ESET 611 Industrial Internet of Things  
Credits 3. 3 Lecture Hours.  
Comprehensive coverage on, among others, the role of data, manufacturing systems, various Industry 4.0 technologies, applications and case studies; draw input from researchers and practitioners on what are the opportunities and challenges brought about by Industry 4.0, and how organizations and knowledge workers can be better prepared to reap the benefits of this latest revolution.  
Prerequisite: Graduate classification, approval of instructor.

ESET 633 Advanced Wireless Instrumentation and Control  
Credits 3. 3 Lecture Hours.  
Short range wireless communication, instrumentation and control for industrial Internet of Things (IoT); wireless sensor networks, information processing and transmission; analysis of requirements on reliability, latency, security, power, signal conditioning and processing, and control; system and subsystem performance evaluation; cloud computing, data analytics for system optimization and prognosis.  
Prerequisites: Graduate classification or approval of instructor.

ESET 644 Embedded Intelligent System Design  
Credits 3. 3 Lecture Hours.  
Embedded intelligent system design; investigate artificial intelligent systems; advanced embedded system designs; use of high performance microcontroller and processor.  
Prerequisites: Graduate classification or approval instructor.

ESET 653 Semiconductor Validation and Verification  
Credits 3. 2 Lecture Hours. 3 Lab Hours.  
Validation of semiconductor devices; focus on the difference between validation and production testing; hands on experience with automation of benchtop instruments with LabView and TestStand; overview of Spotfire to analyze data acquired during laboratory exercises; focus on the acquisition of valid data and the clear and concise presentation of data to stakeholders.  
Prerequisite: Background in mixed signal test theory similar to ESET 352 or approval of instructor.

ESET 662 Advanced Control Systems  
Credits 3. 3 Lecture Hours.  
Components, principles, and techniques fundamental to automated control systems; study of transfer functions, network analysis using Laplace transforms, Z transforms, feedback control systems theory, digital computer simulation and computer-based controls systems.  
Prerequisite: Graduate classification or approval of instructor.

ESET 681 Seminar  
Credit 1. 1 Other Hour.  
Selected topics presented by the faculty, students and outside speakers.  
Prerequisites: Graduate classification or approval of instructor.

ESET 684 Professional Internship  
Credits 1 to 6. 0 Lecture Hours. 1 to 6 Other Hours.  
Directed internship in an organization to provide students with on-the-job training with professionals in settings appropriate to the students’ professional objectives. May be taken for credit up to six hours. Must be taken on a satisfactory/unsatisfactory basis.  
Prerequisite: Graduate classification in Master of Science in Engineering Technology.

ESET 685 Directed Studies  
Credits 1 to 12. 1 to 12 Other Hours.  
Directed study of topics not within scope of thesis research and not covered by other formal courses. May be repeated for credit.  
Prerequisites: Graduate classification or approval of instructor.

ESET 689 Special Topics in...  
Credits 1 to 4. 1 to 4 Other Hours.  
Selected topics in an identified area of engineering technology. May be repeated for credit.  
Prerequisites: Graduate classification or approval of instructor.

ESET 691 Research  
Credits 1 to 23. 1 to 23 Other Hours.  
Research for thesis or dissertation. May be repeated for credit.  
Prerequisites: Graduate classification or approval of instructor.

ESET 692 Professional Study  
Credits 1 to 23. 1 to 23 Other Hours.  
Approved professional study of project.  
Prerequisites: Approval of instructor.