

**Oregon Institute of Technology
Medical Imaging Technology Department
Nuclear Medicine Technology Program Assessment
2014-2015**

1. Introduction

The Nuclear Medicine Technology (NMT) program began accepting students into the program in 1999 and graduated its first class of students in 2001 on the Oregon Tech campus in Klamath Falls. To date, our program has a 100% pass rate on the nationally recognized ARRT registry board examination (183 graduates) and 99.42% pass rate on the NMTCB registry examination (171 graduates).

Enrollment trends from 2002-2014 have varied from 39 to 54 students in the past. The number of graduates has gradually increased from 5 students in 2002, to as many as 21 students in 2004. From 2005 until 2014, graduate numbers have ranged from 15 -18 students. The total number of students in the Nuclear Medicine Technology program in the fall of 2014 between the sophomore, junior and senior classes was 45 students.

The retention rates for our program in fall of 2014 were 100% for seniors, 100% for juniors, and 81.3% for sophomores.

The graduate salary range has been \$50,000 to \$70,000 with a mean of \$58,000 per year.

II. Program Purpose, Objectives and Student Learning Outcomes:

The Nuclear Medicine faculty consisted of three instructors who met formally in the fall of 2014 and agreed to continue to adopt the student learning outcomes listed below. In addition, our Advisory Board reviews and provides input every May at our annual Advisory Board Meeting.

Nuclear Medicine Technology Program Purpose

The Bachelor of Science program in Nuclear Medicine Technology at Oregon Institute of Technology provides graduates with the knowledge and clinical skills necessary to become competent, ethical and caring professionals in the field of Nuclear Medicine.

Program Educational Objectives:

1. The program prepares students to perform as compassionate and caring health care professionals.
2. The program prepares our graduates to sit for the ARRT and NMTCB board exams.
3. The program prepares students to think critically, communicate effectively and demonstrate professional ethics.
4. The program prepares students to utilize diagnostic techniques, sound judgment and good decision making to provide patient services.
5. The program prepares students to be aware of radioactive exposure to themselves and patients.

The program surveys alumni/employer/clinical externship partners every year in the spring to identify whether we are meeting or exceeding these program objectives and if we need to make any adjustments.

Student Learning Outcomes:

1. The student will demonstrate proficiency in providing patient care.
2. The student will demonstrate knowledge of radiation safety precautions and ALARA concepts.
3. The student will demonstrate recognition of, and adherence to, ethical and professional responsibilities.
4. The student will perform Nuclear Medicine imaging procedures according to program and /or departmental protocol using scientific knowledge and skills in scientific reasoning.
5. The student will demonstrate proficiency in obtaining a relevant patient history.
6. The student will demonstrate knowledge of various radiopharmaceuticals and their uses in nuclear medicine imaging.
7. The student will demonstrate knowledge, understanding, and appropriate uses of instrumentation used in a Nuclear Medicine department.
8. The student will demonstrate knowledge of quality control procedures for instrumentation used in Nuclear Medicine.
9. The student will demonstrate knowledge of radiation therapy procedures used in Nuclear Medicine.

Additional Student Learning Opportunities

Students in the Nuclear Medicine Technology Program are given the opportunity to attend a spring or fall conference through the Northwest Chapter of the Society of Nuclear Medicine. Students also have the opportunity to attend other meetings throughout the year sponsored by various other organizations such as Northwest Imaging Forums, Cardinal Health, and Educational Symposium Institute.

In the fourth year of training, students complete an 11 month clinical externship in a hospital affiliated with our program. This is referred to as their *Externship*. Students continue to pay tuition for this training and spend 38 hours a week for 11 months in the clinical environment with direct, and then eventually, indirect supervision by registered and licensed technologists. Students work on developing “competency” with all exams performed in the department as well as taking examinations online through the school and submitting case studies and site profiles as well. Each term, student professionalism skills are evaluated and this evaluation is part of their grade for the term.

