

**Course Assessment Report**  
**Washtenaw Community College**

Discipline	Course Number	Title
Business Management	275	BMG 275 12/06/2016- Business and Supply Chain Analytics
Division	Department	Faculty Preparer
Business and Computer Technologies	Business	Cheryl Byrne
Date of Last Filed Assessment Report		

**I. Assessment Results per Student Learning Outcome**

Outcome 1: Identify the problem-solving process and associated analytic decision-making tools used in business and supply chain management.

- Assessment Plan
  - Assessment Tool: Departmental Exam
  - Assessment Date: Winter 2020
  - Course section(s)/other population: All sections
  - Number students to be assessed: All students
  - How the assessment will be scored: Answer sheet
  - Standard of success to be used for this assessment: 70% of students scoring 70% or better.
  - Who will score and analyze the data: Exam will be online with scoring done by computer. Lead instructor will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2016	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
24	18

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

The course started with 21 students and as time passed students dropped or withdrew.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students enrolled in the BMG 275 online section were assessed. There is only one section of this course and it is online.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

This outcome used a series of tests and assignments to assess this outcome. Tests were scored automatically by Blackboard and assignments were graded using rubrics.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

75% of the students scored 70% or better. The unit tests seemed to be the downfall of a number of students. The unit tests focuses on the concepts rather than the actual using of the tools. To compensate for this and to prepare students to understand what these tests cover, the redesigned course now has practice quizzes so students can study for the unit tests. This should improve the scores for this area.

The redesigned course also addresses the problem solving and decision making tools in more detail and with more background. The students did better at understanding the underlying reasons to use the Excel tools but this area was also upgraded in the redesigned course for Winter 2017.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The two main areas of strength for Outcome 1 were Mind Maps & Affinity Diagrams. The discussion about Effective Teams which combined personal experience on teams with outside research was also a strength.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

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The redesigned course also addresses the Problem Solving and Decision Making tools in more detail and with more background. The students did better at understanding the underlying reasons to use the Excel tools but this area was also upgraded in the redesigned course for Winter 2017.

Outcome 2: Analyze data and make decisions using problem-solving, decision-making and Excel analytic tools.

- Assessment Plan
  - Assessment Tool: Assignments
  - Assessment Date: Winter 2020
  - Course section(s)/other population: All sections
  - Number students to be assessed: All students
  - How the assessment will be scored: Answer sheet to identify correct and incorrect answers.
  - Standard of success to be used for this assessment: 70% of students scoring 70% or better.
  - Who will score and analyze the data: Lead instructor will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2016	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
24	21

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

The course started with 21 students and over time, students dropped and withdrew. There was only one section offered and it was online only.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students in the online section were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

This outcome was assessed based on assignments completed using the Excel tools. The assignments were scored using rubrics.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

The original Master Syllabus had 3 outcomes which were combined into two for simplicity of the new Master Syllabus submitted Fall 2016. The original Master distinguished between descriptive and predictive analytics so the following assessment of Outcome 2 is based on the original outcomes.

**Descriptive:** 81% of the students scored 70% or better with nine assignments used to assess this outcome. When reviewing the data, however, two areas of concern surfaced. The biggest area of concern was pivot tables. While 76.5% scored 70% or better, there were no students in the A-range. Therefore, the redesigned course for W17 does spend more time explaining the purpose of pivot tables as well as explaining how to create them in Excel.

The other area of concern was the group project to create an action plan with 41.2% failing. This was due entirely to non-participation. Online group projects are difficult and since the Master Syllabus does not require any, we eliminated this group project in the redesigned W17 course and dealt with action plans on an individual basis.

**Predictive:** 82% of the students scored 70% or better with eight assignments used to assess this outcome. When reviewing the data, however, two areas of concern

surfaced. The biggest area of concern was the Solver Excel tool. Only 63.6% of the students scored 70% or better with 36.4% failing. In talking with industry people on the Business Advisory Board and other advisors who use Excel in their daily work, it was determined that Solver is not a tool frequently used. It was recommended that we replace this with VLOOKUP which is used often. Therefore, the redesigned course for W17 does not include Solver and does include VLOOKUP.

