University of Wisconsin
PARKSIDE

DEPARTMENT OF BUSINESS

ASSURANCE OF LEARNING REPORT
MIS MAJORS

FOR ACADEMIC YEAR 2014-15

1. Introduction

This document describes the results from the assurance of learning exercises conducted by the MIS program in 2014-15. The complete assessment plans used by the Department of Business are described in three documents: *Assessment Plan for the Undergraduate Business Program*, *MIS Major Assessment Plan*, and *Assessment Plan for the MBA Program*. Each plan identifies program level learning goals (PLLGs) that are periodically assessed. These plans also specify rubrics for the assessment, processes for performing the assessment, processes for taking action on the assessment results, and processes for updating the assessment procedures. The assessment plans and the data generated are periodically reviewed for quality improvement.

MIS students also take part in the business program assessment process. This document only summarizes the results of the assessment unique to MIS students. The MIS learning goals (MISLG) are summarized below. The MISLGs assessed during 14-15 are starred.

Undergraduate MIS majors will be able to:

MISLG1: Document requirements of an information system using state-of-the-art modeling techniques.

MISLG2: Develop a data model that satisfies the third normal form (3NF).

MISLG3: Understand and apply the concepts of object-oriented systems.

MISLG4: Understand the design principles of computer network architectures and apply them to a business problem.

MISLG5: Understand project management principles and apply these principles to a practical situation.

MISLG1: Document requirements of an information system using state-of-the-art modeling techniques.

Course in which this learning goal is assessed: MIS 425: Systems Analysis and Design

Course Embedded Activity for Assessment: A combination of homework and labwork questions were administered to students. These questions discuss business problems. Each student is required to develop activity diagrams, use case descriptions and use case diagrams for the given business scenarios.

	Exemplary	Satisfactory	Unsatisfactory
Use Case Diagram	Student's use case diagram captures most of the requirements stated in the assignment and the use case diagram uses the correct symbols and terminology without errors.	Student's use case diagram captures more than 75% of the requirements stated in the assignment and more than 75% of the use case diagram uses the correct symbols and terminology.	Student's use case diagram reflects only 75% (or less) of the requirements, or 25% or more of the student's use case diagram uses the incorrect symbols or terminology.
Use Case Descriptions	Student describes all use cases correctly by discussing normal business flows, associated actors and relationships.	Student describes more than 75% of the use cases correctly by discussing normal business flows, associated actors and relationships.	Student does not correctly describe 25% or more of the use cases.
Activity Diagrams	Student creates correct activity diagrams for all of the business processes described in the assignment.	Student creates correct activity diagrams for more than 75% of the business processes described in the assignment.	Student does not create (or creates incorrect) activity diagrams for at least 25% of the business processes described in the assignment.

Spring 2015 results:

	Exemplary	Satisfactory	Unsatisfactory	Total
ACTIVITY DIAGRAM	11	5	0	16
USE CASE DIAGRAM	6	10	0	16
USE CASE DESCRIPTION	5	9	2	16

	Exemplary	Satisfactory	Unsatisfactory
ACTIVITY DIAGRAM	68.75%	31.25%	0.00%
USE CASE DIAGRAM	37.50%	62.50%	0.00%
USE CASE DESCRIPTION	31.25%	56.25%	12.50%

RESULTS FOR MISLG1 (SPRING 2015)
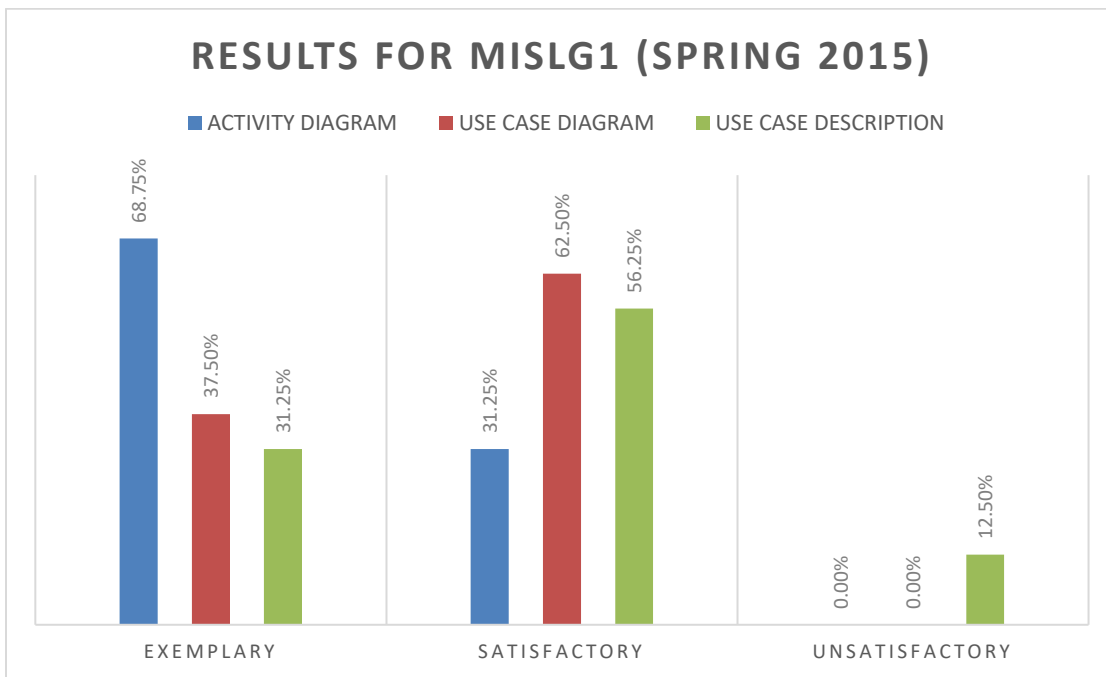
Comments/Observations:

