



IN PARTNERSHIP
 Daniels School of Business
 Edwardson School of
 Industrial Engineering

DOUBLE DEGREE

IBE + IE

INTEGRATED BUSINESS
 & ENGINEERING
 AND
 INDUSTRIAL ENGINEERING

Program/Major Codes:
 IE-BSE/IE
 IBE-BS/IBE
 Major Index: 2.0
 Graduation Index: 2.0
 Credit Hours: 144

DEGREE MAP - 8SEMESTERS

YEAR 1		
FALL		15-19 CR
COURSE	COURSE #	CR
General Chemistry ¹ General Chemistry Lab ²	CHM 11510 CHM 11520	4-7
Transform Ideas to Innovation	ENGR 13300	2
Analytic Geo & Calc I ² *	MA 16500	4
Intro to Accounting (GC)	ACCT 20000	3
EPICS or VIP	EPCS 11100 VIP 17911	1
IBE Seminar #1 (GC)	IBE 29110	1
¹ OR General Chemistry (CHM 11100) AND (CHM 11200) ² OR General Chemistry Lab (CHM 11530) ³ OR •Plane Analytics Geo & Calc I (MA 16100)		
SPRING		18 CR
EPICS OR VIP	EPCS 12100 VIP 17912	1
Analytic Geo & Calc II ¹ *	MA 16600	4
Modern Mechanics *	PHYS 17200	4
Microeconomics (GC)	ECON 25100	3
Python for Business (GC) ²	MIS 38800	3
Oral Communication ³	OPTIONS	3
¹ OR •Plane Analytics Geo & Calc II (MA 16200) ² OR Problem Solving & Object-Oriented Programming (CS 18000) ³ •Transformative Texts: Critical Thinking & Communication II: Modern World (SCLA 10200) OR Fundamentals of Speech Communication (COM 11400) or Science Writing & Presentations (COM 21700) or Collaborative Leadership/Interpersonal Skills (EDPS 31500)		
SUMMER		9 CR
Electricity & Optics	PHYS 24100	3
Management Acct * (GC)	ACCT 20100	3
Intro to Org Behavior (GC)	OBHR 33000	3
YEAR 3		
FALL		16 CR
COURSE	COURSE #	CR
Ordinary Differential Equation	MA 26600	3
Computing in Ind Eng	IE 33200	3
Op Res- Optimization	IE 33500	3
Op Res - Stochastic Models	IE 33600	3
Int Property Mgmt	STRT 49200	2
Team Design Selective	OPTIONS	2
SPRING		17 CR
Marketing Management	MKTG 32400	3
Strategic Management * (GC)	STRT 35200	3
Operations Mgmt * (GC)	SCOM 36100	3
Electrical Engineering Fund	ECE 20001	3
Manufacturing Processes I	IE 37000	3
Team Design Selective	OPTIONS	2
SUMMER		3-4 CR
UC Human Cultures (HUM)	OPTIONS	3-4

YEAR 2		
FALL		17-18 CR
COURSE	COURSE #	CR
Basic Mech I	ME 27000	3
Multivariate Calculus *	MA 26100	4
Written Communication ¹	OPTIONS	3-4
Ind Engineering Seminar	IE 20000	0
Probability & Stat in Eng I	IE 2300	3
IBE #2 Seminar: TBD (GC)	IBE 29120	1
Financial Management	FIN 31000	3
¹ Transformative Texts, Critical Thinking & Communications (SCLA 10100) OR First Year Comp (ENG 10600) OR Accelerated 1st Year Composition (ENGL 10800) OR Interdisciplinary Approaches in Writing (HONR 19903) OR Interdisciplinary Approaches in Writing (HONR 19903)		
SPRING		16 CR
Linear Algebra	MA 26500	3
Probability & Stat in Eng II	IE 33000	3
Engineering Economics	IE 34300	3
Mechanics of Materials	NUCL 27300	3
C Programming	CS 15900 *	3
IBE #3 Seminar: TBD (GC)	IBE 29130	1
* If CS 180 is taken instead of MGMT 388, CS 159 is not needed		
SUMMER		3 CR
Thermodynamics I	ME 20000	3

YEAR 4		
FALL		15 CR
COURSE	COURSE #	CR
IBE #4 Seminar: TBD (GC)	IBE 29140	1
Management Info Sys * (GC)	MIS 38200	3
Storytelling with Data * (GC)	OBHR 49300	2
Integrated Production Sys I	IE 38300	3
Work Analysis and Design I	IE 38600	3
Industrial Control Systems	IE 47400	3
SPRING		15 CR
Work Analysis and Design II	IE 48600	3
Manufacturing Processes II	IE 47000 ¹	3
Business Depth Selective	OPTIONS	3
IBE Capstone	IBE 49400 ²	3
Business Method Selective	SCOM 46600 ³	3
¹ OR Integrated Production Systems (IE 48400) ² OR Industrial Eng Design (IE 43100) ³ OR Advanced Spreadsheet Modeling & Simulation (QM 47200) OR Predictive Analytics (QM 47400)		

