2023-2024 Assessment Cycle

Architectural Design Technology Minor

Goal 1: Competitive in the architectural field

Goal Description:

Enhance students' professional readiness and competitiveness in the architectural field. Through a combination of hands-on projects and exposure to real-world challenges, students will gain practical experience and a deeper understanding of the architectural profession.

Providing Department: Architectural Design Technology Minor

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Learning Objective 2: Prepare students for successful careers in the architectural field

Learning Objective Description:

The Architectural Design Technology Minor aims to prepare students for successful careers in the architectural field by equipping them with practical design skills and the ability to develop comprehensive plans and specifications. Upon completion of the program, students will be able to apply building codes and standards to the creation of architectural designs, specifically through the development of detailed plans and specifications for residential projects.

RELATED ITEM LEVEL 2

Creation of Architectural Designs

Indicator Description:

Direct Measure: Building Codes and Standards

● Source of Data: Final grades based on assignments, exams, and group projects in the Engineering Graphics and Architectural Design classes.

● Data Gathering: The data is gathered by instructors through the University's LMS every semester (Fall, Spring, and Summer).

● Evaluation: Instructors evaluate the design projects, looking for evidence of technical skills and successful application of building codes and standards.

● The faculty in the program area will review the results annually.

Criterion Description:

Criterion Description for "Software Proficiency Assessments": Achieve a minimum average grade of B in the ETDD1361-Engineering Graphics and ETCM2363-Architectural Design courses.

Rationale: The average grade of B represents an appropriate level of industry-standard software, ensuring that students have a minimum level of competence in using these tools, aligning with the objective of developing proficiency in software application.

Criterion Description for "Building Codes and Standards": Attain a minimum grade of B in ETCM2363-Architectural Design class.

Rationale: A minimum grade of B signifies a strong demonstration of technical skills and creativity, ensuring that students not only meet but exceed the expectations for design proficiency, in alignment with the learning objective.

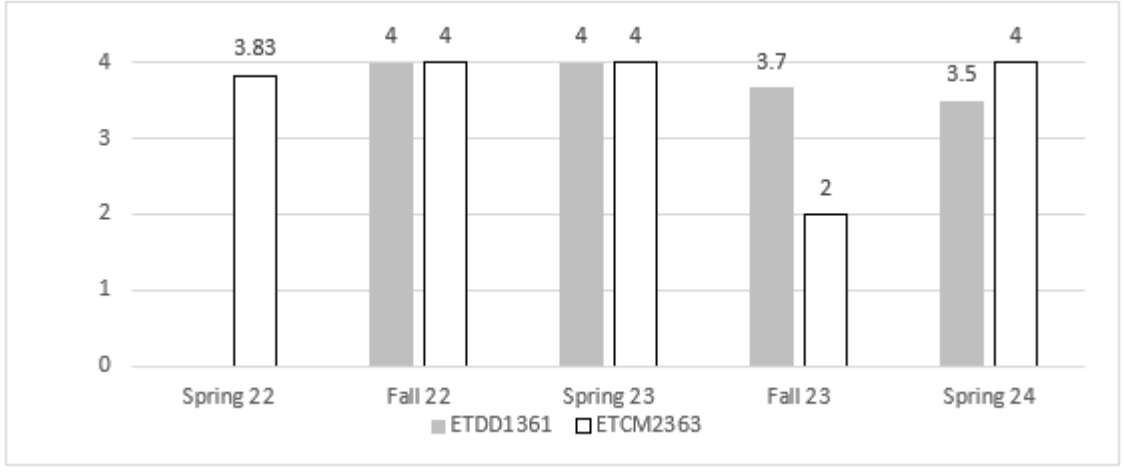
Findings Description:

There were eight (8) students with minor in Architectural Design Technology in ETDD1361 in Fall 23 and Spring 24.

There were three (3) students with minor in Architectural Design Technology ETCM2363 in Fall 23 and Spring 24.

