Wheaton College - Northern Illinois University (NIU) Program Plan

THIS PROGRAM PLAN IS FOR GUIDANCE ONLY. GRADUATION REQUIREMENTS ARE FOUND IN CATALOGS.

Engineering Major
General Education

Industrial & Systems Engineering

Fall Semester

Sem	Code	Name	Hrs.
1	MATH 231	Calculus I	4
	PHYS 231	Introductory Physics I	4
	ENGR 101	Introduction to Engineering	1
	CORE 101	First Year Seminar	4
	LANG.	Foreign Language	4
		Total	17
3	MATH 331	Vector Calculus	2
	PHYS 334	Computer Modeling of Physical Systems	2
	SELECT	Thematic Core (1 of 3)	4
	SELECT	Thematic Core (2 of 3)	4
	COMM	Oral Communications (0-2)	2
		Total	14
5	CHEM 231	General Chemistry I	4
	ENGR 204	Innovative Design in Engineering (NIU Tech. Elective 1)	4
	PHYS 351	Analog Electronics (w/lab)	2
	PSYC 101	Introduction to Psychology	4
	BITH	New Testament Literature	4
		Total	18
		years 1 - 3 credit hours =	*99*

Spring Semester

Sem	Code	Name	Hrs.
2	MATH 232	Calculus II	4
	PHYS 232	Introductory Physics II	4
	ENGR 105	Fundamentals of Engineering Graphics (2 - optional)	
	ENGW	Writing (0-4)	4
	BITH	Old Testament Literature	4
	AHS 101	Wellness (0-2)	2
		Total	18
4	MATH 333	Differential Equations	4
	MATH 363	Probability and Statistics	4
	ENGR 105	Fundamentals of Engrg Graphics	2
	SELECT	Thematic Core (3 of 3)	4
	SELECT	Visual & Performing Arts (1 of 2)	2
		Total	16
6	ECON 211	Principals of Microeconomics	4
	BITH	Christian Thought	4
	CORE 3xx	Advanced Seminar (with 1 Thematic Core tag)	4
	ENGR 394	Ethics Capstone	2
	SELECT	Visual & Performing Arts (2 of 2)	2
		Total	16

All courses below this line are based on completion at NIU

7	ISYE 250	Intro. To lean systems engineering	2
	ISYE 350	Principals of manufacturing processes	3
	ISYE 370	Operations research: deterministic models	3
	ISYE 410	Human factors engineering	3
	MEE 209	Engineering Mechanics - Statics and Dynamics	3
		Total	14
9	ISYE 440	Production planning and control	3
	ISYE 460	Facilities planning and design	3
	ISYE 480	Simulation modeling and analysis	3
	ISYE 492	Industrial and systems engineering senior design project	1
	TE	Technical elective 2	3
	TE	Technical elective 3	3
		Total	16
		years 4 - 5 credit hours =	*57*
		TOTAL credit hours =	*156*

8	ISYE 220	Engineering economy	3
	ISYE 310	Work measurement and work design	3
	ISYE 371	Operations research: Probabilistic models	3
	ISYE 430	Quality control	3
	ISYE 435	Experimental design for engineers	3
		Total	15
10	ISIYE 450	Lean manufacturing systems	3
	ISIYE 495	Senior design project	3
	TE	Technical Elective 4	3
	TE	Technical Elective 5	3
	EXAM	Fundamentals of Engineering (Passing is not required)	
		Total	12

