Degree Pathway

A.A.S. in Computer Engineering Technology – Catalog Year 2022-23

The number of credits you take each year will determine when you graduate. To graduate on time, you are strongly encouraged to enroll in at least 30 credits toward your degree during the calendar year, including fall and spring semesters and winter and summer sessions This Degree Pathway is designed for students who place into **developmental mathematics**. Additional Degree Pathways are available for students who place into other levels of mathematics. Please see the degree website or your advisor for more information.

Courses in **Bold Text** are prerequisites for later courses or only offered in the Fall or Spring semester and should be taken where indicated in the sequence.

Fall Semester #1

Courses	Credits	Prerequisites and Corequisites[1]
MA-114 College Algebra and Trigonometry for Technical Students (Required Core 1B: Mathematical and Quantitative Reasoning)	4	Pre/corequisite: Must satisfy developmental requirement in math or be co-enrolled in MA-114 ALP
MA-114 ALP College Algebra and Trigonometry for Technical Students	0 (3 eq.)	Corequisite: MA-114
ET-110 Electric Circuit Analysis	4	Corequisite: MA-114
ET-540 Digital Computer Theory	4	None
TECH-100 Introduction to Engineering and Technology	1	None
Total credits for the term	13 + 3 eq.	

Spring Semester #1

Courses	Credits	Prerequisites and Corequisites[1]
ENGL-101 English Composition I (ALP section) (Required Core 1A - English Composition)	3	Pre/corequisite: Must satisfy developmental requirement in English or be co-enrolled in ENGL-99
ENGL-99 Developing Competence in College Reading, Writing, & Study Skills	0 (4 eq.)	Corequisite: ENGL-101
MA-128 Calculus for Technical and Business Students[2]	4	Prerequisite: MA-114 (C or better)
ET-210 Electronics I	4	Prerequisite: ET-110 (C or better)
ET-509 Programming for Embedded Systems	1	Prerequisite: TECH-100
Total credits for the term	12 + 4 eq.	

Summer Term

Courses	Credits	Prerequisites and Corequisites[1]
ENGL-102 English Composition II (Required Core 1A - English Composition)	3	Prerequisite: ENGL-101 or placement
PH-201 General Physics I[3] (Required Core 1C – Life and Physical Sciences)	4	Prerequisites: MA-114 or MA-119 and MA-121
Total credits for the term	**7**	

Fall Semester #2

Courses	Credits	Prerequisites and Corequisites[1]
ET-502 Introduction to Computer Programming	1	None
ET-504 Operating Systems and System Deployment	2	None
ET-560 Microprocessors and Microcomputers	4	Prerequisites: ET-210, ET-509, and ET-540
ET-704 Networking Fundamentals I	4	None
ET Elective: Select from list below	2	Check individual courses for prerequisites and corequisites
One History or Social Science course from Flexible Core 2A, 2B, 2D, or 2E – (HIST-100 series, ANTH, CRIM-101 or 102, ECON, PLSC, PSYC, or SOCY)[3]	3	Check individual courses for prerequisites and corequisites
Total credits for the term	**16**	

Spring Semester #2

Courses	Credits	Prerequisites and Corequisites[1]
ET-575 Introduction to C++ Programming Design & Implementation	3	Corequisite: MA-114, MA-119, or MA-440
ET-350 Computer Control Systems	4	Corequisite: ET-560
ET-420 Computer Project Laboratory	1	Prerequisite: ET-560
ET-542 Computer and Electrical Device Applications	1	Prerequisite: ET-540
PH-202 General Physics II[3,4] (Flexible Core 2E – Scientific World)	4	Prerequisites: PH-201 (C or better)
One History or Social Science course from Flexible Core 2A, 2B, 2D, or 2E – (HIST-100 series, ANTH, CRIM-101 or 102, ECON, PLSC, PSYC, or SOCY)[3]	3	Check individual courses for prerequisites and corequisites
Total credits for the term	**16**	
Total credits required for the A.A.S. degree	**64**	

Notes:

1. Prerequisites for a course must be passed before taking the course. Corequisites must be passed before taking the course or taken in the same term as the course.
2. Students may substitute MA-440 and MA-441 for MA-114 and MA-128
3. Students are required to take particular courses in some areas of the Common Core that fulfill both general education and major requirements. If students do not take the required courses in the Common Core, they will have to take additional credits to complete their degree requirements.
4. Students may substitute PH-301 and PH-302 or PH-421 and PH-422 for PH-201 and PH-202.

All students must complete two (2) WI designated classes to fulfill degree requirements.

Major Elective Courses

Major Elective Courses	Credits	Prerequisites and Corequisites
ET-140 Sinusoidal and Transient Circuit Analysis	3	Prerequisite: ET-110 Corequisite: MA-128
ET-220 Electronics II	4	Prerequisite: ET-210
ET-230 Telecommunications I	4	Prerequisite: ET-210
ET-231 Telecommunications II	4	Prerequisite: ET-230, and either ET-510 or ET-540
ET-232 Wireless Mobile Communications	3	Prerequisite: ET-704 or permission of the Department
ET-305 Transients and Electromechanical Transducers	2	Prerequisite: ET-140; Corequisite: MA-128
ET-360 Electronics and Automation for the Home	4	Prerequisite: ET-210 or Permission of the Department
ET-375 Introduction to Robotics	4	Prerequisite: ET-110 and either ET-510 or ET-540 or POD
ET-481 Personal Computer Technology, Architecture & Troubleshooting	2	Prerequisite: ET-501 or ET-504 or permission of the Department
ET-506 Linux Operating System	3	Corequisite: ET-704 or permission of the Department
ET-570 Creating Smartphone Apps	3	None
ET-574 Programming and Applications with Python	3	None
ET-580 Object-Oriented Programming	3	Prerequisite: ET-575 with a grade of C or better
ET-581 Object-Oriented Programming in Java	3	Prerequisite: ET-574 or ET-575 with a grade of C or better
ET-705 Networking Fundamentals II	4	Prerequisite: ET-704
ET-706 Network Configuration I	4	Prerequisites: ET-705
ET-707 Network Configuration II	4	Prerequisites: ET-706
ET-710 Front-End UI/UX Web Development	3	None
ET-712 JavaScript Programming: Client and Server	3	None
ET-720 Advanced Web and Multimedia Programming	1	Prerequisite: ET-710
ET-725 Computer Network Security	3	Prerequisite ET-704 or Department Permission
ET-726 Advanced Network Security	3	Prerequisite: ET-725

Major Elective Courses	Credits	Prerequisites and Corequisites
ET-754 Security Policies and Procedures	3	None
ET 756 Database Administration	3	Corequisite: ET-574 or ET-575
ET-757 Cloud Technology Developing	3	Prerequisite: ET-718 or ET-756 or permission of the Department
ET-758 Cloud Technology Operations	3	Prerequisite: ET-757 or permission of the Department
ET-760 Ethical Hacking and Penetration Testing	3	Prerequisite: ET-725
ET-841 The Science of Energy and Power in the Modern World	3	None
ET-842 Energy Production and Conservation for a Sustainable World	1	Corequisite ET-841
ET-880 Science and Technology in Modern Life	3	None
ET-991, ET-992, ET-993 Cooperative Education in Engineering Technology	1	2.0 GPA, 12 credits in EET or CET, and Departmental Permission