The American School of Architecture
A Curriculum for the 21ˢᵗ Century

The curriculum of the Division of Architecture at the University of Oklahoma grows out of our American School History, which emerged in the middle of the twentieth century, under the leadership of architects Bruce Goff, Herb Greene, and a talented roster of faculty. Together this group developed a design curriculum that emphasized individual creativity and experimentation. They modelled a radical empathy, which taught students to trust their own creative instincts, while paying close attention to their clients' desires and the natural context. The work of American School architects is grounded in a respect for context, a material resourcefulness and a commitment to experimentation and innovative problem solving.

Today, we continue to embrace the spirit of the American School. We aim to educate students to be resourceful—always considering how to make the most with the least impact on the natural environment. Experimentation is advanced today through a research orientation in our curriculum, which instills in students an aspiration to innovate and produce new knowledge. Contextualism, defined as a deeply felt respect for specific contexts, climates, cultures, and people, remains a central tenet of our ethos. Finally, like the Renegades of the American School, we do not seek to produce disciples; we aspire to help each student develop their own talents as individuals in an environment which cultivates confidence and creativity.

Purpose Statement:

The American School of Architecture cultivates designers known for balancing creativity and innovation with resourcefulness and pragmatism. Sensitive to the impacts of climate change, we draw lessons from Oklahoma's cultural context and natural landscape. Our research and creative practices inspire students and faculty to work together to envision a future where communities are healthy, resilient, and just.

DESIGN THINKING
Goal: To graduate students who are creative, collaborative, and resourceful problem solvers who draw on existing knowledge and contexts to imagine visionary solutions.

1 **Aim: Soft Skills.** Students will be able to use "soft skills" important to collaborative design and programming, such as empathy, awareness, listening and observation.
   1.1 **Bias Awareness.** Students will learn about implicit and explicit bias and practice situating their own identities and biases.

   1.2 **Collaboration.** Students will develop the self-awareness, communication skills and team work strategies necessarily for successful collaborations.

   1.3 **Listening and observation. In the spirit of American School contextualism,** students will be able to listen to and learn from diverse constituencies, community members and/or users and documenting their preferences and experiences as a means of informing their design processes.

1.4 **Design presentation.** Students will be able to present design proposals verbally and graphically, which are tailored for particular audience needs and preferences.

1.5 **Research to inform design.** Students will identify and use appropriate qualitative or quantitative methods to research historical, social, scientific, and geographic contexts and gather data to inform design decisions.

2 Aim: Students will demonstrate a core set of "hard skills" in representation and modeling.

2.1 **Architectural Drawing and Modelling.** Students will use basic drawing, drafting, and sketching techniques to convey design concepts and proposals. Students will be able to make architectural models using analog and digital tools.

2.2 **Digital Modelling.** Students will develop digital modeling skills as a means to design architectural projects and develop design options.

2.3 **Information Graphics.** Students will be able to create and use diagrams and infographics to convey ideas and information.

2.4 **Building Simulation.** Students will use advanced analytical tools such as simulation tools, calculators, parametric models, and energy modeling applications, to conduct research on and refine their designs.

2.5 **Tool evaluation.** Students will demonstrate an understanding of when to use different software applications, tools, and techniques

3 Aim: Students will be able to define architectural problems, develop conceptual solutions, and translate concepts into designs while integrating systems, regulatory requirements, and function.

3.1 **Design Problem Characterization.** Students will be able to define the key architectural problem and identify the relevant set of associated issues.

3.2 **Analogical Reasoning.** Students will be able to use analogical reasoning to understand structures, systems, relationships, and connections between phenomena.

3.3 **Design Concept.** Students will be able to develop clear architectural concepts and design intentions tailored to address the identified problem.

3.4 **Design Proposal.** Students will be able to develop design proposals that implement the concept in architectural and experiential terms. There will be a close match between problem, concept, and design proposal.

3.5 **Design Process.** Students will be able to employ an iterative process to define design problems, test concepts and proposals, and develop innovative solutions.

DESIGN CONTEXTS, ANALYSES, AND INTEGRATION

Goal: To graduate students with an awareness of how the decisions they make as designers impact society and the environment today and decades from now, as well as communities near and far.

