

**DIRECT ASSESSMENT RESULTS**

**CRITICAL AND ANALYTICAL THINKING**

**INFORMATION TECHNOLOGY**

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*Document Submitted: Fall 2016*

***Embedded Assessment Results for BBA Program Goals 2 and 3***

***BBA Program Level Goal 2 and 3:***

**Apply critical and reflective thinking skills and use analytical tools to evaluate information, solve problems, and make sound decisions.**

Graduates should be able to carefully and logically analyze data, information, problems, and ideas from multiple perspectives. They may demonstrate these critical and reflective thinking skills through their ability, in a variety of circumstances, to synthesize information and evaluate its logic, validity, and relevance; arrive at reasoned conclusions, make informed decisions, and solve challenging problems; and generate or explore new questions.

**Apply information technology skills to organizational problems and decisions.**

Graduates should be able to use information technology in their work environment and to understand the impact of that technology in various organizational contexts

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***Methodology:***

The BBA Course Alignment Grid identifies core courses that both cover and assess critical thinking skills and informational technology skills. Faculty in each of these core course-teaching groups participated in this assessment. Faculty were asked to assess students’ performance on college learning goals using course specific criteria and report results in the format of Exceeds Expectations, Meets Expectations, or Does Not Meet Expectations. Working with faculty teaching core course sections, each core course coordinator chose their course’s common method of direct, course-embedded assessment, which included multiple methodologies ranging from common test questions and assignments to written assessment rubrics. Methods, by course, are discussed below and are indicated on the composite table after course numbers.

***Methods for BBA Program Goal 2 – Critical and reflective thinking***.

***Accounting 2361***. Multiple choice questions were used to assess student learning of the program goal. Fifteen (15) questions were embedded in the comprehensive final exam at the end of the semester. The multiple choice questions required students to know the material, classify and interpret data, apply accounting concepts, and calculate solutions. Students had to determine which items were relevant to the question being asked and apply the correct accounting process in order to correctly answer the question.

The criteria used to determine if a student exceeds expectations was a score of 75.0% or better, for a student to meet expectations a score had to fall between 60.0 and 74.99%, and for a student to fail to meet expectations a score must have been less than 60.0%. Of the 608 students participating in the assessment, 443 were students majoring in business.

***Accounting 2362***. To assess student learning of the program goal, multiple choice questions were used. A total of 16 questions were embedded in 4 exams throughout the semester. The multiple choice questions required students to know the material, classify and interpret data, apply accounting concepts, and calculate solutions. Students had to determine which items were relevant to the question being asked and apply the correct accounting process in order to correctly answer the question.

The criteria used to determine if a student exceeds expectations was a score of 85.0% or better, for a student to meet expectations a score had to fall between 60.0 and 84.99%, and for a student to fail to meet expectations a score must have been less than 60.0%. Of the 886 students participating in the assessment, 747 were students majoring in business.

***Economics 2314***. Three forms of the direct assessment method were used to assess student learning of the program goal. Each of the three forms involves answering seven embedded multiple-choice questions on the final exam. The first form deals with the concepts of supply and demand and ability to analyze current economic issues across various market settings. The second form focus on analyzing microeconomic policy options and assessing their effect on social welfare and efficiency. The third form required students to interpret and analyze economic data. Each outcome was assessed using seven multiple-choice questions embedded in final examinations of both semesters. There are a total of 21 objective questions. Students who score between 70- 89% are judged to meet expectations, and students who score 90% and above are judged to exceed expectations. Students who score 70 or lower are judged to fail to meet expectations.

***Economics 2315***. During the Fall Semester 2015 and Spring Semester 2016, students in 9 sections of Economics 2315 - Principles of Macroeconomics, a McCoy College core course, were evaluated on the goal of understanding the importance of culture and diversity. The assessment method for evaluating the students was objective questions embedded in an in-class examination. A total of 771 students were assessed, and 90% correct was the standard for ‘exceeds expectations’ and below 70% ‘did not meet expectations'.