III. Three-Year Cycle for Assessment of Student Learning Outcomes

The following are the nine main outcomes which will be assessed at a rate of three each per year on a three-year cycle, as listed in Table 1 below.

Nuclear Medicine Technology Student Learning Outcomes Assessment Schedule	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
1. The student will demonstrate proficiency in providing patient care.		X			X	
2. The student will demonstrate knowledge of radiation safety precautions and ALARA concepts.	X			X		
3. The student will demonstrate recognition of, and adherence to, ethical and professional responsibilities.	X			X		
4. The student will perform Nuclear Medicine imaging procedures according to program and /or departmental protocol using scientific knowledge and skills in scientific reasoning.			X			X
5. The student will demonstrate proficiency in obtaining a relevant patient history.			X			X
6. The student will demonstrate knowledge of various radiopharmaceuticals and their uses in nuclear medicine imaging.		X			X	
7. The student will demonstrate knowledge, understanding, and appropriate uses of instrumentation used in a Nuclear Medicine department.		X			X	
8. The student will demonstrate knowledge of quality control procedures for instrumentation used in Nuclear Medicine.			X			X
9. The student will demonstrate knowledge of radiation therapy procedures used in Nuclear Medicine.	X			X		

Table 1. Nuclear Medicine Technology Education Cycle

IV. Student Learning Outcomes:

The NMT faculty conducted formal assessment of three program learning outcomes during 2014-2015, as outlined below.

PSLO #4: The student will perform Nuclear Medicine imaging procedures according to program and /or departmental protocol using scientific knowledge and skills in scientific reasoning.

Direct Assessment #1: Junior students in NMT 312 winter 2015

This assessment was done with (16) junior students in the NMT 312 Imaging Procedures II winter term 2015.

For this assessment, we used the scoring sheet for our Lab Practical evaluation at the end of the term. This scoring sheet is broken into (4) sections: *Patient History*, *Patient Positioning*, *Computer Acquisition*, and *Computer Processing*. The total points possible for *Patient History* was (10 points), *Patient Positioning* (14), *Computer Acquisition* (11), and *Computer Processing* (15).

The students were given full credit for each section if they asked the appropriate question(s) for the *Patient History* section and demonstrated the knowledge and/or skills required in each of the other three sections. The benchmark for each category was 80% of students with a score of: *Patient History* (8 out of 10), *Patient Positioning* (11 out of 14), *Computer Acquisition* (8 out of 11), and *Computer Processing* (11 out of 14). Results are shown in Table 2 below.

Performance Criteria	Assessment Methods	Measure Scale	Minimum Acceptable Performance	Results
1. The student will correctly identify all of the pertinent patient history questions.	NMT 312 In Vivo Mid Term Lab Practical	Lab Practical Evaluation Form (1) point per skill item	80% of students who correctly ask 8 out of 10 questions	100%
2. The student will properly position the patient for all possible views.	NMT 312 In Vivo Mid Term Lab Practical	Lab Practical Evaluation Form (1) point per skill item	80% of students with a score of 11 out of 14	100%
3. The student will properly set up the acquisition for the patient study.	NMT 312 In Vivo Mid Term Lab Practical	Lab Practical Evaluation Form (1) point per skill item	80% of students with a score of 8 out of 11	100%
4. The student will process the patient data according to protocol as demonstrated in lab.	NMT 312 In Vivo Mid Term Lab Practical	Lab Practical Evaluation Form (1) point per skill item	80% of students with a score of 12 out of 15	100%

Table 2. Assessment Results for PSLO #4, NMT 312, winter 2015

Evaluation of the data: 4/21/2015

The benchmark of at least 80% was achieved in each category.

Action(s) to be taken: 4/21/2015

Since the students achieved the benchmark of at least 80% in each of the categories, no further action is required at this time.

