

Degree Pathway

A.A.S. in Telecommunications 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 **MA-114**. 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 BE-102 |
| ENGL-99 Developing Competence in College Reading, Writing, & Study Skills | 0 (4 eq.) | Corequisite: ENGL-101 |
| ET-210 Electronics I | 4 | Prerequisite: ET-110 (C or better) |
| ET-509 Programming for Embedded Systems | 1 | Prerequisite: TECH-100 |
| ET-704 Networking Fundamentals I | 4 | None |
| 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 |
|--|-----------|---|
| MA-128 Calculus for Technical and Business Students ² | 4 | Prerequisite: MA-114 (C or better) |
| ET-560 Microprocessors and Microcomputers | 4 | Prerequisites: ET-210, ET-509, and ET-540 |
| ET-705 Networking Fundamentals II | 4 | Prerequisite: ET-704 |
| Major Elective: Select from the list below | 1 | 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-230 Telecommunications I | 4 | Prerequisite: ET-210 |
| ET-232 Wireless Mobile Communications | 3 | Prerequisite: ET-704 |
| Major Elective: Select from the list below | 2 | Check individual courses for prerequisites and corequisites |
| PH-202 General Physics II ^{3,4} (Flexible Core 2E – Scientific World) | 4 | Prerequisite: 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-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-502 Introduction to Computer Programming | 1 | None |
| ET-504 Operating Systems and System Deployment | 2 | None |
| ET-505 Introduction to C++ Object Oriented Programming | 4 | None |
| ET-506 Linux Operating System | 3 | Corequisite: ET-704 or permission of the Department |
| ET-570 Creating Smartphone Apps | 3 | None |
| ET-575 Introduction to C++ Programming Design & Implementation | 3 | Prerequisite: MA-321 or corequisite: MA-114, MA-119 or MA-440 |
| ET-580 Object-Oriented Programming | 3 | Prerequisite: ET-575 with a grade of C or better |
| 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 permission of the Department |
| ET-754 Security Policies and Procedures | 3 | None |
| 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, or ET-993 Cooperative Education | 1 | Permission of the Department |