Departmental/Program Assessment Report Form 2017-18

Assessment reports will be completed through Qualtrics to make it easier to share and compile data across campus. The reporting questions will be similar to the questions used in the past, but with some additional detail requested in some areas to help us in collecting and analyzing college and institution-wide data on assessment practices. Your assessment reports will be maintained on file electronically on a password secure site (SharePoint). Other individuals on campus will have access to your reports.

Please complete one Assessment report per learning outcome that you are reporting on.

Name Please identify your department or program and the name of your assessment liaison:

Department/Program: Management Information Systems
Assessment Liaison: Suresh Chalasani
Report Prepared by: Suresh Chalasani

Q1 1. What learning outcome did you assess for this report? (Reminder - if you assessed multiple learning outcomes this academic year, you should complete a separate report for each outcome.)
MISLG3: Undergraduate MIS majors will be able to understand and apply the concepts of object-oriented systems. (Closely aligns with the shared learning goal **Reasoned Judgment**)

Q2 2. Which of the institution-wide shared learning goals does this outcome connect to?
❑ Communication (1)
❑ **Reasoned Judgment (2)**
❑ Social and Personal Responsibility (3)

Q3 3. What assessment tool(s) or method(s) did you utilize? (Check all that apply)
❑ Survey (1)
❑ Standardized exam (2)
❑ **Exam from a course or courses** (3)
❑ Assignment from a course or courses (4)
❑ Student portfolios (5)
❑ Direct observation of student work or performance (6)
❑ Other (7) _____

Q4 4. What type of measurement did you utilize?
- ○ **Direct (asking students to demonstrate their learning)** (1)
- ○ Indirect (asking students to self-report their perceived level of learning) (2)
- ○ A combination of the above (3)

Q5 5. What type of methodology did you use?
- ○ Qualitative (1)
- ○ **Quantitative (2)**
- ○ A combination of the above (3)

Q6 6. What type of course delivery methods did you use to collect your data? If your assessment project is course-based, please identify the course delivery method.
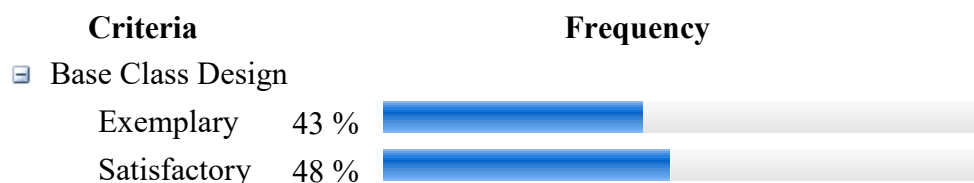- ○ **Face to face (1)**
- ○ Online (2)
- ○ Hybrid (3)
- ○ Flex Option (Competency Based)
- ○ A combination of the above (4)
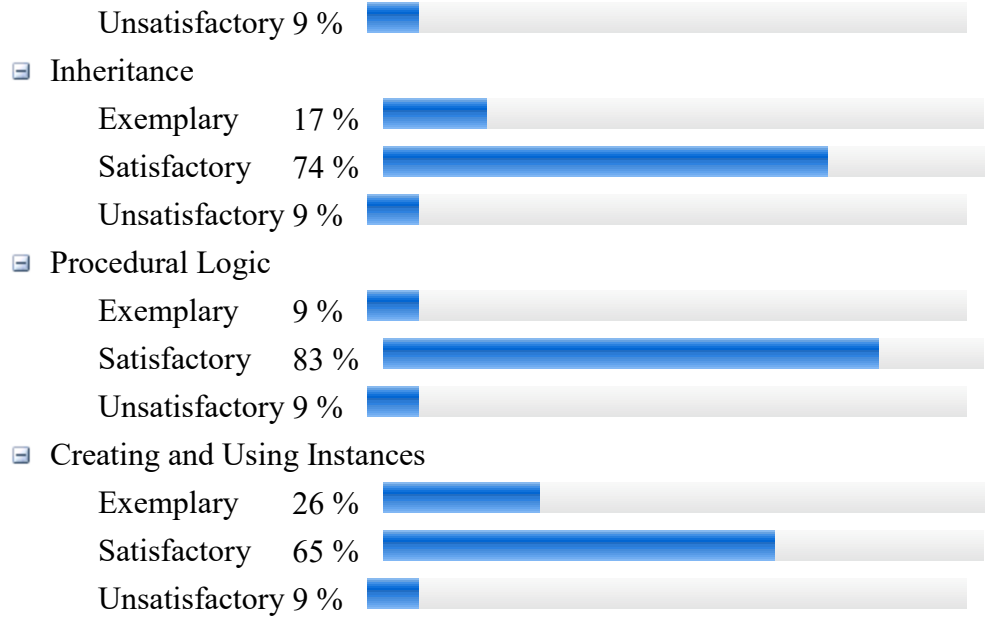- ○ Other: Please Specify: _____