Direct Assessment #2: Clinical Instructors Survey

Eleven of fourteen clinical instructors affiliated with our program responded to a survey identifying how well their externship student performed on PSLO #4. This evaluation was done spring term 2015 just before the senior externship students completed their training and graduated. Three responses were possible for this SLO: *Insufficiently Prepared*, *Sufficiently Prepared*, and *Highly Prepared*. The survey was completed by the student's clinical instructor and returned to my office.

Thirty six percent (36%) of the clinical instructors responded that their student was *Sufficiently Prepared* and 64% responded that their student was *Highly Prepared*.

Evaluation of the data: 4/21/2015

There was no benchmark set for this survey. We simply wanted to identify any SLOs that were consistently low or high amongst the various sites so that we could make the necessary adjustments in our curriculum to improve those results. Since there were no responses that were *Insufficiently Prepared*, we are satisfied with these results.

Action(s) to be taken: 4/21/2015

We are pleased with these results and no further action is required at this time.

Indirect Assessment #1: Senior Externship Student Survey

Ten of our senior externship students in the NMT 410 Externship course responded to a survey spring term 2015 that identified our SLOs. These students were near the end of their 11 month training and only a few weeks away from graduating. Three responses were possible for this SLO: *Insufficiently Prepared*, *Sufficiently Prepared*, and *Highly Prepared*. The survey was completed by each student and returned to my office before the end of spring term.

Eighteen percent (18.75%) of students responded that they were *Sufficiently Prepared*, 81.25% of students responded that they were *Highly Prepared*, and 0% of students felt they were *Insufficiently Prepared*.

Evaluation of the data: 4/21/2015

There was no benchmark set for this survey. We wanted to identify any SLOs that were consistently low or high amongst the various sites, from the students' perspective, so that we could make the necessary adjustments in our curriculum to improve those results. There was only one result (one student) that felt they were *Insufficiently Prepared* for this PSLO. Due to the nature of the results, the faculty are not concerned about the feedback from this one student.

Action(s) to be taken: 4/21/2015

We are pleased with these results and no further action is required at this time.

PSLO #5: The student will demonstrate proficiency in obtaining a relevant patient history.

Direct Assessment #1: Junior student in NMT 312 winter term 2015

This assessment was administered to (16) junior students in the NMT 312 Procedures II course winter term 2015.

For this assessment, the scoring sheet for the Lab Practical evaluation was used. This scoring sheet is broken into (4) sections, the first of which is *Patient History*. The students are required to ask each of the (11) questions listed above within five minutes.

The students were given a (1) if they asked the patient this question and a (0) if they did not. The benchmark for this assessment was at least 80% of the students asking each of the questions in each category. Results are shown in Table 3.

Performance Criteria	Assessment Methods	Measure Scale	Minimum Acceptable Performance	Results
1. Ask patient's Height and weight	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	100%
2. Ask if patient is pregnant or B.F.	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	93.3%
3. Ask patient's age/DOB	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	93.3%
4. Ask what Meds/allergies the patient has.	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	100%
5. Ask if patient has had any lab exams	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	93.3%
6. Ask about family history	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	100%
7. Ask patients' symptoms/medical history	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	100%
8. Ask about possible previous NM exams	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	93.3%
9. Ask about other imaging exams	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	100%
10. Ask about Food/liquids	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	93.3%
11. Ask about possible treatments	NMT 312 In Vivo Mid Term Lab Practical	1 point per item	80% of students who asked this question	100%

Table 3. Assessment Results for PSLO #5, NMT 312, winter 2015

Evaluation of the data: 4/21/2015

The benchmark of at least 80% was achieved in each category.

Action(s) to be taken: 4/21/2015

Since the students achieved the benchmark of at least 80% in each of the (11) categories, no further action is required at this time.