- Students continue to perform well in this PLLG.
- For the Use Case Description dimension, the results include 12.5% unsatisfactory rate (2 out of 16 students). There are no students in the unsatisfactory category for the other dimensions. In the past assessment results, there were very minimal unsatisfactory rates.
- Continue to monitor the results and determine whether this is a trend or an isolated event.

MISLG2: Undergraduate MIS majors will be able to develop a data model that satisfies the third normal form (3NF).

Course in which this learning goal is assessed: MIS 328: Database Management Systems.

Course Embedded Activity for Assessment: An assignment and exam questions that discuss a business problem with several pieces of data were administered to students. Each student is required to develop a logical relational data model that satisfies the third normal form.

Assessment Rubric:

	Exemplary	Satisfactory	Unsatisfactory
Entities	Student's solution captures all of the entities that correspond to the data requirements mentioned for the business problem.	Student's solution captures more than 75% of the entities that correspond to the data requirements mentioned for the business problem.	Student's solution does not correctly identify at least 25% of the entities for the data model based on the requirements mentioned for the business problem.
Relationships	Student's solution captures all of the relationships among entities correctly.	Student's solution captures more than 75% of the relationships among entities correctly.	Student's solution does not correctly identify at least 25% of the relationships among the entities.
Attributes	Student's data model correctly identifies all of the attributes for the data model.	Student's data model correctly identifies more than 75% of the attributes for the data model.	Student's data model does not correctly identify at least 25% of the attributes for the data model.
Normalization	Student's data model satisfies the requirements of the third normal form.	Student's data model satisfies the second normal form, but does not satisfy the requirements of the third normal form.	Student's data model does not satisfy the requirements of the second normal form.
Syntax of the entity relationship models	Student's data model uses the correct syntax for the data model diagram without any errors.	Student's data model uses the correct syntax for more than 75% of the data model diagram.	Student's data model does not use the correct syntax for the data model diagram in at least 25% of the diagram.

Fall 2014

	Exemplary	Satisfactory	Unsatisfactory	Total

Entities	12	6	0	18
Relationships	4	14	0	18
Attributes	7	11	0	18
Normalization	4	11	3	18
Model Syntax	4	14	0	18

	Exemplary	Satisfactory	Unsatisfactory	Total
Entities	66.67%	33.33%	0.00%	100.00%
Relationships	22.22%	77.78%	0.00%	100.00%
Attributes	38.89%	61.11%	0.00%	100.00%
Normalization	22.22%	61.11%	16.67%	100.00%
Model Syntax	22.22%	77.78%	0.00%	100.00%

