

**BS: INTEGRATED BUSINESS & ENGINEERING - SAMPLE**

**Business Core Courses (37 Credits):**

Introduction to Accounting (MGMT 20000)  
 Management Accounting (MGMT 20100)\*  
 Microeconomics (ECON 25100)\*UCC-BSS  
 Programming for Business Apps (MGMT 28800)  
 Intellectual Property Management (MGMT 49200)  
 Business Statistics (MGMT 30500)\*  
 Financial Management (MGMT 31000)\*  
 Marketing Management (MGMT 32400)  
 Strategic Management (MGMT 35200)\*  
 Operations Management (MGMT 36100)\*  
 Management Information Systems (MGMT 38200)\*  
 Organizational Behavior (OBHR 33000)\*  
 Storytelling w/Data (MGMT 49300)

**Business Method Electives (6 Credits):**

*Pick two of the below courses-*

Management Science (MGMT 30600)\*  
 Project Management (MGMT 46600)  
 Spreadsheet Modeling (MGMT 47200)\*  
 Predictive Analytics (MGMT 47400)\*

**Business Depth Course (3 Credits):**

Managerial Economics (ECON 30100)\*  
 Int Accounting/Non Acct Majors (MGMT 35300)\*  
 Investments (MGMT 41100)\*  
 Digital Marketing Strategy (MGMT 42710)\*  
 Leadership & Org Change (MGMT 44362)\*  
 Technology Strategy (MGMT 44810)\*  
 Supply Chain Analytics (MGMT 46300)\*  
 Data Mining (MGMT 47300)\*  
 Data Driven Decisions in Dig Mrkt (MGMT 48800)

**Other Course Requirements (16-17 Credits):**

Written Communication UCC-WC  
 Oral Communication UCC-OC  
 UCC: Human Cultures (Humanities) Elective  
 Multivariate Calculus (MA 26100) \* UCC-QR  
 Probability & Statistics in Business (STAT 30300)\*

**Area Specialty Courses (12 Credits):**

Financial Engineering, Supply Chain Operations  
 Management, Data Analytics, Student Designed Area (*with  
 Advisor Approval*)

**Engineering Electives (3 Credits):**

It's a Complex World: Address GC (SYS 30000)  
 UCC-STs  
 Systems Theories & Approaches (SYS 35000) UCC-  
 IL  
 Imagine, Model, Make (IE 47200)

**Seminar/Innovation Lab Courses (11 Credits):**

(4) IBE Seminar/Special Topics  
 (MGMT 29110, 29120, 29130, 29140)  
 (2) Team-based design in EPICS or VIP  
 (EPCS 20100, 20200, 30100, 30200 or ENGR 27920, 37920) 2.0 cr  
 Capstone (MGMT 49400)

**Engineering Courses (23 Credits):**

General Chemistry (CHM 11500) UCC-SCI  
 Analytical Geometry & Calc (MA 16500) UCC-QR  
 Analytical Geometry & Calc II (MA 16600)\* UCC-QR  
 Transforming Ideas to Innovation, EPICS (ENGR 13300)  
 Modern Mechanics (PHYS 17200)  
 First-Year Participation in EPICS or VIP I (EPCS 11100)<sup>1</sup>  
 First-Year Participation in EPICS or VIP I (EPCS 12100)<sup>2</sup>  
 Engineering Expansion Course (*Any Engineering course  
 except a Junior or Senior required seminar*)

1 or ENGR 17911- if taking IE 343 as IBE Core Course must take EPCS 111  
 2 or ENGR 17912 - if taking IE 343 as IBE Core Course must take EPCS 121

**Engineering IBE Core Courses (6 Credits):**

**Choose 6 credit hours from the courses below - Preferred  
 semesters are denoted: S-Summer, SP-Spring, F-Fall, Online  
 availability**

Computations for Eng Systems (ABE 20500)\* (F)  
 Thermodynamics (ME 20000)\* (SP/S)  
 Basic Mechanics (CE 29700)\*(SP) OR Basic Mechanics I (ME  
 27000)\* (SP/S-Online)  
 Life Cycle Eng & Mgmt of Constructed Facilities (CEM 20100)  
 (SP)  
 Environmental, Ecological & Eng Systems (EEE 25000) (F)  
 Electrical Engineering Fundamentals (ECE 20001)\*<sup>1</sup>(SP/S-  
 Online)  
 Environmental & Ecological Systems Modeling (EEE 30000)\*  
 (SP)  
 Probability & Statistics in Engineering (IE 23000)\* (F/SP)  
 Engineering Economics (IE 34300)\*<sup>2</sup> (SP)  
 Structure and Properties of Materials (MSE 23000)\* (F/SP/S-  
 Online)  
 Introduction to Energy Engineering (NUCL 11000) 1 cr (F)  
 Intro to Nuclear Engineering (NUCL 20000)\*<sup>3</sup> (F)  
 Nuclear Engineering Undergraduate Laboratory (NUCL 20500)\*  
 (SP) AND Introduction to Engineering Practice: Nuclear  
 Proliferation (ENGR 10300) 1 cr<sup>4</sup> (F)

