



# ELECTRICAL ENGINEERING CHECKLIST

This checklist is provided for student use only. It does not represent an official documentation of a student's progress towards completion of their degree program. If you have questions about this sheet please contact the Engineering Advisor at (719) 262-3427.

The EE program requires a minimum of 128 credit hours to complete. Students must have a grade of C or better in ECE 1411, 2411 and 2610, a minimum 2.0 GPA in all ECE course work taken, and a minimum 2.0 GPA in all course work taken in order to graduate. Students must also complete an Exit Interview with the ECE Department during their final semester to graduate.

## ELECTRICAL ENGINEERING CORE COURSES – All courses in this section must be completed.

<input checked="" type="checkbox"/>	COURSE NUMBER & TITLE	HRS	PREREQUISITES/COREQUISITES
	ECE 1001 Introduction to Robotics	3	None
	ECE 1021 Computer-Based Modeling	3	MATH135, ECE1001
	ECE 1411 Logic Circuits I	2	None
	ECE 2050 Intro to Physical Electronics	3	Coreqs. MATH340, PES213
	ECE 2205 Circuits and Systems I	4	ECE 2610
	ECE 2411 Logic Circuits II	2	ECE1411
	ECE 2610 Intro to Signals and Systems	4	MATH 136, ECE 1021
	ECE 3020 Semiconductor Devices I	3	ECE 2205
	ECE 3205 Circuits and Systems II	4	ECE 2205
	ECE 3110 Electromagnetic Fields I	3	ECE 2205
	ECE 3210 Electronics I	3	ECE 2205
	ECE 3220 Electronics II	3	ECE3205 and ECE3210
	ECE 3230 Electronics Lab I	1	Coreq. ECE3210
	ECE 3240 Electronics Lab II	1	ECE3230, Coreq. ECE3220
	ECE 3420 Microprocessor Systems Lab	1	ECE1411, Coreq. ECE3430
	ECE 3430 Intro to Microcomputer Systems	3	ECE1411, Coreq. ECE3420
	ECE 3610 Engineering Probability & Statistics	3	MATH235
	ECE 4890 Senior Seminar	1	Must be taken the semester prior to ECE4899
	ECE 4899 Design Project	3	ECE4890 & last semester of degree
	<b>TOTAL</b>	<b>50</b>	

## ELECTRICAL ENGINEERING ELECTIVES – Courses in this section should be chosen from the two lists as indicated.

<input checked="" type="checkbox"/>	COURSE NUMBER & TITLE	HRS	PREREQUISITES/COREQUISITES
	<b>Complete any 4 of the following 8 courses</b>		
	ECE 3120 Electromagnetic Fields II	3	ECE3110, MATH340
	ECE 4020 Semiconductor Devices II	3	ECE3020
	ECE 4242 Advanced Digital Design Methodology	3	Coreq. ECE3210
	ECE 4340 VLSI Circuit Design I	3	ECE3020, ECE3210
	ECE 4480 Computer Architecture & Design	3	ECE3430 or consent of instructor
	ECE 4510 Feedback Control Systems	3	ECE2205
	ECE 4625 Communications Systems I	3	ECE3205
	ECE 4650 Modern Digital Signal Processing	3	ECE3205, ECE3610 or equivalent
	<b>Complete any 2 of the following 8 courses</b>		
	ECE 3440 Microcomputer Systems Lab	1	ECE2411, ECE3430
	ECE 4040 Introductory VLSI Fabrication Lab	1	ECE 3020, ECE4020, ECE4080, or consent of instructor
	ECE 4150 Microwave Measurement Lab	1	ECE3120 or equivalent
	ECE 4200 Advanced Digital Design Lab	1	ECE4242
	ECE 4530 Control Systems Lab	1	Coreq. ECE4510
	ECE 4560 Digital Control Lab	1	Coreq. ECE4540
	ECE 4670 Communications Lab	1	ECE3230, Coreq. ECE4625
	ECE 4680 Signal Processing Lab	1	ECE3230, Coreq. ECE4650
	<b>TOTAL</b>	<b>14</b>	

