

Texas State University-San Marcos  
Academic Program Student Learning Outcomes Assessment

**Year** 2008-2009  
**College/Division** Business  
**Department/Unit** Accounting  
**Program Name/Department** Accounting and Information Technology (MS)  
**Program Code** 557G MS  
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**Mission Statement**

The mission of the Master of Science in Accounting Information Technology (MSAIT) program is to prepare students for successful careers in the accounting and information technology professions. Many students will be eligible to sit for professional certification exams, such as CPA, CISM, CITP, CIA, AFE and others. The MSAIT program emphasizes oral and written communication, information technology, and technical and research skills needed for a careers in accounting and information technology.

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**Evidence of Improvement**

The MSAIT program was started in 2006, with first enrolled students in fall 2007. The first year in which all courses were developed and taught was 2008-2009. One student completed the program in spring 2009 and another will finish in summer 2009. The first two students graduating in 2009 took and passed an exit exam. The assessments for the year provide beginning benchmarks for future assessment efforts. Faculty will work to refine outcomes and alignment in the different courses. The assessment plan will be updated accordingly.

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**Outcome Number 1**

Students will demonstrate applying accounting and information technology knowledge in new and unfamiliar circumstances. To fulfill this outcome, the student will correctly analyze the problem, develop and explain findings, and justify a conclusion or recommendation.

**Method 1**

Assessment of a student's ability to apply accounting and information technology knowledge in new and unfamiliar circumstances will be conducted in the following ways.

In ACC 5362 (Cost Accounting), ACC 5371 (Accounting Information Systems), and ACC 5373 (Fraud Detection and Prevention), embedded exam and final exam questions will be used. It is expected that 80% of the students will make an 80% or better on these questions.

CIS 5355 (Database Management Systems), CIS 5358 (IT Systems Project Management), and CIS 5368 (Information Security) will use a rubric to evaluate a set of out-of-class individual assignments/projects and exam-embedded questions. It is expected that 70% of the students will make 85% or better.

**Result 1**

ACC 5362 was not taught during 2008-2009. In fall and spring sections of ACC 5371, 8 MSAIT graduate students did an information system controls case; 94% met or exceeded expectations. In fall and spring, 7 MSAIT graduate students in ACC 5373 analyzed cases on detecting fraud in different scenarios and were tested on the greed and fraud differences, auditing and fraud examination differences, and investigation for hidden assets in a divorce; 85.7% of students met or exceeded expectations.

CIS 5355 was offered only during fall 2008 semester. During the semester, 9 MSAIT graduate students completed an assignment to conceptualize and implement a relational database schema for a specified scenario. In addition, students answered several questions embedded in examinations that assessed the database normalization principles and process. Of the students who were assessed, 16% of exceeded expectations while the other 84% met expectations. Overall, 100% of students met or exceeded expectations based on the rubric used.

In fall and spring sections of CIS 5358, a total of 4 MSAIT graduate students were enrolled and assessed on strategic project planning process, project scope control, and different project selection methods. 100% met or exceeded expectations based on the rubric used.

CIS 5368 was offered only during spring 2009 semester. Of the 21 graduate students enrolled, 5 were in the MSAIT program. The students completed a case study requiring students to resolve security issues with planning and implementing a new data center. They also answered an essay question on planning and implementing security measures. Overall, 80% met or exceeded expectations while 20% failed to meet expectations based on the rubric used.

**Method 2**

Additional assessment of this outcome will be accomplished as follows.

In ACC 5375 (Business Consulting), juried projects will be used to assess students' ability to apply accounting and IT knowledge. The projects will be graded by a jury of external business people according to an established rubric. It is expected that projects meet an 80% acceptance level.

CIS 5370 (Enterprise Resource Planning) will use a rubric to evaluate a set of in-class and out-of-class exercises wherein students create, in a real ERP system, an organizational structure and an accounting system structure to process and enter transactions and observe results for a business. It is expected that 70% of the students will make 85% or better on these exercises to demonstrate mastery of this outcome.

**Result 2**

In a spring section of ACC 5375, 3 MSAIT students presented consulting projects to external clients; 66.7% of the students met the client's expectations.

CIS 5370 was offered only in spring 2009 semester. Eleven MSAIT graduate students applied accumulated knowledge of ERP, its context, and business processes to a case involving implementation decisions; understanding how a specific ERP system implements the production logistics process and how that process is integrated with the procurement process; 90.9% met or exceeded expectations on this assignment.

