Program Change Request

Date Submitted: 03/16/25 3:38 pm

Viewing: BS-BSEN: Bachelor of Science in Business and Engineering

Last approved: 05/07/24 1:42 pm

Last edit: 03/16/25 3:38 pm

Changes proposed by: skang21

Catalog Pages

Using this Program

Bachelor of Science in Business and Engineering

Program Status Active

Requestor Name Sang-Baum Kang E-mail

skang21@stuart.iit.edu

Origination Date <u>2025-3-16</u> 2024-4-15

Is this an No

interdisciplinary

program?

Academic Unit Business Administration
College Stuart School of Business

Program Title

Bachelor of Science in Business and Engineering

Effective Academic 2025 2024 - 2026 Effective Term

Year 2025 Fall 2025

Academic Level Undergraduate

In Workflow

- 1. SB Associate Dean
- 2. Academic Affairs
- 3. Undergraduate
 Academic Affairs
- 4. SB Dean
- 5. Undergraduate Studies Committee Chair
- 6. Faculty Council Chair
- 7. Academic Affairs

Approval Path

- 1. 03/16/25 3:54 pm M Krishna Erramilli (krish): Approved for SB Associate Dean
- 2. 03/17/25 10:36 am Ayesha Qamer (aqamer): Approved for Academic Affairs
- 3. 03/17/25 10:46 am Joseph Gorzkowski (jgorzkow): Approved for Undergraduate Academic Affairs
- 4. 03/17/25 1:02 pm Rich Klein (rklein6): Approved for SB Dean

History

- 1. May 15, 2023 by Roland Calia (rcalia)
- 2. May 7, 2024 by Sang-Baum Kang (skang21)

If all courses in a subject in your department are required, please enter each subject followed by the number ranges in the "Quick Add" field in the pop up box when you click the green plus button below. For example: ARCH 100-499.

What courses will <u>Business, ECON, and Engineering courses</u> - <u>Course Business, ECON,</u>

factor the major and Engineering courses not Found

GPA?

Program Type Degree

Degree Type Bachelor of Science (BS)

CIP Code

14.0103 - Applied Engineering.

Is there more than one Academic Unit proposer?

No

Program Code BS-BSEN

Program Attribute

Total Program 120

Credit Hours

Please provide a summary and rationale for the requested program revision.

The change aims to standardize the business part of three Tech+ programs: BS in Business and Cybersecurity, BS in Business and Information Technology, and BS in Business and Engineering. Standardizing the Tech+ programs will give students more flexibility in choosing business and economics courses (economics, finance, marketing, and business administration paths) depending on their career goals and academic interests. Additionally, students can switch between the programs. There is no proposed change in the Engineering part of the curriculum. To remove two business electives. To align the assessment plan with the curriculum map.

Program Narrative and Justification

Narrative description of how the institution determined the need for the program. For example, describe what need this program will address and how the institution became aware of that need. If the program is replacing a current program(s), identify the current program(s) that is being replaced by the new program(s) and provide details describing the benefits of the new program(s). If the program will be offered in connection with, or in response to, an initative by a governmental entity, provide details of that initiative.

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 coursework with training in functional business areas such as economics, finance, marketing, optimization, entrepreneurship, project management, operations, and leadership.

The program emphasizes STEM by combining relevant coursework in business and engineering, engineering, enabling graduates to work successfully in technologically-oriented positions across organizations. This enables graduates to work successfully Graduates of this program will be well prepared lead frontier technological efforts in technologically oriented positions across organizations and to be well prepared to lead frontier technological efforts in their organizations.

Narrative description of how the program was designed to meet local market needs, or for an online program, regional or national market needs. For example, indicate if Bureau of Labor Statistics data or State labor data systems information was used, and/or if State, regional, or local workforce agencies were consulted. Include how the course content, program length, academic level, admission requirements, and prerequisites were decided; including information received from potential employers about course content; and information regarding the target students and employers.

The Bachelor of Science in Business and Engineering was developed by the Stuart School of Business in consultation with the faculty and leadership of the Armour College of Engineering, especially Armour's Department of Civil, Architectural, and Environmental Engineering (CAEE), as well as industry experts and practitioners.

Narrative description of any wage analysis the institution may have performed, including any consideration of Bureau of Labor Statistics wage data related to the new program.

