has credit for ARCH 515.

ARCH 316 - TECHNOLOGY IV
Short Title: TECHNOLOGY IV
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group III
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course addresses building environmental systems including power, water, and wastewater with an emphasis on air condition systems. Through multimedia presentations and fieldtrips, students are taught to analyze the thermal environment in a variety of building types and select equipment to meet these needs. Sustainability issues related to environmental systems such as energy conservational and life cycle costs are also addressed. This is the fourth required course in the architectural technology sequence. Graduate/Undergraduate Equivalency: ARCH 516. Mutually Exclusive: Cannot register for ARCH 316 if student has credit for ARCH 516.

ARCH 318 - LIVING IN THE CITY IN THE OTTOMAN EMPIRE
Short Title: LIVING IN THE CITY
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Seminar combines primary and secondary sources to explore the urban experiences of Ottoman men and women in the 18th and early 19th centuries. Looking at several cities including Istanbul, Izmir, Salonika, Damascus, Aleppo and Alexandria, we will discuss such issues as neighborhood and community life, public spaces and recreational culture perceptions of space, urban institutions, Muslim and non-Muslim relations, migration and marginality, violence and death. Reading knowledge of French and/or Turkish helpful but not necessary. Cross-list: HART 308. Graduate/Undergraduate Equivalency: ARCH 518. Mutually Exclusive: Cannot register for ARCH 318 if student has credit for ARCH 518.
ARCH 321 - CASE STUDIES IN SUSTAINABILITY: THE HIGH PERFORMANCE BUILDING
Short Title: SUSTAINABILITY CASE STUDIES
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: The project-based seminar will provide a means by which all those with an interest in the building science entailed in the design of commercial, institutional, and residential structures can investigate common issues, obtain information, discuss local strategies, and otherwise address subjects relating to building or campus performance over its lifecycle. To develop an approach of taking an existing Rice University building an optimizing its use via 'repositioning' or redesign the class will create an interdisciplinary forum where students of architecture, engineering (structural, mechanical, etc.), and human sciences will potentially collaborate with professional building consultants, materials manufacturers, contractors, developers, owners, and Rice campus facility managers. Cross-list: ENST 321. Graduate/Undergraduate Equivalency: ARCH 621. Mutually Exclusive: Cannot register for ARCH 321 if student has credit for ARCH 621.

ARCH 322 - CASE STUDIES IN SUSTAINABILITY: THE REGENERATIVE REPOSITIONING OF NEW OR EXISTING RICE CAMPUS BLDGS
Short Title: CASE STUDIES IN SUSTAINABILITY
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course will explore application of high performance, sustainable design to specific Rice University campus and facility targets. In partnership with Rice University leadership, the team effort will develop 'regenerative redesign' approaches based on investigation of other campuses' case study. Space is limited and registration does not guarantee a space in this course. The final course roster is formulated on the first day of class by the individual instructor. Cross-list: ENST 322. Graduate/Undergraduate Equivalency: ARCH 622. Mutually Exclusive: Cannot register for ARCH 322 if student has credit for ARCH 622.

ARCH 323 - SEMINAR IN ARCHITECTURE
Short Title: SEMINAR IN ARCHITECTURE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Small, focused, discussion, workshop and/or design based courses on topics of recent research in architecture, delivered by RSA full time or visiting faculty. Each section is a different seminar topic. This seminar series is open to RSA undergraduate and graduate students. Students from other departments may enroll in the course with instructor permission. See our website for more information: arch.rice.edu/courses. Space is limited and registration does not guarantee a space in this course. The final course roster is formulated on the first day class by the individual instructor. Graduate/Undergraduate Equivalency: ARCH 523. Repeatable for Credit.

ARCH 324 - STREETS AND URBAN LIFE: PARIS TO ISTANBUL
Short Title: STREETS AND URBAN LIFE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Exploration of the street as a focus of urban life in 18th and 19th century. We will look at ways streets functioned as spaces of livelihood, sociability, and transgression in cities such as London, Paris, Istanbul, Amsterdam & Cairo. Cross-list: HART 329, HIST 329. Graduate/Undergraduate Equivalency: ARCH 529. Mutually Exclusive: Cannot register for ARCH 329 if student has credit for ARCH 529.

ARCH 326 - MATERIAL, FORM, SPACE, TIME: CONCRETE AND THE REVOLUTION OF SPACE IN ANCIENT ROME
Short Title: MATERIAL, FORM, SPACE, TIME
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: ‘Architectural Revolution’ has been tied to Le Corbusier, the Eiffel Tower, the Louvre, Brunelleschi and to towering Gothic cathedrals. At the foundation of all these endeavors is the Concrete Revolution in Roman Architecture. In this course we'll look at the four essential elements of this revolution from the fourth century BCE to the fifth century CE, and we'll investigate how shifts in application and experience created a background that informs design to this day. Cross-list: CLAS 326, HART 326. Graduate/Undergraduate Equivalency: ARCH 626. Mutually Exclusive: Cannot register for ARCH 326 if student has credit for ARCH 626.

ARCH 327 - CONSTRUCT
Short Title: CONSTRUCT
Department: Architecture
Grade Mode: Standard Letter
Course Type: Laboratory
Credit Hours: 3,4
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: The Rice Building Workshop involves graduate and undergraduate students in the design and construction of real projects at various scales. Elective courses and course sequences will be formatted to address the specific requirements of each project as required. Please consult postings for further information. Space is limited, and registration does not guarantee a space in this course. The final course roster is formulated on the first day of class by the individual instructor. Mutually Exclusive: Cannot register for ARCH 327 if student has credit for ARCH 627. Repeatable for Credit.

