

**College of Business**

**Operations Management & Information Systems  
(OM&IS) Department**

**B.S. in Operations and Information Management**

**B.S. Degree-Assessment Plan**

**September 5, 2017**

**Chang Liu, Department Chair**

## 1. Introduction

The objectives of the B.S. in Operations and Information Management program are to prepare students with the knowledge to manage business processes, to apply information technology effectively, and to provide students with experience in solving business problems. The program is solid and effective compared with the peer and state set of institutions in terms of FTE faculty and instructional staffing (all types), FTE faculty and instructional staffing (tenured/tenure-track), undergraduate student credit hours per FTE faculty, total student credit hours per FTE faculty, and FTE student per FTE faculty. The faculty FTE size is much smaller than that of the average of the state and peer institutions. But, the undergraduate student credit hours per FTE faculty is 54.18% higher than that of the average of the peer institutions and is 51.22% higher than that of the average of the state institutions (Source: 2016 NIU Program Prioritization Report). For the past academic year, the program assessment results decreased due to faculty overburdened workloads and increased class size. The B.S. in Operations and Information Management degree program was awarded in the Top Category 1 by NIU Program Prioritization Task Force in May 2016. We need more faculty resource support to strength the program.

The program enrollments have been steady with approximately 190 students enrolled each year for the past five years. Approximately 40% of the total OM&IS undergraduates have graduated each year from FY2011 to FY2016. 82% of OM&IS students (77% College of Business) finish the upper division and graduate within 4 semesters of starting the principle course of UBUS 310 for the first time (Source: Amy Buhrow, College of Business Accreditation Director). The degree completion time is deemed satisfactory.

Student recruitment, yield, and retention activities have become a greater focus of the program. 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. The learning outcomes and curriculum for the past five years have been concentrated on improving business processes and using technology. SAP, an enterprise application systems to improve business operations, was added into the curriculum.

Recently, the Department also incorporate Data Analytics and Supply Chain Management areas of study into the undergraduate curriculum. The Department has been working with SAS to offer a joint data analytics certification for our undergraduates. These changes clarified what OM&IS is about, what students could learn from this major, and what the job opportunities are. For example, starting in Fall 2016, the Department has been offering a Business Analytics minor to all majors to prepare them to solve complex decision problems with a combination of quantitative skills, modeling techniques, and hands-on expertise using current software applications. The minor is successfully and the number of students pursuing a minor Business Analytics has risen from FY2016 to FY2017. We now have more than 50 undergraduates studying in Business Analytics minor. Certificates offered by the Department include the

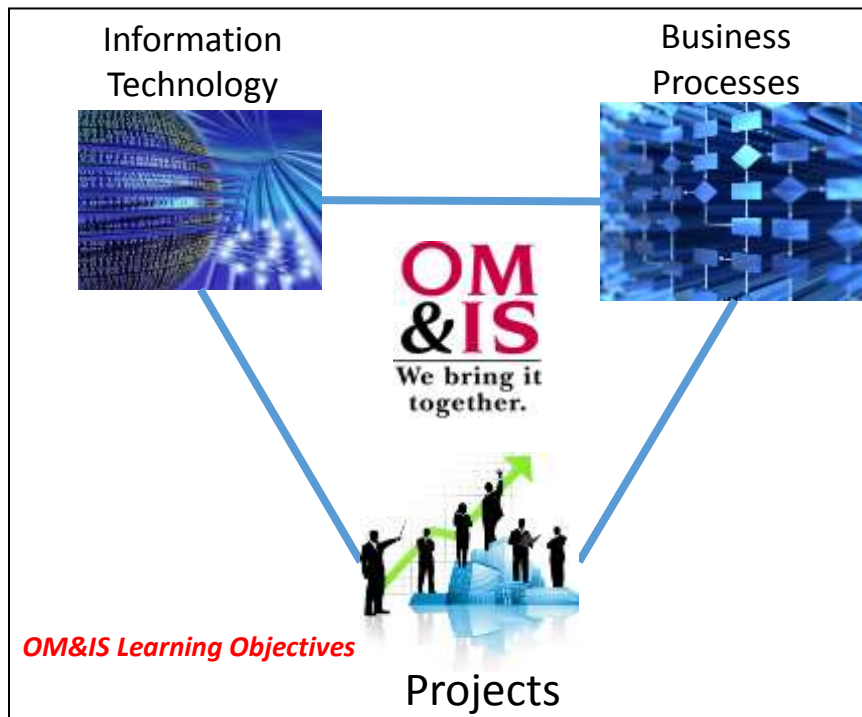
Certificate of Information Systems, the Certificate of Business Analytics Using SAP Software, and the Certificate of Business Analytics Using SAS Software.