last updated 8/24/2020

Wheaton College - NIU
Industrial and Systems Engineering

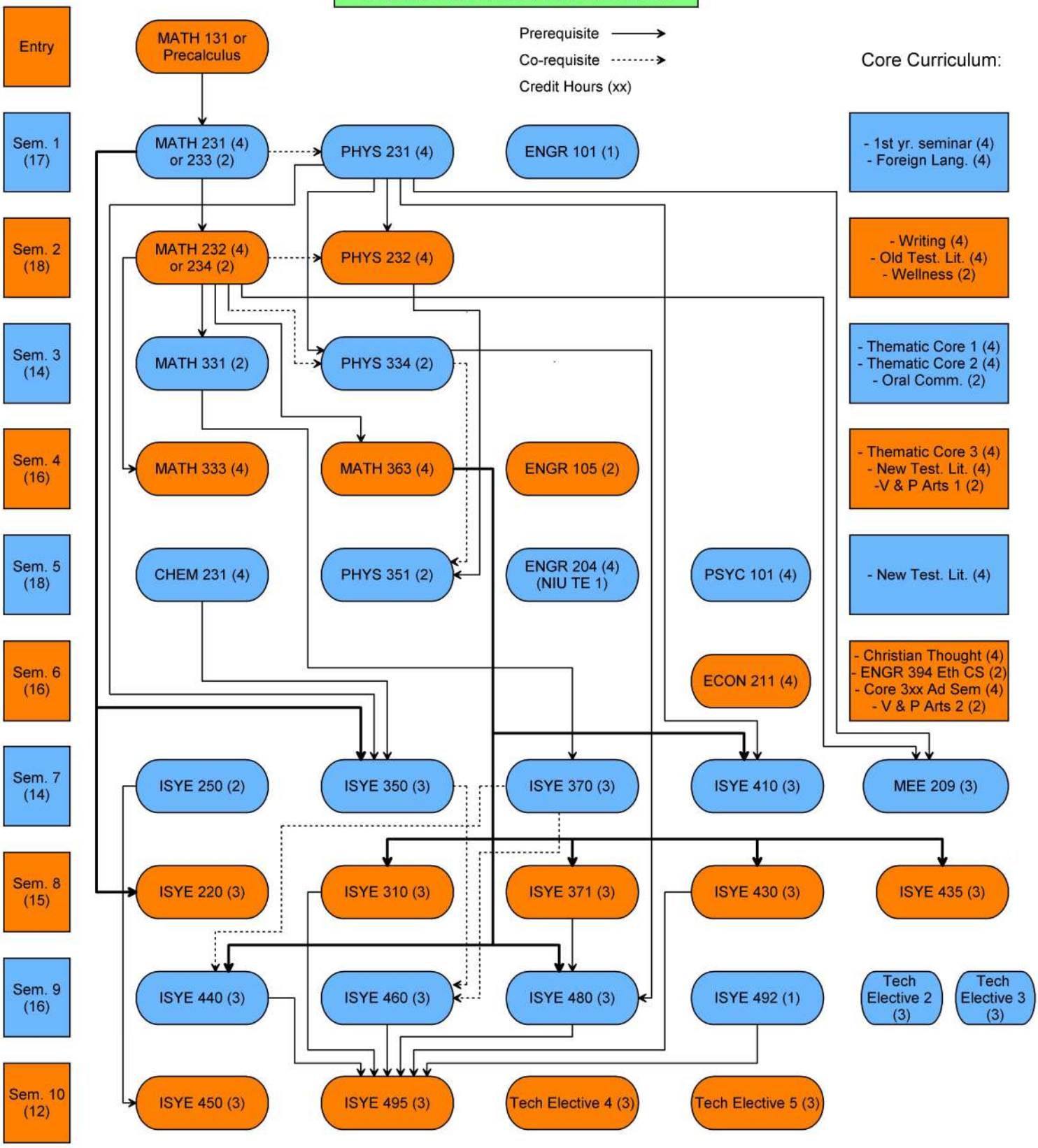
Updated December 2019

All courses after Semester 6 are taken at NIU.

Prerequisite →

Co-requisite ⇢

Credit Hours (xx)



Core Curriculum:

- 1st yr. seminar (4)
- Foreign Lang. (4)
- Writing (4)
- Old Test. Lit. (4)
- Wellness (2)
- Thematic Core 1 (4)
- Thematic Core 2 (4)
- Oral Comm. (2)
- Thematic Core 3 (4)
- New Test. Lit. (4)
- V & P Arts 1 (2)
- New Test. Lit. (4)
- Christian Thought (4)
- ENGR 394 Eth CS (2)
- Core 3xx Ad Sem (4)
- V & P Arts 2 (2)