Miami Dade College

Course Description

ARC2304| Architectural Design 4 | 5.00 credits

A continuation of ARC 2303. Introduction to programming and design methods in architecture. Applications of building technology in the design process. Overview of computer applications in design. Prerequisite: ARC 2303; pre/corequisites: ARC2053, 2681. Laboratory fee.

Course Competencies

Competency 1: The student will Integrate programming and design methods to develop innovative architectural solutions, leveraging computational tools and techniques by:

1. Integrating insights from environmental science, architecture, and urban planning to analyze the symbiotic relationship between natural and built environments
2. Employing advanced research methods to synthesize diverse disciplines and understand the interplay of physiological, functional, and environmental factors
3. Collaborating to synthesize interdisciplinary knowledge and develop a comprehensive understanding of the intricate connections between natural and built environments

Competency 2: The student will apply building technology concepts to optimize the design process, integrating structural, material, and environmental considerations by:

1. Implementing innovative spatial and organizational design strategies to facilitate seamless integration of natural elements into built environments
2. Incorporating sustainable design practices and principles to achieve a harmonious balance
3. Experimenting with cutting-edge spatial and organizational design techniques to achieve a cohesive and environmentally sensitive integration of the natural and built environment

Competency 3: The student will evaluate the impact of environmental forces on architectural and urban design and propose innovative solutions that promote sustainability and human well-being by:

1. Assessing the influence of environmental forces on architectural and urban design
2. Investigating the ecological impact of environmental forces on architectural and urban design
3. Formulating forward-thinking design responses by analyzing the effects of environmental forces on architectural and urban contexts

Learning Outcomes:

- Solve problems using critical and creative thinking and scientific reasoning
- Demonstrate an appreciation for aesthetics and creative activities
- Describe how natural systems function and recognize the impact of humans on the environment