



## **Academic & Career Advising Guide**

### **Master of Science in Management Information Systems**

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## INTRODUCTION TO THE GUIDE

The **Katz Academic & Career Advising Guide** is a program roadmap that enables students to customize the graduate school experience based upon their individual strengths and professional goals.

You can find important information about the Master of Science in Management Information Systems (MS-MIS) curriculum, as well as suggestions for elective courses, co-curricular activities, professional organizations and certifications here. Used together with Gallup's StrengthsFinder 2.0 and regular appointments with your career and academic advisors, you will be empowered to individualize your experience and enhance your competitiveness in order to achieve your academic and career goals.

## ACADEMIC & CAREER ADVISING

At Katz, we have a multi-faceted advising approach that is designed to provide every student with the best opportunity to achieve success. The faculty director, academic advisor, and career advisor take the lead on different aspects of your experience at Katz. They all work together to provide integrated advice to students about the program.

- The **faculty director** manages the curriculum and academic standards for the MS-MIS program.
- The **academic advisor** provides day-to-day advising and support to students on many aspects of the program, including course selection, registration, graduation requirements, and general questions and concerns.
- The **career advisor** understands the students' career goals and coaches the student to construct a plan specifically tailored to their goals.

You may have wondered why you heard from your career and academic advisor before you even started the program. We are acutely aware that students who have been most successful in the past were singularly focused on post-graduation goals before they arrived on campus. With this knowledge in hand, we begin the process of focusing on your ultimate academic and career goals as early as possible.

As career goals come into focus, career advisors can then discuss the goals of each student with their academic advising counterparts. Career advisors and academic advisors work together to understand the ultimate goal of each student along with the skill sets the students will require in order to meet their goals. Then, they work with each student to construct curricular and co-curricular courses and activities specifically tailored to the individual student.

Faculty members frequently interact with both career and academic advisors. Career advisors provide recruiter feedback to faculty in regard to specific topics that give students a competitive advantage. Academic advisors then work with the faculty to determine which courses provide the student with specific knowledge that is most important to recruiters for the success of that individual student.

This process continues throughout the Katz experience and is designed to be completely transparent to the student while taking advantage of the 3 pillars of the Career Management Center (CMC):

- **Career Coaching:** The CMC directs students to relevant resources based on their strengths and career interests, empowering them to achieve their professional objectives.
- **Career Professional Development:** Ensuring that students develop business sophistication, self-awareness, and appropriate communication- skills that are critical in today's job market.
- **Employer Engagement:** The CMC develops and maintains relationships with corporate partners and alumni, to connect students to networking and job opportunities.

## CURRICULUM PLAN

In order to make the most of your Katz experience, it is critical that you work closely with your academic advisor, career advisor, and faculty director to assist you with appropriate course selection and sequencing that aligns with your professional aspirations. Information on course offerings, including course abstracts and schedules, can be found on [StudentNet](#) under the 'Class Schedule' tab.

### Core courses

Core courses are required of all students and are intended to provide students with the foundational knowledge to be successful. Although some courses are offered in both the Fall and Spring semesters, students should take courses in the semester listed below:

Required Core Courses (Total 13.5 credits)	Credits	Semester
<b>BMIS 2056 MIS Practicum</b>	3.0	Fall
<b>BMIS 2409 Information Systems</b>	1.5	Spring
<b>BMIS 2537 Business Systems Platforms</b>	3.0	Spring
<b>BMIS 2551 Project Management Concepts &amp; Processes</b>	3.0	Fall
<b>BMIS 2558 Database Management*</b>	3.0	Spring

\*students with an undergraduate technical degree may substitute with an MIS elective course

### Elective MIS courses

Elective courses are intended to provide depth of expertise in areas of interest to the student. The MS-MIS program requires the completion of at least 6.0 credits from the following list of MIS elective courses.

