Department of Electrical and Computer Engineering
Checklist for the MEng(EE) Degree

This checklist is provided to document the completion of the degree requirements for the program leading to the Master of Engineering (with Major in Electrical Engineering) at NPS.

Student name (please PRINT CLEARLY): _____ ;

email:_____

Month/year enrolled: _____; **Graduation date:**_____

I certify that 1) the information contained on this form is correct; and 2) courses included in this checklist are not included in the requirements towards another Master degree.

Student :_____; **Date:** _____

We certify that this student has met the minimum requirements for the MEng(EE) degree.

Signatures:

_____
Academic Associate, Date
ECE Department

_____
ECE Assoc. Chair for Students, Date

_____
Program Officer/Manager, Date

_____
ECE Department Chair, Date

List of available ECE courses

Communications Systems

EC 3500	Analysis of Random Signals	(4-0)
EC 3510	Communications Engineering	(3-1)

EC 4500	Advanced Topics in Communications	(3-0)
EC 4510	Cellular Communications	(3-0)
EC 4530	Soft Radios	(3-2)
EC 4550	Digital Communications	(4-0)
EC 4560	Spread Spectrum Communications	(3-2)
EC 4570	Signal Detection and Estimation	(4-0)
EC 4580	Error Correction Coding	(4-0)
EC 4590	Communications Satellite Systems Engineering	(3-0)
EC 4580	Coding and Information Theory	(4-0)
EC 4590	Communications Satellite Systems Engineering	(3-0)

Computer Systems

EC 3800	Microprocessor Based System Design	(3-2)
EC 3820	Computer Systems	(3-1)
EC 3830	Digital Computer Design Methodology	(3-2)
EC 3840	Introduction to Computer Architecture	(3-2)

EC 4800	Advanced Topics in Computer Engineering	(3-0)
EC 4810	Fault Tolerant Computing	(3-2)
EC 4820	Advanced Computer Architecture	(3-1)
EC 4830	Digital Computer Design	(3-1)
EC 4870	VLSI Systems Design	(3-2)

Cyber Systems

EC 3730	Cyber Network & Physical Infrastructures	(3-2)
EC 3740	Reverse Engineering in Electronic Syst.	(3-2)
EC 3750	SIGINT Systems I [C]	(3-2)
EC 3760	Information Operations Systems[C]	(3-2)
EC 3795	Mobile Telecommunication Fundamentals	(3-2)

EC 4715	Cyber System Vulnerabilities & Risk Assessment	(3-2)
EC 4730	Covert Communications	(3-2)
EC 4735	Telecommunications Systems Security	(3-2)
EC 4747	Data Mining in Cyber Applications	(3-2)
EC 4755	Network Traffic, Activity Detection, & Tracking	(3-2)
EC 4765	Cyber Warfare[C]	(3-2)
EC 4770	Wireless Communications Network Security	(3-2)
EC 4790	Cyber Architectures & Eng.	(3-2)
EC 4795	Wireless Device Security	(3-2)

[C]: Classified Course

Guidance, Control, & Navigation Systems

EC 3310	Optimal Estimation: Sensor and Data Association	(3-2)
EC 3320	Optimal Control Systems	(3-2)

EC 4310	Robotics Systems	(3-1)
EC 4320	Design of Robust Control Systems	(3-2)
EC 4330	Navigation, Missile, and Avionics Systems	(3-2)
EC 4350	Nonlinear Control Systems	(3-2)
EC 4330	Navigation, Missile, and Avionics Systems	(3-2)
EC 4350	Nonlinear Control Systems	(3-2)

Machine Power Systems

EC 3110	Electrical Energy	(3-2)
EC 3130	Electrical Machinery Theory	(3-3)
EC 3150	Solid State Power Conversion	(3-2)

EC 4130	Advanced Electrical Machinery Systems	(3-3)
EC 4150	Advanced Solid State Power Conversion	(3-2)

Network Engineering

EC 3710 or CS3502	Computer Communications Methods or Computer Communication Networks	(3-2) (4-2)

EC 4700	Advanced Topics in Network Eng.	(3-2)
EC 4710	High-Speed Networking	(3-2)
EC 4725	Advanced Telecom. Systems Eng.	(3-2)
EC 4745	Mobile Ad Hoc Wireless Networking	(3-2)
EC 4785	Internet Engineering	(3-2)

Sensor Systems Engineering

EC 3210	Introduction to Electro-Optical Eng.	(4-1)
EC 3600	Antennas & Propagation	(3-2)
EC 3610	Microwave Engineering	(3-2)
EC 3615	Radar Fundamentals	(3-2)
EC 3630	Radiowave Propagation	(3-2)
EC 3700	Joint Network-enabled El. Warfare I	(3-2)

EC 4600	Advanced Topics in Sensor Systems	(v-v)
EC 4610	Radar Systems	(3-2)
EC 4615	Advanced Radar	(3-2)
EC 4630	RCS Prediction	(3-2)
EC 4640	Airborne Radar Mode Processing	(3-2)
EC4685	Principles of Electronic Warfare	(3-2)

Effective date: 09/17/13; last update 03/18/24.
Please read Privacy Advisory.

Signal Processing Systems

	EC 3400	Digital Signal Processing	(3-2)
	EC 3410	Discrete-Time Random Signals	(3-2)
	EC 3460	Machine Learning for Signal Analytics	(3-2)

	EC 4400	Advanced Topics in Signal Proc.	(3-0)
	EC 4430	Multimedia Info & Communications	(3-1)
	EC 4440	Statistical Digital Signal Processing	(3-2)
	EC 4450	Array Signal Processing	(3-2)
	EC 4480	Image Processing and Recognition	(3-2)
	EC 4910	DSP for Wireless Communications	(3-2)

Solid State Microelectronics

	EC 3200	Advanced Electronics Engineering	(3-2)
	EC 3220	Semiconductor Device Technologies	(3-2)
	EC 3230	Space Power and Radiation Effects	(3-1)
	EC 3240	Renewable Energy at Military Bases	(3-2)

	EC 4220	Introduction to Analog VLSI	(3-2)
	EC 4230	Reliability Issues for Military Electronics	(3-2)

Non-NPS based transferred courses

List **non-NPS** based transferred course(s) - include school name, credits (sem/quarter), Academic Council dates of approval for transfer. A maximum of 25% (8 quarter credits) are transferrable, per AC policy 6.6.3.

Course No.	Credit Information (School Name, credits, AC approval date)

Course credit requirements

List all graduate courses taken in approved engineering disciplines (including transferred courses). Lab credits count as half credits. **Note:** course credit numbers are periodically re-evaluated and may have changed since you took a course. *Only the credits shown on student transcripts will be counted to satisfy minimum requirements.*

3000-level courses	Credits (X-X)	4000-level courses	Credits (X-X)

(a) Total graduate credits in approved[1] engineering, mathematics, physical science, and/or computer science
(32 minimum at 3xxx and 4xxx-level, which must be graded, & include a minimum of 5 graduate-level graded ECE courses):   _____

(b) Total credits from (a) at 4000 level: _____
(10 minimum, 3 ECE courses minimum, which must be graded)

[1]Note: Courses taken in other engineering disciplines require the **_advanced approval_** of the ECE Academic Associate & Chair.