Architecture (ARCH)
UH Manoa Catalog, 2012-13

All courses are restricted to declared architecture majors, unless otherwise specified.

ARCH 100 Introduction to the Built Environment (3) Exploration of human responses to place, climate, culture, communication, technology, and time, with emphasis on the impact of scientific knowledge and architectural design theory on history, culture, sociology, technology and built form. Open to non-majors. DS

ARCH 101 Basic Architecture Studio (4) Hands-on exploration of materials and construction techniques and introduction to architectural design processes. Investigation of architecture as creation of space generated by human needs and aspirations including analysis of exemplary precedents. A-F only. DA

ARCH 132 Design Communication (4) Exploration of critical judgment and means to conceptualize, develop, represent, and communicate architectonic form and space, including fundamentals of freehand drawing, mechanical drawing, physical model making, diagramming, and graphic techniques. A-F only. DA

ARCH 200 Professional Practice of Architecture (3) Investigation of disciplines that address contemporary transformative issues. Emphasis on the role of architecture and the use of multidisciplinary and collaborative methods to address critical issues. Open to non-majors. A-F only. Pre: 100.

ARCH 201 Architecture Studio (4) Development of designs and processes to explore solutions responding to human needs in the built and natural environment with emphasis on analysis and representation architectonic space and form using hand and computer techniques. A-F only. Pre: 132 and either ART 113 or ART 116. DA

ARCH 235 Computer Applications in Architecture (4) Exploration of digital design fundamentals and their application to architectural analysis, conceptualization, design process, and communication of design intent. Repeatable three times. Pre: 132, and ART 113 or ART 116.

ARCH 251 Introduction to Landscape Architecture (3) Principles and practice of landscape planning, design, and technology. Ecological, sociocultural, and natural science determinants of landscape form and pattern. Open to non-majors if space available.

ARCH 271 World Architecture and Urbanism A (3) Investigation of the history and theory of architecture in the world's major cultural regions, from early agricultural settlements to 1500 C.E. Investigation of architecture in relationship to social, political, technological, and material forces. Open to non-majors. Pre: HIST 151. DH

ARCH 272 World Architecture and Urbanism B (3) Investigation of the history and theory of architecture from the 15th century C.E. to the present. Investigation of architecture in
relationship to social, political, technological, and material forces. Open to non-majors. Pre: HIST 151 and HIST 152. DH

ARCH 320 Introduction to Architectural Systems A (3) Introduction to building systems, including structural, environmental, life-safety, building envelope, building materials and building assemblies. Development of design skills with emphasis on elevating skills in assessing and selecting appropriate building systems. A-F only. Pre: MATH 140.

ARCH 321 Introduction to Architectural Systems B (3) Investigation of buildings as related to social and natural systems. Study of water, plumbing, energy generation, renewable energy, lighting, acoustics, vertical transportation, fire safety, and introduction to heating, ventilation, and air conditioning. ARCH majors only. A-F only. Pre: 320 and PHYS 151/151L.

ARCH 322 Sustainable Systems (3) Qualitative and quantitative investigation of HVAC systems and sustainable building design with emphasis on high-performance building design and operation, innovative mechanical and energy systems, integrated energy and resource conservation and renewable energy systems. ARCH majors only. A-F only. Pre: 321.

ARCH 341 Intermediate Architecture Studio A (4) Architectural design with emphasis on space planning, building materials, technology, climatic responses, and codes including complex functional requirements, multi-story design issues, vertical transportation, structure, and finishes. Production of complete schematic design documents. A-F only. Pre: 201, 235, and 320.


