



An entry-level graduate with an Associate of Applied Science Degree in Architectural Technology from Sinclair Community College will be able to:

Learning Outcomes	Related Courses
1. Communicate effectively and professionally in the architectural environment through proper usage of verbal, written and graphic techniques.	COM 206; ENG 121, 122; ARC 101, 102, 103, 105, 116, 117, 211, 240, 241, 278; CCT 105, 216, MET 198
2. Develop mathematical skills sufficient to solve technical problems associated with architectural projects.	MAT 131, 132; PHY 131; MET 203, 207; ARC 117, 278; CCT 105, 201, 206, 216
3. Demonstrate the capability to develop architectural drawings including working drawings, presentation drawings and site drawings.	ARC 101, 102, 103, 211, 240, 241, 278; CCT 201, 206
4. Be proficient in the use of computer graphics associated with architectural projects.	MET 198; DRT 198, 199; ARC 240, 241, 278
5. Demonstrate a thorough knowledge of common construction materials -- both their proper usage and proper testing procedures.	ARC 102, 105, 107, 116, 117, 278; CCT 105, 206, 216
6. Understand the mechanics of structural design.	MAT 131, 132; PHY 131; CCT 105, 205, 206, 216; MET 203, 207; ARC 278
7. Use, understand, and apply building codes and zoning codes.	ARC 107, 117, 211, 278
8. Understand the fundamentals of plumbing, and electrical systems for buildings.	ARC 101, 102, 107, 117, 211, 278
9. Distinguish the physical and psychological effects that mechanical systems have on human occupancy of buildings.	ARC 101, 102, 107, 117, 211, 278

III. **Assessment Method(s):** A measurable indicator of success in attaining the stated learning outcome(s). The methodology should be both reliable and valid. Please describe in detail.

- a. **Formative Assessment Method(s) and Description:** a measurable indicator of student in-progress success in attaining the stated learning outcome(s).

Formative assessment is achieved through course-by-course evaluation from individual faculty. Assessments are done through course project completion rather than through testing. Several sequence courses exist in the major. Computer - Aided Drafting (CAD) course sequences are DRT 198, 199, 240 and 241. ARC 241 (Computer - Aided Architectural Drafting) is required of all ARC majors. There is also a structural analysis series, which includes math, physics, statics, and strength of materials. Student achievement in the design course, CCT 206, demonstrates whether adequate skills were acquired in the earlier classes. The numerous prerequisites that exist in this program enable the department to maintain control over the curriculum. Students are ensured to complete basic skills in math and science before they attempt higher-level skills in the more advanced courses.

Very few graduates complete in two years, primarily due to the level of math skills required and the need for students to take developmental math. Scheduling problems exist when students get behind or "out of sequence" in math classes and have to wait on other course.

- b. **Summative Assessment Method(s) and Description:** a measurable indicator of end-of-program success in attaining the stated program learning outcome(s).

Summative assessment is completed via ARC 278 (Architectural Capstone). It has been offered four times during Spring quarter. ARC 278 is a comprehensive course that uses outside observers to determine the success of the program. The course includes design, drafting, oral, and written communication; students do an oral presentation in the middle of the quarter. General guidelines for the project are given and students decide the specifics of the project. Advisory committee members evaluate the program and the work of the faculty, not the specific projects which the students prepare.

IV. **Results:** A description of the actual results of overall student performance gathered from the summative assessment(s). (see III.b.)

There have been approximately twelve students in the class each year. Students are given a letter grade and most of the students do well. All students enrolled Spring 2000 successfully completed the course. High standards are required in the course. The Advisory Committee highly complimented the projects from this class. Some students have been offered jobs while presenting their project to the Advisory Committee.

- V. **Analysis/Actions:** From analysis of your summative assessment results, do you plan to or have you made any adjustments to your program learning outcomes, methodologies, curriculum, etc.? If yes, describe. If no, explain.

No changes have been made to the assessment process because the feedback received from the advisory committee is so glowing. There are no *major* anticipated changes in curriculum. In the future, the department may consider the development of curriculum modules.

- VI. **General Education:** A description of where and how within the major the three primary general education outcomes\* (communication, thinking, values/citizenship/community) are assessed.

- a. Where within the major do you assess written communication? Describe the assessment method(s) used. Describe assessment results if available.

A written report accompanies each capstone project. The department does not use the written communication checklist for assessing writing.

- b. Where within the major do you assess oral communication? Describe the assessment method(s) used. Describe assessment results if available.

An oral report accompanies each capstone project. The department does not use the oral communication checklist for assessing oral work.

- c. Where within the major do you assess thinking? Thinking might include inventing new problems, seeing relationships and/or implications, respecting other approaches, demonstrating clarity and/or integrity, or recognizing assumptions. Describe the assessment method(s) used. Describe assessment results if available.

Creative and analytical thinking is embedded in all courses. It is assessed formatively in all courses and summatively in the capstone course.

- d. Where within the major do you assess values/citizenship/community? These activities might include behaviors, perspective, awareness, responsibility, teamwork, ethical/professional standards, service learning or community participation. Describe the assessment method(s) used. Describe assessment results if available.

Faculty within the department practice role modeling in order to convey professional behaviors to students. Faculty members are currently working to integrate the Core Competencies of the Engineering & Industrial Technology Division, including citizenship and professionalism, into the curriculum.

- \* Note: The oral communication checklist and the written communication checklist developed by the General Education Committee were adopted for college-wide use during the 1997-98 academic year by Academic Council. Thinking Guidelines developed by the General Education Committee are being piloted by faculty during the 1998-99 academic year.