

Name: \_\_\_\_\_ UID: \_\_\_\_\_ Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**Directions:**

Refer to the WSU Catalog and BSEE Program description on the back side of this sheet and create a list of courses by term. Meet with a program advisor to review the graduation plan at the start of the program and periodically throughout to make sure all courses satisfy requirements for Wright State University, the College of Computer Science and Engineering, and the Department of Electrical Engineering. The model below is a 4-year plan for a student who begins without prior college credit.

**Year 1. EE pre-major. Beginning math, pre-med science, EE, and WSU Core. Courses are generally available fall and spring.**

Course	CR	Core/PM	Sem	Gr	Title	(Prerequisites)
ENG 1100	3	E1			Academic Writing and Reading .....	(ACT 23 or SAT Verbal 530 or WPL 40)
MTH 2300	4	E2			Calculus I .....	(MTH 1350 or MPL 50 or ALEKS 76)
CHM 1210/L/R	5	P,E6 (Add'l)			General Chemistry I w/ Lab & Recit. ....	(HS CHM or CHM 1010), (MTH 1280 or ALEKS 46)
CS 1180/L	4				Computer Science I and Lab (recommended) .....	(MPL 40 or MTH 1280 minimum of C)
MTH 2310	4	E2 (Add'l)			Calculus II .....	(MTH 2300)
PHY 2400/L	5	E6			General Physics I and Lab .....	(MTH 2300)
CHM 1220/L/R	5	P			General Chemistry II w/Lab & Recit.....	(CHM 1210/L)
EE 2000/L	4				Digital Design with HDL and Lab .....	(MPL 30 or MTH 1280 minimum of C)
CHM 2110/L/R	5	P	Su		Organic Chemistry I and Lab .....	(CHM 1210/L)
CHM 2120/L/R	5	P	Su		Organic Chemistry II and Lab .....	(CHM 2110/L)
	44				Credit hours per semester in the model program: Fa (16), Sp (18), Sum (10)	

**Year 2. EE pre-major and beginning full-major. Math, pre-med science, EE, and WSU Core. Courses are generally available fall and spring.**

Course	CR	Core/PM	Sem	Gr	Title	(Prerequisites)
SOC 2000	3	P,E5, IW/MC			Introduction to Sociology (recommended for MCAT prep) .....	(none)
BIO 1120	4	P	Sp		Cells and Genes with Lab .....	(MTH 2300 satisfies)
PHY 2410/L	5	E6			General Physics II and Lab .....	(PHY 2400/L and MTH 2300)
EE 2010/L	4				Analog Circuit Theory and Lab .....	(ENG 1100 minimum of C, MTH 2310 and PHY 2410/L coreq)
MTH 2350	4				Differential Equations with Matrix Algebra .....	(MTH 2310)
EE 3210	3				Linear Systems I .....	(EE 2010/L minimum of C and MTH 2310)
EE 3310/L	4				Elec. Devices & Circuits and Lab .....	(EE 2010/L minimum of C and MTH 2300)
BIO 1150	4	P	Su		Human Bio & Diversity & Ecology .....	(MTH 2300 satisfies)
	31				Credit hours per semester in the model program: Fa (16), Sp (14)	

**Year 3. EE full-major. Advanced math, pre-med science, EE, and WSU Core. Courses are generally available fall and spring.**

Course	CR	Core/PM	Sem	Gr	Title	(Prerequisites)
	3	E5, IW/MC			Any IW/MC course from Social Science in WSU Core .....	(see catalog)
EE 4130/L	4				Cont. Control Systems and Lab .....	(EE 3210 minimum of C and MTH 2310)
EE 4000	3				Linear Systems II .....	(EE 3210 minimum of C and MTH 2310)
BMB 4210	3	P			Biochemistry & Molecular Biology I .....	(CHM 2120)
EE 3260	3				Random Signals and Noise .....	(EE 4000 minimum of C and MTH 2350)
EE 4210/L	4				Digital Communication with Lab .....	(EE 4000 minimum of C)
EE 4620/L	4				Dig. Integrated Circuit Design with PLDs and FPGAs and Lab .....	(EE 2000/L minimum of C)
EGR 3350	3	E1			Tech Comm for Engineers & Comp Scientists .....	(ENG 1100)
	27				Take MCAT during Sp; submit med school application due by Jun/Jul Credit hours per semester in the model program: Fa (14), Sp (15)	

