NEW ENGLAND TECH

Civil Engineering Technology (Evening)
Bachelor of Science Degree

(For students entering their program October 2019 – 202010 or later)

General Information

The Civil Engineering Technology programs, at both the associate and bachelor's levels, prepare graduates to become integral members of the engineering and construction team. The program emphasizes the practical application of construction technology and engineering principles.

A Civil Engineering Technologist designs, engineers, analyzes, and supervises the construction of buildings and infrastructure projects such as roadways, bridges, and environmental facilities. As an integral member of the engineering and construction team, the Civil Engineering Technologist must have the ability to create structures that will answer the engineering, economic, safety, technical, and aesthetic requirements of a project. This program allows students to develop those necessary abilities by emphasizing the fundamentals of civil engineering and design within the context of the scientific and technical aspects of materials, soils, planning, surveying, structures, environmental systems, and construction. The program is also designed to instill within students a sense of professionalism and a desire to serve and contribute to society.

The bachelor's degree program builds upon the fundamentals studied in the associate degree and is firmly based upon the study and practical application of advanced concepts of engineering, technology and building sciences. In the bachelor's program, students will study structural design using wood, steel, and concrete, fluid mechanics, soil mechanics and foundation design, transportation design, quality control, scheduling, planning, estimating, and construction law. The program culminates with an independent 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.

Graduates of the CET bachelor's degree program are qualified to seek employment in a wide range of civil engineering and construction opportunities or choose to continue into the NEIT Master of Science degree in Engineering Management or Construction Management.

Program Mission, Goals and Outcomes

Program Mission:

The Civil Engineering Technology programs, both associate and bachelor's levels, will equip students with foundational knowledge of planning, surveying, building materials, structures, testing, cost estimating, operation and maintenance associated with heavy/civil construction projects, the skill to produce and utilize basic construction documents, and the ability to perform basic analysis and design of system components in support of infrastructure projects in the built environment.

Program Educational Objectives

A graduate of the Bachelor of Science in Civil Engineering Technology program will be capable of:

1. Analyzing complex engineering problems.
2. Designing appropriate engineering solutions for given civil and structural systems.
3. Preparing detailed and comprehensive engineering reports.
4. Developing detailed cost estimates for civil engineering projects.
5. Conducting site inspections of civil projects.
6. Coordinating with associated disciplines in the construction industry.

Student Outcomes:

Upon completion of their degree, graduates of the Civil Engineering Technology degree program will have demonstrated they have achieved the following general outcomes:

1. An appropriate mastery of the knowledge, techniques, skills and modern tools of their civil engineering technology.
2. An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology.
3. An ability to conduct, analyze and interpret experiments, and apply experimental results to improve processes.
4. An ability to apply creativity in the design of systems, components, or processes appropriate to program objectives.
5. An ability to function effectively on teams.
6. An ability to identify, analyze and solve technical problems.
7. An ability to communicate effectively.
8. A recognition of the need for, and an ability to engage in lifelong learning.
9. An ability to understand professional, ethical and social responsibilities.
10. A respect for diversity and a knowledge of contemporary professional, societal and global issues.
11. A commitment to quality, timeliness, and continuous improvement.

Curriculum

Term VII					
Course No.		*Course Title*	*C*	*L*	*T*
CET	313	Highway Planning & Engineering	3	0	3
CMT	313	Introduction to Construction Management	3	0	3
ABT	314	Construction Contracts & Specifications	3	0	3
ABT	315	Structural Wood Design	2	4	4
			11	4	13

Term VIII					
Course No.		*Course Title*	*C*	*L*	*T*
CET	311	Applied Fluid Mechanics	3	0	3
ABT	325	Soil Mechanics & Foundation Design	3	0	3
ABT	328	Structural Steel Design	2	4	4
EN	*322*	*Argumentative Research Writing (COM Core)*	4	0	4
HU	*331*	*Ethics and Technology (HUM Core)*	4	0	4
			16	4	18

Term IX					
Course No.		*Course Title*	*C*	*L*	*T*
CET	321	Hydrology & Site Drainage	3	0	3
CMT	331	Specifications & Quality Control	3	0	3
ABT	334	Site Engineering & Planning	2	2	3
ABT	338	Reinforced Concrete Design	4	0	4
MA	*300*	*Statistics (MA/SCI Core)*	4	0	4
			16	2	17

Term X					
Course No.		*Course Title*	*C*	*L*	*T*
CET	412	Boundary Law	3	0	3
CET	413	Municipal Planning	2	2	3
CMT	411	Project Scheduling	3	2	4
ELT	410	Electrical Design and Energy Management & Lab	3	2	4
ELECTIVE		*300-400 Social Science Core*	*4*	*0*	*4*
			15	6	18

