ARCHITECTURAL BUILDING ENGINEERING TECHNOLOGY (AS)

Program Overview

Associate in Science Degree

The Associate in Science degree in Architectural Building Engineering Technology is offered through the Department of Design + Architectural Building Technology.

The Architectural Building Engineering Technology Program is based upon the premise that buildings are designed and built using a team concept. As an integral member of that team, the architectural engineer must have the ability to create and construct buildings that will answer the economic, safety, technical, sustainability, and aesthetic requirements of a project. The associate degree program allows students to develop these necessary abilities by emphasizing the fundamentals of architectural design, structural engineering, environmental systems, sustainability, and construction technology. The program is also designed to instill within students a sense of professionalism and a desire to serve and contribute to society.

In the associate degree program, students also develop basic skills in drafting, graphic communications, three-dimensional theory, computer-aided drafting (CAD), construction documents, construction techniques, green technology, and building materials. Upon successful completion of the associate degree program, students can continue into either the NEIT Bachelor of Science in Architectural Building Engineering Technology degree program or the Bachelor of Science in Construction Management degree program.

Curriculum

Course	Title	Quarter Credit Hours
Term I		
ABT 111	Introduction to Building Science	1
ABT 112	Technical Drafting and Graphic Communications	3
ABT 114	Introduction to Computer-Aided Drafting (CAD)	4
ABT 115	Introduction to Structures	2
Choose one of the following (depending upon Math Placement):		4-5
MA 105	Basic College Math with Lab (MA/SCI Core) [1]	
MA 110	Introduction to College Math (MA/SCI Core) [1]	
Elective	100-200 Level Math/Science, Humanities, Social Sciences, or Arts/Foreign Language Core [1]	
	Quarter Credit Hours	**14-15**
Term II		
ABT 122	Two- & Three-Dimensional Design Theory	3
ABT 124	Construction Methods & Materials	3
ABT 125	Building Design & Technology I	4
MA 125	Technical Math I (MA/SCI Core) [1]	4
EN 100	Introduction to College Writing (COM Core) [1]	4
	Quarter Credit Hours	**18**
Term III		
ABT 135	Building Design & Technology II	6
ABT 137	Introduction to Environmental Systems	3
ABT 138	Surveying & Civil Technology	2
MA 210	Technical Math II (MA/SCI Core) [1]	4
EN 200	Workplace Communications (COM Core) [1]	4
	Quarter Credit Hours	**19**
Term IV		
ABT 126	Presentation Techniques	3
ABT 218	Building Information Modeling I (BIM I)	4
ABT 236	Building Codes	2
ID 212	Programming	2
SS 263	Architectural History	4
	Quarter Credit Hours	**15**
Term V		
ABT 221	Visualization Studies I	3
ABT 223	Structures I	3
ABT 225	Building Design & Technology III	7
Elective	100-200 Level Humanities (or Arts/Foreign Language) Core [1]	4
	Quarter Credit Hours	**17**
Term VI		
ABT 127	Introduction to Construction Estimating	3
ABT 232	Structures II	3
PHY 200	Physics I & Lab (MA/SCI Core) [1]	4
Choose one of the following options:		7
Option 1		
ABT 235	Building Design & Technology IV (for ABT-BS)	
Option 2		
ENG 263	Commercial Utilization of Drones / UAVs (for CMT-BS)	
CET 231	Surveying II (for CMT-BS)	
	Quarter Credit Hours	**17**
	Total Quarter Credit Hours	**100-101**

[1] Liberal Arts Core.

Legend

C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Credit Hours where each lecture hour per week is one credit, every 2-4 laboratory hours are one credit depending on the expected amount of pre- or post-lab work.

All associate degree students are required to take 32 credits of liberal arts and math/science courses as selected from the liberal arts core. See the course descriptions section of this catalog for a list of the core area courses. Students who place out of MA 105 Basic College Math with

Lab/MA 110 Introduction to College Math must still take 32 credits of core courses.