**TECHNICAL ELECTIVES** – Nine hours of Technical Electives may be chosen from this list: ECE courses at the 3000 or 4000 level, BIOL300-3, BIOL302-3, BIOL310-3, BIOL314-3, BIOL 321-3, BIOL322-3, BIOL330-3, BIOL333-3, BIOL360-4, BIOL361-4, BIOL370-3, BIOL383-3, BIOL391-3, CHEM301-3, CHEM330-3, CHEM331-3, CHEM332-3, CHEM333-2, CHEM334-2, CHEM337-2, CHEM338-2, CHEM340-2, CHEM341-3, PES306-3, PES313-3, PES321-3, PES 341-3, PES 365-3, PES 367-3, CS 301, CS 302-3, CS306-3, CS316-3, CS330-3, MAE3130-3, MAE3135-3, MAE3201-3, MAE3310-3, MAE3401-3, MAE3560-3, MATH311-3, MATH313-3, MATH341-3, MATH350-3, MATH351-3. Other courses in BIOL, CHEM, CS, ECE, MAE, MATH and PES numbered 400/4000+ may be accepted with a petition completed prior to taking the course.

<input checked="" type="checkbox"/>	COURSE NUMBER & TITLE	HRS	PREREQUISITES/COREQUISITES
	<b>TOTAL</b>	<b>9</b>	

**MATHEMATICS** – All courses in this section must be completed.

<input checked="" type="checkbox"/>	COURSE NUMBER & TITLE	HRS	PREREQUISITES/COREQUISITES
	MATH 135 Calculus I or (MATH 131 and 132)	4	MATH105 or score of 10 on Calc. Readiness Exam
	MATH 136 Calculus II	4	MATH135
	MATH 235 Calculus III	4	MATH136
	MATH 340 Intro. to Differential Equations	3	MATH235
	MATH 311 or higher (except 381)	3	Check Bulletin for specific course prerequisites
	<b>TOTAL</b>	<b>18</b>	

**BASIC SCIENCE** – PES 111, 112 and 213 must be completed. Five additional hours of Basic Science are also required and may be chosen from the following courses (credit hours for each class are listed after the course number): CHEM103-5, CHEM106-5, GEOL101-4, GEOL102-4, BIOL110-3, BIOL111-1, BIOL115-3, BIOL116-1 or any other PES course that has a prerequisite of PES111.

<input checked="" type="checkbox"/>	COURSE NUMBER & TITLE	HRS	PREREQUISITES/COREQUISITES
	PES 111 General Physics I	4	Coreq. MATH135
	PES 112 General Physics II	4	PES111, Coreq. MATH136
	PES 213 General Physics III	3	PES112, Coreq. MATH235
	5 hours of additional Science courses from list	5	Check Bulletin for specific course prerequisites
	<b>TOTAL</b>	<b>16</b>	

**WRITING SKILLS** – All courses in this section must be completed. If you do not qualify for ENGL 131 you need to take ENGL 099 as a prerequisite.

<input checked="" type="checkbox"/>	COURSE NUMBER & TITLE	HRS	PREREQUISITES/COREQUISITES
	ENGL 131 Rhetoric & Writing I	3	Score of 19+ on ACT Engl or 450+ on SAT Verb
	ENGL 309 Technical Writing and Presentation	3	ENGL131
	Writing Competency Portfolio	N/A	Complete prior to graduation
	<b>TOTAL</b>	<b>6</b>	

**HUMANITIES/SOCIAL SCIENCE ELECTIVES** – Complete 15 hours of Humanities/Social Science Electives. You must complete at least 6 hours of Humanities and 6 hours of Social Science from the departments listed. At least 6 hours must be taken at the 200+ level. Departments that fulfill Humanities requirements are: A H, EST, ENGL (150+), HIST, HUM, Languages (culture courses only), MUS (except choir or lessons) and PHIL. Departments that fulfill Social Science requirements are: ANTH, COMM, ECON, GES, GRNT, P SC, PSY, SOC and WMST.

<input checked="" type="checkbox"/>	COURSE NUMBER & TITLE	HRS	PREREQUISITES/COREQUISITES
	Humanities Courses	6-9	
	Social Science Courses	6-9	
	<b>TOTAL</b>	<b>15</b>	