Legend:

* Prerequisites required • Critical Course
 (Gold) Changed from previous year
 GC - Gateway Course



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IBE-BS/IBE
Major Index: 2.0
Graduation Index: 2.0
Credit Hours: 144

DEGREE MAP - 9 SEMESTERS

YEAR 1		
FALL 15-19 CR		
COURSE	COURSE #	CR
General Chemistry ¹ General Chemistry Lab ²	CHM 11510 CHM 11520	4-7
Transform Ideas to Innovation	ENGR 13300	2
Analytic Geo & Calc I ³ *	MA 16500	4
Intro to Accounting (GC)	ACCT 20000	3
EPICS or VIP	EPCS 11100 VIP 17911	1
IBE Seminar #1 (GC)	IBE 29110	1
¹ OR General Chemistry (CHM 11100) AND (CHM 11200) ² OR General Chemistry Lab (CHM 11530) ³ OR •Plane Analytics Geo & Calc I (MA 16100)		
SPRING 18 CR		
EPICS OR VIP	EPCS 12100 VIP 17912	1
Analytic Geo & Calc II ¹ *	MA 16600	4
Modern Mechanics *	PHYS 17200	4
Microeconomics (GC)	ECON 25100	3
Python for Business (GC) ²	MIS 38800	3
Oral Communication ³	OPTIONS	3
¹ OR •Plane Analytics Geo & Calc II (MA 16200) ² OR Problem Solving & Object-Oriented Programming (CS 18000) ³ •Transformative Texts: Critical Thinking & Communication II: Modern World (SCLA 10200) OR Fundamentals of Speech Communication (COM 11400) or Science Writing & Presentations (COM 21700) or Collaborative Leadership: Interpersonal Skills (EDPS 31500)		
YEAR 2		
FALL 17-18 CR		
COURSE	COURSE #	CR
Basic Mech I	ME 27000	3
Multivariate Calculus *	MA 26100	4
Written Communication ¹	OPTIONS	3-4
Ind Engineering Seminar	IE 20000	0
Probability & Stat in Eng I	IE 23000	3
IBE #2 Seminar: TBD (GC)	IBE 29120	1
Financial Management	FIN 31000	3
¹ Transformative Texts, Critical Thinking & Communications (SCLA 10100) OR First Year Comp (ENG 10600) OR Accelerated 1st Year Composition (ENGL 10800) OR Interdisciplinary Approaches in Writing (HONR 19903) OR Interdisciplinary Approaches in Writing (HONR 19903)		
SPRING 16 CR		
Linear Algebra	MA 26500	3
Probability & Stat in Eng II	IE 33000	3
Thermodynamics I	ME 20000	3
Mechanics of Materials	NUCL 27300	3
C Programming	CS 15900 *	3
IBE #3 Seminar: TBD (GC)	IBE 29130	1
* If CS 180 is taken instead of MGMT 388, CS 159 is not needed		

Legend:

* Prerequisites required • Critical Course (Gold) Changed from previous year GC - Gateway Course

YEAR 3		
FALL 16 CR		
COURSE	COURSE #	CR
Ordinary Differential Equation	MA 26600	3
Computing in Ind Eng	IE 33200	3
Op Res- Optimization	IE 33500	3
Op Res - Stochastic Models	IE 33600	3
Int Property Mgmt	STRT 49200	2
Team Design Selective	OPTIONS	2
SPRING 17 CR		
Strategic Management * (GC)	STRT 35200	3
Operations Mgmt * (GC)	SCOM 36100	3
Engineering Economics	IE 34300	3
Electrical Engineering Fund	ECE 20001	3
Manufacturing Processes I	IE 37000	3
Team Design Selective	OPTIONS	2

YEAR 4		
FALL 15 CR		
COURSE	COURSE #	CR
Integrated Production Sys I	IE 38300	3
Work Analysis and Design I	IE 38600	3
Industrial Control Systems	IE 47400	3
Marketing Management	MKTG 32400	3
Storytelling with Data * (GC)	OBHR 49300	2
IBE #4 Seminar: TBD (GC)	IBE 29140	1
SPRING 15 CR		
Work Analysis and Design II	IE 48600	3
Manufacturing Processes II	IE 47000 ¹	3
Business Depth Selective	SCOM 46600	3
Management Info Sys * (GC)	MIS 38200	3
Management Acct * (GC)	ACCT 20100	3
¹ OR Integrated Production Systems (IE 48400)		

YEAR 5		
FALL 15-16 CR		
COURSE	COURSE #	CR
Industrial Eng Design	IE 43100 ¹	3
Business Method Selective	SCOM 46600 ²	3
UC Human Cultures (HUM)	OPTIONS	3-4
Electricity & Optics	PHYS 24100	3
Intro to Org Behavior (GC)	OBHR 33000	3
¹ OR IBE Capstone (IBE 49400) ² OR Advanced Spreadsheet Modeling & Simulation (QM 47200) OR Predictive Analytics (QM 47400)		



