

Bachelor of Applied Technology Programs Assessment South Texas College Experience

Convergence: Assessment and Applied Bachelors
Movements

“Applied”

University/Community Colleges Experiences

Community Colleges Reasons:
Practical Reason
Pure Reason

Assessment Programs in Community Colleges

The Assessment of the Bachelor of Applied Technology
in Technology Management at South Texas College



**Bachelor of Applied Technology
in
Technology Management**

**Student Learning Outcome Assessment
Graduation Class 2007**

A. Mission and Goals Statement

The Bachelor of Applied Technology Degree (B.A.T.) in Technology Management will educate, train, and develop successful supervisors who will be prepared to utilize technology to create a competitive advantage for their enterprise. Coursework is balanced between practical training and working with real-life projects that enhance the educational experiences and employment potential for students. The breadth of the coursework enables each graduate to lead and manage by utilizing a wide variety of business, finance, technology and human resource development skills.

The Bachelor of Applied Technology in Technology Management prepares students to:

- Supervise and manage the financial operations of a business;
- Utilize management and motivational theories to enhance the performance of employees and work-teams;
- Use project and quality management strategies to successfully manage and secure organizational resources;
- Apply oral and written communication skills and leverage technology to enhance communications;
- Manage the organization or the business unit within legal and ethical boundaries;
- Employ creative and critical thinking processes to resolve problems of the business unit;
- Use appropriate electronic commerce strategies to enhance the profitability of the organization;
- Exhibit analytical thought, informed judgment, ethical behavior, and an appreciation for diversity;
- Utilize appropriate information technology systems to enhance organizational performance;
- Understand the challenges involved in conducting international business and its impact on the future growth of the organization.

B. Student Learning Outcomes

The major in Technology Management in the STC Bachelor of Applied Technology program focuses the evaluation of student learning outcomes in the major upper level courses. Each required course must emphasize the achievement of a specific learning outcome. The college level assessment of basic academic skills is evaluated using the ACT College Assessment of Academic Proficiency (CAAP) testing.

Upon completion of the program graduates will be able to:

1. Supervise and manage the financial operations of a business; TMGT 3338 Accounting for Technical Managers
2. Utilize management and motivational theories to enhance the performance of employees and work-teams; TMGT 3305 Organizational Theory and Practice
3. Use project and quality management strategies to successfully manage and secure organizational resources; TMGT 3312 Resource Management
4. Apply oral and written communication skills and leverage technology to enhance communications; TMGT 3303 Communications for Technical Managers
5. Manage the organization or the business unit within legal and ethical boundaries; TMGT 3336 Legal Issues for Technical Managers
6. Employ creative and critical thinking processes to resolve problems of the business unit; TMGT 3310 Decision Making
7. Use appropriate electronic commerce strategies to enhance profitability of the organization; TMGT 3411 Technology in Enterprise Management
8. Exhibit analytical thought, informed judgment, ethical behavior, and an appreciation for diversity; TMGT 4320 Organizational Design and Management Seminar
9. Utilize appropriate information technology systems to enhance organizational performance; TMGT 3302 Business and Economics Statistics
10. Understand the challenges involved in conducting international business and its impact on the future growth of the organization; TMGT 3337 Economics for Technical Managers
11. Obtain hands-on training and apply concepts and theories in a workplace setting; TMGT 4347 Capstone: Production and Inventory Planning and Control or TMGT 4396 Capstone: Managing Technology Projects

Assessment Tools

1. CAAP Test:

In order to assess the progress in basic college level academic skills, a nationally recognized test was administered twice; one when students started the upper level course work, a second time during their last semester. The test was the ACT College Assessment of Academic Proficiency (CAAP) test, and students were assessed specifically on writing, critical thinking, and mathematical skills. The benchmark was a comparison to the national mean on those three specific areas.

2. Student case-work projects:

This was a semester long assignment of applied nature that required periodical reports and a final professional delivery. This was a mandatory assignment in each of the upper level required courses. The case-work project addressed the student learning outcome that each course emphasizes.

Each faculty decided the weight of this assignment in the student grade for the course. However, the faculty provided a separate evaluation of the assignment for assessment of the student learning outcome.

3. Faculty report on students skills and competencies:

This was a written report in which each instructor provided an evaluation of the student level of competency on specific professional skills. This is a mandatory report in all upper level required courses.