Subject to change.

Program Mission, Goals, and Outcomes

Program Mission

The Architectural Building Engineering Technology programs, both associate and bachelor, prepare the student to be proficient in the art, engineering, and technology of designing the built environment relative to the users' social, psychological, and aesthetic needs.

Program Goals

The Program Goals of the ABT Associate Degree are:

1. To educate students in the fundamentals of building design and sciences through a seamless and comprehensive study combining the theoretical and practical concepts of design, building systems, components, engineering, and construction.
2. To develop our students' observational skills and critical thinking abilities.
3. To instill within each student an awareness of their responsibility to the profession and society through their ethical and professional behavior.

Program Outcomes

The ABT graduate will be able to:

1. Function as a support member in a design and production team environment.
2. Evaluate and analyze fundamental design problems relative to the built environment and participate with the design team in the development of appropriate solutions.
3. Evaluate and analyze fundamental engineering problems relative to construction and develop appropriate solutions.
4. Demonstrate a historical appreciation relative to the building industry.
5. Demonstrate effective communication skills.
6. Generate construction documents using both electronic and non-electronic media.
7. Demonstrate a commitment to produce accurate and quality work.
8. Apply fundamental technology used in the building industry.
9. Develop an appreciation for sustainable design principles.

Q&A and Technical Standards Questions & Answers

1. When do my classes meet?
Day Classes: Technical classes normally meet for at least three hours a day for up to five days a week. Classes normally begin in the early morning (7:45 a.m.), late morning (usually 11:25 p.m.), or mid-afternoon. A technical time slot may vary from term to term.

Evening Classes: Technical classes meet on the average of three nights a week, although there may be times when they will meet four nights a week. Classes normally begin at 5:45 p.m.

In addition, to achieve your associate degree, you will take a total of approximately eight liberal arts courses, which will be scheduled around your technical schedule over the course of your entire program. Each liberal arts course meets approximately four hours per week. Liberal arts courses are offered days, evenings, and Saturdays.

At the beginning of each term you will receive a detailed schedule giving the exact time and location of all your classes. The College requires that all students be prepared to take classes and receive services at any of NEIT's locations where the appropriate classes and services are offered.

When a regularly scheduled class falls on a day which is an NEIT observed holiday (Columbus Day, Veterans Day, Martin Luther King, Jr. Day, and Memorial Day), an alternate class will be scheduled as a make up for that class. The make up class may fall on a Friday. It is the student's responsibility to take note of when and where classes are offered.

2. How large will my classes be?
The average size for a class is about 20 to 25 students; however, larger and smaller classes occur from time to time.

3. How much time will I spend in lab?
Almost half of your technical courses consist of laboratory work. In order for you to get the most out of your laboratory experiences, you will first receive a thorough explanation of the theory behind your lab work.

4. Where do my classes meet?
Students should be prepared to attend classes at any of NEIT's classroom facilities: either at the Post Road, Access Road, or East Greenwich campuses.

5. I have not earned my high school diploma or GED: can I enroll in an Associate Degree Program?
A candidate for admission to an associate degree program must have a high school diploma, have earned a recognized equivalency diploma (GED), or meet the federal home school requirements.

6. How long should it take me to complete my program?
To complete your degree requirements in the shortest possible time, you should take the courses outlined in the prescribed curriculum. For a typical six-term curriculum, a student may complete the requirements in as little as 18 months.

To complete all your degree requirements in the shortest time, you should take at least one liberal arts course each term.

Students may also elect to complete some of their liberal arts requirements during Intersession (except for EN courses), a special five-week term scheduled between Spring and Summer Terms. Students will not be assessed any additional tuition for liberal arts courses taken during the Intersession but may be assessed applicable fees.

Students wishing to extend the number of terms needed to complete the required technical courses in their curriculum will be assessed additional tuition and fees.

