ARCHITECTURE (ARCH)

ARCH 151 Introduction to the Built Environment
3 credits
*Gen Ed: Humanities*
May not be taken for credit after LARC 151. Introduction to the complexities and wonders of the built environment, and the role of the humanities in successful designs. From the regional landscapes to urban design and architecture, to the intimacy of interiors and dwellings, to place making and space making, student perspectives are broadened on how the built environment is shaped by and contributes to an evolving human story. The built environment is also examined as a product of a multitude of forces that include: place, climate, conservation, culture, economics, beliefs, and aspirations for well-being.

ARCH 154 Introduction to Architectural Graphics
3 credits
Introduction to architectural graphics; two 1-hour lecture sessions per week, plus two 1-hour studio sessions per week; weekly assigned drawing projects, readings, and sketchbook projects; periodic quizzes. Cooperative: open to WSU degree-seeking students.

ARCH 200 (s) Seminar
Credit arranged.

ARCH 203 (s) Workshop
Credit arranged.

ARCH 204 (s) Special Topics
Credit arranged.

ARCH 217 Ancient & Pre-Modern Art
3 credits
A survey of ancient to early modern art, covering the period from classical antiquity through neoclassicism and the industrial revolution. Particular care will be taken to situate the art, architecture, and design of each period in its cultural, political, and religious contexts. Basic methods and approaches of art history will be also be covered. Classes will be mostly lectures, with discussion of primary sources. No prior experience with art or history is required.

ARCH 243 Media in Architecture
3 credits
Introduction to techniques for hybridizing manual & digital design tools for workflows relative to the architectural design process; includes virtual modeling, CNC fabrication, 2D/3D printing, manual drafting, manual modeling, various software. Two 75 minute sessions per week; in class lectures & workshops; tools, techniques, & exercises integrated with ARCH 253
*Coreq:* ARCH 254.

ARCH 244 Computer Aided Drafting and Modeling
2 credits
Cross-listed with ID 244
Introduction to computer-aided drafting and modeling techniques and applications.
*Prereq:* ARCH 154.

ARCH 253 Architectural Design I
4 credits
Introduction to Architectural Design Fundamentals including formal principles, ordering systems, conceptualization, experimentation, design making, & design communication for the resolution of given architectural design problems. Two 3-hr studio sessions per wk; course includes lectures, workshops, project development, presentations, readings.

ARCH 254 Architectural Design II
4 credits
Cross-listed with ID 254.
Basic integration of principles and concepts for architectural design, both interior & exterior. Two 3-hr studios a wk and assigned work.
*Prereq:* ARCH 253 or Permission
*Coreq:* ARCH 243.

ARCH 257 Architectural Design Bootcamp
10 credits
Intensive introduction to various design processes from concept to schematic to design development. Acquisition of a beginning level of both graphic and architectural design literacy, design thinking strategies, aesthetic awareness. Development of basic design communication skills and introduction and application of construction technologies through component resolution.
*Prereq:* Architecture Permission.

ARCH 266 Materials and Methods
3 credits
Introduce physical and performance characteristics of materials, and concepts, conventions and processes of construction methods. Provide a foundation for subsequent courses in architectural technology and design.

ARCH 299 (s) Directed Study
Credit arranged.

ARCH 353 Architectural Design III
6 credits
Development of architectural design process and projects that cultivate an understanding of structures, properties of materials and building tectonics. Emphasis is also placed on precedent analysis, basic code and site related issues. Three 3-hr studios a wk and assigned work; field trips reqd at student expense outside scheduled hours; some class critique sessions may meet outside of scheduled hours.
*Prereq:* ARCH 254 or equivalent. Application Required.

ARCH 354 Architectural Design IV
6 credits
Continued development of architectural projects and design process that cultivate understanding of the properties of materials and building tectonics. Three 3-hr studios a wk and assigned work; field trips will be reqd at student expense outside scheduled hours; some class critique sessions will meet outside of scheduled hours.
*Prereq:* ARCH 353.

