

College of Engineering Graduate Programs  
Electrical Engineering  
Program Study Plan

Student Name: \_\_\_\_\_ ID: \_\_\_\_\_

Starting semester: \_\_\_\_\_

- A. **Tentative list of courses to be taken (check selected course).** Thesis option needs 7 courses and project option needs 9 courses and course option needs 10 courses.

**In addition, all students must complete a seminar course (ELE 695).**

Course	Title	Pre-requisite
<b>College Core Courses: (6 credits)</b>		
Students must successfully complete <b>two</b> of the following courses:		
NGN 500 (3cr)	Advanced Engineering Mathematics	Admission to the program
NGN 505 (3cr)	Random Variables and Stochastic	Admission to the program
NGN 509 (3cr)	Advanced Computational Methods	Admission to the program
<b>In addition, All students must successfully complete a seminar course</b>		
ELE 695(0 cr)	Seminar	Preq. Admission to the program
<b>Elective Courses</b>		
<ul style="list-style-type: none"> <li>Students in the thesis option must successfully complete a minimum of 15 credits.</li> <li>Students in the project option must successfully complete a minimum of 21 credits.</li> <li>Students in the course option must successfully complete a minimum of 24 credits.</li> </ul>		
Students can select elective courses from the following list:		
Course code	Course Description	Pre-requisite
ELE 540 (3 cr)	Principles of Digital Communications	Prereq. Admission to MSEE
ELE 542 (3 cr)	Applied Electromagnetics	Prereq. Admission to MSEE
ELE 543 (3 cr)	Analog Microelectronics	Prereq. Admission to MSEE
ELE 544 (3 cr)	Advanced Signal Processing	Prereq. Admission to MSEE
ELE 545 (3 cr)	Power System Operation and Control	Prereq. Admission to MSEE
ELE 546 (3 cr)	Advanced Power Electronics	Prereq. Admission to MSEE
ELE 594/694 (3 cr)	Special Topics in Electrical Engineering	Topic specific
ELE 596/696 (3 cr)	Independent Study in Electrical Engineering	For further details, refer to Independent Study late in this section.
ELE 640 (3 cr)	Bioelectric Phenomena	Pre-requisite/Concurrent: NGN 500
ELE 641 (3 cr)	Advanced Microwave Engineering	Pre-requisite/Concurrent: NGN 500
ELE 642 (3 cr)	Digital and Wireless Communications	Pre-requisite: ELE 540
ELE 643 (3 cr)	Image and Video Processing	Pre-requisite/Concurrent: NGN 500
ELE 644 (3 cr)	Dynamics and Control of Electrical Drives	Prereq. Admission to MSEE
ELE 645 (3 cr)	High Voltage Engineering	Prereq. Admission to MSEE
ELE 646 (3 cr)	Radio Frequency Integrated Circuits	Prereq. Admission to MSEE
ELE 647 (3 cr)	Digital Protection of Power Systems	Prereq. Admission to MSEE
ELE 648 (3 cr)	Pattern Classification	Prereq. Admission to MSEE
ELE 649 (3 cr)	Power System Transients	Prereq. Admission to MSEE
MTR 540 (3 cr)	Advanced Control Systems	
<b>Master's Thesis/Professional Project (9/3 credits)</b>		
ELE 698 (3 cr)	Professional Project	Good academic standing and approval of department head. Pre-requisite/concurrent ELE 695
ELE 699 (9 cr)	Master's Thesis	Good academic standing and approval of department head. Pre-requisite/concurrent ELE 695

Students in the **thesis and project options** may elect to take **one** course outside the list of elective courses, with the approval of their advisor and program director. Students in the **course option** may elect to take up to **two** elective courses outside the list of elective courses, with the approval of program director.

B. Transferred Courses(if any): \_\_\_\_\_

C. Bridging Courses(if any): \_\_\_\_\_

D. Main Research Area: \_\_\_\_\_