Total Major hours at Wheaton: 57
Suggested hours per semester: 16-18

Chemical Engineering with Illinois Tech

Major Academic Plan (MAP) for Catalog Year 2022-2023

The catalog is the final authority on CATC and major requirements; this is intended as a tool for planning purposes. Student course sequencing may vary depending on course offerings and other variables.

Fall Semester 1	**Spring Semester 2**	**Summer 1**
MATH 231: Calculus I[1]* PHYS 231: Introductory Physics I[F, 1]* CHEM 231: General Chemistry I[F] ENGR 101: Intro. to Engineering (1)[F] *CORE 101: First Year Seminar*	MATH 232: Calculus II* PHYS 232: Introductory Physics II[S]* CHEM 232: General Chemistry I[S] *ENGW 103: Writing* *AHS 101: Wellness (2)*	*Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), Wheaton in the Black Hills, non-major internship, summer research or other options that provide work experience, build your resume, or grow you personally.*
Fall Semester 2	**Spring Semester 2**	**Summer 2**
PHYS 334: Computer Modeling of Physical Systems (2)[F]* CHEM 341: Organic Chemistry I[F]* *BITH or ARCH 211: Old Testament* *COMM 101: Oral Communication: (2)* *Language Core Competency* *Visual & Performing Arts (2)[2]*	CHEM 342: Organic Chemistry II[S]* MATH 331: Vector Calculus (2)* *BITH or ARCH 213: New Testament* *Thematic Core Course[2]* *Advanced Integrative Seminar[2]**	*Consider study, internship or research options.*
Fall Semester 3	**Spring Semester 3**	**Summer 3**
MATH 333: Differential Equations* CHEM 371: Physical Chemistry I* IIT CHE 202: Material Energy Balance (3)[3] *BITH 315: Christian Thought** *Visual & Performing Arts (2)[2]*	CHEM 372: Physical Chemistry II (2)* CHEM 475: Methods in Physical Chemistry (2)* IIT Fluid Mechanics (3)[3] ENGR 394: Ethics Capstone (2)* *Thematic Core Courses (8)[2]*	*Consider study, internship or research options.*
All courses below this line are based on completion at Illinois Tech.		
Fall Semester 4	**Spring Semester 4**	**Summer 4**
ECE 211 or ECE 218: Circuit Analysis 1 (3) or Digital Systems CHE 302: Heat & Mass Transfer Ops. (3) CHE 311: Foundations of Biological Science for Engineering (3) CHE 351: Thermodynamics 1 (3) IPRO: IPRO Elective 1 (3)	CHE 239: Mathematical and Computational Methods (3) CHE 317: Chemical & Biological Engineering Laboratory 1 (2) CHE 433: Process Modeling & System Theory (3) CHE 451: Thermodynamics 2 (3) Technical Elective 1 (3)	*Consider study, internship or research options.*
Fall Semester 5	**Spring Semester 5**	**Summer 5**
CHE 418: Chemical & Biological Engineering Laboratory 2 (2) CHE 423: Chemical Reaction Engineering (3) CHE 435: Process Control (3) CHE 494: Process Design 1 (3) *IPRO: IPRO Elective 2 (3)*	CHE 406: Transport Phenomena (3) CHE 496: Process Design 2 (3) Technical Elective 2 (3) Technical Elective 2 (3) Fundamentals of Engineering Exam (0)	

Last updated: 3/16/2022

Notes or Special Guidance for Majors:

*Course has prerequisite
[F] Fall only course
[S] Spring only course
[#] Offered every other year

[1] Classes that meet CATC Thematic Core tags: MATH 231 (AAQR), PHYS 231 (SP). Engineering majors should use the Engineering checklist for CATC.

[2] Engineering majors should carefully select CATC Thematic Core courses. In addition to the Themes already covered with required courses (AAQR and SP, see footnote 1), Social Inquiry (SI) and the Visual and Performing Arts (VPA or 2 of VPAV/VPAM/VPAT) must be taken. 4 of the 5 remaining themes must also be taken by Engineering majors. See the Engineering checklist for the full CATC requirements. Double tagged courses are strongly encouraged.

[3] These courses are taken in partnership with Illinois Tech while finishing Wheaton requirements.

-All Engineering MAPs are also located on the Engineering Department webpage. Please contact the Engineering Coordinator, Jeff Yoder with questions. He can be reached at jeff.yoder@wheaton.edu.