The other area of concern was the What-If Tables & Goal Seek with 1/3 of the class failing this assignment. The redesigned course for W17 includes more videos about how and why this tool is used as well as how to manipulate data in Excel using What-If Tables and Goal Seek.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The major areas of strength were:

**Descriptive:** Creating informative and visually appealing charts in Excel (Mod 4 & 8). Students also did well on creating Fishbone diagrams and Control Charts in Excel. Finally students did well on the Mod 16 Quick Quiz about adaptive techniques used in problem solving.

**Prescriptive:** Students did well on the If Function in Excel (Mod 19) with 94% of students receiving a 70% or better. For the Mod 26 Quick Quiz about inductive/deductive reasoning and associated fallacies, 83% of students scored 70% or better.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

**Descriptive:** 81% of the students scored 70% or better with nine assignments used to assess this outcome. When reviewing the data, however, two areas of concern surfaced. The biggest area of concern was pivot tables. While 76.5% scored 70% or better, there were no students in the A-range. Therefore, the redesigned course for W17 does spend more time explaining the purpose of pivot tables as well as explaining how to create them in Excel.

The other area of concern was the group project which was to create an action plan with 41.2% failing. This was due entirely to non-participation. Online group projects are difficult and since the Master Syllabus does not require any, we eliminated this group project in the redesigned W17 course and dealt with action plans on an individual basis.

**Predictive:** 82% of the students scored 70% or better with eight assignments used to assess this outcome. When reviewing the data, however, two areas of concern surfaced. The biggest area of concern was the Solver Excel tool. Only 63.6% of the students scored 70% or better with 36.4% failing. In talking with industry people on the Business Advisory Board and other advisors who use Excel in their daily work, it was determined that Solver is not a tool frequently used. It was recommended that we replace this with VLOOKUP which is used often. Therefore, the redesigned course for W17 does not include Solver and does include VLOOKUP.

The other area of concern was the What-If Tables & Goal Seek with 1/3 of the class failing this assignment. The redesigned course for W17 includes more videos about how and why this tool is used as well as how to manipulate data in Excel using What-If Tables and Goal Seek.

## II. Course Summary and Action Plans Based on Assessment Results

1. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

This course was created based on recommendations by the School of Business and Entrepreneurial Studies Advisory Board. They said, "We need employees who can manipulate data for us in Excel." Therefore, the course was created and incorporated into the newly created Retail and Supply Chain certificate and associate degree programs.

It is now also part of the Applied Data Analytics certificate which is a joint effort between the Business and CIS departments.

Conversations and reviews with the BMG Advisory Board and from experts who use the tool daily in their work are used to continuously review the content of the course.

Since we follow the course so closely and look at student achievement every semester, nothing in this assessment was a total surprise. We have tweaked the course twice already so the Winter 2017 is just part of the refinement process.

2. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

This information will be shared at the January 2017 Department meeting.

3.

Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	A new master syllabus has been submitted and the outcomes simplified and put into "normal" language based on the presentation at in-service.	The original outcomes used words and academic phrasings rather than being simple and straightforward....this is what the students will be able to do.	2017
Objectives	Objectives in the new Master Syllabus were reviewed and changed to meet the focus of the course. The original Master Syllabus was created before the content of the course was created and was a "plan". Now that we have had several semesters to refine this course to meet the real needs of the industry, the objectives were changed to match.	See above	2017
Course Assignments	Based on the information shared in the Analysis by Outcome, several assignments were deleted and replaced with new ones.	See Analysis by Outcome.	2017

4. Is there anything that you would like to mention that was not already captured?

5.