Q7 7. What was the process of analysis? How did you involve your department in the process of analysis? (100 words)

In MIS 322: Business Programming II, students learn how to design and implement object oriented programs in the programming language C# .NET. In fall 2017, Prof. Chalasani used the midterm exam and the final exam to collect assessment results for MISLG3. The same rubric with four dimensions was used uniformly for collecting results from the midterm and the final exams. The rubric (see Appendix A) was designed collectively by the MIS faculty and discussed in the MIS faculty meetings in prior years. However, due to faculty turnover and lack of sufficient full-time faculty resources, this particular learning goal (MISLG3) has not been consistently assessed. These results have been shared with MIS faculty and CBEC administration, and will likely be discussed in aa future department meeting.
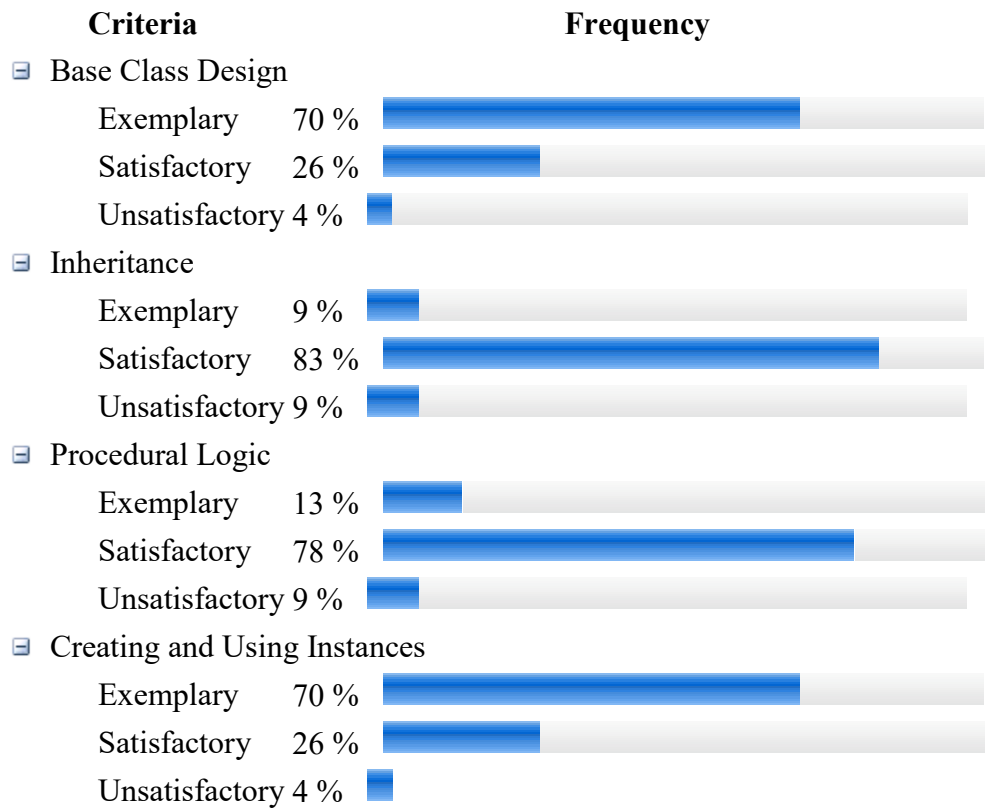
Q8 8. What were the results of this analysis? (250 words)

Student performance in the midterm along the rubric dimensions is reproduced as a bar chart below (results reproduced from D2L).

Criteria		Frequency
⊟ Base Class Design		
Exemplary	43 %	
Satisfactory	48 %	

Unsatisfactory 9 %

☐ Inheritance

    Exemplary   17 %

    Satisfactory   74 %

    Unsatisfactory 9 %

☐ Procedural Logic

    Exemplary   9 %

    Satisfactory   83 %

    Unsatisfactory 9 %

☐ Creating and Using Instances

    Exemplary   26 %

    Satisfactory   65 %

    Unsatisfactory 9 %

Student performance in the final exam along the rubric dimensions is reproduced as a bar chart below (results reproduced from D2L).