ARCH 329 - STREETS AND URBAN LIFE: PARIS TO ISTANBUL
Short Title: STREETS AND URBAN LIFE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Exploration of the street as a focus of urban life in 18th and 19th century. We will look at ways streets functioned as spaces of livelihood, sociability, and transgression in cities such as London, Paris, Istanbul, Amsterdam & Cairo. Cross-list: HART 329, HIST 329. Graduate/Undergraduate Equivalency: ARCH 529. Mutually Exclusive: Cannot register for ARCH 329 if student has credit for ARCH 529.
ARCH 330 - CONSTRUCT II
Short Title: CONSTRUCT II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3, 4
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: The Rice Building Workshop involves graduate and undergraduate students in the design and construction of real projects at various scales. Elective courses and course sequences will be formatted to address the specific requirements of each project as required. Please consult postings for further information. Space is limited, and registration does not guarantee a space in this course. The final roster is formulated on the first day of class by the individual instructor. Mutually Exclusive: Cannot register for ARCH 330 if student has credit for ARCH 630. Repeatable for Credit.

ARCH 331 - IMPERIAL CITY: ISTANBUL 1453-1922
Short Title: ISTANBUL IMPERIAL CITY
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This thematic seminar examines significant historical moments in the architectural and urban cultural of the Ottoman imperial capital from the moment it was conquered until the demise of the Ottoman empire. Weekly readings and discussions will cover a range of topics including building patronage, architectural decorum, the Byzantine legacy, artistic relations with Persia, India and Europe, cultural pluralism, neighborhood and public life, law and urban order, modernity and modernization. Cross-list: HART 321. Graduate/Undergraduate Equivalency: ARCH 521. Mutually Exclusive: Cannot register for ARCH 331 if student has credit for ARCH 521.

ARCH 332 - JERUSALEM TO ISFAHAN
Short Title: JERUSALEM TO ISFAHAN
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: A seminar on key topics of the study of visual cultures in the medieval and early modern Muslim world focused on specific works of art. Politics of architectural patronage, dissemination of visual languages, calligraphy, 'ornament' and figural representation in Islam, cross-cultural exchanges and trans-religious iconographies are among the topics discussed. Cross-list: HART 322. Graduate/Undergraduate Equivalency: ARCH 522. Mutually Exclusive: Cannot register for ARCH 332 if student has credit for ARCH 522.

ARCH 340 - LECTURE IN ARCHITECTURE
Short Title: LECTURE IN ARCHITECTURE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Lectures and discussions focusing on significant architectural and urban practices and ideas formulated before 1850. Cross-list: HART 345. Graduate/Undergraduate Equivalency: ARCH 645. Mutually Exclusive: Cannot register for ARCH 340 if student has credit for ARCH 235/ARCH 535.

ARCH 341 - ARCHITECTURE II (1850-1950)
Short Title: ARCHITECTURE II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): ARCH 340 or ARCH 640 or HART 340 or HART 640
Description: Lectures and discussions focusing on significant architectural and urban practices and ideas formulated after 1850. Graduate/Undergraduate Equivalency: ARCH 641. Mutually Exclusive: Cannot register for ARCH 341 if student has credit for ARCH 236/ARCH 536.

ARCH 345 - FOUNDATIONS IN THE HISTORY AND THEORY OF ARCHITECTURE I (1450-1850)
Short Title: FOUNDATIONS IN ARCH I
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group I
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): ARCH 340 or ARCH 640 or HART 340 or HART 640
Description: Lectures and discussions focusing on significant architectural and urban practices and ideas formulated before 1850. Cross-list: HART 345. Graduate/Undergraduate Equivalency: ARCH 645. Mutually Exclusive: Cannot register for ARCH 345 if student has credit for ARCH 235/ARCH 535.

ARCH 346 - FOUNDATIONS IN THE HISTORY AND THEORY OF ARCHITECTURE II (1850-1950)
Short Title: FOUNDATIONS IN ARCH II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group I
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): ARCH 345 or ARCH 645 or HART 345 or HART 645
Description: Lectures and discussions focusing on significant architectural and urban practices and ideas formulated between 1850 and 1950. Graduate/Undergraduate Equivalency: ARCH 646. Mutually Exclusive: Cannot register for ARCH 346 if student has credit for ARCH 336/ARCH 536.

ARCH 350 - INTRODUCTORY ARCHITECTURE SEMINAR
Short Title: INTRODUCTORY ARCHITECTURE SEM
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Small, focused, introductory-level course in discussion, workshop and/or design-based format on topics related to current research in architecture. Current offerings and enrollment eligibility are listed on the Rice Architecture website: arch.rice.edu. Space is limited and registration does not guarantee a space in this course. Repeatable for Credit.
Short Title: FOUNDATIONS IN ARCH III
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Distribution Group: Distribution Group I
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Prerequisite(s): (ARCH 225 or ARCH 525) and (ARCH 345 or ARCH 645) and (ARCH 346 or ARCH 646)
Description: Lectures and discussions focusing on significant architectural and urban practices between 1950 and 2000. Graduate/Undergraduate Equivalency: ARCH 652. Mutually Exclusive: Cannot register for ARCH 352 if student has credit for ARCH 337/ARCH 537.

ARCH 353 - PHOTOGRAPHY FOR ARCHITECTS
Short Title: PHOTO FOR ARCHITECTS
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Course Level: Undergraduate Upper-Level
Description: Exploration of a variety of photographic techniques for architectural research, design, and presentation. Space is limited and registration does not guarantee a space in this course. The final course roster is formulated on the first day class by the individual instructor. Mutually Exclusive: Cannot register for ARCH 353 if student has credit for ARCH 653.

ARCH 359 - CINEMAS OF URBAN ALIENATION
Short Title: CINEMAS OF URBAN ALIENATION
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 4
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This seminar examines cinematic engagements with urban spaces and experiences around the world spanning the last two centuries. Particular attention will be paid to issues of migration, marginality, colonialism, war and post-war, nostalgia and memory, race and gender. Cities of focus include Berlin, Istanbul, Moscow, Algiers, Beirut and Paris. Our weekly discussions of individual films will be grounded in critical writings of the cities' histories and theories of space and film. Cross-list: FILM 359, HART 359. Graduate/Undergraduate Equivalency: ARCH 654. Mutually Exclusive: Cannot register for ARCH 359 if student has credit for ARCH 654.