Percentage of Students in Each Rubric Dimension for MISLG2 (Fall 2014)
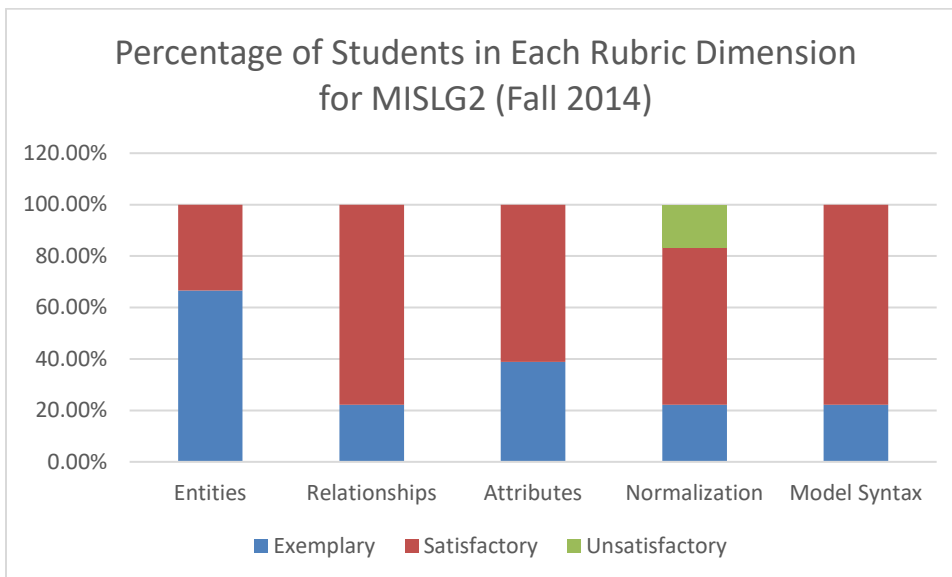
Comments/Observations:
- Students continue to perform well in this PLLG, except for the Normalization dimension. Similar results were obtained in the previous year.
- For the normalization dimension, the results are worse than previous years; in Fall 2013, 7% of students (1 out of 15) were in the unsatisfactory category.
- Normalization needs to be emphasized further in the lectures; add more hands-on in-class exercises to cover this topic in Fall 2015.

MISLG3: Undergraduate MIS majors will be able to understand and apply the concepts of object-oriented systems.

Course in which this learning goal is assessed: MIS 322: Business Programming II.

Course Embedded Activity for Assessment: An assignment that presents a business problem will be administered to the student. Each student is asked to develop object oriented programs with appropriate classes to solve the business problem.

Assessment Rubric:

	Exemplary	Satisfactory	Unsatisfactory
Basic class design	The base class solves the problem by correctly defining the needed variables and methods.	The base class solves the problem by correctly defining at least 75% of the needed variables and methods.	More than 25% of the variables and methods are incorrectly defined.
Inheritance	The solution includes the required derived classes with correct use of overriding, inheritance and superclass methods. If the derived classes introduce redundant variables, methods or procedural logic already available in the superclass, it cannot be rated above satisfactory.	The solution includes the required derived classes with correct use of overriding, inheritance and superclass methods in at least 75% of situations.	More than 25% of the situations calling for overriding, inheritance and invocation of super class methods are improperly defined.
Procedural Logic	The solution correctly implements procedural logic throughout all methods.	The solution correctly implements 75% or more of the procedural logic.	Less than 75% of the procedural logic is implemented correctly.
Creating and using instances	Students correctly create instances of their classes and use the methods of the classes to solve business problems.	Students correctly create instances of their classes and use the methods of the classes to solve business problems in 75% or more of the cases.	More than 25% of the time, students do not correctly create instances and use their methods.

MIS 322 PLLG 3 Assessment (Fall 2014)

	Exemplary	Satisfactory	Unsatisfactory	
Base Class Design	6 32%	11 58%	2 11%	19
Inheritance	10 53%	4 21%	5 26%	19
Procedural Logic	13 68%	4 21%	2 11%	19
Creating and using Instances	14 74%	1 5%	4 21%	19
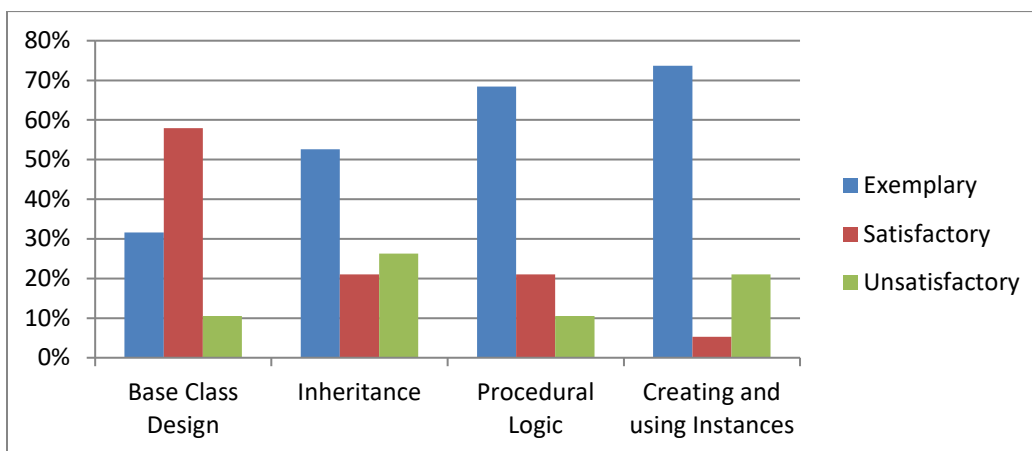
Comments/Observations:
- For base class design, students need to use parameters appropriately (the main reason satisfactory instead of exemplary).
- Students need to better understand how to create derived classes and the importance of not replicating properties and methods in derived classes.
- Deficiencies in the other three criteria is main reason for unsatisfactory performance in the "creating and using instances" criterion as it this would be difficult to do correctly if their work related to the other components is way off the mark.
- Probably common to all three rubrics, the group of students in the unsatisfactory ratings tended to get unsatisfactory or at best satisfactory ratings elsewhere. These students tend to be the slackers, who don't seem to have much desire to work at things – poor attendance, missing assignments.   The problem is difficulty in motivating them to work up to their potential.