**Action Plan**

Faculty observations are that students are able to apply appropriate accounting and information systems knowledge in new and unfamiliar situations. Some students are uncomfortable in such situations; others can apply the accounting and information systems knowledge but are hesitant to draw conclusions. This is especially true in CIS 5355, CIS 5368, and CIS 5370 where we had a small percentage unable to meet expectations. To facilitate the application of

accounting and information systems knowledge in new and unfamiliar situations, faculty will adjust course goals and refine assessment methods to track student improvement.

Based the results, the program faculty plan to continue challenging the students to apply accounting and information systems in new and unfamiliar situations. The courses, such as ACC 5375, have implemented, and will continue to implement, projects consulting with actual businesses.

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## **Outcome Number 2**

Students will apply analytical and critical thinking skills to evaluate information, solve problems, and make sound decisions in accounting and information technology problems. To accomplish this outcome, the student will synthesize and evaluate the relevance of data and demonstrate analytical and critical thinking skills in exploring new questions, analyzing complex issues from multiple perspectives and arrive at reasoned conclusions.

### **Method 1**

Analytical and critical thinking skills will be assessed in the following ways.

In ACC 5362 (Cost Accounting), ACC 5371 (Accounting Information Systems), and ACC 5373 (Fraud Detection and Prevention), embedded exam and final exam questions and cases will be used. It is expected that 80% of the students will make 80% or better on these questions.

### **Result 1**

ACC 5362 was not taught during 2008-2009. In fall and spring sections of ACC 5371, 8 MSAIT graduate students were tested on transaction cycles, computer fraud, internal controls, IS auditing, databases, XBRL, and system analysis and design; 87.5% met or exceeded expectations. In fall and spring, 7 MSAIT graduate students in ACC 5373 were tested on the auditing and fraud examination applications and wrote up cases on detecting fraud in different scenarios; 85.7% met or exceeded expectations.

### **Method 2**

ACC 5375 (Business Consulting) will use term papers and juried projects. A common rubric will used to assess performance. It is expected that 80% of the students will analyze and display critical thinking in the papers and projects at the 80% level. It is expected that the jury of external business people will judge the projects to be at the 80% level.

CIS 5358 (IT Systems Project Management) and CIS 5368 (Information Security) will use a combination of out-of-class individual assignments/projects and exam-embedded questions. The instructors will use a common rubric to evaluate this set of out-of-class assignments. It is expected that 70% of the students will make 85% or better on these evaluations.

### **Result 2**

In a spring section of ACC 5375, 3 MSAIT students wrote consulting project proposals for external clients; 100% met or exceeded expectations.

In fall and spring sections of CIS 5358, a total of 4 MSAIT graduate students were enrolled. These students completed an exercise on developing and analyzing different types of project cost estimates as well as responded to several questions on an examination pertaining to Earned Value Analysis. 90% met or exceeded expectations based on the rubric used.

CIS 5368 was offered only during spring 2009 semester. Of the 21 graduate students enrolled, 5 were in the MSAIT program. The students completed a project comparing physical and virtual risk management techniques for a specified scenario and responded to an essay question pertaining to nine steps of Risk Assessment on an exam to assess if students are able to arrive at a decision based on critical thinking and analysis. Overall, 80% met or exceeded expectations while 20% failed to meet expectations based on the rubric used.

### **Action Plan**

Faculty observations are that students are able to analyze and critically think in exploring new questions, analyzing complex issues from multiple perspectives and arrive at reasoned conclusions. Some students can apply the accounting and information systems knowledge, but are hesitant to draw conclusions. To facilitate the analysis and critical thinking of accounting and information systems knowledge to draw reasoned conclusions, faculty will adjust goals and refine assessment methods to track student improvement.

Based the results, the program faculty plan to stress the application of analytical and critical thinking skills in accounting and information systems situations to arrive at reasoned conclusions. Faculty in accounting and CIS are working together to develop databases and projects that will be used in both the accounting and CIS classes. The timeline by the SEC to have all public companies to use XBRL for all public companies provides current relevance of the projects in ACC 5371 and ACC 5375 to develop accounting systems to capture and describe data.

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## **Outcome Number 3**

Students will use information technology skills in decision making at a level expected of a master's student for practice and research in accounting and information technology used in a business consulting capacity. To fulfill this outcome, the student will learn to use information technology (IT) and be able to apply IT in analysis and communication.

### **Method 1**

IT skills will be evaluated in the following ways.

In ACC 5362 (Cost Accounting), ACC 5371 (Accounting Information Systems), and ACC 5373 (Fraud Detection and Prevention), embedded exam and final exam questions and cases will be used. It is expected that 80% of the students will score 80% or better on these questions.

CIS 5355 (Database Management Systems), CIS 5358 (IT Systems Project Management), CIS 5368 (Information Security) will use exam-embedded questions. It is expected that 70% of the students will make 85% or better.

