Appendix F: Sample Program of Studies for the Different Tracks

Sample study plan for a student entering with a BS to the Control Systems Track

Courses	First Semester	Credits
INEL 6001	Feedback Control Systems	3
INEL 6078	Estimation, Detection, and Stochastic Processes	3
INEL 5505	Linear Systems Analysis	3
INEL 8998	Doctoral Seminar	0
		Total 9

Courses	Second Semester	Credits
INEL 6000	Nonlinear Control Systems	3
INEL 6059	Intelligent Systems and Control	3
MATE 6025	Numerical Optimization	3
INEL 8998	Doctoral Seminar	0
		Total 9

Courses	Third Semester	Credits
INEL 6048	Digital Control Systems	3
INEL 8595	Advanced Topics in Control Systems	3
MATE 6025	Numerical Linear Algebra	3
INEL 8998	Doctoral Seminar	0
		Total 6

Courses	Fourth Semester	Credits
INEL 8595	Advanced Topics in Control Systems	3
----------	Elective Course	3
----------	Elective Course	3
INEL 8998	Doctoral Seminar	0
		Total 9

Qualifying Exam

Courses	Fifth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
		Total 3

Courses	Sixth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
		Total 3

Courses	Seventh Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
		Total 3

Courses	Eight Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	1
		Total 4

Sample study plan for a student entering with a BS to the Electronics Track

Courses	First Semester	Credits
INEL 6055	Solid State Electronics	3
INEL 6080	VLSI Systems Design	3
INEL 6009	Computer Architecture	3
INEL 8998	Doctoral Seminar	0
		Total 9

Courses	Second Semester	Credits
INEL 6075	Integrated Circuits Fabrication	3
INEL 6005	Anaylsis, Design and Parasitic Effects of Integrated Circuits	3
		3
MATE 6026	Numerical Optimization	3
INEL 8998	Doctoral Seminar	0
		Total 9

Courses	Third Semester	Credits
INEL 6048	Advanced Microprocessor Interfacing	3
INEL 8295	Advanced Topics in Electronics	3
MATE 6025	Numerical Linear Algebra	3
INEL 8998	Doctoral Seminar	0
		Total 6

Courses	Fourth Semester	Credits
INEL 8295	Advanced Topics in Electronics	3
----------	Elective Course	3
----------	Elective Course	3
INEL 8998	Doctoral Seminar	0
		Total 9

Qualifying Exam

Courses	Fifth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
		Total 3

Courses	Sixth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
		Total 3

Courses	Seventh Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
		Total 3

Courses	Eight Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	1
		Total 4

Sample study plan for a student entering with a BS to the Applied Electromagnetics Track

Courses	First Semester	Credits
INEL 6216	Advanced Electromagnetics	3
INEL 6078	Estimation, Detection and Stochastic Systems	3
INEL 6115	Microwave Active Circuits	3
INEL 8998	Doctoral Seminar	0
		Total 9

Courses	Second Semester	Credits
INEL 6068	Microwave Antenna Engineering	3
INEL 6105	Active Remote Sensing Techniques	3
MATE 6677	Elementary Partially Differential Equations	3
INEL 8998	Doctoral Seminar	0
		Total 9

Courses	Third Semester	Credits
INEL 6106	Introduction to Radar Systems	3
INEL 8396	Advanced Topics in Applied Electromagnetics	3
MATE 6025	Numerical Linear Algebra	3
INEL 8998	Doctoral Seminar	0
		Total 6

Courses	Fourth Semester	Credits
INEL 8495	Advanced Topics in Power Systems	3
----------	Elective Course	3
----------	Elective Course	3
INEL 8998	Doctoral Seminar	0
		Total 9

Qualifying Exam

Courses	Fifth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
		Total 3

Courses	Sixth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
		Total 3

Courses	Seventh Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
		Total 3

Courses	Eight Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	1
		Total 4

Sample study plan for a student entering with a BS to the Power Electronics Tracks

