ARCHITECTURAL BUILDING ENGINEERING TECHNOLOGY (BS)

Program Overview

Bachelor of Science Degree

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

The Architectural Building Engineering Technology Program continues to build upon the premise that buildings are designed and built using a team concept. The bachelor's program allows students to build upon the fundamentals learned in the associate degree program and expand their knowledge base of architectural design, engineering, and building science.

In the bachelor's program, students also study advanced topics in structural engineering using wood, steel, masonry, and concrete, advanced environmental and mechanical systems, sustainability, LEED certification of buildings, site planning, contracts and specifications, and construction law. The program culminates with a Senior Thesis course. In this final term, students must demonstrate their understanding of and ability to utilize and synthesize the technical and engineering concepts they developed throughout their New England Tech experience.

Students who wish to pursue professional registration must pursue graduate studies at other institutions in the United States. Other students may pursue careers in associated fields within the design and building industry. Upon completion of this program, students may also choose to continue into the NEIT Master of Science in Construction Management degree program.

Curriculum

Course	Title	Quarter Credit Hours
Term VII		
ABT 314	Construction Contracts & Specifications	3
ABT 315	Structural Wood Design	4
ABT 324	Masonry Construction & Detailing	3
PHY 300	Physics II & Lab (MA/SCI Core) [1]	4
Elective	300-400 Level Humanities or 200 Level Foreign Language Core [1]	4
	Quarter Credit Hours	**18**
Term VIII		
ABT 325	Soil Mechanics & Foundation Design	3
ABT 328	Structural Steel Design	4
ABT 337	Building Information Modeling II (BIM II)	4
EN 322	Advanced Career Writing for Digital Media (COM Core) [1]	4
	Quarter Credit Hours	**15**
Term IX		
ABT 331	Advanced Environmental Systems	3
ABT 334	Site Engineering & Planning	3
ABT 340	Laser Scanning & Point Clouds	3
MA 310	Calculus I (MA/SCI Core) [1]	4
Choose one of the following:		4
ABT 338	Reinforced Concrete Design	
ENG 450	Special Topics in Engineering	
	Quarter Credit Hours	**17**
Term X		
ABT 410	Building Design & Technology V (Low Rise)	7
ABT 412	Sustainability in Construction	3
ABT 416	Portfolio Development	3
EN 421	Technical Communications (COM Core) [1]	4
	Quarter Credit Hours	**17**
Term XI		
ABT 420	Building Design & Technology VI (High Rise)	7
ABT 421	Acoustics & Lighting	3
ABT 427	Senior Thesis Proposal & Research	2
Elective	300-400 Level Humanities, Social Sciences, or 200 Level Foreign Language Core [1]	4
	Quarter Credit Hours	**16**
Term XII		
ABT 430	Senior Thesis	5
ABT 433	Construction Law	3
MGM 340	Engineering Finance	3
Elective	300-400 Level Social Sciences Core [1]	4
	Quarter Credit Hours	**15**
	Total Quarter Credit Hours	**98**

[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 bachelor's degree students are required to take 28 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.

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 Bachelor's 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 expand our students' observational skills and critical thinking abilities.
3. To instill within each student an awareness of and desire to contribute to the profession and society at large through the development of a professional and personal ethic that demands technically, environmentally, and socially responsible decision making.

Program Outcomes

The ABT graduate will be able to:

1. Function as an integral member of the building design team.
2. Evaluate and analyze complex problems relative to the built environment and develop solutions that meet the social, technical, engineering, and aesthetic needs of the client and society.
3. Evaluate and analyze complex engineering problems relative to building design and develop appropriate solutions.
4. Present design concepts and solutions using advanced communication skills.
5. Integrate building materials and systems relative to design solutions.
6. Recognize the need for life-long learning.
7. Demonstrate an ability to design buildings that are sustainable and environmentally responsible.
8. Explain the relationship between the legal, contractual, and ethical aspects of the construction industry.

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 a.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 bachelor's degree, you will take a total of approximately seven liberal arts courses, which will be scheduled around your program 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. 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.

6. Is NEIT accredited?
NEIT is accredited by the New England Commission of Higher Education. 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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 program, 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. No school can, and NEIT does not, guarantee to its graduates employment or a specific starting salary.

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

13. 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.

14. What kind of jobs will I be qualified to look for?
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

Technical Standards

These technical standards set forth by the Department of Design + Architectural Building Technology; 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 instrument.

Degree Progress Checklist

Architectural Building Engineering Technology - BS

Degree Progress Checklists

- For students entering April 2025 or later
- For students entering October 2024 to March 2025
- For students entering January 2021 to September 2024
- For students entering April 2019 to December 2020