

**PET FORM**  
**Planning and Evaluation Tracking**  
**(2011-2012 Assessment Period)**

**Division of:** Allied Health

**Person Responsible for the Division:** Bill Crawford

**Department of:** Medical Laboratory Technology

**Person Responsible for this Form:** Jan Martin

**Purpose Statement:** The Medical Laboratory Technology program at Amarillo College is dedicated to providing students with the academic knowledge, the technical training, and the professional skills to enable them to serve as vital members of the healthcare team, within the framework of the Medical Laboratory Technician, in order to enhance the quality of life for individuals in and beyond our service area (Last Updated 2003).

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**Goal Statement #1:**

Program Goal:

Students will be equipped with the cognitive knowledge and psychomotor skills for analysis and clinical decision-making, information management, regulatory compliance, education, and quality assurance/improvement wherever laboratory testing is researched, developed or performed.

Strategic Plan Strategy:

Assess required competencies in credit CTE course/programs, linked CE courses, and CE certification programs (*Amarillo College Strategic Plan through 2015: Strategy 1.5*).

Achieving the Dream/No Excuses Goal(s):

- 4) Completion of attempted courses with a C or better
- 5) Persist from one term to the next
- 6) Earn a certificate, degree or reverse transfer

**Outcome/Objective Statement**

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

- ▶ 1A) Students will recall, identify, and relate knowledge gained in all areas of clinical laboratory science and critically evaluate information and case studies presented, in order to select the correct answers on a comprehensive capstone exam.

100% of graduating Sophomore students will meet or exceed a score of 70% on at least one of three final, comprehensive capstone exams, administered during the final semester of the Medical Laboratory Technology program. The tests are composed of questions covering all of the major and minor disciplines in clinical laboratory science. The questions utilize three taxonomic levels (recall, interpretation, and problem solving), and they are derived from certification-type questions from various nationally recognized Medical Lab certification exam review texts. (*Amarillo College Strategic Plan through 2015: Task 1.4.1.3*)

- ▶ 1B) Students will select and perform appropriate quality control, troubleshooting, and laboratory test procedures; critically evaluate and interpret data generated, based on knowledge gained in all areas of clinical laboratory science; and report the information in the appropriate manner to the specified medical professional.

100% of the students will achieve a score of 70% or better on the Task List student evaluation instruments in all Practicum I and II rotations, during the Sophomore year of the Medical Laboratory Technology program. This instrument provides an evaluation of the essential entry-level cognitive and psychomotor aspects of Medical Laboratory Technology in a professional, medical setting. (*Amarillo College Strategic Plan through 2015: Task 1.4.1.3*)

#### Strategic Plan Task

Faculty will assess the aggregate performance of graduates for mastery of competencies immediately prior to the award of a credential. (*Amarillo College Strategic Plan through 2015: Strategy 1.5.3*)

- Results (Provide Numbers and Percentages for Quantitative Data)
  - Class of 2011 (21 students)
    - 1A) 2011 Final Class Average =91.3% Exam range = 49.0%-98.5%
      - Two students out of twenty-one did not pass after the allotted three attempts. Both students passed on the 4<sup>th</sup> attempt with scores of 86.5% and 95%.
    - 1B) 2011 Task List Average =91.3% Task List range = 49.0%-98.5%
  - Class of 2010 (18 students)
    - 1A) 2010 Final Class Average =86.4% Exam range = 70.0.0%-97.0%
    - 1B) 2010 Task List Average =94.0% Task range = 75.7-100.0%
  - Class of 2009 (16 students)
    - 1A) 2009 Final Class Average =86.2% Exam range = 77.0-96.0%
    - 1B) 2009 Task List Average =93.6% Task range = 73.0-100.0%
  - Class of 2008 (11 students)
    - 1A) 2008 Final Class Average =91.1% Exam range = 71.5-97.5%
    - 1B) 2008 Task List Average =93.2% Task range = 74.6-100.0%
  - Class of 2007 (13 students)
    - 1A) 2007 Final Class Average =83.7% Exam range = 70.0.0%-94.5%
    - 1B) 2007 Task List Average =93.7% Task range = 71.0-101.0%
- Analysis
  - Provide Previous Data/Result Analysis  
(Include if benchmark was met and how results relate to outcome statement):
    - 1A) **Benchmark Not Met:** 90.48% of the students achieved a score well above the target score of 70% on one of the three exams. Two students out of twenty-one did not pass after the allotted three attempts. When the students passed, on the fourth attempt, the final overall class average,

including the failing scores, increased by 4.9%.

