SOUTHEAST COMMUNITY COLLEGE
HEALTH SCIENCES DIVISION
Medical Assisting
Revision Date: 7/2019
Syllabus Statements

I. CATALOG DESCRIPTION

Course Number: **MEDA1400**
Course Title **LIMITED RADIOGRAPHY**
Prerequisite(s): **NONE**

Catalog Description: **A clinic-based comprehensive study of limited radiography that will present the fundamentals of radiation, including procedures and techniques, as well as methods of minimizing radiation exposure to patients and personnel. Procedures include chest and extremities only. The course will include a comprehensive exam preparation for the Nebraska Limited Radiographer Examination.**

Credit Hours: 3.0
Class Hours: 45
Lab Hours: 0
Total Contact Hours: 45

II. COURSE OBJECTIVES: *Course will:*

1. Integrate classroom theory into practicum experiences.
2. Apply limited radiology principles to the medical office setting.
3. Integrate radiation safety practices to the medical office setting.
4. Preparation for the Nebraska Limited Radiographer examination.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

1. Learn the terminology of radiography
2. Understand the production of and the equipment of radiography
3. Review essentials of medical ethics, professionalism, safety and infection control
4. Understand x-ray production in the tube
5. Survey the elements of radiographic quality
6. Technique management
7. Review anatomy and positioning for chest and extremity
8. Learn the construction, function and care of selected accessories of digital equipment
9. Understand primary factors for receptor exposure, brightness, detail and distortion
10. Learn the atomic level interactions that result in x-rays
11. Review descriptions of the x-ray beam and the units of measurement
12. Understand the interactions of ionizing radiation with matter
13. Learn the biological consequences of exposure with ionizing radiation
14. Identify known risks of ionizing radiation and ways to minimize those risks
15. Identify specific State regulations regarding radiation protection

16. Recognize unacceptable images and how to improve or correct positioning and exposure factor errors
17. Review and prepare for the Nebraska Limited Radiographer Examination

B. GENERAL EDUCATION LEARNING OUTCOMES

1. **GELO 5: Analytical, Quantitative, and Scientific Reasoning**
   Outcome: Apply mathematical and scientific methods to solve problems from an array of contexts and everyday situations.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information)*

- **A.** Introduction to Radiography
- **B.** Producing X-rays, Quality, and Technique Management
- **C.** Accessory Devices
- **D.** Processing the Image (Chest and Extremities)
- **E.** Physical Principles of X-Ray Production
- **F.** The X-Ray Beam
- **G.** X-rays and Matter
- **H.** Radiation and Biology
- **I.** Radiation Risks
- **J.** Regulations

V. INSTRUCTIONAL MATERIALS

A. **Required Text(s):**
Limited Radigraphy Course manual, Connie Lyon, ROC publishing (customized edition)
Radiolography Essential for Limited Practice, Saunders Current Edition
Bontrager's Handbook of Radiographic Positioning and Techniques, Mosby Current Edition

B. **Other Resources:**
Instructor Handouts/PowerPoint Presentations

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:
   1. Lecture, demonstrations, practical applications, laboratory practice

VII. METHODS OF EVALUATION

SCC Standard Grading Scale Policy is used.

SCC STANDARD GRADING SCALE POLICY:

A+	**95-100**	**C+**	**75-79**
A	**90-94**	**C**	**70-74**
B+	**85-89**	**D+**	**65-69**
B	**80-84**	**D**	**60-64**
		F	**Below 60**

VIII. SPECIFIC COURSE REQUIREMENTS

1. See course information document for detailed grading policies.