

BACHELOR OF SCIENCE IN BUSINESS AND ENGINEERING

The Bachelor of Science in Business and Engineering degree is an innovative cross-disciplinary program that prepares graduates for careers at the intersection of business and technology. It provides them with critical thinking skills and knowledge that prepare them to adapt to changing technological environments, successfully lead teams, and make key strategic management decisions.

The Business and Engineering curriculum includes a solid foundation in both business fundamentals and core engineering principles. It combines coursework in engineering, management, science, and mathematics with training in functional business areas such as economics, finance, marketing, optimization, entrepreneurship, project management, operations, and leadership.

Stuart School of Business is a global leader in bridging technology and business, offering distinctive education that provides students with the knowledge and skillsets to become outstanding professionals.

Business and engineering at Illinois Tech have a prestigious history that dates back to the 1880s, with the establishment of the Armour Institute of Technology in 1890 and the Lewis Institute in 1895. Business at Illinois Tech began at the Lewis Institute, Stuart's original home, with some of the nation's first courses in "Family and Consumer Science" (including "Home Economics" and "Household Management"), and the Institute's subsequent formation of the university's Department of Business and Economics in 1926. The merger of the Lewis Institute with the Armour Institute of Technology in 1940 brought business and engineering under one entity. The Armour Institute of Technology itself was founded through the pioneering works of Philip D. Armour, a merchant financier, Julia A. Beveridge, a librarian turned public administrator, and Frank W. Gunsaulus, an entrepreneurial preacher. The Department Business and Economics ultimately grew into a separate school at Illinois Institute of Technology – the Stuart School of Business, in 1969, with a gift from Lewis Institute alum and renowned financier Harold Leonard Stuart. Harold L. Stuart himself was a national leader in the field of investment banking in the first half of the 20th century, and his Chicago investment bank played a pivotal role in establishing the city as a global financial hub, as well as financing some incredible engineering feats, including Chicago's elevated train lines.

Over a period of more than 125 years, harnessing curricular innovations by Julia A. Beveridge and George N. Carman, and incredible scholarly works by trailblazing Illinois Tech scholars Herb A. Simon (author of Administrative Behavior, later awarded the Nobel Prize in Economics), Karl Menger (developer of the St. Petersburg paradox in economics) and Abe Sklar (developer of the Copula in financial modeling), the Stuart School of Business has refined business education. A long-standing leader in curricular innovation, in 1990, building on the foundational works of numerous Illinois Tech scholars, and Harold L. Stuart's own contributions to finance and the broader business community, the Stuart School of Business established quantitative finance as an academic discipline, with a world's first postgraduate Master's program in Financial Markets and Trading – a program that highlighted a new model for embedding into a postgraduate academic program the emphases on

career readiness and connectedness with the business community, and transformed business school education.

The Bachelor of Science in Business and Engineering brings together world-class faculty from the Armour College of Engineering and the Stuart School of Business, offering students an incredible opportunity to complete a core set of courses in both disciplines, with expanded access to subject matter experts from both colleges. As with all Stuart majors, the program emphasizes co-curricular opportunities that place students on the path to self-actualization and career success. Leadership, entrepreneurship, experiential learning, positive societal impact, and connectedness to the business community, combined with a human-centered approach to student development, and an unyielding focus on student success, are core pillars of all Stuart programs. Stuart is accredited by the Association to Advance Collegiate Schools of Business (AACSB) – an accreditation achieved by fewer than 6% of business schools worldwide.

The Bachelor of Science in Business and Engineering builds on Stuart's and Armour's prestige in business and engineering, as well as tradition of rigorous undergraduate education. The innovative program requires the successful completion of 126 credit hours.

Required Courses

Code	Title	Credit Hours
Business Core Requirements		(36)
BUS 100	Introduction to Business and Economics	3
ECON 151	Microeconomics	3
ECON 152	Macroeconomics	3
BUS 211	Financial Accounting	3
BUS 212	Managerial Accounting	3
BUS 221	Business Statistics	3
BUS 301	Organizational Behavior	3
BUS 305	Operation and Supply Chain Analytics	3
BUS 321	Analytics for Optimization	3
BUS 351	Financial Decision Making and Capital Budgeting	3
BUS 371	Marketing Fundamentals	3
BUS 480	Strategic Management and Design Thinking	3
Engineering Requirements		(24)
Required Courses		9
MMAE 202	Mechanics of Solids ¹	3
MMAE 232	Design for Innovation	0 OR 3
CAE 287	Mechanics of Structural Materials	3
Electives - Choose 5 from the following courses (subject to prerequisites)		15
Students wishing to take BME 200, ECE 211, CAE 302, CAE 304 or MMAE 305 should use a free elective to take MATH 252		

BME 200	Biomedical Engineering Computer Applications	2
ECE 211	Circuit Analysis I	3
CAE 221	Engineering Geology	3
CAE 302	Fluid Mechanics	3
CAE 303	Steel Structures I	3
CAE 304	Structural Analysis I	3
CAE 315	Materials of Construction	3
MMAE 305	Dynamics	3
MMAE 320	Thermodynamics	3
ID 420	Fundamentals of Design	3
CAE 470	Construction Methods and Cost Estimating	3
CAE 471	Construction Planning and Scheduling	3
CAE 472	Construction Site Operation	3
CAE 473	Construction Contract Administration	3
CAE 474	Introduction to Building Information Modeling	3
INTM 322	Industrial Project Management	3
INTM 415	Advanced Project Management	3
Mathematics Requirement		(10)
MATH 151	Calculus I	5
MATH 152	Calculus II	5
Computer Science Requirement		(2)
CS 104	Introduction to Computer Programming for Engineers	2
Interprofessional Projects (IPRO)		(6)
See Illinois Tech Core Curriculum, section E		6
Humanities and Social Science Requirements		(21)
See Illinois Tech Core Curriculum, section B and C		21
Free Electives		(10)
Select 10 credit hours		10
Natural Science Requirements		(11)
See Illinois Tech Core Curriculum, section D		
PHYS 123	General Physics I: Mechanics	4
CHEM 124	Principles of Chemistry I with Laboratory	4
MS 201	Materials Science	3
Total Credit Hours		120

¹ Substitutes for CAE 286 prerequisite

Bachelor of Science in Business and Engineering Curriculum

		Year 1	
Semester 1	Credit Hours	Semester 2	Credit Hours
BUS 100	3	BUS 221	3
ECON 151	3	ECON 152	3
CHEM 124	4	MATH 152	5
MATH 151	5	PHYS 123	4

		Year 2	
Semester 1	Credit Hours	Semester 2	Credit Hours
		CS 104	2
		15	17
Semester 1	Credit Hours	Semester 2	Credit Hours
BUS 211	3	BUS 212	3
BUS 321	3	BUS 351	3
MS 201	3	BUS 371	3
MMAE 202	3	CAE 287	3
MMAE 232	3	Humanities Elective (300+)	3
Humanities Elective (200 Level)	3		
		18	15
Semester 1	Credit Hours	Semester 2	Credit Hours
BUS 301	3	Engineering Elective	3
BUS 305	3	Engineering Elective	3
Social Sciences Elective	3	Social Science Elective (300+)	3
Humanities Elective (300+)	3	IPRO Elective I	3
Engineering Elective	3	Free Elective	3
		15	15
Semester 1	Credit Hours	Semester 2	Credit Hours
Engineering Elective	3	BUS 480	3
Social Sciences Elective (300+)	3	Engineering Elective	3
Free Elective	3	Humanities or Social Sciences Elective	3
IPRO Elective II	3	Free Elective	4
		12	13
Total Credit Hours: 120			