***Qmst 2333 (Statistics)***. During the 2015-16 academic year, data were collected to assess student learning on Program Goals 2 and 3 in QMST 2333 Business Statistics, a core course of the McCoy College of Business Administration’s BBA degree. Program Goal 2 is: “Critical and Analytical Thinking”. To assess student learning of the program goal we used a direct method consisting of exam imbedded items requiring application of analytical and solving skills. The criteria used to determine if a student exceeds expectations were a score of 90.0% or better, for a student to meet expectations a score had to fall between 70.0 and 90.0%, and for a student to fail to meet expectations a score had to be less than 70.0%.

***Business Law 2361***. To assess student learning of the program goal, eleven chapters were identified and one common critical thinking question per chapter was to be used in testing over the material in all sections of the course. Each instructor determined their administration of the questions based on the timing of coverage and testing over the relevant material. The questions were multiple choice, requiring the students to identify the legal concept applicable, understand its application, and reason to a conclusion. For the 2015-2016 academic year, results submitted were derived from the responses of 527 business majors and 733 non-business majors. For the purposes of the business major percentages table below, only information relating to business majors is included. The criteria used in the determination of the students’ success in meeting expectations were:

1. a score of 80.0% or more correct for all questions attempted was ranked as exceeding expectations;

2. a score equal to or greater than 60.0%, and less than 80.0% of attempted questions correct was ranked as meeting expectations; and,

3. a score less than 60.0% correct of all attempted questions was ranked as failing to meet expectations.

***Management 3303***. To assess student learning of the program goal, two forms of the direct method were used. The first form consisted of multiple choice questions focused primarily on definitions of key terms in the assigned course readings. The second approach also consisted of multiple choice questions, but these questions were of an application orientation and required interpretation of business situations. Students answered a total of 10 questions that were asked as part of an in-class exercise. The criterion used to determine if a student exceeded expectations was a score of 90.0% or better, for a student to meet expectations a score had to fall between 70.0 and 89.0%, and for a student to fail to meet expectations a score had to be less than 70.0%.

***Finance 3312***. All teaching faculty of the course collaboratively agreed on questions involving critical/analytical thinking for financial problems on exams for this assessment. When determining the assessment questions, previous assessment questions were considered for continuity. The data were aggregated for all sections, and a score of 90% ‘exceeded expectations, 70% to 89% ‘met expectations’, and 69% and below ‘did not meet expectations’.

***Management 3353***. To assess student learning of Program Goal 2 (critical thinking), three forms of direct method assessment were used:

1. Analytical writing assignment, graded with a common rubric
2. Combination multiple choice & true/false exam of 10 standardized questions that covered critical thinking of business communication topics
3. Oral presentation summarizing research findings graded with a common rubric

For assessment purposes, four sections of MGT 3353/3453 were included in a representative sample of students enrolled at the main campus. This includes two large lectures (with 16 associated labs of ~25 students each) and two combined lecture/lab sections, all taught by day, totaling 455 students enrolled in Fall 2015 and Spring 2016.

The following criteria were used to determine if students exceeded, met, or failed to meet expectations:

* Exceeded expectations = students who earned 90 percent or better
* Met expectations = students who earned between 80 and 89 percent
* Below expectations = students who earned below 80 percent

***Marketing 3343***. The assessment of student learning consisted of ten embedded questions in the final exam that required students to take information given in the question, use deductive reasoning, consider multiple alternatives, and compare possible solutions given the constraints listed in the information available to them. These ten questions were embedded in a 100 question exam. The criteria used to determine if a student exceeded expectations was a score of 90% or better. A student who met expectations had to have a percentage of correct answers between 70% and 89%. Those who failed to meet expectations had scores below 70%.