The following table shows the average grades for the students with minor in Architectural Design Technology in ETDD1361 and ETCM2363 (Note: Garde A = 4.0, Grade B = 3.0, Grade C = 2.0, and Grade D = 1.0)

The criterion of achieving a minimum average grade of B in the ETDD1361-Engineering Graphics and ETCM2363-Architectural Design courses was met in several instances. In both Fall 2023 and Spring 2024, students in ETDD1361 successfully achieved an average grade of B or higher. Similarly, the target was met for ETCM2363 in Spring 2024. However, in Fall 2023, the average grade for ETCM2363 fell short of the target, with an average of C. This suggests a need for further analysis to identify factors contributing to the lower performance in Fall 2023 and potential adjustments to support improved outcomes in future terms.



RELATED ITEM LEVEL 3

Action: Creation of Architectural Designs

Action Description:

The grades for ETCM2363 are currently reflective of a majority of Construction Management majors, making it challenging to fully assess the performance of students minoring in Architectural Design Technology. To make these grades a more accurate indicator of success for those pursuing the minor, one option is to remove ETCM2363 from the Bachelor of Science in Construction Management curriculum. This would increase the proportion of students with the minor in Architectural Design Technology, allowing for a clearer assessment of their performance and learning outcomes.

Goal 2: Development of Technical Skills

Goal Description:

Equip students with a set of technical skills in architectural design and technology by utilizing industry-standard applications and demonstrating practical design capabilities.

Providing Department: Architectural Design Technology Minor

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Learning Objective 1: Proficiency on industry-standard applications

Learning Objective Description:

Upon completion of the Architectural Design Technology Minor, students will be able to obtain proficiency on industry-standard applications, such as Computer Aided Drafting (CAD) software and Building Information Modeling (BIM) tools, to analyze and create architectural designs.

RELATED ITEM LEVEL 2

Software Proficiency Assessments

Indicator Description:

Two direct assessment indicators are used to evaluate SHSU students learning objectives in the field of architectural design technology:

Direct Measure: Software Proficiency Assessments

- Source of Data: Final grades based on assignments, exams, and group projects in the Engineering Graphics and the Architectural Design courses. Students in these courses learn and apply CAD and BIM tools to complete their assignments, exams, and group projects.
- Data Gathering: The data is gathered by instructors through the University's Learning Management System (LMS) every semester (Fall, Spring, and Summer).
- Evaluation: Instructors evaluate 1) students' performance based on the successful completion of software-related design projects and assignments and 2) ability to apply CAD and BIM tools effectively.

Letter Grade	Percentage
A	90 – 100.0%
B	80 – 89.9%
C	70 – 79.9%
D	60 – 69.9%
F	Below 60%

- Letter grades will be assigned based on the distribution of percentage points earned throughout the semester. The percentage point distribution will be as follows:
- The faculty in the program area will review the results annually.

Criterion Description:

Target Description: Achieve a minimum average grade of B in the ETCM3372-Construction Drafting and ETCM4371-Building Information Modeling courses.

Rationale: A minimum grade of B reflects a high level of competence in coordinating different design elements, ensuring that students meet the expectations for effective project presentation, aligning with the performance objective.

