

# **CBU Architecture Program Student Learning Outcomes**

CBU Architecture graduates are expected to:

## **1. Employ Critical Thinking Skills.**

- 1.1 Students will raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards. (NAAB A.2.)

## **2. Demonstrate facility with the wider range of Communication Skills.**

- 2.1 Students will read, write, speak and listen effectively. (NAAB A.1.)
- 2.2 Students will use appropriate representational media, such as traditional graphic and digital technology skills, to convey essential formal elements at each stage of the programming and design process. (NAAB A.3.)
- 2.3 Students will make technically clear drawings, write outline specifications, and prepare models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design. (NAAB A.4.)

## **3. Research and Analyze multiple theoretical, social, political, economic, cultural and environmental contexts.**

- 3.1 Students will gather, assess, record, apply, and comparatively evaluate relevant information within architectural coursework and design processes. (NAAB A.5.)
- 3.2 Students will examine and comprehend the fundamental principles present in relevant precedents and make choices regarding the incorporation of such principles into architecture and urban design projects. (NAAB A.7.)
- 3.3 Students will demonstrate knowledge of parallel and divergent canons and traditions of architecture, landscape and urban design including examples of indigenous, vernacular, local, regional, national settings from the Eastern, Western, Northern, and Southern hemispheres in terms of their climatic, ecological, technological, socioeconomic, public health, and cultural factors. (NAAB A.9.)
- 3.4 Students will demonstrate knowledge of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the implication of this diversity on the societal roles and responsibilities of architects. (NAAB A.10)

- 3.5 Students will demonstrate the role of applied research in determining function, form, and systems and their impact on human conditions and behavior. (NAAB A.11.)

#### 4. Demonstrate overall Design sensibilities and Problem Solving skills.

- 4.1 Students will effectively use basic architectural and environmental principles in design. (NAAB A.6.)
- 4.2 Students will employ the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design. (NAAB A.8.)
- 4.3 Students will prepare a comprehensive program for an architectural project, such as preparing an assessment of client and user needs, an inventory of space and equipment requirements, an analysis of site conditions (including existing buildings), a review of the relevant laws and standards and assessment of their implications for the project, and a definition of site selection and design assessment criteria. (NAAB B.1.)
- 4.4 Students will respond to site characteristics such as soil, topography, vegetation, and watershed in the development of a project design. (NAAB B.4.)
- 4.5 Students will produce a comprehensive architectural project that demonstrates each student's capacity to make design decisions across scales while integrating SPCs A.2, A.4, A.5, A.8, A.9, B.2, B.3, B.4, B.5, B.8, B.9. (NAAB B.6.)

#### 5. Comprehend Building Technology, including the technical aspects of design, systems and materials, and be able to apply that comprehension to their services.

- 5.1 Students will design sites, facilities, and systems to provide independent and integrated use by individuals with physical (including mobility), sensory, and cognitive disabilities. (NAAB B.2.)
- 5.2 Students will design projects that optimize, conserve, or reuse natural and built resources, provide healthful environments for occupants/users, and reduce the environmental impacts of building construction and operations on future generations through means such as carbon-neutral design, bioclimatic design, and energy efficiency. (NAAB B.3.)
- 5.3 Students will apply the basic principles of life-safety systems with an emphasis on egress. (NAAB B.5.)
- 5.4 Students will apply the principles of environmental systems' design such as embodied energy, active and passive heating and cooling, indoor air quality, solar orientation, daylighting and artificial illumination, and acoustics; including the use of appropriate performance assessment tools. (NAAB B.8.)

- 5.5 Students will apply the basic principles of structural behavior in withstanding gravity and lateral forces and the evolution, range, and appropriate application of contemporary structural systems. (NAAB B.9.)
- 5.6 Students will apply the basic principles and appropriate application of building envelope systems and associated assemblies relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources. (NAAB B.10.)
- 5.7 Students will apply basic principles and appropriate application and performance of building service systems such as plumbing, electrical, vertical transportation, security, and fire protection systems. (NAAB B.11.)
- 5.8 Students will apply the basic principles of and select appropriate construction materials, products, components, and assemblies, based on their inherent characteristics and performance, including their environmental impact and reuse. (NAAB B.12.)

6. Appreciate the role of Professional Practice, including their role in the implementation of design decisions, and the impact of such decisions on the environment.

- 6.1 Students will demonstrate an understanding of the fundamentals of building costs, such as acquisition costs, project financing and funding, financial feasibility, operational costs, and construction estimating with an emphasis on life-cycle cost accounting. (NAAB B.7.)
- 6.2 Students will demonstrate an understanding of the responsibility of the architect to elicit, understand, and reconcile the needs of the client, owner, user groups, and the public and community domains. (NAAB C.3.)
- 6.3 Students will demonstrate an understanding of the methods for competing for commissions, selecting consultants and assembling teams, and recommending project delivery methods. (NAAB C.4.)
- 6.4 Students will demonstrate the basic principles of architectural practice management such as financial management and business planning, time management, risk management, mediation and arbitration, and recognizing trends that affect practice. (NAAB C.5.)
- 6.5 Students will demonstrate an understanding of the architect's responsibility to the public and the client as determined by registration law, building codes and regulations, professional service contracts, zoning and subdivision ordinances, environmental regulation, and historic preservation and accessibility laws. (NAAB C.7.)

7. Integrate their Christian worldview and their profession through service to their Community through learning to manage, advocate, and act legally, ethically and critically for the good of the client, society and the public. This includes collaboration, business, and leadership skills

- 7.1 Students will work in collaboration with others and in multi- disciplinary teams to successfully complete design projects. (NAAB C.1.)
- 7.2 Students will demonstrate an understanding of the relationship between human behavior, the natural environment and the design of the built environment. (NAAB C.2.)
- 7.3 Students will practice the techniques and skills architects use to work collaboratively in the building design and construction process and on environmental, social, and aesthetic issues in their communities. (NAAB C.6.)
- 7.4 Students will comprehend the ethical issues involved in the formation of professional judgment regarding social, political and cultural issues in architectural design and practice. (NAAB C.8.)
- 7.5 Students will understand the architect's responsibility to work in the public interest, to respect historic resources, and to improve the quality of life for local and global neighbors. (NAAB C.9.)