

DEPARTMENT OF COMPUTER ENGINEERING TECHNOLOGY

DEGREE CHECKLIST FOR ASSOCIATE IN APPLIED SCIENCE IN ELECTROMECHANICAL ENGINEERING TECHNOLOGY AND BACHELOR OF TECHNOLOGY IN COMPUTER ENGINEERING TECHNOLOGY

For students entering the program Spring 2018 to Fall 2020.

ASSOCIATE DEGREE

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

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 Duty² 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, Write Proficiency	3 credits.
ENG 1121	English Composition II (EC)	Prereq: ENG 1101	3 credits.
MAT 1375 ²	Precalculus or higher (MQR)	Prereq: MAT 1275	4 credits.
MAT 1475 ²	Calculus or higher (sw)	Prereq: MAT 1375	4 credits.
PHYS 1433 ² or PHYS 1441 ²	General Physics I: Algebra Based (LPS, WI) or General Physics I: Calculus Based (LPS, WI)	Prereq or Coreq: MAT 1275 or higher Prereq or Coreq: MAT 1475 or higher	4 to 5 credits.
PHYS 1434 ² or PHYS 1442 ²	General Physics II: Algebra Based (sw, WI) or General Physics II: Calculus Based (sw, WI)	Prereq: PHYS 1433 Prereq: PHYS 1442	4 to 5 credits.
	Flexible Common Core Course: WCGI/CE/USED/IS		3 credits.
	Flexible Common Core Course: WCGI/CE/USED/IS		3 credits.
EMT 1111	Logic and Problem-Solving	Prereq: CUNY Math Proficiency	1 credit.
EMT 1120	Technical Graphics		1 credit.
EMT 1130	Electromechanical Manufacturing Laboratory		1 credit.
EMT 1150	Electrical Circuits	Prereq or Coreq: MAT 1175 or higher, EMT 1120, EMT 1130	5 credits.
EMT 1220	Mechanisms	Prereq: EMT 1120, EMT 1130; Prereq or Coreq: MAT 1275 [^] , PHYs 1433, or PHYS 1441	4 credits.
EMT 1250	Fundamentals of Digital Systems	Prereq: EMT 1111, EMT 1130, EMT 1150	4 credits.
EMT 1255	Electronics (WI)	Prereq or Coreq: EMT 1250, MAT 1375 or higher	4 credits.
EMT 2320	Advanced Mechanisms	Prereq: EMT 1120, EMT 1220 Prereq or Coreq: EMT 1255	5 credits.
EMT 2370	Computer Hardware Systems	Prereq: EMT 1250	2 credits.
EMT 2390L	Operating Systems Design Laboratory	Prereq or Coreq: EMT 2370	1 credit.
EMT 2455	Data Communications	Prereq: EMT 1250, EMT 2370	2 credits.
EMT 2461	Electromechanical Systems Software Interface	Prereq: EMT 1111, EMT 2370 Prereq or Coreq: EMT 2455, EMT 2480L, MAT 1475 or higher	2 credits.
EMT 2480L	Electromechanical Systems Design Laboratory	Prereq: EMT 2320, PHYS 1433 or 1441, ENG 1101	1 credit.
EMT 2410 or CST 2403	C/C++ Programming for Embedded Systems or Introductory C++ Programming Language I	Prereq or Coreq: EMT 2370 or EET 2262 or TCET 2242 or EMT 2280 or MTEC 2280 or MECH 1240 Prereq: (EMT 1111, MAT 1275 [^]) or (CST 1101, MAT 1275 [^]) or MAT 1475	3 credits. 3 credits.

ASSOCIATE IN APPLIED SCIENCE IN ELECTROMECHANICAL 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 (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 (46 CREDITS)

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

AAS GRADUATES ³
EMT Graduate take CET 3525
MECH Graduate take CET 3525/3350
EET/TCET Graduate take CET 4762

COURSE	COURSE TITLE	PRE/CO REQUISITES	CREDITS
	Flexible Common Core Course: WCGI/CE/USED/IS		3 credits.
	Flexible Common Core Course: WCGI/CE/USED/IS		3 credits.
COM 1330	Public Speaking or higher Interdisciplinary course	Prereq: CUNY Read, Write Proficiency	3 credits. 3 credits.
	Liberal Arts Elective (LibArt) or Foreign Language Sequence (FL)		3 credits.
MAT 2580 ²	Introduction to Linear Algebra or Foreign Language Sequence (FL) ¹	Prereq or Coreq: MAT 1575	3 credits.
CET 3525 ³ or CET 3550 ³ or CET 4762 ³	Electrical Networks (Required only AAS in EMT or MECH) or Analog and Digital Electronics (Required AAS in MECH) or Electromechanical Devices (Required only AAS in EET or TCET)	Prereq or Coreq: MAT 1575 or higher Prereq or Coreq: MAT 1575 or higher, CET 3525 Prereq: CET 3615, MAT 2680, CET 3625 all with grades C or higher	4 credits.
CET 3510	Microcomputer Systems Technology	Prereq: Previous course in digital electronics, CST 2403 or EMT 2410, MAT 1575 or higher	4 credits.
CET 3615	Instrumentation and Data Acquisition	Prereq: MAT 1575 or higher, CET 3525, PHYS 1434 or PHYS 1442	4 credits.
CET 3625	Applied Analysis Laboratory	Prereq or Coreq: MAT 2680	1 credit.
CET 3640	Software for Computer Control	Prereq: CST 2403 or EMT 2410, CET 3510	3 credits.
CET 4705	Component and Subsystem Design I	Prereq: CET 3625 with a grade of C or higher, previous course(s) in analog and digital electronics	2 credits.
CET 4711	Computer Controlled System Design	Prereq: CET 3640 Prereq or Coreq: CET 4705	2 credits.
CET 4773	Inter-networking Technology (WI)	Prereq: CET 3510	4 credits.
CET 4805	Component and Subsystem Design II	Prereq: CET 4705	2 credits.
CET 4811	Capstone Design Project	Prereq: CET 3640, CET 4711 Prereq or Coreq: CET 4773, CET 4805 and CET 4684	2 credits.
CET 4864	Feedback Controlled Systems (WI)	Prereq: CET 3625 and MAT 2580	4 credits.
MAT 1575 ^{2,4}	Calculus II	Prereq: MAT 1475	4 credits.
MAT 2680	Differential Equations	Prereq: MAT 1575	3 credits.
	Technical Elective I (TECH Elect only for students with an AAS in EMT, EET or TCET)		3 to 4 credits.
	Technical Elective II (TECH Elect) or Internship		3 credits.