ARCH 350 Introduction to Planning (3) Perspectives on planning; planning tools and methods; specific Hawai'i planning/research problems from a multidisciplinary approach. Pre: consent. DS

ARCH 351 Introduction to Urban Design (3) Principles and practice of urban design within the comprehensive planning process. Sociocultural, economic, political, environmental determinants of urban form and pattern. Open to non-majors if space available. DS

ARCH 352 Landscape Architecture History, Theory, and Practice (3) Surveying the development of landscape architecture as an art form from Mesopotamia to present. Exploring the theory, profession and art of landscape architecture in the world by physical, social, economic, political, and cultural environmental factors. (Alt. years)(Cross-listed as TPSS 352) DH

ARCH 353 Landscape Graphics Studio (3) Basic skills of landscape graphic communication through a creative process model. Learning free hand and technical drafting techniques to creative effective landscape graphics. Pre: consent. (Alt. years) (Cross-listed as TPSS 353) DA
ARCH 354 Tropical Landscape Planting Design Studio (3) Students will develop basic skills of residential landscape graphic and design processes in order to clearly articulate the ability to think, analyze, and extend a physical solution in the proper scale. Repeatable one time. A-F only. (Alt. years)(Cross-listed as TPSS 354) DA

ARCH 371 Design Theory (3) Examination of theories, movements, and periods in architectural history focusing on contemporary issues. Introduction to analytic techniques for achieving understanding of formal and spatial ordering of architectural and site constructs. ARCH majors only. A-F only. Pre: 271 and 272.

ARCH 372 Special Topics in Architectural History and Theory (3) An examination of specific theories, movements, or periods of architectural history. Changing topics to be taught by both regular and visiting faculty. Repeatable three times. Pre: 271 and 272. DH

ARCH 399 Directed Work (V) Pre: consent.

ARCH 400 Project Management (3) Exploration of the management of architectural services from project initiation through project completion. Investigation of project delivery options; management of project design teams, project operations and services; design parameter definition; design service documentation; and project execution. A-F only. Pre: 200.

ARCH 405 Selected Design Studio (3) Special architecture/interior architecture problems individually selected by students or faculty to sharpen design skills. Repeatable one time.

ARCH 406 Office Research Practicum (3) Learn design research method[s]. Conduct architectural design research under the guidance of a practicing architect in an office setting in an area of the architect's expertise and interest. The experience also exposes students to the professional practice of architecture via shadowing an architect mentor relative to typical design process activities, communication techniques, and professional ethics issues. A-F only. Pre: 200.

ARCH 415 Concentration Architecture Studio (6) Professional experience combined with scholarly and research activity occurring in an off-campus location with a focus on architectural concentration areas. ARCH majors only. A-F only. Pre: 322, 342, and 371. DP

ARCH 432 Construction Management (3) Design professional's role during the building procurement process, particular emphasis on documentation and construction phases. Analysis of value of professional construction management services.

ARCH 433 Professional Practice Law and Ethics (3) Exploration of the practice of architecture including: professionalism; office organization and administration; public, client, consultant, and other contractor relations; project administration, procedure and compensation; construction law and contract administration. A-F only. Pre: 200.

ARCH 434 Digital Design Synthesis (3) Investigation of processes for generating architectonic form using current digital technologies. Making advanced geometric models including
investigation of morphological transformations. Study of design optimization, digital fabrication, information modeling, and generative algorithms. ARCH majors only. A-F only. Pre: 235.

ARCH 435 Architectural Economics (3) Survey of fundamental business principles and economic theories as they relate to professional practice for design professionals. DS

ARCH 442 Introduction to Urban Design (3) Principles and practice of urban design within the comprehensive planning process. Sociocultural, economic, political, environmental determinants of urban form and pattern. Open to non-majors if space available. A-F only. DS

ARCH 451 Landscape Architecture Design Seminar (3) Principles and practice of landscape architecture within the comprehensive design processes of the built environment. Focus on context-specific sociocultural, economic, political, environmental determinants of landscape forms and patterns. Open to non-majors if space available. A-F only.