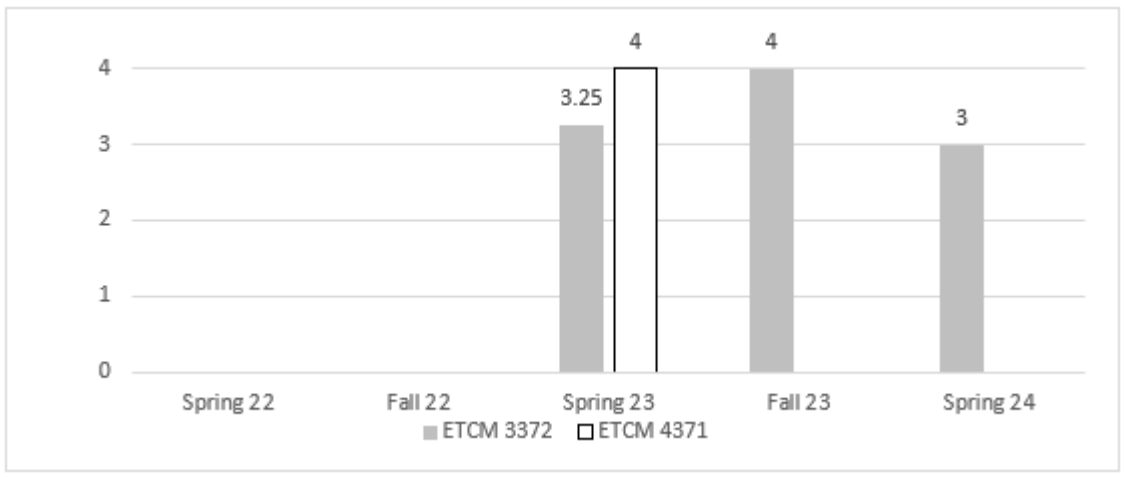
Findings Description:

There were five (5) students with minor in Architectural Design Technology in ETCM3372 in Fall 23 and Spring 24.

There was only 1 student with minor in Architectural Design Technology in ETCM4371 in Fall23 and Spring 24.

Note that the limited enrollment of upper-level classes within the Architectural Design Technology Minor can be attributed to the recent establishment of the minor itself. As a newly introduced program, most students currently enrolled are freshmen and sophomores who are still progressing through the foundational courses required for the minor. Given the sequential nature of the curriculum, these early-stage students are not yet required to register for the 3000- and 4000-level classes. The scarcity of upper-level enrollees is a natural consequence of the minor's initial stages, where the focus has primarily been on building a solid academic foundation for students. As the program matures and students' progress through their coursework, it is anticipated that enrollment in upper-level classes will naturally increase, reflecting the developmental trajectory of the Architectural Design Technology Minor.

The following table shows the average grades for the students with minor in Architectural Design Technology in ETCM3372 and ETCM4371 (Note: Garde A = 4.0, Grade B = 3.0, Grade C = 2.0, and Grade D = 1.0)



RELATED ITEM LEVEL 3

Professional careers preparation
Action Description:

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

Assessment of the student learning in architectural design and engineering drafting classes has produced three key findings.

- Experiential Learning: Architectural design classes emphasize experiential learning, where students engage in hands-on design projects and learn by doing. This approach allows students to develop practical skills, problem-solving abilities, and a deeper understanding of design principles through direct application.

- Design Process: Students in engineering graphics and architectural design courses learn to follow a structured design process, which involves conducting research, analyzing site conditions, generating ideas, developing concepts, creating design iterations, and refining their solutions. This iterative process helps students cultivate their creativity, critical thinking, and decision-making skills.
- Integration of Theory and Practice: We often integrate theoretical concepts with practical design exercises. Students learn to apply architectural theories, principles, and historical precedents to inform their design decisions. This integration helps students develop a deeper understanding of the contextual and theoretical aspects of architecture.

RELATED ITEM LEVEL 1

Performance Objective

Performance Objective Description:

The objective to boost enrollment is based on the current and previous year's data, which will serve as a benchmark to assess growth and demand for the program. An increase in enrollment can indicate enhanced visibility and perceived value of the minor among students.

RELATED ITEM LEVEL 2

KPI

KPI Description:

Compare the enrollment numbers at the start of the academic year with the end of the year.

