

**DEGREE/PROGRAM CHANGE  
FORM C  
Form Number: C1161**

**Fields marked with \* are required**

**Name of Initiator:** Elizabeth Greer      **Email:\*** [ejgreer@unm.edu](mailto:ejgreer@unm.edu)      **Date:\*** 10-29-12  
**Phone Number:\*** 505 272-5254      Initiator's Title\* Lecturer III: Radiology  
Department  
Associated Forms exist?\*: Yes ▼  
Faculty Contact\* Elizabeth Greer      Administrative Contact\* Pamala Garcia-Ramirez  
Department\* Radiologic Sciences      Admin Email\* pkgarcia@salud.unm.edu  
**Branch**      Admin Phone\* 505-272-5254

**Proposed effective term:**

Semester Fall ▼      Year 2014 ▼

**Course Information**

Select Appropriate Program Undergraduate Degree Program ▼  
Name of New or Existing Program \* Nuclear Medicine Imaging Certificate  
Select Category Certificate ▼      Degree Type  
Select Action Revision ▼

**Exact Title and Requirements as they should appear in the catalog. If there is a change, upload current and proposed requirements.**

See current catalog for format within the respective college (upload a doc/pdf file)

[Nuclear Medicine Imaging Certificate Program course outline 10-2012.docx](#)

**Does this change affect other departmental program/branch campuses? If yes, indicate below.**

Reason(s) for Request \* (enter text below or upload a doc/pdf file)

Removing HSCI 480 from the Certificate and replace with new course NUCM 380 Nuclear Medicine Cross Sectional Anatomy. This will provide Nuc students with knowledge of nuclear medicine specific to the certificate earned. HSCI 480 will be offered in the BSRS concentration Nuclear Medicine  
[NUCM-380-Syllabus-AE-Fall 2012.docx](#)

Upload a document that includes justification for the program, impact on long-range planning, detailed budget analysis and faculty workload implications. \*

[NUCM 380 Form B New Course Request 10-29-12.docx](#)

Nuclear Medicine Imaging Certificate Program  
Curriculum Revisions 2012

Nuclear Medicine Imaging Certificate Program\*

Program Curriculum

Summer Semester

MUCM 315	Radiation Safety	2	
HSCI 381	Medical Language Systems Review	1	
HSCI 330	Patient Care	2	
HSCI 331	Patient Care Lab	1	
		6	

Fall Semester

NUCM 320	Clinical Nuclear Technology I	4	
NUCM 354	Clinical Radiopharmacy	3	
NUCM 375	Nuclear Physics and Instrumentation	3	
NUCM 360	Imaging and Instrumentation	3	
<b>HSCI 480</b>	<b>Human Cross Sectional Anatomy</b>	<b>3</b>	<b>REMOVE</b>
NUCM 412	Nuclear Radiation Biology (1 <sup>st</sup> 8 weeks)	2	replace with (summer existing course)
<b>NUCM 380</b>	<b>Nuc Med Cross Sect. Anatomy(2<sup>nd</sup> 8wks)</b>	<b>2</b>	<b>replace with (NEW COURSE)</b>
		17	(previous credit count was16)

Spring Semester

NUCM 365	Clinical Nuclear Technology II	4	
NUCM 385	Imaging Instrumentation II	3	
NUCM 390	In Vitro Nuclear Medicine	2	
NUCM 392	Pathology Seminar	4	
NUCM 396	Essentials of Nuc Med Imaging I	3	
		16	

Nuclear Medicine Imaging Certificate Program  
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Summer Semester

NUCM 400	Clinical Nuclear Technology III	4	
NUCM 412	Nuclear Radiation Biology	2	(move to Fall in the ESR)
NUCM 415	Essentials of Nuc Med Imaging II	2	
		6	(previously credit count of 8)

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**NUCM 380 COURSE Syllabus/Description  
Nuclear Medicine Cross Sectional Anatomy  
FALL 2013**

Instructor: Amin Eizadkhah  
Email: [aeizadkhah@salud.unm.edu](mailto:aeizadkhah@salud.unm.edu)  
Office number: (505) 272-5742  
Room: HSSB Room 212

