

MANAGEMENT INFORMATION SYSTEMS, B.S. (BEHREND)

Begin Campus: Any Penn State Campus

End Campus: Erie

Program Description

The MIS Major prepares students for typical IT-related jobs such as programmer/analyst, systems analyst, data analyst, database administrator, team leader, project manager, consultant, and MIS manager. Since the focus of such jobs is on the application of information technology to business problems and opportunities, the MIS curriculum integrates three main areas of study.

In the first area, students take core business courses in order to understand organizational processes and user requirements. In the second area, students take computer science courses in order to understand information technologies and to develop technical competencies. In the third area, students take core MIS courses in the areas of database management systems, systems analysis, and systems design and development where the focus is on learning tools, processes, and techniques required for successful application of information technology to business problems. These core courses are supplemented with a variety of electives and a required, and very useful, internship experience.

Business Analyst Option

The Business Analyst option focuses on educating students with principles, methods and tools related to business processes, enterprise systems, business reporting for decision-making and web technologies applications. The option provides a sharper focus for students who wish to pursue their careers emphasizing ERP, business process management, business intelligence, and web technologies.

Data Analyst Option

The Data Analyst option focuses on educating students with principles, methods and tools related to business analytics, business intelligence, data warehousing, and big data. The option provides the fundamental knowledge and skills in the area of analytics that draws on multiple areas including decision support systems, data mining, database technology, data visualization, and advances in large-scale computing. Students will gain skills needed to support data-driven decision-making for tackling business problems that often cut across conventional disciplinary boundaries and involve a blend business and information technology. The courses in this option are designed to convey key principles through projects and exercises that involve hands-on experiential learning using realistic datasets and applications. The option will provide a sharper focus for students who wish to pursue their careers emphasizing data analytics with applications in public and private sectors.

Systems Analyst Option

The Systems Analyst option focuses on educating students with principles, methods and tools related to systems design, systems development, programming tools, and IT systems architecture. The option provides a sharper focus for students who wish to pursue their careers emphasizing the design and development of new information systems.

What is Management Information Systems?

Management information systems lie at the intersection of business intelligence and computer programming. MIS managers apply information technology in ways that improve the efficiency and effectiveness of organizational decision-making and enterprise-wide management. This ability to save an organization time, money, and frustration by harnessing the usefulness of big data positions MIS managers to become valued members of a leadership team.

You Might Like This Program If...

- Your career interests intersect at “business” and “technology.”
- You are equally curious about accounting and coding and economics and database management.
- You are interested in pursuing concurrent education in enterprise resource planning (ERP) with SAP or Oracle.

Entrance to Major

Entry to the Management Information Systems major requires the completion of 5 entry-to-major courses: ACCTG 211, ECON 102, ENGL 15 or ENGL 30, MATH 110 or MATH 140, STAT 200 or SCM 200 and a 2.00 or higher cumulative grade-point average.

Degree Requirements

For the Bachelor of Science degree in Management Information Systems, a minimum of 120 credits is required:

Requirement	Credits
General Education	45
Electives	0-1
Requirements for the Major	88-91

15 of the 45 credits for General Education are included in the Requirements for the Major. This includes: 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of coursework in the major to be taken at the location or in the college or program where the degree is earned.

General Education

Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (<http://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program>) section of the Bulletin and consult your academic adviser.

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

Foundations (grade of C or better is required.)

- **Quantification (GQ):** 6 credits
- **Writing and Speaking (GWS):** 9 credits

Knowledge Domains

- **Arts (GA):** 6 credits
- **Health and Wellness (GHW):** 3 credits
- **Humanities (GH):** 6 credits
- **Social and Behavioral Sciences (GS):** 6 credits
- **Natural Sciences (GN):** 9 credits

Integrative Studies (may also complete a Knowledge Domain requirement)

- **Inter-Domain or Approved Linked Courses:** 6 credits

University Degree Requirements**First Year Engagement**

All students enrolled in a college or the Division of Undergraduate Studies at University Park, and the World Campus are required to take 1 to 3 credits of the First-Year Seminar, as specified by their college First-Year Engagement Plan.

Other Penn State colleges and campuses may require the First-Year Seminar; colleges and campuses that do not require a First-Year Seminar provide students with a first-year engagement experience.

First-year baccalaureate students entering Penn State should consult their academic adviser for these requirements.