MISLG4: Undergraduate MIS majors will be able to understand the design principles of computer network architectures and apply them to a business problem.

Course in which this learning goal is assessed: MIS 327: Business Data Communications.

Course Embedded Activity for Assessment: An assignment that asks the student to develop a proposal to install a LAN based system at a small business will be administered. Each student is asked to develop a business proposal along with a diagram of the proposed network and a project plan for implementing the proposal.

Scoring Rubric:

	Exemplary	Satisfactory	Unsatisfactory
LAN networking proposal technical requirements	Student's proposal includes all the required technical elements. In addition, students provide clear supporting documentation that shows the proposed vendor(s) of technical elements including clear pricing and technical specifications.	Student's proposal includes all of the required LAN technical elements. Supporting documentation that shows the proposed vendor(s) of technical elements including clear pricing and technical specifications is insufficient or missing.	Student's proposal does not include all of the required LAN technical elements.
LAN networking business proposal	The proposal is a well-written business proposal. All sections of the proposal are included and are properly organized.	The proposal is an adequately written business proposal. All sections of the proposal are included but may not be properly organized.	The proposal is poorly written or not all of the sections of the proposal are included.
LAN network diagram	Student submits a complete network diagram with all required technical components. The diagram is fully documented.	Student submits a complete network diagram with all required technical components. The network documentation is incomplete or missing.	Students submit an incomplete network diagram that does not include all of the technical components.

MIS 327 PLLG 4 Assessment (Fall 2014)

	Exemplary	Satisfactory	Unsatisfactory	
LAN Networking Proposal technical requirements	13 76%	3 18%	1 6%	17
LAN Networkng Business Proposals	12 75%	5 31%	0 0%	17
LAN network diagram	10 63%	6 31%	2 13%	17
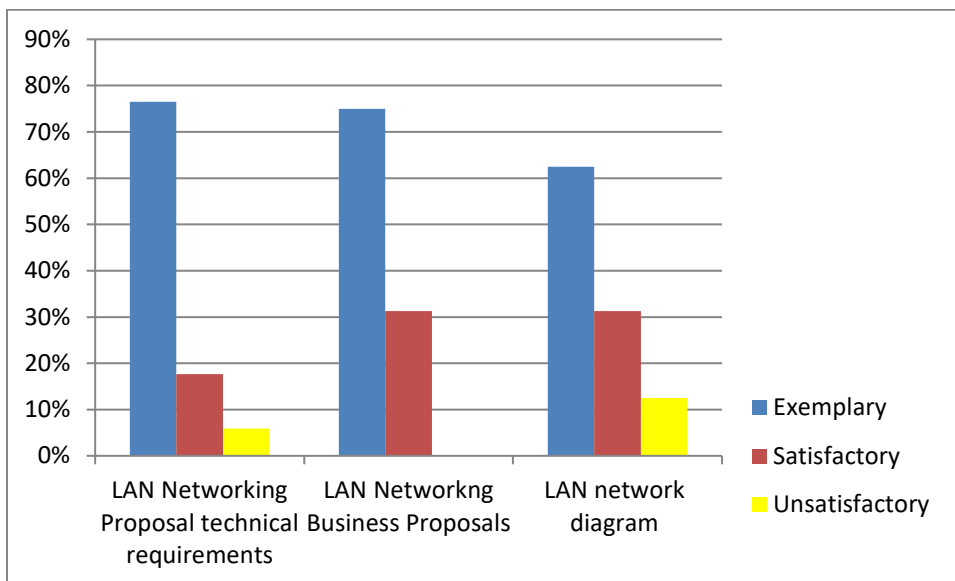
Comments/Observations:

- Overall, students did very well on this PLLG, especially for the business proposal criterion.
- Students misunderstood or chose not to flesh out their technical proposals with adequate supporting references. This needs to be emphasized more in future instructions.
- Deficiencies in the network diagram criterion could be improved in the future with more instruction on diagram standards and tools for creating professional-looking diagrams.
- Rubric for assessment is modified compared to previous years to account for the fact that optional technical elements isn't a fundamental requirement of all proposals, and the main requirement is to have a well-documented proposal.

