College of Business

Operations Management & Information Systems (OM&IS) Department

M.S. in Management Information Systems

M.S. Degree-Assessment Plan

September 8, 2017

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1.   Introduction

The purpose of the M.S. in Management Information Systems (MIS) program is to expose students to current information technologies and information management theories as means to maximizing organizational performance. The program effectively integrates the technical area of computer technology with business operations. The M.S. in MIS program serves both full-time and part-time students on NIU campus in DeKalb. A limited number of courses are also offered at the NIU Naperville site.

The program is efficient compared with the peer and the state set of institutions in terms of FTE faculty and instructional staffing (all types), FTE faculty and instructional staffing (tenured/tenure-track), graduate student credit hours per FTE faculty, and graduate organized class sections per FTE faculty. Our faculty FTE size (11) is much smaller than that of the average of the state (19.4) and peer (20.1) institutions, But, the graduate student credit hours per FTE faculty is 240.35% higher than that of the average of the peer institutions and is 211.90% higher than that of the average of the state institutions. Moreover, our faculty provide more than doubled graduate class sections than those of the peer and the state set of institutions (Source: 2016 NIU Program Prioritization Report). The M.S. in MIS degree program was awarded in the Top Category 1 by NIU Program Prioritization Task Force in May 2016. The program has built a solid MIS brand in the Midwest region.

The program has enjoyed a significant enrollment growth for the past five years. The program has increased from 64 enrollments in Fall 2011 to 232 in Fall 2016, a 263% increase. We currently have approximately 200 MIS students enrolled on campus in Fall 2017. The M.S. in MIS students are satisfied with their choice of degree. They are satisfied, 100% satisfaction in a row from FY2010 to FY2015, with their degree completion time and the program quality (Source: NIU Assessment Office Alumni Survey). The M.S. in MIS students are employed and satisfied with the program's preparedness for jobs. The employment rates over the past five years are higher than that of NIU graduates which reflects strong market demands for our graduates (Source: 2016 NIU Program Prioritization Report).

In September 2013, the M.S. in MIS program was approved by Illinois Board of Higher Education (IBHE) as a STEM (Science, Technology, Engineering, and Mathematics) designated degree program. It allows us to attract more international students to study in the MIS field since students who graduate from a STEM designated degree program are eligible for an addition 24 months Optional Practical Training Extension. In February 2015, the MIS program differential tuition request was approved by the Provost Office. It provides us with resources to stay competitive and for advancing technologies in the fields of SAS, SAP, Business Intelligence, Business Analytics, Enterprise Resources Planning, and other hot IT areas.

The Department has implemented curricular revisions based on evidence from the systematic implementation of the assessment program and in consultation with the Executive Advisory Council. For example, The Phase One MIS foundation shifted from an MBA model to a STEM model, reducing course requirements to from nine to four 2-credit-hour courses since spring 2015. Students entering the program without an undergraduate degree in business take the Phase One courses which cover accountancy, finance, information systems, and one course from management, marketing, and operations. The revised Phase One requirement addresses the need of business foundation courses and increases attractiveness for the perspective MIS students.

The learning outcomes and curriculum for the past five years have been concentrated on improving business processes and using technology. Two specializations, *Business Analytics* and *SAP & Business Enterprise Computing*, were approved by NIU Board of Trustees in the M.S. in MIS program in Fall 2016. A specialization is not required to complete the MIS program. But, students may choose either Business Analytics Specialization or SAP and Business Enterprise Computing Specialization in the program. Certificates offered by the Department include the Certificate of Management Information Systems, the Certificate of Business Analytics Using SAP Software, and the Certificate of Business Analytics Using SAS Software.

We see huge potential in Business Analytics and Business Enterprise Computing areas and the Department will continue the effort to focus on raising awareness of the MIS program within the university community, within the business community, and across institutions to increase enrollment. The MIS program offers SAP TERP10 workshop and SAS joint certification boot camp for its students. Moreover, the Department is going to offer several MIS courses in an online format to meet student demands.

2.   Student Learning Outcomes (SLOs)

The M.S. in MIS program in the Department of Operations Management and Information Systems will develop leadership-oriented information technology (IT) professionals who can plan, manage, lead, develop, and evaluate organizational information systems as shown in the following figure.

Learning Goal 1 and Outcomes:
The program provides advanced study to prepare students with professional skills, values, and attitudes for the challenges of the professional practice of information technology. The learning outcomes for this goal are - Students will be able to:

P1) Communicate effectively both written and orally.

P2) Work effectively in teams to solve MIS/Business-related problems.

P3) Apply the role of leadership in carrying out IT strategy and directing teams.

P4) Demonstrate strong ethical principles and apply professional rules of conduct.