Cultures Requirement

6 credits are required and may satisfy other requirements

- United States Cultures: 3 credits
- International Cultures: 3 credits

Writing Across the Curriculum

3 credits required from the college of graduation and likely prescribed as part of major requirements.

Total Minimum Credits

A minimum of 120 degree credits must be earned for a baccalaureate degree. The requirements for some programs may exceed 120 credits. Students should consult with their college or department adviser for information on specific credit requirements.

Quality of Work

Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

Limitations on Source and Time for Credit Acquisition

The college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (<http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80>)). For more information, check the Suggested Academic Plan for your intended program.

Requirements for The Major

Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (<http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44>).

Common Requirements for the Major (All Options)

Code	Title	Credits
Prescribed Courses		
ACCTG 211	Financial and Managerial Accounting for Decision Making	4
ECON 102	Introductory Microeconomic Analysis and Policy	3
ECON 104	Introductory Macroeconomic Analysis and Policy	3
MIS 204	Introduction to Business Information Systems	3
<i>Prescribed Courses: Require a grade of C or better</i>		
FIN 301	Corporation Finance	3
MGMT 301	Basic Management Concepts	3
MGMT 410	Project Management	3
MGMT 471W	Strategic Management and Business Policy	3
MIS 336	Database Management Systems	3
MIS 430	Systems Analysis	3
MIS 495	Internship	3
MKTG 301	Principles of Marketing	3
SCM 301	Supply Chain Management	3
Additional Courses		
BA 241 & BA 242 or BA 243	Legal Environment of Business and Social and Ethical Environment of Business Social, Legal, and Ethical Environment of Business	4
ENGL 202C or ENGL 202D	Effective Writing: Technical Writing Effective Writing: Business Writing	3
MATH 110 or MATH 140	Techniques of Calculus I Calculus With Analytic Geometry I	4
SCM 200 or STAT 200	Introduction to Statistics for Business Elementary Statistics	4
<i>Additional Courses: Require a grade of C or better</i>		
Select one of the following:		3
ECON 470	International Trade and Finance	
ECON 473	China in the Global Economy: History, Culture, and Society	
FIN 471	International Finance	
MGMT 461	International Management	
MKTG 445	Global Marketing	
Other 400-level international business courses		
Requirements for the Option		
Select an option		31-34

Requirements for the Option**Business Analyst Option (31 credits)**

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		

MIS 404	Introduction to ERP and Business Processes	3
MIS 445	Business Intelligence	4

Supporting Courses and Related Areas

Select any combination of 6 credits from the non-business supporting course list for the major. 6

Select 3 credits in programming courses 3

Supporting Courses and Related Areas: Require a grade of C or better

MIS 387	Website Design and Administration	3
or MIS 470	Advanced Applications Development	

Select 12 credits of 300- or 400-level MIS, or other business supporting course areas (see school list of approved courses) 12

Data Analyst Option (31-33 credits)

Code	Title	Credits
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Prescribed Courses

Prescribed Courses: Require a grade of C or better

MIS 345	Introduction to Data Analytics	3
MIS 445	Business Intelligence	4
MIS 447	Data Warehousing	3
MIS 494	Research Project	3

Supporting Courses and Related Areas

Select any combination of 6-7 credits from Software Engineering or Computer Science or 300- or 400-level MIS or business supporting or non-business supporting course list for the major 6-7

Select any combination of 9-10 credits from Software Engineering or Computer Science or 300- or 400-level MIS, or other business supporting course areas (see school list of approved courses) 9-10

Supporting Courses and Related Areas: Require a grade of C or better

Select 3 credits in programming courses 3

Systems Analyst Option (31-34 credits)

Code	Title	Credits
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Prescribed Courses

Prescribed Courses; Require a grade of C or better

MIS 435	Systems Design and Implementation	4
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Supporting Courses and Related Areas

Select any combination of 6-7 credits from the non-business supporting course list for the major 6-7

Select 9 credits in programming courses taken from two different languages 9

Supporting Courses and Related Areas: Require a grade of C or better

Select 6-7 credits of 300- or 400-level courses in Computer Science, or MIS in consultation with adviser (see school list of approved courses) 6-7

Select 6-7 credits from 300- or 400-level MIS, or other business supporting course areas (see school list of approved courses) 6-7

Program Learning Objectives

Critical and Integrative Thinking:

1. Students will be able to think critically by actively considering different points of view and utilize an integrated, holistic approach to construct relevant analyses, arguments, and conclusions.
 - a. Students will clearly identify the key issues in the analysis.
 - b. Students will present the appropriate analytic framework or warrant.