ARCH 461 Introduction to Interior Architecture (3) Introduction and orientation to the field. Fundamental design principles and elements as applied to interiors. Basic materials and methods of interior construction; basic professional and business practices. Critical analysis of an existing interior space. Open to nonmajors if space available. Repeatable three times. DA

ARCH 471 Historic Architecture Design Seminar (3) Introduction to historic preservation. Exploration of design principles and elements as applied to conservation of historic resources, including basic conservation materials and methods, professional practices, and critical analysis of existing methodologies. Open to non-majors if space available. A-F only.

ARCH 472 Documentation of Historic Architecture (V) Study and documentation of existing buildings, structures, and sites of historic and/or cultural significance, including field measurements and drawings, historical research, photo documentation, and preparation of archival drawings to be deposited in the Library of Congress. Documentation conducted according to standards of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER). Repeatable three times. Pre: consent. (Cross-listed as AMST 475)

ARCH 473 History of American Architecture (3) History of American architecture in terms of style, techniques, and symbolic meaning. (Cross-listed as AMST 423) DH

ARCH 474 Preservation: Hawai‘i, Asia, and the Pacific (3) Lectures and discussions on historic preservation issues in Hawai‘i, Asia, and the Pacific. Emphasis on indigenous and national expressions. Pre: junior standing or consent. (Cross-listed as AMST 474) DH

ARCH 477 Research Seminar (V) Research methodology for the qualitative development of an optimum environment. Repeatable three times. Pre: consent.

ARCH 490 Special Topics (3) Selected topics in any aspect of architecture. Content to be announced. Repeatable three times.
ARCH 491 Special Topics in Architecture History (3) Specialized work on the history and theory of architecture. Repeatable unlimited times. ARCH majors only. A-F only.

ARCH 492 Special Topics in Architectural Technology (3) Specialized investigation of technological developments in structural systems, environmental control systems, or materials and methods of construction. Repeatable unlimited times. ARCH majors only. A-F only.

ARCH 493 Special Topics in Architecture and Design (3) Work on specialized topics in the fields of architecture and design. May include research and/or studio experiences in architecture, interior architecture, computer-aided design, professional practice, advanced visual design, and architectural graphics. Repeatable unlimited times. ARCH majors only. A-F only.

ARCH 495 (Alpha) Foreign Exchange (3) Various coursework including design, history, theory, technology, and sustainability offered for international exchange students. (E) elective; (L) laboratory; (P) project; (S) seminar. A-F only. Pre: departmental approval.

ARCH 515 Asia-Pacific Architectural History and Theory (3) Study of the history and theory of culture and the built environment with particular focus on the Asia-Pacific region. ARCH majors only. A-F only. Pre: 371 and 415.

ARCH 516 Architecture and Urban Design Theory (3) Detailed investigation of major theories in architecture and urban design and examination of their impact on contemporary architectural practice in varied geo-political contexts. Open to non-majors. A-F only. Pre: 415 and 515.

ARCH 522 Architecture Systems I: Introduction to Systems (3) Study of building materials, assemblies, and integrated design including structural, environmental, life-safety, and building envelope systems. Development of ability to design, analyze and assess appropriate systems. ARCH majors only. A-F only. Pre: departmental approval.

ARCH 523 Architecture Systems II: Wood and Steel (3) Properties, evolution, and range of wood and steel and their use in structural systems and the ability to assess, select design, and integrate structural systems into building design. ARCH majors only. A-F only. Pre: 322 and 415.

ARCH 524 Architecture Systems III: Concrete and Masonry (3) Properties, evolution, and range of masonry, concrete and advanced composites and their use in structural systems and the ability to assess, select design, and integrate structural systems into building design. ARCH majors only. A-F only. Pre: 523.

ARCH 525 Architecture Systems IV: Sustainability (3) Qualitative and quantitative investigation of sustainable building systems with emphasis on integrated high-performance building design and operation, innovative mechanical systems, resource conservation, and renewable energy systems. ARCH majors only. A-F only. Pre: 523.
ARCH 526 Architecture Systems V: Integration (3) Properties, evolution, and range of building materials, assemblies, and systems and their applications in integrated high-performance building design with a focus on the role of detail and systems in the design process. ARCH majors only. A-F only. Pre: 515, 524, 525, and 542.