Criteria	Frequency
☐ Base Class Design	
Exemplary 70 %	
Satisfactory 26 %	
Unsatisfactory 4 %	
☐ Inheritance	
Exemplary 9 %	
Satisfactory 83 %	
Unsatisfactory 9 %	
☐ Procedural Logic	
Exemplary 13 %	
Satisfactory 78 %	
Unsatisfactory 9 %	
☐ Creating and Using Instances	
Exemplary 70 %	
Satisfactory 26 %	
Unsatisfactory 4 %	

Overall, student performance in various rubric dimensions is very good. The unsatisfactory rates in various rubric dimensions are 9% for the midterm and ranged from 4% to 9% for the final exam. For the "Base Class Design" rubric dimension, the unsatisfactory rates dropped from 9% to 4% from the midterm exam to the final exam. This is to be expected since students have had many more programming exercises (through homework assignments and in-class lab work) between the midterm and the final exam, and had many opportunities to practice this in the classroom. Further, the instructor provided feedback and spent a significant amount of time with the students in the lab, beyond the normal office hours, to address their questions regarding object-oriented programming. Students have to first design the base classes prior to progressing with almost any other aspects of object-oriented programming such as inheritance and creating instances. Perhaps because this fundamental concept was emphasized in the lab and the lecture by the instructor, it may be the reason why the student performance improved from the midterm to the final exam, with 70% of the students in the "Exemplary" category for the final exam compared to 43% for the midterm. After "Base Class Design" the next less complex concept is creating and using instances. The student performance improved in this dimension as well.

Student performance is almost unchanged for the "Procedural Logic" and "Inheritance" dimensions, with 9% of the students in the unsatisfactory category for both the final exam and the midterm. Implementing coding logic and using classes to implement inheritance accurately are some of the more difficult object-oriented concepts, and more practice and more examples is perhaps one way to improve students' critical thinking skills in these dimensions.

Q9 9. How were results shared/discussed with your department/external stakeholders? (Check all that apply)
❍ Special faculty meeting (1)
❍ Part of a regular faculty meeting (2)
❍ **Shared electronically (3)**
❍ Advisory board (4)
❍ **Other (5)** _They will be discussed in a future Business department's undergraduate curriculum committee meeting. _____

Q10 10. As a result of your analysis, what changes will your department or program make to improve student learning? (250 words)

No changes are planned at this point. Since this learning goal has been assessed after a significant gap, it may be better to collect results in future years (including 2018) before drawing conclusions on changes. The previous major change we made to the MIS program based on this learning goal was a few years ago, when we decided to teach C# .NET, in addition to VB .NET, as programming languages in the MIS program. In fall 2017, the instructor already

implemented extensive number of lab hours to help students struggling with the programming concepts. This practice will be continued in future.

Q11 11. Looking back at your last assessment report, what is the current status of the plan for improvement of student learning that was discussed in your past reports? (Check all that apply)
○ Proposed (1)
○ In consideration (2)
○ **Implemented** (3)
○ Being assessed (4)
○ Other (5)

Q12 12. Indicate all changes made to your program to improve student learning since the last assessment report you submitted. Some example changes include the following: Revising learning goals, outcomes and rubrics; Revising pre-requisites; Improving hands-on learning and labs; Introducing new courses; Changing emphasis on topics; Providing more tutoring help; Progressive measurement of the same learning goals in multiple courses; Redesigning assessment instruments such as assignments, exams, labs, and quizzes. (250 words)

MIS program curriculum underwent significant changes in the past year.   Based on assessments conducted in the past years, student feedback, and input from the ITPC (Information Technology Practice Center) advisory board, these curricular changes have been implemented. Because of the importance of project management in the workplace, PMGT 341: Basics of Project Management has been added as a required course. MIS 320: Management Information Systems has been a required course for all Business majors (Business Management, Accounting, Marketing) except MIS majors prior to 2017. Since fall 2017, MIS 320 has been made a required course for MIS majors as well. MIS 320 gives exposure to a variety of technical software including spreadsheets, databases and Microsoft project; the stakeholders felt that student foundation will be strengthened if this course is a required course. Previously required classes MIS 220 and MIS 428 were made into elective courses. MIS 220 introduced students to community projects and project management, which, in the revised curriculum, is covered by PMGT 341 and community projects in courses such as MIS 328 and MIS 425. MIS 428 covers information systems and project management, which is emphasized in other courses such as MIS 425 and PMGT 341. Further, MIS students are now strongly encouraged to complete one or more of the certificates offered by the Computer Science department (e.g. Web Development) to enhance their technical skills. The revised curriculum is in alignment with the MIS program learning goals.