1B) **Benchmark Not Met:** This was the first year that not all students achieved a Task List score of 70% or better in all areas of the Task List evaluation. One student experienced some personal challenges that compromised his ability to perform well in a professional manner, in his practicum rotations. The student was sent to advising and counseling and received personal counseling. Upon return to the program, the student was able to successfully complete his practicum rotations.

- Improvements

- List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results:

- 1A) The Program Director prepared a 3000+ question bank, composed of certification examination-type questions, and incorporated these questions into a Jeopardy-style review game.

- 1B) Competency evaluations were developed and distributed to all students.

- Evaluate Why Improvements Were Successful/Were Not Successful:

- 1A) **Success was mixed.** The overall class average on the capstone exam increased, however the fact remains that two students were unsuccessful in passing their capstone exams after three attempts. Students were not required to access the review activities, and this could possibly account for the two students who did not pass one of their three attempts at the exam.

- 1B) **Unsuccessful.** The competency evaluation forms did not appear to be successful, as the overall Task List average decreased. The competency evaluation forms were designed to give students a better idea of entry-level tasks required in the practicum setting. Perhaps greater emphasis should be placed on the competency forms.

- Provide the Budget Information Needed to Make Past Improvements (Cost/Details):  
No funds were required for either improvement

- Recommendations/Actions for **2011-2012**

- Person Responsible (Who will complete the action?):

- Program Faculty

- Action Plan:

- 1A) The program faculty will identify areas in which students appeared to have the most difficulty on their capstone exams and focus on those areas in lecture/lab courses. In addition, the program faculty will explore development of other review methodologies.

- 1B) The MLT faculty will put forth greater emphasis on practicum expectations in order to better prepare students for the rigor of practicum experiences.

- Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):

- July 2012

- Budget Information Needed for Future Action (Cost/Details):

No additional, foreseeable cost

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## **Goal Statement #2:**

### Program Goal:

Students will be able to demonstrate graduate/entry level technician knowledge and performance of routine and special clinical laboratory tests as the primary analyst, making specimen oriented decisions based on predetermined criteria, including a working knowledge of critical values.

### Strategic Plan Strategy:

Assess required competencies in credit CTE course/programs, linked CE courses, and CE certification programs (*Amarillo College Strategic Plan through 2015: Strategy 1.5*).

### Achieving the Dream/No Excuses Goal(s):

- 4) Completion of attempted courses with a C or better
- 5) Persist from one term to the next
- 6) Earn a certificate, degree or reverse transfer

## **Outcome/Objective Statement**

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

- ▶ 2A) Students will perform, assess, and analyze results generated from routine and esoteric hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, and other emerging clinical laboratory tests according to established protocols and procedures.

90% of all Medical Laboratory Technology Program graduates will have achieved a score of "Pass" on a Pass/Fail basis, indicating cognitive and psychomotor competency, for all areas indicated on the Amarillo College Medical Laboratory Technology Competency Profile. The profile is updated by program officials and adjunct clinical faculty at the conclusion of each semester of the Medical Laboratory Technology program, and completed prior to the last semester of the program. The profile includes basic tasks and psychomotor skills required of the entry level Medical Laboratory Technician.

- ▶ 2B) Graduates will assess the suitability of patient specimens; perform lab procedures using the prescribed instruments and test methodologies; relate patient test results to reference ranges and correlate test results to disease processes; follow directions and assume responsibility for his/her work; discriminate between normal and abnormal structures in clinical specimens; perform instrument checks, maintenance and troubleshooting; practice universal safety procedures; effectively problem-solve based on clinical situations; exhibit discretion with personal, professional, and medical information; employ organizational and time-management skills; work independently in a dependable manner; communicate effectively with other healthcare professionals, patients, and the public at large; present him-/herself in a professional manner in regard to demeanor and attire; participate in professional development activities; and maintain local, state, and/or national licensure/certification.

100% of all program graduates will receive an average score of 3.5 or greater, on a Likert

scale of 1-5, on Employer Satisfaction Surveys. The surveys are mailed out to employers approximately 9 months to one year post graduation. The surveys include questions that encompass all three taxonomic domains. Specifically, technical work performance and professional skills and attitudes are addressed and evaluated.