Term XI					
Course No.		*Course Title*	*C*	*L*	*T*
CET	423	Infrastructure Maintenance	3	0	3
CMT	415	Construction Estimating II	3	0	3
ABT	427	Senior Thesis Proposal & Research	2	0	2
MA	*320*	*Calculus II (MA/SCI Core)*	*4*	*0*	*4*
ELECTIVE		*300-400 Level Humanities, Social Sciences, or 200 Level Foreign Language Core*	*4*	*0*	*4*
			16	0	16

Term XII					
Course No.		*Course Title*	*C*	*L*	*T*
CET	435	Senior Thesis	2	6	5
MGM	340	Engineering Finance	2	2	3
ABT	433	Construction Law	3	0	3
EN	*421*	*Technical Communications (COM Core)*	*4*	*0*	*4*
			11	8	15
Total Quarter Credit Hours = 97					

Legend
C = Number of lecture hours per week
L = Number of laboratory hours per week
T = Total Quarter Hours where each lecture hour per week is one credit and each pair of laboratory hours per week is one credit

PLEASE NOTE: All liberal arts core courses are listed in italics.

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.

Liberal Arts Core Electives

All programs must meet certain minimum requirements in both the major and in the liberal arts. Course requirements for each program are listed in each curriculum along with liberal arts selections. Courses listed as "Core Electives" in a curriculum can be chosen by students from one of the several core areas listed below. Each core area provides a variety of courses for student choice. Students must take a minimum of 32 credits in core electives for the associate degree and an additional minimum of 28 credits for the bachelor's degree. Individual majors have specific requirements and may require more than the minimum number of liberal arts credits or may specify certain courses in a particular core area. All liberal arts core elective courses are 4 credits. Please refer to the curriculum of the major for specific requirements.

Please refer to the curriculum for each program for specific requirements as some curricula require more than the minimum number of liberal arts core courses. Only the associate-level core electives in the list below can be used to satisfy bachelor's degree core requirements.

Bachelor's Degree Core Elective Areas[1]

To obtain a minimum of 7 courses (28 credits), students may choose from the following course selections:

2 courses from the Communications Core
2 courses from the Math/Science Core
1 course from the Humanities Core
1 course from the Social Sciences Core
1 course from either the Humanities Core
OR from the Arts/Foreign Language Core
OR from the Social Sciences Core

Bachelor's Degree Courses by Core[1]

Communications Core Electives (Minimum 8 Credits)
EN 322 Argumentative Research Writing
EN 331 Research Writing in the Social Sciences
EN 421 Technical Communications
EN 422 Writing in the Health Sciences
SS 303 Communication in the Global Workplace

Math/Science Core Electives (Minimum 8 Credits)
CHM 300 Chemistry I and Lab
CHM 400 Chemistry II and Lab
MA 300 Statistics
MA 301 Math for Management Studies
MA 310 Calculus I
MA 315 Math for Game Developers
MA 320 Calculus II
PHY 300 Physics II & Lab
SCI 304 Development of Western Science
SCI 307 Understanding Science Through Photography
SCI 310 Perception of Green Living
SCI 320 Understanding Flight
SCI 330 Our History and Future in Space
SCI 333 Sports Performance Metrics

SCI 340 Introduction to Environmental Health
SCI 350 Introduction to Genetics and Evolution
SCI 351 Sustainable Technology
SCI 360 Wellness for Life

Arts/Foreign Language Core Electives (Maximum of 4 Credits in Place of a Humanities Course)
JP 201 Introduction to Japanese
SP 201 Introduction to Spanish
SP 203 Spanish for Healthcare Workers

Humanities Core Electives (Minimum 4 Credits)
HU 311 The Art of Film
HU 313 World War II in Film
HU 315 Cultural Competence in the Workplace
HU 320 Multicultural Voices
HU 321 Representations of Gender
HU 331 Ethics and Technology
HU 341 World Religions
HU 350 Literature and Health
HU 352 History of Rock and Roll
HU 432 History of Western Art
HU 433 Encountering 20th Century Art
HU 441 World Literature

Social Sciences Core Electives (Minimum 4 Credits)
EC 301 The Global Economy
PS 330 Marriage and the Family
PS 350 Forensic Psychology
PS 410 Applied Research Statistics
SCI 360 Wellness for Life
SO 461 Language and Society
SS 302 The United States Legal System
SS 303 Communication in the Global Workplace
SS 304 Digital Media & the Law
SS 330 Contemporary Social Issues
SS 350 Everything is a Negotiation

1. Subject to Change

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Degree Progress Checklist

Program Requirements
Check off each completed course.