Direct Assessment #2: Clinical Instructor Survey

Eleven of fourteen clinical instructors affiliated with our program responded to a survey identifying how well their externship student performed on SLO #5. This evaluation was done spring term 2015 just before the senior externship students completed their training and graduated. Three responses were possible for this SLO: *Insufficiently Prepared*, *Sufficiently Prepared*, and *Highly Prepared*. The survey was completed by the student's clinical instructor and returned to the externship coordinator.

Twenty seven (27%) of the clinical instructors responded that their student was *Sufficiently Prepared* and Seventy three (73%) responded that their student was *Highly Prepared*. None of the clinical instructors identified that any student was *Insufficiently Prepared* for SLO #5.

Evaluation of the data: 4/21/2015

There was no benchmark set for this survey. We simply wanted to identify any SLOs that were consistently low or high amongst the various sites so that we could make the necessary adjustments in our curriculum to improve those results. Since there were no responses that were *Insufficiently Prepared*, we are satisfied with these results.

Action(s) to be taken: 4/21/2015

The data supports that no further action is required at this time.

Indirect Assessment #1: Senior Externship Student Survey

Sixteen senior externship students in the NMT 410 Externship course responded to a survey sent to them spring term 2015 that identified our SLOs. These students were near the end of their 11 month training and only a few weeks away from graduating. Three responses were possible for this SLO: *Insufficiently Prepared*, *Sufficiently Prepared*, and *Highly Prepared*. The survey was completed by each student and returned to externship coordinator before the end of spring term.

Thirty one percent (31.25%) of students responded that they were *Sufficiently prepared* and 68.75% of students responded that they were *Highly Prepared*. There were no *Insufficiently Prepared* responses.

Evaluation of the data: 4/21/2015

There was no benchmark set for this survey. Faculty are interested in identifying any SLOs that were consistently low or high amongst the various sites, from the students' perspective, so that we could make the necessary adjustments in our curriculum to improve those results. There were no results that were *Insufficiently Prepared*, and therefore, we are pleased with these results.

Action(s) to be taken: 4/21/2015

The results indicate that no further action is required at this time.

PSLO #8: The student will demonstrate knowledge of quality control procedures for instrumentation used in Nuclear Medicine.

Direct Assessment #1: Junior students in the NMT 312 course spring term 2015

For this assessment, an unannounced quiz was administered to (16) junior students in the NMT 388 Externship Prep course spring term 2015. This course is one year later than where the material on the quiz was first introduced and primarily taught in the NMT 225 course. The quiz was broken down into three separate sections: *Dose Calibrator QC*, *Gamma Camera QC*, and *Well Counter QC*. Each section included five questions regarding quality control procedures related to that subject.

The benchmark for this assessment was 80% of students getting (4) out of the (5) questions correct in each section. Results are shown in Table 4 below.

Performance Criteria	Assessment Methods	Measure Scale	Minimum Acceptable Performance	Results
1. The student will demonstrate knowledge of Dose Calibrator QC	NMT 388 Course	(5) Questions in this section	80% of students with a score of 4 out of 5	79%
2. The student will demonstrate knowledge of Gamma Camera QC	NMT 388 Course	(5) Questions in this section	80% of students with a score of 4 out of 5	93%
3. The student will demonstrate knowledge of Well counter QC	NMT 388 Course	(5) Questions in this section	80% of students with a score of 4 out of 5	93%

Table 4. Assessment Results for PSLO #8, NMT 312, spring 2015

Evaluation of the Data: 6/16/2015

The benchmark of at least 80% was achieved for the *Well Counter QC* (93%) and *Gamma Camera QC* (93%) sections. However, the benchmark was not achieved in the category of *Dose Calibrator QC* section. Only 79% of students achieved the benchmark

in this category. This assessment demonstrated that our students have not retained a sufficient knowledge of Dose Calibrator QC procedures as they apply to dose calibrator instrumentation used in Nuclear Medicine.