ARCH 363 - ARCHITECTURAL FREEHAND DRAWING WORKSHOP
Short Title: ARCH FREEHAND DRAWING WKSHOP
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: The object of this workshop is to explore, practice and develop a series of drawing methods and techniques in the context of the architectural design process. Emphasis will be on the development of free-hand drawing skills that will enhance the ability of the design in communicating conceptual ideas. The course will consist of a combination of lectures/demonstrations, in-class drawing exercises, and out-of-class assignments. Two sketch books (one at mid-term and one at the end of the semester) will also be required. Attendance is critical. Please come to the first class prepared to draw with pen and an 8 1/2 x 11 or 9 x 12 sketch pad. Space is limited and registration does not guarantee a space in this course. The final course roster is formulated on the first day class by the individual instructor. Mutually Exclusive: Cannot register for ARCH 363 if student has credit for ARCH 663. Repeatable for Credit.

ARCH 366 - RIO DE JANEIRO: A SOCIAL AND ARCHITECTURAL HISTORY
Short Title: RIO DE JANEIRO
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: The development of Rio de Janeiro from a colonial capital to an Olympic host with emphasis on the peoples of the city and evolution of the urban panorama. Cross-list: HIST 366. Mutually Exclusive: Cannot register for ARCH 366 if student has credit for ARCH 666.

ARCH 367 - SCULPTURE STUDIO
Short Title: SCULPTURE STUDIO
Department: Architecture
Grade Mode: Standard Letter
Course Type: Studio
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): ARTS 165
Description: Study of advanced problems in various sculptural media. Limited enrollment. The roster is formulated on the first day of class by the instructor, who may allow additional registration for majors and under-classmen. It is necessary to attend the first class meeting to confirm your place on the class roster. Cross-list: ARTS 366.
ARCH 375 - LATIN-EUROPE/LATIN-AMERICA: THE AESTHETICS AND POLITICS OF MODERN CITIES
Short Title: LATIN-EUROPE/LATIN-AMERICA
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course challenges our pre-conceived maps of the world, highlighting Latin America's place within our understanding of modernity as a product of transnational interconnections. Transversing the Atlantic, this course traces the interactions of capitalism and culture, science and aesthetics, and the ideologies that informed and formed the urban fabric and spatial politics of important cities in the modern Latin world - Paris, Rio de Janeiro, Rome, Buenos Aires, Barcelona, Havana, and Brasilia. Cross-list: HART 375. Graduate/Undergraduate Equivalency: ARCH 675. Mutually Exclusive: Cannot register for ARCH 375 if student has credit for ARCH 675.

ARCH 376 - THE ARCHITECTURE OF BOOKS
Short Title: THE ARCHITECTURE OF BOOKS
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Over the past decades, the conception of books has become an integral part of any architectural practice. This seminar aims to introduce students to the book as a means to think about the production of space, and as a critical vessel to discuss and disseminate architectural ideas. In the first part of the seminar students will engage in an in-depth analysis of seminal architectural publications, considering their historical background, conceptual background and introducing such topics as typography and layout- and in-class discussions of relevant literature. The second part will be dedicated to the actual 'building' of a small architectural publication, which will reflect critical and editorial skills as well as the craft of bookmaking. Graduate/Undergraduate Equivalency: ARCH 676. Mutually Exclusive: Cannot register for ARCH 376 if student has credit for ARCH 676.

ARCH 401 - ADVANCED TOPICS IN ARCHITECTURE - THE METROPOLIS
Short Title: ADVANCED TOPICS ARCHITECTURE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 6
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): ARCH 302
Description: What is the agency of the architect as a public figure and the contributions of architecture to the emerging and existing public realms? This studio focuses on a very large building program or urban scaled design, engaging the complexity of the communities and shared spaces of the emerging metropolis/megalopolis.
ARCH 423 - PROFESSIONALISM AND MANAGEMENT IN ARCHITECTURAL PRACTICE
Short Title: PROF&MGMT IN ARCH PRACTICE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): ARCH 302
Description: This course is required for the completion of the Bachelor of Architecture professional degree; students may take the course in their fourth year of architectural study in the BA program or in their final year of study in the BArch program. Graduate/Undergraduate Equivalency: ARCH 623. Mutually Exclusive: Cannot register for ARCH 423 if student has credit for ARCH 623.

ARCH 431 - URBANISM: ARCHITECTURE AND THE CITY
Short Title: URBANISM: ARCH & THE CITY
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: The intention of a course on urbanism is to view architecture in light of the city. An assembly of theoretical considerations serves to construct a perspective that allows us to critically assess modern urbanization. The goal is to help students form their own perspective on the practice of architecture and to broaden their understanding of the relentless urbanization that dominates the modern world. Students are expected to read extensively, to be prepared to discuss topics of urbanism in class, to form two-person teams to read selected texts to be presented in class and to shape a term project that may take the form of a final paper or a design proposal dealing with suburban issues. Grades are based on class participation, the reading project and the term project. Graduate/Undergraduate Equivalency: ARCH 631. Mutually Exclusive: Cannot register for ARCH 431 if student has credit for ARCH 631.

ARCH 433 - THE CULLINAN SEMINAR
Short Title: THE CULLINAN SEMINAR
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This seminar for advanced undergraduate students and graduate students will focus on the writings and practice of the semester's four RSA Cullinan visitors: art historian David Joselit (Yale), architect Michael Maltzan (L.A.), architect Alejandro Zaera-Polo (London), and art historian Neil Levine (Harvard). The seminar will be a platform for researching these four topics, including additional background references, other writings by these four figures as well as writings about them and their own work. Additionally, the seminar will feature one seminar session each with the four speakers. Graduate/Undergraduate Equivalency: ARCH 633. Mutually Exclusive: Cannot register for ARCH 433 if student has credit for ARCH 633. Repeatable for Credit.
ARCH 461 - SPECIAL PROJECTS
Short Title: SPECIAL PROJECTS
Department: Architecture
Grade Mode: Standard Letter
Course Type: Research
Credit Hours: 1-9
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Independent research or design arranged in consultation with a faculty member. Subject to approval of faculty advisor and director or undergraduate studies. Instructor Permission Required. Repeatable for Credit.

