Academic Program Review of the
Nuclear Medicine Technology Program
University of Wisconsin - La Crosse
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## BACKGROUND:

Nuclear Medicine Technology exists as a program within the Department of Chemistry in the College of Science and Health. The Nuclear Medicine Technology Program submitted its self-study report to the Dean of College of Science and Health, Dean's Office in September of 2006. There is no external review for this program per se as advanced students are comparatively reviewed at specific accredited hospital sites during their internship period and a review of pre-requisite and foundational courses is conducted annually by specific hospital affiliated program directors in consultation with the UW-L NMT program director. (See Dean's letter dated: September 8, 2006)

## SUMMARY OF THE SELF STUDY:

### Goals and Objectives

The Nuclear Medicine Technology Program (NMT) states, as purposes, its two primary goals:

#1. To continue producing high quality graduates.

#2. To maintain the program at ~ 30 graduates per year.

### Summary of how the program reaches its Goals/objectives

NMT is a program, within the Department of Chemistry, and grants a Bachelor of Science Degree. Students typically spend three years, in residence, at UW-L and fulfill requirements for graduation through internships at cooperating institutions (healthcare facilities, etc.). After graduation students take a national certification exam.

NMT is able to address its first goal through the structure of its curriculum and the basic demand for the specialists the program produces.
Note the learning outcomes (specific to #1):

- A solid scientific background, particularly in nuclear science, enabling the student to understand and critically assess complex procedures
- Communicate clearly in writing and speech

- Work well with others and independently, act responsibly, and have a graceful tolerance of other ways of life
- Make ethical decisions

NMT has been able to raise the number of students it graduates by altering and improving the quality of the program, through student recruitment and by increasing the number of cooperating institutions.

NMT has made revisions in its curricular structure, lowering its required credit load by 4 credits and making allowances for the incoming competencies of students, moving some course work to the internship site, and updating some courses to accommodate contemporary technology and information.

NMT measures the success of its program objectives by analyzing results of the national certification board exams, Site Director Surveys, student surveys, evaluation of student research in CHM 461 and program reputation. The program report makes note of the success of its students in all areas looked at as measures.

Supplemental information could also be gained through better sharing of information from participating internship sites.

**NOTABLE STRENGTH AND WEAKNESSES OF THE PROGRAM:**

**Programs**
The structure and the curriculum of the program are its primary strength, considered within the context of the quality of the cooperating institutions.

**Curriculum**
The curriculum of the NMT program is similar to that of related programs, with program consistency mandated by Joint Review Committee on Educational Programs in Nuclear Medicine Technology. Exceptional to other programs in the field is the depth of nuclear science instruction that takes place at UW-L, prior to internship placement. Prior to this report, adjustments in curriculum were undertaken, altering courses, requirements and credit totals for the major. All adjustments were aimed at making the program more responsive to the changing needs of the field and the competencies of the students within the major.

**Program Success**
Program success has been determined from results from site directors' surveys. Response from the site directors (from clinics and hospitals) clearly indicate that the students are well prepared for the internship and that UW-L students are particularly well exposed to in-depth nuclear science topics before their

internship.

Program Assessment generally indicates an increase in enrollment and increases in students' GPA. But for the 05-06 academic year there has been an increase in enrollment to meet proposed levels of enrollment for the program and maintenance of the program.

As noted in the Dean's letter, UW-L NMT graduates have performed exceptionally well in the national certification board exam with an extraordinary 100% pass rate in the last 7 years.

In addition, students have generally ranked above average on the national certification exams with 2004 and 2005 being exceptions to this trend with no apparent reasons cited.

With input from accredited internship sites, the curriculum is constantly monitored and fine tuned on a regular basis. Assessment tools have been implemented to make programmatic improvements. Student demand for this program has been steadily increasing and the program has an excellent track record of producing highly qualified and well sought after graduates.

**Previous Academic Program Review and New Program Initiatives**

The 1999 Academic Program Review of the NMT program indicates a desire to increase the enrollment of the program to 30 students and to increase the quality of their graduates by restructuring elective course offerings coinciding with changes in General Education requirements. These initiatives have taken place in the intervening time period. Enrollment has generally been maintained at the designated level and the overall quality of the program's graduates is attested to by a rise in GPA and data collected from the site director's surveys.

New program initiatives include exploring the shifting from the program director being a chemistry professor to being a certified Nuclear Medicine Technologist. This could allow for curricular changes where the program director would teach courses directly related to Nuclear Medicine Technology and for the possibility of direct accreditation of the UW-L NMT program.

**Personnel**

The only personnel supported by the program are the NMT program director, who has traditionally been a member of the chemistry department, and part-time instructors for NMT 201 and 395. Program Director receives 25% release and an additional stipend.

**Support for Achieving Academic Program Goals (Resources)**

Support for NMT is delivered in the form of staffing and nominal budget lines dedicated to supplies, postage, and travel required by the program director.

**Comments on External Reviewer/Department Response/Dean's Letter**

There is no external review per se. The participating internship sites carry the accreditation and data from them is reviewed by external national and international credentialing/accreditation agencies. The Dean's letter recommends that this requirement be waived and we would agree. Pre-requisite and foundational courses are under constant revision based on responses from the participating sites' program directors. The Dean's letter is consistent with the contents of the report, indicating a high level of programmatic achievement and carrying support within the college. Further the Dean's letter does not indicate any discrepancies with the contents of the report.

**APR's Recommendations**

1. While there are many positive indicators of high achievement, the report includes data from site directors' surveys that recently indicates slight downward variation from previous years' highs. Continue to monitor this closely in order to assess trends and respond accordingly.

2. In addition to pass/fail rates, continue to monitor closely comparative student rankings on National Certification Board Exams in order to assess possible trends and respond accordingly.

3. We support the recommendation in the NMT APR report that as part of a long-term plan it may be worthwhile to consider hiring a Certified Nuclear Medicine Technologist to administer the program. This should allow for:

- greater facilitation of the necessary curricular changes which, in response to changing technology, are ongoing
- direct accreditation of UW-L program
- an administrator of the program to teach courses directly relevant to the program, and
- facilitate greater communication with clinical sites.

4. There are no serious areas to address. The Nuclear Medicine Technology Program should undergo its next Academic Program Review in the next regularly scheduled cycle.