ARCH 531 Advanced Design Communication I (3) Exploration of digital technologies, their relationship to design, and their application to architectural analysis, conceptualization, design processes, communication, representation, and construction. ARCH majors only. A-F only. Pre: departmental approval.

ARCH 533 Advanced Design Communication II (3) An interdisciplinary investigation of design theory as connected to digital technology and its applications to current developments in practice and research within architecture and design. ARCH majors only. A-F only. Pre: 235 and 415.

ARCH 535 Architecture Doctorate Seminar (3) Assessment of both contemporary and future architectural education, research and practice, by examining existing and evolving consistencies and shared visions that cut across distinct architectural approaches and other disciplines. Conceptual skills in the production of architecture that links environmental concerns with advances in building construction, computational and informational technologies. It includes the study of collaboration in design and on the technologies and spaces that support it; the study of encoding design knowledge in material resolution. CR/NC only. Pre: consent.

ARCH 537 Advanced Design Communications III (3) Interdisciplinary investigation of design theory as connected to architectural presentation techniques, particularly oral and written, to current developments in architectural practice. A-F only.

ARCH 539 Research Methods Seminar (3) Comprehensive assessment of objectives and function of research in architecture. Lecture, seminar, independent work with emphasis on doctorate project topic and proposal development. ARCH majors only. A-F only. Pre: 515 and 541.

ARCH 540 Architecture Studio I: Intro to Design (6) Design theories and systematic analytic and synthetic methodologies applied to creation of building and site spaces responsive to environmental and human needs. Several individual projects. ARCH majors only. A-F only.

ARCH 541 Architecture Studio II (6) Design of a medium complexity building and site engaging social, cultural, codes, building systems, and sustainable design. Production of program and schematic design documents. Individual projects. ARCH majors only. A-F only. Pre: 415 and 433.

ARCH 542 Architecture Studio III (6) Design of complex, large scale building and site engaging social, cultural, code, sustainable systems, and acoustic issues. Production of schematic and design development documents. ARCH majors only. A-F only. Pre: 523, 533, and 541.
ARCH 543 Architecture Studio IV: Urban Design (6) Urban design focused on Asian cities investigating social, cultural, political, and technological factors; study of historical precedents, building/block typology, circulation, infrastructure, and context response. ARCH majors only. A-F only. Pre: 524 and 542.


ARCH 545 Advanced Practice (3) Comprehensive study of architectural practice investigating architect's response to global forces, including entrepreneurial practice, office organization, project delivery, compensation, and construction law. ARCH majors only. A-F only. Pre: 433, 524, 525, and 533.

ARCH 546 (Alpha) Doctorate Project I (V) Individual development of a doctorate project with an approved chair and doctorate project committee that advances architectural knowledge through analysis, research, scholarship, and design. (C) China; (G) global; (H) Hawai‘i. ARCH majors only. A-F only. Pre: 547T for (C); 547C for (G); 515, 516, 526, 539, 545 for (H).

ARCH 547 (Alpha) Professional Studio (V)(6 for T) Scholarly and research activity combined with professional experience occurring in an off-campus location. (B) business; (C) community design; (E) alternative; (G) global; (P) practicum; (T) China. Repeatable three times for (C), (E), and (P); repeatable one time for (B), (G), and (T). ARCH majors only. Graduate standing only for (G) and (T). A-F only. Pre: 543, 545, and 546 for (C), (E), and (P); 542 for (T); 543 for (B) and (G).

ARCH 548 (Alpha) Doctorate Project II (V) Individual development of a doctorate project with an approved committee that advances architectural knowledge through research, scholarship, design, and engages theoretical and architectonic propositions. (C) China; (G) global; (H) Hawai‘i. ARCH majors only. A-F only. Pre: 546G for (C); 548C for (G); 547C, 547P, or 547E for (H).

