

# Architecture (ARCH)

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**ARCH 194. Individual Study. 1-3 Credits.**

**ARCH 196. Field Experience. 1-15 Credits.**

**ARCH 199. Special Topics. 1-5 Credits.**

**ARCH 231. Creativity and Communication. 3 Credits.**

Introductory course that covers the key aspects of the creative problem-solving process as applied in the design of buildings, the landscape, and communities, with an introduction to design visualization and visual thinking, information management, design methods, design process management, studio culture, and professional communication. Prereq: Admission into the second year of the Architecture program.

**ARCH 232. Design Technology. 3 Credits.**

Introductory exploration of digital design media and environmental technology in architecture and landscape architecture. Prereq or Co-req: ARCH 271 or LA 271.

**ARCH 233. Math for Designers. 1 Credit.**

Elementary investigations and applied learning activities focused on mathematical influences on architecture through history, proportioning, geometric modeling, trigonometric identities, fractals, algorithms, and parametric modeling. Prereq: Admission into the second year of the Architecture or Landscape Architecture program.

**ARCH 271. Architectural Design I. 6 Credits.**

Studio course focused on beginning exercises in basic design, incorporating abstract two-dimensional design, functional response to environmental determinants, the articulation of form, spatial organization, and aesthetic judgment. Prereq: . Admission into second year of program.

**ARCH 272. Architectural Design II. 6 Credits.**

Studio course focused on exercises in basic design incorporating abstract two-dimensional design, functional response to environmental determinants, the articulation of form, spatial organization, and aesthetic judgment. Prereq: ARCH 271.

**ARCH 291. Seminar. 1-3 Credits.**

**ARCH 292. Global Practicum: Study Abroad. 1-15 Credits.**

Pre-Arranged study at accredited foreign institutions (study abroad), domestic institutions (National Student Exchange) or on approved study abroad programs. Pre-requisite: Sophomore standing and prior approval by International Student and Study Abroad Services and major department. Graded 'P' or 'F' (Undergraduate), or 'S' or 'U' (Graduate).

**ARCH 294. Individual Study. 1-5 Credits.**

**ARCH 296. Field Experience. 1-15 Credits.**

**ARCH 299. Special Topics. 1-5 Credits.**

**ARCH 321. History and Theory of Architecture I. 3 Credits.**

History and theory of architecture from ancient times through the Renaissance with attention placed on the design connections across cultures and across the globe. Lecture course.

**ARCH 322. History and Theory of Architecture II. 3 Credits.**

History of architecture from the Baroque to the mid-range of modernism, placed within a global perspective. Lecture course.

**ARCH 323. History and Theory of Architecture III. 3 Credits.**

History and theory of architecture from the mid-range of modernism to the contemporary, exploring different movements, methods, and ideas, including global and vernacular influences. Prereq: Admission into the second year of the Architecture or Landscape Architecture program.

**ARCH 341. Site Design for Architects. 3 Credits.**

Intermediate investigations and applied learning activities directed towards understanding building site inventory, analysis, and appropriate design responses. Prereq: ARCH 272.

**ARCH 344. Architectural Structures I. 3 Credits.**

Overview of the principles of statics and mechanics of materials and structural concepts relative to building members and frames. Prereq: ARCH 271 and admission to the professional program.

**ARCH 351. Materials & Construction. 3 Credits.**

Study of building materials from source through manufacture, focusing on their contribution to design and the study of the assembly processes of construction. Lecture course. Prereq: ARCH 272.

**ARCH 371. Architectural Design III. 6 Credits.**

Studio courses providing intermediate level exercises in architectural design; responding to contextual, cultural, environmental, climatic, technological, and aesthetic determinants. Prereq: ARCH 272.

**ARCH 372. Architectural Design IV. 6 Credits.**

Studio course continuing intermediate level exercises in architectural design: responding to contextual, cultural, environmental, climatic, technological, and aesthetic determinants. Prereq: ARCH 371.

**ARCH 379. Global Seminar. 1-6 Credits.**

NDSU instructed experience or field study in a foreign country. Conducted in English for residence credit. Pre-requisite: Prior approval by International Student and Study Abroad Services and major department. May be repeated. Standard Grading.

**ARCH 391. Seminar. 1-3 Credits.**

**ARCH 392. Global Practicum: Study Abroad. 1-15 Credits.**

Pre-Arranged study at accredited foreign institutions (study abroad), domestic institutions (National Student Exchange) or on approved study abroad programs. Pre-requisite: Sophomore standing and prior approval by International Student and Study Abroad Services and major department. Graded 'P' or 'F' (Undergraduate), or 'S' or 'U' (Graduate).

**ARCH 394. Individual Study. 1-5 Credits.**

**ARCH 397. Fe/Coop Ed/Internship. 1-4 Credits.**

**ARCH 399. Special Topics. 1-5 Credits.**

**ARCH 443. Architectural Structures II. 3 Credits.**

Overview of the principles of statics and mechanics of materials and structural concepts relative to building members and frames. Prereq: ARCH 344, ARCH 372.