We see huge potential in Data Analytics and Supply Chain Management areas and the Department will continue the effort to focus on raising awareness of the OM&IS programs within the university community, within the business community, and across institutions to increase enrollment. Moreover, the Department has offered students the opportunity to take several OM&IS courses online. The Department currently offers three online courses in the B.S. Degree in Operations and Information Management. We will expand the online courses to meet student demand.

## **2. Student Learning Outcomes (SLOs)**

Students who receive a B.S. in Operations and Information Management are prepared to successfully enter the workforce through their ability to understand and apply the following:

- (1) Processes: To Provide The Student With The Knowledge to Manage Business Processes
  - Conceptualization: The student will conceptualize business as a collection of processes.
  - Process Evaluation: The student will illustrate proficiency with business process evaluation.
  - Process Improvement: The student will exhibit the ability to improve business processes.
  
- (2) Technology: To Provide The Student With The Knowledge to Apply Information Technology Effectively
  - Hardware: The Student will display the knowledge of hardware technology.
  - Software: The student will display the knowledge of software technology.
  - Data: The student will display the knowledge of data technology.
  - Networking: The student will display the knowledge of network technology.
  
- (3) Managing Projects: To Provide Students With Experience In Solving Business Problems
  - Project Management: The student will demonstrate an ability to manage a project.
  - Project Integration: The student will be able to improve processes through the application of information technology appropriately.



Please note that the proposed new OM&IS curriculum which include Data Analytics and Supply Chain Management areas of study will take effect in Fall 2018. Therefore, the OM&IS SLOs will be updated next year.

### 3. Program- by-Baccalaureate Student Learning Outcome Matrix

Table 1: Program-by-Baccalaureate Student Learning Outcome Matrix

Program Student Learning Outcome	Baccalaureate Student Learning Outcome							
	A. Global inter-connections and inter-dependencies	B. Intercultural competencies	C. Analyze human life and natural world inter-connections	D. Critical, creative, and independent thought	E. Communicate clearly and effectively	F. Collaborate with others	G. Quantitative and qualitative reasoning	H. Apply knowledge/ skills creatively
Processes	S	M	M	S	S	S	S	S
Technology	M		M	S	M	S	M	S
Managing Projects	S	M	M	M	S	S	M	S
Overall	S	M	M	S	S	S	S	S

Note: S=Strongly Support; M=Moderately Supports

## 4. Curriculum Map

Table 2: Program Student Learning Outcomes for OM&IS Courses  
(Estimate level of coverage: B=beginning; D=developing; P=proficient level)

	PROCESSES			TECHNOLOGY				MANAGING PROJECTS	
	Conceptualization	Process Evaluation	Process Improvement	Hardware	Software	Data	Networking	Project Management	Project Integration
	The Student will conceptualize business as a collection of processes.	The student will illustrate a proficiency with business process evaluation	The student will exhibit the ability to improve business processes	The student will display the knowledge of hardware technology.	The student will display the knowledge of software technology.	The student will display the knowledge of data technology.	The student will display the knowledge of network technology.	The student will demonstrate an ability to manage a project	The student will be able to improve processes through the application of information technology appropriately
OMIS 259	B			B	D	D	B		
OMIS 338	B	B	B	B	B	B	B	D	D
OMIS 324					D	D		D	D
OMIS 351	D	B	B	D	P	P	B	B	B
OMIS 352	D	D	D	B	P	B	B	P	P
OMIS 327	D	D	D		P	P			
OMIS 442	P	P	P	D	P	P	D	P	P
OMIS 444	P	P	P		P				
OMIS 450	P	P	P	D	D	D	B	P	P
OMIS 452	D	D	D	B	D	D	B	D	D
OMIS 455	P	P	P	D	D	P	D	P	P
OMIS 460				D	D	D	D	P	P
OMIS 462	P	P	P	D	P	D	B	B	6
OMIS 472					P	P			
OMIS 475	D	D	P		P	D	P	D	D
OMIS 478	P	P	P	B	D				
OMIS 480	P	P	P		P				
OMIS 498	P	P	P	D	D	P	D	P	

## 5. Assessment Methods

The B.S. in Operations and Information Management program is assessed on three major learning outcomes through (1) Capstone course Body of Knowledge (BOK) exam, (2) Exit survey of graduates, (3) Alumni survey, (4) Internship performance evaluation, (5) Faculty review of student learning in current curriculum, and (6) Executive Advisory Council review of curriculum. In addition, the Department works with the College to ensure all the College of Business' learning goals and objectives are assessed properly. Over the past five years, the Department of Operations Management and Information Systems has made a significant progress on the program assessment. In November 2012, the Department received a letter from the Vice Provost to congratulate us on the Outstanding Assessment Practices for the OM&IS undergraduate program. The OM&IS Department, one of ten chosen from across campus, was invited to present at NIU's 2013 Assessment Expo. Moreover, each SLO reported in the annual assessment reports from FY2012 to FY2016 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. The coordinator is also a member of the College's assessment committee. The Department faculty and instructors have attended various assessment workshops and conferences offered by the College, University, and the Association for the Advancement of Collegiate Schools of Business (AACSB).