4 **Aim: Technical Skills. Students will demonstrate a core set of domain-specific technical design skills.**

4.1 **Site Design.** Students will be able to develop site designs grounded in an understanding of natural and/or urban contexts that take into consideration ecosystems, topography, and water.

4.2 **Regulatory Context.** Students will be able to propose design solutions respectful of relevant codes, regulations, principles of life-safety and accessibility standards. Students will understand the process through which architects work to comply with such laws and regulations.

4.3 **Health, Safety, and Welfare in the Built Environment.** Students will understand the impact of the built environment on human health, safety, and welfare at multiple scales, from buildings to cities.

4.4 **Urban Design.** Students will be able to analyze urban environments in terms of physical form, typologies, use patterns, traffic, streetscape, and historical context.

4.5 **Universal Design.** Students will be able to explain the intentions of universal design and apply key accessibility design guidelines to the design of paths of travel, parking, and restroom design. Students will be able to recognize and explain how finish and fixture choices may impact accessibility.

4.6 **Design Synthesis.** Students will be able to make design decisions within architectural projects while demonstrating synthesis of user requirements, regulatory requirements, site conditions, and accessible design and, consideration of the measurable environmental impacts of their design decisions.

5 **Aim: Understanding Building Systems and Technology.** Students will demonstrate an understanding of established and emerging building systems, technologies, assemblies of building construction and how choices about these systems should be made in response to an understanding of particular users and contexts.

5.1 **Human Comfort, Thermodynamics.** Students will be able to explain the metrics of human comfort, and thermodynamics.

5.2 **Passive Design.** Students will be able to apply passive design strategies for environmental control and explain how they differ from place to place according to geography, climate, available materials, and culture.

5.3 **Building Systems.** Students will be able to explain basic mechanical, plumbing, fire protection, conveyance, and electrical systems, the ways in which they are integrated into building design and construction, and the ways in which they are communicated and represented.

5.4 **Building Envelopes.** Students will be able to identify the key components, metrics, and design of building envelopes and wall assemblies.

5.5 **Life-cycle cost analysis.** Students will understand how life-cycle costs are calculated and the influence they can have on the design process.

5.6 **Structural Systems.** Students will apply structural systems design principles for gravity and lateral loads during the design process and select systems.

6 **Aim: Performance Analytics and Systems Integration.** Students will be able to evaluate design decisions using building performance analytics and building simulations. Students will be able to apply knowledge gained from such analysis to the systems integration in their designs.

6.1 **Building Performance Analysis.** Students will be able to use building performance analysis tools to inform design decisions.

6.2 **Material and Systems Research.** Students will be able to research materials and building systems with regards to cost, lifespan, lifecycle cost, waste, production and transportation costs, embodied energy and an ethic of resourcefulness.

6.3 **Structural Design.** Students will be able to apply their understanding of gravity and lateral loads to do basic calculations and design for structural systems.

6.4 **Systems and Technology Evaluation and Integration.** Students will be able to research, analyze and evaluate established and emerging systems, technologies, and assemblies of building construction and assess those technologies against the design, economic and performance objectives of projects.

6.5 **Building Integration.** Students will be able to make design decisions within architectural projects while demonstrating integration of building envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and the measurable outcomes of building performance.

HISTORY, THEORY, AND RESEARCH

Goal: To graduate students who are able to critically evaluate information, sources and research, and have a broad understanding of global architectural history and theory.

7   **Aim: Students will understand how to access and evaluate research, and the relationship between sources and historical narratives.**

   7.1 **Finding Sources.** Students will be able to find research through the library including key indexes such as JSTOR and the Avery Index.

   7.2 **Classify Sources.** Students will be able to classify research resources as peer reviewed research, criticism, news, opinion/editorial and sources as primary, secondary and tertiary. Students will understand the various forms of evidence, peer review, and citations associated with each.

   7.3 **Recent Research.** Students will understand that research resources are constantly evolving and thus there is a need to regularly update library search practices and re-evaluate sources.

   7.4 **Basic Research Methods.** Students will comprehend what research is, the various processes of creating new knowledge, and how different types of research can inform the design process.

   7.5 **Design Research Methods.** Students will be able to use the design process as a means to create new knowledge and innovate.

8   **Aim: Students will develop media literacy and be able to analyze and evaluate information.**

   8.1 **Understanding Peer review.** Students will be able to explain the peer review process and describe why it matters.