***CIS 3380***. To assess student learning of program goal 2, one form of direct assessment was used. This assessment/exercise provide learning opportunities in which student to access data sets, manipulate the data and make decisions based upon first hand individual discovery during the data investigation. The assessment consists of student completing assignment/exercise using Excel spreadsheet and Access database. The students export data from the database to Excel (technology skill), creates appropriate pivot tables (technology and critical skills) and uses pivot tables to make decisions (analytical, critical and reflective skills) regarding improving sales at a grocery store chain.

The criteria used to determine if a student exceeds expectations was a score of 80% or greater, for a student to meet expectations the score had to fall between 60.0-% and 79.9%, and for a student to fail to meet expectations the score had to fall below 60%.

***Management 4335***. Students work individually on a strategic analysis of a major corporation. This culminates in a written paper addressing corporate- and business-level analyses (including financial analyses), recommendations, tables, and references. Students also analyze a current business situation, including the historical background, all pertinent data, internal and external analysis, and recommendation. This is presented to the class in an oral presentation of approximately 45 minutes in length. Assignments are evaluated on a common rubric, and a score of 90% or greater ‘exceeds expectations’, 70% to 89% ‘meets expectations’, and 69% and below ‘does not meet expectations’.

**Results for Program Goal 2—Critical Thinking**

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| **Course and evaluation method** | **Students evaluated** | **% Failing to Meet** | **% Meeting** | **% Exceeding** | **% Meeting or Exceeding** | **% Meeting or Exceeding 2013** |
| **ACC 2361** - common test questions/problems | 443 | 32.51% | 44.02% | 23.48% | 67.49% | 64.86% |
| **ACC 2362** - common test questions/problems | 747 | 22.22% | 55.15% | 22.62% | 77.78% | 76.05% |
| **ECO 2314** - multiple approaches | 634 | 55.99% | 20.03% | 23.97% | 44.01% | 46.00% |
| **ECO 2315** - multiple approaches | 527 | 54.81% | 20.38% | 24.81% | 45.19% | 59.50% |
| **QMST 2333** - application/problem questions | 1008 | 32.84% | 46.13% | 21.03% | 67.16% | 84.00% |
| **BLAW 2361** - common test questions/problems | 527 | 19.17% | 33.78% | 47.06% | 80.83% | 67.95% |
| **MGT 3303** - terms/applications exam questions | 376 | 30.05% | 43.88% | 26.06% | 69.95% | 86.00% |
| **FIN 3312** - common test questions/problems | 369 | 34.69% | 33.33% | 31.98% | 65.31% | 81.00% |
| **MGT 3353** - analytical report/presentation | 455 | 35.38% | 23.96% | 40.66% | 64.62% | 88.01% |
| **MKT** **3343** - common test questions/problems | 1891 | 16.08% | 44.69% | 39.24% | 83.92% | 88.08% |
| **CIS** **3380** -application/problem questions | 1041 | 17.00% | 13.64% | 69.36% | 83.00% | 81.42% |
| **MGT** **4335** - corporate strategy analysis | 242 | 9.50% | 56.61% | 33.88% | 90.50% | 92.00% |

***Round Rock Classes Results.***

Some core class sections were taught at the Round Rock campus during the 2012-2013 academic year measuring goal 2. Methodologies and standards of performance are the same as stated previously.

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| **Course and evaluation method** | **Students evaluated** | **% Failing to Meet** | **% Meeting** | **% Exceeding** | **% Meeting or Exceeding** |
| **MGT 3303** - terms/applications exam questions | 45 | 33.33% | 44.44% | 22.22% | 66.67% |
| **FIN 3312** - common test questions/problems | 46 | 28.26% | 34.78% | 36.96% | 71.74% |
| **MGT 3353** - analytical report/presentation | 59 | 32.20% | 33.90% | 33.90% | 67.80% |
| **MKT** **3343** - common test questions/problems | 280 | 30.36% | 24.64% | 45.00% | 69.64% |
| **MGT** **4335** - corporate strategy analysis | 59 | 6.78% | 66.10% | 27.12% | 93.22% |