### **Result 1**

ACC 5362 was not taught in 2008-2009. In fall and spring sections of ACC 5371, 8 MSAIT graduate students did an IT controls cases and database project; 87.5% met or exceeded expectations. In fall and spring, 7 MSAIT graduate students in ACC 5373 were tested on auditing systems; 85.7% met or exceeded expectations.

CIS 5355 was offered only during fall 2008 semester. During the semester, 9 MSAIT graduate students completed assignments and responded to several questions on examinations to conceptualize, develop, and execute SQL queries against a database. 90% met or exceeded expectations based on rubric used.

In fall and spring sections of CIS 5358, a total of 4 MSAIT graduate students were enrolled. These students used Microsoft Project software to create Gantt Charts and Work Breakdown Structures. In addition, they responded to several exam-embedded questions pertaining to the use of Microsoft Project. 100% met or exceeded expectations based on the rubric used.

CIS 5368 was offered only during spring 2009 semester. Of the 21 graduate students enrolled, 5 were in the MSAIT program. The students completed two exercises to assess student's ability to use IT skills at an appropriate level. These included a case study addressing the need for information security for a hypothetical scenario and an essay question pertaining to Business Impact Analysis on an examination. The percentage of students meeting or exceeding expectations ranged from 80% to 100% on each individual exercise based on rubrics used. Overall, 80% met or exceeded expectations.

#### **Method 2**

ACC 5375 (Business Consulting) will use term papers and juried projects. It is expected that 80% of the students will use IT and apply IT in analysis and communication at the 80% level. It is expected that the jury of external business people will judge the projects at 80% or better level.

CIS 5370 (Enterprise Resource Planning) will use a large set of in-class and out-of-class exercises wherein students create, in a real ERP system, an organizational structure and an accounting system structure to process and enter transactions and observe results for a business. The instructor will use a rubric to evaluate in-class and out-of-class exercises. It is expected that 70% of the students will make 85% or better.

#### **Result 2**

In a spring section of ACC 5375, 3 MSAIT students prepared spreadsheets, electronic survey instruments and PowerPoint presentations for external clients; 100% met or exceeded expectations.

CIS 5370 was offered only in spring 2009 semester. Eleven MSAIT graduate students applied accumulated knowledge of ERP, its context, and business processes to a case involving implementation decisions; understanding how a specific ERP system implements the production logistics process and how that process is integrated with the procurement process; 90.9% met or exceeded expectations on this assignment.

#### **Action Plan**

Faculty observations are that students gain confidence and experience in using new IT software. The students seem to be challenged when dealing with the use of IT skills in analyzing and assessing security risks in information systems. The projects will be refined and expanded.

Based the results, the program faculty plan to continue the use of IT projects in the appropriate classes. Faculty are working to refine goals, expand projects, and provide a detailed grading structure and expectations of levels for each class. ACC 5371 is adding a project using Microsoft Dynamics software. In addition, CIS 5368 faculty will revise course contents to emphasize a walkthrough of security controls in systems development.

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### **Outcome Number 4**

Students will conceptualize a complex issue into a coherent, persuasive written or oral statement. To fulfill the written portion of the outcome, the student will develop well-written reports, memos, and projects that explain findings, organize ideas into a coherent train of thought, and justify a conclusion or recommendation. To fulfill the oral portion, the student will make effective oral presentations that explain findings, organize ideas into a coherent train of thought, and justify a conclusion or recommendation.

#### **Method 1**

Written and oral communication skills will be assessed in the following ways.

In ACC 5362 (Cost Accounting), ACC 5371 (Accounting Information Systems), and ACC 5373 (Fraud Detection and Prevention) written cases and papers will be used. ACC 5375 (Business Consulting) will use term papers and juried projects. It is expected that 80% of the students will make an 80% or higher on written communication skills.

CIS 5358 (IT Systems Project Management), CIS 5368 (Information Security) will use out-of-class individual assignments/projects. The instructor will use a rubric to evaluate the set of out-of-class assignments. It is expected that 70% of the students will make 85% or better.

#### **Result 1**

ACC 5362 was not taught in 2008-2009. In fall and spring sections of ACC 5371, 8 MSAIT graduate students wrote cases on systems design and appropriate system controls; 75% met or exceeded expectations. In fall and spring, 7 MSAIT graduate students in ACC 5373 wrote cases and projects on detecting fraud in different scenarios; 71.3% met or exceeded expectations. Both of these measures are below expected level of performance. In a spring section of ACC 5375, 3 MSAIT graduate students wrote client proposals and reports; 100% met or exceeded written communication expectations.

