

# 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 analyzing business systems. In the second area, students take core MIS courses in the areas of database management systems, data analysis, and analytics methodologies where the focus is on learning tools, processes, and techniques required for the successful application of information technology to business problems. These core courses are supplemented with a variety of electives and required, and approved internship experience.

## What is Management Information Systems?

Data is everywhere: location-based from smart phones, social media, text, corporate data, and more. Companies need to analyze this data to get meaningful information to the people who need it. Hence, Management Information Systems (MIS) lives in the space that intersects technology and business.

### 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 successful completion of 5 entry-to-major courses: ACCTG 211, ECON 102, ENGL 15 or ENGL 30H, MATH 110 or MATH 140, STAT 200 or SCM 200, and a 2.00 or higher cumulative grade-point average. All courses require a C or higher.

## Degree Requirements

**For the Bachelor of Science degree in Management Information Systems, a minimum of 123 credits is required:**

| Requirement                | Credits |
|----------------------------|---------|
| General Education          | 45      |
| Requirements for the Major | 99      |

**21 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; 9 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.

## 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 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44>).

| Code  | Title   | Credits |
|---|---|---------|
| <b>Prescribed Courses</b>                                 |   |         |
| BA 241  | Legal Environment of Business                           | 2       |
| BA 242  | Social and Ethical Environment of Business              | 2       |
| PSU 7   | First-Year Seminar Behrend                              | 1       |
| <i>Prescribed Courses: Require a grade of C or better</i> |   |         |
| ACCTG 211   | Financial and Managerial Accounting for Decision Making | 4       |
| CAS 100   | Effective Speech  | 3       |
| ECON 102  | Introductory Microeconomic Analysis and Policy          | 3       |
| ECON 104  | Introductory Macroeconomic Analysis and Policy          | 3       |
| 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 204   | Introduction to Management Information Systems          | 3       |
| MIS 315   | Python Programming                                      | 3       |
| MIS 336   | Database Management Systems                             | 3       |
| MIS 345   | Introduction to Data Analytics                          | 3       |
| MIS 430   | Systems Analysis  | 3       |
| MIS 445   | Business Intelligence                                   | 4       |
| MIS 495   | Internship  | 3       |
| MKTG 301  | Principles of Marketing                                 | 3       |
| SCM 301   | Supply Chain Management                                 | 3       |
| <b>Additional Courses</b>                                 |   |         |
| <i>Additional Courses: Require a grade of C or better</i> |   |         |
| ENGL 15   | Rhetoric and Composition                                | 3       |
| or ENGL 30H   | Honors Rhetoric and Composition                         |         |
| ENGL 202C   | Effective Writing: Technical Writing                    | 3       |
| or ENGL 202D  | Effective Writing: Business Writing                     |         |
| MATH 110  | Techniques of Calculus I                                | 4       |
| or MATH 140   | Calculus With Analytic Geometry I                       |         |
| SCM 200   | Introduction to Statistics for Business                 | 4       |
| or STAT 200   | Elementary Statistics                                   |         |
| Select 3 credits from the following:                      |   | 3       |
| ECON 470  | International Trade and Finance                         |         |
| FIN 471   | International Finance                                   |         |

|  |  |   |
|--|--|---|
| IB 303   | International Business Operations  |   |
| MGMT 461   | International Management   |   |
| MKTG 445   | Global Marketing   |   |
| Other 300- or 400-Level International Business Courses         |  |   |
| Select 6 credits from the business or data analyst focus area: |  | 6 |
| MIS 404 & MIS 387  | Introduction to ERP and Business Processes and Website Design and Administration |   |
| MIS 404 & MIS 433  | Introduction to ERP and Business Processes and Rapid Application Development     |   |
| MIS 415 & MIS 447  | Social Media Management and Analytics and Data Warehousing                       |   |

#### Supporting Courses and Related Areas

|  |    |
|--|----|
| Select 12 credits from any MIS/Business/COMPSC courses.  | 12 |
| Select 6 credits from any business major field or any non-business major field, except for all KINES (GHW) courses, any ENGL course below ENGL 15, and any MATH course below MATH 110. Exceptions may be petitioned through the applicable department chair. | 6  |

## 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 (<https://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 and Inter-Domain courses do not meet this requirement.)

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

### Breadth in the Knowledge Domains (Inter-Domain courses do not meet this requirement.)

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

### Integrative Studies

- **Inter-Domain Courses (Inter-Domain):** 6 credits

### Exploration

- **GN**, may be completed with Inter-Domain courses: 3 credits
- **GA, GH, GN, GS, Inter-Domain courses.** This may include 3 credits of World Language course work beyond the 12th credit level or the requirements for the student's degree program, whichever is higher: 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 (<https://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.

## Program Learning Objectives

- **CRITICAL AND INTEGRATIVE THINKING:** Students will be able to think critically across business disciplines by considering different perspectives and using an integrated, holistic approach to perform relevant analyses, construct valid arguments, and make appropriate conclusions.
- **ORAL COMMUNICATION:** Students 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.
- **WRITING COMPETENCE:** Students will be able to demonstrate effective business writing skills.
- **TEAMWORK:** Students will be positive contributors to an effective team functioning via application of their functional skills in addition to strong interpersonal skills.

