

Architectural Technology

● CAREER DEGREE  MIDDLETOWN CAMPUS

Program Description

The Associate in Applied Science degree program in Architectural Technology prepares graduates to enter the workforce as architectural team members. While other opportunities exist, the largest job opportunities are positions as interns / CAD operators for architectural firms. Graduates' skills will prepare them to produce working drawings in a variety of settings, such as engineering firms or manufacturers. If graduates have field experience in a building trade, all program outcomes are directly transferable to entry-level positions in construction management and supervision. A broad cross-section of course content is covered in the program; this familiarizes students with many aspects of the architectural profession, the work of building professionals and the construction process.

When working under the supervision of a licensed professional (i.e. Registered Architect, Professional Engineer, etc.), a graduate's primary responsibilities would include measuring and documenting existing conditions of buildings and sites, preparing construction documents, interpreting construction documents, preparing design presentations for clients or other audiences, and coordinating architectural drawings with consultants' drawings.

Fluency with computer-aided drawing (AutoCAD) and computer literacy, as it applies to generating architectural drawings, are fundamental skills graduates will possess. Meanwhile, freehand sketching is stressed wherever possible as a valuable communication method. Beyond preparing construction drawings, students will build models, prepare reports and orally present their work to groups.

Most courses in the program are a combination of lecture and lab. In the lecture component, foundational material is presented, often accompanied by samples, examples or other visual cues. In the lab component, students will either work on short-term exercises designed to hone very specific knowledge bases or skills or they will work on long-term projects designed to simulate the types of projects that they will eventually encounter in the workforce. Students should be prepared to spend a significant amount of time on projects outside the classroom.

Many students who enter this degree program plan to transfer to an upper division institution. Because these opportunities exist, second year students who intend to transfer should select their courses in careful consultation with their academic advisor. Portfolio production will be required.

For those students wishing to become Registered Architects, New York State Department of Education guidelines must be followed. To become a Registered Architect, one must earn an NAAB-accredited Bachelor of Architecture or Master of Architecture degree, fulfill NCARB internship requirements (a proscribed three year apprenticeship), and pass a challenging and comprehensive licensing examination.

For those students wishing to pursue baccalaureate degrees in Landscape Architecture and Construction Management, an A.S. degree from SUNY Orange with electives from the Architectural Technology degree program may be most suitable. Course selection should be made carefully in consultation with academic advisors.

Program Outcomes

Students will:

- graphically communicate architectural forms and building assemblies, both two and three dimensionally
- demonstrate fluency using digital graphics software packages to produce construction drawings and other architectural representations
- solve architectural problems through the development of an aesthetic approach and the manipulation of form and space
- demonstrate an understanding of building materials and methods
- demonstrate an understanding of the coordination within a building project between architecture and related professions
- demonstrate an understanding of basic life safety and regulatory requirements in building projects
- demonstrate an understanding of fundamental structural principles
- utilize research from web based and other sources in architectural projects
- identify basic methods of sustainable building practices and their environmental impacts
- demonstrate an understanding of the historical and social context of western architecture

Admission Criteria

Admission to this program requires that students be high school graduates or have high school equivalency diplomas (HSEs). If students are home schooled, they may be eligible for admission.

Maintenance of a C average or better in courses in the major is also required.

Transfer Options

While the A.A.S. degree leads to immediate employment, SUNY Orange students have successfully transferred to:

- Alfred State College
- New York Institute of Technology
- New Jersey Institute of Technology
- Pratt Institute
- SUNY Environmental Science and Forestry

Your Career Coach

Career opportunities exist in the following areas:

- architectural firms
- engineering firms
- manufacturing firms
- construction firms
- governmental agencies
- utility companies

[Explore Careers with Career Coach](#)

Architectural Technology Gateway Courses:

- Gateway courses: ARC 105, ARC 111, CAD 101, ARC 101
- Key courses (for transfer):
 - *Architectural Design sequence*: ARC 111, ARC 112, ARC 211, ARC 212
 - *Visualization sequence*: ARC 101, ARC 102, CAD 101, CAD 102
 - *Architectural History sequence*: ARC 215, ARC 216
- Key courses (for employment):
 - *Building Materials and Working Drawings sequence*: ARC 105, ARC 106, ARC 205, ARC 206
- Electives: Speak with your advisor to determine which Category E and SUNY Restricted Electives would best transfer into a Bachelor of Architecture program

Courses above have been recommended by the department to help introduce you to the program (Gateway courses) and guide you in selecting courses that will provide you with the best academic experience (Key courses and suggested Electives).

First Semester

Course #	Course Name	P, C, P/C	Cr
ENG 101	Freshman English 1 (G10A [w] & G11A)	P	3
Either	Intermediate Algebra (G1A)	P	3
MAT 102			
Or	College Algebra or higher (G1A)	P	3
MAT 121			
CAD 101	Introduction to CAD	P, P/C	3
ARC 101	Architectural Graphics	C, P/C	3
ARC 105	Building Materials and Methods 1	C, P/C	2
ARC 111	Architectural Design 1	C, P/C	3
	Total Semester Credits		17

Milestones

During this semester, students should:

- Lay the foundation of their architectural education, building basic skills in visualization, architectural design and building materials

Second Semester

Course #	Course Name	P, C, P/C	Cr
ENG 102	Freshman English 2 (G7A & G12A)	P	3
CAD 102	Computer Aided Drafting 2	P	2
ARC 102	Advanced Arch. Graphics	P	3
ARC 106	Building Materials and Methods 2	P	3
ARC 112	Architectural Design 2	P	3
ARC 215	Architecture to the 18th Century (G8A)		3
	Total Semester Credits		17

Milestones**During this semester, students should:**

- Develop advanced skills in architectural design, building materials, 3-D modeling, rendering and fabrication

Third Semester

Course #	Course Name	P, C, P/C	Cr
	Category E Social Science Elective (G6A)		3
COM 100	Oral Communication* (G10A)		1
ARC 211	Architectural Design 3	P	3
ARC 205	Working Drawings 1	P	3
ARC 201	Digital Portfolio	P	1
ARC 216	Architecture from the 19th Century (G8A)		3
	Total Semester Credits		14

Milestones**During this semester, students should:**

- Develop portfolio materials in preparation for application to transfer to institutions or professional positions in the workforce; continue development of architectural design and working drawings skills. Upon completion of this semester, students are qualified to work as draftsmen in architectural or engineering firms.

Fourth Semester

Course #	Course Name	P, C, P/C	Cr
	Restricted SUNY Elective**		3
ARC 220	Mechanical and Electrical Equipment for Buildings		3
ARC 206	Working Drawings 2	P	4
ARC 212	Architectural Design 4	P	4
PHY 111	Architectural Physics (G2A)	P	3
	Total Semester Credits		17

Milestones**During this semester, students should:**

- Complete capstone courses, to include ARC 206 (Working Drawings 2) and ARC 212 (Architectural Design 4)
- Prepare to enter the workforce upon graduation by seeking and securing a full time position
- For those seeking to continue their studies, submit final portfolio and transcripts for transfer credits.

TOTAL DEGREE CREDITS: 65**Notes**

*COM 101 satisfies the requirement of COM 100

**Select one from three different SUNY lists: G3A (SUNY Social Science), G4A (SUNY US History & Gov) or G5A (SUNY World History)