   8.2 **Evaluating Evidence.** Students will be able to analyze and evaluate different types of evidence, narratives, and motivations, and distinguish reliable sources from less reliable or unreliable sources.

   8.3 **Evaluating Arguments.** Students will be able to evaluate the strengths and weaknesses of evidence-based arguments, by analyzing sources, motivations, and research methods.

9   **Students will be able to explain that historical narratives are not fixed and the ways in which history is documented and preserved reflects power, privilege, and cultural bias.**

9.1 **History reflects privilege.** Students will be able to explain how histories reflect cultural values and priorities, which evolve over time.

9.2 **Historical narratives reflect available evidence.** Students will be able to explain that histories reflect available evidence at a given moment.

9.3 **Historical narratives reflect archival absences.** Students will understand how archival absences play into the historical narratives we construct; it can be difficult to tell the stories of those whose records are not preserved.

9.4 **Diverse perspectives on history.** Students will actively engage diverse perspectives on historical narratives and be able to compare and analyze these perspectives and narratives.

10 Aim: Students will be able to explain influential design principles, theories, and projects from global contexts.

10.1 **History and Theory in Context.** Students will be able to explain how urban and architectural projects and theories relate to culture, identities, and geographies.

10.2 **Comparative Analysis of Historical Projects.** Students will be able to compare and analyze urban and architectural projects, theories across time or space in regard to contexts, issues, and theories.

11 Aim: Students will be able to describe, analyze and express architectural concepts, analyses, and criticism through various mediums including writing, oral presentations, and multi-media presentations.

11.1 **Describing Architecture.** Students will be able to describe architecture in terms of form, scale, materials, circulation, experience, and personal relationship.

11.2 **Interpreting Architecture.** Students will be able to analyze and interpret architectural and urban forms relative to physical and cultural contexts, and theories.

11.3 **Communication tailored to audience.** Students will be able to adapt writing styles and voice to communicate to different audiences and in different media. Students will know how to find the right format and communication tools for the audience.

11.4 **Multi-media Representations.** Students will learn to create multi-media representations of knowledge.

11.5 **Architectural Criticism.** Students will learn to write architectural criticism based on an evaluation of the designer's intentions and cultural and physical contexts.

11.6 **Concept Statement.** Students will be able to write a clear, specific, and concise design concept statement.

12 Aim: Students will be able to describe and assess how new knowledge is created through research. (Graduate only)

    12.1   **Research Process.** Students will be able to articulate research questions, select appropriate research methods, connect them with types of evidence and develop evidence-based arguments.

    12.2   **Analyzing Research.** Students will be able to analyze the correlations between different types of research methods and different types of research questions, evidence, and outcomes.

    12.3   **Literature Reviews.** Students will be able to conduct literature reviews and identify gaps in existing knowledge.

APPROACH TO PRACTICE

Goal: To graduate students who understand how to develop an approach to practice reflective of their values and seek to expand the role of the architect in shaping the built environment to better serve communities in need.

13 Aim: Students will be able to explain how they aspire to position their work in society and how they aspire to practice.

    13.1   **Professional Practice.** Students will be able to explain professional ethics, the regulatory requirements, and the fundamental business processes relevant to architecture practice in the United States, and the forces influencing change in these subjects.

    13.2   **Self-Positioning.** Students will develop their own approach to design that reflects social and environmental awareness as well as their own values and aspirations.

    13.3   **Social Equity.** Students will be able to describe how policy and the built environment can affect individuals and groups of people over time.

    13.4   **Professionalism and business communication.** Students will be able to recognize expectations for professional conduct and apply that understanding to business communications.

14 Aim: To graduate students who are entrepreneurial and seek to expand the role of the architect in shaping the built environment to better serve communities in need. *(This is an aspirational aim that we do not currently have the faculty or capacity to achieve.)*

    14.1   Students will have the business and real estate knowledge and pro forma skills to actively engage in the planning and development of an equitable built environment.

14.2 Students will be able to explain how real estate and business development strategies may differ from place to place and within communities.

14.3 Students will be able to envision creative ways to implement design proposals by drawing on research and analysis in real estate economics, codes and regulations, and an understanding of local context and culture.