PURDUE
UNIVERSITY

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businessadvising@purdue.edu
765-494-4343

COURSE LIST

BUSINESS CORE COURSES (34 CR)

Microeconomics (ECON 25100) (3 cr)
Introductory Accounting (ACCT 20000) (3 cr) (GC)
Management Accounting (ACCT 20100)* (3 cr)
Financial Management (FIN 31000)* (3 cr)
Marketing Management (MKTG 32400) (3 cr)
Strategic Management (STRT 35200)* (3 cr)
Operations Management (SCOM 36100)* (3 cr)
Management Information Sys (MIS 38200)* (3 cr)
Python for Business (MIS 38800) (3 cr)¹
Intellectual Property Mgmt (STRT 49200) (2 cr)
Storytelling With Data (OBHR 49300) (2 cr)
Organizational Behavior (OBHR 33000)* (3 cr)
IBE Capstone (IBE 49400) (3 cr)

1 or Problem Solving & Object Oriented Programming (CS 18000)

2 or Industrial Engineering Design (IE 43100)

* Prerequisites required

BUSINESS METHOD SELECTIVES (3 CR)

Project Management (SCOM 46600) (3 cr)
Spreadsheet Modeling (QM 47200)* (3 cr)
Predictive Analytics (QM 47400)* (3 cr)

* Prerequisites required

BUSINESS DEPTH SELECTIVE (3 CR)

Managerial Economics (ECON 30100)*
Investments (FIN 41100)*
Leadership & Org Change (OBHR 44362)*
Technology Strategy (STRT 44810)*
Supply Chain Analytics (SCOM 46300)*
Data Mining (QM 47300)*
Data-Driven Decisions in Dig. Mkt (MIS 48800)*

* Prerequisites required

INNOVATION LAB COURSES (6 CR)

(4) IBE Seminar/Special Topics (1 cr)
(MGMT 29110, 29120, 29130, 29140)
First-Year Participation EPICS or VIP I (EPCS 11100)¹ (1 cr)
First-Year Participation EPICS or VIP I (EPCS 12100)² (1 cr)

1 or Vertically Integrated Projects (VIP 17911)

2 or Vertically Integrated Projects (VIP 17912)

OTHER COURSE REQUIREMENTS (35-39 CR)

Written Communication (3-4 cr)
Oral Communication (3 cr)
UCC: Human Cultures (Humanities) Elective (3-4 cr)
General Chemistry (CHM 11510) (3-6 cr)¹
General Chemistry LAB (CHM 11520) (1 cr)²
Analytical Geometry & Calc (MA 16500) (4-5 cr)
Analytical Geometry & Calc II (MA 16600)* (4-5 cr)
Multivariate Calculus (MA 26100)* (4 cr)
Linear Algebra (MA 26500) (3 cr)
Ordinary Differential Equations (MA 26600) (3 cr)
Modern Mechanics (PHYS 17200) (4 cr)

* Prerequisites required

1 OR General Chemistry (CHM 11500)

2 OR General Chemistry Lab (CHM 11530)

ENGINEERING REQ COURSES (59 CR)

Transforming Ideas to Innovation, EPICS (ENGR 13300) (2 cr)
Electricity & Optics (PHYS 24100) (3 cr)
Basic Mech I (ME 27000)* (3 cr)
Industrial Engineering Seminar (IE 20000) (0 cr)
Probability & Statistics in Engineering I (IE 23000)* (3 cr)
Probability & Statistics in Engineering II (IE 33000) (3 cr)
Engineering Economics (IE 34300)* (3 cr)
Mechanics of Materials (NUCL 27300) (3 cr)
C Programming (CS 15900)** (3 cr)
Thermodynamics (ME 20000)* (3 cr)
Computing in Industrial Engineering (IE 33200) (3 cr)
Operations Research - Optimization (IE 33500) (3 cr)
Operations Research - Stochastic Models (IE 33600) (3 cr)
Electrical Engineering Fundamentals (ECE 20001)* (3 cr)
Manufacturing Processes I (IE 37000) (3 cr)
Integrated Production Systems (IE 38300) (3 cr)
Work Analysis & Design I (IE 38600) (3 cr)
Work Analysis & Design II (IE 48600) (3 cr)
Industrial Control Systems (IE 47400) (3 cr)
Manufacturing Processes II (IE 47000)¹ (3 cr)

1 or Integrated Production Systems II (IE 48400)

* Prerequisites required

** Do not need if taking Problem Solving & Object Oriented Programming (CS 18000)

TEAM-BASED DESIGN (4 CR)

Sophomore Participation in EPICS (EPCS 20100) (1 cr)
Sophomore Participation in EPICS (EPCS 20200) (2 cr)
Sophomore Participation in VIP (VIP 27920) (2 cr)
Junior Participation in EPICS (EPCS 30100) (1 cr)
Junior Participation in EPICS (EPCS 30200) (2 cr)
Junior Participation in VIP (VIP 37920) (2 cr)