Mechanical Engineering with Illinois Tech

Total Major hours at Wheaton: 51
Suggested hours per semester: 16-18

Major Academic Plan (MAP) for Catalog Year 2020-2021

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 1**	**Summer 1**
MATH 231: Calculus I[1]* PHYS 231: Introductory Physics I[F, 1]* *CORE 101: First Year Seminar* *Language Core Competency* *AHS 101: Wellness (2)*	MATH 232: Calculus II* PHYS 232: Introductory Physics II[S]* ENGR 101: Intro. to Engineering (1)[S] *ENGW 103: Writing* *BITH or ARCH 211 Old Testament*	*Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), 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**
MATH 331: Vector Calculus (2)* PHYS 334: Computer Modeling of Physical Systems (2)[F]* ENGR 201: Statics[F]* *Thematic Core Course[2]* *COMM 101: Oral Communication (2)*	MATH 333: Differential Equations* ENGR 202: Dynamics[S]* *Thematic Core Course[2]* *Visual & Performing Arts (2)[2]* *BITH or ARCH 213: New Testament*	*Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), non-major internship, summer research or other options that provide work experience, build your resume, or grow you personally.*
Fall Semester 3[3]	**Spring Semester 3**	**Summer 3**
ENGR 204: Innovative Design in Engr.[F]* ENGR 223: Strength of Materials[F]* CHEM 231: General Chemistry I[F] *Advanced Integrative Seminar[2]**	ENGR 225: Material Science[S]* ENGR 394: Ethics Capstone (2)[S]* *BITH 315: Christian Thought** *Thematic Core Course[2]* *Visual & Performing Arts (2)[2]*	*Consider study, internship or research options –Wheaton In summer program, WIN (HoneyRock), non-major internship, summer research or other options that provide work experience, build your resume, or grow you personally.*
All courses below this line are based on completion at Illinois Tech.		
Fall Semester 4	**Spring Semester 4**	**Summer 4**
MMAE 302: Advanced Mechanics of Solids (3) MMAE 313: Fluid Mechanics (3) MMAE 320: Thermodynamics (3) MMAE 350: Computational Mechanics (3)	MMAE 319: Mechanical Lab 1 MMAE 321: Applied Thermodynamics (3) MMAE 323: Heat & Mass Transfer (3) MMAE 332: Design of Machine Elements (3)	Consider study, internship or research options.
Fall Semester 5	**Spring Semester 5**	**Summer 5**
MMAE 419: Mechanical Laboratory 2 MMAE 443: Systems Analysis & Control (3) MMAE 445: Computer Aided Design (3) MMAE 485: Manufacturing Processes (3) IPRO: IPRO Elective 1 (3)	MMAE 432 or MMAE 433: Design, Mechanical Systems (3) or Design, Thermal Science (3) IPRO: IPRO Elective 2 (3) Technical Elective 1 (3) Optional Elective (3) Fundamentals of Engineering Exam (0)	

Notes or Special Guidance for Majors:

*Course has prerequisite

[F] Fall only course

Last updated: 5/20/2020

[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] ENGR 125: Introduction to CADD (2) is strongly recommended in this semester.

-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.