

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

Division of: **Health Sciences**

Person Responsible for this Division: **Mark E. Rowh**

Department of: **Nuclear Medicine Technology**

Person Responsible for this Form: **Mark E. Rowh**

Purpose Statement (With Last Updated Date): The Amarillo College Nuclear Medicine Technology Program is committed to provide medical affiliates with entry-level nuclear medicine professionals through a comprehensive program that enables proof of competency via didactic and clinical curriculum, which complies with all requirements of the Accreditation Standards for Nuclear Medicine Technologist Education of the Joint Review Committee on Educational Programs in Nuclear Medicine Technology accrediting organization and the Texas Higher Education Coordinating Board, therefore, enhancing the quality of patient care.

In addition, the Health Science Division Mission Statement is as follows: In keeping with the mission of Amarillo college, the Health Sciences Division mission is to provide a comprehensive educational environment that will prepare the graduate to effectively engage in the daily challenges and responsibilities required of a competent entry-level Health Science Professional. (updated 8/11)

The Division Philosophy states: Health Science education at amarillo College adheres to the philosophy that a health science career is chosen and prepared for with a dedication of the student to the dignity and mental and physical well-being of the patient. (updated 8/11)

Goal Statement #1:

Guide students to pass a nationally recognized professional certification or registry through the NMTCB. (Analysis based upon graduates from summer 2010).

This goal statement is in alignment with Goal 1 of the Strategic Plan: Expand Student Success.

Strategy 1.1 Adjust instruction and services based on assessment data.

Tasks1.1.1 Employees will use institutional data/evidence to determine sustainability and viability based on trend lines for instruction, academic support services, and student services.

Outcome/Objective Statement

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

Standard E1.2: Program Assessment states that "Programs must maintain at least an 80% pass rate over consecutive five year periods for their graduates on national certification examinations. This pass rate is to include all examination attempts by program graduates."

Additional Information: In July 1996, the NMTCB began offering a computer adaptive test (CAT) for classification in association with ACT, Inc. The CAT for classification is designed to render a pass/fail decision. In a CAT of this type, examinees are NOT rank-ordered along a score scale in order to make a precise and accurate classification decision. In order to administer a CAT for

classification, the items themselves are ranked at the decision point on the score scale according to their ability to classify accurately and quickly. Each item in the item pool is associated with the information on its difficulty (the proportion of examinees answering an item correctly) and discrimination (the ability of an item to distinguish between passing and failing individuals) levels. An item that has a difficulty level at or near the passing score and has good discrimination will be a better item for decision-making than another item that is too difficult or too easy or has little ability to discriminate between those examinees who should pass and those who should fail. ACT, Inc. psychometric staff obtained Item Response Theory (IRT) statistics for all items in the item pool.

A "classification" CAT is still adaptive in that those examinees whose abilities are far from the passing score (in either direction) will require fewer test items for classification than those whose ability is at or near the passing score. The test will adapt by test length rather than by item difficulty. For the classification CAT, the types of items that are administered to each and every candidate are the same: there are no "difficult items for better candidates" or "easier items for poorer candidates." All examinees receive the same type of test items. Each examinee answers a total of 80 to 90 items, and the items are different for each examinee.

Items for the classification CAT are selected in the following approximate proportions for each of four content domains of nuclear medicine technology. I. Radiation safety (15%), II. Instrumentation (20%), III. Clinical procedures (45%), and IV. Radiopharmacy (20%). Results of completed computerized exams are sent to the Program Director to assess pass rates each year, and the data is complete by Spring Semester. Note: This data is 100% complete for the graduating class of 2010.

This data is located in record in the NM program director's office and has been provided to the Institutional Effectiveness Office at Amarillo college.

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

73% of graduates passed the test within one year of graduation. Scores ranged from 71-83 with an average score of 77.93.

Total # of Graduates-13

Total # of Examinees-14 (includes repeater from previous year)

Pass NMTCB Reference Scores

Highest Distinction-85+

0 grads scored in this range

Pass w/Distinction-82-84

4 examinees passed in this range.