- c. Students will identify and assess important assumptions and question their validity.
- d. Students will identify and assess the quality of supporting data/evidence & provide additional data/evidence related to the issue.
- e. Students will draw and discuss conclusions, implications, and consequences.
- f. Students will identify key business issues using an integrated approach.
- g. Students will apply appropriate holistic analyses to business issues.
- h. Students will generate solutions that incorporate an integrated perspective to business problems.

Oral Communication:

1. Upon graduation our undergraduate students in The Sam and Irene Black School of Business will be able to execute the oral communication skills that they have learned in the interactive business courses to business situations where effective explanation, persuasion, exchanging information and ideas are essential.
 - a. Students will be able to clearly express their line of thoughts to an audience.
 - b. Student will be able to show confidence in their ability to communicate with their audience.
 - c. Students will be able to effectively organize their thoughts and clearly communicate their organized thoughts with their audience.
 - d. Students will be able to provide accuracy of content in their communication with their audience.
 - e. Students will be able to provide depth of content in their communication with their audience.
 - f. Students will be able to deliver a professional quality presentation to an audience while using appropriate and supporting technology.
 - g. Students will be able to have a professional appearance in front of their audience.

Writing Competence:

1. Students will be able to demonstrate effective writing skills.
 - a. Students will organize written assignments effectively.
 - b. Students will develop a clear and well-structured argument.
 - c. Students will identify and provide evidence sufficient to support the argument.
 - d. Students will find reliable sources and cite and reference them correctly.
 - e. Students will demonstrate proper writing mechanics with respect to spelling, punctuation, and grammar.

Teamwork:

1. Students will be positive contributors to effective team functioning via application of their functional skills in addition to strong interpersonal skills.
 - a. Students will be able to recognize the different ways in which their peers contribute to collaborative work.
 - b. Students will contribute effectively to teams.

- c. Students will display good interpersonal skills in teamwork contexts.
- d. Students will learn how to interact effectively on teams.

Ethics and Social Responsibility:

1. Students will be able to recognize ethical issues and apply ethical theories in business situations at individual and/or organizational levels.
 - a. Students will recognize ethical issues and the inter-relationships between business and society.
 - b. Students will identify stakeholders affected by decisions and actions.
 - c. Students will understand the consequences of decisions/actions to stakeholders.
 - d. Students will analyze an ethical dilemma applying multiple ethical theories.
 - e. Students will be able to correctly apply relevant ethical principles.
 - f. Students will be able to recommend a plan of action.
 - g. Students will be able to supported recommend action with by ethical analysis/evaluation.

Functional Area Knowledge:

1. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material across various business domains.
 - a. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material in the Accounting domain.
 - b. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material in the Economics domain.
 - c. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material in the Management domain.
 - d. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material in the Quantitative Business Analysis domain.
 - e. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material in the Finance domain.
 - f. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material in the Marketing domain.
 - g. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material in the Legal and Social Environment domain.
 - h. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material in the Information Systems domain.
 - i. Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material in the International Issues domain.

Functional Area Knowledge (ACCOUNTING):

1. Students will be able to demonstrate a broad general knowledge of the principles of accounting, both managerial and financial.

- a. Students will be able to perform basic financial accounting transaction analysis.
- b. Students will prepare and interpret general purpose financial statements.
- c. Students will perform financial statement analysis.
- d. Students will apply various principles of managerial accounting.

Functional Area Knowledge (ECONOMICS):

1. Students will be able to demonstrate a broad general knowledge of the principles of economics, both microeconomics and macroeconomics.
 - a. Students will apply concepts associated with free market operations.
 - b. Students will conduct decision making based on opportunity costs and marginal analysis.
 - c. Students will determine consumer behavior based on various measures of elasticity.
 - d. Students will interpret effects associated with the four major market structures.
 - e. Students will apply the theory of comparative advantage.
 - f. Students will apply the basic market and macroeconomic models to explain changes in price and quantity.
 - g. Students will define, calculate, and interpret major economic indicators.
 - h. Students will identify and analyze the phases of the business cycle and their characteristics, including the problems associated with each cycle .
 - i. Students will interpret the impact of fiscal policy effects on the macro economy.
 - j. Students will interpret the impact monetary policy on the macro economy.
 - k. Students will identity how various analytical frameworks, (e.g., classical, Keynesian, monetarist, etc.) used may affect the policy conclusions in debates over stabilization policy.
 - l. Students will apply the theory of comparative advantage and the flows of financial assets principle to trade.

