DEPARTMENT OF CONSTRUCTION MANAGEMENT AND CIVIL ENGINEERING TECHNOLOGY

CMCE New York City College of Technology
Construction Management & Civil Engineering Technology

DEGREE CHECKLIST FOR ASSOCIATE IN APPLIED SCIENCE IN CIVIL ENGINEERING TECHNOLOGY AND BACHELOR OF TECHNOLOGY IN CONSTRUCTION ENGINEERING TECHNOLOGY

ASSOCIATE DEGREE

GENERAL EDUCATION REQUIRED AND FLEXIBLE COMMON CORE (28 TO 30 CREDITS)

[3] Students who have already completed MAT 1575 may select another mathematics or flexible core course instead.

At least 1 course designated WI is required from the Gen Ed Flexible Common Core.

PROGRAM-SPECIFIC DEGREE REQUIREMENTS (36 CREDITS)

At least 1 course designated WI is required from the program-specific required and elective courses.

Double Duty[2] Specific courses listed indicate double duty courses, i.e., program degree requirements that also meet general education requirements in that category.

COURSE	COURSE TITLE	PRE/CO REQUISITES	CREDITS
ENG 1101	English Composition I (EC)	**Prereq:** CUNY Read and Write Proficiency	3 credits.
ENG 1121	English Composition II (EC)	**Prereq:** ENG 1101	3 credits.
MAT 1475[2]	Calculus I or higher (MQR)	**Prereq:** MAT 1375 or CUNY Placement	4 credits.
PHYS 1433[2] **or**	General Physics I: Algebra Based (LPS, WI) **or**	**Prereq or Coreq:** MAT 1275	4 to 5
PHYS 1441[2]	General Physics I: Calculus Based (LPS, WI)	**Prereq or Coreq:** MAT 1475 or higher	credits.
ECON 1101[2]	Macroeconomics (USED)	**Prereq:** CUNY Read and Write Proficiency	3 credits.
PHYS 1434[2] **or**	General Physics II: Algebra Based (SW) **or**	**Prereq:** PHYS 1433	4 to 5
PHYS 1442[2]	General Physics II: Calculus Based (SW)	**Prereq:** PHYS 1441	credits.
MAT 1575[2 3]	Calculus II	**Prereq:** MAT 1475	4 credits.
	Flexible Common Core Course: WCGI, IS, CE		3 credits.
CMCE 1110	Construction Drawings I		2 credits.
CMCE 1115	Statics (WI)	**Prereq:** MAT 1275 with grade C or higher **Prereq or Coreq:** PHYS 1433 or 1441	3 credits.
CMCE 1211	Construction Drawings II – Computer Aided Drawing (CAD)	**Prereq:** CMCE 1110	2 credits.
CMCE 1215	Strength of Materials	**Prereq:** CMCE 1115 with grade C or higher	2 credits.
CMCE 1222	Surveying I	**Prereq:** MAT 1275 with grade C or higher **Prereq or Coreq:** CMCE 1211	3 credits.
CMCE 2306	Materials Testing Laboratory (WI)	**Prereq:** CMCE 1215	2 credits.
CMCE 2315	Elements of Structural Design-Steel	**Prereq:** CMCE 1215 with grade C or higher	3 credits.
CMCE 2322	Surveying II	**Prereq:** CMCE 1222	3 credits.
CMCE 2351	Fluid Mechanics (WI)	**Prereq:** CMCE 1215 with grade C or higher **Coreq:** CMCE 2351L	4 credits.
CMCE 2351L	Fluid Mechanics Lab	**Prereq:** CMCE 1215 with grade C or higher **Coreq:** CMCE 2351	0 credits.
CMCE 2410	Construction Drawings III	**Prereq:** CMCE 1211 **Prereq or Coreq:** CMCE 2315	2 credits.
CMCE 2416	Elements of Structural Design-Concrete	**Prereq:** CMCE 2315	3 credits.
CMCE 2454	Applied Hydraulics-Water Supply	**Prereq:** CMCE 2351, 2351L	2 credits.
CMCE 2456	Soil Mechanics (WI)	**Prereq:** CMCE 1215 or CMCE 2321	3 credits.
CMCE 2457	Construction Techniques in Civil Engineering	**Prereq:** CMCE 1222	2 credits.