T7	CET	313	_____
	CMT	313	_____
	ABT	314	_____
	ABT	315	_____

T8	CET	311	_____
	ABT	325	_____
	ABT	328	_____

T9	CET	321	_____
	CMT	331	_____
	ABT	334	_____
	ABT	338	_____

T10	CET	412	_____
	CET	413	_____
	CMT	411	_____
	ELT	410	_____

T11	CET	423	_____
	CMT	415	_____
	ABT	427	_____

T12	CET	435	_____
	MGM	340	_____
	ABT	433	_____

Liberal Arts Core Requirements
7 Required Courses
Each course = 4 credits (total of 28 credits)

	Communications Core		
#1	EN 322	T8	_____
#2	EN 421	T12	_____

	Math/Science Core		
#3	MA 300	T9	_____
#4	MA 320	T11	_____

	Humanities Core		
#5	HU 331	T8	_____

	Social Sciences Core		
#6	300-400 level SS elective	T10	_____

	Arts/Foreign Language*, Humanities, or Social Sciences Core		
#7	300-400 level HU, SS or 200 level AR/FL elective	T11	_____

*Only foreign language courses are allowed as AR/FL electives.

Subject to change.
Please see your advisor for any questions.

Students are advised to take courses in the order and in the term in which they appear on this checklist. Any deviation may result in an extended time required to complete your degree as well as additional tuition and fees. Please contact your Student Advisor prior to making any changes to the course sequence.

Course Descriptions

ABT 314 Construction Contracts & Specifications
3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 232 or ID 315
This course is a study of the procedures used to prepare construction specifications and standard construction contracts. Emphasis will be on commercial construction projects. Topics covered will include the CSI specification format, abbreviated and three-part specifications, party responsibility, liability, relationship between contacts and specifications and contract type versus delivery method.

ABT 315 Structural Wood Design
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
In this course, students study the analysis and design of wood relative to its use as a structural system. Topics will include wood properties, grading rules, allowable working stresses, deflection, connections, flitch beams, framing systems, and loading conditions. Structural differences between solid sawn, laminated, and engineered lumber will be examined as well as the use of computer programs as a design tool.

ABT 325 Soil Mechanics & Foundation Design
3 Class Hours 3 Quarter Credit Hours
In this course students study the engineering properties of soils and the principals of foundation design. Topics covered will include soil classification, stress, settlement, consolidation, slope stability, bearing pressure, and retaining wall and shallow foundation design.

ABT 328 Structural Steel Design
2 Class Hours 4 Lab Hours 4 Quarter Credit Hours
In this course students study the analysis and design of steel relative to its use as a structural system. Topics will include properties of steel, the design of beams, columns, plates and joists, rived and welded connections, code compliance, and the use of computer programs as design tools.

ABT 334 Site Engineering & Planning
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
A study of the concepts and technology used in the design, planning, and engineering of a site relative to land use and real estate development. The emphasis will be on residential single and multi-family development. Topics will include site analysis and selection, plane surveying, grading, roads, drainage, utilities, density, erosion and sediment control, zoning and environmental regulations, and federal, state and municipal approvals. Students will develop a graphic solution for an assigned real estate development project.

ABT 338 Reinforced Concrete Design
4 Class Hours 4 Quarter Credit Hour
In this course students study the analysis and design of reinforced concrete elements relative to their use as a structural system. Topics will include properties of reinforced concrete, the design of beams, columns, and one-way slabs, positive and negative moment and shear reinforcement, pre-stressed concrete, code compliance, and the use of computer programs as a design tool.

ABT 427 Senior Thesis Proposal & Research
2 Class Hours 2 Quarter Credit Hours
This course is a direct preparatory course for ABT 430/CET 435/ID 430 Senior Thesis. The intent of the course is to guide and assist students through the process of initial project selection, site selection, and proposal preparation, and the collection, synthesis and publication of a comprehensive research document for the thesis project. Topics will include project selection, site analysis, research, and architectural programming.

ABT 433 Construction Law
3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 314
This course examines the aspects of law that are unique or of special interest to the construction and architectural process. Topics will include government regulations, bidding, contracts, formation and interpretation of contract documents, liability, risk management, and dispute resolution.

CET 311 Applied Fluid Mechanics
3 Class Hours 3 Quarter Credit Hours
Prerequisite: MA 310
This course covers the fundamental principles and methods of fluid mechanics forming the analytical basis for hydrologic studies including closed system flow, storm water management engineering and open channel flow.

CET 313 Highway Planning & Engineering
3 Class Hours 3 Quarter Credit Hours
Principles of route location and alternative analysis. Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges. Examination of common pavement materials and the design of flexible and rigid pavements for highways and airports.

CET 321 Hydrology and Site Drainage
3 Class Hours 3 Quarter Credit Hours
Prerequisite: CET 311
This course develops analysis and design techniques for incompressible pipe flow, uniform open channel flow, and hydraulic structures. Students learn the design of municipal water distribution and wastewater collection (storm and sanitary) systems by combining principles from hydraulics, hydrology and environmental engineering coursework into an integrated design approach. Analysis of elements of the hydrologic cycle and design with emphasis on precipitation, evapotranspiration, infiltration, runoff and groundwater are covered. Precipitation/Runoff relationships, routing methods, flood prediction and groundwater yield from aquifers are also introduced.