**ARCH 450. Architectural Detailing. 3 Credits.**

Study of wood, steel, masonry, and concrete construction assemblies through architectural detailing, with an introduction to specifications and construction documents. Prereq: ARCH 371.

**ARCH 453. Environmental Control Systems: Passive Principles. 3 Credits.**

Study of architectural design related to thermal comfort, climate, passive solar systems, daylighting, acoustics, and other environmental concerns. Prereq: ARCH 272.

**ARCH 454. Environmental Control System: Active System. 3 Credits.**

Study of the basic fundamentals of illumination and basic power generation, distribution and service; heating, ventilation, and air-conditioning systems; plumbing systems; and acoustics as they relate to building design. Prereq: ARCH 371, 453.

**ARCH 461. Urban Design. 3 Credits.**

Study of urban form and urban theory, development, and processes in a historic and contemporary context. Prereq: ARCH 371 or LA 371.

**ARCH 471. Architectural Design V. 6 Credits.**

Studio courses involving the complex organization of architectural spaces and forms in an urban context. Prereq: ARCH 372.

**ARCH 472. Architectural Design VI. 6 Credits.**

Studio courses involving the complex organization of architectural spaces and forms in an urban context. Prereq: ARCH 471.

**ARCH 474. International Design Studio. 6 Credits.**

Comprehensive design studio experience in advanced architectural studies to be conducted in culturally diverse, international locations. Prereq: ARCH 471.

**ARCH 491. Seminar. 1-5 Credits.**

**ARCH 492. Global Practicum: Study Abroad. 1-15 Credits.**

Pre-Arranged study at accredited foreign institutions (study abroad), domestic institutions (National Student Exchange) or on approved study abroad programs. Pre-requisite: Sophomore standing and prior approval by International Student and Study Abroad Services and major department. Graded 'P' or 'F' (Undergraduate), or 'S' or 'U' (Graduate).

**ARCH 493. Undergraduate Research. 1-5 Credits.**

**ARCH 494. Individual Study. 1-5 Credits.**

**ARCH 496. Field Experience. 1-15 Credits.**

**ARCH 497. FE/Coop Ed/Internship. 1-4 Credits.**

**ARCH 499. Special Topics. 1-5 Credits.**

**ARCH 721. Non-Western Architectural Traditions. 3 Credits.**

Advanced course on the investigation of design methods and building traditions of non-Western cultures and diverse geographic regions. May be repeated.

**ARCH 722. Urbanism. 3 Credits.**

Advanced course to explore in-depth aspects of urban design. May be repeated.

**ARCH 723. Historic Preservation. 3 Credits.**

Advanced course to explore the philosophy and techniques of preserving historic buildings. May be repeated.

**ARCH 724. Architectural Technology. 3 Credits.**

Advanced course to explore the historical and theoretical underpinnings of architectural technology. May be repeated.

**ARCH 725. Architecture or the Recent Past. 3 Credits.**

Advanced course to explore the major architectural movements and personalities since the mid-20th century. May be repeated.

**ARCH 726. Current Architectural Theory. 3 Credits.**

Advanced course focused on current issues and the work and design theory of leading architectural practitioners around the world. May be repeated.

**ARCH 727. Vernacular Architectural Traditions. 3 Credits.**

Advanced course to explore vernacular architectural traditions in North America and elsewhere. May be repeated.

**ARCH 728. Sociocultural Issues. 3 Credits.**

Advanced course focused on the social issues and movements that have influenced environmental design. May be repeated.

**ARCH 763. Thesis Research. 3 Credits.**

An introduction to research methodologies and the research required to complete a design thesis in a first professional degree program in Architecture at the graduate level. Completion of a Thesis Proposal and a Thesis Research document in preparation for the Design Thesis Studio to follow. Prereq: ARCH 472.

**ARCH 771. Advanced Architectural Design. 6 Credits.**

Advanced studio course addressing complex design problems requiring increased self-direction.

**ARCH 772. Design Thesis. 8 Credits.**

Advanced studio course devoted to the execution of a comprehensive design thesis project, from schematic design through design development, presentation, and review. Prereq: ARCH 663, ARCH 771.

**ARCH 781. Professional Practice. 3 Credits.**

Study of contemporary architectural practice covering professional development, firm organization, and project management within the context of the ethical, legal, and regulatory environment. Cross-listed with LA 581.

**ARCH 789. Professional Topics in Architecture. 3 Credits.**

Various topics related to theoretical or methodological aspects of architecture as a professional discipline. May be repeated.

**ARCH 790. Graduate Seminar. 1-3 Credits.****ARCH 793. Individual Study. 1-5 Credits.****ARCH 795. Field Experience. 1-10 Credits.**