Student skill and competencies are defined as it follows:

- **Student Skills Outcome Assessment: Faculty Input**
- **Fields of skills:**

a) Comprehension:

This is an assessment of the student understanding of fundamental concepts of a discipline in relation to the broad field of Technology Management. This is not an evaluation of correct answers knowledge, but an assessment of articulated use of basic concepts.

b) Communication:

An assessment of the ability to receive and provide information:

- Oral skills: Effective use of common language in professional settings.
- Written skills: Ability to write professional reports and use academic documents.
- Presentation skills: Ability to deliver professional public reports.

c) Team Work:

An assessment of the ability to work as a team member:

- Cooperation: Ability to contribute to the team goals.
- Leadership: Ability to provide guidance and coordination to the teamwork.

d) Technology:

An assessment of the ability to understand the role and function of technologies:

- Knowledge: Identification of technological possibilities; pro's and contra's
- Application: Ability to use problem-solving technology approaches.

e) Professionalism:

An assessment of professional behavior:

- Manners: Appropriate decorum in relationships; language, gesture, dressing, punctuality, and others.
- Ethical: Honesty, respect, integrity.

Procedure

Each faculty teaching a required upper level course deliver a written student skills report for each student in the class.

The report has a scale point system for each of the five fields of skills we are trying to assess. In addition, each faculty is free to provide a written commentary on each student level of professional skills.

4. Capstone Internship

The last semester in the Technology Administration bachelor program, students enrolled in a senior capstone course. The main assignment in this course is an internship in a real workplace. The purpose is to apply project management, negotiation and conflict resolution, organizational behavior, risk management, production and materials management, and quality concepts, as well as legal, ethical, and safety considerations, by working on a semester-long project design assignment as a team leader or active team member. The instructor of the capstone worked in coordination with an in site manager supervisor. Each supervisor delivered a written report of the student professional performance.

5. Professional profile analysis:

The second assignment in the senior capstone was the development of a professional profile. This assignment implied two specific tasks: one, the preparation of a portfolio, second, the participation in a Mock Interview.

I) Portfolio Components:

a) Student course work analysis:

- General Education
- Technical courses
- Upper Level required courses
- Upper Level electives

b) Upper Level case work projects analysis:

- All casework projects final reports (mandatory in required courses)
- A rational link among at least three of the casework projects

c) Faculty evaluation of student professional skills:

- All faculty written reports on student skills proficiency (mandatory in required courses)

d) Work experience analysis:

- Review and discuss all students working experience

e) Curriculum vitae:

- A required task between student and instructor during the Capstone course

II) Mock interview:

- Preparation of an application, letter and a resume
- Participation in a mock interview with attendance of instructors, placement officers, and advisory committee members

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 1. Supervise and Manage the Financial Operations of a Business

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 3338 Accounting for Technical Managers	Casework Project Use of: <ul style="list-style-type: none"> • Accounting information • Managerial Financial Concepts 	Grade B or better	75%	Fall 2006 Summer II 2007	David Laurel	<u>Chair: Oscar Plaza</u> Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	21% 92% 88% 100% 92%		David Laurel	

Results: Summer 2007

This assessment is based on the first cohort of graduates (15). Overall, students were able to demonstrate understanding of the subject matter (good reporting). However, students have difficulties handling the raw materials of the course (accounting procedures).

Actions: Fall 2007

Based on the analysis of the results the idea is to continue with the coursework project as the main assessment tool. However, more hands-on exercise in the classroom will be added in order to improve the understanding of accounting operations. Given the managerial approach of the course content, we suggest a change in the course name.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 2. Utilize Management and Motivational Theories to Enhance the Performance of Employees and Work-Teams

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 3305 Organizational Theory and Practice	Casework Project: <ul style="list-style-type: none"> • Understanding of basic Management Theory Concepts • Real case application 	Grade B or better	94%	Spring 2006	Keith Kutner	<u>Chair:</u> Oscar Plaza Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	83% 100% 94% 100% 87%	Summer I 2006 Summer II 2007	Keith Kutner Benito Garza	

Results: Summer 2007

Assessment based on the first cohort of graduates (15). Students demonstrated competence in analyzing management issues (good casework reports). However, students require improvement in management theory concepts.

