LABETTE COMMUNITY COLLEGE BRIEF SYLLABUS

SPECIAL NOTE:
This brief syllabus is not intended to be a legal contract. A full syllabus will be distributed to students at the first class session.

TEXT AND SUPPLEMENTARY MATERIALS USED IN THE COURSE (if any):

Please check with the LCC bookstore http://www.labette.edu/bookstore for the required texts for this class.

COURSE NUMBER: RADI 201

COURSE TITLE: IMAGING MODALITIES

SEMESTER CREDIT HOURS: 3

DEPARTMENT: Radiography

DIVISION: Health Science

PREREQUISITE: RADI 105 Radiographic Procedures III

REVISION DATE: 1/13/10

COURSE DESCRIPTION:
This course encompasses the concepts and applications within advanced modality areas of radiology, including: Magnetic Resonance Imaging, Mammography, Bone Densitometry, Ultrasound, Nuclear Medicine, PET, Radiation Therapy, and Angiography.

COURSE OUTCOMES & COMPETENCIES:
Students who successfully complete this course will be able to with 86% accuracy:

1. Explain the background and purpose that magnetic resonance imaging plays in diagnostic imaging.

- Define MRI and its comparison to conventional radiography.
- Discuss the technology of MRI and how that works in diagnostic procedures.
- Discuss the historical development and the physical applications of MRI.
- Describe the safety precautions needed when dealing with an MRI unit.
- Describe the advantages and disadvantages of this modality.

2. Explain the role and applications of mammography and bone mineral density.

- Describe the common purposes of mammography and BMD.
- Discuss the evolution and relation of mammography to conventional radiography.
- Discuss the topic of breast cancer and the role that mammography plays.

- Discuss technology advancements of digital mammography and the importance of quality assurance.

3. Discuss and understand general concepts of ultrasound.

- Describe the applications of ultrasound and how it relates to diagnostic imaging.
- Discuss the advantages and disadvantages of ultrasound.
- Discuss the physics and evolvement of the modality.

4. Discuss and understand the concepts of nuclear medicine imaging and positron emission tomography.

- Define and discuss the applications of Nuclear Medicine.
- Discuss common procedures performed in modality.
- Discuss radiation safety among radioactive materials.
- Discuss the physics and evolvement of the modality.
- Describe the advantages and disadvantages of the modality.

5. Discuss the areas of application of radiation therapy.

- Discuss the different types of radiation therapy procedures.
- Describe members of the radiation therapy team.
- Describe the new technology advances in radiation therapy.
- Discuss the advantages and disadvantages of this modality.

6. Discuss and understand the concepts of angiography.

- Define and discuss the applications of angiography scanning.
- Discuss common procedures performed with the modalities.
- Discuss radiation safety issues for professional workers and patients.
- Describe the advantages and disadvantages of the modality.

7. Explain the individual preparation for future career employment.

- Discuss the interview process.
- Discuss and write a cover letter and professional resume'.