



**Coleman for Health Sciences  
Nuclear Medicine Methodology II  
NMTT 2309 Syllabus**

<b>Semester with Course Reference Number (CRN)</b>	NMTT 2309 (87598)
<b>Instructor contact information (phone number/email address)</b>	Vikki Davis Littleton – (713) 718-7398 or Rene Hyder – (713) 718-7355 Email – <a href="mailto:vikki.davislittleton@hccs.edu">vikki.davislittleton@hccs.edu</a> <a href="mailto:rene.hyder@hccs.edu">rene.hyder@hccs.edu</a>
<b>Office Location and Hours</b>	Office Hours: Monday 1:00 - 4:30 p.m., Friday 9:00 - 10:30 a.m. Suite 529
<b>Course Location/Times</b>	RM TBA - Monday 9:00 am – 12:15 pm RM 553 - Wednesday 9:00 am – 12:00 am RM 553 - Wednesday 1:00 pm – 4:00 pm
<b>Course Semester Credit Hours (SCH) (lecture, lab) If applicable</b>	Credit Hours      3.00 Lecture Hours      2.00 Laboratory Hours 5.00 External Hours
<b>Total Course Contact Hours</b>	96.00
<b>Continuing Education Units (CEU): if applicable</b>	N/A
<b>Course Length (# of weeks)</b>	8 weeks
<b>Type of Instruction</b>	Lecture/Lab
<b>Course Description:</b>	Principles and practices involved in nuclear medicine regarding cardiovascular, genitourinary, respiratory systems, and miscellaneous procedures. Emphasizes patient care, anatomy, physiology, radiopharmaceuticals, instrumentation, data processing and analysis, and diagnostic value.
<b>Course Prerequisite(s)</b>	<b>PREREQUISITE(S):</b> <ul style="list-style-type: none"><li>• NMTT 1409</li></ul>

- BIOL 2401
- BIOL 2402

### FREQUENT REQUISITES

- College Level Writing
- Departmental approval
- Admission to the Program
- College Level Reading
- College Level Mathematics

#### Academic Discipline/ CTE Program Learning Outcomes

1. Prepare and administer radiopharmaceuticals.
2. Correlate nuclear medicine procedures with normal anatomy/physiology and abnormal pathology.
3. Utilize proper methods of patient care.
4. Demonstrate radiation safety techniques to minimize radiation exposure.
5. Perform quality control procedures.
6. Competently perform imaging and non-imaging nuclear medicine procedures.

#### Course Student Learning Outcomes (SLO): 4 to 7

1. Assess student's knowledge of patient procedures and radiopharmaceuticals.
2. Assess student's ability to identify normal and abnormal patterns of radiopharmaceutical distribution.
3. Student should be capable of citing procedures, medications and possible adverse reactions.
4. Student should be capable of specifying equipment required for performing the methodology.
5. Assess student's ability to identify technical considerations.

#### Learning Objectives (Numbering system should be linked to SLO – e.g., 1.1, 1.2, 1.3, etc.)

#### Assess student's knowledge of patient procedures and radiopharmaceuticals.

1. List the main indications for performing in-vivo procedures.
2. State the preparations and procedures for performing in-vivo studies.

#### Assess student's ability to identify normal and abnormal patterns of radiopharmaceutical distribution.

1. Recognize anatomy and physiology with the procedure performed.
2. Distinguish between normal anatomy/physiology versus pathology as seen on a nuclear medicine image.

#### Student should be capable of citing procedures, medications and possible adverse reactions.

1. Identify procedures and substances that may interfere with the performance of a nuclear medicine procedure.

#### Student should be capable of specifying equipment required for performing the methodology.

1. List the equipment required to perform various nuclear medicine procedures.
2. List the equipment required to perform nuclear medicine procedures.