ASSOCIATE IN APPLIED SCIENCE IN CIVIL ENGINEERING TECHNOLOGY: 64 TO 66 CREDITS.
MINIMUM REQUIRED LIBERAL ARTS AND SCIENCES CREDITS: 20 CREDITS.

BACHELOR'S DEGREE

GENERAL EDUCATION FLEXIBLE COMMON CORE AND COLLEGE OPTION REQUIREMENTS (16 TO 18 CREDITS)

[1] Students must take at least one advanced liberal arts course or choose two sequential courses in a foreign language.

At least 1 course designated WI is required from the College Option or Gen Ed Flexible Common Core.

PROGRAM-SPECIFIC DEGREE REQUIREMENTS (32 CREDITS)

At least 1 course designated WI is required from the program-specific required and elective courses.

Double Duty[2] Specific courses listed indicate double duty courses, i.e., program degree requirements that also meet general education requirements in that category.

PROGRAM-SPECIFIC ELECTIVE COURSES (9 CREDITS)

COURSE	COURSE TITLE	PRE/CO REQUISITES	CREDITS
	Flexible Common Core Course: WCGI, IS, CE		3 credits.
	Flexible Common Core Course: WCGI, IS, CE		3 credits.
	Additional Flexible Common Core Course: WCGI, USED,IS, CE, SW		3 credits.
COM 1330	Public Speaking or higher	**Prereq:** CUNY Read, Write Proficiency	3 credits.
	Interdisciplinary course		3 credits.
	Liberal Arts Elective (LibArt)[1] or Foreign Language Sequence (FL)[1]		3 credits.
CMCE 1114	Materials and Methods of Construction I		3 credits.
CMCE 2319	Building Service Systems	**Prereq:** CMCE 1224 or CMCE 2457	2 credits.
CMCE 2412	Construction Estimating	**Prereq:** CMCE 1224 or CMCE 2457	2 credits.
CMCE 3501	Steel Fabrication Detailing	**Prereq:** CMCE 2315, CMCE 2410, MAT 1475	3 credits.
CMCE 3520	Construction Management for Civil Engineering Technologists	**Prereq:** CMCE 2457	4 credits.
CMCE 3602	Heavy Construction Practices	**Prereq:** CMCE 2421 or CMCE 3520, CMCE 2456	3 credits.
CMCE 4700	Construction Law	**Prereq:** CMCE 3520 or CMCE 2421	3 credits.
CMCE 4701	Construction Field Management	**Prereq:** CMCE 3602	3 credits.
CMCE 4702	Construction and Site Safety Management	**Prereq:** CMCE 3602	3 credits.
CMCE 4800	Senior Capstone Project (WI)	**Prereq:** Department Approval	3 credits.
ARCH 3551	Sustainability: History and Practice	**Prereq:** ENG 1101	3 credits.
CMCE TECH	4400 Series		3 credits.
CMCE TECH	4400 Series		3 credits.
CMCE TECH	4400 Series		3 credits.

BACHELOR OF TECHNOLOGY IN CONSTRUCTION ENGINEERING TECHNOLOGY: 123 CREDITS.
MINIMUM REQUIRED LIBERAL ARTS AND SCIENCES CREDITS: 42 CREDITS.

DEPARTMENT OF CONSTRUCTION MANAGEMENT AND CIVIL ENGINEERING TECHNOLOGY

CMCE TECHNICAL ELECTIVES

Choose three courses. Courses are 3 credits.

CMCE 4400 Bridge Building Technology (Prereq: CMCE 2416, 3501)
CMCE 4401 Special Topics (Prereq: CMCE 3602)
CMCE 4402 Fundamentals of Engineering (Prereq: CMCE 3602)
CMCE 4403 Professional Practice & Ethics (Prereq: CMCE 2321 or CMCE 3520)
CMCE 4410 Land Development and Design (Prereq: CMCE 2322, 2410)
CMCE 4415 Real Estate Development Fundamentals (Prereq: CMCE 1224 or 2457)
CMCE 4422 Geographic Information Systems (Prereq: CMCE 2410)
CMCE 4423 Transportation Engineering Technology (Prereq: CMCE 2322, 2410)
CMCE 4456 Foundation Analysis and Design (Prereq: CMCE 2315, 2416, 2456)
CMCE 4458 Earth Retaining Structures (Prereq: CMCE 2315, 2416, 2456)
CMCE 4460 Design of Temporary Structures (Prereq: CMCE 2315, 2416, 2456)
CMCE 4461 Instrumentation and Condition Assessments (Prereq: PHYS 1434, 1442, CMCE 2456)
CMCE 4471 Quality Assurance (Prereq: CMCE 3520)
CMCE 4472 Risk Management in Construction (Prereq: CMCE 3602)
CMCE 4473 Advanced Building Information Modeling (BIM) (Prereq: CMCE 2410)

The Bachelor of Technology degree in Construction Engineering Technology is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org/.

