Wheaton College - Illinois Tech Joint Dual-degree Program
THIS PROGRAM PLAN IS FOR GUIDANCE ONLY. GRADUATION REQUIREMENTS ARE FOUND IN CATALOGS.

Engineering Major
General Education

Computer Engineering

Sem	Code	Name (Fall Semester)	Hrs.	Sem	Code	Name (Spring Semester)	Hrs.
1	MATH 235	Calculus I	4	2	MATH 236	Calculus II	4
	PHYS 231	Introductory Physics I	4		PHYS 232	Introductory Physics II	4
	ENGR 101	Introduction to Engineering	1		ENGR 130	Engineering Graphics & CAD (4 - optional)	
	CORE 101	First Year Seminar	4		ENGW	Writing (0-4)	4
	LANG.	Foreign Language	4		BITH	Old Testament Literature	4
		Total	**17**			**Total**	**16**
3	MATH 333	Differential Equations	4	4	MATH 237	Calculus III	4
	PHYS 334	Computer Modeling of Physical Systems	2		PHYS 331	Spacetime and Quanta (*CE 300+)	4
	ENGR 201	Engr. Mechanics I - Statics (*CE 100+)	4		SELECT	Visual & Performing Arts (1 of 2)	2
	SELECT	Thematic Core (1 of 3)	4		BITH	New Testament Literature	4
	SELECT	Thematic Core (2 of 3)	4		COMM	Oral Communication (0-2)	2
		Total	**18**			**Total**	**16**
5	ENGR 204	Innovative Design in Engr. (*CE 200+)	4	6	IIT CS 116	Object-Oriented Programming II	2
	CHEM 231	General Chemistry I	4		IIT ECE 211	Circuit Analysis 1	3
	IIT CS 115	Object-Oriented Programming I	2		IIT ECE 218	Digital Systems	4
	CORE 3xx	Advanced Seminar (with 1 Thematic Core tag)	4		ENGR 394	Ethics Capstone	2
	SELECT	Thematic Core (3 of 3)	4		BITH	Christian Thought	4
					SELECT	Visual & Performing Arts (2 of 2)	2
		Total	**18**			**Total**	**17**

years 1 - 3 credit hours = 102

All courses below this line are based on completion at IIT

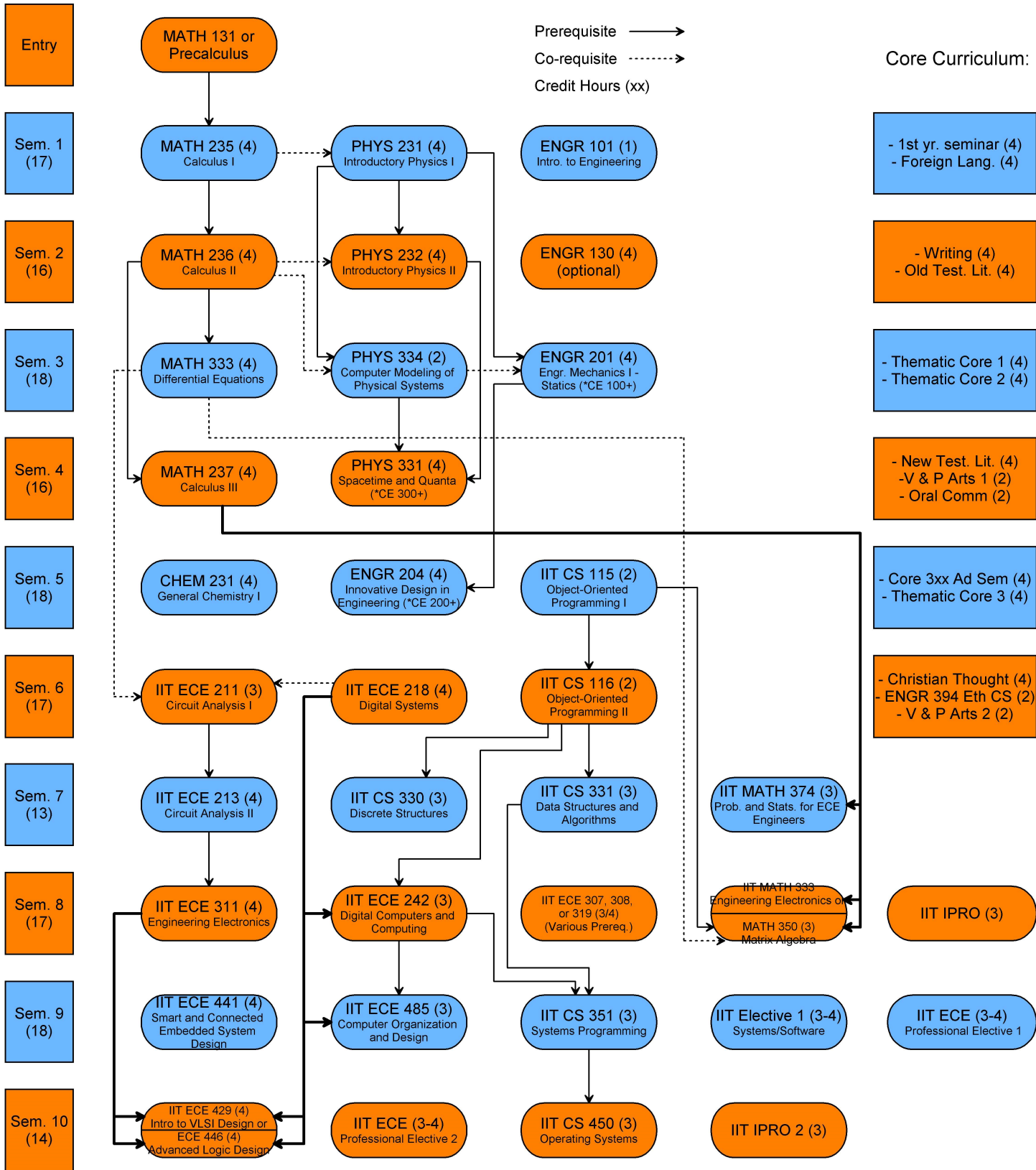| Sem	Code	Name	Hrs.	Sem	Code	Name	Hrs.
7	CS 330	Discrete Structures	3	8	ECE 242	Digital Computers & Computing	3
	CS 331	Data Structures & Algorithms	3		ECE 307, ECE 308, or ECE 319	Electrodynamics (4) Signals and Systems (3) Fundamentals of Power Engr (4)	4
	ECE 213	Circuit Analysis 2	4		ECE 311	Engineering Electronics	4
	MATH 374	Probability & Statistics for Electrical & Computer Engineers	3		MATH 333 or MATH 350	Matrix Algebra/Complex Variables or Intro Computational Mathematics	3
					IPRO	IPRO Elective 1	3
		Total	**13**			**Total**	**17**
9	CS 351	Systems Programming	3	10	CS 450	Operating Systems	3
	ECE 441	Smart and Connected Embedded System Design	4		ECE 429 or ECE 446	Introduction to VLSI Design Advanced Logic Design (3-4)	4
	ECE 485	Computer Organization and Design	3		ECE 400+	Professional ECE elective 2 (3-4)	4
	SELECT	Computer Sys/Software Elective (3-4)	4		IPRO	IPRO Elective 2	3
	ECE 400+	Professional ECE elective 1 (3-4)	4		EXAM	Fundamentals of Engineering (Passing is not required)	
		Total	**18**			**Total**	**14**