Required Elective Courses (Minimum 6.0 credits)	Credits	Semester
<b>BMIS 2053 Human Computer Interaction</b>	3.0	varies
<b>BMIS 2060 MIS Independent Study</b>	varies	varies
<b>BMIS 2074 Strategic IT in Supply Chain Management</b>		
<b>BMIS 2501 Enterprise Systems &amp; Integration of Business Processes (SAP TERP 10 certification prep)</b>	3.0	Spring
<b>BMIS 2542 Introduction to Data Science: Programming Essentials (Python, R)</b>	3.0	Fall
<b>BMIS 2528 Practical Data Science</b>	3.0	Spring
<b>BMIS 2527 Privacy, Security, and Ethical Computing</b>	3.0	varies
<b>BMIS 2678 Electronic Commerce</b>	3.0	Spring
<b>BMIS 2679 Technology Innovation, Adoption &amp; Diffusion</b>	3.0	Fall
<b>BMIS 2689 Technology-enabled Business Transformation</b>	3.0	Spring
<b>BMIS XXXX Current Topics in MIS*</b>	1.5	varies

\*options vary; consult with faculty director and academic advisor for available courses

\*\* immersion course at end of Spring semester

### Elective Business (non-MIS) courses from Katz Masters Programs

Students may choose non-MIS electives from the Katz Masters schedule up to a **maximum of 10.5 credits** in order to develop expertise in an area of business in which the student desires to utilize their technical and project management skills.

## Elective courses from Other Pitt Schools

Students with special interests, with the approval of the faculty director, will be permitted to substitute other relevant elective courses from the Pitt School of Computing and Information. Credits from these graduate-level courses can be used towards the requirement of MIS electives (6 credits) or/and towards non-MIS electives (10.5 credits).

☒ Course Descriptions and Schedule are listed here <https://cs.pitt.edu/grads> and <http://www.ischool.pitt.edu/academics/master.php>

## Co-Curricular Opportunities

A variety of opportunities to learn, improve, and practice professional business skills are available to Katz students. Specialized professional development workshops are designed to enhance those skills taught in the classroom and that are highly valued by employers.

### Enterprise Systems

- BMIS 2501 Enterprise Systems & Integration of Business Process (3 credits) offers students the opportunity to take the **SAP TERP 10 Certification** exam on the last day of class. This course is approved to count toward the 6 credit MIS elective requirement. Talk with your academic or career advisor for further details.
- [SAP student website](#)

### Project Management

- The [Project Management Institute \(PMI\)](#) offers a discounted student membership for those enrolled full-time in a degree-granting program, reduced from regular membership of \$132.00.
- Be sure to explore the [PMI Pittsburgh](#) chapter which hosts a wide variety of professional development and networking events throughout the year.
- If you're a veteran or serve in the U.S. Military, your PMI certification exam – including the PMI-PBA® - is covered by the GI Bill for U.S. Military Service Members and Veterans.
- Talk with your academic or career advisor about the **CAPM/PMP Exam Prep Workshop** (3 days) usually offered during Spring Professional Development Days, as well as other options from [PMCentersUSA](#) available through Katz Executive Education.

### Process Improvement

- Students earn their **Six Sigma Green Belt** certification while taking the BQOM Six Sigma Theory & Practice (3 credits) course. MS-MIS students can take this course as a business (non-MIS) elective. Six Sigma Green Belts are employees who spend some of their time on process improvement teams. They analyze and solve quality problems, and are involved with Six Sigma, lean or other quality improvement projects. See your academic or career advisor to discuss if this course is right for you.

### Customer Insights

- Students learn how to turn customer insights into business results while gaining marketable skills with the **Google Adwords** (Fall) and **Google Analytics** (Spring) workshops. Each workshop is conducted on a weekend so that it doesn't conflict with classes. See your academic or career advisor to discuss whether one or both of these workshops are right for you.

## Interview Skills

- Technical, project management, and consulting interviews usually have a **case interview** component. Because of this, we recommend that you practice and master your case interviewing skills.
  - [Case in Point](#) – Marc Cosentino, President, has over 23 years of case interview prep experience. His book is entitled, “*Case in Point: Complete Case Interviewing Preparation*” at is approximately \$25 plus shipping and handling.
  - A helpful and quick review guide is the [Vault Guides on Case Interviewing and Case Interviewing Practice](#) – FREE through Vault link in Career Connection.
- Interviews frequently also have a **behavioral interview** component. The interviewer is interested in discovering how you have acted in specific situations in the past. Because of this, we recommend that you reflect (think and write) on your academic and work experiences so that you can quickly remember and communicate these brief stories during an interview. See Career Connection resource library for “*Complete List of Behavioral Interview Questions*”.
- Take advantage of opportunities to practice your interview skills. Make an appointment with an **Executive-in-Residence (EIR)** and be sure to participate in “**Mock Interview**” days.