1 If you choose this course - your four year plan will need to be altered as the pre-req for this course MA 261 comes after the semester slated for the IBE Engineering Core course

2 If you choose this course you must choose the pre-req courses of EPICS 111 & EPICS 121

3 If you choose NUCL 20500 as one of your two courses you must also choose NUCL 20000 as it is the pre-requisite course for NUCL 20500

4 If you choose NUCL 20500 you must use 1 cr of your 3 cr elective for ENG 10300 as it must be taken with NUCL 20500

**Electives (3 Credits):**

Choose 3 cr hours

 <p><b>PURDUE UNIVERSITY</b> Krannert School of Management</p>	<p><b>LENGTH:</b> Four-year program 8 Semesters 120 Credit Hours</p>	<p><b>PROGRAM:</b> IBE-BS</p> <p><b>CODE:</b> IBE</p>	<p><b>FIRST-YEAR GPA REQUIREMENT:</b> 2.5 GPA</p>	<p><b>CONTACT</b> Krannert Undergrad Recruitment <b>765-496-0264</b> krannertundergrad@purdue.edu</p>
---	--	---	---	---

## INTEGRATED BUSINESS & ENGINEERING SAMPLE

Courses denoted with a footnote have alternate course choices. Courses marked with \* have Pre-requisites.

<p><b>Y E A R 1</b></p>	<p><b>Fall Semester</b> (15 Credits)</p> <p>(4.0) General Chemistry (<i>CHM 11500</i>)                  (2.0) Transforming Ideas into Innovation EPICS (<i>ENGR 13300</i>)  <b>(4.0) Analytic Geometry &amp; Calculus I</b> (<i>MA 16500</i>) *                  (3.0) Intro to Accounting (<i>MGMT 20000</i>)  <b>(1.0) Epics or VIP</b> (<i>EPCS 11100 or ENGR 17911</i>)                  (1.0) IBE #1 Seminar: TBD (<i>MGMT 29110</i>)</p>	<p><b>Spring Semester</b> (18 Credits)</p> <p><b>(1.0) Epics or VIP</b> (<i>EPCS 12100 or ENGR 17912</i>)  <b>(4.0) Analytic Geometry &amp; Calculus II</b> (<i>MA 16600</i>) *                  (4.0) Modern Mechanics (<i>PHYS 17200</i>) *  <b>(3.0) Microeconomics</b> (<i>ECON 25100</i>)  <b>(3.0) Oral Communication</b> <sup>1</sup>                  (3.0) UCC Human Cultures: Humanities</p> <hr/> <p><small><sup>1</sup> Any of the UCC Oral Communication Courses</small></p>
<p><b>Y E A R 2</b></p>	<p><b>Fall Semester</b> (16 -17 Credits)</p> <p>(3.0) Management Accounting (<i>MGMT 20100</i>) *                  (3.0) Marketing Management (<i>MGMT 32400</i>)  <b>(3.0-4.0) Written Communication</b> <sup>1</sup>                  (3.0) Engineering IBE Core Course                  (3.0) Probability &amp; Statistics in Business (<i>STAT 30300</i>)                  (1.0) IBE #2 Seminar: TBD (<i>MGMT 29120</i>)</p> <hr/> <p><small><sup>1</sup> First Year Composition (ENG 10600) OR Accelerated 1st Year Composition (ENGL 10800) OR Transformative Texts, Critical Thinking &amp; Communications (SCLA 10100) OR Interdisciplinary Approaches in Writing (HONR 19903)</small></p>	<p><b>Spring Semester</b> (16 Credits)</p> <p>(3.0) Business Statistics (<i>MGMT 30500</i>) *                  (3.0) Financial Management (<i>MGMT 31000</i>) *                  (3.0) Programming for Business Apps (<i>MGMT 28800</i>)                  (3.0) Engineering IBE Core Course                  (3.0) Business Method Elective                  (1.0) IBE #3 Seminar: TBD (<i>MGMT 29130</i>)</p>
<p><b>Y E A R 3</b></p>	<p><b>Fall Semester</b> (17 Credits)</p> <p>(4.0) Multivariate Calculus (<i>MA 26100</i>) *                  (3.0) Engineering Elective                  (3.0) Business Method Elective                  (2.0) Intellectual Property Management (<i>MGMT 49200</i>)                  (3.0) Area Specialty Course                  (2.0) IBE Innovation Lab VIP</p>	<p><b>Spring Semester</b> (14 Credits)</p> <p>(3.0) Engineering Expansion Course                  (3.0) Area Specialty Course                  (3.0) Operations Management (<i>MGMT 36100</i>) *                  (3.0) Management Info Systems (<i>MGMT 38200</i>) *                  (2.0) IBE Innovation Lab: VIP</p>
<p><b>Y E A R 4</b></p>	<p><b>Fall Semester</b> (12 Credits)</p> <p>(2.0) Storytelling w/Data (<i>MGMT 49300</i>)*                  (3.0) Strategic Management (<i>MGMT 35200</i>)*                  (3.0) Intro to Organizational Behavior (<i>OBHR 33000</i>)*                  (3.0) General Elective                  (1.0) IBE #4 Seminar: TBD (<i>MGMT 29140</i>)</p>	<p><b>Spring Semester</b> (12 Credits)</p> <p>(3.0) Business Depth Course                  (3.0) Area Specialty Course                  (3.0) Area Specialty Course                  (3.0) Capstone Project (<i>MGMT 49400</i>)</p>