A Bachelor of Science in Business and Engineering degree can provide an excellent preparation for the private sector job markets, particularly particular in the technology sector. Students with a degree have a relatively high mean salary of between \$99,890 \$88,000 and \$95,890, \$95,000, according to the Bureau of Labor Statistics. The job outlook is good, with job growth projected to increase at a range of 9% 7% to 6% 9% annually. Graduates are well prepared to work successfully in technologically-oriented positions across organizations and to lead frontier technological efforts in their organizations. See https://www.bls.gov/ooh/business-and-financial/financial-analysts.htm and https://www.bls.gov/ooh/architecture-and-engineering/civil-engineers.htm. https://www.bls.gov/ooh/architecture-and-engineering/civil-engineers.htm.

Narrative description of how the program was reviewed or approved by, or developed in conjunction with, one or more of the following: a) business advisory committees; b) program integrity boards; c) public or private oversight or regulatory agencies (not including the state licensing/authorization agency and accrediting agency); and d) businesses that would likely employ graduates of the program. For example, describe the steps taken to develop the program, identify when and with whom discussions were held, provide relevant details of any proposals or correspondence generated, and/or describe any process used to evaluate the program.

<u>The</u> "The Bachelor of Science in Business and Engineering was developed by the Stuart School of Business in consultation with the faculty and leadership of the Armour College of Engineering, especially Armour's Department of Civil, Architectural, and Environmental Engineering (CAEE), as well as industry experts and practitioners.

Admission Entry Details

What are the enrollment estimates?

Year 1 5 Year 2 10 Year 3 15

Attach Additional

Program

Justification

Document(s)

Academic Information

Advising

Since quality advising is a key component of good retention, graduation, and career placement, how will students be mentored? What student professional organizations will be formed? How will the department work with the Career Services office to develop industry connections?

Students will be advised by the Stuart Undergraduate Program Director.

Program Resources

4/18/25. 10:28 AM

Which program resources are

necessary to offer

this program?

Personnel

Facilities

Describe the personnel requirements necessary to offer the program. Describe how and when resources will be made available to hire any additional personnel that are required.

No new personnel are required.

Describe the facilities requirements necessary to offer the program. Describe how and when resources will be made available to obtain any additional facilities that are required.

No new facilities are required.

Proposed Catalog Entry

Admission

Requirements

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.

The program emphasizes STEM by combining relevant coursework in business and engineering, enabling graduates to work successfully in technologically-oriented positions across organizations. Graduates of this program will be well prepared lead frontier technological efforts in their organizations.

<u>Illinois Tech undergraduate admission requirements can be found at http://bulletin.iit.edu/undergraduate/undergraduate-admission/.</u>

Course Requirements

Business Core Rec	quired Courses	(21)
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