**Year 4. EE full-major. EE, senior design and WSU Core. Courses are generally available fall and spring.**

Course	CR	Core/PM	Sem	Gr	Title	(Prerequisites)
	3	E3, IW/MC			Any Global Traditions (Interdisciplinary Global Studies) in WSU Core .....	(see catalog)
	3	E3			CLS 1500 or HST 1100 or HST 1200 .....	(see catalog)
MTH 2320	4				Calculus III .....	(MTH 2310)
EE 4910	3	IW			Electrical Engr. Senior Design Project I .....	(Department approval)
	3	E4, IW/MC			Any Arts/Humanities in WSU Core .....	(see catalog)
EE 3450	3				Intro Electromagnetics w/o Lab .....	(EE 2010/L minimum of C, and MTH 2320 and PHY 2410/L)
EE 4920	3	IW			Electrical Engr. Senior Design Project II .....	(Department approval)
	22				Credit hours per semester in the model program: Fa (13), Sp (9)	

The Bachelor of Science in Electrical Engineering (BSEE) Pre-Med program requires 120 hours of course work from Wright State University (WSU) Core, Pre-major, Full-major, Pre-Med Electives, and Senior Design.

**A. 44 hours of WSU Core (see Table 1).**

WSU Core consists of at least 38 hours (Hrs) from six areas called Elements and includes two integrated writing (IW) and two multicultural competency (MC) courses.

Reference: <https://www.wright.edu/academic-affairs/programs/general-education/program-requirements>,

**Table 1. WSU Core courses in BSEE program.**

<i>WSU Core by Element</i>	<i>Hrs</i>	<i>Acceptable for BSEE</i>
E-1 Communications – 1st year	3	ENG 1100
E-1 Communications – 2nd year	3	EGR 3350
E-2 Mathematics	4	MTH 2300
E-3 Global Traditions – History	3	CLS 1500 or HST 1100 or HST 1200
E-3 Global Traditions – Interdisciplinary Global Studies	3	Any E-3 (IW,MC) course
E-4 Arts/Humanities	3	Any E-4 (IW,MC) course
E-5 Social Science (1st category)	6	Any E-5 (IW,MC) course in Economics (EC)
E-5 Social Science (2nd category)		Any E-5 (IW,MC) non-EC course
E-6 Natural Science with lab	5	PHY 2400/L/R
E-6 Natural Science with lab	5	PHY 2410/L/R
Additional WSU Core from E-2	4	MTH 2310
Additional WSU Core from E-6	5	CHM 1210/L/R
<b>Total hours from WSU Core</b>	<b>44</b>	

**B. 16 hours of Pre-major courses (see Table 2).**

Students are admitted with pre-major status to the College of Computer Science and Engineering upon completion of 24 or more semester hours of college-level work, a 2.25 cumulative GPA at Wright State and in all academic work, a C or higher in ENG 1100, and completion of EE 1000, EE 2000, EE 2000L, EE 2010, EE 2020L, MTH 2300, MTH 2310, MTH 2320 or MTH 2350, CHM 1210/1210L or BIO 1120/1120L or BIO 1150/1150L, PHY 2400/2400/L, PHY 2410/2410L, CS 1160 or CS 1180 or CEG 2170, and 3 hours of integrated writing in WSU Core beyond ENG 1100. Promotion to full-major occurs upon completion of the pre-major courses listed in Table 2.

**Table 2. Pre-major courses in BSEE program.**

<i>Course</i>	<i>Hrs</i>	<i>Prerequisites</i>
MTH 2350 Differential Equations with Matrix Algebra	4	MTH 2310 (minimum of D)
EE 2000 Digital Design with HDL	3	MTH 2300 (minimum of C)
EE 2000L Digital Design with HDL Lab	1	EE 2000 co-requisite
EE 2010 Analog Circuit Theory	3	MTH 2300 (minimum of C)
EE 2010L Analog Circuit Theory Lab	1	EE 2010 co-requisite
Plus one computer programming course from:	4	
CEG 2170 Intro to C Prog. for Scientists and Engineers, or		CS 1180 is preferred. MTH 2300 satisfies programming course prerequisites
CS 1160 Intro to Computer Programming I, or		
CS 1180 Computer Science I with Lab		
<b>Total hours from pre-major</b>	<b>16</b>	

**C. 32 hours of Full-major courses (see Table 3).**

Before registering for full-major EE courses listed in Table 3, students must satisfactorily complete the courses listed in Section B including the BSEE pre-major courses listed in Table 2.