Functional Area Knowledge (FINANCE):

1. Use discounted valuation techniques to make capital investment decisions.
 - a. Calculate the NPV for three scenarios (1) base case, (2) best case, and (3) worst case
 - b. Identify relevant initial CFs for NPV calculation
 - c. Identify relevant operating CFs for NPV calculation
 - d. Identify relevant terminal CFs for NPV calculation
 - e. Create and interpret a NPV profile
 - f. Analyze and accept or reject a proposed investment project.
2. Understand the relationship between risk and return for equity and debt.
 - a. Understand the trade-off between risk and return for individual assets by computing a beta and required rate of return using the CAPM (Capital Asset Pricing Model).
 - b. Explain an appropriate proxy for the market rate of return for the CAPM.
 - c. Explain an appropriate risk-free rate proxy for the CAPM.
 - d. Calculate cost of debt or YTM of corporate bonds

3. Determine the required return on a proposed investment.
 - a. Calculate and interpret the weighted-average cost of capital (WACC) by estimating the market cost of equity and debt.
 - b. Understand when WACC is appropriate as the required return to evaluate a proposed capital investment.

Functional Area Knowledge (MIS):

1. Students will be able to describe the benefits and challenges of applying information technology in various organizations and functional areas.
 - a. Students will describe the benefits and challenges of applying information technology in various organizations and functional areas.
 - b. Students will describe management issues and career paths in Information Technology.

Functional Area Knowledge (INTERNATIONAL BUSINESS):

1. Students will be able to will have basic multidisciplinary knowledge needed to conduct international business and understand the impact of globalization.
 - a. Our students will develop an awareness of global issues and diverse cultures.
 - b. Our students will be able to analyze how global factors affect decision making.
 - c. Our students will be able to use information resources to formulate global strategy.

Functional Area Knowledge (LEGAL ENVIRONMENT):

1. Students will be able to identify key terms, concepts, and theories of the law, understand how law affects business, demonstrate an ability to analyze legal issues, and apply the law to business situations.
 - a. Students will identify key terms, concepts, and theories of law.
 - b. Students will analyze legal issues and apply the law to business situations.

Functional Area Knowledge (MANAGEMENT):

1. Students will be able to demonstrate a broad knowledge of each business discipline, including management.
 - a. More particularly, students will be able to identify the correct core concepts in the context of the following 12 main topic areas:
 - i. Introduction to / History of Management
 - ii. Managing in the Global Environment
 - iii. Decision Making
 - iv. Planning & Strategy
 - v. Organizational Structure & Culture
 - vi. Managing Human Resources
 - vii. Individual Attitudes & Behavior
 - viii. Managing Teams
 - ix. Motivation
 - x. Leadership
 - xi. Communication
 - xii. Principles of Control

Functional Area Knowledge (MARKETING):

1. Students will be able to demonstrate a broad knowledge of marketing discipline.

- a. Students will understand the concept of marketing and marketing philosophies.
 - i. Definition of marketing.
 - ii. Main marketing philosophies (e.g., market orientation, societal market orientation, sales orientation, production orientation).
- b. Students will understand the process of marketing plan and how to set marketing strategies.
 - i. Be able to prepare an outline of marketing plan (e.g., SWOT analysis).
 - ii. Be able to choose an appropriate marketing strategy for different types of firms (e.g., market development, product development, diversification, market penetration).
- c. Students will understand the process of market research.
 - i. Be able to choose an appropriate market research design and method for different types of market research questions.
- d. Students will understand buyers and markets.
 - i. Be able to understand the mechanism of the buyer behaviors.
- e. Students will understand the concept of target marketing strategy.
 - i. Be able to use market segmentation variables for targeting and positioning.
 - ii. Students will understand the 4P's (product, price, promotion, place) concepts.
 - iii. Be able to formulate MARKETING 4P'S DECISIONS.

Functional Area Knowledge (QUANTATIVE BUSINESS ANALYSIS):

1. Upon graduation our undergraduate students in The Sam and Irene Black School of Business will be able to demonstrate a broad knowledge of business disciplines (quantitative business analysis).
 - a. Students will be able to apply the basic rules of probability to assess likelihood within a population.
 - b. Students will be able to identify and apply appropriate probability distribution concepts to analyze data.
 - c. Students will be able to demonstrate an understanding of correlation and regression analysis.