ECON 211	Introduction to Economics ^a	<u>3</u>
or ECON 151	<u>Microeconomics</u>	
BUS 210	Introduction to Accounting b	<u>3</u>
<u>or BUS 211</u>	Financial Accounting	
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
or <u>ECON 423</u>	Economics of Capital Investments	
BUS 371	Marketing Fundamentals	3
BUS 480	Strategic Management and Design Thinking	3
Economics/Busine	ss Electives	<u>(15)</u>
BUS 301 (Organiza (Strategic Cost Mar	dit hours from: BUS 102 (Business Analytics), BUS 212 (Managerial Accounting), tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 nagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152	<u>15</u>
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), l level BUS or ECON	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 , ECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. ^c	
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), l level BUS or ECON Engineering Requi	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 , ECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. ^c	(24)
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), l level BUS or ECON	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 , ECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. ^c	
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), l level BUS or ECON Engineering Requi	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 , ECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. ^c	(24)
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), l level BUS or ECON Engineering Required	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 hECON 251 (Introduction of Econometrics), ECON 311 (Intermediate hECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- hecourses for which they are qualified. Characteristics herements	(24) 9
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), level BUS or ECON Engineering Required Required Courses	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 hECON 251 (Introduction of Econometrics), ECON 311 (Intermediate hECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- hecourses for which they are qualified. c rements Mechanics of Solids 1	(24) 9 3 0 OR
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), Ilevel BUS or ECON Engineering Requil Required Courses MMAE 202 MMAE 232	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 LECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. ^c rements Mechanics of Solids ¹ Design for Innovation	(24) 9 3 0 OR 3
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), Ievel BUS or ECON Engineering Requir Required Courses MMAE 202 MMAE 232 CAE 287 Electives - Choose	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 LECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. c rements Mechanics of Solids 1 Design for Innovation Mechanics of Structural Materials	(24) 9 3 0 OR 3
BUS 301 (Organiza Strategic Cost Mar Macroeconomics), Microeconomics), evel BUS or ECON Engineering Requira Required Courses MMAE 202 MMAE 232 CAE 287 Electives - Choose Students wishing to	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 hECON 251 (Introduction of Econometrics), ECON 311 (Intermediate hECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400-courses for which they are qualified. c rements Mechanics of Solids 1 Design for Innovation Mechanics of Structural Materials 5 from the following courses (subject to prerequisites)	(24) 3 0 OR 3
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), level BUS or ECON Engineering Requir Required Courses MMAE 202 MMAE 232 CAE 287 Electives - Choose Students wishing to take MATH 252	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 LECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. c rements Mechanics of Solids 1 Design for Innovation Mechanics of Structural Materials 5 from the following courses (subject to prerequisites) to take BME 200, ECE 211, CAE 302, CAE 304 or MMAE 305 should use a free elective	(24) 9 3 0 OR 3 3
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), level BUS or ECON Engineering Requir Required Courses MMAE 202 MMAE 232 CAE 287 Electives - Choose Students wishing to take MATH 252 BME 200	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 hECON 251 (Introduction of Econometrics), ECON 311 (Intermediate hECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. characteristics Mechanics of Solids 1 Design for Innovation Mechanics of Structural Materials from the following courses (subject to prerequisites) to take BME 200, ECE 211, CAE 302, CAE 304 or MMAE 305 should use a free elective Biomedical Engineering Computer Applications	(24) 9 3 0 OR 3 3
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), level BUS or ECON Engineering Requir Required Courses MMAE 202 MMAE 232 CAE 287 Electives - Choose Students wishing to take MATH 252 BME 200 ECE 211	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 hagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 LECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. c rements Mechanics of Solids 1 Design for Innovation Mechanics of Structural Materials 5 from the following courses (subject to prerequisites) of take BME 200, ECE 211, CAE 302, CAE 304 or MMAE 305 should use a free elective Biomedical Engineering Computer Applications Circuit Analysis I	(24) 3 0 OR 3 3 15
BUS 301 (Organiza (Strategic Cost Mar (Macroeconomics), Microeconomics), Ilevel BUS or ECON Engineering Required Courses MMAE 202 MMAE 232 CAE 287 Electives - Choose Students wishing to take MATH 252 BME 200 ECE 211 CAE 221	tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 Inagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 I, ECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus 400- courses for which they are qualified. Cerements Mechanics of Solids 1 Design for Innovation Mechanics of Structural Materials 5 from the following courses (subject to prerequisites) of take BME 200, ECE 211, CAE 302, CAE 304 or MMAE 305 should use a free elective Biomedical Engineering Computer Applications Circuit Analysis I Engineering Geology	(24) 9 3 0 OR 3 3 15

/ 10/25, 10.20 AIVI	BO-BOLN. Bachelor of oblehoe in Business and Engineering	
<u>CAE 315</u>	Materials of Construction	3
MMAE 305	Dynamics	3
MMAE 320	Thermodynamics	3
<u>ID 420</u>	Fundamentals of Design	3
<u>CAE 470</u>	Construction Methods and Cost Estimating	3
CAE 471	Construction Planning and Scheduling	3
<u>CAE 472</u>	Construction Site Operation	3
<u>CAE 473</u>	Construction Contract Administration	3
<u>CAE 474</u>	Introduction to Building Information Modeling	3
<u>INTM 322</u>	Industrial Project Management	3
<u>INTM 415</u>	Advanced Project Management	3
Mathematics Req	uirement	(10)
MATH 151	Calculus I	5
MATH 152	Calculus II	5
Computer Science	e Requirement	(2)
<u>CS 104</u>	Introduction to Computer Programming for Engineers	2
Interprofessional	Projects (IPRO)	(6)
See Illinois Tech C	Core Curriculum, section E	6
Humanities and S	Social Science Requirements	(21)
See Illinois Tech C	Core Curriculum, section B and C	21
Free Electives		(10)
Select 10 credit h	ours	10
Natural Science R	Requirements	(11)
See Illinois Tech (Core Curriculum, section D	
PHYS 123	General Physics I: Mechanics	4
<u>CHEM 124</u>	Principles of Chemistry I with Laboratory	4
MS 201	Materials Science	3
Total Credit Hour	S	120

