

Nuclear Medicine Technology BS

Expanded Statement of Institutional Purpose

Institutional Mission Reference

The Nuclear Medicine Technology (NMED) program is a nationally accredited program that offers undergraduates an opportunity to earn a Bachelors of Science degree in Nuclear Medicine Technology. The NMED program supports the stated mission of the College of Health Sciences by preparing qualified nuclear medicine technology professionals with practice, management, research and teaching skills to address the changing health needs of the region, state and nation. The NMED program also supports the stated mission of the university which is to "enhance the quality of the educational experience, both on campus and through distance learning". The NMED program does this by offering a course via TELETECHNET within the BSHS program.

Institutional Goal(s) Supported

The Nuclear Medicine Technology program supports the University goals of (a) serving a culturally diverse undergraduate population, (b) quality undergraduate programs, (c) discovery of new knowledge, (d) quality teaching and (e) distance education. (See pages 8 and 9 from the Old Dominion University Strategic Plan: 2000 - 2005)

Intended Educational (Student) Outcomes, Methods for Assessment, Criteria for Success, Assessment Results, and Use of Results

Intended Outcome 1

Graduates of the NMED program will pass either the Nuclear Medicine Technology Certification Board (NMTCB) or American Registry of Radiologic Technologists (ARRT) national registry exams.

Method for Assessing Outcome 1 and Criterion for Success: All NMED program graduates will achieve a rating of "Pass" on the Nuclear Medicine Technology Certification Board (NMTCB) national registry exam (85% on their first attempt). Comparisons will be made between program and national pass rates and mean examination subgroup scaled scores.

Summary of Assessment Data Collected for Outcome 1:

Ten Old Dominion University Nuclear Medicine Technology Program Graduates took the NMTCB in 2000

1. Results: 8 out of 10 passed on first attempt (80%)
National Pass Rate (2000) First Attempt: (81%)
2. Results: 2 out of 2 passed on subsequent attempts (100%)

National Pass Rate (2000), 2nd attempt: (40%)

3. ODU Mean Score: 77.09

National Mean Score: 78.225

Alternate Method for Assessing Outcome 1 and Criterion for Success: All NMED program graduates will achieve a rating of "Pass" on the American Registry of Radiologic Technologists (ARRT) national registry exams (85% on their first attempt). Comparisons will be made between program and national pass rates and between program and national subgroup scores.

Summary of Assessment Data Collected, Alternate Method for Outcome 1: No graduates took the ARRT Nuclear Medicine Technology Registry Examination.

Use of Assessment Results from Intended Outcome 1 to Improve Academic Program: Old Dominion Students continue to pass the NMTCB Registry but just at the national average level. A review of the results by registry category (Instrumentation , Radiation Safety, Clinical Procedures and Radiopharmacy) reveals that students do best in Radiopharmacy and Radiation Safety, so initially improvements will be made in Instrumentation and Clinical Procedures. In Spring 2001, a new instructor was hired to teach NMED 332, Nuclear Instrumentation, and guest lecturers with up-to-date experiences in clinical imaging will be added in NMED 401 and 402 (Clinical Nuclear Medicine Technology I and II) to improve clinical procedure education.

Intended Outcome 2

Students will demonstrate entry-level knowledge and skills representative of the profession of nuclear medicine technology.

Method for Assessing Outcome 2 and Criterion for Success: Senior NMED students will take and pass a Mock Registry Examination designed as a capstone measure of the field of nuclear medicine technology. The exam is given as part of the NMED 410 course. Student scores on the Mock Exam and their actual NMTCB scores are correlated to determine the degree to which the Mock exam predicts actual registry performance. It is expected 75% of student will achieve a score of 65% (passing score) or higher on the Mock Registry each cycle.

Summary of Assessment Data Collected for Outcome 2:

Mock Registry Scores for 2000 :

Mean Mock Examination Score: 65.8

Six of 10 (60%) students achieved a Mock Registry Score of 65 or greater.

Range of scores: 51 - 79

Use of Assessment Results from Intended Outcome 2 to Improve Academic Program:

A review of previous classes results on the Mock Registry reveals similar results, this may require a change in the "Criterion for Success" to a more realistic percentage of 50%. The Mock Registry continues to be a relatively good predictor of success on the NMTCB Registry.

Intended Outcome 3

Students completing the baccalaureate program in nuclear medicine technology will be well prepared for their first position in the field of nuclear medicine technology.

Method for Assessing Outcome 3 and Criterion for Success: Graduates of the NMED program will complete a "Graduate Evaluation of Readiness for Job Performance" Survey. 85% of the graduates responding will rate their preparation for job readiness as "Very Good" or "Excellent" (4.0 or greater on a 5 point scale) within eleven content areas: (1) Clinical skills, (2) Patient Care, (3) Radiation Safety, (4) SPECT Imaging skills, (5) Problem solving skills, (6) Computer skills, (7) Quality Assurance, (8) Adaptability, (9) Theoretical knowledge (10) Radiopharmaceutical skills, and (11) Overall preparation to work in the field.