Actions to be taken: 6/16/2015

Faculty plan to emphasize and re-evaluate the Dose Calibrator quality control material in courses subsequent to the NMT 225 course by quizzing students specifically on this material in NMT 311 course during the junior year. Finally, we plan to incorporate questions on the exams for this material for these same students who will be doing their NMT 410 externship this coming year.

Direct Assessment #2: Clinical Instructor Survey

Eleven clinical instructors affiliated with our program responded to a survey identifying how well their externship student performed on SLO #8. This evaluation was done spring term 2015 just before the senior externship students completed their training and graduated. Three responses were possible for this SLO: *Insufficiently Prepared*, *Sufficiently Prepared*, and *Highly Prepared*. The survey was completed by the student's clinical instructor and returned to the externship coordinator.

Forty five percent (45%) of the clinical instructors responded that their student was *Sufficiently Prepared* and fifty five one percent (55%) responded that their student was *Highly Prepared*. There were no *Insufficiently Prepared* responses for SLO #8.

Evaluation of the data: 4/21/2015

There was no benchmark set for this survey. Faculty are interested in identifying any SLOs that were consistently low or high amongst the various sites, from the students' perspective, so that we could make the necessary adjustments in our curriculum to improve those results. There were no *Insufficiently Prepared* responses and therefore, no additional action is necessary.

Action(s) to be taken: 4/21/2015

The results indicate that no further action is required at this time.

Indirect Assessment #1: Senior Externship Student Survey

Sixteen of our senior externship students in the NMT 410 Externship course responded to a survey sent to them spring term 2015 that identified our SLOs. These students were near the end of their 11 month training and only a few weeks away from graduating. Three responses were possible for this SLO: *Insufficiently Prepared*, *Sufficiently Prepared*, and *Highly Prepared*. The survey was completed by each student and returned to the externship coordinator before the end of spring term.

Thirty Seven percent (37.5%) of students responded that they were *Sufficiently prepared* and 62.5% of students responded that they were *Highly Prepared*. There were no *Insufficiently Prepared* responses.

Evaluation of the data: 4/21/2015

There was no benchmark set for this survey. Faculty wanted to identify any SLOs that were consistently low or high amongst the various sites, from the students' perspective, so that the necessary adjustments in the curriculum could be made to improve those results. There were no results that were *Insufficiently Prepared*, and therefore, we are pleased with these results.

Action(s) to be taken: 4/21/2015

The results indicate that no further action is required at this time.

V: Summary of Student Learning.

During the 2014-2015 academic year, the faculty assessed student learning outcomes #4, #5, and #8. The faculty observed the following:

PSLO #4. Student Learning Outcome: The student will perform Nuclear Medicine imaging procedures according to program and /or departmental protocol using scientific knowledge and skills in scientific reasoning.

Strengths: The students on campus performed very well here. In addition, the self-evaluation of our externship students in this area, as well as the evaluation by their clinical instructors, was excellent. We had two direct and one indirect assessment and they all met or exceeded expectations and/or requirements for this PSLO.

Areas Needing Improvement: None identified.

PSLO #5. Student Learning Outcome: The student will demonstrate proficiency in obtaining a relevant patient history.

Strengths: The students in the NMT 312 course also performed very well in this PSLO. In addition, the externship students in the NMT 410 course evaluated themselves on this PSLO as did their externship clinical instructors. The data overwhelming support the conclusion that our students are very well prepared on campus, as well as on their externship, to take a relevant patient history.

Areas Needing Improvement: None identified.

PSLO #8. Student Learning Outcome: The student will demonstrate knowledge of quality control procedures for instrumentation used in Nuclear Medicine

Strengths: This one is confusing. The NMT 410 externship students overwhelmingly agreed that they felt they were *Highly Prepared* (90%) or at least *Sufficiently Prepared* (10%) in their knowledge and demonstration of quality control procedures for instrumentation in the clinical environment. However, junior students on campus in the NMT 388 course spring term failed to demonstrate adequate knowledge of *Dose Calibrator QC* (79%).