ARCH 477 - SPECIAL TOPICS
Short Title: SPECIAL TOPICS
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar, Lecture, Internship/Practicum, Laboratory
Credit Hours: 1-4
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Topics and credit hours vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

ARCH 491 - REAL ESTATE LAB: DEVELOP, DESIGN AND CONSTRUCTION
Short Title: RE LAB: DEVELOP DESIGN CONSTR
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Graduate/Undergraduate Equivalency: ARCH 691. Mutually Exclusive: Cannot register for ARCH 491 if student has credit for ARCH 691. Repeatable for Credit.

ARCH 500 - PRECEPTORSHIP PROGRAM
Short Title: PRECEPTORSHIP PROGRAM
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Internship/Practicum
Credit Hours: 1-15
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Full time internship for nine to twelve months under guidance of appointed preceptor. Required for all students enrolled in the Bachelor or Architecture degree program. Repeatable for Credit.

ARCH 501 - CORE DESIGN STUDIO I
Short Title: CORE DESIGN STUDIO I
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 10
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The first in a sequence of four studios that foregrounds the relationship between form and program. By underscoring this pairing, the studio suggests that program and form amplify one another (rather than one superseding the other). The studio establishes a foundation in visual culture through examples in architecture and other design disciplines, art, and art history, as well as exercises in visual/spatial discrimination. The studio stresses the importance of iteration throughout the semester: individual projects emphasize a production/critique/refinement cycle, as does the overall sequence of projects that make up the entire studio.

ARCH 502 - CORE DESIGN STUDIO II
Short Title: CORE DESIGN STUDIO II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 10
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The second in a sequence of four studios that foregrounds the relationship between form, program, and technology.

ARCH 503 - CORE DESIGN STUDIO III
Short Title: CORE DESIGN STUDIO III
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 10
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The third in a sequence of four studios that foregrounds the relationship between form, program, and technology.

ARCH 504 - CORE DESIGN STUDIO IV
Short Title: CORE DESIGN STUDIO IV
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 10
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The fourth in a sequence of four studios that foregrounds the relationship between form, program, and technology.
ARCH 507 - TECHNOLOGY I
Short Title: TECHNOLOGY I
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The course will introduce students to historical and contemporary structures through multi-media presentations, computer-based visualizations, field trips, and hands-on experiments with materials of construction and physical models of structures. This course also addresses sustainability issues specific to structural systems such as embodied energy, life-cycle cost, and material recycling. This is the introductory course on the art and science of designing engineered structures and is the first of four required courses in the architectural technology sequence. It is intended for first year graduate students in architecture. Graduate/Undergraduate Equivalency: ARCH 207. Mutually Exclusive: Cannot register for ARCH 507 if student has credit for ARCH 207.

ARCH 509 - TECHNOLOGY II
Short Title: TECHNOLOGY II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: This course is the second part of the introduction to contemporary building structures. The topics covered are the design of concrete structures and design of specialized structures including tilt wall, long span, and high rise. Each structural type is explored in terms of overall performance, design of individual components, and the relation of structure to other building subsystems such as foundations, enclosure, and interiors. This course also addresses sustainability issues specific to structural systems and is the second of four required courses in the architectural technology sequence. Graduate/Undergraduate Equivalency: ARCH 309. Recommended Prerequisite(s): Prior completion of Technology I. Mutually Exclusive: Cannot register for ARCH 509 if student has credit for ARCH 309.

ARCH 514 - TECHNOLOGY III
Short Title: TECHNOLOGY III
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The building envelope is the collection of material assemblies that separate a building’s interior from the exterior environment. This course examines the interaction of those assemblies with natural forces such as temperature, moisture, and solar radiation and the details of construction which have evolved to mitigate them. The subject matter includes both traditional building exterior wall and roof construction and newer technologies such as rainscreen, green roof, and building surface media systems. This course addresses sustainability issues related to enclosure systems through energy cost and carbon footprint analysis. It is the third of four required courses in the architectural technology sequence. Graduate/Undergraduate Equivalency: ARCH 314. Mutually Exclusive: Cannot register for ARCH 514 if student has credit for ARCH 314.

ARCH 515 - BRAZIL BUILT: THE CLINIC, THE TROPICAL AND THE AESTHETIC
Short Title: BRAZIL BUILT
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: From Brazil Builds, MOMA’s 1943 celebrated exhibition to Brasilia, the supermodern capital created ex-nihilo in the middle of nowhere, to today’s worldwide attention on Brazil, this seminar examines the built environment - natural and architectural - as the main transmitter of modernism in Brazil. This is a seminar on Brazilian modernism and its discontents. Cross-list: HART 526. Graduate/Undergraduate Equivalency: ARCH 315. Mutually Exclusive: Cannot register for ARCH 515 if student has credit for ARCH 315.

ARCH 516 - TECHNOLOGY IV
Short Title: TECHNOLOGY IV
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: This course addresses building environmental systems including power, water, and wastewater with an emphasis on air condition systems. Through multimedia presentations and fieldtrips, students are taught to analyze the thermal environment in a variety of building types and select equipment to meet these needs. Sustainability issues related to environmental systems such as energy conservational and life cycle costs are also addressed. This is the fourth required course in the architectural technology sequence. Graduate/Undergraduate Equivalency: ARCH 316. Mutually Exclusive: Cannot register for ARCH 516 if student has credit for ARCH 316.