CET 412 Boundary Law
3 Class Hours 3 Quarter Credit Hours
Prerequisite: CET 231
This course in boundary law addresses the fundamental principles of real property as applied to land surveying and related professions. A practical exploration of survey evidence and the laws of boundary location for efficient, accurate boundary determination. Discussion and applications center on practical situations and concepts commonly encountered while conducting boundary surveys and the determination of the extent of ownership rights. Students explore the scope of the surveyors' judiciary role in real property ownership.

CET 413 Municipal Planning
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisites: ABT 334, CET 313, CET 321
Overview of the relationship of municipal planning to the civil engineering profession. Introduction to municipal master plans, comprehensive waste management plans, pavement management systems and various other infrastructure planning documents. Students will explore the relationship of the federal, state, regional planning agencies and cities & towns. The organizational structure, roles and responsibilities of municipal government officials and their impact upon infrastructure planning, design and construction will be examined. Guest lectures by municipal officials will be included.

CET 423 Infrastructure Maintenance
3 Class Hours 3 Quarter Credit Hours
Prerequisite: CET 413
Introduction to the maintenance and upkeep of streets, medians, lights, traffic signage and markings, storm sewers and drains, buildings & grounds, electrical services, and other common engineering infrastructure components. Emphasis on the common theories and applications of infrastructure maintenance including planned maintenance systems (PMS), infrastructure inspection, maintenance techniques and emergency repair actions. Case studies and directed research on local infrastructure maintenance projects and programs.

CET 435 Senior Thesis
2 Class Hours 6 Lab Hours 5 Quarter Credit Hours
Prerequisite: ABT 427
This course provides an in-depth assessment of civil engineering technologies and the products derived and/or utilized in the context of a construction project. Focus will be upon a Senior Thesis/Project, development of a student-designed engineering project and development of a formal set of construction project documents including construction plans, specifications, quantities and estimates. Additionally, various aspects such as environmental requirements will be incorporated within the project.

CMT 313 Introduction to Construction Management
3 Class Hours 3 Quarter Credit Hours
This course introduces students to the field of construction management relative to construction contracting and the construction industry. Topics will include fundamental relationships between construction costs, resources, scheduling, the concept of scope of work, careers in construction management, qualifications for professional construction managers, and professional organizations within the industry.

CMT 331 Specifications and Quality Control
3 Class Hours 3 Quarter Credit Hours
Prerequisites: CMT 313, ABT 314
In this course, students will continue their study of construction project specifications relative to contract delivery and quality requirements. Students will perform case studies of construction contracts, examine accepted formats and requirements for specifications, and study the legal, social and financial ramifications of adherence to contract specifications. Additional topics will include field monitoring, enforcement and modification of specifications and the resulting impact upon the construction management process.

CMT 411 Project Scheduling
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisite: CMT 313
This course exposes students to the fundamentals of project scheduling. Topics will include project diagramming, activities and activity relationships, critical path, WBS, and formal schedule preparation using state of the art computer scheduling software. Class projects will include developing and preparing schedules for architectural and/or civil engineering projects.

CMT 415 Construction Estimating II
3 Class Hours 3 Quarter Credit Hours
Prerequisite: ABT 127 or CR 136 or CET 221
This course expands upon the theory, applications, and technology studied in the prerequisite course. Topics will include the use of general conditions, bonding costs, material take-off methods, subcontractor coasts, CSI format, overhead, and profit. The primary reference tool will be the *R.S. Means Cost Works* book.

ELT 410 Electrical Design and Energy Management & Lab
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
This course will demonstrate the process of designing the electrical distribution systems for commercial and industrial buildings. Students will identify all distribution components, understand specialized electrical needs, design switchboard and panelboard layouts, design and draw a complete electrical plan showing general purpose, specialized and lighting loads as well as the raceways that feed them. Students will use AutoCAD MEP for all system design and layouts. Students will be required to design their systems by applying all necessary National Electrical Codes (NEC). The course will also explore the causes of arc flash faults and calculate arc flash potential and common power quality issues and how to apply common mitigation strategies.

MGM 340 Engineering Finance
2 Class Hours 2 Lab Hours 3 Quarter Credit Hours
Prerequisite: MA 125 or MA 210
In this course, students study the fundamentals of economic analysis with the emphasis on the topics that are relative to the work of an engineer. Topics will include basic economic concepts, financial decision making, financial statements, depreciation, financial ratios, time value of money, evaluating projects, breakeven analysis and continuous financial improvement.

Liberal Arts, Math and Science Courses
Bachelor's Degree

Community Enrichment (Social Science Core)

CE 301 Community Enrichment
1 Quarter Credit Hour
This online course is offered through the Feinstein Enriching America Program. Weekly assignments include topics such as B Corporations, civic and social responsibility, and Non-Governmental Organizations. A 15-hour community enrichment project is also required. Community engagement six months prior to taking the course may be accepted with proper documentation. Current or prior military service and concurrent clinical experiences are accepted in lieu of the community enrichment project. After successful completion of the course, students are eligible to apply for a Feinstein Scholarship, which is awarded each term.