ARCH 361 Structural Systems I
3 credits
Project based introduction to the physical principles that govern statics and strength of materials. Graphical and numerical methods for designing and analyzing structures are used.
*Prereq:* PHYS 111, PHYS 111L, MATH 143, ARCH 266.

ARCH 362 Structural Systems II
3 credits
Project based course with focus on the overall building behavior of framing systems. Graphical and numerical methods for designing and analyzing structures are used.
*Prereq:* ARCH 361.
ARCH 385 Global History of Architecture  
3 credits  
A global survey of architecture and urban design from its beginnings through the seventeenth century, considered within the social, cultural, religious, and political contexts that shape it. Recommended Preparation: ARCH 151.

ARCH 386 Global History of Architecture II  
3 credits  
A global survey of architecture and urban design from the Enlightenment to the present, considered within the social, cultural, political and technological contexts that shape it.

ARCH 388 Architectural Theory  
3 credits  
This course is aimed at familiarizing students with key movements, thinkers, and developments in architectural theory's continued evolution, so that they are prepared to go into the world and produce thoughtful work and well-crafted thought.  
**Prereq:** ARCH 151.

ARCH 400 (s) Seminar  
Credit arranged.

ARCH 403 (s) Workshop  
Credit arranged.

ARCH 404 (s) Special Topics  
Credit arranged.

ARCH 410 Sketching for Architecture  
3 credits  
Instruction in intermediate through advanced architectural sketching, painting, and place-recording techniques. A variety of media techniques will be employed, including graphite, charcoal, colored pencil, pen & ink, and watercolor. The majority of work will be completed in class, with additional homework assignments outside class and on field trips. Recommended Preparation: Basic sketching abilities, as developed in ARCH 154 and subsequent architectural design studios.

ARCH 411 Native American Architecture  
3 credits  
*Gen Ed: American Diversity*  
Joint-listed with ARCH 511, Cross-listed with AIST 411  
An exploration of Native American architecture in North America, including ancient, historic, and contemporary buildings and settlements within their diverse social, cultural, and physical contexts. Additional assignments required for graduate credit. (Spring only)

ARCH 415 Instructional Assistant  
1-3 credits, max 6  
Assist instructors in delivering courses including classroom and teaching technology set up, taking roll, and other administrative or logistical tasks. Assistants may also (at instructor direction) work with students on design studio critiques, discussion or other related activities. Instructional assistants cannot award or enter grades.  
**Prereq:** Fourth year standing in architecture programs.

ARCH 416 Social Sustainability in Contemporary Cities  
3 credits  
Joint-listed with ARCH 516  
Seminar provides an overview of the social dimension of sustainability and its related issues in contemporary cities in the world. Exploration of concepts and strategies of social urban sustainability through case studies to critically evaluate urban governance and policies in both developed and developing countries, and assessment of struggles for social justice and equality. Additional projects/assignments required for graduate credit.

ARCH 421 China Program Preparation Seminar  
2 credits  
Joint-listed with ARCH 521  
Seminar course preparing students for summer study abroad program in China. This course will introduce travelling, money management, safety, visa application, and some basic cultural introductions. Also, this class will introduce the academic courses to be undertaken in China and prepare research data collection. Required for all students enrolled in the China program. Cooperative: open to WSU degree-seeking students. (Spring only)  
**Prereq:** ARCH 353 or LARC 353.

ARCH 422 China's Urbanization Seminar  
2 credits  
Joint-listed with ARCH 522  
Seminar course conducted in China, focusing on understanding the complicated challenges of China's urbanization and design strategies for urban development.  
**Prereq:** ARCH 354 or LARC 365.

ARCH 423 Cultural & Ethical Issues in Global Architectural Practice  
2 credits  
Joint-listed with ARCH 523  
Study of the phenomenon of architectural practice under the impact of globalization using the market of China as an example. Focus on the development of model architectural practice in China as well as the associated social and cultural issues of global architectural practice.  
**Prereq:** ARCH 354 or LARC 365.