ARCH 550 (Alpha) Architecture Studio (6) Urban design focused on investigating social, cultural, political, and technological factors; study of historical precedents, building/block typology, circulation, infrastructure, and context response. (C) China; (G) Global. A-F only. ARCH global Track only. Graduate standing only. Pre: 547B or 547G for (C); 550C for (G).

ARCH 551 Architecture Topics (1) Range of topics allowing acquisition of knowledge and ability needed for professional architectural practice offered online. Repeatable two times. ARCH majors only. A-F only. Pre: 415.

ARCH 554 Professional Studio Topics (3) Varied topics furthering knowledge and ability needed for professional design practice emphasizing communication methods for collaborative and integrated design using digital technologies. ARCH majors only. A-F only. Pre: 544.
ARCH 555 Advanced Global Practice (3) Comprehensive study of architectural practice investigating architect's response to global forces, including entrepreneurial practice, office organization, project delivery, compensation, and construction law. A-F only. Pre: 545.

ARCH 569 Study Abroad: Architectural Study Tour (V) Firsthand examination of the architecture of various countries, with emphasis on experiencing and comprehending significant spaces within historical, cultural, and physical contexts. Topics and countries visited change with each offering. Open to nonmajors. Repeatable two times.

ARCH 571 Architecture History (3) Investigation of architectural history and theory in the world from antiquity to present. Examining social, political, technological, material, and environmental forces. ARCH majors only. A-F only.

ARCH 577 History of Hawaiian Architecture (3) Investigation of social, cultural, political, climactic, and technological factors influencing the historical development of architecture in Hawai'i. ARCH majors only. A-F only.

ARCH 588 Doctorate Project II Extension (3) Extension of the development of a doctorate project with an approved committee that advances architectural knowledge through research, scholarship, design, and engages theoretical and architectonic propositions. Repeatable two times. ARCH majors only. CR/NC only. Pre: 548.

ARCH 591 Digital Design and Fabrication (3) Theoretical and design investigations into fabrication and construction techniques using computer aided design and manufacturing technologies. ARCH majors only. A-F only. Pre: 533.

ARCH 595 Building and Landscape: Theory and Practice (3) Research into landscape, landscape architecture, and architecture from historical, historiographic, and theoretical perspectives. ARCH majors only. A-F only.

ARCH 628 Preservation: Theory and Practice (3) History and philosophy of historic preservation movement. Analysis of values and assumptions, methodologies and tactics, implications for society and public policy. (Cross-listed as AMST 675 and PLAN 675)

ARCH 650 Vernacular Architecture (3) Methods and approaches in the study of vernacular architecture, cultural landscapes and material culture, with an emphasis on traditions and innovations in the Americas. (Cross-listed as AMST 681)

ARCH 679 Elements of Style (3) The manifestations, visual characteristics, and social/cultural meaning of "style" in American architecture and decorative arts from the early settlement period through the present. (Cross-listed as AMST 679)

ARCH 690 Special Topics Seminar (3) Seminar on a wide range of architectural topics to be directed by both visiting and regular faculty. Repeatable. Pre: consent.
ARCH 691 Special Topics: Architecture History/Theory (3) Specialized work at an advanced level on the history and theory of architecture. Repeatable unlimited times.

ARCH 692 Special Topics in Architectural Technology (3) Specialized investigation at an advanced level of technological developments in structural systems, environmental control systems, or materials and methods of construction. Repeatable unlimited times.

ARCH 693 Special Topics in Architecture and Design (3) Intensive work on specialized topics in the fields of architecture and design. May include research and/or studio experiences in architecture, interior architecture, computer-aided design, professional practice, advanced visual design, and architectural graphics. Repeatable unlimited times.

ARCH 699 Directed Work (V) Repeatable unlimited times.