Functional Area Knowledge (SUPPLY CHAIN MANAGEMENT):

1. Students will be able to demonstrate a broad knowledge of business disciplines (supply chain management).
 - a. Students will be able to apply forecasting methods for demand of a product or service.
 - b. Students will be able to apply inventory and planning models for managing operations.
 - c. Students will be able to demonstrate an understanding of TQM tools.

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and-out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The

advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<http://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy>)

Erie

Kathleen Noce, Ph.D.

Associate Teaching Professor of MIS
273 Burke
Erie, PA 16563
814-898-6508
kxn9@psu.edu

Suggested Academic Plan

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2019-20 academic year. To access previous years' suggested academic plans, please visit the archive (<http://bulletins.psu.edu/undergraduate/archive>) to view the appropriate Undergraduate Bulletin edition (Note: the archive only contain suggested academic plans beginning with the 2018-19 edition of the Undergraduate Bulletin).

Business Analyst Option at Erie Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
ENGL 15 or 30 ^{‡#†}	3 CAS 100 (OR CAS 100A OR CAS 100B OR CAS100C) ^{‡†}	3
MATH 110 or 140 ^{‡#†}	4 ECON 102 ^{#†}	3
GENERAL EDUCATION COURSE ³	3 MIS 204	3
GENERAL EDUCATION COURSE ³	3 GENERAL EDUCATION COURSE ³	3
GENERAL EDUCATION COURSE (GHW) ³	1.5 GENERAL EDUCATION COURSE ³	3
PSU 7	1	
	15.5	15

Second Year

Fall	Credits Spring	Credits
ACCTG 211 [#]	4 ENGL 202D ^{‡†}	3
ECON 104 [†]	3 FIN 301 [*]	3
SCM 200 or STAT 200 ^{‡#†}	4 MGMT 301 [*]	3
GENERAL EDUCATION COURSE ³	3 MKTG 301 [*]	3
GENERAL EDUCATION COURSE (GHW) ³	1.5 SCM 301 [*]	3
	15.5	15

Third Year

Fall	Credits Spring	Credits
BA 241 & BA 242 [†]	4 MIS 387 or 470 [*]	3
MIS 336 [*]	3 MIS 430 [*]	3
MIS 404 [*]	3 APPROVED ELECTIVE ²	3
GENERAL EDUCATION COURSE ³	3 SUPPORTING MIS/BUSINESS COURSE [*]	3
MIS 315 (or PROGRAMMING COURSE)	3 SUPPORTING MIS/CMPCSC COURSE [*]	3
	16	15

Fourth Year

Fall	Credits Spring	Credits
MGMT 410 [*]	3 MIS 495 [*]	3
MGMT 471W [*]	3 INTERNATIONAL BUSINESS COURSE (IL) [*]	3
MIS 445 [*]	4 SUPPORTING MIS/BUSINESS COURSE [*]	3
APPROVED ELECTIVE ²	3 SUPPORTING MIS/CMPCSC COURSE [*]	3
GENERAL EDUCATION COURSE ³	3	
	16	12

Total Credits 120

- * Course requires a grade of C or better for the major
- ‡ Course requires a grade of C or better for General Education
- # Course is an Entrance to Major requirement
- † Course satisfies General Education and degree requirement

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GHW, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GHW, GN, GA, GH, GS, and Integrative Studies). Foundations courses (GWS and GQ) require a grade of 'C' or better.

Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

- 1 Please see your academic adviser for approval before scheduling your course
- 2 In order for a course to be eligible for an Approved Elective, the course can not be a lower level ENGL (1-6) or MATH (2-41) OR a GHW designated course. Please see your academic adviser if you have a question on a specific course.

³ All students are required to fulfill 45 credits of General Education courses. They include 9 credits of Natural Science (GN), 6 credits of Arts (GA), 6 credits of Humanities (GH), 6 credits of Social Science (GS) and 3 credits of Health and Wellness (GHW). Two (2) classes must be Inter-domain (N) or Linked (Z) courses. One (1) course must be designated an United States culture (US) and one (1) course must be designated an International culture (IL).
Any 3 credits may be substituted for a different designation (GN,GA,GH,GS, or GHW) once 3 credits in each designation area have been successfully completed.