#### Assess student's ability to identify technical considerations.

1. Illustrate different techniques used to attain data for clinical procedures.

#### SCANS and/or Core Curriculum Competencies: If applicable

#### SCANS

#### Assess student's knowledge of patient procedures and radiopharmaceuticals.

#### Assess student's ability to identify normal and abnormal patterns of radiopharmaceutical distribution.

Foundation Skills - Basic -Listening

#### Student should be capable of citing procedures, medications and possible adverse reactions.

#### Student should be capable of specifying equipment required for performing the methodology.

#### Assess student's ability to identify technical considerations.

Foundation Skills - Thinking -Decision Making  
Foundation Skills - Thinking -Problem Solving  
Workplace Competencies - Information -Uses Computers to Process

**Instructional  
Methods**

Web-enhanced (49% or less)  
Face to Face

**Student  
Assignments**

**Assess student's knowledge of patient procedures and radiopharmaceuticals.**

Various assigned readings from textbooks, peer-rev  
Presentations  
Lab Exercises  
Homework Exercises

**Assess student's ability to identify normal and abnormal patterns of radiopharmaceutical distribution.**

Various assigned readings from textbooks, peer-rev  
Presentations  
Lab Exercises  
Homework Exercises

**Student should be capable of citing procedures, medications and possible adverse reactions.**

Various assigned readings from textbooks, peer-rev  
Presentations  
Lab Exercises  
Homework Exercises

**Student should be capable of specifying equipment required for performing the methodology.**

Presentations  
Lab Exercises  
Homework Exercises

Various assigned readings from textbooks, peer-rev  
**Assess student's ability to identify technical considerations.**

Various assigned readings from textbooks, peer-rev  
Presentations  
Lab Exercises  
Homework Exercises

**Student  
Assessment(s)**

**Assess student's knowledge of patient procedures and radiopharmaceuticals.**

Quizzes/Tests which may include: definitions, matching, multiple choice, true/false, short answer, brief essay

Various assigned readings from textbooks  
Presentations

**Assess student's ability to identify normal and abnormal patterns of radiopharmaceutical distribution.**

Quizzes/Tests which may include: definitions, matching, multiple choice, true/false, short answer, brief essay

Various assigned readings from textbooks  
Presentations

**Student should be capable of citing procedures, medications and possible adverse reactions.**

Quizzes/Tests which may include: definitions, matching, multiple choice, true/false, short answer, brief essay

Various assigned readings from textbooks  
Presentations

**Student should be capable of specifying equipment required for performing the methodology.**

Quizzes/Tests which may include: definitions, matching, multiple choice, true/false, short answer,

brief essay  
Various assigned readings from textbooks  
Presentations

**Assess student's ability to identify technical considerations.**

Quizzes/Tests which may include: definitions, matching, multiple choice, true/false, short answer, brief essay  
Various assigned readings from textbooks  
Presentations

**Instructor's  
Requirements**

All students are expected to attend all classes in which they are enrolled. Attendance will be checked regularly by the instructor in the lecture and laboratory sessions. Any student who accumulates more than four absences will be administratively withdrawn from the course without notification. The student must attend  $\frac{3}{4}$  of the class to be considered as being present for each class.

**Program/  
Discipline  
Requirements:  
If applicable**

Testing

Final examinations must be taken on the day and time designated by the instructor, unless there is a personal illness, accident or death in the immediate family (parent, child, brother, sister, spouse or grandparent). In the event any of these occur, the student must call and speak personally with the instructor or department head on the day of the examination. The student must provide documented evidence of the reason for missing the examination; doctor's statement in the case of personal illness, an accident report in the case of an accident, or obituary or funeral program in the case of death in the immediate family. This documentation must be provided prior to taking a make-up final examination. The make-up final must be taken within 7 working days from the original test date or at the discretion of the instructor. In the case of a severe injury or long term illness, the student will be given an "I", incomplete, until the final examination is taken. An "I" will automatically turn into an "F" if the student does not take the examination by the end of the following term (excluding Summer). A student may not register for the next semester's nuclear medicine technology courses, if they have an incomplete in any of their nuclear medicine technology courses.

If notification on the day of a missed final examination to the involved instructor/department head by the student is not made, a student will receive a 0 for their final exam grade and course's final grade will be calculated as prescribed in the individual course syllabi. Also, if documented evidence as described in the preceding paragraph is not provided, a student will receive a 0 on their final examination.

