ELECTRICAL ENGINEERING - MASTER OF SCIENCE IN ELECTRICAL ENGINEERING (ONLINE)

New Mexico State University master's accelerated program provides the opportunity for academically qualified undergraduate students to begin working on a master's degree during their junior and senior years while completing a bachelor's degree. Typically, a bachelor's degree requires four years to complete, and a master's degree requires an additional two years. The master's accelerated programs allow students the opportunity to complete a graduate program in an accelerated manner. Students can take up to 12 credits of E E graduate courses and get dual course credit that can be applied to both an undergraduate and master's degree.

You can also check NMSU's catalog for additional information about our programs.

MAP Requirements

Please see further information about the MAP program on the graduate school website at https://gradschool.nmsu.edu/current-students/masters-accelerated-program.html

Accepted MAP Courses

The following courses are accepted for use in the MAP program. Any other E E 500 level course that is taught concurrently with an E E 400 level course may be considered after a consultation with an advisor. E E 450 level courses are not eligible for MAP credit nor are E E 500 level courses that are not taught concurrently with an E E 400 level course. The following course list specifies which undergraduate BSEE concentration electives may count toward the MAP. Courses are listed according to the most relevant BSEE concentration, but some courses may count toward multiple concentrations; please refer to the corresponding BSEE concentrations in the NMSU catalog for more details on concentration courses.

Prefix	Title	Credits
Artificial Intelligence, Machine Learning, & Data Science		
E E 506	Quantum Computing	3
E E 565	Machine Learning I	3
Communications and Signal Processing		
E E 545	Digital Signal Processing II	3
E E 571	Random Signal Analysis	3
E E 572	Modern Coding Theory	3
E E 573	Signal Compression	3
E E 581	Digital Communication Systems I	3
E E 583	Wireless Communications	3
E E 586	Information Theory	3
E E 587	Deep Learning for Image Processing	3
E E 588	Advanced Image Processing	3
E E 596	Digital Image Processing	3
E E 597	Neural Signal Processing	3
Computers and Microelectronics		
E E 510	Introduction to Analog and Digital VLSI	3
E E 512	ASIC Design	3
E E 523	Analog VLSI Design	3
E E 556	Hardware & Software Codesign	3
E E 558	Hardware Security and Trust	3
E E 562	Computer Systems Architecture	3
E E 563	Computer Performance Analysis I	3
E E 564	Architectural Concepts II	3
E E 567	ARM SOC Design	3
Controls & Robotics		
E E 551	Control Systems Synthesis	3
E E 576	Geometric Algebra	3
Electromagnetics and Photonics		
E E 521	Microwave Engineering	3
E E 528	Fundamentals of Photonics	4
E E 541	Antennas and Radiation	4
E E 548	Introduction to Radar	3
E E 549	Smart Antennas	3
E E 577	Fourier Methods in Electro-Optics	3
E E 578	Optical System Design	3
Power		
E E 502	Electricity Markets	3
E E 503	Numerical Computational Methods for Smart Grid	3
E E 504	Smart Grid Technologies	3
E E 505	Application of Optimization Techniques in Power Systems	3
E E 507	Data Analytics and AI for the Smart Grid	3
E E 533	Power System Operation	3
E E 534	Power System Relaying	3
E E 537	Power Electronics	3
E E 540	Photovoltaic Devices and Systems	3
E E 537	Power Electronics	3
E E 540	Photovoltaic Devices and Systems	3
E E 542	Power System Analysis	3
E E 543	Power System Faults and Stability	3
E E 544	Distribution Systems	3