P5) Demonstrate analytical skills in terms of effective decision-making and problem solving.
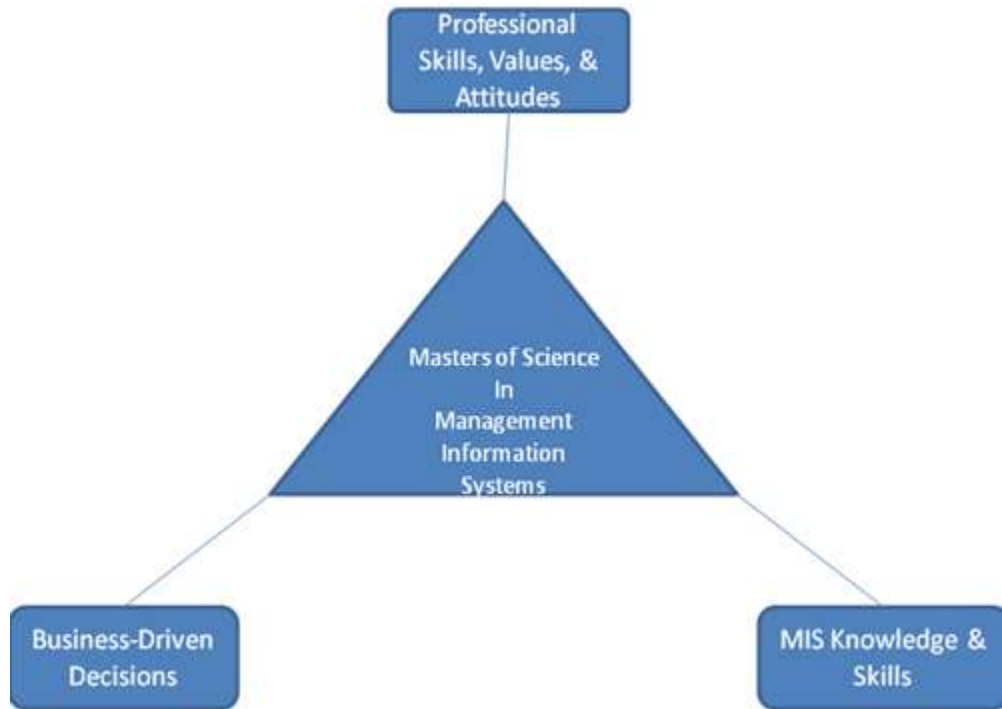
Figure 1: M.S. in MIS Learning Outcomes

Learning Goal 2 and Outcomes:

The program provides advanced study to prepare students to be able to make solid business driven decisions. The learning outcomes of this goal are - Students will be able to:

D1) Apply the role of MIS in supporting organizational decision-making and for achieving competitive advantage.

D2) Develop appropriate IT strategies & policies for organizations.

D3) Apply the social, political, & strategic value of information creation, access, ownership, & use in a global environment.

D4) Research & evaluate emerging technologies and MIS trends in order to develop innovative organizational solutions.

<u>Learning Goal 3 and Outcomes:</u>

The program provides advanced study to prepare students to have MIS knowledge and skills. The learning outcomes of this goal are- Students will be able to:

S1) Demonstrate skills in modeling organizational processes, business rules, and data, as well as defining and implementing technical and process solutions

S2) Apply project management concepts, processes, knowledge areas, and tools to plan and manage IT projects that bring value to organizations.

S3) Develop a computer-based application using a contemporary computer language or development tool.

S4) Demonstrate a socio-technical understanding that systems consist of people, processes, software, hardware, and data.

S5) Design and evaluate secure computer networks.

Please note that the two specializations in the MIS program takes effect in Fall 2017. Therefore, the MIS SLOs will be updated next year.

3. Program- by-Baccalaureate Student Learning Outcome Matrix

N/A.

This is a master program.

4. Curriculum Map

Table 1: Program Student Learning Outcomes for MIS Courses
(Estimate level of coverage: B=beginning; D=developing; P=proficient level; Required courses are in bold font)

Assessing Program Learning Goals by M.S. in MIS courses

	P1 Communication	P2 Work in Teams	P3 Leadership	P4 Ethics	P5 Analytical Skills	D1 Supporting Decision-Making and Competitive Advantage	D2 IT Strategies and Policies	D3 Value of Information	D4 Emerging Technologies and Trends	S1 Modeling	S2 Project Management	S3 Computer Language/ Development Tool	S4 Socio-Technical Understanding	S5 Secure Computer Networks
OMIS 640	D		D	D		D	P	P					D	
OMIS 643		D					D					P		
OMIS 651		D									P	D		
OMIS 652					D		P							
OMIS 660				D	D				D					D
OMIS 675		D		D			P					D		
OMIS 690		P	P				D				P		D	
OMIS 653								D						
OMIS 661	D				P	P				D				
OMIS 665	D				P				D					D
OMIS 670			D									D	D	
OMIS 694							D			D		D		