**D. 6 hours of EE Senior Design Project.**

Students must complete BSEE Full-major courses listed in Table 3 and have an overall WSU GPA of 2.0 in order to receive EE Department approval to register for EE 4910 and EE 4920. Exception: take MTH 2320 as co-req with EE 4910 and EE 3450 as co-req with EE 4920.

**Table 3. Full-major courses in BSEE program.**

<i>Course</i>	<i>Hrs</i>	<i>Acceptable for BSEE</i>
MTH 2320 Calculus III	4	MTH 2310 (minimum of D)
EE 3260 Random Signals and Noise	3	EE 4000 (minimum of C) and MTH 2350 (minimum of D)
EE 3210 Linear Systems I	3	EE 2010 (minimum of C) and either programming course (minimum of C) or MTH 2310 (minimum of D)
EE 3310 Electronic Devices and Circuits	3	EE 2010 and EE 2010L (each minimum of C) and MTH 2300 (minimum of D)
EE 3310L Electronic Devices and Circuits Lab	1	
EE 3450 Intro to Electromagnetics (lecture only, lab section is optional)	3	EE 2010 and EE 2010L (each minimum of C) and PHY 2410 and PHY 2410L (each minimum of D) and MTH 2320 (minimum of D)
EE 4000 Linear Systems II	3	EE 3210 (minimum of C) and MTH 2310 (minimum of D)
EE 4130 Continuous Control Systems	3	EE 3210 (minimum of C) and MTH 2310 (minimum of D)
EE 4130L Continuous Control Systems Lab	1	
EE 4210 Digital Communications	3	EE 4000 (minimum of C)
EE 4210L Digital Comms. Lab	1	
EE 4620 Digital Integrated Circuit Design with PLDs and FPGAs	3	EE 2000 and EE 2000L (each minimum of C)
EE 4620L Digital Integrated Circuit Design with PLDs and FPGAs Lab	1	
<b>Total hours from full-major</b>	<b>32</b>	

**Table 4. Senior Design courses in BSEE program.**

<i>Course</i>	<i>Hrs</i>	<i>Prerequisites</i>
EE 4910 EE Senior Design Project I	3	EE Department approval
EE 4920 EE Senior Design Project II	3	EE Department approval
<b>Total hours of senior design</b>	<b>6</b>	

**E. 22 hours of Pre-Med courses (see Table 5).**

Students complete the courses listed in Table 5 in biology and chemistry as part of the EE-Pre-Med program. The additional courses in Table 6 are recommended to meet admissions requirements of some medical schools. Course are listed in order of greatest importance. Check with the pre-med coordinator in the College of Science and Mathematics for assistance in choosing these or additional courses.

**Table 5. Pre-Med courses in BSEE program.**

<i>Course</i>	<i>Hrs</i>	<i>Prerequisites</i>
BIO 1120/L Cells & Genes w/Lab	4	Math placement 25 or equivalent
CHM 1220/L/R General Chemistry II w/Lab	5	CHM 1210/L (each minimum of D)
CHM 2110/L Organic Chemistry I w/Lab	5	CHM 1220/L (each minimum of D)
CHM 2110/L Organic Chemistry II w/Lab	5	CHM 2110/L (each minimum of D)
BMB 4210 Biochemistry & Molecular Bio I	3	CHM 2120 (minimum of D)
<b>Total hours from Pre-Med</b>	<b>22</b>	

**Table 6. Recommended Pre-Med courses.**

<i>Course</i>	<i>Hrs</i>	<i>Prerequisites</i>
BIO 1150/L Organisms & Ecosystems w/Lab	4	Math placement 25 or equivalent
BMB 4230 Biochemistry & Molecular Bio II	3	CHM 2120 (minimum of D)
ANT 3100 Human Structure & Func. I w/Lab	4	CHM 1210 (minimum of C)
ANT 3100 Human Structure & Func. II w/Lab	4	ANT 3100 (minimum of C)
<b>Hours of recommended Pre-Med</b>	<b>15</b>	