ARCH 518 - LIVING IN THE CITY IN THE OTTOMAN EMPIRE
Short Title: LIVING IN THE CITY
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Seminar combines primary and secondary sources to explore the urban experiences of Ottoman men and women in the 18th and early 19th centuries. Looking at several cities including Istanbul, Izmir, Salonika, Damascus, Aleppo and Alexandria, we will discuss such issues as neighborhood and community life, public spaces and recreational culture perceptions of space, urban institutions, Muslim and non-Muslim relations, migration and marginality, violence and death. Reading knowledge of French and/or Turkish helpful but not necessary. For each lecture, Graduate Students will be assigned additional readings. They will write an annotated bibliography of all these readings to be turned in at the end of the semester. We will meet for an additional every two or three weeks to discuss interpretive and methodological problems and ideas associated with the readings. Graduate Students will be expected to complete all the requirements of the class in addition to writing a substantial research paper due at the end of the semester. Cross-list: HART 508. Graduate/Undergraduate Equivalency: ARCH 318. Mutually Exclusive: Cannot register for ARCH 518 if student has credit for ARCH 318.
ARCH 521 - IMPERIAL CITY: ISTANBUL 1453-1922
Short Title: ISTANBUL IMPERIAL CITY
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: This thematic seminar examines significant historical moments in the architectural and urban cultural of the Ottoman imperial capital from the moment it was conquered until the demise of the Ottoman Empire. Weekly readings and discussions will cover a range of topics including building patronage, architectural decorum, the Byzantine legacy, artistic relations with Persia, India and Europe, cultural pluralism, neighborhood and public life, law and urban order, modernity and modernization. For each lecture, Graduate Students will be assigned additional readings. They will write an annotated bibliography of all these reading to be turned in at the end of the semester. We will meet at the end of the semester. We will meet for an additional every two or three weeks to discuss interpretive and methodological problems and ideas associated with the readings. Graduate Students will be expected to complete all the requirements of the class in addition to writing a substantial research paper due at the end of the semester. Cross-list: HART 521. Graduate/Undergraduate Equivalency: ARCH 331. Mutually Exclusive: Cannot register for ARCH 521 if student has credit for ARCH 331.

ARCH 522 - JERUSALEM TO ISFAHAN
Short Title: JERUSALEM TO ISFAHAN
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: A seminar on key topics of the study of visual cultures in the medieval and early modern Muslim world focused on specific works of art. Politics of architectural patronage, dissemination of visual languages, calligraphy, 'ornament' and figural representation in Islam, cross-cultural exchanges and trans-religious iconographies are among the topics discussed. For each lecture, Graduate Students will be assigned additional readings. They will write an annotated bibliography of all these reading to be turned in at the end of the semester. We will meet at the end of the semester. We will meet for an additional every two or three weeks to discuss interpretive and methodological problems and ideas associated with the readings. Graduate Students will be expected to complete all the requirements of the class in addition to writing a substantial research paper due at the end of the semester. Cross-list: HART 522. Graduate/Undergraduate Equivalency: ARCH 332. Mutually Exclusive: Cannot register for ARCH 522 if student has credit for ARCH 332.

ARCH 523 - SEMINAR IN ARCHITECTURE
Short Title: SEMINAR IN ARCHITECTURE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Small, focused, discussion, workshop and/or design based courses on topics of recent research in architecture, delivered by RSA full time or visiting faculty. This seminar series is open to RSA undergraduate and graduate students. Students from other departments may enroll in the course with instructor permission. 'See our website for more information: arch.rice.edu/courses'. Space is limited and registration does not guarantee a space in this course. The final course roster is formulated on the first day class by the individual instructor. Graduate/Undergraduate Equivalency: ARCH 323. Repeatable for Credit.

ARCH 525 - INTRODUCTION TO ARCHITECTURAL THINKING
Short Title: INTRO ARCHITECTURAL THINKING
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Introduction to architectural thought. Lectures and discussions focusing on practice and ideas that have exercised a significant influence on the discourse and production of architecture and urbanism. Cross-list: HART 545. Graduate/Undergraduate Equivalency: ARCH 225. Mutually Exclusive: Cannot register for ARCH 525 if student has credit for ARCH 225.