Pass-75-81

6 examinees passed in this range.

Fail-below 75

4 examinees failed the exam

- **Analysis**

- Provide Previous Data/Result Analysis

(Include if benchmark was met and how results relate to outcome statement):

85% standard was not met this year by 12% with 73 % pass rate. A five-year trend of NMTCB scores is shown below and the Program maintains a 92% pass rate, which is 12% above that required by the JRCNMT. The graphs on the following page compliment the analysis.

NUCLEAR MEDICINE TECHNOLOGY PROGRAM

PASS RATES NMTCB

2006

94% (15 OF 16 STUDENTS)

11-Pass

4-Pass with Distinction

1-Fail (passed on 2nd attempt with Pass)

2007

100% (16 of 16 STUDENTS)

10-Pass

4-Pass with Distinction

2-Pass with Highest Distinction

2008

100% (16 of 16 STUDENTS)

11-Pass

4-Pass with Distinction

1-Pass with Highest Distinction

2009

94% (15 of 16 STUDENTS)

9-Pass

4-Pass with Distinction

2-Pass with Highest Distinction

1-Fail (failed 2nd attempt, as well, which is reflected within the 2010 report)

2010

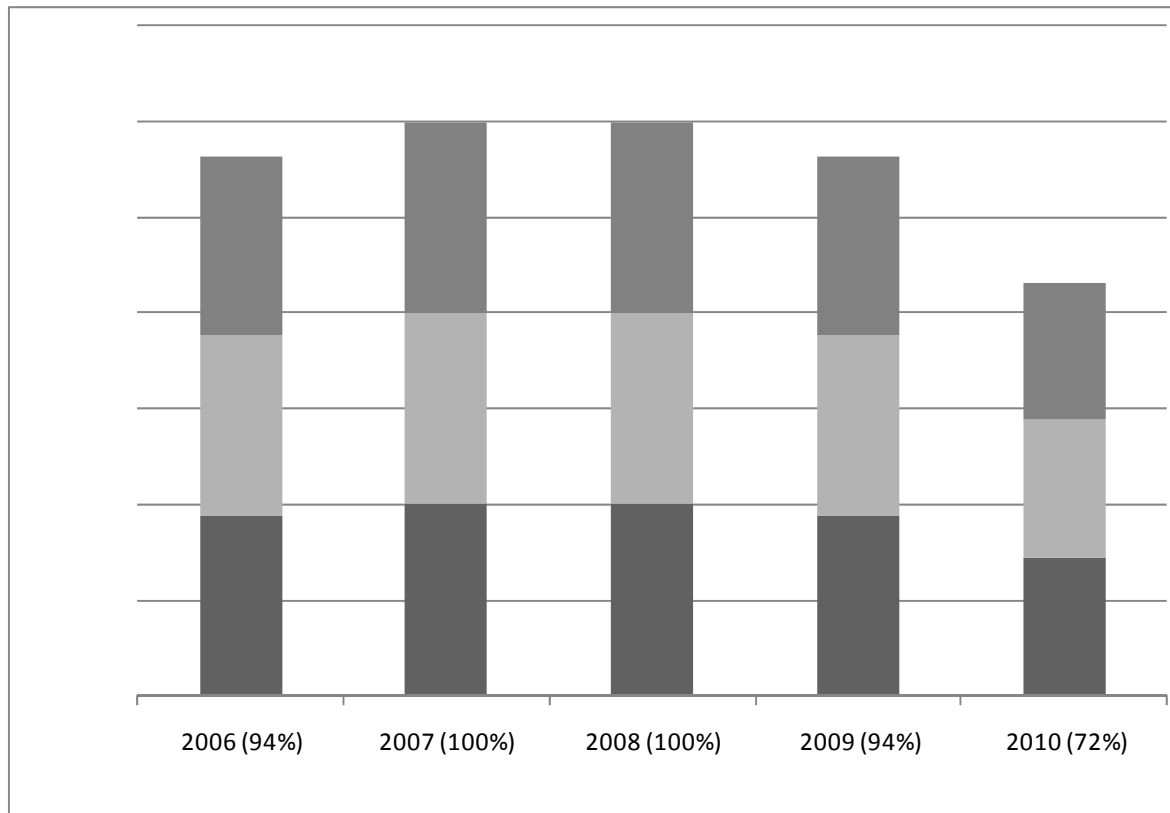
73% (10 of 14 STUDENTS)