MISLG5: Undergraduate MIS majors will be able to understand project management principles and apply these principles to a practical situation.

Course in which this learning goal is assessed: MIS 428: IS Planning and Project Management.

Course Embedded Activity for Assessment: Students in MIS 428 will be given a case that discusses a project for an organization and are asked to submit a written assignment related to the case. The assignment requires them to discuss issues related to teamwork, scope management, and risk management. It will also ask the students to develop a project plan.

Assessment Rubric:

	Exemplary	Satisfactory	Unsatisfactory
Scope and Risk Management	Student recognizes the scope of the project and the risks associated with the project correctly. Student also provides a detailed plan to manage the scope and the risks of the project.	Student recognizes the scope of the project and the risks associated with the project correctly. However, does not provide a thorough plan to manage the scope and the risks of the project.	Student does not recognize either: (1) the scope of the project, or (2) the risks associated with the project.
Teamwork	Student recognizes the teamwork issues presented in the mini-case. Student also provides a thorough plan to improve the teamwork along dimensions such as communication, motivation, productivity and morale.	Student recognizes the teamwork issues presented in the mini-case. However student does not identify concrete steps for improving the team's communication, motivation, productivity and morale.	Student does not recognize the positive and/or negative teamwork issues presented in the mini-case.
Project Plan	Project plan correctly all the details in terms of tasks, deadlines, precedence constraints, persons assigned to the task and the estimated time for each task.	Project plan correctly includes more than 75% of the details in terms of tasks, deadlines, precedence constraints, persons assigned to the task and the estimated time for each task.	Project plan lacks 25% or more of the details in terms of tasks, deadlines, precedence constraints, persons assigned to the task and the estimated time for each task.

Spring 2015 Results:

	Exemplary	Satisfactory	Unsatisfactory	Total
Scope and Risk	4	9	0	13
	31%	*69%*	*0%*	
Teamwork	4	6	3	13
	31%	*46%*	*23%*	
Project Plan	6	4	3	13
	46%	*31%*	*23%*	
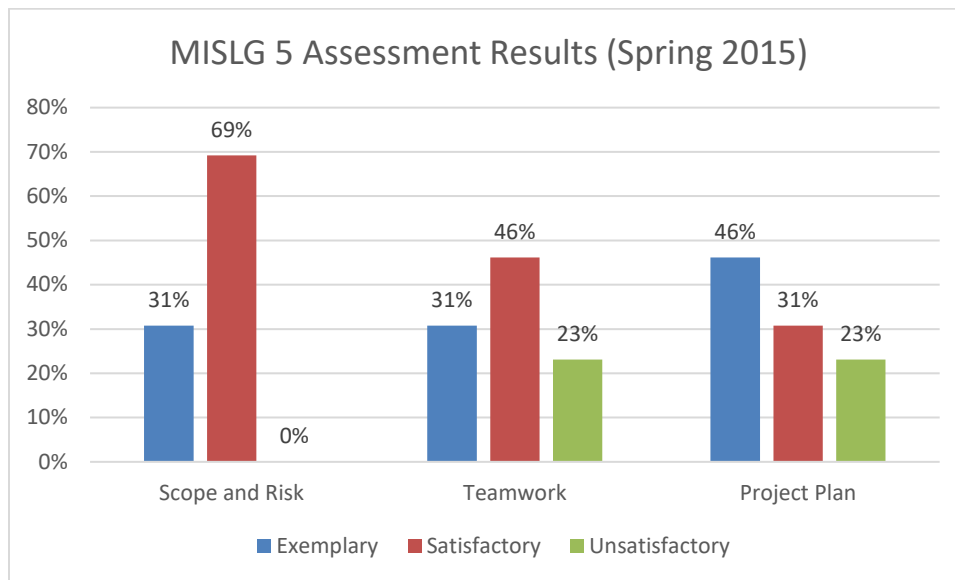
Comments/Observations:

- Continue to observe the results by gathering more data on this PLLG in future semesters.