



# Bachelor of Science General Industrial and Systems Engineering Track 2021-2022

Name: \_\_\_\_\_

UID: \_\_\_\_\_

**2IW and 2MC required in WSU core**

**Guide may be subject to program change**

First Year	CR	IW/MC	Sem	GR	Title	Fa	Sp	Su	
ISE 1110(D)	4.0				Introduction to Engineering Science Applications for All-----ISE 1110(L)c	*	a	a	
EGR 1010	4.0	IW			Intro Math for Egr App (E-2)-----ALEKS level 61 or MPL 40 & HS Trig) or ACT MTH 25 or MTH 1350	*	a	a	
ENG 1100	3.0				English (E-1)-----ACT 23 or SAT Verbal 530 or WPL 40	*	a	a	
ME 1040*	3.0				Engineering Design and Solid Modeling-----	*	a	*	
MTH 2300	4.0				Calculus I (E-2 Additional)-----MTH 1350 or MPL 50 or ALEKS 76	a	*	a	
PHY 2400	4.0				General Physics I (E-6)----- (MTH 2300 or EGR 1010 C or better), PHY 2400Lc	a	*	a	
PHY 2400L	1.0				General Physics Lab (E-6)-----PHY 2400c	a	*	a	
PSY 1010	4.0	IW			Psychology (Social Sciences) (E-5)-----	a	*	a	
CS 1160(D)	4.0				Introduction to Computer Programming-----MPL 30 or DEV 0970 Minimum Grade of P, CS1160L(c)	a	*	*	
<b>Credit Hours Per Semester in the Model Program</b>							<b>14</b>	<b>17</b>	<b>0</b>

Second Year	CR	IW/MC	Sem	GR	Title	Pre/Co-Requisites	Fa	Sp	Su
ISE 2211	3.0				Statistics for Engineers-----	EGR 1010 or MTH 2300	*	a	a
ME 2120*	3.0				Statics-----	(EGR 1010 or MTH 2310), ME 1040, PHY 2400, ME 2120Rc	*	a	*
MTH 2310	4.0				Calculus II (E-2 Additional)-----	MTH 2300	*	a	a
PHY 2410	4.0				General Physics II (E-6)-----	PHY 2400, MTH 2300, {MTH 2310}, PHY 2410Lc	*	a	a
PHY 2410L	1.0				General Physics II Lab (E-6)-----	PHY 2410c	*	a	a
ME 2210*	3.0				Dynamics-----	ME 2120 C or better, and (ME 1020 C or better or CS 1160 C or better), ME 2210Rc	a	*	*
CS 2800***	3.0				Web Development I-----	CS 1160 or CS 1180 or CEG 2170	a	*	*
	3.0				Global Traditions/Interdisciplinary (E-3)-----		a	*	a
MTH 2350	4.0				Differential Equations w/Matrix Algebra-----	MTH 2310	a	*	a
<b>Credit Hours Per Semester in the Model Program</b>							<b>15</b>	<b>13</b>	<b>0</b>

Third Year	CR	IW/MC	Sem	GR	Title	Pre/Co-Requisites	Fa	Sp	Su
ISE 4300(D)	3.0				Fundamentals of Human Factors Engineering-----	ISE 2211, PSY 1010	*	*	*
ISE 4711(D)	3.0				Optimization Methods-----	MTH 2310	*	*	*
ISE 4150(D)	3.0				Advanced Statistics for Engineers-----	ISE 2211	*	*	*
ISE 4850(D)	3.0				Six Sigma for Engineers-----	ISE 2211	*	*	*
	3.0				Global Traditions/History (E-3)-----		*	a	a
ISE 4320(D)	3.0				Human Systems Interaction & Usability Engineering-----	ISE 2211, ISE 4300	*	*	*
ISE 4510(D)	3.0				Computer Applications in ISE-----	ISE 4150, CS 1160	*	*	*
ISE 4712(D)	4.0				Simulation and Stochastic Models-----	ISE 4150, ISE 4712Lc	*	*	*
EGR 3350(D)	3.0				Tech Comm for Engineers & Computer Scientists (E-1)-----	ENG 1100	a	*	*
ISE 4820(D)	3.0				Supply Chain Analysis & Design-----	ISE 4711	*	*	*
<b>Credit Hours Per Semester in the Model Program</b>							<b>15</b>	<b>16</b>	<b>0</b>