6-Pass

4-Pass with Distinction

4-Fail (None have retested.)

Five-Year Pass Rate Trend-92%



- Improvements
 - List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results:
Comparative data stated above and shown on the Five-Year Trend Pass-rate Table show that the NMT students were performing as expected and exceeding expectations by the JRCNMT accrediting agency in all years, except 2010.
Preliminary first-time pass rate reports for 2011 from NMTCB show that 100% of students who have tested have passed the national boards on the first attempt. The official report will not be available until spring 2012 and the results will be added to the trend bar as 2006 drops off.
The Program found it necessary to increase the rigor of the capstone course, requiring students to pass all exams within the course, instead of averaging grades on exams.
 - Evaluate Why Improvements Were Successful/Were Not Successful:
As stated above, preliminary reports show that this strategy allowed for increased student success on national boards.
 - Provide the Budget Information Needed to Make Past Improvements (Cost/Details):
N/A
- Recommendations/Actions for 2011-2012
 - Person Responsible (Who will complete the action?): Program Director or Student
Program Director and Students are responsible for carrying out the action plan stated below.

- Action Plan:
 1. The program maintains a 92% average 5-year pass rate. The significant drop from 2009 to 2010 summons the PD to increase the rigor of the program by incorporating more critical thinking elements within major exams.
 2. Students will be required to participate more actively in class by supplementing lecture material with TurningPoint Software and the use of 'clickers' to record participation and correct answers. The onus and the responsibility to study will be on each student.
 3. The PD will continue to engage in professional development activities that enhance teaching styles, and ultimately lead to an increase in student success across all generations.
 4. The PD will continue to manage the NMT program with the premise that student success is important. However, the rigor of the program must be enhanced so that students are not able to sit for their national boards until they have proven merit to do so.
 5. Course syllabi will purport the necessary grading criteria for seeing 'real grades', since the ultimate goal of the student is to perform patient care activities in a professional setting.
 - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):
Spring 2011, Summer 2011, and Academic Years 2011-2012.
 - Budget Information Needed for Future Action (Cost/Details): N/A
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Goal Statement #2:

Guide students to meet or exceed the national Mean Scaled Score for all examinees from all Nuclear Medicine Technology Programs in the United States.

Outcome/Objective Statement

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

The NMTT program will meet or exceed the mean scaled score for all examinees nation-wide.

Additional Information: Results of completed exams are sent to Program Director from testing agency to assess pass rates every year. **NOTE: This data is 100% complete for the graduating class of 2010 by Spring 2011.**

- Results (Provide Numbers and Percentages for Quantitative Data)

Average score for Amarillo College NM examinees was 77.93. The median score for ALL NMTCB Examinees nation-wide was 79.33.

- Analysis

- Provide Previous Data/Result Analysis

(Include if benchmark was met and how results relate to outcome statement):

Standard was not met by 2%.