Chemistry (Math/Science Core)

CHM 300 Chemistry I and Lab
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MA 125
Topics covered include atomic structure, the periodic law, and nature of the chemical bond, chemical reactivity, stoichiometry, and acid base reactions.

CHM 400 Chemistry II and Lab
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: CHM 101 or CHM 300 and MA 125
This course focuses on chemical reactions and related concepts. Topics include chemical bonds, solution chemistry, acids and bases, chemical equilibria, kinetics, thermodynamics and descriptive chemistry. Lecture and lab.

Economics (Social Sciences Core)

EC 301 The Global Economy
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 322 or EN 331
This course is an exploration of the increasingly complex global economy with particular attention to the competing political economies of Europe, the United States, and the Pacific Rim.

English (Communications Core)

EN 322 Argumentative Research Writing
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
In EN 322, "Argumentative Research Writing," students engage in critical thinking, credible research, and persuasive writing. Beginning with the idea that academic and professional arguments result in a collegial exchange of ideas to pursue knowledge, this course prompts students to examine various viewpoints of a debate. The central goal for students is to produce an argument essay based on meaningful dialogue and thoughtful reflection. Students are introduced to different models of argument, persuasive appeals, logical reasoning, and visual rhetoric. The course breaks the writing process down into a series of comprehensible habits of mind and investigative skills: inquiry, active reading, critical analysis, research, communication, and documentation of sources.

EN 331 Research Writing in the Social Sciences
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
In this advanced research writing course, students will read, research and evaluate social science articles and other materials in order to understand their claims, credibility and conclusions. Students will conduct an extensive literature review on a topic of their choice resulting in an APA-formatted research paper including an abstract and reference section. Utilizing writing workshops, students will write coherent and unified texts, including effective introductions, clear thesis statements, supporting details, transitions, and strong conclusions.

EN 421 Technical Communications
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 322 or EN 331
EN 421 is an advanced writing course designed to help students achieve mastery in presenting complex content. This course encompasses writing for a broad range of technical and general audiences in virtually all media. Students will reinforce their ability to analyze audience, purpose, and content. Additionally, students will learn how to plan and organize content to meet goals, use graphics effectively, and deliver an oral presentation.

EN 422 Writing in the Health Sciences
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 322 or EN 331
EN 422 is an advanced writing course focusing on written communication common in the health science professions. To better prepare students for the challenges of successful professional communication, Writing in the Health Sciences targets the three main audiences of the health provider: other professionals, patients and clients, and the public. For each of these audiences, students will master writing techniques and practices to ensure that their message is being understood and that their professional voices are being heard at all levels of the health care organization.

Humanities (Humanities Core)

HU 311 The Art of Film
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
This course is a survey of films that have significantly contributed to the development of film as an art and as an industry. Topics of discussion include filmmaking techniques and theories of criticism.

HU 313 World War II in Film
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
The Second World War has remained a great thematic source for today's filmmakers. This course will examine films made about World War II. After watching each film, students will analyze the way the films address such themes as patriotism, leadership, moral responsibility, heroism, cowardice, survival, comradeship, and readjustment to peacetime conditions. The films will also be analyzed through discussion, reading, research and writing, in terms of the contribution of these films in developing a better understanding of current military conflicts.

HU 315 Cultural Competence in the Workplace
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
Students of all disciplines must be ready to engage in a globally connected world requiring an understanding of cultural norms, differences, and beliefs which effect the workplace. This course will

examine the students' understanding of what culture is and what each citizen of a global world will need to provide knowledge, skills, and an attitude inherent in a culturally responsive manner.

HU 320 Multicultural Voices
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
This course will examine literary works that cross the boundaries of national lines and cultures and reflect the experiences that occur in the diverse United States. How do we learn to understand our own and different cultural identities and practices through interactions with others? What role does the experience of immigrants play in how we decide what is American culture? The purpose of this course is for all of us to gain an understanding and appreciation of culture, cultural values, and perspectives by reading various works, in different genres, written by authors of a variety of racial, ethnic, and national backgrounds.

HU 321 Representations of Gender
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
HU 321 is an advanced course that analyzes portrayals of gender in both written and visual text including literature, film, and television to find patterns of meaning that illuminate human nature and society. Additionally, it will explore how gender intersects with other social constructs like race, ethnicity, and sexual orientation.

HU 331 Ethics and Technology
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
This course will explore the basic concepts of ethical theories and ethical values and apply these to technologically-based dilemmas through case studies. These dilemmas will be considered in terms of their implications both for individuals, and for professionals involved in creating and maintaining technology, and mechanisms will be developed to guide ethical discussions and decision-making.