### Strategic Plan Task

Faculty will assess the aggregate performance of graduates for mastery of competencies immediately prior to the award of a credential. (*Amarillo College Strategic Plan through 2015: Task 1.5.3*)

- Results (Provide Numbers and Percentages for Quantitative Data)
  - Class of 2010 and 2011
    - 2A) 2011 Pass/Fail Rate = 100% (21 out of 21) = Pass
    - 2B) Class of 2010 Employer Satisfaction Survey Results = 4.20 on a Likert scale of 1-5; # of Surveys Returned = 4
  - Class of 2009 and 2010
    - 2A) 2010 Pass/Fail Rate = 100% (16 out of 16 = Pass)
    - 2B) Class of 2009 Employer Satisfaction Survey Results = 3.91 on a Likert scale of 1-5; # of Surveys Returned = 6
  - Class of 2008 and 2009
    - 2A) 2009 Pass/Fail Rate = 100% (18 out of 18) = Pass
    - 2B) Class of 2008 Employer Satisfaction Survey Results = 3.75 on a Likert scale of 1-5; # of Surveys Returned = 3
  - Class of 2007 and 2008
    - 2A) 2008 Pass/Fail Rate = 100% (11 out of 11) = Pass
    - 2B) Class of 2007 Employer Satisfaction Survey Results = 3.69 on a Likert scale of 1-5; # of Surveys Returned = 5
  - Class of 2006 and 2007
    - 2A) 2007 Pass/Fail Rate = 100% (14 out of 14) = Pass
    - 2B) Class of 2006 Employer Satisfaction Survey Results = 3.26 on a Likert scale of 1-5; # of Surveys Returned = 2

### Analysis

- Provide Previous Data/Result Analysis  
(Include if benchmark was met and how results relate to outcome statement):
  - 2A) **Benchmark Met:** The Pass/Fail rate for the Medical Laboratory Technology Student Competency continues at a level of 100% passing.
  - 2B) **Benchmark Met:** The Employer Satisfaction Survey Results for each graduating class has steadily increased and has consistently exceeded the 3.50 benchmark, since 2007.
- Improvements
  - List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results:
    - 2A) It was decided that in the event that a student does not achieve a “pass” on all clinical competencies, that he or she will be assigned additional

time in the practicum environment in order to have the opportunity to achieve competency in those areas in which he/she is deficient.

2B) Practicum rotations have been slightly modified so that students receive periodic, basic practicum instruction on campus, prior to practicum rotations at the medical facilities

- Evaluate Why Improvements Were Successful/Were Not Successful:

2A) **Successful.** Extra time in a practicum rotation allows those students, who may be a bit slower to comprehend and apply on-campus knowledge to “real life” situation, the additional time they need to be successful.

2B) **Successful.** The practicum facilities can concentrate instruction on more complex concepts, rather than reviewing basic laboratory tasks, thus providing a more in-depth, high quality practicum experience.

- Provide the Budget Information Needed to Make Past Improvements (Cost/Details):  
No funds were required for either improvement

- **Recommendations/Actions for 2011-2012**

- Person Responsible (Who will complete the action?):  
Program faculty

- Action Plan:

- 2A) The Faculty will continue to monitor student competency in all areas of the clinical laboratory, allow students extra time to demonstrate competency in all required areas, and work with clinical/adjunct faculty to correct any deficiencies that arise.
- 2B) The faculty will continue to monitor student performance in all areas of the clinical laboratory, and also work with clinical/adjunct faculty and prospective employers to correct any deficiencies that arise in student performance prior to graduation from the program, and subsequent employment. In addition, the faculty will continue their emphasis on work ethics.

- Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):

Continuous

- Budget Information Needed for Future Action (Cost/Details):

No additional, foreseeable cost

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### **Goal Statement #3:**

#### **Program Goal:**

Students will display possession of knowledge and communication skills that extend to collaborative, consultative, and educational interactions with laboratory professionals, other healthcare professionals, patients, and the general public.

#### **Achieving the Dream/No Excuses Goal(s):**

4) Completion of attempted courses with a C or better

- 5) Persist from one term to the next
- 6) Earn a certificate, degree or reverse transfer

### **Outcome/Objective Statement**

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

- ▶ 3A) Students will collaborate in small groups or independently, and create an informational visual presentation pertaining to the clinical laboratory profession that is suitable for public display, in order to promote their profession to other students, medical professionals, and/or the general public.

90% of all currently enrolled Freshmen and Sophomore the students in the Medical Laboratory Technology Program will prepare an informational visual presentation pertaining to the clinical laboratory profession. Student participation will be evaluated by their instructors as part of their weekly Work Ethics grades on the basis of “participated/did not participate.” These presentations are utilized to present information regarding different aspects of laboratory medicine during National Medical Laboratory Week, and are viewed by students and faculty in the Allied Health Division and the general public. The purpose of the presentations is to promote and educate other medical professionals, as well as the general public, about the laboratory profession. All students enrolled in the Medical Laboratory Technology program are asked to participate.