Q13 13. Please write an abstract of no more than 250 words to summarize your assessment report this year. Your abstract should address items completed above, including which learning outcome was assessed, which data were collected and analyzed, how the department discussed the findings, and what changes are planned as a result of what was learned. In

addition, please emphasize the changes made to your program since the last assessment report (see questions 11 and 12). This abstract will be the basis of the assessment poster that the OIE will generate for the Assessment Showcase, and will be used as an easy way to share a summary of your report with others on campus.

Abstract:

In 2017-18 we assessed the third learning goal for the MIS program: "MISLG3: Undergraduate MIS majors will be able to understand and apply the concepts of object-oriented systems." This goal closely aligns with the shared learning goal **Reasoned Judgment.** In MIS 322: Business Programming II, students learn how to design and implement object oriented programs in the programming language C# .NET. In fall 2017, Prof. Chalasani used the midterm exam and the final exam to collect assessment results for MISLG3. The same rubric with four dimensions was used uniformly for collecting results from the midterm and the final exams. The rubric (see Appendix A) was designed collectively by the MIS faculty and discussed in the MIS faculty meetings in prior years. Overall, student performance in various rubric dimensions is very good. The unsatisfactory rates in various rubric dimensions are 9% for the midterm and ranged from 4% to 9% for the final exam. For the "Base Class Design" rubric dimension, the unsatisfactory rates dropped from 9% to 4% from the midterm exam to the final exam. This is to be expected since students have had many more programming exercises between the midterm and the final exam, and had a significant number of opportunities to practice this in the classroom. Further, the instructor provided feedback and spent a significant amount of time with the students in the lab, beyond the normal office hours, to address their questions regarding object-oriented programming. Students have to first design the base classes prior to progressing with almost any other aspects of object-oriented programming such as inheritance and creating instances. Perhaps because this fundamental concept was emphasized in the lab and the lecture by the instructor, it may be the reason why the student performance improved from the midterm to the final exam, with 70% of the students in the "Exemplary" category for the final exam compared to 43% for the midterm. Student performance is almost unchanged for the "Procedural Logic" and "Inheritance" dimensions, with 9% of the students in the unsatisfactory category for both the final exam and the midterm. Implementing coding logic and using classes to implement inheritance accurately are some of the more difficult object-oriented concepts, and more practice and more examples is perhaps one way to improve students' critical thinking skills in these dimensions.

MIS program curriculum underwent significant changes in the past year.   Based on assessments conducted in the past years, student feedback, and input from the ITPC (Information Technology Practice Center) advisory board, these curricular changes have been implemented. Because of the importance of project management in the workplace, PMGT 341: Basics of Project Management has been added as a required course. Since fall 2017, MIS 320 has been made a required course for MIS majors as well. MIS 320 gives exposure to a variety

of technical software including spreadsheets, databases and Microsoft project; the stakeholders felt that student foundation will be strengthened if this course is a required course. Previously required classes MIS 220 and MIS 428 were made into elective courses. Further, MIS students are now strongly encouraged to complete one or more of the certificates offered by the Computer Science department (e.g. Web Development) to enhance their technical skills. The revised curriculum is in alignment with the MIS program learning goals.

The deadline for submission of reports is May 25, 2018. (Note, if due to the timing of your data gathering you would like to request a different deadline, please contact the Institutional Research Office, John Standard, standard@uwp.edu. The Assessment Showcase this year will be held on November 2, 2018 (First Friday of November).

SPECIAL QUESTION RELATED TO DISTANCE EDUCATION COURSES:

If your program is delivered fully or partly via distance education (online, hybrid, or flex-option/competency-based), please indicate the assessment efforts/plans undertaken in distance education (DE) courses/programs. Please emphasize topics such as assessment plans for distance education courses/programs, assessment results for DE courses/programs. (No limit on the length)

MIS program is a face-to-face program and, except MIS 320 and PMGT courses, no courses are offered online. In future, assessment results from online sections of MIS 320 and PMGT courses will be shared.

Appendix A: Rubric to Measure Student Performance for MISLG3

MISLG3: Object-Oriented Programming

Criteria	Exemplary 4 points	Satisfactory 3 points	Unsatisfactory 2 points	
Base 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.	
Overall Score	**Exemplary** **14 or more**	**Satisfactory** **11 or more**	**Unsatisfactory** **6.5 or more**	**Fail** **0 or more**