

# *Department of Electrical and Computer Engineering*

## *Checklist for MSEE Degree*

The program leading to the Master of Science in Electrical Engineering at NPS is accredited at the advanced level through the Accreditation Board of Engineering and Technology This accreditation is based on degree requirements set forth by the Electrical and Computer Engineering Department at NPS and approved by the NPS Academic Council. This checklist is provided to document the completion of these degree requirements.

**Student name:** \_\_\_\_\_ ; **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:** \_\_\_\_\_

**-- USN Students only (For P-codes issues)--**

***Final Checklist: Please attach Copy of Thesis Title & Abstract at the back***

**We certify that this student has met the minimum requirements for the MSEE degree.**

**Signatures:**

\_\_\_\_\_  
**Academic Associate, Date**  
**ECE Department**

\_\_\_\_\_  
**ECE Assoc. Chair for Students, Date**

\_\_\_\_\_  
**Program Officer, Date**

\_\_\_\_\_  
**ECE Department Chair, Date**

**1. BSEE Degree/Equivalence** requirement satisfied by (fill in one):

- BSEE degree from: \_\_\_\_\_ Month/year: \_\_\_\_\_
- BSEE equivalence from NPS. Date: \_\_\_\_\_

**2. Thesis:**

- Number of thesis credits (16 minimum): \_\_\_\_\_
- Advisor: \_\_\_\_\_
- Presentation quarter: \_\_\_\_\_ Where? (ECE Seminar?) \_\_\_\_\_
- Completed EC3000 during (specify quarter) \_\_\_\_\_

**The remaining requirements must be met exclusive of thesis requirements.**

**3. Program of Study:**

(Select **two specialties** and check courses taken in those specialties):

Specialties	Check 2 specialties selected
Cyber	
Electronics	
Power Systems	
Radar and EW Engineering	
Signal Processing	

**4. Additional NPS-based external-to-ECE Program(s) (degree/certificates):**

List all additional planned/completed external-to-ECE programs (degree, certificate(s), TSSE Program , or Meyer Program):

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<b>For administrative use only – Subspecialty Code Assignment for US NAVY only</b>	
Program Officer → Check Selected Code	
<input type="checkbox"/> 5302 – Communication Systems	<input type="checkbox"/> 5308 – Total Ship Systems
<input type="checkbox"/> 5304 – Guidance, Control & Navigation Systems	<input type="checkbox"/> 5309 – Computer Systems
<input type="checkbox"/> 5305 – Power Systems	<input type="checkbox"/> 5310 – Sensor Systems Engineering
<input type="checkbox"/> 5306 – Digital Signal Processing	<input type="checkbox"/> 5311 – EE Energy Focus (curric 593)
<input type="checkbox"/> 5307 – Electronics	<input type="checkbox"/> 5312 – Networks
	<input type="checkbox"/> 5313 - Cyber

## List of Specialties (each specialty has 4 required courses)

**Recall: you must request enrollment in a certificate if you wish to get nominated for it (see EC0000 SOP for details)**

### Cyber Engineering:

**Required Courses: (may satisfy certificate 288 or 296)**

EC3730	Cyber Network & Physical Infrastructures	(3-2)
EC3740	Reverse Engineering in Electronic Syst.	(3-2)

AND select *either* the Classified or Unclassified set:

**Classified:** (US only, with appropriate security clearance)

EC 3760	Information Operations Systems	(3-2)
EC 4765	Cyber Warfare	(3-2)

or

**Unclassified:**

EC 4730	Covert Communications	(3-2)
EC 4770	Wireless Communications Network Security	(3-2)

### Electronics:

**Required courses:**

EC 3200	Advanced Electronics Engineering	(3-2)
EC 3220	Semiconductor Device Technologies	(3-2)
Or		
EC 4950	Emerging Nanotechnology	(3-1)
EC 4220	Introduction to Analog VLSI	(3-2)
EC 4230	Reliability Issues for Military Electronics	(3-2)

### Power Systems:

**Required courses: (satisfies certificate 291)**

EC 3130	Electrical Machinery Theory	(3-3)
EC 3150	Power Electronics	(3-2)
EC 4130	Advanced Electrical Machinery Systems	(3-3)
EC 4150	Applied Power Electronics	(3-2)

### Radar and EW Engineering:

**Required Courses: (satisfies certificate 292)**

EC 3600	Antennas & Propagation	(3-2)
EC 3615	Radar Fundamentals	(3-2)
EC 4615	Advanced Radar	(3-2)
Or		
EC 4630	Radar Cross Section Prediction & Reduction	(3-2)
EC 4685	Principles of Electronic Warfare	(3-2)

### Signal Processing Systems:

**Required Courses: (satisfies certificate 290)**

EC 3400	Digital Signal Processing	(3-2)
EC 3410	Discrete-Time Random Signals	(3-2)
EC 4440	Statistical Digital Signal Processing	(3-2)
EC 4450	Array Signal Processing	(3-2)

## List of ECE courses currently taught and not included above

### Electronics Systems

EC 3230	Space Power & Radiation Effects	(3-1)
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### Guidance & Control Systems

EC 4310	Fundamentals of Robotics	(3-2)
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### Sensor Systems

EC 3210	Intro to Electro-Optics Systems Eng.	(4-1)
EC 3610	Microwave Engineering	(3-2)
EC 3630	Radiowave Propagation	(3-2)
EC 3700	Joint Network-Enabled Electronic Warfare I	(3-2)

### Signal Processing Systems

EC 3460	Machine Learning for Signal Analytics	(3-2)
EC 4400	Adv. Topics in Signal Processing	(3-0)