Actions: Fall 2007

The main change was to go into a different textbook. The new textbook emphasizes the basic management theory concepts and provides a good basic vocabulary to converse about management.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 3. Use Project and Quality Management Strategies to Successfully Manage and Secure Organizational Resources

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 3312 Resource Management	Casework Project • Applied operation management case	Grade B or better	84%	Fall 2006	Keith Kutner	<u>Chair:</u> Oscar Plaza
	Faculty Report: • Comprehension • Communication • Teamwork • Technology • Professionalism	Satisfactory or better	93% 89% 89% 93% 89%	Spring 2007	Bradley Altemeyer	Department Curriculum Committee: • Ali Esmaeili • Benito Garza • Oscar Plaza

Results: Summer 2007

This is an assessment based on the first graduates cohort (15). It was observed that students have difficulties in grasping the concept of operation management. However, once the subject matter of the course was understood, students performed well with assignments.

Actions: Fall 2007

The course will emphasize the overall concept of operation management. From there, it will move toward the procedures to manage resources efficiently.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 4. Apply Oral and Written Communication Skills and Leverage Technology to Enhance Communications

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 3303 Communications for Technical Managers	Casework Project	Grade B or better	78%	Fall 2005	Keith Kutner	<u>Chair: Oscar Plaza</u> Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza
	<ul style="list-style-type: none"> • Demonstrate Professional Reporting • Analytical Skills 			Fall 2006	Kimberly Johnson	
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	88% 86% 89% 94% 89%			
	<ul style="list-style-type: none"> • CAAP Composite Writing 	Above National Mean	80%	Fall 2005	Keith Kutner	

Results: Summer 2007

This assessment is based on the first graduate cohort (15). Students demonstrated competence in achieving professional level reporting. However, students need to improve critical thinking skills.

Actions: Fall 2007

This course should continue its emphasis on developing oral and written communication skills and making full use of communication technologies. The analytical and critical skills should be taking into consideration. However, those skills are multidisciplinary in nature, therefore, a better coordination with other courses should be sought, especially Decision Making. Attending to the business communication nature of the content, we suggest a change in the course name.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 5. Manage the Organization or the Business Unit within Legal and Ethical Boundaries

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 3336 Legal Issues for Technical Managers	Casework Project <ul style="list-style-type: none"> • Legal study and documentation of a start up business 	Grade B or better	95%	Spring 2006	Griselda Solis	<u>Chair:</u> Oscar Plaza
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	100% 95% 95% 100% 95%	Summer 2006	Truman Dean	Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza

Results: Summer 2007

This is an assessment based on the first graduate cohort (15). It was observed that students were able to comprehend well the subject matter of the course. Furthermore, with very few exceptions, students were able to demonstrate ability to deliver a professional report (casework project).

Actions: Fall 2007

This course should keep working on the same content and methodology. Given the nature of the content, business law, second level, we suggest a course name change.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 6. Employ Creative and Critical Thinking Processes to Resolve Problems of the Business Unit

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 3310 Decision Making	Casework Project: <ul style="list-style-type: none"> • Applied case of decision analysis 	Grade B or better	80%	Spring 2006	Keith Kutner	<u>Chair: Oscar Plaza</u> Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	93%	Summer 2006	Daniel Montez	
	<ul style="list-style-type: none"> • CAAP: Critical Thinking 	Above National Mean	33%	Fall 2005	Keith Kutner	
	<ul style="list-style-type: none"> • CAAP: Critical Thinking 	Above National Mean	33%	Fall 2005	Keith Kutner	

Results: Summer 2007

This is an assessment based on the first graduate cohort (15). Students were able to perform at good level in term of completion of assignments. However, students were not performing at a satisfactory level in critical thinking.

Actions: Fall 2007

Based on the analysis of the results, the content of this course is extremely necessary. In particular, this course will need to emphasize the critical thinking component. In an effort to address this issue, it was decided to change the textbook, selecting a very standard one with emphasis on critical thinking.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 7. Use Appropriate Electronic Commerce Strategies to Enhance Profitability of the Organization

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 3411 Technology in Enterprise Management	Casework Project Use of: <ul style="list-style-type: none"> • Technology Management Techniques • Software Management 	Grade B or better	88%	Fall 2006 Summer I 2006	Raquel Pena Gabriel Viera	<u>Chair:</u> Oscar Plaza Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	100% 94% 94% 94%			

Results: Summer 2007

This is an assessment based on the first graduate cohort (15). Students were able to demonstrate competence at an acceptable level in terms of assignments performance. However, several students did not perform equally well in terms of understanding the management process of information technologies.

