INFORMATION SYSTEMS

Graduate Program Head	John Haddad
Program Code	INFSY
Campus(es)	Harrisburg (M.S.)
Degrees Conferred	Master of Science (M.S.) Integrated B.S. in Information Systems and M.S. in Information Systems
The Graduate Faculty	View (https://secure.gradsch.psu.edu/gpms/?searchType=fac&prog=INFSY)

The Master of Science in Information Systems (MSIS) is a STEM-designated program that equips students with business intelligence, analytics, and management competencies required to shape business strategy and lead digital transformation to stay competitive.

A STEM-designated degree allows eligible graduates an Optional Practical Training (OPT) extension for up to 36 months, helping graduates gain additional real-world skills and experiences.

The MSIS is highly flexible to accommodate both full- and part-time students. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.

Admission Requirements

Applicants apply for admission to the program via the J. Jeffrey and Ann Marie Fox Graduate School application for admission (https://gradschool.psu.edu/admissions/how-to-apply/). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (https://gradschool.psu.edu/graduate-education-policies/).

Admission decisions are based primarily on undergraduate junior-senior grade-point average and the Graduate Management Admissions Test (GMAT) scores or Graduate Record Exam (GRE) scores. Post-baccalaureate course work, professional experience, and the statements provided in the application are also taken into account.

Students are also required to submit the following:

- a completed Graduate School application (http://www.gradschool.psu.edu/prospective-students/how-to-apply/) with application fee
- official transcripts from all post-secondary institutions attended (http://www.gradschool.psu.edu/prospective-students/how-to-apply/new-applicants/requirements-for-graduate-admission/);
- official scores from the GMAT test or GRE test (the test must have been taken within the past five years); and
- letters of recommendation (optional)

Application Dates

Candidates may enter the program at the beginning of the fall semester. To allow time for applications to be processed, all information, including GMAT or GRE score, for domestic students must be received by Graduate Enrollment Services no later than July 18.

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. The international application deadline date is May 31.

Entry Requirements

Credits obtained to fulfill entry and pre-program requirements cannot be applied towards the requirements for the degree.

Analytic Skills Requirement

Prior to enrolling in their M.S.I.S. course work, students are required to demonstrate competence in Analytic skills. This requirement may be demonstrated by:

1. satisfactory completion of college-level mathematics course or
2. successful completion of a mathematics proficiency examination approved by the M.S.I.S. program. This requirement must be taken either during the first semester or summer session before the student's matriculation and completed with a grade of C or better.

Computer Skills Requirement

Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through completion of a college-level computer applications or information systems course within the past five years with a grade of B or higher or by documented significant computer-related work experience. If this requirement has not been met prior to admission, a college-level computer-based information systems course such as MIS 204 is required. Course work must be taken either during the first semester or summer session before the student's matriculation and completed with a grade of B or higher.

Communication Skills Requirement

Successful completion of the M.S.I.S. program requires the ability to think clearly and to write and speak persuasively. Part of this requirement can be met by obtaining a score of "4" or more on the Graduate Management Admission Test (GMAT) or Graduate Record Exam (GRE) Analytical Writing Assessment (AWA). If this score is not achieved, students must satisfy this requirement through additional course work in writing skills or other work developed in consultation with the M.S.I.S. Program. This requirement must be satisfied during the first semester or summer session before the student's matriculation and completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in courses in the M.S.I.S. Program.

Pre-Program Requirement

The Pre-program requirement provides a basic foundation in theory, tools and techniques required for the management of profit and non-profit organizations. It also provides a basic understanding of applications of financial accounting, the creation and distribution of goods and services, business and how people relate to others in various organizations, helping to merge two related disciplines: business and information systems. Students who have completed the appropriate pre-program courses previously must have completed the courses with a grade of B or higher within seven years prior to admission, or through equivalent graduate course work completed with a B or higher within seven years prior to admission or college level course work validated by recent work experience. Students who have not met these tests of relevancy, grade, or currency prior to admission to the program must take these courses at the graduate level and early in program.