ARCH 430 Rome Preparatory Seminar  
2 credits  
Seminar preparing students for summer study abroad in Rome, Italy. Introduces academic courses to be taken in Rome, and begins research and information-gathering tasks for Design Studio and Rome Design History courses. Also includes practical matters such as travel planning, money, safety, and basic language skills. Cooperative: open to WSU degree-seeking students. (Spring only)

ARCH 431 Rome Design History  
3 credits  
Lecture course conducted in Rome, Italy, focused on the essential eras of Roman history related to design (art, architecture, urban planning, etc.): Republican & Imperial Rome; Early Christian Rome; Renaissance & Baroque Rome; the “Third Rome” of the Risorgimento and Mussolini; Contemporary Rome of the late-20th and early-21st Centuries.  
**Prereq:** ARCH 430.
ARCH 432 Advanced Analog Graphics
3 credits
Joint-listed with ARCH 532
Advanced sketchbook and large format drawing development focused on the built environment. Analog (i.e., physical) media, including graphite, ink and watercolor. Additional projects/assignments required for graduate credit.
Prereq: ARCH 154 and ARCH 254; or Permission.

ARCH 454 Architectural Design: Vertical Studio
6 credits, max 12
Gen Ed: Senior Experience
Joint-listed with ARCH 554
Architectural and/or urban design projects are developed to explore and integrate urban theory sustainable design, construction & environmental control systems technology, experimental design approaches, human and cultural factors, and construction assemblies. Design projects completed individually or in team/collaborative settings encouraged. Three 3-hr studios per week and assigned work. Field trips at student expense are required and meet outside scheduled hours; some class critique sessions meet outside of scheduled hours. Additional projects/assignments required for graduate credit.
Prereq: ARCH 353 and ARCH 354; or Permission.

ARCH 461 Building Assemblies
3 credits
Advanced building construction with focus on building enclosure systems and assemblies.
Prereq: ARCH 362, ARCH 463, or instructor permission.

ARCH 463 Environmental Control Systems I
3 credits
Principles and design of sustainable passive energy systems, mechanical heating and cooling systems, air quality, fire suppression and vertical transport. Three 1-hr lec a wk.
Coreq: ARCH 463L.

ARCH 463L Environmental Control System I Lab
1 credit
Laboratory to accompany the ARCH 463 lecture. One 2-hour lab a week.
Coreq: ARCH 463.

ARCH 464 Environmental Control Systems II
3 credits
Principles and design of integrated natural and electrical lighting systems, water use and conservation systems, storm and waste water treatment and management, and acoustic systems as well as principles for and evaluation of sustainable architecture. Three 1-hr lec a wk.
Coreq: ARCH 464L.

ARCH 464L Environmental Control System II Lab
1 credit
Laboratory to accompany the ARCH 464 lecture. One 2 hour lab a week.
Coreq: ARCH 464.

ARCH 475 Professional Practice
3 credits
Joint-listed with ARCH 575
Overview of professional standards and practices in the architecture and interior design professions. Including duties and responsibilities in practice (construction documents and contracts, code analysis, ethics, and professional organizations and alliances), project management, office administration, and comprehensive services; specification writing, unit costs, and building estimation. Additional assignments/projects required for graduate credit.

ARCH 483 Urban Theory and Issues
3 credits
History and theory of city planning and problems associated with urban growth.

ARCH 498 (s) Internship
Credit arranged.

ARCH 499 (s) Directed Study
Credit arranged.

ARCH 500 Master's Research and Thesis
Credit arranged.

ARCH 501 (s) Seminar
Credit arranged.

ARCH 502 (s) Directed Study
Credit arranged.

ARCH 503 (s) Workshop
Credit arranged.

ARCH 504 (s) Special Topics
Credit arranged.

ARCH 505 Architectural Research Methods
3 credits
Quantitative and qualitative research designs, procedures, instruments, and techniques for use in architectural research, programming and design.
Prereq: Grad standing in M.Arch./M.A. program.

