**MOHAWK VALLEY COMMUNITY COLLEGE**

Course Outline

Course Name: **Image Production & Evaluation II C-2 P-0 Cr. 2**

Course Number: RT 201

Pre-requisites: RT105 Image Production & Evaluation I.

Co-requisites: RT109 Radiation Biology I, RT200 Advanced Procedures/ Sectional Anatomy, RT202 Clinical Education Advanced.

**Course Description**:

This course provides students with a knowledge base in factors that govern the image production process. Digital imaging with related accessories, including radiographic grids, is emphasized. The components, principles, and operation of digital imaging

systems found in diagnostic radiology are discussed.

**Student Learning Outcomes:**

1. Evaluate radiographic receptor exposure, resolution, and distortion and characteristics for determining image quality
2. Synthesize various geometrical factors into a clinical protocol for improving resolution.
3. Describe adjustments of central ray, anatomical part, and image receptor that will minimize shape distortion.
4. Evaluate the importance of quality assurance and quality control and discuss the relationship to excellence in radiography.
5. Extrapolate a variable and fixed technique chart
6. Accurately identify configuration size, shape, and position for various brands of ionization chambers.
7. Identify image intensification components related to fluoroscopic image brightness.

**Major Topics:**

1. Receptor Exposure

1. Image Contrast
2. SID
3. OID
4. Spatial Resolution (Recorded Detail)
5. Distortion
6. Exposure Latitude
7. Beam-Limiting Devices
8. Beam Filtration
9. QA/Technique Formulation
10. Exposure Calculations
11. AEC
12. X-ray Equipment Operation & Digital Acquisition & Image Intensification

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