

The master syllabi were reviewed in 2004.

II. Program Learning Outcomes: A description of what you intend for students to know (cognitive), think/feel (affective), or do (psychomotor), when they have completed your degree program. A suggested manageable number of outcomes should be in the range of five to ten. Describe Program Learning Outcomes review activities*.

Program learning outcomes were reviewed and revised in 2004 in conjunction with the Advisory Committee.

* Note: Every department is required to review Master Syllabi and Program Learning Outcomes a minimum of every two years.

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 Are in the
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, 135, 199, 211, 240, 241, 270, 278; CCT 105, 206, MET 198, DRT 198
2. Apply mathematical skills sufficient to solve technical problems associated with architectural drawings, site measurements, and cost estimating.	MAT 131, 132; PHY 131; MET 203, 207; ARC 117, 278; CCT 105, 206
3. Demonstrate the capability to develop architectural drawings including construction drawings and presentation drawings.	ARC 101, 102, 103, 135, 199, 211, 240, 241, 270 278; CCT 103, 206
4. Be proficient in the use of computer graphics associated with architectural projects.	MET 198; DRT 198; ARC 199, 240, 241, 278

Learning Outcomes	Related Courses Are in the
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
6. Understand the principals of structural design.	MAT 131, 132; PHY 131; CCT 105, 206; MET 203, 207; ARC 135, 199, 278
7. Use, understand, and apply building codes, zoning codes and ADA (Americans with Disabilities Act).	ARC 107, 117, 135, 211, 240, 241, 278
8. Understand the fundamentals of plumbing, electrical, and HVAC systems for building design.	ARC 101, 102, 107, 117, 135, 211, 240, 241, 278
9. Be a creative problem solver in architectural studio with a sense of design and orientation.	ARC 101, 102, 107, 117, 211, 278
10. Use Architectural Graphic Standards, recognizing standard dimensions for space planning and human occupancy.	ARC 101, 102, 107, 135, 211, 240, 241, 278
11. Recognize professional, ethical and societal responsibilities, respect diversity and commit to lifelong learning.	ARC 105, 116, 117, 220, 221, 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, ARC 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.

Due to the subjectivity of architectural skills rubrics have been developed for assessment and evaluation. Rubrics have been shared with students which has resulted in increased student achievement.

- 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). 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. Advisory committee members also share informal feedback with faculty.

Divisional core competencies are assessed as graduates complete a self-analysis of their growth in these areas. This data is used as a part of the ARC program assessment process.

The department chair interviews each graduate and that data is included in the ARC program assessment process.

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 capstone class each year. Students are given a letter grade and most of the students do well. Most students successfully complete the course. High standards are required in the course. The Advisory Committee continues to complement the projects from this class and some students have been offered jobs as a result.

- 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.

Faculty meet at a yearly summer retreat to review assessment data related to the divisional core competencies and graduate and employer feedback from IPR. Discussions at the summer retreat are used by faculty as the basis for review of program outcomes and course master syllabi. Faculty are considering the development of a formal process for reviewing assessment data from the capstone course. Faculty also plan on tracking the numbers of student who transfer to baccalaureate institutions.

- 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.

Written communication is part of the program learning outcomes; written reports are required in many of the courses. The capstone course includes a written report. The department currently does not use the writing checklist.

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

Oral communication is part of the program learning outcomes; oral reports are required in many of the courses. The capstone course includes an oral presentation. Student feedback may be used to assess oral presentations. Specific oral presentation skills are taught in ARC 135. The department currently does not use the oral communication checklist.

- 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.

A new program outcome specifically related to this area was added in 2004. This program outcome is emphasized in several courses and evaluated in the capstone course. Faculty within the department practice role modeling in order to convey professional behaviors to students. Faculty members continue to work to integrate the Core Competencies of the Engineering & Industrial Technology Division, including citizenship, professionalism and life-long learning into the curriculum.