

MANAGEMENT INFORMATION SYSTEMS ASSESSMENT POSTER, 2018-19

College of Business, Economics, and Computing

LEARNING GOAL ASSESSED

– Reasoned Judgement –

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

OVERVIEW AND METHODS

In MIS 322: Business Programming II, students learn how to design and implement object oriented programs in the programming language C# .NET. In Fall 2018, Prof. Chalasani used the programming assignments 6 through 10 and the final exam to collect assessment results for MISLG3. These programming assignments and the final exam primarily cover object oriented programming concepts. A rubric with four dimensions was used to categorize student performance into three tiers: Exemplary, Satisfactory, and Unsatisfactory. The rubric was designed collectively by the MIS faculty and discussed in the MIS faculty meetings in prior years.

The rubric has the following dimensions. For each dimension, the work expected from the students in order to achieve a rating of exemplary is described below:

Base Class Design

The base class solves the problem by correctly defining the needed variables and methods.

Inheritance

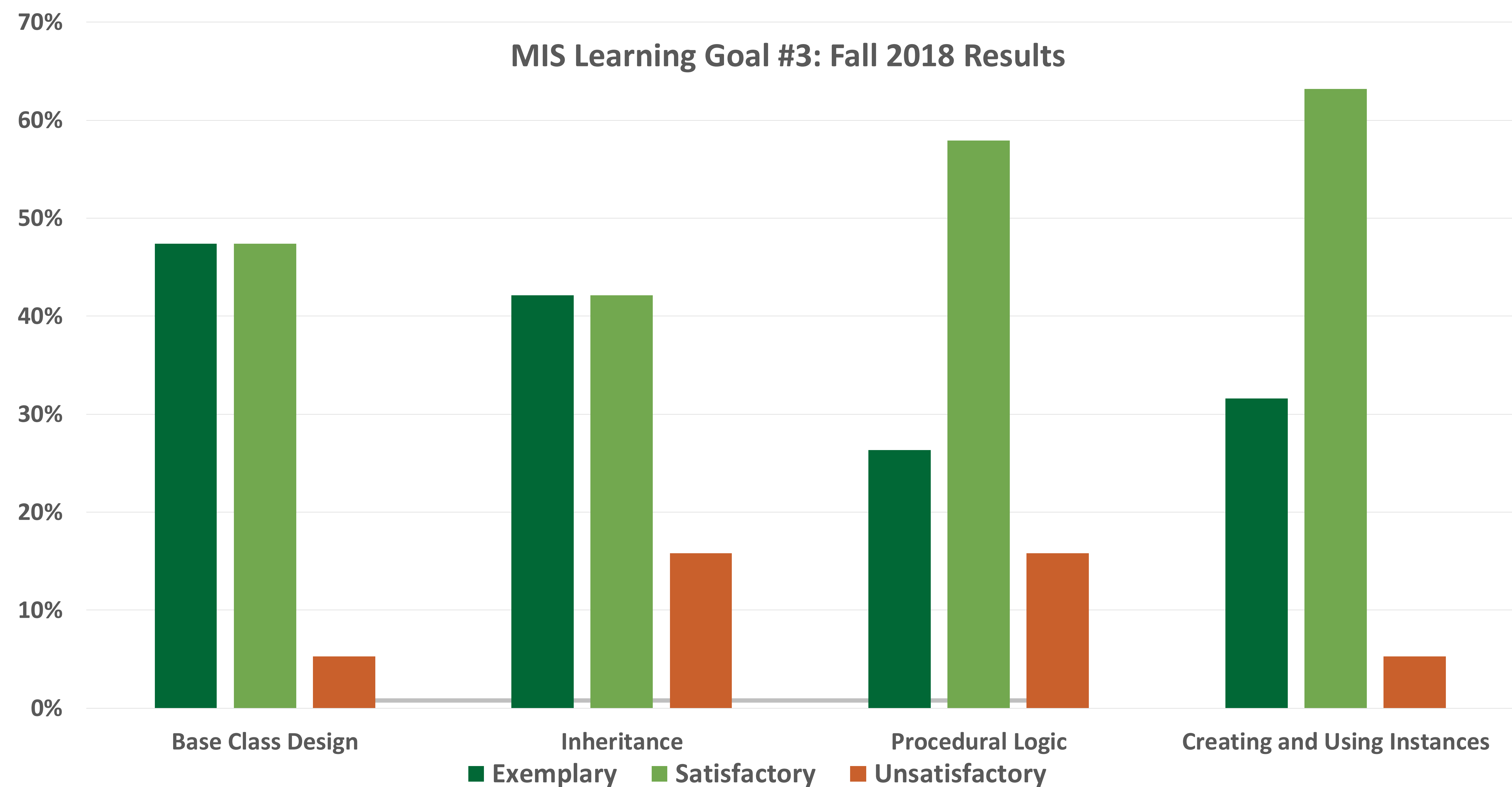
The solution includes the required derived classes with correct use of overriding, inheritance and superclass methods.

Procedural Logic

The solution correctly implements procedural logic throughout all methods.

Creating and Using Instances

Students correctly create instances of their classes and use the methods of the classes to solve business problems.



CONCLUSIONS

Overall, student performance in various rubric dimensions is good. The unsatisfactory rates in various rubric dimensions ranged from 5% to 15%. “Procedural Logic” and “Inheritance” have the highest unsatisfactory rating; writing procedural logic and correctly using inheritance tend to be difficult for students. 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 labs and the lecture by the instructor, it may be the reason why the student performance was very good in the “Base Class Design” rubric dimension (close to 95% of the students are in exemplary or satisfactory category). After “Base Class Design” the next less complex concept is creating and using instances. The student performance is very good in this dimension as well.

No changes to the curriculum are planned at this point. These results are similar to the results obtained in 2017. Due to the small number of students, performance of one student equates to about 5% of the results; thus, if one student does not perform well, it leads to an additional 5% increase in the unsatisfactory percentage. Since this learning goal has been assessed after a significant gap, it may be better to collect results in future years (including 2019) 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. Since fall 2017, the instructor implemented extensive number of lab hours to help students struggling with the programming concepts. This practice will be continued in future.