ARCH 510 Graduate Project Seminar
3 credits
Specialized research and program writing in preparation for ARCH 556 as well as schematic design proposals.
Prereq or Coreq: ARCH 553.

ARCH 511 Native American Architecture
3 credits
Joint-listed with ARCH 411, Cross-listed with AIST 411
An exploration of Native American architecture in North America, including ancient, historic, and contemporary buildings and settlements within their diverse social, cultural, and physical contexts. Additional assignments required for graduate credit. (Spring only)

ARCH 512 Identity and Place in Global Space
3 credits
A seminar focused on contemporary issues related to architecture in an increasingly globalized world. Themes, theories, and issues may include symbolic architecture and identity, colonization/postcolonialism/neocolonialism, modernity and tradition, space and power, themed spaces/simulacra, ethnoburbs and globurbs, and transnational planning processes. Recommended Preparation: ARCH 386.

ARCH 516 Social Sustainability in Contemporary Cities
3 credits
Joint-listed with ARCH 411, Cross-listed with AIST 411
An exploration of Native American architecture in North America, including ancient, historic, and contemporary buildings and settlements within their diverse social, cultural, and physical contexts. Additional assignments required for graduate credit. (Spring only)
ARCH 517 Graduate Instructional Assistant
1-3 credits, max 6
Assist instructors in delivering undergraduate courses including classroom and teaching technology set up, taking roll, and other administrative or logistical tasks. Assistants may also (at instructor direction) work with students on design studio critiques, discussions or other related activities. Graduate Instructional assistants may also contribute to the evaluation and grading process, but final grade is the responsibility of the instructor of record.
Prereq: Graduate standing in architecture program.

ARCH 520 Architectural Research Methods
3 credits
Philosophy of research in architecture, research design, data gathering and interpretation, and thesis preparation.

ARCH 521 China Program Preparation Seminar
2 credits
Joint-listed with ARCH 421
Seminar course preparing students for summer study abroad program in China. This course will introduce travelling, money management, safety, visa application, and some basic cultural introductions. Also, this class will introduce the academic courses to be undertaken in China and prepare research data collection. Required for all students enrolled in the China program. Cooperative: open to WSU degree-seeking students. (Spring only)
Prereq: ARCH 353 or LARC 353.

ARCH 522 China's Urbanization Seminar
2 credits
Joint-listed with ARCH 422
Seminar course conducted in China, focusing on understanding the complicated challenges of China's urbanization and design strategies for urban development.
Prereq: ARCH 354 or LARC 365.

ARCH 523 Cultural & Ethical Issues in Global Architectural Practice
2 credits
Joint-listed with ARCH 423
Study of the phenomenon of architectural practice under the impact of globalization using the market of China as an example. Focus on the development of model architectural practice in China as well as the associated social and cultural issues of global architectural practice.
Prereq: ARCH 354 or LARC 365.

ARCH 532 Advanced Analog Graphics
3 credits
Joint-listed with ARCH 432
Advanced sketchbook and large-format drawing development focused on the built environment. Analog (i.e. physical) media, including graphite, Ink and watercolor. Additional projects/assignments required for graduate credit.
Prereq: ARCH 154 and ARCH 254; or Permission.

ARCH 552 Alternate Graduate Design Experience
6 credits
Independent exploration of specific issues in architecture and/or urban design, including off-site, national or international education or professional experiences, for qualified students. An application, including independent study plans and credits must be approved by the Department during the semester before the proposed study. May be substituted for ARCH 554.
Prereq: B.S. Architecture.

ARCH 553 Integrated Architectural Design
6 credits
Integrative design of an architectural project including all phases of the design process with particular emphasis on schematic design and design development. Demonstration of ability to develop spatial details and construction systems concepts in support of design goals. Three 3-hr studios per week and assigned work; field trips reqd at student expense outside of scheduled hours; some class critique sessions will meet outside of scheduled hours.
Coreq: ARCH 568.

