Total Major hours at Wheaton: 56
Suggested hours per semester: 16-18

Biomedical Engineering – Medical Imaging with Illinois Tech

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 2**	**Summer 1**
MATH 231: Calculus I[1]* PHYS 231: Introductory Physics I[F, 1]* CHEM 231: General Chemistry I[F] *CORE 101: First Year Seminar* *AHS 101: Wellness (2)*	MATH 232: Calculus II* PHYS 232: Introductory Physics II[S]* ENGR 101: Intro. to Engineering (1)[S] CHEM 231: General Chemistry II[S]* *ENGW 103: Writing*	*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]* CHEM 341: Organic Chemistry I[F]* *BITH or ARCH 211: Old Testament* *COMM 101: Oral Comm. (2)* *Language Core Competency*	CHEM 342: Organic Chemistry II[S]* *BITH or ARCH 213: New Testament* *Thematic Core Course[2]* *Visual & Performing Arts (2)[2]* *Advanced Integrative Seminar[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.*
Fall Semester 3	**Spring Semester 3**	**Summer 3**
MATH 333: Differential Equations* *BITH 315: Christian Thought** *Thematic Core Courses (8)[2]*	BIOL 115: Human Biology (3)[3] BIOL 117: Human Biology Lab (1)[3] BME 315: Instrumentation & Measurement Laboratory (2)[3] CS 201: Accelerated Introduction to Computer Science[3] ECE 211: Circuit Analysis 1 (3)[3] ENGR 394: Ethics Capstone (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**
BME 100: Intro. to the Profession (2) BME 309: Biomed Imaging & Sensing (3) ECE 308: Signals and Systems (3) BME 422: Mathematical Methods for Biomedical Engineers (3) BME 433: Biomedical Applications of Statistics (3) ECE 213: Circuit Analysis 2	BME 310: Biomaterials (3) BME 325: Bioelectronics Lab. (1) BME 443: Biomedical Inst. & Electronics (3) BME: Technical Elective 1 (3) IPRO: IPRO Elective 1 (3)	Consider study, internship or research options.
Fall Semester 5	**Spring Semester 5**	**Summer 5**
BME 405: Physiology Laboratory (2) BME 419: Intro. to Design Concepts in Biomedical Engineering (2) BME 453: Quantitative Physiology (3) ECE 437: Digital Signal Processing 1 (3) IPRO: IPRO Elective (3)	BME 420: Design Concepts in Biomedical Engineering (3) BME 438: Neuroimaging (3) BME 445: Quant. Neural Function (3) ECE 481: Image Processing (3) Fundamentals of Engineering Exam (0)	

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.