Code	Title	Credits
Pre-Program Requirement		
BUS 505	Data Analysis for Business Decisions	3
Select 6 credits from the following:		6
ACCT 501	Financial Statement Analysis	
BUSEC 502	Economics for Managers	
MNGMT 511	Organizational Behavior	
Total Credits		**9**

Degree Requirements
Master of Science (M.S.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (https://gradschool.psu.edu/graduate-education-policies/)

The M.S.I.S. degree program requires, excluding pre-program requirements, 30 credits of course work at the 500 or 800 level, with a minimum of 18 credits at the 500 level.

Code	Title	Credits
Required Courses		
INFSY 535	Object-Oriented Design and Programming in Business	3
INFSY 540	Information Technology and Knowledge Management	3
15 credits of Information Systems courses from an approved list available in the program office		15
Electives		
6 credits of electives from the 500-level courses offered by Penn State Harrisburg's School of Business Administration		6
Culminating Experience		
INFSY 554	Master's Project [1]	3
Total Credits		**30**

[1] The INFSY 554 Master's Project course involves development of an original master's project in the student's field of interest and preparation of a scholarly paper.

Data Analytics Track
The objective of this Track is to provide the student with business intelligence and analytics skills that enable them to gain insights and transform data into strategic decisions.

In consultation with their adviser, a student shall select 9 credits of the following:

Code	Title	Credits
BUS 510	Business Analytics and Decision Modeling	3
INFSY 555	Data Management Systems	3
INFSY 556	Data Warehousing	3
INFSY 565	Intelligent Systems in Business	3
INFSY 566	Data Mining and Knowledge Discovery	3
INFSY 547	WEB Enabled Technologies	3

Transfer Credits
Credits earned at other institutions but not used to earn a degree may be applied toward the requirements for a graduate degree, subject to restrictions outlined in GCAC-309 Transfer Credit (http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/transfer-credit/). It must be the opinion of the reviewing faculty that these courses are equivalent in quality to those offered at Penn State Harrisburg. Credit will not be given for any class used to complete a previous degree.

Course Substitutions
Because some students enter the Program with advanced knowledge in one or more subject areas, up to six credits in prescribed or additional courses may be replaced with more advanced undergraduate or graduate courses in the same subject area. Except for INFSY 554, which must be taken at the College, INFSY prescribed and additional courses, in cases where there is equivalent knowledge, must be replaced with more advanced courses in the same field. Substitutions are based on a minimum of six credits of advanced undergraduate course work in an area of concentration or credits earned in an equivalent graduate-level program at a regionally accredited, college-level institution. These courses must have been completed within the past five years and have earned a grade of B or better. Substituted courses must be replaced with other advanced graduate courses in the field for which the substitute is the foundation/prerequisite. Substitutions are based on past academic performance. An examination cannot be used for earned graduate course credit.

Integrated Undergrad-Grad Programs
Integrated B.S. in Information Systems and M.S. in Information Systems

This Integrated Undergraduate/Graduate (IUG) degree program combines the B.S. in Information Systems with the M.S. in Information Systems offered at the following campuses:

Undergraduate Degree

• Harrisburg

Graduate Degree

• Harrisburg

Requirements listed here are in addition to requirements listed in GCAC-210 Integrated Undergraduate-Graduate (IUG) Degree Programs (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-210-integrated-undergraduate-graduate-degree-programs/).

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems students the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Science in Information Systems. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Science in Information Systems degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed.

ADMISSION REQUIREMENTS

Applicants apply for admission to the program via the J. Jeffrey and Ann Marie Fox Graduate School application for admission (https://gradschool.psu.edu/admissions/how-to-apply/). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (https://gradschool.psu.edu/graduate-education-policies/).

Students apply to the program via the Graduate School application for admission (http://www.gradschool.psu.edu/prospective-students/how-to-apply/), and must meet the admission requirements of the Graduate School, as well as the admission requirements for the Master of Science degree in Information Systems. Students should mention in the notes section that the application is for the IUG program in Information Systems.