## CAREER PLANNING

Typically the amount of prior work experience plays an integral role in the level with which you are hired within an organization, especially in the big consulting firms and multi-national corporations. Whether you are a career starter, career switcher or career enhancer, Katz research shows that those with an MS-MIS degree are hired into the following functional areas:

[Business Analysis](#)

[Data Analysis](#)

[Product Development](#)

[Project Management](#)

[Service Management](#)

Please access Vault through [Career Connection](#) to learn more about various careers in management information systems.

## Business Analysis

Within consulting firms, business analysts work with experienced consultants to develop models, perform complex analyses, and work on research assignments at both the office and client sites. Analysts often travel while on assignments, undertaking a broad range of activities, while gaining exposure to the business world. They may also participate in marketing activities and the preparation of proposals for new engagement opportunities.

Outside of consulting firms, analysts help their companies solve business challenges by collecting, reviewing and analyzing data that enables senior management to make informed decisions. They often work closely with both internal and external stakeholders to enable improved business planning and forecasting. In more technical business analysis, an analyst may be controlling and communicating changes to requirements documentation, developing test plans, test scripts and test conditions, and even provide end-user support in post-deployment phases.

Although some courses are offered in both the Fall and Spring semesters, MS-MIS students should take courses in the semester listed below:

### Suggested MIS Elective Courses

Courses	Credits	Semester
BMIS 2074 Strategic Information Technology in Global Supply Chains	1.5	Fall
BMIS 2678 E-Commerce	3.0	Spring
BMIS 2679 Technology Innovation, Adoption, and Diffusion	3.0	Fall
BMIS 2689 Technology Enabled Business Transformation	3.0	Spring
BMIS 2501 Enterprise Systems & Integration of Business Processes	3.0	Spring (Immersion)

### Suggested Business (non-MIS) Elective Courses

Courses	Credits	Semester
BEEN 2401 Economic Analysis for Managerial Decisions: Firms and	3.0	Fall
BIND 2400 Consulting Field Project	3.0	Spring
BMKT 2544 Shopper Marketing	3.0	Fall, Spring
BQOM 2139 Six Sigma Theory and Practice	3.0	Fall, Spring
BQOM 2401 Statistical Analysis	3.0	Fall
BQOM 2421 Decision Technologies	1.5	Fall, Spring
BQOM 2523 Process Engineering (BQOM 2401 prerequisite)	1.5	Spring
BQOM 2578 Data Mining	3.0	Fall
BSPP 2409 Strategic Management	1.5	Fall, Spring

### Suggested Co-Curricular Activities

Katz Clubs: Business Technology, Consulting

Case Competitions:

- The Association for Information Systems (AIS) hosts a variety of conference throughout the year, as well as sponsoring the **AIS Student Chapter Leadership Conference and Competition**. The Katz Business Technology Club is a student chapter. More information at [AIS Student Chapters website](#).
- See [Experience Based Learning](#) on StudentNet for more information about case competitions.

### Professional Organizations

[The Association of Information Technology Professionals](#)

[Information Systems Security Association](#)

[Information Systems Audit and Control Association](#)

[International Institute of Business Analysis](#)

[Pittsburgh Technology Council](#)  
[Information Technology Infrastructure Library](#)  
[Association for Information Systems](#)  
[itSMF USA](#)

### **External Certifications**

[PMI Certifications](#) (CAPM®, PMP®)

[SAP Certification](#) (TERP10 Certification)

### **Job Functions within Track**

**Sr. Business Analyst:** Also called a lead analyst, senior business analysts oversee the business process analysis and execute the collection, elicitation, and recording of business requirements for more and better strategic project developments. A senior business analyst often acts as a liaison among internal stakeholders and is responsible for managing or training more junior business analysts.

**Business & Planning Analyst:** Business & planning analysts develop and implement business plans, processes and procedures. They help to define and implement business strategy to meet an organizations objective, identify problems, and coordinate with various teams to provide strategic solutions. Business & Planning Analysts need to stay up to date on the current business operations, latest business developments and market trends as well as ensure compliance with company laws and regulations.

