

Bachelor of Science in Electrical Engineering

Program Guide
2017-2018

Student's Name _____ UID# _____

First Year	Sem	Grade	(33 annual credit hours)	Pre-requisites	Fa	Sp	Su
CHM 1210	3.0	_____	General Chemistry I.....	CHM 1010 Min Grade of D & MPL 30, CHM1210Lc; CHM1210Rc	★	a	a
CHM 1210L	2.0	_____	General Chemistry I Lab....	CHM 1010 Min Grade of D & MPL 30, CHM1210c; CHM1210Rc	★	a	a
CHM 1210R	0.0	_____	General Chemistry I Recitation.....	CHM 1010 Min Grade of D & MPL 30, CHM1210c; CHM1210Lc	★	a	a
ENG 1100	3.0	_____	Academic Writing and Reading.....	ACT 23 or SAT Verbal 530 or WPL 40	★	a	a
EE 1000	1.0	_____	Intro to Electrical Engineering.....		★	•	•
MTH 2300	4.0	_____	Calculus I.....	MTH 1350 or MPL 50	★	a	a
_____	3.0	_____	Social Sciences (E-5).....	Note 7	★	a	a
EE 2000	3.0	_____	Digital Design with HDL	MPL 40 or MTH 1280 with a minimum grade of C	a	★	•
EE 2000L	1.0	_____	Digital Design with HDL Laboratory....	(MPL 40 or MTH 1280 with a minimum grade of C), EE 2000c	a	★	•
CEG 2170	4.0	_____	Introduction to C Programming	MTH 1280 or MPL 40	a	★	•
PHY 2400	4.0	_____	General Physics I.....	(C or higher in EGR 1010 or MTH 2300), PHY 2400Lc, and PHY 2400Rc	a	★	a
PHY 2400L	1.0	_____	General Physics I Laboratory	PHY 2400c	a	★	a
MTH 2310	4.0	_____	Calculus II	MTH 2300	a	★	a
Credit Hours per Semester in the Model Program.....					16	17	0

Second Year	Sem	Grade	(33 annual credit hours)	Pre-requisites	Fa	Sp	Su
PHY 2410	4.0	_____	General Physics II	MTH 2310c, PHY 2400, PHY 2410Lc, and PHY 2410Rc	★	a	a
PHY 2410L	1.0	_____	General Physics II Laboratory	PHY 2410c	★	a	a
EE 2010	3.0	_____	Circuit Analysis I	..(C or better in ENG 1100 and MTH 2310) and PHY 2410/Lc	★	a	•
EE 2010L	1.0	_____	Circuit Analysis I Laboratory	EE 2010c	★	a	•
MTH 2320	4.0	_____	Calculus III	MTH 2310	★	a	a
_____	3.0	_____	Arts/Humanities (E-4).....	Note 7	★	a	a
EE 3210	3.0	_____	Linear Systems I.....	(C or higher in EE 2010/L), (C or higher in CEG 2170), MTH 2310	a	★	•
EE 3310	3.0	_____	Electronic Devices and Circuits.....	MTH 2300, (C or higher in EE 2010)	a	★	•
EE 3310L	1.0	_____	Electronic Devices and Circuits Laboratory.....	EE 3310c	a	★	•
_____	3.0	_____	Global Traditions (E-3).....	Note 7	a	★	a
EGR 3350	3.0	_____	Technical Communication for Engineers and Scientists.....	ENG 1100 & full major standing (Note 12)	a	★	a
MTH 2350	4.0	_____	Differential Equations with Matrix Algebra.....	MTH 2310	a	★	a
Credit Hours per Semester in the Model Program.....					16	17	0

Third Year	Sem	Grade	(29 annual credit hours)	Pre-requisites	Fa	Sp	Su
EE 3450	3.0	_____	Introduction to Electromagnetics.....	(C or higher in EE2010/L), PHY 2410/L, MTH 2320	★	a	•
EE 3450L	1.0	_____	Intro to Electromagnetics Laboratory	EE 3450c	★	a	•
EE 4130	3.0	_____	Continuous Control Systems	(C or higher in EE 3210 or ME 3210), MTH 2310	★	a	•
EE 4130L	1.0	_____	Continuous Control Systems Laboratory.....	EE 4130c	★	a	•
_____	3.0	_____	Focus Area	Note 8	★	a	•
EE 4000	3.0	_____	Linear Systems II.....	(C or higher in EE 3210), MTH 2310	★	a	•
EE 4210	3.0	_____	Digital Communication	EE 4000	a	★	•
EE 4210L	1.0	_____	Digital Communication Laboratory.....	EE 4210c	a	★	•
EE 4620	3.0	_____	Digital Integrated Circuit Design...(C or higher in EE 2000/L), (C or higher in EE 3210 or CEG 3320)		a	★	•
EE 4620L	1.0	_____	Digital Integrated Circuit Design Laboratory	EE 4620c	a	★	•
EE 3260	3.0	_____	Random Signals and Noise.....	(C or higher in EE 4000), MTH 2350, EE3210	a	★	•
_____	4.0	_____	Focus Area	Note 8	a	★	•
Credit Hours per Semester in the Model Program.....					14	15	0