Cell: (505) 818-5405

Class hours: Online-No class Meeting Times

Office hours: Virtual Office Hours-Wednesday 8:30-9pm or by appt. this is not mandatory to log into

Objectives:

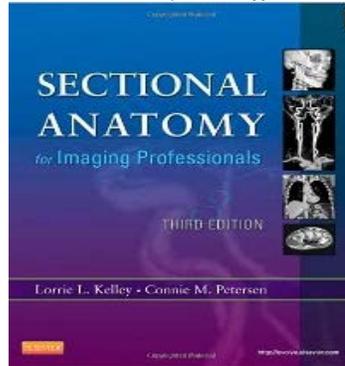
- Define anatomic planes.
- Identify medical imaging modalities.
- Describe the relative position of human anatomy relevant to diagnostic radiology.
- Identify commonly used external and internal landmarks.
- Utilize medical terminology in evaluating anatomy and pathology captured throughout medical images.
- Describe the relative position of specific structures within the body using directional and regional terminology.

Homework and Exams: All homework and exams will be online and timed.

**(Note 1:** When you start a homework/exam, a timer will start. If for some reason you lose internet connectivity, you will not be able to restart the exam. **If this happens you need to contact the technical support staff for WebCT.** They will be able to login and verify the time that you lost your connectivity. If you cannot reach the technical support staff, leave a message. You may also email me and leave a message on my phone. Do not wait. If you do this then we have a “time stamp” of when the problem occurred. We can then resolve the issue at a later time. Having a reliable internet connection is important when taking the ex. ***Finding a reliable connection for taking Exams is your responsibility.*** If your connection at home is unreliable, then use the computers in the Health Science Library or some other location that has better internet service).

**(Note 2:** **I will drop a student after 2 weeks of no participation (logging into course) or contact. I am able to monitor all student activity in the course).**

Text: The following text is required: Kelley & Petersen, Sectional Anatomy for Imaging Professionals, 3<sup>rd</sup>. Ed. *Note: Cover may be different*



Others texts that may be useful: Netter, Atlas of Human Anatomy, Radiographic Anatomy, any edition  
Marieb, Human Anatomy and Physiology or any other good, college-level anatomy book

Resources: Health Sciences Library – Extensive collection of texts, journals and models  
WebCT – I will be posting lecture material and supplemental material on WebCT.  
Internet – There are a number of resources available on the web. I will be sharing these throughout the semester. If you find something of interest, let me know and perhaps we can post the link for the rest of the class.

Late assignments: I will not accept late homework unless prior arrangements have been made. 10% deduction for any missed assignment per day. Exams must be taken at the scheduled time unless you make prior arrangements or have a valid emergency/illness.  
Notify me if you will not be able to take a homework or exam at the scheduled time. There is No Makeup Exams, However with prior arrangements in case of emergency; an early exam might be the option.

Grading Criteria: **Your final letter grade will be weighted as follows:**  
**50% midterm and final exams**  
**50% exams and homework**

The homework/quiz fraction of your grade is based on the number of points earned and the total number of points possible. The midterm and final exam fraction will also be based on the number of points earned and the total number of point possible

$$\text{Final grade percentage} = [0.5 * (\text{exam and homework fraction})] + [0.5 * (\text{midterm and final fraction})] * 100\%$$

The following grading system is used:

Percentage	Grade
97-100	A+
93-96	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77 to 79	C+
73 to 76	C

### Per student handbook

All students must maintain a 75% average **in all courses** to remain in good standing and receive a Certificate in Nuclear Medicine Imaging. A student who receives less than 75% in any course will be placed on **academic probation** and must bring the course average up to 75% prior to the conclusion of that course.

Students who fall **below 75% in any course will be dismissed from the program**. The program reserves the right to terminate any student who fails to meet minimum academic or clinical standards.

### Chapter Objectives:

#### Chapter 1 – Introduction to Sectional Anatomy

- Define the four anatomic planes.
- Describe the relative position of specific structures within the body using directional and regional terminology.
- Identify commonly used external landmarks.
- Identify the location of commonly used internal landmarks.
- Describe the dorsal and ventral cavities of the body.
- List the four abdominal quadrants.
- List the nine regions of the abdomen.
- Describe the gray scale used in CT and MR imaging.