### III. Attached Files

#### [Required Attachments](#)

<b>Faculty/Preparer:</b>	Cheryl Byrne	<b>Date:</b> 03/08/2017
<b>Department Chair:</b>	Julianne Davies	<b>Date:</b> 03/28/2017
<b>Dean:</b>	Kristin Good	<b>Date:</b> 03/31/2017
<b>Assessment Committee Chair:</b>	Ruth Walsh	<b>Date:</b> 04/25/2017



**Course Assessment Report  
Washtenaw Community College**

Discipline	Course Number	Title
Business Management	275	BMG 275 04/19/2019- Business and Supply Chain Analytics
Division	Department	Faculty Preparer
Business and Computer Technologies	Business	Joe Chiappetta
Date of Last Filed Assessment Report		

**I. Review previous assessment reports submitted for this course and provide the following information.**

1. Was this course previously assessed and if so, when?

Yes

12/06/2016

2. Briefly describe the results of previous assessment report(s).

This course was created based on recommendations by the School of Business and Entrepreneurial Studies Advisory Board. This course was created and incorporated in the newly created Retail and Supply Chain Certificate associate degree programs. Since the course is monitored regularly, assessments results were not a surprise. This course has been tweaked twice already, and this is part of the refinement process.

3. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

Changes were implemented in Winter 2017. VLookup functions were added, and Scenario Manager functions were eliminated. The group project was eliminated due to a lack of participation, but more virtual meetings with the instructor were encouraged. Videos were updated using Lynda, and YouTube videos were eliminated where possible.

**II. Assessment Results per Student Learning Outcome**

Outcome 1: Identify the problem-solving process and associated analytic decision-making tools used in business and supply chain management.

- Assessment Plan

- Assessment Tool: Departmental Exam
- Assessment Date: Winter 2020
- Course section(s)/other population: All sections
- Number students to be assessed: All students
- How the assessment will be scored: Answer sheet
- Standard of success to be used for this assessment: 70% of students scoring 70% or better.
- Who will score and analyze the data: Exam will be online with scoring done by computer. Lead instructor will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018	2018	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
51	29

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

The difference is due to withdrawal.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students who completed the course were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A series of tests and assignments were used to assess this outcome. Tests were scored automatically by Blackboard and assignments were graded using rubrics.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this

learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: <u>Yes</u>	
82.8% of all students received a 75% or higher. The unit tests focused on concepts rather than the actual application of the tools. To compensate for this and to prepare students to understand what these tests cover, the course had practice quizzes, so students can practice for the unit tests. Further, there were 3 graded Excel assignments in the assessment. The low score was primarily due to non-submission of assignments, not the actual performance on the assignment.	

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students seemed to struggle and then excel at the decision tree process.
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8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

I think we should offer more practice problems. My plans for continuous improvement is to engage the students to a higher degree.
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Outcome 2: Analyze data and make decisions using problem-solving, decision-making and Excel analytic tools.

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1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
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The difference is due to withdrawal.

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All students who completed the course were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A series of tests and assignments were used to assess this outcome. Tests were scored automatically by Blackboard, and assignments were graded using rubrics.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes  
 82.8% of the students scored 75% or higher, with 27 assignments used to assess this outcome. When reviewing the data, however, a few areas of concern surfaced. These were Decision Matrices, Nested If statements, Pivot Tables, sorting and filtering, and following instructions.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students seemed to do very well with building charts. Students seemed to excel at If statements and Vlookups.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students still seemed to struggle with analyzing the stories that the charts are telling. True analysis is interpreting the numbers, lines, and trends before them.

What-If and Goal Seek continued to be a challenge for the students. I have found continued demonstration and interactive meetings to be the most effective.

### III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

The changes made in the last revision have increased scores by an average of 1 to 2 points.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

I think this course is preparing students for analytical roles, but nothing was a surprise, as I routinely meet with the students and witness their struggles. I assist in any way I can.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

The Lead Instructor will share this information at a Department meeting and at an Advisory Committee meeting.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Course Assignments	Additional practice programs using the decision tree process.	Increased practice will lead to better outcomes.	2019
Other: Additional Virtual Meetings	Additional or weekly ungraded GotoMeetings.	Increased interaction and immediate assistance with questions will lead to better outcomes.	2019

5. Is there anything that you would like to mention that was not already captured?

Not at this point.

### III. Attached Files

[Assessment Summary](#)

**Faculty/Preparer:** Joe Chiappetta **Date:** 04/24/2019  
**Department Chair:** Douglas Waters **Date:** 04/24/2019  
**Dean:** Eva Samulski **Date:** 05/10/2019  
**Assessment Committee Chair:** Shawn Deron **Date:** 06/11/2019