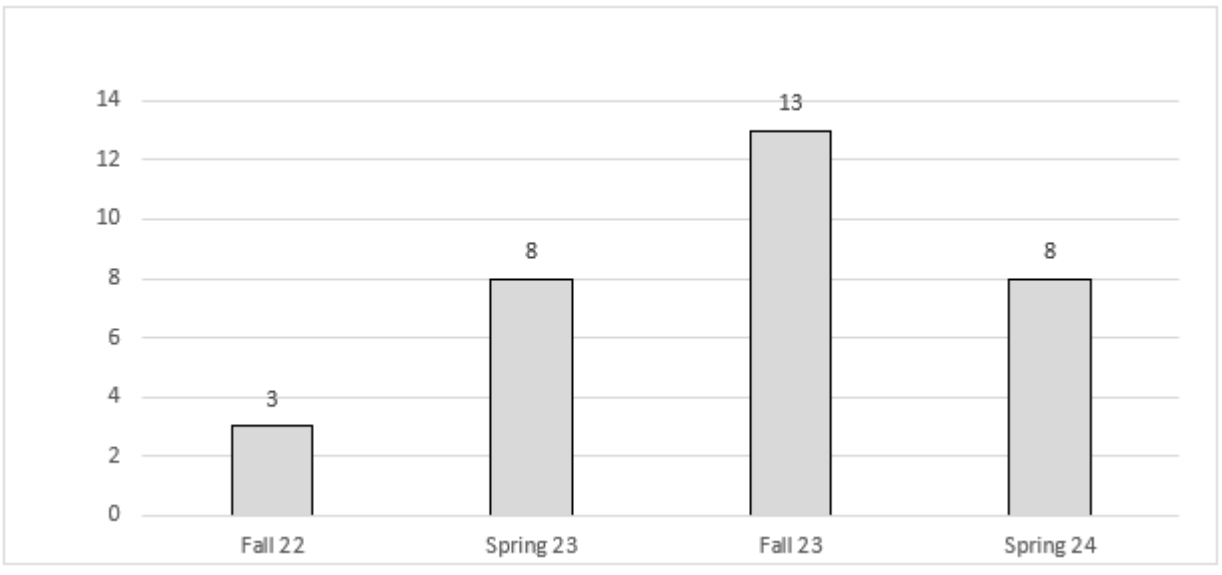
Target Description:

The target is a 10% increase in the number of students enrolled compared to this year.

Results Description:

The data collected from Fall 2022 to Spring 24 indicates a consistent upward trend in enrollment, reflecting a growing interest and recognition among students for the value of practical experience in the architectural profession. This tangible outcome aligns with our objective to provide students with a deeper understanding of the field, equipping them with the skills and knowledge necessary for success in their careers.

The observed increase in the percentage of students pursuing the architectural design technology minor demonstrates the effectiveness of our program in meeting its objectives. We attribute this success to the thoughtful integration of hands-on projects, which have allowed students to apply theoretical knowledge to real-world scenarios, fostering a sense of professional preparedness.



RELATED ITEM LEVEL 3

KPI

Action Description:

Action Description: Conduct a thorough review of the current curriculum to ensure it aligns with the latest industry standards and technological advancements in architectural design.

Responsible Party: The faculty of the program area.

Completion Date: Review to be completed, with updates implemented by the start of the next academic year.

Purpose: To ensure the program remains competitive and relevant, making it more appealing to new students and enhancing the educational value for current students.

Update to Previous Cycle's Plan for Continuous Improvement Item

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

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.

Update of Progress to the Previous Cycle's PCI:

A committee was formed in the ETEC department to establish a new concentration under BSc in Engineering Technology. The committee developed a new concentration called **Architectural Design Technology** to an existing program, Bachelor of Science (BSc) degree in Engineering Technology. Architectural Design Technology will be a 4-year concentration which prepares individuals for careers in commercial and/or residential architectural fields. This concentration shall determine 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.

New Plan for Continuous Improvement Item

Closing Summary:

In order to seek continuous improvement, the Architectural Design Technology 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 will be developed for the next academic year to ensure the plan reflects program goals. The IAB will review 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.