#### Chapter 3 – Brain

- Describe the meninges.
- Describe the production and absorption of cerebrospinal fluid.
- Identify the components of the ventricular system.
- Identify the basal cisterns.
- List the structures of the diencephalon.

- Describe the location and function of the components of the cerebrum, brainstem, and cerebellum.
- Identify the structures of the limbic system and describe their function.
- Identify the major arteries of the cerebrum and list the structures they supply.
- List the arteries that constitute the circle of Willis.
- Identify the superficial cortical veins, deep veins, and dural sinuses of the cerebrum.
- Identify the function and course of the cranial nerves.

#### Chapter 4 – Spine

- Identify the structures of a typical vertebra.
- Identify the atypical structures of the atlas and axis, thoracic vertebrae, sacrum, and coccyx.
- Identify and explain the function of the spinal ligaments.
- Define the action of and identify the muscle groups of the spine.
- Describe the components of the spinal cord and spinal nerves.
- Describe the four plexuses of the spinal cord and list the structures they innervate.
- Identify the vasculature of the spine and spinal cord.

#### Chapter 5 – Neck

- List the three anatomic sections of the pharynx.
- List and identify the laryngeal cartilages.
- Identify and describe the esophagus and trachea.
- Identify and state the function of the salivary gland.
- Describe the location and function of the thyroid gland.
- List the cervical lymph node regions.
- Describe the course of the major vessels located within the neck.

#### Chapter 6 – Thorax

- Describe the structures that constitute the bony thorax.
- Define the thoracic inlet and outlet.
- Understand the function and layers of the pleura.
- Identify and describe the structures of the lungs.
- Identify the mainstream bronchi and their divisions.
- List the structures of the mediastinum and describe their anatomic relationships to each other.
- Identify the structures of the heart and explain the circulation of blood through the heart.
- Identify the great vessels and describe the distribution of their associated arteries and veins.
- Differentiate between pulmonary arteries and veins by function and location.
- Identify the coronary arteries and veins.
- List the muscles involved in respiration by function and location.

## Chapter 7 – Abdomen

- List the structures of the abdominal cavity and differentiate among those that are contained within the peritoneum and those that are contained within the retroperitoneum.
- Describe the peritoneal and retroperitoneal spaces.
- Describe the lobes, segments, and vasculature of the liver.
- Define the structures of the biliary system.
- State the function and location of the pancreas and spleen.
- Identify the structures of the urinary system.
- List and identify the structures of the stomach and intestines.
- Identify the branches of the abdominal aorta and the structures they supply.

## Chapter 8 – Pelvis

- Identify the structures of the bony pelvis.
- Define the pelvic inlet and outlet.
- Describe the perineum.
- Differentiate between the pelvic and urogenital diaphragms.
- Describe the location of the bladder in relation to the reproductive organs and the course of the male and female urethras.
- Describe the location and function of the male and female reproductive organs.
- Identify the major arteries and veins that are located within the pelvis.
- Describe the location of the pelvic lymph nodes.

## Chapter 9 – Upper Extremity

- Identify the bony anatomy of the upper extremity.
- Identify the major arteries and veins of the upper extremity.

## Chapter 10 – Lower Extremity

- Identify the bony anatomy of the lower extremity.
- Describe the labrum and articular capsule of the hip.
- Define and identify the meniscus and articular capsule of the knee.
- Identify the bursae of the hip and knee.
- List and identify the major arteries and veins of the lower extremity.

New Course Request  
Form B  
Radiologic Sciences Programs

New Course Number: NUCM 380

New Course Title: Nuclear Medicine Cross Sectional Anatomy

Instructor:

New Credit Hours: 2

Course Description:

Faculty Course examines three and four dimensional relationships of the skull, brain, CNS, thorax, abdomen, pelvis and extremities correlating this information with nuclear medicine imaging modality.

Impact Statement

Justification for offering the course: This course will be part of our existing Nuclear Medicine Certificate Program. This course will replace an existing course that will be removed. Additional faculty was hired in 2012.

Course Methodology

Comprehensive review examinations and topic review, lectures, and image evaluations.

Bibliography:

Kelley & Petersen, Sectional Anatomy for Imaging Professionals, 3<sup>rd</sup>. Ed.