\* All courses will be subject to any academic standards set by the college that offers the course

## Specialty Areas

### Data Analytics (12 Credits)

**Select and complete 3 of the below courses-**

Adv. Spreadsheet Modeling and Sim (MGMT 47200)\*

Data Mining (MGMT 47300)\*

Predictive Analytics (MGMT 47400)\*

Econometrics (ECON 36000)

**Select and complete 1 of the below courses-**

Six Sigma Quality Management (MGMT 40500)\*

Financial Modeling (MGMT 41300)\*

Marketing Analytics (MGMT 42110)\*

Marketing Research (MGMT 42500)

Adv Mfg Planning and Control Sys (MGMT 46200)\*

Supply Chain Analytics (MGMT 46300)\*

Project Management (MGMT 46600)\*

Data Visualization (MGMT 47900)\*

Data-Driven Decisions in Dig Mkt (MGMT 48800)

Database Management Systems (MGMT 54400)

### Financial Engineering (12 Credits)

**Select and Complete 4 of below courses**

Econometrics (ECON 36000)

Intermediate Economics I (ECON 51100)

Investment Management (MGMT 41100)\*

Futures and Options (MGMT 41150)\*

Financial Markets and Institutions (MGMT 41200)\*

Fixed Income Securities (MGMT 41250)\*

Corporate Finance (MGMT 41300)\*

Financial Data Analysis and Modeling (MGMT 41310)\*

Venture Capital and Entre Finance (MGMT 41350)

International Finance (MGMT 41500)\*

Corporate Mergers and Acquisitions (MGMT 41601)\*

Adv. Spreadsheet Modeling and Sim (MGMT 47200)\*

Predictive Analytics (MGMT 47400)\*

Investments (MGMT 61400)\*

Portfolio Management (MGMT 64200)\*

Financial Risk Management (MGMT 64300)\*

Advanced Problems in Management - Financial

Engineering (Summer Only) (MGMT 69000)\*

### Supply Chain Operations Management (12 Credits)

**Select and complete the below courses**

Supply Chain Analytics (MGMT 46300)\*

Logistics (MGMT 46400)\*

**Select and complete 2 of the below courses**

Six Sigma Quality Management (MGMT 40500)\*

Manufacturing Strategy (MGMT 45200)

Adv. Mfg. Planning and Control Sys (MGMT 46200)\*

Project Management (MGMT 46600)\*

Predictive Analytics (MGMT 47400)\*

Adv. Spreadsheet Modeling and Sim (MGMT 47200)\*

### Student Designed Specialty Area (12 Credits)

**Choose any 20000-40000 level courses with approval from advisor**

#### **Notes:**

All MGMT & ECON 300 level courses require upper division status

1. Only 1 course may be shared between 2 concentrations or between a major and a concentration
2. Space in MGMT & ECON courses may be limited
3. Pre-requisites should be checked on MyPurdue
4. MGMT, ECON & OBHR courses must be taken at Purdue University West Lafayette and may **not** be taken through correspondence or online
5. The School of Management **CANNOT** guarantee offerings of non MGMT, ECON or OBHR courses