**Business Process Engineer:** As a business process engineer, you design and implement operational methods that promote an organization's overall efficiency and reduce costs. Business process engineers need to be able to build and evaluate financial models for cost estimation, cash flow and cost reduction as well as have strong project management and implementation skills. You are the expert. Many business process engineers have years of prior work experience and will work as consultants contracted by companies seeking improvements to their methodology and infrastructure.

**Requirement Analyst Specialist:** Within an organization, a requirement analyst specialist works with all of the stakeholders (project managers, development, testing, customers, etc.) and helps to translate multiple perspectives into a requirement specification. In other words, they help to determine the difference between what a customer says that they want and what they really need. A requirement analyst specialist plays the role of a conduit through which requirements flow between the customer community and the software development team.

### **Key Skills Needed**

Analytical, analysis, problem solving, planning, ability to see things from multiple perspectives, project management, advanced business knowledge, leadership, teamwork, excellent verbal and written communication, organizational abilities, conflict resolution, and advanced research ability.

## Data Analysis

Data scientists help decision-makers by extracting insights from large volumes of structured and unstructured data. To pursue a career in data science, students should develop sound statistical and IT platform skills in addition to the skills described in the IT Business Analysis and IT consulting sections of this guide. Positions may include Data Scientist, Data Analyst, Analytics Consultant, Analytics Manager, and Business Intelligence Manager.

Although some courses are offered in both the Fall and Spring semesters, MS-MIS students should take courses in the semester listed below:

### Suggested MIS Elective Courses

Courses	Credits	Term likely to be offered
BMIS 2526 Practical Data Science	3.0	Spring
BMIS 2034 Information Systems Planning	3.0	varies
BMIS 2074 Strategic Information Technology in Global Supply Chains	1.5	Spring
BMIS 2679 Technology Innovation, Adoption, and Diffusion	3.0	Fall
BIOST 2093 SAS Data Management & Analysis (School Public Health)	3.0	Spring

### Suggested Business (non-MIS) Elective Courses

Courses	Credits	Semester
BECN 2401 Economic Analysis for Managerial Decisions: Firms and	3.0	Fall
BIND 2024 Consulting Field Project	3.0	Spring
BMKT 2544 Shopper Marketing	3.0	Fall, Spring
BMKT 2551 Digital & Social Media Analytics	1.5	Spring
BQOM 2139 Six Sigma Theory and Practice	3.0	Spring
BQOM 2401 Statistical Analysis	3.0	Fall
BQOM 2421 Decision Technologies	1.5	Fall
BQOM 2512 Advanced Decision Technologies	1.5	Spring
BQOM 2521 Decision Making in a Complex Environment	1.5	Spring
BQOM 2578 Data Mining	3.0	Fall
BSEO 2525 Competitive Intelligence	1.5	Spring

### Suggested Co-Curricular Activities

Clubs: Business Technology, Marketing

Case Competitions:

- The Association for Information Systems (AIS) hosts a variety of conference throughout the year, as well as sponsoring the **AIS Student Chapter Leadership Conference and Competition**. The Katz Business Technology Club is a student chapter. More information at [AIS Student Chapters website](#).
- See [Experience Based Learning](#) on StudentNet for more information about case competitions.

### Professional Organizations

[International Institute of Business Analysis](#)

### External Certifications

SAS Certification

### Job Functions within Track

**Data Analyst:** A data analyst specializes in collecting, sorting, and studying business data in a given organization for interpretation and analysis. Many times a data analyst plays an advisory role to business managers and executives, explaining why business figures are the way they are and suggesting ways for

improvement. Good analysts take this complex data and utilize good presentations skills to make it easy for key players to understand.

***Analytics Consultant:*** Analytic consultants play a key role in supporting the decision making of their clients through the collection of data, complex analysis and analysis design (usually involving data mining activities), predictive modeling and visualization. They need to interpret enormous amounts of data, using multiple structured and non-structured sources, and present their results and recommendations to senior management. Sometimes they may be involved directly or indirectly in the technical build-out and/or support of databases, query tools, reporting tools, BI tools, dashboards, etc. that enable analysis, modeling, and or data visualization.