Progression and Graduation To meet prerequisites for required classes in the AAS degree in Civil Engineering Technology, AAS degree in Construction Management Technology, and BTech degree in Construction Engineering Technology, students must earn a C or higher in MAT 1275, CMCE 1115, and CMCE 1215.

SAMPLE COURSE OF STUDY

For Associate in Applied Science in Civil Engineering Technology and Bachelor of Technology in Construction Engineering Technology

SEMESTER 1 (Total Credits 16)

CMCE 1110	Construction Drawings I	2 credits.
CMCE 1115	Statics	3 credits.
ENG 1101	English Composition I	3 credits.
MAT 1475	Calculus I or higher	4 credits.
PHYS 1433	General Physics I: Algebra Based	4 credits.

SEMESTER 2 (Total Credits 18)

CMCE 1211	Construction Drawings II – Computer Aided Drawing (CAD)	2 credits.
CMCE 1222	Surveying I	3 credits.
CMCE 1215	Strength of Materials	2 credits.
MAT 1575	Calculus II	4 credits.
ENG 1121	English Composition II	3 credits.
PHYS 1434	General Physics II: Algebra Based	4 credits.

SEMESTER 3 (Total Credits 15)

CMCE 2306	Materials Testing Laboratory	2 credits.
CMCE 2315	Elements of Structural Design-Steel	3 credits.
CMCE 2322	Surveying II	3 credits.
CMCE 2351	Fluid Mechanics	4 credits.
CMCE 2351 L	Fluid Mechanics Lab	0 credits.
FlexCore		3 credits.

SEMESTER 4 (Total Credits 15)

CMCE 2410	Construction Drawings III	2 credits.
CMCE 2416	Elements of Structural Design-Concrete	3 credits.
CMCE 2454	Applied Hydraulics-Water Supply	2 credits.
CMCE 2456	Soil Mechanics	3 credits.
CMCE 2457	Construction Techniques in Civil Engineering	2 credits.
ECON 1101	Macroeconomics	3 credits.

SEMESTER 5 (Total Credits 14)

CMCE 1114	Materials and Methods of Construction I	3 credits.
CMCE 2319	Building Service Systems	2 credits.
CMCE 2412	Construction Estimating	2 credits.
CMCE 3501	Steel Fabrication Detailing	3 credits.
CMCE 3520	Construction Management for Civil Engineering Technologists	4 credits.

SEMESTER 6 (Total Credits 15)

CMCE 3602	Heavy Construction Practices	3 credits.
ARCH 3551	Sustainability: History and Practice	3 credits.
CMCE TECH		3 credits.
FlexCore		3 credits.
COM 1330	Public Speaking or higher	3 credits.

SEMESTER 7 (Total Credits 15)

CMCE 4700	Construction Law	3 credits.
CMCE 4701	Construction Field Management	3 credits.
CMCE 4702	Construction and Site Safety Management	3 credits.
ID	Interdisciplinary Course	3 credits.
FlexCore		3 credits.

SEMESTER 8 (Total Credits 15)

CMCE 4800	Senior Capstone Project	3 credits.
CMCE TECH		3 credits.
CMCE TECH		3 credits.
Add. Flex Core		3 credits.
LibArt		3 credits.

Footnotes

[1] In meeting their general education requirements overall, students must take at least one advanced liberal arts course **or** choose two sequential courses in one of the foreign language (FL) course offerings, such as Arabic (ARB), Spanish (SPA), Chinese (CHN), or French (FREN).

[2] Specific courses listed indicate double duty courses, i.e., program degree requirements that also meet general education requirements. Choosing to take advantage of double duty can speed up progress toward graduation and increase elective credits. Consult with an advisor about your options.

[3] Students who have already completed MAT 1575 may select another mathematics or flexible core course instead.