HU 341 World Religions
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
In this course, students will examine religious practices surrounding life passages (birth, marriage, death), and the food, clothing, sacred calendars, sacred texts, and ethics of several major world religions.

HU 350 Literature and Health
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100 or its equivalent
Through the study of fiction and poetry, students broaden their understanding of two important perspectives in healthcare – that of patient and caregiver. With the ultimate goal of engendering empathy for both parties, this course requires students to read a variety of literary texts that address the social, cultural, psychological, familial, institutional, and professional dimensions of healthcare. Course requirements include close reading, lively class discussion, short oral presentations, original research, and thoughtful writing.

HU 352 History of Rock and Roll
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
This course will trace the various musical forms and technological advances that have led to the American popular music of today. Particular emphasis will be given to blues and jazz and their influence on early rock and roll. In addition, a substantial portion of the course will be devoted to the technology that has led to today's sophisticated performance and recording techniques. Students will also experience

some hands-on musical activities with instruments such as the guitar and keyboard that are vital components of today's music.

HU 432 History of Western Art
4 Class Hours 4 Quarter Credit Hours
This course offers students the opportunity to explore the visual arts throughout Western history. Students will develop knowledge of artists and artistic development and increase their ability to critically appreciate a wide range of art across media, styles, and time periods. The course will emphasize painting, and will additionally examine sculpture, architecture and photography, as time permits.

HU 433 Encountering 20th Century Art
4 Class Hours 4 Quarter Credit Hours
Students will examine art produced in the 20th Century by exploring a variety of factors including: the differences in this art from what had come before; the role of the machine and technology in subject matter, technique and production; the major social movements and political events of the 20th Century and how they were represented in art; and the major movements in art in this century. Important works by major artists of this period will be studied, so that students can recognize these and similar works, and appreciate their place in popular culture. Students will learn to be comfortable with art and be able to "read" art for their own enjoyment. They will come to appreciate the notion that art, in the final analysis, is a creative expression of their world, their lives, what they see and feel and experience every day.

HU 441 World Literature
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
As a result of globalization, we are interacting more often with people from other cultures. This course uses fiction, poetry, and drama from around the world to learn about other cultures.

Japanese (Arts/Foreign Language Core)

JP 201 Introduction to Japanese
4 Class Hours 4 Quarter Credit Hours
Students will be introduced to the basics of Japanese, (speaking, listening, reading, and writing) with an emphasis on comprehension and speaking. Vocabulary used in everyday communication in the workplace, school, and common social situations will be covered. Contemporary Japanese society will be addressed in class discussions and video presentations including, but not limited to art, education, film (in particular, animé), food, literature, music, sports, and technology. Japanese technological invention and know-how, as well as the unique challenges of doing business with the Japanese will be studied. Japanese guest speakers will be invited to share their expertise and experiences.

Mathematics (Math/Science Core)

MA 300 Statistics
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 125 or MA 200 or MA 301
This introductory course stresses the use of statistics as a management tool for decision-making. The focus is on descriptive statistics, communicating statistical data, concepts of probability distribution, estimation, and hypothesis testing.

MA 301 Math for Management Studies
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 100/110 or MA 105 or above
MA 301 is designed to transition students from basic algebra to more advanced business applications. Specific topics include: percent increase and decrease problems; linear and quadratic functions with cost, revenue, profit, supply and demand function applications; descriptive statistics; exponential and logarithmic functions with exponential growth and decay applications; compound interest and annuities. There are video examples of how to do some problems in Excel as an introduction to that program.

MA 310 Calculus I
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 210
Limits will be introduced, and the derivatives and integrals of algebraic functions will be studied at length. Applications include rectilinear motion, curve sketching, maxima and minima problems, related rates, and area under a curve.

MA 315 Math for Game Developers
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 310
Students will study the essential math necessary to become a successful game developer. Topics include vectors, matrices, transformations, collision detection, random numbers, rendering techniques and optimizations.

MA 320 Calculus II
4 Class Hours 4 Quarter Credit Hours
Prerequisite: MA 310
This continuation of Calculus I begins with derivatives of transcendental functions and proceeds with their integration. Additional topics include integration by parts, partial fractions, and numerical methods. Applications of the integral to area, volume, motion, and work will be stressed.

Physics Courses (Math/Science Core)

PHY 300 Physics II & Lab
3 Class Hours 2 Lab Hours 4 Quarter Credit Hours
Prerequisites: MA 125 and PHY 200 (or PHY 126)
This is an algebraic approach to a second course in physics. The topics include: centripetal force, temperature, heat energy, mechanical waves, sound, electrostatics, and basic circuit elements. The laboratory component is designed to give students the opportunity to have hands-on experience with the fundamental concepts of physics studied in the theory portion of the course. Laboratory experiments will be performed to reinforce these concepts.

Psychology (Social Science Core)

PS 330 Marriage and the Family
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100 or its equivalent
This course is a review of psychological concepts relevant to understanding marital and family functioning. Topics will include mate selection, marital communication, intimacy, conflict resolution, transitioning to parenthood, managing crises, family violence, divorce, and balancing work, leisure and family.