***Analytics Manager:*** An analytics manager is responsible for providing their company's top management with summarized and current data to be used in making the most appropriate and strategic decisions involving the company. This is a key role within the company's decision making process and this type of manager performs a plethora of tasks to arrive at a comprehensive analysis. Tasks include generating data and information from previous statements and accounts of the company, distributing gathered information and data to significant members of the organization, as well as presenting accurate and complete data across the organization. Analytics managers also ensure that data and information are up to date, develop strategies in order to increase revenue of the company by using analytics management, and consult with department heads and top management.

***Business Intelligence Manager (BI):*** The BI manager's function within an organization is to identify and translate market opportunities into actionable recommendations to achieve individual, team and company revenue profit targets. Most work closely with the sales and marketing areas within their organizations and use information to help find new ways to attract new customers, maximize value of existing customers, and retain the most profitable ones. They also support the campaign target setting process and measure the impact of campaigns, reporting findings to management.

#### **Key Skills Needed**

Statistical, mathematical, predictive modeling, strategic thinking, excellent verbal and written communication, curious, self-confidence, patience, attention to detail, research and analysis, ability to interact with all levels within an organization, problem solving, project management

## Product Development

Product Development involves multiple areas within the technology lifecycle of product or service. Combining expertise in MIS, marketing and strategy, these professionals are subject matter experts that work closely with both internal and external stakeholders to develop, grow, maintain and / or sell a product or service line. Popular job titles include, but are not limited to, IT Product Manager, IT Product Developer, Technology Product Manager, and Marketing Product Manager.

Although some courses are offered in both the Fall and Spring semesters, MS-MIS students should take courses in the semester listed below:

### Suggested MIS Elective Courses

Courses	Credits	Term likely to be offered
BMIS 2034 Information Systems Planning	3.0	varies
BMIS 2074 Strategic Information Technology in Global Supply Chains	1.5	Spring
BMIS 2679 Technology Innovation, Adoption, and Diffusion	3.0	Fall
BMIS 2526 Practical Data Science	3.0	Spring

### Suggested Business (non-MIS) Elective Courses

Courses	Credits	Semester
BACC 2401 Financial Accounting	3.0	Fall
BACC 2528 Managerial Accounting (BACC 2401 prerequisite)	1.5	Spring
BECN 2401 Economic Analysis for Managerial Decisions: Firms and	3.0	Fall
BIND 2024 Consulting Field Project	3.0	Spring
BMKT 2031 Marketing Research	3.0	Fall
BMKT 2409 Marketing Management	1.5	Fall
BMKT 2526 Product Development and Management	3.0	Spring
BOAH 2532 Negotiations, Teamwork and Change	1.5	Fall, Spring
BQOM 2139 Six Sigma Theory and Practice	3.0	Fall, Spring
BSEO 2525 Competitive Intelligence	1.5	Spring
BSPP 2111 Commercializing New Technologies	3.0	Fall

### Suggested Co-Curricular Activities

Clubs: Business Technology, Marketing Club, LaunchPitt  
Katz/MIT Enterprise Forum – Entrepreneurial Café (E-Café)

Case Competitions:

- The Association for Information Systems (AIS) hosts a variety of conference throughout the year, as well as sponsoring the **AIS Student Chapter Leadership Conference and Competition**. The Katz Business Technology Club is a student chapter. More information at [AIS Student Chapters website](#).
- See [Experience Based Learning](#) on StudentNet for more information about case competitions.

### Professional Organizations:

[Project Management Institute \(PMI\)](#)

[Pittsburgh Technology Council](#)

[Association for Information Systems](#)

[Association of Product Management and Product Marketing](#)

[Product Development and Management Association](#)

**External Certifications:**

[AMA Professional Certified Marketer](#)

[Certified Product Manager](#)

[Agile Certified Product Manager](#)

[Certified Product Marketing Manager](#)

[PMI Certifications](#) (CAPM®, PMP®)

[New Product Development Professional \(NPDP\) Certification](#)

**Job Functions within Track**

***IT Product Developer:*** Product developers typically have a background in design, engineering, or both. As an IT product developer you may be responsible for developing a new technical product or improving an existing product so that the company can meet customers' needs more effectively. Once the team has agreed on the product design, the product developer carries out or supervises the detailed design work, collaborating with stakeholders, to develop and manufacture the product. A developer may also be involved in the product launch or even help in the training of the sales and customer service teams.

