



Bachelor of Science in Electrical Engineering

Program Guide
2015-2016

Student's Name _____ UID# _____

First Year	Sem	Grade	(31 credit hours)	Pre-requisites	Fa	Sp	Su
EGR 1010	4.0 iw	___	Intro Math for Eng Appl ALEKS level 61 or MPL 40 & HS Trig or ACT MTH 25 or MTH 1350		★	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 EE and EP.....		★	•	•
EE 2000	3.0	___	Digital Design with HDLMPL 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	•
___	3.0	___	Social Sciences (E-5).....Note 4		★	a	a
CEG 2170	4.0	___	Introduction to C ProgrammingMTH 1280 or MPL 40		a	★	•
MTH 2300	4.0	___	Calculus I.....MTH 1350 or MPL 50		a	★	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 LaboratoryPHY 2400c		a	★	a
___	3.0	___	Arts/Humanities (E-4).....Note 4		a	★	a
Credit Hours per Semester in the Model Program.....					15	16	0

Second Year	Sem	Grade	(33 semester credit hours)	Pre-requisites	Fa	Sp	Su
MTH 2310	4.0	___	Calculus IIMTH 2300		★	a	a
PHY 2410	4.0	___	General Physics IIMTH 2310c, PHY 2400, PHY 2410Lc, and PHY 2410Rc		★	a	a
PHY 2410L	1.0	___	General Physics II LaboratoryPHY 2410c		★	a	a
EE 2010	3.0	___	Circuit Analysis I...(C or higher in EGR 1010 or MTH 2300), (C or higher in PHY2400/L), ENG 1100		★	a	a
EE 2010L	1.0	___	Circuit Analysis I LaboratoryEE 2010c		★	a	a
MTH 2320	4.0	___	Calculus IIIMTH 2310		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	★	a
___	3.0	___	Global Traditions (E-3).....(Note 4)		a	★	a
EGR 3350	3.0	___	Technical Communication for Engineers and Scientists(ENG 1100 and full major standing)		a	★	a
Credit Hours per Semester in the Model Program.....					13	17	0

Third Year	Sem	Grade	(32 semester credit hours)	Pre-requisites	Fa	Sp	Su
MTH 2350	4.0	___	Differential Equations with Matrix Algebra.....MTH 2310		★	a	a
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 LaboratoryEE 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		★	a	•
EE 4000	3.0	___	Linear Systems II.....(C or higher in EE 3210), MTH 2310		★	a	•
EE 4210	3.0	___	Digital CommunicationEE 3210, EE 3260c		★	a	
EE 4210L	1.0	___	Digital Communication Laboratory EE 4000EE 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	★	a
EE 4620L	1.0	___	Digital Integrated Circuit Design LaboratoryEE 4620c		a	★	a
EE 3260	3.0	___	Random Signals and Noise.....(C or higher in EE 4000), MTH 2350 3210		a	★	•
___	4.0	___	Focus Area		a	★	•
Credit Hours per Semester in the Model Program.....					18	15	0

Fourth Year		Sem	Grade	(24 semester credit hours)		Pre-requisites	Fa	Sp	Su	
EE	4910	3.0	iw	___	___	Senior Design Project I.....	Note 9	★	•	•
___	___	4.0	___	___	___	Technical Elective	Note 8	★	a	•
___	___	3.0	___	___	___	Technical Elective	Note 8	★	a	•
___	___	3.0	___	___	___	Global Traditions/History (E-3).....	Note 4	★	a	a
EE	4920	3.0	iw	___	___	Senior Design Project II.....	EE 4910	•	★	•
___	___	3.0	___	___	___	Technical Elective	Note 8	•	★	•
___	___	4.0	___	___	___	Technical Elective	Note 8	a	★	•
___	___	3.0	___	___	___	Social Sciences (E-5)	Note 4	a	★	a
Credit Hours per Semester in the Model Program.....								13	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, PHY 2400/L	★	•	a
EE	4440/L	4.0	___	___	___	Electronic Integrated Sys.....	EE 3210, EE 3310	•	a	•

Control Systems Focus Area

EE	4170/L	3.0	___	___	___	Digital Control Systems	EE 4130	•	★	•
And ONE of the following:										
EE	4190/L	4.0	___	___	___	Intelligent Control Systems.....	EE 4130	★	•	•
EE	4560/L	4.0	___	___	___	Intro to Robotics.....	MTH 2350	★	•	•
EE	4120/L	4.0	___	___	___	Industrial Controls	EE 2000	★	a	a

Microwave Engineering Focus Area

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

Signal Processing and Wireless Focus Area

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

VLSI and Computer EGR:

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

Software:

CEG	3310/L	4.0	___	___	___	Computer Organization.....	CEG 2170, EE 2000/L	★	•	a
CS	3100	3.0	___	___	___	Data Structures and Algorithms.....	CS 1181/L, CEG 2350/L, CEG 3310/L	•	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 (EGR 1010 or 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, all students are required to complete two Integrated Writing "iw" courses from the Wright State Core. This may include the "iw" course EGR 1010. Students must also complete two Multicultural Competence courses "MC" courses from the Wright State Core. Refer to the university catalog for additional information.
7. Students have the option to choose from the four Focus Areas above. At least one focus area must be completed in its entirety. Additional courses outside the focus area may be taken as technical electives. For planning purposes, students must pick a focus area as soon as they become full major.
8. Technical Electives are 2000+ level courses from colleges of Engineering, Science and Math, or Business. Science courses should be natural or physical science courses. Psychology 1010 or its equivalent will not be counted as a technical elective. Redundant coursework (i.e. ISE 2211, MS 2040, STT 3630, STT 2640) will not be accepted. Required courses for a student's degree cannot be double counted as technical electives.
9. Senior design students must complete EGR 3350 and **ALL** EE foundation hours.