In fall and spring sections of CIS 5358, a total of 4 MSAIT graduate students were enrolled. These students prepared and presented an executive summary on an initial assessment of various alternative projects using the weighted scoring model for C-level review. 100% met or exceeded expectations based on the rubric used.

CIS 5368 was offered only during spring 2009 semester. Of the 21 graduate students enrolled, 5 were in the MSAIT program. To assess this learning outcome, students completed a written report on a short case study in which they had to critically address security risks involved when a company off-shores its information systems development projects. 80% met or exceeded expectations based on the rubric used.

#### **Method 2**

Oral communication skills will be assessed through student presentations in ACC 5375 (Business Consulting). It is expected that the jury of external business people will judge the oral presentations of the projects at the 80% or higher level.

#### **Result 2**

In the spring section of ACC 5375, 3 MSAIT graduate students made a proposal and final presentations to the external client; 100% met or exceeded oral communication expectations.

#### **Action Plan**

Faculty observations are that students can conceptualize a complex issue into a coherent, persuasive written or oral statement; that students become more effective communicators and gain poise with practice. The percentage meeting or exceeding expectations in CIS 5368 was observed to be somewhat low primarily due to less than adequate familiarity with off-shoring issues. CIS 5368 faculty will expand the topical coverage on security risks in off-shoring. The written cases, projects presentations will be refined and expanded.

Based the results, the program faculty plan to continue the written and oral communications in the appropriate classes. ACC 5373 plans to grade drafts of papers so that the final papers will meet expectations. ACC 5375 plans to expand the input on the written final project by the clients.

**Outcome Number 5**

Students will understand the importance of group dynamics in achieving organizational goals and use the skills needed for effective teamwork. To accomplish this outcome, students will demonstrate an ability to work effectively in teams.

**Method 1**

Teamwork skills will be assessed in ACC 5375 (Business Consulting). This course will use teams on juried projects. It is expected that 80% of the teams will display quality team skills as judged by the team members, external business people and instructor.

**Result 1**

In a spring section of ACC 5375, 3 MSAIT students worked in teams on juried projects for external clients; 100% met or exceeded expectations.

**Method 2**

CIS 5358 (IT Systems Project Management) will use three out-of-class group projects to assess this skill, using a rubric agreed upon by faculty. It is expected that 70% of the students will make 85% or better.

**Result 2**

In fall and spring sections of CIS 5358, 4 MSAIT graduate students worked in teams on developing a project management plan for a hypothetical project. 100% met or exceeded expectations based on the rubric used.

**Action Plan**

Faculty observations are that students worked well in team projects. Based the results, the program faculty plan to continue the use of team projects in the appropriate classes. The evaluation of team projects in ACC 5373 and 5375 by team members will be part of the class evaluation. ACC 5375 will move up the final presentation of projects to the clients so that the final will be a debrief and discussion of group dynamics, things that went right and wrong, and formalized feedback from the clients. Faculty are working to refine goals and provide a detailed grading structure and expectations of levels for each class.

**Outcome Number 6**

Students will apply ethical reasoning for resolution of ethical dilemmas of accounting and information technology. To satisfy this outcome, the student will be able to recognize an ethical dilemma, apply ethical reasoning to resolve it and provide support for the resolution and effects on stakeholders.

**Method 1**

Ethical issues will be assessed in ACC 5373 (Fraud Detection and Prevention) through the use of cases. It is expected that 80% of the students will be 80% correct in identifying the dilemma, applying ethical reasoning and providing support for the resolution.

**Result 1**

In fall and spring, 7 MSAIT graduate students in ACC 5373 were assessed on the fraud triangle and controls to encourage employees to be honest; 85.7% met or exceeded expectations.

**Method 2**

CIS 5368 (Information Security) will use a combination of out-of-class individual assignments/projects and/or exam-embedded questions. The instructor will use a rubric to evaluate this set of out-of-class assignments and exam-embedded questions. It is expected that 70% of the students will make 85% or better.

**Result 2**

CIS 5368 was offered only during spring 2009 semester. Five MSAIT students completed an assignment on intellectual copyright violation to assess if students can recognize and resolve an ethical dilemma. 80% met or exceeded expectations based on the rubric used.

**Action Plan**

Faculty observations are that students can apply ethical reasoning in resolution of ethical dilemmas of accounting and information technology. The cases and projects will be refined and expanded.

Based the results, the program faculty plan to continue the discussion and assessment of ethical dilemmas in accounting and information systems situations in the appropriate classes. The economy is providing current, relevant examples of ethical dilemmas faced by accounting and information systems professionals. ACC 5373 is working to bring guest speakers on a regular basis to the program to highlight these dilemmas.

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