Architectural Design Technology Minor

Goal

Goal Description:

- The Interior Design Minor provides knowledge and proficiency for students to succeed in an architectural profession through conventional and applied academic learning environments.

Providing Department: Architectural Design Technology Minor

RELATED ITEMS/ELEMENTS -

RELATED ITEM LEVEL 1

Learning Objective

Learning Objective Description:

- The Interior and Architecture Design Minor (formerly the Interior Design Minor) Committee in the Department of Engineering Technology produces learning goals that span common architectural skills for students in Interior Design Minor. Using enrollment data and students' grades in Architectural Design class, the committee decides appropriate benchmark levels for students in this minor. The lecture-based coursework required through the minor offers the student the ability to study specialty topics, such as architectural design and construction drafting and further augmenting their comprehension of the industry.

RELATED ITEM LEVEL 2

Professional careers preparation

Indicator Description:

Student learning outcomes as well as career pathways-related topics are discussed annually as part of our Industry Advisory Board meeting. All board members are informed about the updates and involved in the process, including industry representatives, recent alumni, and faculty.

Criterion Description:

Developing of curricula and resources that reflect a command of the Interior Design field. This criterion focuses on a solution having the empirical and technological support necessary to be delivered and implemented successfully.

Findings Description:

- The Architecture Design Technology Minor (formerly the Interior Design Minor) Committee in the Department of Engineering Technology found the need for adding a new concentration called Architectural Design Technology to an existing program, Bachelor of Science (BSc) degree in Engineering Technology. Currently, the Department of Engineering Technology offers a BSc degree in Engineering Technology with two concentrations: Electronics and Safety management.

- Architectural Design Technology concentration will be a 4-year concentration which prepares individuals for careers in commercial and/or residential architectural fields. This concentration shall a method of presentation to graphically represent building plans, draw preliminary and detailed plans for foundations, buildings, and structures, and coordinate structural, electrical, and mechanical designs are among the most in-demand skills in the architectural fields. To meet this market demand, the proposed concentration prepares learners with the necessary skills for architectural design career options in residential and commercial design in the construction industry.

- Unlike an architecture degree, the proposed concentration consists of a minimum of 120 semester credit hours and focuses on the technical and functional elements of the building, including building codes, CAD, conceptual drawings and 3D models. In contrast, Bachelor of Architecture degrees consist of a minimum of 150 semester credit hours (for accreditation purposes) and focus on the art and science of the building such as flow, function, style, regulations, bylaws and overall design. The other relevant degree is Architectural Engineering (AE) that has a lot in common with the proposed concentration but focuses on the design and integration of all building systems, including the mechanical, lighting/electrical, and structural systems of a building. AE does not necessarily involve in the design process of buildings or urban landscapes like the study of Architectural Design Technology.

RELATED ITEM LEVEL 3

Professional careers preparation

Action Description:

To better meet the industry expectations and prepare future professional careers, Architecture Design Technology Committee in the Department of Engineering Technology collected data from the construction and engineering companies seeking a variety of architectural and civil related drafting services. While the U.S. Bureau of Labor Statistics (BLS) does not provide specific information for architectural technologists, the Bureau does state that increasing construction work will result in a demand for architectural and civil drafters, who perform similar work as architectural technologists. According to ZipRecruiter, the average annual pay for an Architectural Technologist in the United States is $102,493 a year as of Oct 27, 2021 and $92.170 in Texas. Texas ranks number 12 out of 50 states nationwide for Architectural Technologist salaries. Table 1 summarizes the BLS data on relevant occupations.

Table 1 – Occupational outlook – Bureau of Labor Statistics

Occupation	Entry-Level Education	2020 Median Pay	# of Jobs, 2020	Job Outlook (2020-30)
Architects	Bachelor's degree	$82,320	126,700	3% (slower than average)
Architectural and Civil Drafters	Associate's degree	$57,500	99,180	No projection
Construction Managers	Bachelor's degree	$97,180	448,000	11% (faster than average)
Drafters	Associate's degree	$57,960	191,800	-2% (decline)
Industrial Designers	Bachelor's degree	$71,640	31,500	6% (as fast as average)

Performance Objective

Performance Objective Description:

Architectural Design is a required course for all Interior Design minors. During the Fall and Spring semesters, the Interior and Architecture Design Minor committee records grades that communicate mastery or non-mastery skilled currently accepted in the Architecture, Engineering & Construction (A/E/C) industry.

KPI

KPI Description:

The indicator is reported as the percentage of Interior Design Minor students who met Satisfactory Academic Performance in Architectural Design class. Performance equivalent to a grade of C or better is recorded as Satisfactory. Please note that there were only six students with minor in Interior Design who registered for Architectural Design course in 2020-2021 (4 students in Fall, 1 in Spring, and 1 in Summer).

Average Grade = 2.83 (between C and B)

Results Description:

Although grades for only five students are not necessarily an indicator of students' performance, they can provide a quantifiable measure of performance over time for the minor. The recorded grades for the students with minor in Architecture Design Technology who registered for Architectural Design course in 2021-2022 are:

Student 1: A

Student 2: B

Student 3: C

Student 4: C

Student 5: B

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Average Grade = 2.80 (between C and B)

KPI

Action Description:

Continue the practice to consult with IAB members for feedback about the minor and propose a curriculum for a new BSc in Engineering Technology concentration.

Update to Previous Cycle's Plan for Continuous Improvement Item

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

Closing Summary

In order to seek continuous improvement, the interior design minor is expected to maintain an assessment plan and present an annual assessment report to the Industrial Advisory Board (IAB) of the program. The assessment plan reflects specific program goals, the enrollment data and students' grades in Architectural Design class. The IAB is comprised of architectural and construction professionals, regularly reviews the minor's objectives and curriculum, and keeps the program apprised of concerns within the wider professional community, thus helping the program to ensure a high degree of relevance.

Update of Progress to the Previous Cycle's PCI:

Comments from students participated in departmental exit surveys in the 2018-2021 academic years indicate that there are students in BSc in Construction Management (CM) with interest on practical and design-based architectural skills and students in BSc in Engineering Design Technology (ETDD) with interest in careers that support the built environment. Although courses are available in CM and ETDD to prepare students to pursue careers in civil drafting, interior design, and architecture design, currently, there is no academic program that provides a concentration in Architectural Design Technology within the Engineering Technology department.

New Plan for Continuous Improvement Item

Closing Summary:

The Architecture Design Technology Minor (formerly the Interior Design Minor) Committee in the Department of Engineering Technology realized the above mentioned need and decided to propose a new concentration to fill this gap through an emphasis on a professionally-oriented program that combines technical CM coursework with design courses and practical training.