- ▶ 3B) Students will select a subject of advanced interest; compile information from professional, peer reviewed resources; prepare a research paper using the appropriate format; create audio/visual activities/resources based on their research; and present the information to their peers in the form of an oral presentation.

100% of the Sophomore students will prepare and present an in-depth advanced research paper and presentation, and achieve an average score of 90%, as evaluated by their instructor and their peers. The project will include a research paper prepared according to specific guidelines, set forth by program officials. The students will present their research to the Med Lab faculty and to their peers during the last semester of the Medical Laboratory Technology program. The presentation must include audio-visual aides and must demonstrate sufficient depth of knowledge as would be expected of students at this level of education. Evaluation of the presentation is based on appropriate selection of subject, depth of subject matter, structure of project, communication/presentation techniques, and audio/visual aids.

### **Results (Provide Numbers and Percentages for Quantitative Data)**

- 2010-2011
  - 3A) 2011 participation = 100% (34/34)

- 3B) 2011 Research Presentations = 92.6%. Range 55.7-99.85%; 21 Total
  - 2009-2010
    - 3A) 2010 participation = 100% (36/36)
    - 3B) 2010 Research Presentations = 94.5%. Range 86.85-105.75%; 17 Total
  - 2008-2009
    - 3A) 2009 participation = 95.8% (23/24)
    - 3B) 2009 Research Presentations = 88.09%. Range 70.1-98.88%; 17 Total
  - 2007-2008
    - 3A) 2008 participation = 95.8% (23/24)
    - 3B) 2008 Research Presentations = 92.8%. Range 84-100%; 10 Total
  - 2006-2007
    - 3A) 2007 participation = 86% (24/28)
    - 3B) 2007 Research Presentations = 88.1%. Range 46-98%; 14 Total
- Analysis
  - Provide Previous Data/Result Analysis  
(Include if benchmark was met and how results relate to outcome statement):
    - 3A) **Benchmark Met.** This is a requirement for the students in the Medical Laboratory Technology program, however we feel that it is an excellent opportunity for students to develop additional knowledge and better public relations skills. In addition, it provides an occasion for students to promote their chosen profession to other health professionals, as well as to the general public. The 100.0% rate of participation is well above the standard of 90%. The project is part of the work ethics evaluation for both Freshmen and Sophomore level students, and is also used as a visual aid for the Sophomore research presentations.
    - 3B) **Benchmark Met.** The average score on the student research presentations was 92.86%, which is greater than the 90.0% but slightly below the previous year average of 94.5. The range was 55.7-99.85%. The student who earned a 55.7% did so because she chose not to turn in a final research paper, though she did make an excellent presentation.
- Improvements
  - List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results:
    - 3A) The program faculty have created a laboratory week competition to encourage students to participate in this project. All student presentations are placed in the atrium during National Medical Laboratory Week, and faculty from other health science programs judge the presentations on the basis of creativity, neatness, accuracy, and overall presentation. The first, second, and third place winners receive extra credit points.
    - 3B) The faculty sent reminders to students about deadlines, and made the presentations more of an “event” than an assignment.



- Evaluate Why Improvements Were Successful/Were Not Successful:
    - 3A) **Successful.** The improvements were successful because:
      - It created a friendly competition between students.
      - Students are highly motivated when extra points are at stake
    - 3B) **Successful.** The students were more mindful of submission deadlines when a reminder was sent.
  - Provide the Budget Information Needed to Make Past Improvements (Cost/Details):
    - No funds were required for either improvement
  - Recommendations/Actions for 2011-2012
    - Person Responsible (Who will complete the action?):
      - Program faculty
    - Action Plan:
      - 3A) The contest will continue, due to its success, and faculty will begin discussing the visual presentations earlier in the Spring semester, in order to give the students a bit more time to plan and execute their presentations.
      - 3B) The faculty will continue to emphasize the importance of this project, to encourage students to be mindful of their deadlines, and encourage students to augment their research, written, and verbal presentation skills prior to actual delivery of their research presentations.
    - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):
      - July 2012
    - Budget Information Needed for Future Action (Cost/Details):
      - No additional, foreseeable cost
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**Goal Statement #4:**

Program Goal:

Students will exhibit the capacity for calm and reasoned judgment, taking responsibility for their own actions, show a strong commitment to patient welfare, and display positive ethical and moral attitudes and principles that are necessary for gaining and maintaining the confidence of patients, professional associates, and the community at large.