- Improvements

- List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results: No improvements noted, because AC NMT program average score was 80 in 2009 and 77.93 in 2010, and average scores for all examinees nationally were 79.61 in 2009 and 79.33 for 2010.
- Evaluate Why Improvements Were Successful/Were Not Successful: Year 2010 was the year that the NMTCB testing agency changed national exam course content to include updated methodologies and technologies for our field. The results show that even the national mean declined from 2009 to 2010. PD must continually stay abreast of task analysis changes to prepare students properly for their national exams.
- Provide the Budget Information Needed to Make Past Improvements (Cost/Details): N/A

- Recommendations/Actions for 2011-2012

- Person Responsible (Who will complete the action?): Program Director and Students
- Action Plan:
 1. The program maintains a 92% average 5-year pass rate. However, the significant drop from exceeding the national mean of 1% in 2009 to a decline of 2% in 2010 summons the PD to increase the rigor of the program by incorporating more critical thinking elements within major exams.
 2. The PD will continue to engage in professional development activities that enhance teaching styles, and ultimately lead to an increase in student success across all generations.

3. The PD will continue to manage the NMT program with the premise that student success is important. However, the rigor of the program must be enhanced so that students are not able to sit for their national boards until they have proven merit to do so.
4. Students will be required to pass all exams throughout the capstone course rather than averaging all exam grades.
5. Course syllabi will purport the necessary grading criteria for seeing 'real grades', since the ultimate goal of the student is to perform patient care activities in a professional setting.

The results will be monitored and reported within the PET form for the next academic year.

- Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):
Academic year 2011-2012.
 - Budget Information Needed for Future Action (Cost/Details): N/A
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Goal Statement #3: Monitor Program Effectiveness (No Excuses/AtD Goal)

Guide students to pass national certification/registry exams on the first attempt.

Outcome/Objective Statement

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

After graduating the Nuclear Medicine Technology program, 85% of NMT students, who attempt the national certification/registry exam, will pass the exam on the first attempt.

Additional Information: Results of completed exams are sent to the Program Director by testing agencies every year.

NOTE: This data is 100% complete for the graduating class of 2010 by Spring semester of 2011.

- Results (Provide Numbers and Percentages for Quantitative Data)

Out of 13 graduates, 10 (77%) passed exam on the 1st attempt.

- Analysis

- Provide Previous Data/Result Analysis

(Include if benchmark was met and how results relate to outcome statement):

Standard not met by 8%. Comparing data from the previous year, the program had a 94% first-time pass rate in 2009, or a difference of 17%. The five-year graphs for comparison are located in Goal Statement #1 summary.

- Improvements

- List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results:
No improvements noted for 2010-2011, because the standard was not met by 8%.
- Evaluate Why Improvements Were Successful/Were Not Successful:
Year 2010 was the year that the NMTCB testing agency changed national exam course content to include updated methodologies and technologies for our field. The results show that even the national mean declined from 2009 to 2010.
PD must continually stay abreast of task analysis changes to prepare students properly for their national exams.
- Provide the Budget Information Needed to Make Past Improvements (Cost/Details): N/A

- Recommendations/Actions for 2011-2012

- Person Responsible (Who will complete the action?): Program Director and Students
- Action Plan:

The first-time pass rates for the last 4 years are well within the standard of 85%. The action plan is also stated in Goal Statement #1 summary.

1. The program maintains a 92% average 5-year pass rate. The significant drop from 2009 to 2010 summons the PD to increase the rigor of the program by incorporating more critical thinking elements within major exams.
2. Students will be required to participate more actively in class by supplementing lecture material with TurningPoint Software and the use of 'clickers' to record participation and correct answers. The onus and the responsibility to study will be on each student.
3. The PD will continue to engage in professional development activities that enhance teaching styles, and ultimately lead to an increase in student success across all generations.
4. The PD will continue to manage the NMT program with the premise that student success is important. However, the rigor of the program must be enhanced so that students are not able to sit for their national boards until they have proven merit to do so.
5. Course syllabi will purport the necessary grading criteria for seeing 'real grades', since the ultimate goal of the student is to perform patient care activities in a professional setting.
6. Students will be required to pass all exams within the capstone course rather than averaging all test grades. The purpose is to make sure students are better prepared for national boards.

Results will be monitored and reported in the PET form for academic year 2011-2012.

- Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):
Academic Years 2011-2012
 - Budget Information Needed for Future Action (Cost/Details): N/A
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