а

<u>Students pursuing the economic path should choose ECON 151 (Microeconomics) and take ECON 152 (Macroeconomics) later.</u>

<u>b</u>

<u>Students pursuing business paths are highly recommended to choose BUS 211 (Financial Accounting) and take BUS 212 (Managerial Accounting) later.</u>

c

Possible combinations include the following:

Economics Path:

ECON 152 (Macroeconomics);

ECON 251 (Introduction to Econometrics);

ECON 311 (Intermediate Microeconomics);

ECON 312 (Intermediate Macroeconomics); and

ECON 382 (Business Economics).

Finance Path:

BUS 212 (Managerial Accounting);

BUS 452 (International Finance);

BUS 454 (Investments);

BUS 455 (Corporate Finance); and

BUS 458 (Financial Derivatives).

Marketing Analytics Path: One way to pursue this path is

BUS 212 (Managerial Accounting);

BUS 472 (New Product Development);

BUS 473 (Marketing Analytics);

BUS 475 (Sales Management and Analytics); and

BUS 476 (Consumer Behavior).

Here, BUS 472, BUS 473, BUS 475, and BUS 476 require BUS 371 as a prerequisite, and a student may use BUS 371

as a social science requirement.

Alternatively, students may take

BUS 371 (Marketing Fundamentals);

BUS 472 (New Product Development);

BUS 473 (Marketing Analytics);

BUS 475 (Sales Management and Analytics); and

BUS 476 (Consumer Behavior)

to pursue the marketing analytics path.

Business Administration Path:

BUS 212 (Managerial Accounting);

BUS 301 (Organizational Behavior);

BUS 305 (Operation and Supply Chain Analytics);

BUS 341 (Business Law); and

BUS 371 (Marketing Fundamentals).

Substitutes for CAE 286 prerequisite

The above "paths" are for example purposes only.

Students could choose courses that satisfy the Illinois Tech Core Curriculum requirements to gain more exposure to

these areas. For example, BUS 371 and the economics courses are classified as social science requirements.

Students could use these courses to satisfy the social science requirements.

Sample
Curriculum/Program

Requirements

Year 1

Semester 1 Credit Semester 2 Credit
Hours Hours

BUS 100 3 BUS 221 3

4/18/25, 10:28 AM	BS-BSEN: Ba	achelor of Science in Business and Engineering	
ECON 151	3	ECON 152	3
ECON 211 or 151 ^a	<u>3</u>	Economics/Business Elective ^b	<u>3</u>
<u>CHEM 124</u>	4	MATH 152	<u>-</u> 5
MATH 151	5	PHYS 123	4
		<u>CS 104</u>	2
	15		17
			Year 2
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
BUS 211	3	BUS 212	3
BUS 321	3	BUS 351 or ECON 423	3
BUS 210 or 211 ^c	<u>3</u>	BUS 371	3
MS 201	<u>3</u> 3	Economics/Business Elective ^d	<u>3</u>
MMAE 202	3	<u>CAE 287</u>	<u>3</u> 3
MMAE 232	3	Social Science Elective	3
Humanities Elective (200 Level)	3	Humanities Elective (200 level)	<u>3</u>
	15		<u></u>
			Year 3
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
BUS 301	3	Economics/Business Elective	3
BUS 305	3	Engineering Elective	3
Economics/Business Elective	<u>3</u>	Engineering Elective	3
Engineering Elective	3	IPRO Elective I	3
Engineering Elective	<u>3</u>	Free Elective	3
Social Sciences Elective	3		
Humanities Elective (300+)	3		
	15		15
			Year 4
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
Economics/Business Elective	3	BUS 480	3
Social Sciences Elective (300+)	3	Engineering Elective	3
IPRO Elective II	3	Humanities or Social Sciences Elective	3
Humanities Elective (300+)	<u>3</u>	Free Elective	4
Free Elective	3		
	15		13
Total Credit Hours: 120			
_			

a

<u>Students pursuing the economic path should choose ECON 151 (Microeconomics) and take ECON 152 (Macroeconomics) later.</u>

b

If a student chooses an economics path, this is a good place to take ECON 152. Alternatively, the student may take a core curriculum course here and then take an Econ/Business elective later.