Actions: Fall 2007

The content and procedure of this course will continue. However, in an effort to strengthen the information technology component of the course, a new textbook with emphasis in Information Technology Management, was adopted.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 8. Exhibit Analytical Thought, Informed Judgment, Ethical Behavior, and Appreciation for Diversity

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 4320 Organizational Design and Management Seminar	Casework Project <ul style="list-style-type: none"> • Design a case study of organizational design 	Grade B or better	95%	Fall 2006	Oscar Plaza	<u>Chair:</u> Oscar Plaza
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	79% 84% 84% 100% 89%	Summer II 2007	Oscar Plaza	Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza

Results: Summer 2007

This assessment is based on the first cohort of graduates (15). Students were able to demonstrate competence at analyzing case studies of organizational design. Yet, several students have difficulties at grasping the discussion nature of a seminar course.

Actions: Fall 2007

The content and methodology of this course will continue. More emphasis and explanation will be given to the seminar nature of the course.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 9. Utilize Appropriate Information Technology Systems to Enhance Organizational Performance

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 3302 Business and Economics Statistics	Casework Project <ul style="list-style-type: none"> • Design a simple business statistical research • Statistical analysis of data 	Grade B or better	83%	Fall 2005	M. Kazerani	<u>Chair:</u> Oscar Plaza
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	95%	Fall 2006	M. Hassanpour	Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza
			95%			
			88%			
• CAAP: Mathematics	Above National Mean	13%				

Results: Summer 2007

This evaluation is based on the first cohort of graduates (15). Overall, students were able to demonstrate ability to perform assignment. However, many students are deficient in mathematical knowledge and skills.

Actions: Fall 2007

The course content will continue. The course will give more emphasis to the use of statistical software.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 10. Understand the Challenges Involved in Conducting International Business and its Impact on the Future Growth of the Organization

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 3337 Economics for Technical Managers	Casework Project <ul style="list-style-type: none"> • A real business case in international outsourcing 	Grade B or better	91%	Spring 2005	Oscar Plaza	<u>Chair:</u> Oscar Plaza Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	85% 94% 94% 100% 91%	Spring 2007	Oscar Plaza	

Results: Summer 2007

This assessment is based on the first graduate cohort (15). Students were able to perform quite well with the purpose of the assignments (casework projects). However, several students have difficulty in understanding the basic logic of economics theory.

Actions: Fall 2007

The content and methodology of the course will continue. The course content material online was expanded with several sources for review and exercises about economics theory.

Student Learning Outcomes at the PROGRAM Level

Learning Outcome: 11. Obtain Hands-On Training and Apply Concepts and Theories in a Workplace Setting

Strategies	Assessment Method(s)	Performance Criteria	Results	Time of Data Collection	Assessment Coordinator	Evaluation of Results
TMGT 4347 Capstone: Production of Inventory Planning and Control	<ul style="list-style-type: none"> • Site Supervisor Evaluation 	Good or higher	100%	Spring 2007	Oscar Plaza	<u>Chair:</u> Oscar Plaza Department Curriculum Committee: <ul style="list-style-type: none"> • Ali Esmaeili • Benito Garza • Oscar Plaza
	Professional Profile: <ul style="list-style-type: none"> • Portfolio Analysis • Mock Interview 	Grade B or higher Good or higher	100% 100%			
	Faculty Report: <ul style="list-style-type: none"> • Comprehension • Communication • Teamwork • Technology • Professionalism 	Satisfactory or better	21% 92% 88% 100% 92%			
	<ul style="list-style-type: none"> • CAAP: <ul style="list-style-type: none"> ○ Composite Writing ○ Mathematics ○ Critical Thinking 	Above National Mean	73% 40% 7%			

Results: Summer 2007

This assessment is based on the graduate cohort Spring 2007 (15). Students demonstrated competence at performing professionally in the working place. However, several students demonstrated weaknesses in some college level knowledge: mathematics, critical thinking.

Actions: Fall 2007

The format of the capstone will continue, emphasizing professional skills like interview and reporting. A coordination effort will be made to enhance certain college level knowledge, e.g. critical thinking, in lower level and upper level courses.

Assessment's Assessment

Simplification
Integration
Coordination
Assessment Culture