Course Title: IST133 Visual Basic

Course Leader: Doug Leisher

Expected Learning Outcomes for Course

- Demonstrate knowledge of programming terminology and how applied using Visual Basic (e.g., variables, selection statements, repetition statements, etc.)
- Develop a Graphical User Interface (GUI) based on problem description
- Develop an Event Planning Chart based on problem description so as to define the processing that is to occur based on specific events
- Develop an Algorithm to verify processing is accurate
- Develop and debug applications using Visual Basic 2010 (or version required for the course) that runs under Windows operating system
- Develop programs that retrieve input from a file as opposed to input only provided by user

Assessment

(How do students demonstrate achievement of these outcomes?)

1. Satisfactory scores on exams and assignments
2. Students develop practical, professional-quality programs using appropriate Visual Basic Programming methods that are graded using rubrics developed by the instructor.

Validation

(What methods are used to validate your assessment?)

The instructor verifies that the programs created by the students work properly (i.e., produce the correct results given specific inputs) but also that the source code and documentation for the programs are easy to read and make sense. Students are given a copy of other students programs to determine how easy it is for a student who did not create the program to describe how the program works.

Since computer programming is cumulative, program assignments at the end of the course incorporate most, if not all, topics taught in the course. For example, early in the course students learn the importance and use of variables. Variables are used in programs a student develops.

Results

(What does the data show?)

Only two students started this course. One of them stopped coming to class or turning in work after three classes. There was no notification as to why. Since there was only one student in the class on a continuing basis, I am not able to draw any valid conclusions as to how the class went nor determine any changes to the course that might be needed in the future.

By having students help each other and evaluate each other's programs, the students can see how others might have a different way of writing the program. This then gives students ideas on how to make their programs better. Also, knowing that other people, not just the instructor, will view their programs gives them a better sense of pride when other students talk about how well their program is written.

Follow-up
(How have you used the data to improve student learning?)

By teaching this course on a continuous basis, the instructor can see trends as far as what topics students typically struggle with. Doing so, allows the instructor to focus more on those topics. Also, students seem to like being introduced to topics then allowed to use much class time to work on assignments.

Programming is a course whereby students learn much more by trying and debugging programs (asking for help when needed) than by having an instructor tell them exactly what to do.

At the end of each semester, the instructor analyzes student results from the last couple semesters to compare results. This helps define trends so that instruction techniques/assignments can be adjusted to better help future students learn the material.

Budget Justification
(What resources are necessary to improve student learning?)

- Keeping the Visual Basic program close to the currently available version
- Use of a computer lab that has a projector for instructor to project screen to students
- Access to computers with Visual Basic other than during class time
- Ability for students to purchase Visual Basic program inexpensively so they have access to it away from class.
- It would be nice to be able to bring in a speaker who actually uses Visual Basic in their business