Students must submit:

- a resume,
- a personal statement including career goals and how the M.S.I.S. will enhance their career goals,
- official transcripts from all post-secondary institutions attended (http://www.gradschool.psu.edu/prospective-students/how-to-apply/new-applicants/requirements-for-graduate-admission/) except for Penn State,
- two letters of recommendation, with at least one from the School of Business Administration faculty, and
- a plan of study that integrates both undergraduate and graduate requirements.

The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A Graduate Faculty adviser in collaboration with the Director of M.S.I.S. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Before applying to the Graduate School, students must have completed entrance to their undergraduate major and have completed no less than 60 credits. Students must be admitted no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. Transfer students must have completed at least 15 credits at Penn State to enroll in an IUG. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent:

Code	Title	Credits
ACCTG 211	Financial and Managerial Accounting for Decision Making	4
ECON 102	Introductory Microeconomic Analysis and Policy	3
ENGL 15	Rhetoric and Composition	3
or ENGL 30H	Honors Rhetoric and Composition	
FIN 301	Corporation Finance	3
MATH 110	Techniques of Calculus I	4
or MATH 140	Calculus With Analytic Geometry I	
MGMT 301	Basic Management Concepts	3
MKTG 301	Principles of Marketing	3
STAT 200	Elementary Statistics	4
or SCM 200	Introduction to Statistics for Business	

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Information Systems.

DEGREE REQUIREMENTS

Students must fulfill all degree requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the Bachelor of Science in Information Systems are listed in the Undergraduate Bulletin (http://bulletins.psu.edu/undergraduate/). Students must sequence their courses so all undergraduate degree requirements are fulfilled before taking courses to count solely towards the graduate degree. Students are expected to complete the undergraduate degree requirements within the typical time to degree for the undergraduate major. In the semester in which the undergraduate degree requirements will be completed, IUG students must apply to graduate, and the undergraduate degree should be conferred at the next appropriate Commencement.

Up to 12 credits may be double-counted towards the degree requirements for both undergraduate and graduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Independent study courses and credits associated with the culminating experience for the graduate degree cannot be double-counted.

Code	Title	Credits
Courses Eligible to Double Count for Both Degrees		
INFSY 535	Object-Oriented Design and Programming in Business	3
INFSY 540	Information Technology and Knowledge Management	3
INFSY 555	Data Management Systems	3
INFSY 860	Data Communications Systems and Networks	3
INFSY 547	WEB Enabled Technologies	3
INFSY 543	Electronic Commerce	3
INFSY 570	Software Engineering in the Analysis and Design of Information Systems	3

Minor

A graduate minor is available in any approved graduate major or dual-title program. The default requirements for a graduate minor are stated in Graduate Council policy GCAC-218 Minors (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-218-minors/).

Student Aid

Graduate assistantships available to students in this program and other forms of student aid are described in the Tuition & Funding (https://gradschool.psu.edu/funding/) section of the J. Jeffrey and Ann Marie Fox Graduate School's website. Students on graduate assistantships must adhere to the course load limits (https://gradschool.psu.edu/graduate-education-policies/gsad/gsad-900/gsad-901-graduate-assistants/) set by the Fox Graduate School.

There are a limited number of scholarships, fellowships, and research grants available, as well as several graduate assistantships. For more information on these, contact Penn State Harrisburg's School of Business Administration.

Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact one of the following offices:

1. Financial Aid Office, 717-948-6307
2. Admissions, 717-948-6250

Graduate School Assistantships

Full time graduate students who are interested in an assistantship should contact the graduate program coordinator. Students must be nominated for an assistantship by their program coordinator. Students interested in pursuing full-time graduate study and who would like to be considered for a graduate assistantship or fellowship, must submit their application materials by January 15.

Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Information Systems (INFSY) Course List (https://bulletins.psu.edu/university-course-descriptions/graduate/infsy/)

Contact

Campus	Harrisburg
Graduate Program Head	John Haddad
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)	Mohammad A Ali
Program Contact	HEATHER DAUB Graduate Admissions 777 West Harrisburg Pike Middletown PA 17057 had11@psu.edu (717) 948-6140
Program Website	View (https://harrisburg.psu.edu/business-administration/information-systems/master-science-information-systems/)