ARCH 529 - STREETS AND URBAN LIFE: PARIS TO ISTANBUL
Short Title: STREETS AND URBAN LIFE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: For each lecture, Graduate Students will be assigned additional readings. They will write an annotated bibliography of all these readings to be turned in at the end of the semester. We will meet for an additional every two or three weeks to discuss interpretive and methodological problems and ideas associated with the readings. Graduate Students will be expected to complete all the requirements of the class in addition to writing a substantial research paper due at the end of the semester. Cross-list: HART 529. Graduate/Undergraduate Equivalency: ARCH 329. Mutually Exclusive: Cannot register for ARCH 529 if student has credit for ARCH 329.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Short Title</th>
<th>Department</th>
<th>Grade Mode</th>
<th>Course Type</th>
<th>Credit Hours</th>
<th>Course Level</th>
<th>Restrictions</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ARCH 550</td>
<td>INTERMEDIATE/ADVANCED ARCHITECTUER SEMINAR</td>
<td>INTER/ADVANCED ARCH SEMINAR</td>
<td>Architecture</td>
<td>Standard Letter</td>
<td>Lecture/Laboratory</td>
<td>3</td>
<td>Graduate</td>
<td>Undergraduate level students may not enroll.</td>
<td>Small, focused, intermediate/advanced-level course in discussion, workshop and/or design-based format on topics related to current research in architecture. Current offerings and enrollment eligibility are listed on the Rice Architecture website: arch.rice.edu. Space is limited and registration does not guarantee a space in this course. Repeatable for Credit.</td>
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<tr>
<td>ARCH 600</td>
<td>M. ARCH. I INTERNSHIP</td>
<td>M. ARCH. I INTERNESHIP</td>
<td>Architecture</td>
<td>Satisfactory/Unsatisfactory</td>
<td>Internship/Practicum</td>
<td>1-15</td>
<td>Graduate</td>
<td>Undergraduate level students may not enroll.</td>
<td>Practical work experience for students who have completed at least four semesters in the Option I Program prior to their entrance into the regular Master of Architecture studio sequence. Instructor Permission Required. Repeatable for Credit.</td>
</tr>
<tr>
<td>ARCH 601</td>
<td>ARCHITECTURAL PROBLEMS: STUDIO</td>
<td>ARCHITECTURAL PROBLEMS:STUDIO</td>
<td>Architecture</td>
<td>Standard Letter</td>
<td>Seminar</td>
<td>10</td>
<td>Graduate</td>
<td>Undergraduate level students may not enroll.</td>
<td>Emphasis on abstract thought and design capabilities relevant to systematic processes of designing specific buildings and facilities. Note: there are three separate sections for this course. The course is coordinated by RSA faculty Troy Schaum and Will Cannady. Repeatable for Credit.</td>
</tr>
<tr>
<td>ARCH 602</td>
<td>ARCHITECTURAL PROBLEMS</td>
<td>ARCHITECTURAL PROBLEMS</td>
<td>Architecture</td>
<td>Standard Letter</td>
<td>Lecture/Laboratory</td>
<td>10</td>
<td>Graduate</td>
<td>Undergraduate level students may not enroll.</td>
<td>Emphasis on abstract thought and design capabilities relevant to systematic processes of designing specific buildings and facilities. Repeatable for Credit.</td>
</tr>
<tr>
<td>ARCH 605</td>
<td>ARCHITECTURE FOR NON-ARCHITECTS INSTRUCTION</td>
<td>NON-ARCHITECTS INSTRUCTION</td>
<td>Architecture</td>
<td>Standard Letter</td>
<td>Lecture/Laboratory</td>
<td>3</td>
<td>Graduate</td>
<td>Undergraduate level students may not enroll.</td>
<td>Small, focused, advanced discussion, workshop and/or design based courses on topics of recent research in architecture, delivered by RSA full time or visiting faculty. This seminar is open to RSA undergraduate students junior-level and above, and RSA graduate students. Students from other departments may enroll in the course with instructor permission. See the RSA website for more information: arch.rice.edu/courses. Space is limited and registration does not guarantee a space in this course. The final course roster is formulated on the first day class by the individual instructor. Cross-list: HART 612. Graduate/Undergraduate Equivalency: ARCH 412. Mutually Exclusive: Cannot register for ARCH 612 if student has credit for ARCH 412. Repeatable for Credit.</td>
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<tr>
<td>ARCH 610</td>
<td>HISTORY, THEORY AND STRUCTURE/ PARIS PROGRAM (RSAP)</td>
<td>HIST, THEORY &amp; STRCTR: PARIS</td>
<td>Architecture</td>
<td>Standard Letter</td>
<td>Seminar</td>
<td>6</td>
<td>Graduate</td>
<td>Undergraduate level students may not enroll.</td>
<td>Seminar, comprised of separate modules, each addressing different issues of urban theory, historical evolution and structure of greater Paris, through lectures, discussions, research and site visits.</td>
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<tr>
<td>ARCH 612</td>
<td>ADVANCED SEMINAR IN ARCHITECTURE</td>
<td>ADV SEMINAR IN ARCHITECTURE</td>
<td>Architecture</td>
<td>Standard Letter</td>
<td>Seminar</td>
<td>3</td>
<td>Graduate</td>
<td>Undergraduate level students may not enroll.</td>
<td>Small, focused, advanced discussion, workshop and/or design based courses on topics of recent research in architecture, delivered by RSA full time or visiting faculty. This seminar is open to RSA undergraduate students junior-level and above, and RSA graduate students. Students from other departments may enroll in the course with instructor permission. See the RSA website for more information: arch.rice.edu/courses. Space is limited and registration does not guarantee a space in this course. The final course roster is formulated on the first day class by the individual instructor. Cross-list: HART 612. Graduate/Undergraduate Equivalency: ARCH 412. Mutually Exclusive: Cannot register for ARCH 612 if student has credit for ARCH 412. Repeatable for Credit.</td>
</tr>
<tr>
<td>ARCH 613</td>
<td>CASE STUDIES IN SUSTAINABLE DESIGN</td>
<td>SUSTAINABLE DESIGN</td>
<td>Architecture</td>
<td>Standard Letter</td>
<td>Seminar</td>
<td>3</td>
<td>Graduate</td>
<td>Undergraduate level students may not enroll.</td>
<td>Repeatable for Credit.</td>
</tr>
</tbody>
</table>
ARCH 615 - WOODSHOP SAFETY
Short Title: WOODSHOP SAFETY
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Laboratory
Credit Hour: 1
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: This course will cover all safety concerns in the model shop. Students will learn the proper set up and maintenance of the stationary tools as well as how to do basic fabrication. Students will learn basic material layout and produce objects using the tools as we cover them. Repeatable for Credit.

ARCH 620 - ARCHITECTURAL PROBLEMS: STUDIO/PARIS PROGRAM (RSAP)
Short Title: ARCHITECTURAL PROBLEMS
Department: Architecture
Grade Mode: Standard Letter
Course Type: Studio
Credit Hours: 10
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Advanced issues in building design and urban infrastructure using greater Paris as context. Emphasis on abstract thought and design capabilities relevant to systematic processes of designing specific architectural interventions in the urban context.

ARCH 621 - CASE STUDIES IN SUSTAINABILITY: THE HIGH PERFORMANCE BUILDING
Short Title: SUSTAINABILITY CASE STUDIES
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The project-based seminar will provide a means by which all those with an interest in the building science entailed in the design of commercial, institutional, and residential structures can investigate common issues, obtain information, discuss local strategies, and otherwise address subjects relating to building or campus performance over its lifecycle. To develop an approach of taking an existing Rice University building an optimizing its use via ‘repositioning’ or redesign the class will create an interdisciplinary forum where students of architecture, engineering (structural, mechanical, etc.), and human sciences will potentially collaborate with professional building consultants, materials manufactures, contractors, developers, owners, and Rice campus facility managers Cross-list: ENST 621. Graduate/Undergraduate Equivalency: ARCH 321. Mutually Exclusive: Cannot register for ARCH 621 if student has credit for ARCH 321.

ARCH 622 - CASE STUDIES IN SUSTAINABILITY: THE REGENERATIVE REPOSITIONING OF NEW OR EXISTING RICE CAMPUS BLDGS
Short Title: CASE STUDIES IN SUSTAINABILITY
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: This course will explore application of high performance, sustainable design to specific Rice University campus and facility targets. In partnership with Rice University leadership, the team effort will develop ‘regenerative redesign’ approaches based on investigation of other campuses’ case study. Space is limited and registration does not guarantee a space in this course. The final course roster is formulated on the first day of class by the individual instructor. Cross-list: ENST 622.
Graduate/Undergraduate Equivalency: ARCH 322. Mutually Exclusive: Cannot register for ARCH 622 if student has credit for ARCH 322.

ARCH 623 - PROFESSIONALISM AND MANAGEMENT IN ARCHITECTURAL PRACTICE
Short Title: PROF&MGMT IN ARCH PRACTICE
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: . Graduate/Undergraduate Equivalency: ARCH 423. Mutually Exclusive: Cannot register for ARCH 623 if student has credit for ARCH 423.