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, Data Analytics and Supply Chain Management areas of study were added for the OM&IS curriculum. The curriculum have been approved by the College and the University. It will be implemented in Fall 2018. 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 3 outlines the learning outcomes, the department assessment methods, the timing, and the responsible person for each assessment effort for the past five years.

Table 3: OM&IS Program Assessment Methods

<b>Learning Outcomes</b>	<b>Method</b>	<b>Timeline</b>	<b>Person Responsible</b>
<b>Processes</b>	BOK Exit Survey of Graduates Internship Performance Alumni Survey Faculty Review Executive Advisory Council	Every semester 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
<b>Technology</b>	BOK Exit Survey of Graduates Internship Performance Alumni Survey Faculty Review Executive Advisory Council	Every semester 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
<b>Managing Project</b>	BOK Exit Survey of Graduates Internship Performance Alumni Survey Faculty Review Executive Advisory Council	Every semester 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

A description of each assessment method is given below:

- (1) Body of the Knowledge (BOK) Exam: Table 2 above presents the mappings for the learning outcomes for each OMIS courses. Knowledge from six courses, i.e., OMIS 338, Principles of Operations Management; OMIS 327, Decision Analysis; OMIS 351, Information Systems in Organizations; OMIS 352, Managing Projects in Business; OMIS 442, Process and Quality Improvement, and OMIS 452, Database Management for Business, were selected to assess Processes, Technology and Managing Projects learning objectives. Each of the six courses identified above contributes ten multiple choice questions for the BOK. The result is a sixty multiple choice question BOK exam. All B.S. in Operations and Information Management graduating seniors are required to take the BOK exam which is administrated via Blackboard in OMIS 498, the Business Analysis Capstone course each semester. Target: 80% of capstone class students will meet or exceed expectations on each learning objective.
- (2) Exit Survey of Graduates: An exit survey has been conducted by the academic advisor every semester for graduating seniors. All OM&IS graduating seniors are required to fill out an exit survey 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 the graduating seniors on each of the learning objectives evaluated will be 4.0 (good) 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 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. 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 surveys alumni one, five and nine years after graduation. The Department also conducts its own alumni survey. These surveys include questions about the B.S in Operations and Information Management 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 on each of the learning objectives as 4.0 (good) or higher.
- (5) Faculty Review: Feedback from Department faculty and instructors is also used to review student learning outcomes. The Department curriculum and Department assessment committees meet every month during a regular semester. 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. 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 on 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 program, curriculum, job placement, and assessment issues. Feedback from EAC business members is used to indirectly assess student learning outcomes. Every two years, all EAC business members are 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 EAC members will rate on each of the learning objectives evaluated as 4.0 (good) or higher.

Table 4: Assessment Method Explanation

Assessment Method	Explanation					
	Description	Student-Level Achievement	Program-Level Target	When Data Will be Collected	Person Responsible	SLOs
Body of Knowledge Exam (BOK)	60 multiple questions from OMIS 327, 351, 352, 442, 452, and UBUS 310. Each course contributes 10 questions (see above for details).	A student will receive a percentage score for each learning objective on (1) Processes; (2) Technology, and (3) Managing Projects.	80% of capstone class students will meet or exceed expectations on each learning objective.	Every semester	Capstone instructor	1,2,3
Exit Survey	All OM&IS graduating seniors 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 5: Assessment Methods by Outcome Matrix

Assessment Method	Program Student Learning Outcome		
	Processes	Technology	Managing Projects
Internship Performance	<u>F, I</u>	<u>F, I</u>	<u>F, I</u>
Body of Knowledge Exam (BOK)	<u>F, D</u>	<u>F, D</u>	<u>F, D</u>
Exit Survey	<u>F, I</u>	<u>F, I</u>	<u>F, I</u>
Alumni Survey	<u>S, I</u>	<u>S, I</u>	<u>S, I</u>
Faculty Review	<u>S, I</u>	<u>S, I</u>	<u>S, I</u>
EAC Review	<u>S, I</u>	<u>S, I</u>	<u>S, I</u>

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