BACHELOR OF TECHNOLOGY IN COMPUTER ENGINEERING TECHNOLOGY: 128 TO 130 CREDITS. MINIMUM REQUIRED LIBERAL ARTS AND SCIENCES CREDITS: 42 CREDITS

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PROGRAM-SPECIFIC ELECTIVE COURSES

TECHNICAL ELECTIVES (TECH ELECT)

Select One Course From Each Category.

TECHNICAL ELECTIVE I (BTECH) REQUIRED ONLY FOR STUDENTS WITH AN AAS IN EMT, EET/TCET

CET 4900 series, CST 3500 or higher, or TCET 3100 or higher, with department permission.

TECHNICAL ELECTIVE II (BTECH)

Choose from CET 3910, CET 3572, CET 3672, CET 4772, CET 4872, CET4900 series, CST 3500 or higher, or TCET 3100 or higher, with department permission.

Required TECH ELECT II only for students with an AAS in MECH:

EMT 2410 or CST 2403 or an approved equivalent

SAMPLE COURSE OF STUDY

For Associate in Applied Science in Electromechanical Engineering Technology and Bachelor of Technology in Computer Engineering Technology, entering at MAT 1375.

SEMESTER 1

(Total Credits 15)

EMT 1111	Logic and Problem-Solving	1 credit.
EMT 1120	Technical Graphics	1 credit.
EMT 1130	Electromechanical Manufacturing Laboratory	1 credit.
EMT 1150	Electrical Circuits	5 credits.
MAT 1375	Precalculus or higher (MQR)	4 credits.
ENG 1101	English Composition I	3 credits.

SEMESTER 2

(Total Credits 16)

EMT 1220	Mechanisms	4 credits.
EMT 1250	Fundamentals of Digital Systems	4 credits.
EMT 1255	Electronics (WI)	4 credits.
PHYS 1433	General Physics I: Algebra Based	4 credits.

SEMESTER 3

(Total Credits 18)

EMT 2320	Advanced Mechanisms	5 credits.
EMT 2370	Computer Hardware Systems	2 credits.
EMT 2390L	Operating Systems Laboratory	1 credits.
MAT 1475	Calculus or higher	4 credits.
ENG 1121	English Composition II	3 credits.
FlexCore		3 credits.

SEMESTER 4

(Total Credits 15)

EMT 2455	Data Communications	2 credits.
EMT 2461	Electromechanical Systems Software Interface	2 credits.
EMT 2480L	Electromechanical Systems Design Laboratory	1 credit.
PHYS 1434	General Physics II: Algebra Based	4 credits.
EMT 2410/CST 2403	C/C++ Programming for Embedded Systems or Introductory C++ Programming Language I	3 credits.
Flex Core	Writing Intensive	3 credits.

SEMESTER 5

(Total Credits 15)

CET 3510	Microcomputer Systems Technology	4 credits.
CET 3525	Electrical Networks	4 credits.
MAT 1575	Calculus II	4 credits.
COM 1330	Public Speaking or higher	3 credits.

SEMESTER 6

(Total Credits 17)

CET 3615	Instrumentation and Data Acquisition	4 credits.
CET 3625	Applied Analysis Laboratory	1 credit.
CET 3640	Software for Computer Control	3 credits.
MAT 2680	Differential Equations	3 credits.
Flex Core	Writing Intensive	3 credits.
TECH Elect II		3 credits.

SEMESTER 7

(Total Credits 17)

CET 4705	Component and Subsystem Design I	2 credits.
CET 4711	Computer Controlled System Design	2 credits.
MAT 2580	Introduction to Linear Algebra	3 credits.
CET 4773	Inter-networking Technology	4 credits.
ID	Interdisciplinary Course	3 credits.
Flex Core		3 credits.

SEMESTER 8

(Total Credits 15)

CET 4805	Component and Subsystem Design II	2 credits.
CET 4811	Capstone Design Project	2 credits.
CET 4864	Feedback Controlled Systems (WI)	4 credits.
TECH Elect I		4 credits.
LibArts		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 A student with an AAS in EMT must take CET 3525; MECH must take CET 3525 and 550; EET/TCET must take CET 4762.

⁴ Students who have already completed MAT 1575 may select another mathematics or flexible core course instead.