Data Analyst Option at Erie Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
ENGL 15 or 30 ^{‡#†}	3 CAS 100 (OR CAS 100A OR CAS 100B OR CAS100C) ^{††}	3
MATH 110 or 140 ^{‡#†}	4 ECON 102 ^{#†}	3
GENERAL EDUCATION COURSE ³	3 MIS 204	3
GENERAL EDUCATION COURSE ³	3 GENERAL EDUCATION COURSE ³	3
GENERAL EDUCATION COURSE (GHW) ³	1.5 GENERAL EDUCATION COURSE ³	3
PSU 7	1	
	15.5	15

Second Year

Fall	Credits Spring	Credits
ACCTG 211 [#]	4 ENGL 202D ^{††}	3
ECON 104 [†]	3 FIN 301 [*]	3
SCM 200 or STAT 200 ^{‡#†}	4 MGMT 301 [*]	3
GENERAL EDUCATION COURSE ³	3 MKTG 301 [*]	3
GENERAL EDUCATION COURSE (GHW) ³	1.5 SCM 301 [*]	3
	15.5	15

Third Year

Fall	Credits Spring	Credits
BA 241 & BA 242 [†]	4 MIS 430 [*]	3
MIS 336 [*]	3 APPROVED ELECTIVE ²	3
MIS 345 [*]	3 SUPPORTING MIS/BUSINESS COURSE [*]	3
GENERAL EDUCATION COURSE ³	3 SUPPORTING MIS/CMPCSC COURSE [*]	3
MIS 315 (or PROGRAMMING COURSE)	3 SUPPORTING MIS/CMPCSC COURSE [*]	3
	16	15

Fourth Year

Fall	Credits Spring	Credits
MGMT 410 [*]	3 MIS 447 [*]	3
MGMT 471W [*]	3 MIS 495 [*]	3
MIS 445 [*]	4 INTERNATIONAL BUSINESS COURSE (IL) [*]	3
APPROVED ELECTIVE ²	3 SUPPORTING MIS/CMPCSC COURSE [*]	3
GENERAL EDUCATION COURSE ³	3	
	16	12

Total Credits 120

- * Course requires a grade of C or better for the major
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Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

- 1 Please see your academic adviser for approval before scheduling your course.
- 2 In order for a course to be eligible for an Approved Elective, the course can not be a lower level ENGL (1-6) or MATH (2-41) OR a GHW designated course. Please see your academic adviser if you have a question on a specific course.
- 3 All students are required to fulfill 45 credits of General Education courses. They include 9 credits of Natural Science (GN), 6 credits of Arts (GA), 6 credits of Humanities (GH), 6 credits of Social Science (GS) and 3 credits of Health and Wellness (GHW). Two (2) classes must be Inter-domain (N) or Linked (Z) courses. One (1) course must be designated an United States culture (US) and one (1) course must be designated an International culture (IL).
Any 3 credits may be substituted for a different designation (GN,GA,GH,GS, or GHW) once 3 credits in each designation area have been successfully completed.

Systems Analyst Option at Erie Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit

(accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
ENGL 15 or 30 ^{†##}	3 CAS 100 (OR CAS 100A OR CAS 100B OR CAS100C) ^{††}	3
MATH 110 or 140 ^{†##}	4 ECON 102 ^{##}	3
GENERAL EDUCATION COURSE ³	3 MIS 204	3
GENERAL EDUCATION COURSE ³	3 GENERAL EDUCATION COURSE ³	3
GENERAL EDUCATION COURSE (GHW) ³	1.5 GENERAL EDUCATION COURSE ³	3
PSU 7	1	
	15.5	15

Second Year

Fall	Credits Spring	Credits
ACCTG 211 [#]	4 ENGL 202D ^{††}	3
BA 241 & BA 242 [†]	4 FIN 301 [*]	3
ECON 104 [†]	3 MGMT 301 [*]	3
SCM 200 ^{†##}	4 MKTG 301 [*]	3
GENERAL EDUCATION COURSE (GHW) ³	1.5 SCM 301 [*]	3
	16.5	15

Third Year

Fall	Credits Spring	Credits
MIS 336 [*]	3 MIS 430 [*]	3
APPROVED ELECTIVE ²	3 GENERAL EDUCATION COURSE ³	3
GENERAL EDUCATION COURSE ³	3 PROGRAMMING COURSE 2	3
GENERAL EDUCATION COURSE ³	3 SUPPORTING MIS/BUSINESS COURSE [*]	3
MIS 315 (or PROGRAMMING COURSE 1)	3 SUPPORTING MIS/CMPSK COURSE [*]	3
	15	15