5.   Assessment Methods

The M.S. in MIS program is assessed on three major learning goals through (1) course performance assessment, (2) exit survey of graduates, (3) alumni survey, (4) internship performance, (5) faculty review of student learning in the curriculum, and (6) Executive Advisory Council review of student learning in the curriculum. As seen below, the Department utilizes multiple methods and multiple courses to gather information related to the M.S. in MIS program assessment. The Department has made a significant progress on the program assessment. Each Annual Assessment Report for the M.S. in MIS program has been marked as "Met' based on the feedbacks from NIU Office of Assessment.

The Department has its own assessment committee. In addition, a faculty member is designated as the Assessment Coordinator for the Department. This individual works closely with the chair to plan, implement, and report assessment activity. With the creation of the College of Business Graduate Curriculum Committee, we now have additional faculty to work closely with the chair on the MIS program assessment. The Department faculty and instructors have attended varies assessment workshops and conferences offered by the College, University, and the Association for the Advancement of Collegiate Schools of Business (AACSB).

Based on the program review and assessment activities, the Department worked with SAP and SAS to offer two certification programs on Business Analytics to the MIS students. Recently, the Department Curriculum Committee had determined that current course offerings were not adequately representing the goals of the Department for improving and analyzing business processes and using technologies for the students. Therefore, two specializations on Business Analytics and SAP and Business Enterprise Computing were added for the MIS curriculum. New courses have been developed for the specializations. The curriculum change have been approved by the College and the University. The changes is taking place in Fall 2017. As the result of the new curriculum, revised learning objectives and outcomes will be developed in the summer of 2018.

Explanation of Assessment Methods

Table 2 outlines the learning outcomes, the department assessment methods, the timing, and the responsible person for each assessment effort for the past five years.

Table 2: M.S. in MIS Program Assessment Methods

Learning Outcomes	Method	Timeline	Person Responsible
Professional skills, values, & attitudes	Course Embedded Measures Exit Survey of Graduates Internship Performance Alumni Survey Faculty Review Executive Advisory Council	Every year Every semester Every summer Every 2 years Every 2 years Every 2 years	Course Instructor Academic Advisor Academic Advisor Chair/Assessment Coordinator Chair/faculty members Chair
Business-driven decisions	Course Embedded Measures Exit Survey of Graduates Internship Performance Alumni Survey Faculty Review Executive Advisory Council	Every year Every semester Every summer Every 2 years Every 2 years Every 2 years	Capstone Instructor Academic Advisor Academic Advisor Chair/Assessment Coordinator Chair/faculty members Chair
MIS knowledge & skills	Course Embedded Measures Exit Survey of Graduates Internship Performance Alumni Survey Faculty Review Executive Advisory Council	Every year Every semester Every summer Every 2 years Every 2 years Every 2 years	Course Instructor Academic Advisor Academic Advisor Chair/Assessment Coordinator Chair/faculty members Chair

A description of each assessment method is given below:

(1) Course Embedded Measures: All M.S. MIS faculty and instructors in the Department were required to submit a course template for each course they taught to specify how the course learning objectives contribute to the program learning objectives and outcomes. The assessment committee worked with each M.S. in MIS faculty to identify the learning outcomes to be assessed in each as shown in Table 1 above. The Department chair and assessment coordinator then wrote a letter to selected M.S. in MIS course instructors on learning objectives and timeline to complete the necessary assessment. All course assessment used a standard form to complete the course assessment. Target: 80% of each class students will meet or exceed expectations on each learning objectives.

(2) Exit Survey of Graduates: An exit survey is conducted by the academic advisor every semester for graduating M.S. in MIS students. The exit survey is completed through

Qualtrics. Each learning outcome is measured on a 5 point Likert scale with 5 equating to superior preparation provided by the department. Target: 80% of graduating MIS students will rate the learning objective as a 4 or higher. Types of data on the survey include:

- Job placement
- Salary
- Graduate appraisal of job preparedness
- Overall satisfaction with the program
- Quality of the program
- Program strengths and weaknesses
- Effectiveness of the curriculum in various topic areas
- Continuing education

(3) Internship Performance: The Department academic advisor reviews all reports filed from employers, conducts on-site visitations, and reads students' internship reports. All internship supervisors at hiring firms are asked to complete and return a survey which includes questions rating the Department in its effectiveness in preparing students in terms of each of the learning outcomes. Each learning outcome is rated on a 5 point Likert scale with 5 equating to superior preparation provided by the department. Target: The average rating on each of the learning objectives evaluated will be 4.0 (good) or higher. Types of data collected on internship performance include:

