WRIGHT STATE UNIVERSITY

Bachelor of Science
Industrial and Systems Engineering
2016-2017

Name _____ UID# U_____ Phone#_____

*2 IW and 2MC required in WSU Core *Guide may be subject to program change

First Year	Cr	IW/MC	Sem	Grade	(31 Credit hours)	Pre/Co-requisites	Fa	Sp	Su
ISE 1110	3.0		____	____	Fundamentals of BIE Engineering	ISE 1110Lc	★	a	.
CHM 1210	3.0		____	____	General Chemistry I	(HS CHM or CHM 1010),(MTH 1280 or ALEKS level 46),CHM 1210Lc	★	a	a
CHM 1210L	2.0		____	____	General Chemistry I Lab	CHM 1210c	★	a	a
EGR 1010	4.0	IW	____	____	Intro Math for Egr Applications (E-2)	(ALEKS level 61 or MPL 40 & HS Trig) or ACT MTH 25 or MTH 1350	★	a	.
PSY 1010	4.0	IW	____	____	Psychology (Social Sciences) (E-5)		★	a	a
ENG 1100	3.0		____	____	English (E-1)	ACT 23 or SAT Verbal 530 or WPL 40	a	★	a
MTH 2300	4.0		____	____	Calculus I (E-2 Additional)	MTH 1350 or ALEKS level 50	a	★	a
PHY 2400	4.0		____	____	General Physics I (E-6)	(MTH 2300 Grade C or Better or EGR 1010 Grade C or Better), PHY 2400Lc	a	★	a
PHY 2400L	1.0		____	____	General Physics I Lab (E-6)	PHY 2400c	a	★	a
____ ____	3.0		____	____	Global Traditions/History (E-3)		a	★	a
					Credit Hours Per Semester in the Model Program		16	15	0

Second Year	Cr		Sem	Grade	(29 Credit hours)	Pre/Co-requisites	Fa	Sp	Su
ISE 2211	3.0		____	____	Statistics for Engineers	EGR 1010 or MTH 2300	★	a	a
ISE 3211*	4.0		____	____	Human Biomechanics I	(EGR 1010 or MTH 2300) and PHY 2400, ISE 3211Rc	★	a	.
MTH 2310	4.0		____	____	Calculus II (E-2 Additional)	MTH 2300	★	a	a
____ ____	3.0		____	____	Global Traditions/Interdisciplinary (E-3)		★	a	a
ISE 3221*	3.0		____	____	Advanced Statistics for Engineers	ISE 2211	a	★	.
ISE 3212*	3.0		____	____	Human Biomechanics II	ISE/BME 3211	a	★	.
MTH 2350	4.0		____	____	Differential Equations w/ Matrix Algebra	MTH 2310	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)	MTH 2300, {MTH 2310}, PHY 2410c	a	★	a
					Credit Hours Per Semester in the Model Program		14	15	0

Third Year	Cr		Sem	Grade	(34 Credit hours)	Pre/Co-requisites	Fa	Sp	Su
ISE 3540	3.0		____	____	Introduction to Computation for ISE	{MTH 2350}	★	.	.
ISE 4300	3.0		____	____	Fundamentals of Human Factors Engineering	{ISE 2211}, PSY 1010	★	.	.
ISE 4711	4.0		____	____	Optimization Methods	MTH 2350, ISE 4711Lc	★	.	.
ISE 3511	4.0		____	____	Bioelectronics I	(EGR 1010 or MTH 2300) and PHY 2410, ISE 3511Lc	★	.	.
BME 4410	3.0		____	____	Biothermodynamics	CHM 1210, BME/ISE 3211	★	.	.
ISE 4320	3.0		____	____	Human-System Interaction & Usability Engineering	ISE 2211, ISE 4300	.	★	.
ISE 4510	4.0		____	____	Computer Applications in ISE	ISE 3540, ISE 4711	.	★	.
ISE 4712	4.0		____	____	Simulation and Stochastic Models	ISE 2211, ISE 3540, ISE 4712Lc	.	★	.
EGR 3350	3.0		____	____	Tech Comm for Engineers & Computer Scientists (E-1)	ENG 1100	a	★	a
____ ____	3.0		____	____	Arts/Humanities (E-4)		a	★	a
					Credit Hours Per Semester in the Model Program		17	17	0