***IT Product Manager:*** Behind every great product is a great product manager! An IT product manager develops a deep understanding of the customer experience, identifies and fills product gaps based upon that information and generates new ideas that grow market share, improve the overall customer experience and drive growth for the company they work for. Those in this role are defined as being the liaison between the business, technology and the user experience. They manage all aspects of a successful product throughout its lifecycle and work with both internal and external stakeholders. Because they work with technology, a solid technical background with understanding and/or hands-on experience in software development and web technologies is a must.

**Key Skills Needed**

Strong problem solving skills, project management, excellent verbal and written communication, customer service, analytical, requirements and pricing analysis, market research, operations, sales, leadership, teamwork, strategic thinking, technical background and the ability to influence others.

## Project Management

Project Managers play a vital role in the success of their organizations because they are responsible for the planning, management, coordination and financial control of a specific project or related set of projects. They not only apply their broad knowledge of information technologies and business issues to manage projects, but also work with upper management to ensure the scope and direction of each project is aligned with organizational goals. Project Managers do not tend to travel as much as IT Consultants, but they do tend to work longer hours.

Although some courses are offered in both the Fall and Spring semesters, MS-MIS students should take courses in the semester listed below:

### Suggested Elective Courses

Courses	Credits	Semester
BMIS 2034 Information Systems Planning	3.0	Fall
BMIS 2074 Strategic Information Technology in Global Supply Chains	1.5	Spring
BMIS 2679 Technology Innovation, Adoption, and Diffusion	3.0	Fall
BMIS 2689 Technology-enabled Business Transformation	3.0	Spring
BMIS 2526 Practical Data Science	3.0	Spring

### Suggested Business (non-MIS) Elective Courses

Courses	Credits	Semester
BACC 2401 Financial Accounting	3.0	Fall
BACC 2528 Managerial Accounting (BACC 2401 prerequisite)	1.5	Spring
BACC 2549 Strategic Cost Analysis	1.5	Spring
BIND 2400 Consulting Field Project	3.0	Spring
BOAH 2409 Organizational Behavior	1.5	Fall
BOAH 2423 Managing Human Capital	3.0	Spring
BOAH 2521 Staffing Organizations	1.5	Spring
BOAH 2532 Negotiations, Teamwork and Change	1.5	Spring
BOAH 2537 Conflict Resolution in the Workplace	1.5	Spring
BQOM 2139 Six Sigma Theory and Practice	3.0	Fall, Spring
BQOM 2534 Strategic Procurement and Sourcing Management	1.5	Spring

### Suggested Co-Curricular Activities

Clubs: Business Technology

Case Competitions:

- The Association for Information Systems (AIS) hosts a variety of conference throughout the year, as well as sponsoring the **AIS Student Chapter Leadership Conference and Competition**. The Katz Business Technology Club is a student chapter. More information at [AIS Student Chapters website](#).
- See [Experience Based Learning](#) on StudentNet for more information about case competitions.

### Professional Organizations:

[The Association of Information Technology Professionals](#)

[Information Systems Security Association](#)

[Pittsburgh Technology Council](#)

[Information Technology Infrastructure Library](#)

[Association for Information Systems](#)

[itSMF USA](#)

[Project Management Institute \(PMI\)](#)

## External Certifications:

### [PMI Certifications](#) (CAPM®, PMP®)

- The [Project Management Institute \(PMI\)](#) offers a student membership for \$32.00 to those enrolled full-time in a degree-granting program, reduced from regular membership of \$132.00.
- Be sure to explore the [PMI Pittsburgh](#) chapter which hosts a wide variety of professional development and networking events throughout the year.
- Talk with your academic or career advisor about the **CAPM/PMP Exam Prep Workshop** (3 days) usually offered during Spring Professional Development Days, as well as other options from [PMCentersUSA](#) available through Katz Executive Education.

## Job Functions within Track

**Project Manager (PM):** PMs are the people within an organization that are in charge of a specific project or projects. They plan, budget, oversee and document all aspects of the project(s) they are working on. They need to be able to work closely with all levels of management and all departments within their organization. Excellent communication skills are a must. They are the project owners and ultimately responsible to ensure that projects are delivered on-time, within scope and within budget. The Project Management Professional (PMP) certification is highly desirable and recommended.