ARCH 554 Architectural Design: Vertical Studio
6 credits, max 12
Joint-listed with ARCH 454
Architectural and/or urban design projects are developed to explore and integrate urban theory sustainable design, construction & environmental control systems technology, experimental design approaches, human and cultural factors, and construction assemblies. Design projects completed individually or in team/collaborative settings encouraged. Three 3-hr studios per week and assigned work. Field trips at student expense are required and meet outside scheduled hours; some class critique sessions meet outside of scheduled hours. Additional projects/assignments required for graduate credit.
Prereq: ARCH 353 and ARCH 354; or Permission.

ARCH 556 Graduate Project
6 credits
Graduate terminal project - a self-directed architectural design study with faculty consultation within a studio context. Students demonstrate their capacity to apply appropriate programming and research methods in pursuit of a focused design topic. The project culminates with a project book prepared by the student.
Prereq: ARCH 510, ARCH 553, and ARCH 554.

ARCH 558 Urban Design and Planning Studio
3 credits
Urban Design and Planning studio serves as a fundamental urban design studio, providing appropriate skills in design-led planning for students in the Urban Design Certificate program that are not in the professional MArch. or MLA programs. This class is place-based studio, emphasizing the understanding of urban design as a place-making process and product within the dynamic of change to the urban environment. Students do not need a background in design to participate in this studio. This course may meet with ARCH 554.

ARCH 568 Technical Integration in Design
3 credits
Strategies for integrating structure, enclosure, services, site and interior systems in the design and development of an architectural concept.
Prereq: ARCH 461, ARCH 463, ARCH 464, or equivalent.

ARCH 570 Natural Lighting
3 credits
Natural lighting seminar/workshop including hands-on experience with physical and digital modeling techniques. The course includes a term-long investigation of the nature of Palouse light, and a redesign problem of a real space on-campus or nearby, which will be measured, modeled, redesigned, predicted, redesigned, and evaluated.

ARCH 571 Building Performance Evaluation
3 credits
This case-study based course focuses on evaluation methods for occupied buildings. A full-range of physical measurement and user surveying techniques are presented and employed on local buildings.
ARCH 573 Daylight Design and Simulation  
3 credits  
This course teaches the fundamental principles for daylighting design in buildings through building tours, case studies, geometric approaches, as well as physical modeling and digital simulation methods. Students will understand implications of design decisions on visual comfort, thermal comfort and performance, energy efficiency and will have the skills to scientifically assess these factors during design stages.

ARCH 574 Building Performance Simulation for Integrated Design  
3 credit  
Cross-listed with ME 571  
This course focuses on design decisions that impact energy, thermal, visual and acoustic comfort with a strong emphasis on building simulation tools. This course provides students with the understanding of the nature of building thermal comfort, building envelope behavior, ventilation requirements, indoor air quality, passive cooling systems, energy conservation, and the importance of iterative building simulation in achieving high performance buildings.

ARCH 575 Professional Practice  
3 credits  
Joint-listed with ARCH 475  
Overview of professional standards and practices in the architecture and interior design professions. Including duties and responsibilities in practice (construction documents and contracts, code analysis, ethics, and professional organizations and alliances), project management, office administration, and comprehensive services; specification writing, unit costs, and building estimation. Additional assignments/projects required for graduate credit.

ARCH 580 British Green Architecture  
2 credits  
Preparation for students who will participate in the summer studies abroad program in London, including basic research on green building in the UK, helping plan the itinerary. All logistical preparations for studies abroad will be discussed and students are familiarized with both green approaches to design and British culture. Cooperative: open to WSU degree-seeking students. (Spring only)

ARCH 585 Urban Design Seminar  
3 credits  
On-line course, covering a broad view of Urban Design as an academic discipline and a field of practice in planning and design of the built environment.

ARCH 598 (s) Internship  
1-3 credits, max 6  
Work in an architectural office under the supervision of a licensed architect.  
Prereq: Permission.

ARCH 599 (s) Non-thesis Master's Research  
Credit arranged  
Research not directly related to a thesis or dissertation.  
Prereq: Permission.