Fourth Year

Fall	Credits Spring	Credits
MGMT 410 [*]	3 MIS 495 [*]	3
MGMT 471W [*]	3 INTERNATIONAL BUSINESS COURSE (IL) [*]	3
MIS 435 [*]	4 SUPPORTING MIS/BUSINESS COURSE [*]	3
APPROVED ELECTIVE ²	3 SUPPORTING MIS/CMPSK COURSE [*]	3
PROGRAMMING COURSE 3	3	
	16	12

Total Credits 120

* Course requires a grade of C or better for the major

† Course requires a grade of C or better for General Education

Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GHW, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GHW, GN, GA, GH, GS, and Integrative Studies). Foundations courses (GWS and GQ) require a grade of 'C' or better.

Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

¹ Please see your academic adviser for approval before scheduling your course.

² In order for a course to be eligible for an Approved Elective, the course can not be a lower level ENGL (1-6) or MATH (2-41) OR a GHW designated course. Please see your academic adviser if you have a question on a specific course.

³ All students are required to fulfill 45 credits of General Education courses. They include 9 credits of Natural Science (GN), 6 credits of Arts (GA), 6 credits of Humanities (GH), 6 credits of Social Science (GS) and 3 credits of Health and Wellness (GHW). Two (2) classes must be Inter-domain (N) or Linked (Z) courses. One (1) course must be designated an United States culture (US) and one (1) course must be designated an International culture (IL).

Any 3 credits may be substituted for a different designation (GN,GA,GH,GS, or GHW) once 3 credits in each designation area have been successfully completed.

Career Paths

Tailor Penn State Behrend's MIS degree program to your career interests by pursuing one of three options: Business Analyst, Data Analyst, or Systems Analyst. Graduates typically enter the workforce in IT-related positions such as computer systems analyst, applications developer, web developer, project manager, technology auditor, internet solutions manager, or database administrator. Penn State Behrend has a comprehensive support system to help you identify and achieve your goals for college and beyond. Meet with your academic adviser often and take advantage of the services offered by the Academic and Career Planning Center beginning in your first semester.

Careers

Employers of recent Behrend B.S. in Management Information Systems graduates includes Bayer Business Services, Centric Consulting, GE Transportation, Erie Insurance, Accenture, U.S. Steel, Progressive Insurance, Deloitte, TEKsystems, IBM, and Booz Allen Hamilton.

MORE INFORMATION ABOUT POTENTIAL CAREER OPTIONS FOR GRADUATES OF THE MANAGEMENT INFORMATION SYSTEMS

PROGRAM (<http://behrend.psu.edu/school-of-business/academic-programs/management-information-systems>)

Opportunities from Graduate Studies

B.S. in Management Information Systems graduates are well-prepared to pursue master's- or doctoral-level education in a business or technology discipline, or in Penn State Behrend's master's degree programs in Business Administration (M.B.A.), Project Management (M.P.M.) or Manufacturing Management (M.M.M).

MORE INFORMATION ABOUT OPPORTUNITIES FOR GRADUATE STUDIES (<http://behrend.psu.edu/admissions-financial-aid/graduate-admissions>)

Professional Resources

- AACSB International (<http://www.aacsb.edu>)
- Association for Information Systems (<https://aisnet.org>)
- Association of Information Technology Professionals (<https://www.aitp.org>)

Accreditation

The Black School of Business is accredited by AACSB International—The Association to Advance Collegiate Schools of Business. As the world's largest business education alliance, AACSB connects educators, students, and business to achieve a common goal: to create the next generation of great leaders. Synonymous with the highest standards of excellence since 1916, AACSB provides quality assurance, business education intelligence, and professional development services to over 1,500 member organizations and more than 785 accredited business schools worldwide. AACSB's mission is to foster engagement, accelerate innovation, and amplify impact in business education.

MORE INFORMATION ABOUT THE ASSOCIATION TO ADVANCE COLLEGIATE SCHOOLS OF BUSINESS (<http://www.aacsb.edu>)

Contact

Erie

BLACK SCHOOL OF BUSINESS
281 Jack Burke Research and Economic Development Center
5101 Jordan Road
Erie, PA 16563
814-898-6107
behrend-business@psu.edu

<http://behrend.psu.edu/school-of-business>