- **ETHICS AND SOCIAL RESPONSIBILITY:** Students will be able to recognize ethical issues and apply ethical theories in business situations at individual and/or organizational levels.
- **FUNCTIONAL AREA KNOWLEDGE (ETS):** Students will be able to apply foundational knowledge to analyze and solve problems and interpret written and visual material across various business domains.
- **FUNCTIONAL AREA KNOWLEDGE (ACCOUNTING):** Students will be able to demonstrate a broad general knowledge of the principles of accounting, both managerial and financial.
- **FUNCTIONAL AREA KNOWLEDGE (ECONOMICS):** Students will be able to demonstrate a broad general knowledge of the principles of economics, both microeconomics and macroeconomics
- **FUNCTIONAL AREA KNOWLEDGE (FINANCE):** Students will be able to demonstrate a broad general knowledge of the principles of finance.
- **FUNCTIONAL AREA KNOWLEDGE (MIS):** Students will be able to describe the benefits and challenges of applying information technology in various organizations and functional areas.
- **FUNCTIONAL AREA KNOWLEDGE (INTERNATIONAL BUSINESS):** Students will be able to apply basic multidisciplinary knowledge needed to conduct international business and analyze the impact of globalization.
- **FUNCTIONAL AREA KNOWLEDGE (LEGAL ENVIRONMENT):** Students will be able to identify key terms, concepts, and theories of the law, evaluate how law affects business, analyze legal issues, and apply the law to business situations.
- **FUNCTIONAL AREA KNOWLEDGE (MANAGEMENT):** Students will be able to demonstrate a broad knowledge of the business discipline of management.
- **FUNCTIONAL AREA KNOWLEDGE (MARKETING):** Students will be able to demonstrate comprehensive knowledge in the field of marketing.
- **FUNCTIONAL AREA KNOWLEDGE (QUANTATIVE BUSINESS ANALYSIS):** Students will be able to demonstrate a broad knowledge of quantitative business analysis.
- **FUNCTIONAL AREA KNOWLEDGE (SUPPLY CHAIN MANAGEMENT):** Students will be able to demonstrate a broad knowledge of supply chain management.

## 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 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

## Erie

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## Suggested Academic Plan

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2024-25 academic year. To access previous years' suggested academic plans, please visit the archive (<https://bulletins.psu.edu/undergraduate/archive/>) to view the appropriate Undergraduate Bulletin edition.

### Management Information Systems, B.S. 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 (GWS) <sup>*†#†</sup>  | 3 CAS 100 (GWS) <sup>††</sup>                                     | 3         |
| MATH 110 or 140 (GQ) <sup>*†#†</sup> | 4 ECON 102 <sup>*#†</sup>   | 3         |
| General Education Course (GH)        | 3 MIS 204 <sup>*</sup>  | 3         |
| General Education Course (GN)        | 3 General Education Course (GA)                                   | 3         |
| General Education Course (GHW)       | 1.5 General Education Course (GN) (Single Domain or Inter-Domain) | 3         |
| PSU 7                                | 1   |           |
|                                      | <b>15.5</b>   | <b>15</b> |

#### Second Year

| Fall                                     | Credits Spring                  | Credits   |
|--|---------------------------------|-----------|
| ACCTG 211 <sup>*#</sup>                  | 4 ENGL 202D (GWS) <sup>††</sup> | 3         |
| ECON 104 (GS/Exploratory) <sup>*†</sup>  | 3 FIN 301 <sup>*</sup>          | 3         |
| SCM 200 or STAT 200 (GQ) <sup>*†#†</sup> | 4 MGMT 301 <sup>*</sup>         | 3         |
| General Education Course (Inter-Domain)  | 3 MKTG 301 <sup>*</sup>         | 3         |
| General Education Course (GHW)           | 1.5 SCM 301 <sup>*</sup>        | 3         |
|  | <b>15.5</b>                     | <b>15</b> |

#### Third Year

| Fall   | Credits Spring   | Credits |
|--|--|---------|
| BA 241                                       | 2 MIS 430 <sup>*</sup>   | 3       |
| BA 242                                       | 2 MIS Business Analyst or Data Analyst Focus Area <sup>*</sup> | 3       |
| MIS 336 <sup>*</sup>                         | 3 Supporting Course MIS/CMPSC/Business <sup>*</sup>            | 3       |
| MIS 315 (or PROGRAMMING COURSE) <sup>*</sup> | 3 Supporting Course MIS/CMPSC/Business <sup>*</sup>            | 3       |
| MIS 345 <sup>*</sup>                         | 3 Approved Elective  | 3       |

|   |  |                |
|---|--|----------------|
| General Education Course<br>(Inter-Domain)                              | 3  |                |
|   | <b>16</b>                                    | <b>15</b>      |
| <b>Fourth Year</b>  |  |                |
| <b>Fall</b>   | <b>Credits Spring</b>                        | <b>Credits</b> |
| MGMT 410*   | 3 IB 303 (or International Business Course)* | 3              |
| MIS 445*  | 4 MIS 495*                                   | 3              |
| MIS Business Analyst or Data Analyst Focus Area (MIS 447 is Fall only)* | 3 MGMT 471W*                                 | 3              |
| Approved Elective   | 3 Supporting Course MIS/CMPSC/Business*      | 3              |
| General Education Course (GA/GH/GS/GN/Inter-Domain)                     | 3 Supporting Course MIS/CMPSC/Business*      | 3              |
|   | <b>16</b>                                    | <b>15</b>      |
| <b>Total Credits 123</b>  |  |                |

\* 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 Cultural Diversity 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.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

<sup>1</sup> Please see your academic adviser for approval before scheduling your course

<sup>2</sup> 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.

<sup>3</sup> All students are required to fulfill 45 credits of General Education courses. More information about this requirement can be found on the Baccalaureate Degree General Education Requirements page in the Bulletin (<https://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program/>).

## 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 (<https://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 (<https://behrend.psu.edu/admissions-financial-aid/graduate-admissions/>)

## Professional Resources

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

## Contact

### Erie

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