years 4 - 5 credit hours = 62

TOTAL credit hours = 164

last updated 8/21/2023

*Career Electives (CE): Advisor-approved course from engineering, science, math, computer science, business, and law at the indicated level.

Wheaton College - Illinois Tech
Computer Engineering
Updated August 2023

Entry

MATH 131 or Precalculus

Prerequisite ⟶
Co-requisite ⇢
Credit Hours (xx)

Core Curriculum:

Sem. 1 (17)
- MATH 235 (4) Calculus I
- PHYS 231 (4) Introductory Physics I
- ENGR 101 (1) Intro. to Engineering
- 1st yr. seminar (4)
- Foreign Lang. (4)

Sem. 2 (16)
- MATH 236 (4) Calculus II
- PHYS 232 (4) Introductory Physics II
- ENGR 130 (4) (optional)
- Writing (4)
- Old Test. Lit. (4)

Sem. 3 (18)
- MATH 333 (4) Differential Equations
- PHYS 334 (2) Computer Modeling of Physical Systems
- ENGR 201 (4) Engr. Mechanics I - Statics (*CE 100+)
- Thematic Core 1 (4)
- Thematic Core 2 (4)

Sem. 4 (16)
- MATH 237 (4) Calculus III
- PHYS 331 (4) Spacetime and Quanta (*CE 300+)
- New Test. Lit. (4)
- V & P Arts 1 (2)
- Oral Comm (2)

Sem. 5 (18)
- CHEM 231 (4) General Chemistry I
- ENGR 204 (4) Innovative Design in Engineering (*CE 200+)
- IIT CS 115 (2) Object-Oriented Programming I
- Core 3xx Ad Sem (4)
- Thematic Core 3 (4)

Sem. 6 (17)
- IIT ECE 211 (3) Circuit Analysis I
- IIT ECE 218 (4) Digital Systems
- IIT CS 116 (2) Object-Oriented Programming II
- Christian Thought (4)
- ENGR 394 Eth CS (2)
- V & P Arts 2 (2)

Sem. 7 (13)
- IIT ECE 213 (4) Circuit Analysis II
- IIT CS 330 (3) Discrete Structures
- IIT CS 331 (3) Data Structures and Algorithms
- IIT MATH 374 (3) Prob. and Stats. for ECE Engineers

Sem. 8 (17)
- IIT ECE 311 (4) Engineering Electronics
- IIT ECE 242 (3) Digital Computers and Computing
- IIT ECE 307, 308, or 319 (3/4) (Various Prereq.)
- IIT MATH 333 Engineering Electronics or MATH 350 (3) Matrix Algebra
- IIT IPRO (3)

Sem. 9 (18)
- IIT ECE 441 (4) Smart and Connected Embedded System Design
- IIT ECE 485 (3) Computer Organization and Design
- IIT CS 351 (3) Systems Programming
- IIT Elective 1 (3-4) Systems/Software
- IIT ECE (3-4) Professional Elective 1

Sem. 10 (14)
- IIT ECE 429 (4) Intro to VLSI Design or ECE 446 (4) Advanced Logic Design
- IIT ECE (3-4) Professional Elective 2
- IIT CS 450 (3) Operating Systems
- IIT IPRO 2 (3)

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