- Employer intern hiring levels
- Employer appraisal of interns' abilities
- Employer requests for internship resumes
- Level of permanent position hiring of interns
- Level of responsibility assigned to interns
- Students meet specified learning outcomes

(4) Alumni Survey: The NIU Office of Assessment Services sends M.S. in MIS graduates a survey one, five and nine years post-graduation. The Department also conducts its own alumni survey. The survey includes questions about the M.S. in MIS program and alumni perceptions of the Department in terms of its effectiveness in its teaching and each of the learning outcomes. Each learning outcome is rated on a 5 point Likert scale with 5 equating to superior preparation provided by the Department. Target: 80% of alumni surveyed will rate the learning objectives as a 4.0 (good) or higher.

(5) Faculty Review: Feedback from Department faculty and instructors are also used to review student learning outcomes. The curriculum and assessment committees meet every month during a regular semester. All faculty and instructors will complete and return a survey which includes questions rating the Department in its effectiveness in preparing graduates of the respective programs in terms of each of the learning outcomes every two years. Each learning outcome is rated on a 5 point Likert scale with 5 equating to superior preparation provided by the department. Target: 80% of

faculty/instructor will rate each of the learning objectives as 4.0 (good) or higher.

(6) Executive Advisory Council (EAC): This council, made up of faculty, alumni, and business professionals from the disciplines of operations management and information systems, meets on campus twice a year to advise the Department on programs, curricular, job placement, and assessment issues. Feedback from EAC business members is used to assess student learning outcomes. Every two years, all EAC business members are been asked to complete and return a survey which includes questions rating the department in its effectiveness in preparing graduates of the respective programs in terms of each of the learning outcomes. Each learning outcome is rated on a 5 point Likert scale with 5 equating to superior preparation provided by the department. Target: 80% of the EAC members will rate each of the learning objectives as 4.0 (good) or higher.

Table 3: Assessment Method Explanation

| Assessment Method | Description | Explanation | | | | SLOs |
		Student-Level Achievement	Program-Level Target	When Data Will be Collected	Person Responsible	
Course Embedded Measures	Faculty assess student achievement of an assigned learning objective through course embedded measures. Faculty submit an assessment form reporting results.	A student will receive a percentage score for the learning outcomes measured.	80% of each class students will meet or exceed expectations on the assessed learning objectives	Every year	Instructor; Chair; Assessment Coordinator	1,2,3
Exit Survey of Graduates	All graduating MIS students are required to fill out an exit survey through Qualtrics on measuring SLOs.	Self-evaluate ratings on the learning objectives.	The average rating by students on each of the learning objectives evaluated will be 4.0 (good) or higher.	Every semester	Academic advisor	1,2,3
Internship Performance	Employers have been asked to complete and return a survey which includes questions rating the Department in its effectiveness in preparing students in terms of each of the learning outcomes.	A student will receive a performance grade for the internship.	The average rating by employers on each of the learning objectives evaluated will be 4.0 (good) or higher	Every summer	Academic advisor	1,2,3
Alumni Survey	Survey alumni in Department's effectiveness in preparing students in terms of each of the learning outcomes.	n/a	The average rating by alumni on each of the learning objectives evaluated	Every 2 years	Chair & Assessment coordinator	1,2,3

			will be 4.0 (good) or higher.			
Faculty Review	All faculty and instructors will be asked to complete and return a survey which includes questions rating the department in its effectiveness in preparing graduates of the respective programs in terms of each of the learning outcomes every two years.	n/a	The average rating by faculty members on each of the learning objectives evaluated will be 4.0 (good) or higher.	Every 2years	Chair & faculty members	1,2,3
EAC Review	All board members will be asked to complete and return a survey which includes questions rating the Department in its effectiveness in preparing graduates of the respective programs in terms of each of the learning outcomes every two years.	n/a	The average rating by faculty members on each of the learning objectives evaluated will be 4.0 (good) or higher.	Every 2 years	Chair	1,2,3

Table 4: Assessment Methods by Outcome Matrix

Assessment Method	Program Student Learning Outcome		
	Professional skills, values, & attitudes	Business-driven decisions	MIS knowledge & skills
Course Embedded Measures	F, D	F, D	F, D
Exit Survey	F, I	F, I	F, I
Internship Performance	F, I	F, I	F, I
Alumni Survey	S, I	S, I	S, I
Faculty Review	S, I	S, I	S, I
EAC Review	S, I	S, I	S, I

Note: F=formative assessment; S=summative assessment; D=directive assessment; and I=indirective assessment.