***Methods for BBA Program Goal 3 – Information Technology***.

***CIS 1323***. To assess student learning of the program goal, a direct method consisting of two homework assignments (one Excel project and one Access project) and a department assessment exam were used. The homework assignments were assigned by faculty as the student progressed through the course term, each was auto-graded using a common rubric by the course simulation software. While faculty offer the student multiple attempts, only the first attempt was evaluated for this report. The department assessment was a cumulative hands-on exam utilizing the course simulator software, administered during the last two weeks of the course term. The criteria agreed upon by the course faculty to determine if a student exceeds expectations was a score of 90% or better, a student meets expectations if a score fell between 70% and 89%, and a student fails to meet expectations if a score was less than 70%.

***Qmst 2333 (Statistics)***. To assess student learning of the program goal faculty used a direct method consisting of a common assignment, developed by all teaching faculty, requiring students to use Excel to analyze and graph statistical data. The criteria used to determine if a student exceeds expectations were a score of 95.0% or better, for a student to meet expectations a score had to fall between 70.0 and 95.0%, and for a student to fail to meet expectations a score had to be less than 70.0%.

***CIS 3380***. To assess student learning of program goal 3, one form of direct assessment was used. The assessment consists of student completing assignment/exercise using enterprise software, ERP. This assessment explores students to key processes that are common in most companies, and illustrates to them how enterprise systems enable companies to execute those processes quickly and efﬁciently. The main objective of this assessment is to bridge the gap between the fundamentals of how businesses operate (processes) and the tools that business people use to accomplish their tasks (enterprise systems).

The criteria used to determine if a student exceeds expectations was a score of 80% or greater, for a student to meet expectations the score had to fall between 60.0-% and 79.9%, and for a student to fail to meet expectations the score had to fall below 60%.

***Finance 3312***. All teaching faculty of the course collaboratively agreed on questions involving the use of information technology for financial problems on exams. The data were aggregated for all classes, and 90% ‘exceeded expectations, 70% to 89% ‘met expectations’, and 69% and below ‘did not meet expectations’.

***Results for Program Goal 3—Information Technology***

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| **Information Technology** |   |
| **Course and evaluation method** | **Students evaluated** | **Failing to Meet** |  **Meeting** | **Exceeding** | **Meeting or Exceeding** | **Meeting or Exceeding 2013** |
| **CIS 1323** - Excel manipulation assignments | 779 | 41.32% | 39.69% | 18.99% | 58.68% | 78.70% |
| **QMST 2333** - Excel applications | 1008 | 41.96% | 10.91% | 47.12% | 58.04% | 70.08% |
| **CIS** **3380** - Direct usage/observation | 1041 | 15.27% | 11.24% | 73.49% | 84.73% | 81.42% |
| **FIN 3312** - Technology exam questions | 415 | 6.51% | 28.19% | 65.30% | 93.49% | 73.00% |

***Comments and Observations.***

1. Most notable are the declines in the percentage of students meeting or exceeding expectations across multiple courses. Four courses for Goal 2 and two for Goal 3 showed declines of more than 10 percentage points in the students meeting or exceeding expectations compared to 2013. The committee would like to see a plan from the respective departments detailing changes that will be made going forward in response to these results.
2. The initial Accounting and Economics courses appear to be below benchmarks of upper division courses for direct critical thinking assessment. While these are lower-level courses consisting mainly of freshman and sophomore students core course teaching groups are nonetheless encouraged to review critical thinking learning outcomes, examine direct assessment instrument in light of Bloom’s taxonomy and overall levels of difficulty, and teaching delivery methods and teaching methodologies.
3. It is also notable that the poorest performance with regard to Information Technology appears in the lower-level courses. The differences between the two lower-level courses and the two upper-level courses is striking. Some of that would be expected, but more discouraging is the drop in those courses relative to 2013. One potential factor is the removal of the IT requirement at the high school level. This change has unquestionably reduced the exposure that incoming students have had to Office programs. It is likely that this change is a factor in the results.