7. Is NEIT accredited?
NEIT is accredited by the New England Commission of Higher Education (formerly the Commission on Institutions of Higher Education of the New England Association of Schools and Colleges, Inc.). Accreditation by NECHE is recognized by the federal government and entitles NEIT to participate in federal financial aid programs. Some academic departments have specialized professional accreditations in addition to accreditation by NECHE. For more information on accreditation, see NEIT's catalog.

8. Can I transfer the credits that I earn at NEIT to another college?
The transferability of a course is always up to the institution to which the student is transferring. Students interested in the transferability of their credits should contact the Office of Teaching and Learning for further information.

9. Can I transfer credits earned at another college to NEIT?
Transfer credit for appropriate courses taken at an accredited institution will be considered upon receipt of an official transcript for any program, biology, science, and mathematics courses in which the student has earned a "C" or above within the past three years and for English or humanities courses in which the student has earned a "C" or above within the last ten years. An official transcript from the other institution must be received before the end of the first week of the term for transfer credit to be granted for courses to be taken during that term. Students will receive a tuition reduction for the approved technical courses based on the program rate and will be applied against the final technical term of the curriculum's tuition amount. No tuition credit is provided for courses which are not a part of the technical curriculum.

10. What is the "Feinstein Enriching America" Program?
New England Institute of Technology is the proud recipient of a grant from the Feinstein Foundation. To satisfy the terms of the grant, the College has developed a one-credit community enrichment course which includes hands-on community enrichment projects. The course can be taken for a few hours per term, spread over several terms. Students who are already engaged in community enrichment on their own may be able to count that service towards course credit.

11. How many credits do I need to acquire my Financial Aid?
In order to be eligible for the maximum financial aid award, you need to maintain at least 12 credits per academic term.

12. What does my program cost?
The cost of your program will be as outlined in your enrollment agreement, along with your cost for books and other course materials. Students who decide to take more terms than the enrollment agreement describes to complete the technical courses in their curriculum will be subject to additional fees and possible additional tuition costs. Students who elect to take the technical portion of the degree requirements at a rate faster than the rate prescribed in the curriculum and the enrollment agreement will be assessed additional tuition.

Students who require prerequisite courses will incur additional tuition and fees above those outlined in their enrollment agreement.

If a student elects to take a course(s) outside of the prescribed curriculum, additional tuition and fees will be assessed.

Remember, students who withdraw and re-enter, one time only, pay the tuition rate that was in effect for them at the time of their last day of attendance for up to one year from their last day of attendance. Second re-entries and beyond pay the tuition rate in effect at the time they re-enter. The most economical way for you to complete your college degree is to begin your program now and continue your studies straight through for the six terms necessary to complete your degree requirements.

13. What kind of employment assistance does NEIT offer?
The Career Services Office assists NEIT students and graduates in in all aspects of the job search, including resume writing, interviewing skills, and developing a job search strategy. Upon completion of their programs, graduates may submit a resume to the Career Services Office to be circulated to employers for employment opportunities in their fields. Employers regularly contact us about our graduates. In addition, our Career Services Office contacts employers to develop job leads. A strong relationship with employers exists as a result of our training students to meet the needs of industry for over fifty years. No school can, and NEIT does not, guarantee to its graduates employment or a specific starting salary.

14. Where will job opportunities exist?
Graduates have obtained employment in the local area. However, one of the most exciting aspect of this program is the ability to look nationally for employment opportunities.

15. Is there any state or federal licensing required in my field?
No license is required for any of the careers which you will be preparing to enter.

