Annual Academic Assessment Report Cover Sheet

Assessment reports are due the 1st Wednesday after the Fall Term
Email to: assessment@unlv.edu

Program Information:

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<th>Program Assessed</th>
<th>Nuclear Medicine Technology</th>
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<td>Department</td>
<td>Health Physics</td>
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<td>College</td>
<td>Allied Health Sciences</td>
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<td>Date Submitted</td>
<td>Dec 12, 2016</td>
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Please attach a narrative (not to exceed 4 pages, excluding appendices) addressing the following:

- What are the student learning outcomes? Please provide a numbered list.
- Which learning outcomes were assessed?
- How were they assessed? (Programs must use at least one direct assessment of student learning.)
- Undergraduate programs should assess at least one University Undergraduate Learning Outcome (UULO) each year, which may or may not overlap with a program learning outcome.
- Graduate programs should assess at least one outcome related to one of the following graduate level requirements each year:
  - student engagement in research, scholarship, creative expression and/or appropriate high-level professional practice.
  - activities requiring originality, critical analysis and expertise.
  - the development of extensive knowledge in the field under study.
- What was learned from the assessment results?
- How did the program respond to what was learned?

Please limit the narrative portion of your report to no more than four pages. You may attach appendices with data, tables, charts, or other materials as needed. Please explain the relevant conclusions from any appendices in your narrative. Please contact the Office of Academic Assessment if you have questions or need assistance.
What are the student learning outcomes?

1. Applying the theoretical concepts learned in the classroom to practical applications in the nuclear medicine clinical environment
2. Develop cognitive thinking through laboratory and coursework exercises
3. Completing Competency tasks associated with routine aspects of nuclear medicine technology including; preparation and injection of radiopharmaceuticals, scanning patients, quality control on equipment and radiation safety.
4. Have a sound academic foundation for graduate study
5. Conduct themselves in an ethical and professional manner
6. Find gainful employment in nuclear medicine as certified technologists
7. Successfully write national registry examination

What learning outcomes were assessed?
Learning outcomes 1-3, and 5-7 were assessed

How were they assessed?

1. (Learning Outcome #1) Many applied theoretical concepts learned in the classroom were assessed in practical applications in the nuclear medicine clinical environment in the following ways;
   A. Individual testing and observation of students by Clinical coordinator or Certified Technologist in the clinical site the students were assigned. These tests and observations required students to either verbally explain or demonstrate how specific concepts of Instrument, radiation protection, radiopharmaceutical use and computer manipulations taught in the class were applied and properly used in clinical environment.
   B. Through clinical competency evaluations performed on each student during their clinical rotation demonstrating understanding of basic concepts in classroom setting translating to hospital and outpatient setting.
   C. Clinical sites supervisor’s evaluation of students and post-graduation survey forms.
   D. Student post-graduation survey forms.
2. (Learning Outcome #2) Developing cognitive thinking was assessed through laboratory and coursework exercises in a number of way including;
   A. Numerous laboratory experiments and written reports required by students to assimilate information and deduce solutions.
   B. Calculations of mathematical equations and problem solving important to understand basic theorems of nuclear medicine.
   C. Homework that evoked thought and a comprehension of various statistical counting perimeters and understanding of anatomy and physics to interpret simulated patient data.
   D. Various tests throughout the program evaluating cognitive development of ideas.
   E. National registry examination that tests aspects of cognitive understanding of potential nuclear medicine technologists.

3. (Learning Outcome #3) Students are assessed in the clinical environment in many aspects of nuclear medicine through the use of a competency based performance sheet. Students have to successfully complete (demonstrate understanding and be able to perform specific tasks) assigned in the clinical environment in 29 identified areas.
   These forms require that the Clinical Coordinator or Chief Technologist sign-off on all competencies in order for a student to complete their clinical rotation in nuclear medicine.

4. (Learning Outcome #5) Students are expected to be professional and conduct themselves in an ethical manner. This is assessed formally twice a semester by a written evaluation performed by the clinical supervisor of the student. After evaluation is completed, results of the student’s perceived behavior were discussed with student. Furthermore, the clinical coordinator meets informally with the hospital and/ or outpatient staff to discuss the behavior and attitude of student in their facility bi-monthly.

5. (Learning Outcome #6) Students that recently graduated from nuclear medicine program (10 students in May of 2016) were asked to contact the Program Director if and when they receive formal offers of employment in the field.

6. (Learning Outcomes #7) Students graduating and eligible for national registry examination in nuclear medicine technology were requested to contact the Program Director and let him know their scores on exam.
What was learned from assessment results?

1. Overall grades for nuclear medicine students were mostly A’s and B’s on laboratory exercises and classroom examinations demonstrated students understanding in theoretical concepts of nuclear medicine.

2. Transferring these concepts into practical experiences was demonstrated by students satisfactory completion of Competencies identified in their clinical experience and Clinical Supervisor’s evaluation forms.

3. Students surveyed after graduation rated the program an overall 4.6/5 in meeting their needs of becoming a certified nuclear medicine technologist. (9/11 students responded to survey requested)

4. Clinical supervisors surveyed after students graduated rated the program overall at 4.7/5 in meeting the needs of the community in regard to graduating future qualified technologist.

5. All graduates of the nuclear medicine program this May/2016 passed both national registry examinations on their first attempt. The nuclear medicine program has NOT had a student fail the national registry in 10 years. The national average for passing the national registry examination by graduated of accredited programs is about 85%. We are very proud of our overall success rate.

6. All of the students that graduated from the nuclear medicine program in May/2016 have successfully become employed as certified nuclear medicine technologists in the field within 3 months.

7. One area of concern was identified by students in the survey. Students wanted more time spent in the Radiopharmaceutical laboratory.

How do the program respond to what was learned?

The nuclear medicine Program Director at UNLV met with the nuclear medicine advisory board in the community. This board is a representative group of Chief Technologists, Radiology Managers, Pharmacists, Sales representatives and previous graduates of the program. The information above was disseminated to this group and discussed. The committee decided to add additional radiopharmaceutical time to the student clinical rotations for the new incoming class that began this fall/semester 2106.