C

<u>Students pursuing business paths are highly recommended to choose BUS 211 (Financial Accounting) and take BUS 212 (Managerial Accounting) later.</u>

d

If a student chooses one of the business paths, this is a good place to take BUS 212.

Specialization Requirements

No

Program Outcomes and Assessment Process

What are your learning objectives in this program? Please list each learning objective in the boxes below:

Note: These should be the same as described in your assessment plan at the bottom of this form.

Students will prepare and deliver oral presentations that are well-structured, technically competent and make good use of aids to support evidence-driven conclusions.

Students will prepare documents in text-based media that are clear, accurate, and appropriate for the intended audience

Students will be able to develop well-reasoned arguments and conclusions.

Graduates will possess the analytical skills to support business decision making.

Students will apply business principles to engineering management problems

Upload your assessment plan

here:

Assessment Plan v2023 Stuart BS Business Enginneering.xlsx
Assessment Plan v2025 Stuart BS Business Enginneering.xlsx

Undergraduate Program Requirements

What courses will factor the major GPA?

<u>Business, ECON, and Engineering Courses</u> - <u>Course Business, ECON,</u>

and Engineering Courses not Found

Undergraduate Degree Requirements

Minimum credit 120

hours

Specialization required?

No

Minor required?

No

Proposed General Curriculum

List Major Course Requirements

<u>Business Core Req</u>	<u>uired Courses</u>	<u>(21</u>
BUS 100	Introduction to Business and Economics	
ECON 211	Introduction to Economics ^a	
<u>or ECON 151</u>	<u>Microeconomics</u>	
BUS 210	Introduction to Accounting b	
<u>or BUS 211</u>	Financial Accounting	
BUS 221	Business Statistics	
3US 321	Analytics for Optimization	
BUS 351	Financial Decision Making and Capital Budgeting	
or ECON 423	Economics of Capital Investments	
BUS 480	Strategic Management and Design Thinking	
Economics/Busine	ss Electives	<u>(1</u>
BUS 301 (Organiza Strategic Cost Mar Macroeconomics), Microeconomics), l	dit hours from: BUS 102 (Business Analytics), BUS 212 (Managerial Accounting), tional Behavior), BUS 305 (Operations and Supply Chain Analytics), BUS 311 (Dagement), BUS 341 (Business Law), BUS 371 (Marketing Fundamentals), ECON 152 (ECON 251 (Introduction of Econometrics), ECON 311 (Intermediate ECON 312 (Intermediate Macroeconomics), ECON 382 (Business Economics) plus CON courses for which they are qualified. C	<u>1</u>
Engineering Requi	rements	<u>(2</u>
Required Courses		
MMAE 202	Mechanics of Solids ¹	<u>3</u>
MMAE 232	<u>Design for Innovation</u>	<u>0</u> <u>OR</u>

<u>CAE 287</u>	Mechanics of Structural Materials	<u>3</u>
Electives - Choose 5 f	rom the following courses (subject to prerequisites)	<u>15</u>
	take BME 200, ECE 211, CAE 302, CAE 304 or MMAE 305 should use a free elective	
to take MATH 252		
<u>BME 200</u>	Biomedical Engineering Computer Applications	<u>2</u>
ECE 211	<u>Circuit Analysis I</u>	<u>3</u>
<u>CAE 221</u>	Engineering Geology	<u>3</u>
<u>CAE 302</u>	Fluid Mechanics	<u>3</u>
<u>CAE 303</u>	<u>Steel Structures I</u>	<u>3</u>
<u>CAE 304</u>	<u>Structural Analysis I</u>	<u>3</u>
<u>CAE 315</u>	Materials of Construction	<u>3</u>
MMAE 305	<u>Dynamics</u>	<u>3</u>
MMAE 320	<u>Thermodynamics</u>	<u>3</u>
<u>ID 420</u>	<u>Fundamentals of Design</u>	<u>3</u>
<u>CAE 470</u>	Construction Methods and Cost Estimating	<u>3</u>
<u>CAE 471</u>	Construction Planning and Scheduling	<u>3</u>
<u>CAE 472</u>	<u>Construction Site Operation</u>	<u>3</u>
<u>CAE 473</u>	Construction Contract Administration	<u>3</u>
<u>CAE 474</u>	Introduction to Building Information Modeling	<u>3</u>
<u>INTM 322</u>	Industrial Project Management	<u>3</u>
<u>INTM 415</u>	Advanced Project Management	<u>3</u>
Total Credit Hours		60

a

Students pursuing the economic path should choose ECON 151 (Microeconomics) and take ECON 152 (Macroeconomics) later.

b

Students pursuing business paths are highly recommended to choose BUS 211 (Financial Accounting) and take BUS 212 (Managerial Accounting) later.