Achieving the Dream/No Excuses Goal(s):

- 4) Completion of attempted courses with a C or better
- 5) Persist from one term to the next
- 6) Earn a certificate, degree or reverse transfer

**Outcome/Objective Statement**

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

- ▶ Students will act in a professional manner at all times while in the clinical setting,

demonstrating the positive attributes of professionalism in regard to attire, demeanor, conduct, dependability, initiative, attitude, adaptability, reasoning, and seeking additional knowledge.

100% of the students will achieve a score of 70% or better on the Student Professional Evaluation instruments in all Practicum I and II rotations, during the Sophomore year of the Medical Laboratory Technology program. This instrument provides an evaluation of the affective aspects of Medical Laboratory Technology in a professional medical setting including professionalism (attire, demeanor and conduct), dependability, ability to reason and learn, initiative, attitude, and adaptability.

- Results (Provide Numbers and Percentages for Quantitative Data)

- Class of 2011 (21 students)  
4A) Class of 2011 Professional Eval Average =91.3% Task List range = 60.8%-100.00%
- Class of 2010 (18 students)  
4A) Class of 2010 Professional Eval Average =92.6% Task List range = 64.7%-100.0%
- Class of 2009 (16 students)  
4A) Class of 2009 Professional Eval Average =93.3% Task List range = 73.0%-100.0%
- Class of 2008 (11 students)  
4A) Class of 2008 Professional Eval Average =93.2% Task List range = 79.0%-100.0%
- Class of 2007 (13 students)  
4A) Class of 2017 Professional Eval Average =93.7% Task List range = 71.0%-100.0%

- Analysis

- Provide Previous Data/Result Analysis  
(Include if benchmark was met and how results relate to outcome statement):  
**Benchmark not met.** This was the first year that not all students achieved a Task List score of 70% or better in all areas of the Task List evaluation. One student experienced some personal challenges that compromised his ability to perform well, and in a professional manner, in his practicum rotations. In addition, the average scores on the Task List have steadily decreased over the past five years. This negative trend is a major concern for the program faculty.

- Improvements

- List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results:  
The one student who did not pass was counseled by program faculty and by the head of advising, and was given an incomplete and additional time to resolve his issues.
- Evaluate Why Improvements Were Successful/Were Not Successful:

**Successful** - Upon return to the program, the student was able to successfully complete his practicum rotations. However, the fact remains that the average scores have decreased.

- Provide the Budget Information Needed to Make Past Improvements (Cost/Details):  
No funds were required for this improvement
  - **Recommendations/Actions for 2011-2012**
    - Person Responsible (Who will complete the action?):  
Faculty
    - Action Plan:
      - 4A) The faculty will continue to emphasize and evaluate the essential qualities of professionalism in the medical laboratory setting. In addition, during Sophomore orientation, held prior to students entering into their clinical/practicum rotations, the program faculty will discuss the impact of professional behaviors on student clinical/practicum evaluations but more importantly, on their career.
    - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):  
Continuous
    - Budget Information Needed for Future Action (Cost/Details):  
No additional, foreseeable cost
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**Goal Statement #5: (New goal as of 2011-2012. Data will be furnished within the 2012-2013 PET form)**

**Strategic Plan Strategy:**

Align AC learning outcomes with THECB outcomes which emphasize 21<sup>st</sup> century skills. (Amarillo College Strategic Plan through 2015: Strategy 1.4).

**Achieving the Dream/No Excuses Goal(s):**

- 4) Completion of attempted courses with a C or better
- 5) Persist from one term to the next
- 6) Earn a certificate, degree or reverse transfer

**Outcome/Objective Statement**

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

- ▶ Students will demonstrate the skills and knowledge sets, as stated in the learning outcomes required by THECB in the Workforce Education Course Manual (WECM), for each PLAB and MLAB course in the program curriculum.

100% of the students will fulfill the learning outcomes with a score of 70% or better, as determined by the program faculty. Data will be assessed and tracked through the Worldwide Instructional Design System (WIDS).

### Strategic Plan Task

After academic leadership ensures all career and technical education CTE and CE courses include the student learning outcomes required by THECB in Workforce Education Course Manual (WECM), students who complete these courses will fulfill the assigned student learning outcomes. (*Amarillo College Strategic Plan through 2015: Task1.4.1.3*)

- Results (Provide Numbers and Percentages for Quantitative Data) **No data available**
  - Analysis **No data available**
  - Improvements **No data available**
  - Recommendations/Actions for 2011-2012
    - Person Responsible (Who will complete the action?):  
Program Faculty
    - Action Plan
      - Input WECM PLAB and MLAB course outcomes into WIDS
      - Track student achievement of outcomes
    - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):  
October 2012
    - Budget Information Needed for Future Action (Cost/Details):  
No additional, foreseeable cost
-