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’.