Fourth Year				Sem	Grade	(25 annual credit hours)	Pre-requisites	Fa	Sp	Su
EE	4910	3.0	iw	_____	_____	Senior Design Project I	Note 11 Department Permission	★	•	•
_____	_____	3.0	_____	_____	_____	Technical Elective	Note 9	★	a	•
_____	_____	3.0	_____	_____	_____	Technical Elective	Note 9	★	a	•
_____	_____	3.0	_____	_____	_____	Global Traditions/History (E-3).....	Note 7	★	a	a
EE	4920	3.0	iw	_____	_____	Senior Design Project II.....	EE 4910	•	★	•
_____	_____	3.0	_____	_____	_____	Technical Elective	Note 9	•	★	•
_____	_____	4.0	_____	_____	_____	Technical Elective	Note 9	a	★	•
_____	_____	3.0	_____	_____	_____	Social Sciences (E-5)	Note 7	a	★	a
Credit Hours per Semester in the Model Program.....								12	13	0

TOTAL PROGRAM CREDIT HOURS

120.0

EE Focus Area (Complete one of the areas below with a minimum of 7 hours)

Electronic Systems Focus Area

EE	4100	3.0	_____	_____	_____	Micro/Nano fab Engineering.....	EE 3310/L, PHY 2410/L	★	•	•
EE	4440/L	4.0	_____	_____	_____	Electronic Integrated Sys.....	EE 3210, EE 3310/L	•	★	•

Control Systems Focus Area

EE	4170/L	4.0	_____	_____	_____	Digital Control Systems.....	EE 4130/L	•	★	•
And ONE of the following:										
EE	4190/L	4.0	_____	_____	_____	Intelligent Control Systems.....	EE 4130/L	★	•	•
EE	4560/L	4.0	_____	_____	_____	Intro to Robotics.....	MTH 2350	★	•	•
EE	4120/L	4.0	_____	_____	_____	Industrial Controls	EE 2000/L	★	a	•

Microwave Engineering Focus Area

EE	4420/L	4.0	_____	_____	_____	Microwave Engineering I.....	EE 3450/L	•	★	•
And ONE of the following:										
EE	4460/L	4.0	_____	_____	_____	Microwave Engineering II.....	EE 4420/L	★	•	•
EE	4470/L	4.0	_____	_____	_____	Antenna Theory and Design.....	EE 4420/L	★	•	•

Signal Processing and Wireless Focus Area

EE	4730/L	4.0	_____	_____	_____	Wireless Communication	EE 4210/L, EE 3260	•	★	•
EE	4360	3.0	_____	_____	_____	Digital Signal Processing.....	EE 4000	★	•	•

VLSI and Computer EGR:

EE	4540/L	4.0	_____	_____	_____	VLSI Design	EE 2000/L	★	a	•
And ONE of the following:										
EE	4100	3.0	_____	_____	_____	Micro/Nano fab Engineering.....	EE 3310/L, PHY 2400/L	★	•	•
CEG	4330	3.0	_____	_____	_____	Microprocessor- Embedded Sys.....	CEG 3320 or (EE 2000/L, CEG 2170)	★	•	•
EE	4360	3.0	_____	_____	_____	Digital Signal Processing.....	EE 4000	•	a	•
EE	4730/L	4.0	_____	_____	_____	Wireless Communication.....	EE 4210/L, EE 3260	•	a	•

Software:

CEG	3310/L	4.0	_____	_____	_____	Computer Organization.....	CEG 2170, EE 2000/L	★	•	•
CS	3100	3.0	_____	_____	_____	Data Structures and Algorithms.....	(C or higher CEG 2170/L, CEG 3310/L), CEG 2350/L, MTH 2570	•	a	•

NOTES:

1. **Advising is mandatory in order to assure timely completion of the program.** Please see a department advisor as soon as possible to ensure enrollment in the proper courses.
2. Students must meet full major requirements (24+ credit hours completed, 2.25 cumulative grade point average, C or higher in ENG 1100, PHY 2400/2400L, CEG 2170, and MTH 2300) before being allowed to complete junior or senior level coursework.
3. In the right hand columns, (★) denotes the model schedule for a full-time student, (a) denotes "tentatively available", and (•) denotes "not available"
4. **The course(s) on the right side of the guide denote a prerequisite or a co-requisite course.** A course number followed by "c", such as (PHY #####c), denotes a co-requisite (can or must be taken at the same time).
5. See the Undergraduate Catalog for the Wright State Core requirements.
6. In addition to ENG 1100 and EGR 3350, or ENG 2100, or ENG 2140, students are required to complete two Integrated Writing "iw" courses from the Wright State Core. This may include the "iw" course EGR 1010.
7. Students must also complete two Multicultural Competence courses "MC" courses from the Wright State Core. Refer to the university catalog for additional information.
8. At least one focus area must be completed in its entirety. Additional courses outside the focus area may be taken as technical electives.
9. Technical electives are 2000+ level courses from colleges of Engineering, Science and Math, or Business. Science courses should be natural or physical science courses. Students may take one of the following 1000-level courses: EGR1010, MTH1350, EGR1980, CS1160, CS1180, or ME1020. Redundant coursework (i.e. ISE 2211, MS 2040, STT 3630, STT 2640) will not be accepted. In addition, technical electives may include 1 semester hour of internship credit (EE4810, EE4820, or EE4830).
10. **Students without high school chemistry will be required to take CHM 1010.**
11. **Senior Design I (EE 4910) requires Department Permission.** Students can only be admitted to S.D. if they have completed at least 30 hours of EE course work or they are within two semesters of completing the BSEE program on an advisor approved program of study.
12. Student may take EGR 3350 or ENG 2100 or ENG 2140 to meet the program's technical writing requirement.