Areas Needing Improvement: It appears that we need to do a better job of reviewing or applying student's knowledge of Dose Calibrator QC after the students take the NMT 225 course spring term of the sophomore year.

As mentioned above, we plan to emphasize the Dose Calibrator quality control material in the NMT 225 course where it is originally taught as well as emphasizing, and re-testing students on this material in the NMT 311 course. Finally, we plan to incorporate questions on this material for these same students who will be doing their NMT 410 externship this coming year, to re-emphasize this information, although the assessment revealed that this was not a necessity.

VI. Closing the loop:

NMT PSLO 1: No areas needing improvement identified.

NMT PSLO 6: No areas needing improvement identified.

NMT PSLO 7: As suggested in the NMT 2013-2014 Assessment Report, we have reviewed and emphasized material on collimators in the NMT 388 course. We did not re-evaluate this material in this course, but will in the NMT 410 course on externship.

As mentioned, I'm not concerned that students scored a 79% out of the required 80% in this category since the externship students identified that they felt they were *Highly Prepared* or at least *Sufficiently Prepared* in this category for this material.

ISLO 2: Critical Thinking

This skill was emphasized and re-evaluated on the Professional evaluations for fall term in the NMT 311 course. 100% of the junior students scored at least an 80% in this category. No students received a score of less than 75% which is "Performance fails to meet expectation for skill level."

VII. Additional Comments:

Two surveys were conducted spring term 2015. These surveys were done with Qualtrics. The first survey asked 14 of our **clinical instructors** to evaluate how well the OIT

Nuclear Medicine Program prepared our NMT 410 externship students in a (19) areas of preparedness that included the (9) PSLOs for our program. As faculty, we are looking for trends in these responses that might indicate one or more areas for improvement.

The results were encouraging. The respondents had (3) choices: *Highly Prepared*, *Sufficiently Prepared*, and *Insufficiently Prepared*. The vast majority of responses were *Highly Prepared* and then *Sufficiently Prepared* after. There were no *Insufficiently Prepared* responses. We also asked for subjective feedback on what they considered strengths and weaknesses of the program.

The second survey was directed toward our **NMT 410 externship students** in the last term of their training. Students were asked to respond to their level of preparedness in each of the categories of the OIT ISLOs. There were (4) possible responses: *High Proficiency*, *Proficient*, *Some Proficiency*, and *No/Limited Proficiency*. There were no responses in the *No/Limited Proficiency* category. Students responded to thirty six questions regarding their preparedness from OIT for their externship experience. Nine of the questions were the OIT Nuclear Medicine PSLOs. The students had the following evaluation choices for each question: *Highly Prepared*, *Sufficiently Prepared*, and *Insufficiently Prepared*.

Only one student of the fourteen responded with *Insufficiently Prepared* for PSLO #4: **The Student will perform Nuclear Medicine Imaging Procedures according to program and/or departmental protocol.** The second response from this student in this category was for this statement: **The equipment in the department is of adequate quality to meet the clinical objectives.**

Regarding these statements, we immediately provided an opportunity for students to provide suggestions at the end of the survey in the event there were any “Insufficiently Prepared” responses.

There was no feedback to clarify why the student answered *Insufficiently Prepared* making any response to this very difficult.

Overall, the results were encouraging and we will share the responses to any affiliate externship site that requests the feedback regarding their externship site.

Appendix

Curriculum Maps

Student Learning Outcome #4: The student will perform Nuclear Medicine imaging procedures according to program and /or departmental protocol using scientific knowledge and skills in scientific reasoning.