**Technical Program Manager (TPM):** The TPM is responsible for managing projects, providing clear management structure, working to define critical milestones and decision points for an overall program, incorporating input from outside technical sources (engineering, programming, etc.), ensuring that timelines are achieved and tracking execution against the plan. They need to have a strong analytical background, be able to work with cross functional teams and work with all levels of people within an organization. The Project Management Professional (PMP) certification is highly desirable.

## Service Management

Computer and information systems managers play a vital role in the technological direction of their organizations because they do everything from constructing the business plan to overseeing network and internet operations. IS professionals not only apply their broad knowledge of information technologies and business issues, but speak to their vision of where technology can take organizations. IS Managers do not tend to travel as much as IT Consultants, but they do tend to work longer hours and can sometimes be on call 24/7.

Although some courses are offered in both the Fall and Spring semesters, MS-MIS students should take courses in the semester listed below:

### Suggested MIS Elective Courses

Courses	Credits	Semester
BMIS 2034 Information Systems Planning	3.0	varies
BMIS 2074 Strategic Information Technology in Global Supply Chains	1.5	Spring
BMIS 2679 Technology Innovation, Adoption, and Diffusion	3.0	Fall
BMIS 2526 Practical Data Science	3.0	Spring
BMIS 2501 Enterprise Systems & Integration of Business Processes	3.0	Spring (Immersion)

### Suggested Business (non-MIS) Elective Courses

Courses	Credits	Semester
BACC 2549 Strategic Cost Analysis	1.5	Spring
BECN 2401 Economic Analysis for Managerial Decisions: Firms and	3.0	Fall
BIND 2400 Consulting Field Project	3.0	Spring
BMKT 2531 Marketing Research	3.0	Fall
BOAH 2423 Managing Human Capital	3.0	Spring
BOAH 2521 Staffing Organizations	1.5	Spring
BOAH 2537 Conflict Resolution in the Workplace	1.5	Fall
BQOM 2401 Statistical Analysis	3.0	Fall
BQOM 2139 Six Sigma Theory and Practice	3.0	Fall, Spring
BQOM 2523 Process Engineering (BQOM 2401 prerequisite)	1.5	Spring
BQOM 2534 Strategic Procurement and Sourcing Management	1.5	Spring
BSEO 2316 Business Law	3.0	Spring

### Suggested Co-Curricular Activities

Clubs: Business Technology Club

Case Competitions:

- The annual **itSMF USA Student Case Competition** is for graduate-level students with an interest in IT Service Management.
- See [Experience Based Learning](#) on StudentNet for more information about case competitions.

### Professional Organizations:

[The Association of Information Technology Professionals](#)

[Information Systems Security Association](#)

[Pittsburgh Technology Council](#)

[Information Technology Infrastructure Library](#)

[Association for Information Systems](#)

[itSMF USA](#)

[Project Management Institute \(PMI\)](#)

**External Certifications:**

[PMI Certifications](#) (CAPM®, PMP®)

[SAP Certification](#) (TERP10 Certification)

**Job Functions within Track**

**Technical Program Manager (TPM):** The TPM is responsible for managing projects, providing clear management structure, working to define critical milestones and decision points for an overall program, incorporating input from outside technical sources (engineering, programming, etc.), ensuring that timelines are achieved and tracking execution against the plan. They need to have a strong analytical background, be able to work with cross functional teams and work with all levels of people within an organization. The Project Management Professional (PMP) certification is highly desirable.

**Project Manager (PM):** PMs are the people within an organization that are in charge of a specific project or projects. They plan, budget, oversee and document all aspects of the project(s) they are working on. They need to be able to work closely with all levels of management and all departments within their organization. Excellent communication skills are a must. They are the project owners and ultimately responsible to ensure that projects are delivered on-time, within scope and within budget. The Project Management Professional (PMP) certification is highly desirable and recommended.

**IT Leadership Development Program (ITLDP):** An ITLDP is an excellent way to gain meaningful experience combined with technical professional skill development within an organization. Companies hire candidates into their ITLDP because they are considered “high potential” for future leadership positions. Those that enter these programs should expect to do multiple rotations in different areas of a company where they are exposed to industry connections and provided with learning and development opportunities.

**Key Skills Needed**

Leadership, time management, analytical skills, budgeting, excellent written and verbal communication skills, attention to detail and multi-task, creative and innovative, plan, organize, problem solving, project management, teamwork, strategic thinking.