16. What kind of jobs will I be qualified to look for?
Career opportunities for graduates of the Architectural/Building Engineering Technology Associate Degree program include entry-level positions with:
• architectural and engineering firms as drafters, CAD operators, or job captains
• construction companies or construction management firms as estimators and schedulers
• construction subcontractors as estimators
• municipalities in their drafting/engineering departments
• real estate companies in sales (with appropriate license)
• real estate development companies as drafters/designers
• corporations who manufacture or sell construction products in their sales or drafting/engineering departments
• corporations who have in-house facilities management, design and/or construction departments as designers/drafters
• building materials related retail sales
• Career opportunities for our Bachelor Degree graduates include entry-level positions with:
• architectural and engineering firms as project managers or junior engineers
• construction companies or construction management firms as project managers, estimators, schedulers, and expediters
• construction subcontractors as project managers or estimators
• government agencies such as HUD or the Army Corps of Engineers
• state agencies such as RI Department of Environmental
• Management, RI Building Code Commission, or Department of Transportation
• municipalities in their building inspection, planning, engineering, or highway departments
• real estate companies in sales or inspections (with appropriate license)
• real estate development companies as designers, planners, or project managers
• corporations who manufacture or sell construction products either in their sales, engineering, or marketing departments
• corporations who have in-house design and/or construction departments as designers or project managers
• related industries such as insurance or finance
• corporations as a facilities manager or plant engineer
• builder of manufactured housing as a designer, production supervisor, or sales representative

17. How much time will I spend on Computer Aided Drafting (CAD)?
You will receive approximately 120 hours of formal training on CAD before the end of the fourth term or your program. In many of the other courses in the program, students will prepare both CAD and manually

drawn projects. In some cases students will be able to choose whether or not to complete a drawing manually or on CAD.

NEIT has found that the best way to learn a software package such as CAD is through the student's independent practice. After you have received the formal introduction to CAD, you will work on your own exploring the CAD system. Instructors and lab assistants will be available to answer questions that come up for you; however, it is essential that you take personal responsibility for mastering the software package.

18. Will I be able to continue toward a bachelor's degree?
Yes. Students who have successfully completed the Associate Degree program in Architectural/Building Engineering Technology with a grade point average of 2.0 or better, may continue in the Bachelor Degree Program in Architectural/Building Engineering Technology.

Technical Standards

These technical standards set forth by the Architectural Building Engineering /Interior Design Technology Programs Department; establish the essential qualities considered necessary for students admitted to these programs to achieve the knowledge, skills and competencies to enter these fields. The successful student must possess the following skills and abilities or be able to demonstrate that they can complete the requirements of the program with or without reasonable accommodation, using some other combination of skills and abilities.

Cognitive Ability:

- Ability to interpret ideas and concepts visually and/or graphically
- Ability to learn, remember and recall detailed information and to use it for problem solving.
- Ability to deal with materials and problems such as organizing or reorganizing information.
- Ability to use abstractions in specific concrete situations.
- Ability to break information into its component parts.
- Ability to understand spatial relationships.
- Possession of basic math skills through addition, subtraction, multiplication and division of whole numbers and fractions using both the U.S. and Metric systems of measurement.
- Ability to perform tasks by observing demonstrations.
- Possession of basic keyboarding skills and knowledge of computer programs.

Communications Skills:

- Ability to communicate effectively with faculty and students.
- Ability to demonstrate and use the knowledge acquired during the classroom training process and in the lab setting.

Adaptive Ability:

- Ability to maintain emotional stability and the maturity necessary to interact with other members of the faculty and students in a responsible manner.

Physical Ability:

- Ability to stand and/or sit for long periods of time.
- Ability to perform learned skills, independently, with accuracy and completeness.

Manual Ability:

- Sufficient motor function and sensory abilities to participate effectively in the classroom laboratory.
- Sufficient manual dexterity and motor coordination to coordinate hands, eyes and fingers in the use of the computer, plotter and other equipment.

Sensory Ability:

Visual

- Acute enough to enable the adjustment of drafting equipment
- Ability to properly distinguish colors.
- Acute enough to read small print.
- Acute enough to read small numbers on measuring instruments

Degree Progress Checklist

Architectural Building Engineering Technology - AS

Degree Progress Checklists

- For students entering October 2024 or later
- For students entering October 2018 to September 2024