I = Introduced
 R = Reinforced
 E = Emphasized

	Sophomore			Junior			Senior		
Fall	NMT 217	Patient Care	I	NMT 311	In-Vivo Procedures	RE	NMT 410	Extern	RE
	NMT 212	Nuclear Med Physics		BUS 317	Health Care Managment				
	PHY 217	Physics of Medical Imaging		Math Science	Elective				
	CHE 250	Clinical Pharm for Nuc Med		COM	Elective				
Win	NMT 215	Radiopharm/ Radiochem	RE	NMT 312	In-Vitro Procedures	RE	NMT 410	Extern	RE
	NMT 205	Nuclear Medicine Administration		NMT 367	PET Imaging	RE			
	WRI 227	Tech Report		NMT 355	CT Imaging	RE			
	SPE 321	Discussion Processes		BIO 335	Cross Sectional				
				Soc Science	Elective				
Spr	NMT 225	Nuclear Physics/Instrumentation		NMT 313	Therapeutic Procedures	RE	NMT 410	Extern	RE
	NMT 256	Cardiovascular NM	RE	NMT 325	Spect Imaging	RE			
	BUS 316			NMT 388	Extern Prep/Review				
	HUM	Humanities Elective		HUM Elective	HUM Elective				
	Soc Sci	Soc Sci elective		Social Science Elective	Social Sci Elective				

Student Learning Outcome #5: The student will demonstrate proficiency in obtaining a relevant patient history.

I = Introduced
 R = Reinforced
 E = Emphasized

	Sophomore			Junior			Senior		
Fall	NMT 217	Patient Care	I	NMT 311	In-Vivo Procedures	RE	NMT 410	Extern	RE
	NMT 212	Nuclear Med Physics		BUS 317	Health Care Mngment				
	PHY 217	Phy of MI		Math Science	Elective				
	CHE 250	Clinical Pharm for Nuc Med		COM	Elective				
Win	NMT 215	Radiopharm/ Radiochem		NMT 312	In-Vitro Procedures	RE	NMT 410	Extern	RE
	NMT 205	Nuclear Medicine Administration		NMT 367	PET Imaging				
	WRI 227	Tech Report		NMT 355	CT Imaging				
	SPE 321	Discussion Processes		BIO 335	Cross Sectional				
				Soc Science	Elective				
Spr	NMT 225	Nuclear Physics/Instrumentation		NMT 313	Therapeutic Procedures		NMT 410	Extern	RE
	NMT 256	Cardiovascular NM		NMT 325	Spect Imaging				
	BUS 316			NMT 388	Extern Prep/Review	RE			
	HUM	Humanities Elective		HUM Elective	HUM Elective				
	Soc Sci	Soc Sci elective		Social Science Elective	Social Sci Elective				

Student Learning Outcome #8: The student will demonstrate knowledge of quality control procedures for instrumentation used in Nuclear Medicine

I = Introduced
R = Reinforced
E = Emphasized

	Sophomore			Junior			Senior		
Fall	NMT 217	Patient Care		NMT 311	In-Vivo Procedures	RE	NMT 410	Extern	RE
	NMT 212	Nuclear Med Physics		BUS 317	Health Care Mngment				
	PHY 217	Phy of MI		Math Science	Elective				
	CHE 250	Clinical Pharm for Nuc Med		COM	Elective				
Win	NMT 215	Radiopharm/ Radiochem		NMT 312	In-Vitro Procedures	RE	NMT 410	Extern	RE
	NMT 205	Nuclear Medicine Administration		NMT 367	PET Imaging				
	WRI 227	Tech Report		NMT 355	CT Imaging				
	SPE 321	Discussion Processes		BIO 335	Cross Sectional				
				Soc Science	Elective				
Spr	NMT 225	Nuclear Physics/Instrumentation	I	NMT 313	Therapeutic Procedures	RE	NMT 410	Extern	RE
	NMT 256	Cardiovascular NM		NMT 325	Spect Imaging	RE			
	BUS 316			NMT 388	Extern Prep/Review				
	HUM	Humanities Elective		HUM Elective	HUM Elective				
	Soc Sci	Soc Sci elective		Social Science Elective	Social Sci Elective				