PS 350 Forensic Psychology
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
This course addresses the psychological issues of human behavior that surround law enforcement and the legal system. It supplements information provided by physical evidence forensics courses and offers hands-on practice by utilizing psychological techniques implemented in the field. It familiarizes students with new technologies and available databases used in investigations. The course goes beyond criminal profiling popular in today's media and explores the findings of psychological research behind such issues as eyewitness identification (memory retrieval) and interviewing (conformity and obedience). Forensic Psychology also covers newer areas of concern such as psychological assistance in all career aspects of policing from personnel selection to dealing with the demands of the job.

PS 410 Applied Research Statistics
4 Class Hours 4 Quarter Credit Hours
PS 410 is an intermediate-level course designed to develop in students an expertise in identifying statistical approaches to research problems. Students will examine statistics and the rationale behind them. They will comprehend and interpret statistical results as they apply to their programs. Students will master the APA style of writing by dissecting the results and discussion sections of journal articles in their programs and by writing those sections using statistics learned in the course.

<u>Science (Math/Science Core)</u>

SCI 304 Development of Western Science
4 Class Hours 4 Quarter Credit Hours
This course centers on the interaction of science, scientists, technology and society over the past five hundred years, primarily focusing on the development of Western science. The scientific method will be examined utilizing selected case studies. Underlying principles and methodologies of science will be illustrated by comparing and contrasting both the successes and failures of science. Factors affecting the acceptance and use of science and related technologies will be examined.

SCI 307 Understanding Science Through Photography
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 322 or EN 331
This course integrates photography and science. Students will demonstrate their understanding of science concepts through photography and written artifacts. A key to understanding concepts in science is the ability to recognize their applications in everyday use. Problem solving and evaluating discussion board postings are also part of this course. Science concepts such as motion and forces are combined with physical elements of photography such as shutter speed, focal length, and aperture. Students will design and complete a capstone project that focuses on their area of study as it relates to science. Students are expected to have basic knowledge of digital images and have the ability to upload photos. Cameras are not provided by NEIT.

SCI 310 Perception of Green Living
4 Class Hours 4 Quarter Credit Hours
This project-oriented course explores how our world views affect our perception of green living with the main focus on environmental economics. Students will engage in critical analysis of consumerism and the interaction and interdependence between our lifestyle (consumption rate) and environmental sustainability. Students will examine the shift in economic and environmental perceptions by comparing conventional economics with emerging plenitude economics. Students will apply the knowledge gained in this course to technology development strategy, career planning and personal reflection on sustainable living.

SCI 320 Understanding Flight
4 Class Hours 4 Quarter Credit Hours
This course explores a variety of real-world examples of objects moving through the air. While not an applied math course, the concepts that help understand the flight of objects are explored. Freefall, gliding, ballistics, and powered flight will be explained and studied. Both the historical development of manned flight as well as examples of flight in nature as exemplified by both birds and seeds will be investigated.

SCI 330 Our History and Future in Space
4 Class Hours 4 Quarter Credit Hours
A course investigating the history, current programs, and future of space exploration. Topics will focus on our solar system, the current search for water on Mars, and evidence of life on other planets and moons. Current events related to space exploration and Near-Earth Objects will be incorporated whenever possible. Weekly writing assignments pertaining to weekly reading assignments will be required.

SCI 333 Sports Performance Metrics
4 Class Hours 4 Quarter Credit Hours
This introductory course is intended for any student with an interest in physical fitness, exercise or wellbeing. The course will focus on the foundations of exercise testing and training while exploring the various elements of an individual's fitness profile including strength, flexibility, power, balance, speed, agility, aerobic capacity, body composition and anthropometrics. The course will also help explain how each of those fitness parameters relates to a student's ability to play a sport or participate in a hobby such as hiking, running or gardening. Finally, the course will explore various exercise program variables and designs to maintain and improve health and human performance.

SCI 340 Introduction to Environmental Health
4 Class Hours 4 Quarter Credit Hours
Environmental health is the study of the interactions between humankind and our environment. This course will explore health issues arising from exposure to environmental hazards which are the direct result of human activity – such as energy production, industry, and agribusiness. Within the framework of environmental health and sustainability, students will explore core principles of toxicology, epidemiology and risk assessment; and will apply these concepts to the analysis of emerging environmental health problems in a rapidly growing and increasingly industrialized world.

SCI 350 Introduction to Genetics and Evolution
4 Class Hours 4 Quarter Credit Hours
No prior coursework in the subject is assumed. This course begins by looking at cells and what they are. Concepts such as mitosis and meiosis will be explored. What a gene is, how it functions, and how it may be mutated will be covered. The basic principles of genetics, including patterns of inheritance (Mendelian genetics) will be studied. Additional topics include the genetic basis of genotype and phenotype, natural selection, evolution, and speciation. Students will explore recombinant DNA and genetic engineering (genetically modified foods and livestock) and the future of genetics.

