Bachelor of Science
Applied Systems ISE Track
2024-2025

Name: UID:

2IW and 2MC required in WSU core

Guide may be subject to program change

First Year	CR	IW/MC	Sem	GR	Title	Pre/Co-Requisites	Fa	Sp	Su
ISE 1110(D)	4.0				Introduction to Engineering Science Applications for All	ISE 1110(L)c	*	a	•
MTH 2570 OR CS 2200	4.0				Discrete Mathematics for Computing Discrete Structures and their Algorithms	WSU MPL 40 or MTH 1280 Min Grade of D WSU MPL 40 or MTH 1280, CS 2200(R)c	*	a	a
ENG 1100(C)	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(C)	4.0				Calculus I (E-2 Additional)	MTH 1350 or MPL 50 or ALEKS 76	a	*	a
PHY 1110(C)	4.0				Principles Physics I	MTH 1280 or WSU MPL 40,PHY 110 (L),PHY 1110(R)c	a	*	a
PHY 1110L(C)	1.0				Principles Physics I(L)	PHY 1110: PHY 1110(R)c	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	*	•
					Credit Hours Per Semester in the Model Program		**14**	**17**	**0**

Second Year	CR	IW/MC	Sem	GR	Title	Pre/Co-Requisites	Fa	Sp	Su
ISE 2211(D)	3.0				Statistics for Engineers	EGR 1010 or MTH 2300	*	a	•
MTH 2530	3.0				Elementary Linear Algebra	MTH 2300 min grade D	*	a	•
PHY 1120	4.0				Principles of Physics II	PHY 1110, PHY 1120Lc	*	a	a
PHY 1120L	1.0				Principles of Physics II lab	PHY 1120c	*	a	a
	3.0				Natural Science(E-6) – Choose from list on back of guide***		*	a	a
ISE 3540 or CS 3840	3.0				Intro to Machine Learning in EGR Apps Applied Machine Learning	(CS 1160 or CS 1180) and (ISE 2211 or MTH2570) or (CS2200 or STT3600) CS 1160 or CS 1180 or CEG 2170 or CS 2200 or STT 3600 or ISE 2211	a	*	a
	3.0				Global Traditions/Interdisciplinary (E-3)		a	*	a
	3.0				Natural Science(E-6) – Choose from list on back of guide***		a	*	a
	3.0				Technical or General Elective		a	*	a
					Credit Hours Per Semester in the Model Program		**15**	**13**	**0**

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	ISE 2211 and (MTH 2570 or MTH 2300)	*	•	•
ISE 4150(D)	3.0				Advanced Statistics for Engineers	ISE 2211	*	•	•
ISE 4850(D)	3.0				Six Sigma for Engineers	ISE 2211	*	•	•
EGR 3350 or ENG 2140(D)*	3.0 3.0				Tech Comm for Engineers & Computer Scientists (E-1) Rsrch, Tech Writing & Prestation for Scientists and Egr	ENG 1100 ENG 1100 min grad C or ENG 1130 Min Gr C or ENG 1140 Min Gr C	*	a	•
ISE 4320(D)	3.0				Human-System Interaction and Design Thinking Principles	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	•	*	•
	3.0				Global Traditions/History (E-3)		a	*	•
ISE 4820(D)	3.0				Supply Chain Analysis & Design	ISE 4711	•	*	•
					Credit Hours Per Semester in the Model Program		**15**	**16**	**0**

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(D)	3.0	IW			Senior Design I	ISE 4320, ISE 4712, EGR 3350	*	•	•
	3.0				Technical or General Elective		*	a	a
MIS 3000 or MGT 3100	3.0				Fundamentals of Information Systems Management & Organizational Behavior	Junior Status and permission from RSCOB required to register Junior Status and permission from RSCOB required to register	a	*	a
	3.0				Technical Elective (see approved list)		a	*	a
	3.0				Social Science (E-5)		a	*	a
	3.0				Arts/Humanities (E-4)		a	*	a
ISE 4920(D)	3.0	IW			Senior Design II	ISE 4910	•	*	•
					Credit Hours Per Semester in the Model Program		**15**	**15**	**0**

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. Completion of the courses in the order indicated on this guide is the most efficient path to graduation. 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. Department Research or independent study can 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. (C) = A C or higher is required to move to full major status for PHY 1110/1110(L), MTH 2300 and ENG 1100

10. Suggested technical electives can be found at: Technical Electives

***Approved Natural Science Courses

BIO 1060	Global Ecology and Diversity	4cr
BIO 1120	Cells and Genes	4cr
BIO 1150	Organisms and Ecosystems	4cr
ANT 2100	Human Anatomy and Physiology	4cr
CHM 1210/L	General Chemistry	5cr

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