C

Possible combinations include the following:

Economics Path:

ECON 152 (Macroeconomics);

ECON 251 (Introduction to Econometrics);

ECON 311 (Intermediate Microeconomics);

ECON 312 (Intermediate Macroeconomics); and

ECON 382 (Business Economics).

Finance Path:

BUS 212 (Managerial Accounting);

BUS 452 (International Finance);

BUS 454 (Investments);

BUS 455 (Corporate Finance); and

BUS 458 (Financial Derivatives).

Marketing Analytics Path: One way to pursue this path is

BUS 212 (Managerial Accounting);

BUS 472 (New Product Development);

BUS 473 (Marketing Analytics);

BUS 475 (Sales Management and Analytics); and

BUS 476 (Consumer Behavior).

Here, BUS 472, BUS 473, BUS 475, and BUS 476 require BUS 371 as a prerequisite, and a student may use BUS 371

as a social science requirement.

Alternatively, students may take

BUS 371 (Marketing Fundamentals);

BUS 472 (New Product Development);

BUS 473 (Marketing Analytics);

BUS 475 (Sales Management and Analytics); and

BUS 476 (Consumer Behavior)

to pursue the marketing analytics path.

Business Administration Path:

BUS 212 (Managerial Accounting);

BUS 301 (Organizational Behavior);

BUS 305 (Operation and Supply Chain Analytics);

BUS 341 (Business Law); and

BUS 371 (Marketing Fundamentals).

The above "paths" are for example purposes only.

Students could choose courses that satisfy the Illinois Tech Core Curriculum requirements to gain more exposure to

these areas. For example, BUS 371 and the economics courses are classified as social science requirements.

Students could use these courses to satisfy the social science requirements.

<u>Substitutes for CAE 286 prerequisite</u>

=		
Business Core Re	equirements	
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

Marketing Fundamentals	
Strategic Management and Design Thinking	
lents	
Mechanics of Solids	
Design for Innovation	
Mechanics of Structural Materials	
ments	
Calculus I	
Calculus II	
	1
rements	
General Physics I: Mechanics	
Principles of Chemistry I with Laboratory	
Materials Science	
	1
quirement	
Introduction to Computer Programming for Engineers	
edu/undergraduate/undergraduate-education/core-curriculum/#core_b	2
	2
	Mechanics of Solids Design for Innovation Mechanics of Structural Materials ments Calculus I Calculus II rements General Physics I: Mechanics Principles of Chemistry I with Laboratory Materials Science quirement Introduction to Computer Programming for Engineers

Interprofessional Pr	ojects (IPRO)	
https://bulletinnext.	iit.edu/undergraduate/undergraduate-education/core-curriculum/#core_e	(
Total Credit Hours		(
List Technical Elective Course Options		
Engineering Elective	s - Choose 5 from the following courses	1!
Students wishing to take MATH 252	take BME 200, ECE 211, CAE 302, CAE 304 or MMAE 305 should use a free elective to	
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
Total Credit Hours		+
List Free Elective Credit Hours (if applicable) Semester-by- semester plan of	10	
study for the degree program		

10/23, 10.20 AW	DO-DOLI1. Di	acticion of ocietice in business and Engineering	
			Year 1
Semester 1	Credit	Semester 2	Credit
	Hours		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
_		CS 104	2
_	0	-	Ð
			Year 2
Semester 1	Credit	Semester 2	Credit
	Hours		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	-	
_	0	-	Ð
			Year 3
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
BUS 301	3	Engineering Elective	3
BUS 305	3	Engineering Elective	3
Social Sciences Elective	3	Social Sciences Elective (300+)	3
Humanities Elective (300+)	3	IPRO Elective I	3
Engineering Elective	3	Free Elective	3
_	0	-	Ð
			Year 4
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
Engineering Elective	3	BUS 480	3
Social Sciences Elective (300+)	3	Engineering Elective	3
	3	Humanities or Social Sciences Elective	3
Free Elective			
Free Elective IPRO Elective II	3	Free Elective	4

Report to Faculty

Council

Reviewer

Comments