

**Course Title: IST106 Spreadsheet Software**

**Course Leader: Trudy Gift**

**Expected Learning Outcomes for IST106 Spreadsheet Software**

- Use Excel software in a variety of business and organizational settings to make calculations on financial and statistical data and present the results in a manner that is informative, documented, and useful to the reader.

**Assessment**

(How do students demonstrate achievement of these outcomes?)

The critical thinking exam and chapter exams are not included in this report (since it is available to the public). The critical thinking exam is used each semester.

There is an exam is comprised of a worksheet that the student must complete using the commands covered in each chapter (9 chapters are covered). Each chapter's questions are based on specific skills that are mapped to the outcome for the course. This means that every activity is a valid assessment of the student's skills. They can either complete the activity or not.

There are 9 projects required for each chapters. Students either create a new worksheet or they make modifications to downloaded files. The concepts presented in the chapter are reviewed in the projects. Students have to use their critical thinking skills on how to solve the problem as requested.

The presentation of this course has changed dramatically since Fall 2013. Previously, students had the opportunity to read a textbook, follow a step-by-step tutorial, completed projects, and completed a critical thinking exam which was problem oriented (similar to what they would encounter when taking the MOS (Microsoft Office Specialist) exam. The exam consists of a scenario and two questions based on that scenario. Students are asked to select their answer from 4 choices.

During the summer of 2014, a new course management software was selected. Students still had the opportunity to read/complete projects but training modules were incorporated. It was noticed that most of the students choose to complete the training rather than do the textbook option. In the Fall 2014, the software was fully implemented. Training has made understanding concepts in the textbook easier.

There are two groups of students. Those that grasp the online tutorials and can learn from there. Others require the face-to-face explanation (where they can also ask questions and receive immediate feedback).

**Validation**

(What methods are used to validate your assessment?)

The course is taught using a Microsoft Certified Application Specialist approved courseware.

Microsoft Office Specialist Exam standards were reviewed for course content to be sure they mapped to the outcomes in this course.

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In place of taking this course, the student may take the MOS Expert Excel certification exam. Upon receiving their certification, they can apply for 3 credits for this course.

### Microsoft Office Specialist Exam Map

Objective
1.1. Insert data using AutoFill
1.2. Ensure data integrity
1.3. Modify cell contents and formats
1.4. Change Worksheet Views
1.5. Manage worksheets
2.1. Format worksheets
2.2. Insert and modify rows and columns
2.3. Format cells and cell content
2.4. Format data as a table
3.1. Reference data in formulas
3.2. Summarize data using a formula
3.3. Summarize data using subtotals
3.4. Conditionally summarize data using a formula
3.5. Look up data using a formula.
3.6. Use conditional logic in a formula
3.7. Format or modify text using formulas
3.8. Display and print formulas
4.1. Create and format charts
4.2. Modify charts
4.3. Apply conditional formatting
4.4. Insert and modify illustrations
4.5. Outline data
4.6. Sort and filter data
5.1. Manage changes to workbooks
5.2. Protect and share workbooks
5.3. Prepare workbooks for distribution
5.4. Save workbooks
5.5. Set print options for printing data, worksheets and workbooks

### Results

(What does the data show?)

This course was taught as an online. The section experienced only four walk-away as compared to 2 in Fall 2014.

The overall passing grade for the Critical Thinking exam was 57% versus 65% from the previous semester (after removing the four students who walked away from the course). The rationale for this is the format of the exam. Every test of their skills has been application/show based. With the critical thinking exam, they had to apply what they learned in a multiple choice format. They

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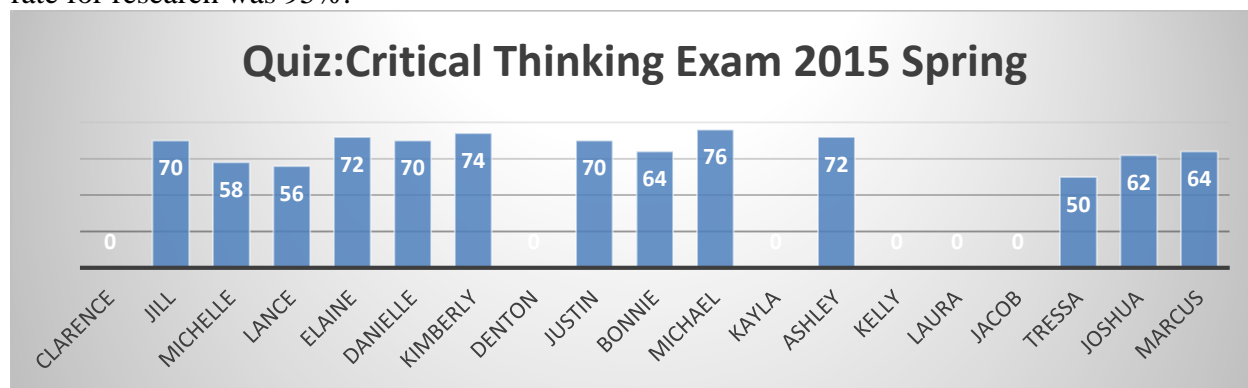
only had one attempt to answer the questions (unlike their projects where they could redo the projects up to 5 times. Average retakes 2).

In surveying students:

- they do not like the format of the exam because it is multiple choice
- They state they are better at showing what they know than reading a scenario and applying the correct method to modify
- Last exam they don't take it seriously
- They know their final grade prior to take this one so to them it is not as important (10% of their grade versus 2 points for projects and 3 points for exams)

After reviewing student answers, all questions on the critical thinking exam were answered at least one time correctly. No questions need to be removed. It was observed that even though the students were not timed on the exam and had access to their textbooks, the average time used to take the exam was approximately 145 minutes (which increased slightly to from Fall 2014 where the length of time was 114 minutes).

Two of the questions required the students to research the answer as it referred to a chapter not covered. This was intentional to see if they could successfully research the answer. The success rate for research was 95%.



### Follow-up

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

Office 2013/365 is working great. Not having access to Windows 8 has not caused any major problems. We will continue to use Windows 7 on campus. An upgrade to Windows 10 will be required in Fall 2017.

Every other Wednesday from 5:30-7:00 the instructor offered an open lab time where students could come and get a preview to the chapter, cover difficult concepts, ask questions, receive help on projects, and discuss any computer problems. Even Wednesday there was an average of 3 students that took advantage of this additional study time. The grades did not show improvement because of this additional study time.

### Budget Justification

(What resources are necessary to improve student learning?)

Tutoring hours need to be increase and there needs to be an Excel person part-time personal available in the Learning Success Center.