Summary of Assessment Data Collected for Outcome 3:

Graduates from the last three years (most recent data 1998-2000) rated preparation in all 10 areas as very good or better. The top three areas, according to the graduates were: 1) Patient Care, 2) Adaptability, and 3) Clinical Imaging Skills.

They rated their "Overall Preparation" to work in the field. as 4.58 , or between Very Good and Excellent.

The average rating (out of a 5 point scale) in all 11 areas for this group is 4.48.

The average ratings for the past 12 years is 4.37.

Alternate Method for Assessing Outcome 3 and Criterion for Success: Qualitative data on student employment will be obtained annually. Data concerning graduate employment will include; (a) Place of employment, (b) Level of employment (staff, senior, chief technologist), and (c) Location (Local, State, Nationally). Where applicable, quantitative data comparing local versus out of state employment will be extracted.

Summary of Assessment Data Collected, Alternate Method for Outcome 3:

Students continue to obtain employment in nuclear medicine at a 100% rate. Of the 94 graduates of the program:

80.9% (76/94) work in Nuclear Medicine

19.1% (18/94) work in a related field (Health care/medical physics)

66.0% (62/94) work in Virginia
34.0% (32/94) work out of state

Intended Outcome 4

Graduates of the NMED program will be well prepared for their first position in the field of nuclear medicine technology.

Method for Assessing Outcome 4 and Criterion for Success: The Employers of graduates of the NMED program will complete a "Graduate Evaluation of Readiness for Job Performance" Survey. 85% of the employers responding will rate the students' preparation for job readiness as "Very Good" or "Excellent" (4.0 or greater on a 5 point scale) within eleven content areas: (1) Clinical skills, (2) Patient Care, (3) Radiation Safety, (4) SPECT Imaging skills, (5) Problem solving skills, (6) Computer skills, (7) Quality Assurance, (8) Adaptability, (9) Theoretical knowledge (10) Radiopharmaceutical skills, and (11) Overall preparation to work in the field.

Summary of Assessment Data Collected for Outcome 4:

Employer ratings for the past four years (most recent data 1997-2000) rated preparation in all 10 areas as very good or better.

The top three areas, according to the employers of graduates were: (2) Patient Care, (10) Radiopharmacy Skills, and (3) Adaptability

They rated the "Overall Preparation" of NMED program graduates as 4.38 , or between Very Good and Excellent.

The average rating (out of a 5 point scale) for this group in all 11 areas is 4.33.

The average ratings for the past 12 years is 4.20

Alternate Method for Assessing Outcome 4 and Criterion for Success: Qualitative data on student employment will be obtained annually. Data concerning graduate employment will include; (a) Place of employment, (b) Level of employment (staff, senior, chief technologist), and (c) Location (Local, State, Nationally). Where applicable, quantitative data comparing local versus out of state employment will be extracted.

Summary of Assessment Data Collected, Alternate Method for Outcome 4:

Students are working as staff, chief or lead technologists and in a specialty area; nuclear cardiology:

86.8% (66/76) are staff technologists
6.6% (5/76) work in nuclear cardiology
6.6% (5/76) are chief/lead technologists

Use of Assessment Results from Intended Outcome 4 to Improve Academic Program:

None necessary. Students are working chosen field and are advancing to higher levels, supervisory and specialty positions. In addition, 11 of 94 graduates (12%) have gone on to graduate/professional schools.

Intended Outcome 5

Students will receive a high quality education in the field of nuclear medicine technology.

Method for Assessing Outcome 5 and Criterion for Success: Eighty percent of the seniors from the NMED program (on the Senior Student Satisfaction Survey) will rate that they are "Satisfied or Very satisfied" with the NMED program in the areas of: (a) quality of program faculty, (b) quality of curriculum (including internships), (c) quality of instruction in the major, (d) quality of advising, (e) faculty attitudes and interactions with students, and (f) clarity and attainment of program goals.

Summary of Assessment Data Collected for Outcome 5:

Results of the Senior Survey revealed the following data on the 8 NMED seniors completing the survey:

The program exceeded the 80% expectation on each of eight areas under review.

A. Quality of faculty: 100% rated they were Satisfied (25%) or Very Satisfied (75%)

B. Quality of curriculum: 100% rated they were Satisfied (25%) or Very Satisfied (75%)
Quality of internship: 100% rated they were Very Satisfied

C. Quality of instruction in major: 100% rated they were Satisfied (25%) or Very Satisfied (75%)

D. Quality of advising in major: 87.5% rated they were Satisfied (12.5%) or Very Satisfied (75%)

E. Faculty Attitude: 100% rated they were Satisfied (25%) or Very Satisfied (75%)

F. Clarity of Program goals: 100% rated they were Satisfied (25%) or Very Satisfied (75%)

Attainment of these goals: 100% rated they were Satisfied (25%) or Very Satisfied (75%)