Fourth Year	Cr		Sem	Grade	(28 Credit hours)	Pre/Co-requisites	Fa	Sp	Su
ISE 4310	3.0		____	____	Ergonomics	ISE 2211	★	.	.
ISE 4400	3.0		____	____	Engineering Economy	EGR 1010 or MTH 2300	★	.	.
ISE 4820	3.0		____	____	Supply Chain Analysis & Design	ISE 4711	★	.	.
ISE 4910**	3.0	IW	____	____	Senior Design I	ISE 4320,ISE 4712	★	.	.
____ ____	3.0		____	____	Social Sciences (E-5)		★	a	a
ISE 4410	3.0		____	____	Technology Based Ventures	Senior Status	.	★	.
ISE 4420	1.0		____	____	Innovation and Entrepreneurship Seminar Series	Junior or Senior Status	.	★	.
ISE 4810	3.0		____	____	Production and Service Systems	ISE 2211, ISE 4711, ISE 4712	.	★	.
ISE 4920**	3.0	IW	____	____	Senior Design II	ISE 4910	.	★	.
____ ____	3.0		____	____	***Department Approved Technical Elective		a	★	.
					Credit Hours Per Semester in the Model Program		15	13	0

TOTAL SEMESTER CREDIT HOURS 122.0

CECS Admission Requirements met _____ Initial _____ Date

Meets or exceeds ABET minimum requirements of 37.5% engineering credit hours (45.75 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. **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.

3. Prerequisites to a course in **{ }** may be taken concurrently with the course.

4. Course number followed by "c" denotes a corequisite course.

** 5. EGR 4910 and EGR 4920 may be substituted for ISE 4910 and ISE 4920 with department approval.

*** 6. Choose Technical Electives from this Department Approved List.

* 7. Except for ISE 3211, 3212 and ISE 3221, students must have met the CECS entrance requirements in order to register for CECS courses numbered 3000 or higher.

Course	Title	Pre-req	Fa	Sp	Su
BME/EGR 4610	Clinical Engineering in the Developing World	PHY 2410,(Application and Department Permission)	.	.	a
ISE 4850 (3)	Six Sigma for Engineers	(ISE 2211)	a		.
ISE 4950 (3)	Undergraduate Research in ISE II	(Department Permission)	a	a	a
ISE 4980 (3)	Undergraduate Special Topics in ISE II	(Department Permission)	a	a	a
ISE 4990 (3)	Undergraduate Independent Studies in ISE II	(Department Permission)	a	a	a
ISE 3512 (3)	Bioelectronics II	(ISE/BME 3511)	.	a	.
BME 3520 (4)	Microprocessors for Biomedical Engineering	(PHY 2410)	a	.	.
BME 3530 (3)	Biomedical Signals and Systems	{ISE 3540},(ISE/BME 3511)	.	a	.
BME 4421 (3)	Biotransport	(MTH 2350, BME 4410)	.	a	.
BME 4440 (4)	Biomaterials	(ISE/BME 3212 and ISE/BME 3540)	.	a	.
ISE 4980 (3)	Computational Neuroergonomics & Healthcare Applications		a	.	.
SCM 3070 (3)	Introduction to Operations Management	(MTH 2300)	a	a	a
SCM 3200 (3)	Basics of Supply Chain Management	(SCM 3070)	a	.	.
SCM 3340 (3)	Global Supply Chain Management	(SCM 3070)	.	a	.
SCM 4250 (3)	Supply Chain Information Management	(SCM 3070)	.	a	.
SCM 4600 (3)	Supply Management	(SCM 3070)	a	.	.
ME 4870 (3)	Machining	(.ME 2210 and ME 2700) or BME or ISE 3212), ME 4870Lc	.	a	.