Make-up policy

Students absent at the time when a major lecture exam or quiz is given will not be given a make-up examination. This also includes a student who comes to class late. Students will not be allowed to take exams at a later time during the class. All exams will have time periods designated; therefore, all test papers and practicums must be turned in at the end of that time period. This policy is absolutely necessary in order to carry out all laboratory activities in the given time period and allow for fairness to all students present.

Class rolls are taken each day as class begins. Students who enter the classroom more than 1/2 hour after class has begun will be counted absent on that day. Students who are late to class but less than 1/2 hour late will be counted as tardy. A student is considered tardy if they enter the class more than 5 minutes late. Students are responsible for contacting their instructor to prevent being marked as absent on that day. Three tardies will count as an additional absence.

**THERE WILL BE NO MAKE-UP EXAMINATIONS FOR THE CLASSROOM**

Any student absent from the classroom for a major scheduled exam will have the percent value of that exam added to the percent value of the appropriate FINAL EXAM.

Projects, Assignments, Portfolios, Service Learning, Internships, etc.

Laboratory Procedures - Laboratory sessions will be split in time between lab assignments and

computer processing of nuclear medicine procedures. A practical exam will be given on processing a nuclear medicine procedure with the Nu Quest software.

**Course Content**

This course is designed to give an in-depth view of the in vivo clinical aspects of nuclear medicine technology. Lecture/Laboratories sessions will include reviewing the procedure manual, processing studies, and learning anatomy/physiology/pathology on the internet, CD ROMs, and/or videotapes. Several nuclear medicine professionals will guest lecture on the systems covered this summer.

Other Student Information (clubs, tutoring, web resources, etc.)

**Tutoring Available** -Outstanding students in the program will be designated as peer tutors. They will be approved and paid by the college to tutor students who need help. Arrangements for tutoring sessions will be made between the student in need and their tutor.

**HCC Grading Scale**

A = 100- 90	4 points per semester hour
B = 89 - 80:	3 points per semester hour
C = 79 - 70:	2 points per semester hour
D = 69 - 60:	1 point per semester hour
59 and below = F	0 points per semester hour
IP (In Progress)	0 points per semester hour
W(Withdrawn)	0 points per semester hour
I (Incomplete)	0 points per semester hour
AUD (Audit)	0 points per semester hour

IP (In Progress) is given only in certain developmental courses. The student must re-enroll to receive credit. COM (Completed) is given in non-credit and continuing education courses. To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP," "COM" and "I" do not affect GPA.

For Health Science programs, see the Program/Discipline Requirements section for specific grading requirements.

**Instructor Grading Criteria**

METHOD FOR DETERMINING COURSE GRADE		GRADING SCALE	
Quizzes	10%	90 - 100	A
Homework /Lab Assignments	10%	80 - 89	B
Mid-Term Lecture Exam	25%	75 - 79	C
Mid Term Lab Practical	15%	Below 75	F
Final Lecture Exam	25%		
Final Lab Practical	15%		

\* Remember: You need a "C" or better to continue to the next semester

The material for this course will be presented both in the classroom lecture and the regularly scheduled laboratory session. Students are requested to read the assignment outlined in the syllabus prior to the class meeting. Examination questions will be taken from the reading assignments, the lab assignments, as well as from the material presented during the lecture.

**Instructional Materials**

Nuclear Medicine and PET, Technology and Techniques, Christian, Waterstram-Rich, 7th Edition, 2012  
 Nuclear Medicine Procedure Manual 12-14, Klingensmith, Wick Publishing Inc., 2012.

**HCC Policy Statement:**

**Access Student** <http://hccs.edu/student-rights>

**Services  
Policies on their  
Web site:**

**Distance Education and/or  
Continuing Education Policies**

**Access DE Policies** [http://de.hccs.edu/Distance\\_Ed/DE\\_Home/faculty\\_resources/PDFs/DE\\_Syllabus.pdf](http://de.hccs.edu/Distance_Ed/DE_Home/faculty_resources/PDFs/DE_Syllabus.pdf)  
**on Web site:**

**Access CE** <http://hccs.edu/CE-student-guidelines>  
**Policies on**  
**Web site:**