ARCH 626 - MATERIAL, FORM, SPACE, TIME: CONCRETE AND THE REVOLUTION OF SPACE IN ANCIENT ROME
Short Title: MATERIAL, FORM, SPACE, TIME
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: *Architectural Revolution* has been tied to Le Corbusier, the Eiffel Tower, the Louvre, Brunelleschi and to towering Gothic cathedrals. At the foundation of all these endeavors is the Concrete Revolution in Roman Architecture. In this course we'll look at the four essential elements of this revolution from the fourth century BCE to the fifth century CE, and we'll investigate how shifts in application and experience created a background that informs design to this day. Cross-list: HART 626. Graduate/Undergraduate Equivalency: ARCH 326. Mutually Exclusive: Cannot register for ARCH 626 if student has credit for ARCH 326.
ARCH 631 - URBANISM I: THE CITY THEORETICALLY CONSIDERED
Short Title: URBANISM I
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The intention of a course on urbanism is to view architecture in light of the city. An assembly of theoretical considerations serves to construct a perspective that allows us to critically assess modern urbanization. The goal is to help students form their own perspective on the practice of architecture and to broaden their understanding of the relentless urbanization that dominates the modern world. Students are expected to read extensively, to be prepared to discuss topics of urbanism in class, to form two-person teams to read selected texts to be presented in class and to shape a term project that may take the form of a final paper or a design proposal dealing with suburban issues. Grades are based on class participation, the reading project and the term project. Graduate/Undergraduate Equivalency: ARCH 431. Mutually Exclusive: Cannot register for ARCH 631 if student has credit for ARCH 431.

ARCH 633 - THE CULLINAN SEMINAR
Short Title: THE CULLINAN SEMINAR
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: This seminar for advanced undergraduate students and graduate students will focus on the writings and practice of the semester's four RSA Cullinan visitors: art historian David Joselit (Yale), architect Michael Maltzan (L.A.), architect Alejandro Zaera-Polo (London), and art historian Neil Levine (Harvard). The seminar will be a platform for researching these four topics, including additional background references, other writings by these four figures as well as writings about them and their own work. Additionally, the seminar will feature one seminar session each with the four speakers. Graduate/Undergraduate Equivalency: ARCH 433. Mutually Exclusive: Cannot register for ARCH 633 if student has credit for ARCH 433. Repeatable for Credit.

ARCH 645 - FOUNDATIONS AND THE HISTORY AND THEORY OF ARCHITECTURE I (1450-1850)
Short Title: FOUNDATIONS IN ARCH I
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Lectures and discussions focusing on significant architectural and urban practices and ideas formulated before 1850. Cross-list: HART 645. Graduate/Undergraduate Equivalency: ARCH 345. Mutually Exclusive: Cannot register for ARCH 645 if student has credit for ARCH 235/ARCH 535.

ARCH 646 - FOUNDATIONS IN THE HISTORY AND THEORY OF ARCHITECTURE II (1850-1950)
Short Title: FOUNDATIONS IN ARCH II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Prerequisite(s): ARCH 345 or ARCH 645 or HART 345 or HART 645
Description: Lectures and discussions focusing on significant architectural and urban practices and ideas formulated be 1850 and 1950. Cross-list: HART 506. Graduate/Undergraduate Equivalency: ARCH 346. Mutually Exclusive: Cannot register for ARCH 646 if student has credit for ARCH 336/ARCH 536.

ARCH 650 - ADVANCED ARCHITECTURE SEMINAR
Short Title: ADVANCED ARCH SEMINAR
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Course Level: Graduate
Description: Small, focused, advanced-level course in discussion, workshop and/or design-based format on topics related to current research in architecture. Current offerings and enrollment eligibility are listed on the Rice Architecture website: arch.rice.edu. Space is limited and registration does not guarantee a space in this course. Repeatable for Credit.

ARCH 651 - PRESENT FUTURE SEMINAR
Short Title: PRESENT FUTURE SEMINAR
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The present Future seminar will examine the history of future projection as it came to dominate modern architecture and urbanism in the period of 1914-2014. The realization of such a large number of future projections over the preceding century allows us to examine their effects as they have now come to constitute our present. Focusing on modern urbanism, will trace both the historical and the contemporary effects of the future as it was imagined so long ago. Given the volatile historical moment that we are presently passing through, an effort will be made to understand the logic as well as the remaining potential of future projection as a design strategy today.
Short Title: FOUNDATIONS IN ARCH III
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Prerequisite(s): (ARCH 225 or ARCH 525) and (ARCH 345 or ARCH 645) and (ARCH 346 or ARCH 646)
Description: Lectures and discussions focusing on significant architectural and urban practices between 1950 and 2000. Graduate/Undergraduate Equivalency: ARCH 352. Mutually Exclusive: Cannot register for ARCH 652 if student has credit for ARCH 537.

ARCH 654 - CINEMAS OF URBAN ALIENATION
Short Title: CINEMAS OF URBAN ALIENATION
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 4
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: This seminar examines cinematic engagements with urban spaces and experiences around the world spanning the last two centuries. Particular attention will be paid to issues of migration, marginality, colonialism, war and post-war, nostalgia and memory, race and gender. Cities of focus include Berlin, Istanbul, Moscow, Algiers, Beirut and Paris. Our weekly discussions of individual films will be grounded in critical writings of the cities’ histories and theories of space and film. Cross-list: HART 659. Graduate/Undergraduate Equivalency: ARCH 359. Mutually Exclusive: Cannot register for ARCH 654 if student has credit for ARCH 359.

ARCH 655 - CONTEMPORARY PRACTICES IN ARCHITECTURE
Short Title: CONTEMPORARY PRACTICES
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Graduate level students.
Course Level: Graduate
Description: Lectures and discussions focusing on issues and approaches central to current architectural discourse and practice. M.Archs take this course in their penultimate semester. Also open to undergraduates, seniors and above.