Fourth Year	CR	IW/MC	Sem	GR	Title	Pre/Co-Requisites	Fa	Sp	Su
ISE 4310(D)	3.0				Ergonomics-----	ISE 2211	*	*	*
ISE 4400(D)	3.0				Engineering Economy-----	EGR 1010 or MTH 2300	*	*	*
ISE 4810(D)	3.0				Production and Service Systems-----	ISE 2211, ISE 4711, ISE 4712	*	*	*
ISE 4910	3.0	IW			Senior Design I-----	ISE 4320, ISE 4712, EGR 3350	*	*	*
	3.0				Social Sciences (E-5)-----		*	a	a
	3.0				Technical or General Elective-----		a	*	a
	3.0				Technical or General Elective-----		a	*	a
	3.0				Technical or General Elective-----		a	*	a
	3.0				Arts/Humanities (E-4)-----		a	*	a
ISE 4920	3.0	IW			Senior Design II-----	ISE 4910	*	*	*
<b>Credit Hours Per Semester in the Model Program</b>							<b>15</b>	<b>15</b>	<b>0</b>

**Total Semester Credit Hours =120**

**Meets or exceeds ABET minimum requirements of 37.5% engineering credit hours(45 semester credit hours).**

**Advisor Initials:** \_\_\_\_\_

**Program Planning** - The student, in cooperation with an advisor, should use a Program Guide and the corresponding undergraduate catalog to plan a complete program. Any problem which arises in connection with a particular Program Guide should be referred to the student's advisor.

**Additional Requirements:**

- Students are required to have two Multicultural Competence (MC) courses from any of the Wright State Core MC designated courses, Study Abroad courses, or Service Learning courses.
- Students are also required to have two Integrated Writing (IW) courses from the Wright State Core.

**Notes:**

1. **Use this guide, advisor consultations, and the Undergraduate Catalog to carefully plan a program of study.** Most courses are offered only once or twice a year. Complete mathematics and physics courses early since they are prerequisite to many engineering courses. Delaying these courses may delay completion of the program. Pay close attention to prerequisite and corequisite information listed on the right of the guide.
2. Students must have met the CECS entrance requirements in order to register for BIE courses numbered 3000 or higher.
3. **In the right hand columns:**  
 (\*) denotes courses in a model program with a non-conflicting schedule for a full-time student;  
 (a) denotes courses likely to be available;  
 (•) denotes courses normally not available. Check the Class Schedule for current information.
4. Prerequisites to a course in { } may be taken concurrently with the course.
5. Course number followed by "c" denotes a corequisite course.
6. Departmental honors research can fulfill a maximum of three credit hours of TE or GE requirements.
7. (D) following course number indicates course is offered distance.
8. ME courses with an asterisk (\*) are only offered once a year at the Lake Campus.
9. \*\*\*May substitute EE 2010(L or ME 2700 for CS 2800.

**\*\*Any course to fulfill a technical elective requirement that is not on this list of approved technical elective must have preapproval prior to the semester in which the course is being taken.**

Suggested Technical Electives			Fa	Sp	Su
ISE 4350(D)	3.0	Computational Neuroergonomics & Healthcare Applications-----ISE 4320 and PHY 2410	a	•	•
ISE 4950	1-5	Undergraduate Research in ISE----- (Department Permission)	a	a	a
ISE 4960	1-4	Departmental Honors Research----- (Application and Department Permission)	a	a	a
ISE 4980	1-5	Undergraduate Special topics in ISE----- (Department Permission)	a	a	a
ISE 4990	1-5	Undergraduate Independent Studies in ISE----- (Department Permission)	a	a	a
ISE 3940	3.0	Engineering Internship-----30 hours per week or 450 hours total of internship will count as a 3 cr hr technical elective	a	a	a
ISE 4940	3.0	Engineering Internship-----30 hours per week or 450 hours total of internship will count as a 3 cr hr technical elective	a	a	a
SCM 4250	3.0	Supply Chain Information Management-----SCM 3070	•	a	•
SCM 4600	3.0	Supply Management-----SCM 3070	a	•	•
ME 3870	3.0	Machining----- (ME 2210 and ME 2700) or (BME/ISE 3212), ME 3870Lc	a	•	•
ME 4121	4.0	Industrial Controls and Automation----- (ME 1020 or CS 1160), ME 4121Lc	a	a	•
EE 4190	4.0	Introduction to Intelligent Control Systems-----MTH 2350(available odd years)	a	•	•