

Accelerated Master of Science in Electrical Engineering

School of Informatics, Computing, and Cyber Systems

Accelerated Program: Electrical Engineering BS – Electrical Engineering MS (2019-2020 catalog)

**Overview**

*This plan includes* ***12*** *units that are used to complete both the undergraduate and the graduate requirements:*

***6*** *at the undergraduate level and* ***6*** *at the graduate level.*

**Undergraduate requirements for students in the accelerated program**

The following 104-105 requirements, maintaining a 3.0 GPA overall and 3.0 in major (EE) courses:

* Mathematics and Science courses (25-26 units)
	+ CHM 151 or BIO 181 or AST 180 or (GLG 101 and GLG 103) (3-4 units)
	+ MAT 136, MAT 137, MAT 238, and MAT 239 (15 units)
	+ PHY 161 and PHY 262 (7 units)
* Engineering and Computer Science courses (12 units)
	+ CS 122 and CS 122L (3 units)
	+ CENE 225 or STA 275 (3 units)
	+ EGR 186 and EE 286 (6 units)
* Professional Requirements – General (49 units)
	+ EE 110, EE 188, EE 188L, EE 215, EE 222, EE 280, EE 310, EE 325, EE 348, EE 364, and EE 380 (38 units)
	+ PHY 263 (3 units)
	+ EGR 386W or EE 386W (3 units)
	+ (EE 476C and EE 486C) or (EGR 476C and EGR 486C) where either sequence meets NAU's senior capstone requirement (5 units)
* Professional Requirements – EE major electives (18 units)
	+ Additional units from 500-level EE courses (6 units)
	+ Additional units from any 400-level EE courses (9 units)
	+ Breadth course: additional units from any AST, BIO, CENE, CENS, CHM, CM, CS, EGR, ENV, FOR, GLG, MAT, ME, PHY, PHS, or STA – with the following exceptions (3 units):
		- We will not accept any recitations, BIO 100, BIO 100L, CS 110, ENV 101, ENV 101L, FOR 101, GLG 100, GLG 100L. PHY 103, PHS 101, or MAT classes numbered lower than MAT 136

**Graduate requirements for students in the accelerated program**

Coursework: the following 30 units

* Statistics and Mathematics (3 units)
	+ Any graduate level (500 and above) STA or MAT prefixed course OR INF 511
* Project based learning (6 units)
	+ EE 685 or EE 697
* Graduate EE electives (21 units)
	+ Any EE prefixed graduate level (500 and above) course (9 units)
	+ EE prefixed 400-level courses, with faculty advisor’s approval (6 units)
	+ Any graduate level (500 and above) with EE, INF, CS, or PHY prefix (6 units)

**Suggested Progression Plan**

^ Denotes undergraduate course required for the undergraduate degree

% Denotes a course that applies towards both degrees

\* Denotes graduate course required for the graduate degree

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| Fall Year 1 (Term 1: 18 units) | Spring Year 1 (Term 2: 16 units) |
| ^MAT 136 Calculus I  | ^Mat 137 Calculus II |
| ^EE 110 Introduction to Digital Logic | ^PHY 161 University Physics I |
| ^EGR 186 Introduction to Engineering Design | ^EE 188 Electrical Engineering I |
| ^CS 122 Programming for Engineering and Science | ^EE 188L Electrical Engineering I Lab |
| ^CS 122L Programming for Engineering and Science | ^Foundation English |

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| Fall Year 2 (Term 3: 16 units) | Spring Year 2 (Term 4: 17 units) |
| ^MAT 238 Calculus III | ^EE 215 Microprocessors |
| ^CENE 225 or STA 275 | ^EE 280 Introduction to Electronics |
| ^EE 222 Intermediate Programming | ^MAT 239 Differential Equations |
| ^EE 286 Electrical Engineering Design: The Process | ^PHY 263 University Physics III |
| ^PHY 262 University Physics II | ^Liberal Studies and/or Diversity |

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| Fall Year 3 (Term 5: 14-15 units) | Spring Year 3 (Term 6: 17 units) |
| ^EE 325 Engineering Analysis II | ^EE 310 Fundamentals of Computer Engineering |
| ^EE 364 Fundamentals of Electromagnetics | ^EE 348 Fundamentals of Signals and Systems |
| ^EE 380 Fundamentals of Electronic Circuits | ^EE 386W or EGR 386W |
| ^CHM 151 or BIO 181 or AST 180 or (GLG 101 and GLG 103) | ^Undergraduate EE elective (400-level EE course) |
|  | ^Liberal Studies and/or Diversity |

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| Fall Year 4 (Term 7: 17 units) | Spring Year 4 (Term 8: 15 units; graduate with BS) |
| ^EE 476C or EGR 476C | ^EE 486C or EGR 486C |
| %Undergraduate EE elective (400-level EE course) | %Undergraduate EE elective (400-level EE course) |
| %Graduate EE elective (500-level EE course) | %Graduate EE elective (500-level EE course) |
| ^Breadth course | ^Liberal Studies and/or Diversity |
| ^Liberal Studies and/or Diversity | ^Liberal Studies and/or Diversity |
| ^Liberal Studies and/or Diversity |  |

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| Fall Year 5 (Term 9: 9 units) | Spring Year 5 (Term 10: 9 units; graduate with MS) |
| \* INF 511 or 500-level STA or MAT course | \* EE 685 or EE 697 |
| \* EE 685 or EE 697 | \* Graduate EE, INF, CS, or PSY course |
| \* Graduate EE Elective (500- or 600- level EE course) | \* Graduate EE, INF, CS, or PSY course |