ARCH 656 - FUTURES OF THE BOOK
Short Title: FUTURES OF THE BOOK
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Seminar
Credit Hour: 1
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: From an ongoing interest in the book as a physical object, to the exploration of its potentials expanding into a four-dimensional digital realm, to rapidly changing demands for the storage and retrieval of knowledge, this master class will provide a platform to engage experts from various disciplines in a debate on the shifting futures of the book. Instructor Permission Required. Cross-list: HURC 608. Graduate/Undergraduate Equivalency: ARCH 456. Mutually Exclusive: Cannot register for ARCH 656 if student has credit for ARCH 456.

ARCH 675 - LATIN-EUROPE/LATIN-AMERICA: THE AESTHETICS AND POLITICS OF MODERN CITIES
Short Title: LATIN-EUROPE/LATIN-AMERICA
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: This course challenges our pre-conceived maps of the world, highlighting Latin America’s place within our understanding of modernity as a product of transnational interconnections. Transversing the Atlantic, this course traces the interactions of capitalism and culture, science and aesthetics, and the ideologies that informed and formed the urban fabric and spatial politics of important cities in the modern Latin world - Paris, Rio de Janeiro, Rome, Buenos Aires, Barcelona, Havana, and Brasilia. Cross-list: HART 675. Graduate/Undergraduate Equivalency: ARCH 375. Mutually Exclusive: Cannot register for ARCH 675 if student has credit for ARCH 375.

ARCH 676 - THE ARCHITECTURE OF BOOKS
Short Title: THE ARCHITECTURE OF BOOKS
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Over the past decades, the conception of books has become an integral part of any architectural practice. This seminar aims to introduce students to the book as a means to think about the production of space, and as a critical vessel to discuss and disseminate architectural ideas. In the first part of the seminar students will engage in an in-depth analysis of seminal architectural publications, considering their historical background, conceptual background and introducing such topics as typography and layout- and in-class discussions of relevant literature. The second part will be dedicated to the actual ‘building’ of a small architectural publication, which will reflect critical and editorial skills as well as the craft of bookmaking. Graduate/Undergraduate Equivalency: ARCH 376. Mutually Exclusive: Cannot register for ARCH 676 if student has credit for ARCH 376.
ARCH 677 - SPECIAL TOPICS
Short Title: SPECIAL TOPICS
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar, Lecture, Laboratory, Internship/Practicum
Credit Hours: 1-4
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Graduate
Description: Topics and credit hours may vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

ARCH 690 - PEDAGOGY PRACTICUM
Short Title: PEDAGOGY PRACTICUM
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Internship/Practicum
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: This course addresses the development of skills for the teaching of History & Technology core courses. Weekly meetings will be held and supervised by faculty in the teaching of whose courses practicum students are involved. Department Permission Required. Repeatable for Credit.

ARCH 691 - REAL ESTATE LAB: DEVELOP, DESIGN AND CONSTRUCTION
Short Title: RE LAB:DEVELOP DESIGN CONSTR
Department: Architecture
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Cross-list: MGMT 757. Graduate/Undergraduate Equivalency. ARCH 491. Mutually Exclusive: Cannot register for ARCH 691 if student has credit for ARCH 491. Repeatable for Credit.

ARCH 700 - PRACTICUM
Short Title: PRACTICUM
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Internship/Practicum
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Full-time internship service in approved local offices under interdisciplinary supervision. Emphasis on real world design, planning, or research experiences. Special tuition. May be taken in any semester or in summer. Instructor Permission Required. Repeatable for Credit.

ARCH 701 - THESIS PROPOSAL
Short Title: THESIS PROPOSAL
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Independent Study
Credit Hour: 1
Restrictions: Enrollment is limited to Graduate level students.
Course Level: Graduate
Description: The course provides a structure in which the independent conceptual formulation, articulation, and critical evaluation of thesis proposals can take place. By the end of the semester, each student is expected to clearly outline a thesis focus, its architectural implications, contemporary relevance, and projected material results.

ARCH 702 - PRE-THESIS PREPARATION
Short Title: PRE-THESIS PREPARATION
Department: Architecture
Grade Mode: Standard Letter
Course Type: Research
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: The aim of this course is to locate potential thesis topics and hone those topics by situating them within a lineage of architectural and urban paradigms. The aim is also to develop and rehearse a focused argument for your particular approach to the topic. The thesis design project tests this approach in a project, the underpinnings of which seek a synthesis of intellectual and design objectives. Thesis concludes with a public final review, where the project is evaluated both on its own terms and within the broader field of contemporary architectural discourse. Mutually Exclusive: Cannot register for ARCH 702 if student has credit for ARCH 638.

ARCH 703 - DESIGN THESIS STUDIO
Short Title: DESIGN THESIS STUDIO
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Lecture
Credit Hours: 10
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate

ARCH 711 - SPECIAL PROJECTS
Short Title: SPECIAL PROJECTS
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Research
Credit Hours: 1-9
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: Independent research or design arranged in consultation with a faculty member subject to approval of the student's faculty advisor and director. Repeatable for Credit.

ARCH 729 - THESIS WRITTEN DOCUMENT (FALL)
Short Title: FALL WRITTEN THESIS
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Independent Study
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: All architecture thesis students are required to provide a written document to the university on completion of their thesis as a requirement for graduation. This document, prepared in consultation with the thesis director and the director of the thesis program, should include a written and graphic description of the project and conform to the university requirements for thesis documents.
ARCH 730 - THESIS WRITTEN DOCUMENT (SPRING)

Short Title: SPRING WRITTEN THESIS
Department: Architecture
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Independent Study
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: All architecture thesis students are required to provide a written document to the university on completion of their thesis as a requirement for graduation. This document, prepared in consultation with the thesis director and the director of the thesis program, should include a written and graphic description of the project and conform to the university requirements for thesis documents.

ARCH 751 - PRESENT FUTURE II

Short Title: PRESENT FUTURE II
Department: Architecture
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Undergraduate level students may not enroll.
Course Level: Graduate
Description: ARCH 751 is the third core course of the Master of Arts degree program. It is the concluding semester of the three semester research project, the subject of which changes with each class. The purpose of the semester is to draw the conclusions of the project and produce and package the results. The formats vary with each project.