SCI 351 Sustainable Technology
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
What do climate changes and carbon emissions have in common? The carbon cycle. In this course students will engage in critical analysis of science components of economic and environmental sustainability. Students will analyze case study scenarios from current events and other sources and propose comprehensive steps for sustainable technology development in the context of their subject specialty. Through various projects, student will apply the knowledge gained in this course to technology development strategy, career planning and personal reflection on sustainable living.

SCI 360 Wellness for Life
4 Class Hours 4 Quarter Credit Hours
Core Fulfillment: Both Math/Science Core and Social Sciences Core
Lifestyle-related diseases are at epidemic proportions in this country. There is scientific evidence that links physical activity and positive habits to improved quality of life. This course will explore topics of health promotion, wellness, risk screening, and behavior change. Students will evaluate how lifestyle-related health problems can be impacted by positive lifestyle choices. Since optimal wellness goes beyond physical fitness and the absence of disease, students will examine the eight dimensions of wellness and design a personal wellness program to attain their health goals.

Sociology (Social Sciences Core)

SO 461 Language and Society
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
This course provides students with knowledge about the role that language plays in our cognitive and social development in order to give us greater power over our interactions with others at home, at work, and elsewhere. Topics covered include: how we speak and why; is language biological or cultural; do men and women speak differently; and what is the connection between language and thought.

Spanish (Arts/Foreign Language Core)

SP 201 Introduction to Spanish
4 Class Hours 4 Quarter Credit Hours
This course will introduce students to the Spanish language with an emphasis on the use of Spanish in the workplace. Students will learn to communicate with customers and other employees in Spanish with a focus on basic vocabulary words used in everyday interactions at the workplace. While each class will emphasize conversational skills, the course will also cover some key principles of Spanish grammar and provide some exposure to a variety of cultural traditions in Spanish-speaking countries. The course is designed for students with no prior knowledge of Spanish. ***Students who speak Spanish fluently or who grew up in a home where Spanish was the primary language spoken will not be eligible to take the course.***

SP 203 Spanish for Healthcare Workers
4 Class Hours 4 Quarter Credit Hours
This course will introduce students to the Spanish language with an emphasis on the use of Spanish in the workplace. Students will learn to communicate with Spanish speaking patient and family and other employees in Spanish with a focus on basic vocabulary words used in everyday interactions at the workplace. While each class will emphasize conversational skills, the course will also cover some key principles of Spanish grammar and provide some exposure to a variety of cultural traditions in Spanish-speaking countries. **The course is designed for students with no prior knowledge of Spanish.**

Social Sciences (Social Sciences Core)

SS 302 The United States Legal System
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
This course will critically analyze whether the American legal system is truly providing equal justice for all members of our society. We will examine how legal disputes are handled and the influences that shape the structure, process and personnel of the legal system.

SS 303 Communication in the Global Workplace
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
Core Fulfillment: Both Communications Core and Social Sciences Core
This course is designed to acquaint students with intercultural communication issues that arise in the workplace, culminating in a final project: making a business/occupational presentation to an audience from another culture.

SS 304 Digital Media & The Law
4 Class Hours 4 Quarter Credit Hours
In this course, students will examine how the existing legal structure within digital and social media operates and understand how the global shift to digital media has profoundly affected the production and control of information from a global and domestic perspective. The course is designed to introduce students to legal issues that are most relevant to careers in digital media and to individuals using digital and social media for personal interests. These topics include information access and protection, intellectual property, defamation, invasion of privacy, commercial speech, jurisdiction, internet regulations, and, of course, freedom of expression.

SS 330 Contemporary Social Issues
4 Class Hours 4 Quarter Credit Hours
This course will examine contemporary social issues from multiple perspectives. Attempts to see the ethics, the arguments and the policy outcomes involved in problems such as drug abuse, crime, poverty and the global environment.

SS 350 Everything is a Negotiation
4 Class Hours 4 Quarter Credit Hours
Prerequisite: EN 100
Program Restriction: This course not open to students in the Business Management program.
This course is intended to help students develop the skills they need to successfully negotiate their way through their work situations. Students will practice both face-to-face negotiations and negotiations carried on electronically.

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 who need more time to complete their curriculum may postpone some of the liberal arts courses until after the completion of the technical requirements. Students are provided up to two additional terms of study to complete the liberal arts requirements without any additional tuition assessment fee. During these additional terms of study, students are required to pay all applicable fees.

Students may also elect to complete some of their liberal arts requirements during Intersession, 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 (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.

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. 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.

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 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-entrees 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.

12. 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 for over fifty years. No school can, and NEIT does not, guarantee to its graduates employment or a specific starting salary.

13. 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.

Technical Standards

These technical standards set forth by the Civil Engineering Technology 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 instrument