Courses	First Semester	Credits
INEL 6085	Analysis and Design of Power Semiconductor Circuits	3
INEL 6025	Advanced Energy Conversion	3
INEL 6055	Solid State Electronics	3
INEL 8998	Doctoral Seminar	0
	Total	9

Courses	Second Semester	Credits
INEL 6058	High Frequency Power Converters	3
INEL 6066	Control of Electric Drive Systems	3
MATE 6026	Numerical Optimization	3
INEL 8998	Doctoral Seminar	0
	Total	9

Courses	Third Semester	Credits
INEL 6096	Electric Power Quality	3
INEL 8496	Advanced Topics in Power Electronics	3
MATE 6025	Numerical Linear Algebra	3
INEL 8998	Doctoral Seminar	0
	Total	6

Courses	Fourth Semester	Credits
INEL 8496	Advanced Topics in Power Electronics	3
----------	Elective Course	3
----------	Elective Course	3
INEL 8998	Doctoral Seminar	0
	Total	9

Qualifying Exam

Courses	Fifth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
	Total	3

Courses	Sixth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
	Total	3

Courses	Seventh Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
	Total	3

Courses	Eight Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	1
	Total	4

Sample study plan for a student entering with a BS to the Power Systems Track

Courses	First Semester	Credits
INEL 6027	Dynamics and Control of Integrated Power Systems	3
INEL 5505	Linear Systems Analysis	3
INEL 6025	Advanced Energy Conversion	3
INEL 8998	Doctoral Seminar	0
	Total	9

Courses	Second Semester	Credits
INEL 6028	Optimization and Economic Operation of Integrated Power Systems	3
INEL 6077	Surge Phenomena in Power Systems	3
ESMA 6600	Probability Theory	3
INEL 8998	Doctoral Seminar	0
	Total	9

Courses	Third Semester	Credits
INEL 6026	Computational Methods for Power Systems Analysis II	3
INEL 8495	Advanced Topics in Power Systems	3
MATE 6025	Numerical Optimization	3
INEL 8998	Doctoral Seminar	0
	Total	6

Courses	Fourth Semester	Credits
INEL 8495	Advanced Topics in Power Systems	3
----------	Elective Course	3
----------	Elective Course	3
INEL 8998	Doctoral Seminar	0
	Total	9

Qualifying Exam

Courses	Fifth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
	Total	3

Courses	Sixth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
	Total	3

Courses	Seventh Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
	Total	3

Courses	Eight Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	1
	Total	4

Sample study plan for a student entering with a BS to the Signal Processing Track

Courses	First Semester	Credits
INEL 6078	Estimation, Detection, and Stochastic Processes	3
INEL 6049	Multidimensional Signal Processing	3
INEL 5046	Pattern Recognition	3
INEL 8998	Doctoral Seminar	0
	Total	9

Courses	Second Semester	Credits
INEL 6076	Adaptive and Optimal Signal Processing	3
INEL 6007	Introduction to Remote Sensing	3
ESMA 6661	Theory of Statistics I	3
INEL 8998	Doctoral Seminar	0
	Total	9

Courses	Third Semester	Credits
INEL 6050	Advanced Digital Signal Processing Algorithms	3
INEL 8395	Advanced Topics in Signal Processing	3
MATE 6025	Numerical Linear Algebra	3
INEL 8998	Doctoral Seminar	0
	Total	6

Courses	Fourth Semester	Credits
INEL 8395	Advanced Topics in Signal Processing	3
----------	Elective Course	3
----------	Elective Course	3
INEL 8998	Doctoral Seminar	0
	Total	9

Qualifying Exam

Courses	Fifth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
	Total	3

Courses	Sixth Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
	Total	3

Courses	Seventh Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	0
	Total	3

Courses	Eight Semester	Credits
INEL 8999	Doctoral Dissertation	3
INEL 8998	Doctoral Seminar	1
	Total	4