

**Middlesex Community College**  
**SYALLBUS**

**I. Course Title: CAT \*203 – Procedures and Instrumentation I**

**II. Credits:** 2

**III. Prerequisites:** Admission to the Computed Tomography Program, ARRT Registered Radiographer

**IV. Semester:** Fall 2016

**V. Instructor:** Jason Bohn, BS, RT (R)(CT)  
Office Hours: By appointment  
Phone: 860-358-6293 7:00am – 3:30pm  
Email: jason.bohn@midhosp.org

**VI. Course Description:** This course will introduce students to the set-up and operation necessary to acquire optimal images of the head and neck. Emphasis will be placed on the acquisition techniques required to obtain optimal images of the head and neck including their respective pathologies.  
*Prerequisites: Admission to the Computed Tomography Program, ARRT Registered Radiographer*

**VII. Course Text:** **CT Basics Institutional Software**, [www.asrt.org/CTBasics](http://www.asrt.org/CTBasics)  
**References:** **Computed Tomography**, Seeram, 2009, Elsevier.  
**Computed Tomography Review**, DeMaio, 20011, Elsevier

**VIII. Course Objectives:** At the end of this course, the student will be able to:

1. Describe and differentiate clinical indications for head and neck imaging based on patient symptoms.
2. List and explain patient preparation for CT imaging of the head and neck.
3. Distinguish the differences in the different protocols for the head and neck.
4. Explain scan protocols for the head and neck based on patient symptoms.
5. Compare techniques to reduce patient radiation exposure while obtaining optimal images
6. Correctly explain appropriate contrast usage for CT imaging of the head and neck
7. Correctly identify anatomic structures of the head and neck on CT images.

**IX. Course Goals:**

1. Provide students with the opportunity to describe and differentiate clinical indications for head and neck imaging.
2. Provide students the opportunity to list and explain patient preparation for CT imaging of the head and neck.
3. Provide students the opportunity to distinguish and explain different protocols for the head and neck based on patient symptoms.

4. Provide student the opportunity to identify appropriate images for head and neck protocols.

**X: General Unit Outline:**

- I. Clinical Indications for Head imaging
  - a. Signs
  - b. Symptoms
- II. Patient Preparation
- III. Positioning for specific cranial anatomy
  - a. Brain
  - b. Blood vessels
  - c. Dural venous system
  - d. Facial bones
  - e. Sinuses
  - f. Internal auditory canal
  - g. orbits
- IV. Scan protocols for specific neck anatomy
  - a. Blood vessels
  - b. Larynx
  - c. Pharynx
  - d. Soft tissue vs. vertebrae
- V. Contrast media usage
- VI. Image review and critique of head and neck images.

**XI: Course Presentation:** This course consists of the following components:

Assignments	200 points	80%
Final Exam	50 points	20%
Total Points	250 points	100%

<b>XII: Grade Scale:</b>	235/250= 94 = A	207/250= 83 = B -
	230/250= 92 = A -	200/250= 80 = C +
	222/250= 89 = B +	192/250= 77 = C
	215/250= 86 = B	190/250= 76 = F

**ADDITIONAL COLLEGE INFORMATION:**

**IMPORTANT COLLEGE POLICIES!! PLEASE READ CAREFULLY!**

For information about the college's policies and procedures regarding academic honesty, accessibility/disability services, attendance, audio-recording in the classroom, grade appeals, plagiarism, religious accommodations, weather and emergency closings, and more, please go to the following website:

[www.mxcc.edu/catalog/syllabus-policies/](http://www.mxcc.edu/catalog/syllabus-policies/) or scan the QR code with your smart phone. Also, please become familiar with the policies regarding nondiscrimination, sexual misconduct, and general student conduct at the following website: [www.mxcc.edu/nondiscrimination/](http://www.mxcc.edu/nondiscrimination/).

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employment on the additional basis of veteran status or criminal record. The following people have been designated to handle inquiries or complaints regarding non-discrimination policies and practices:

*Primary Title IX Coordinator*

*Dr. Adrienne Maslin*

*Dean of Students/Title IX and Section 504/ADA Coordinator*

*[amaslin@mxcc.edu](mailto:amaslin@mxcc.edu); 860-343-5759; Founders Hall Room 123*

*Secondary Title IX Coordinator*

*Ms. Mary Lou Phillips*

*Director of Human Resources, Middlesex Community College*

*[mphillips@mxcc.edu](mailto:mphillips@mxcc.edu); 860-343-5751; Founders Hall Room 115*

*Secondary Title IX Coordinator*

*Ms. Queen Fordham*

*Coordinator of the Meriden Center Welcome Desk*

*[qfordham@mxcc.edu](mailto:qfordham@mxcc.edu); 203-608-3011*

### **CAT\*203 – CT Procedures and Instrumentation I**

#### **Course Topics and Schedule**

<b>Module</b>	<b>Study Topic(s)</b>	<b>Assignment(s)</b>	<b>Points</b>
7	Introduction Procedures to include the following:		
Part 1	Clinical Indications for Head Imaging; Patient Preparation and Positioning for Head Imaging	Mod 7 Assignment 1	25
Part 2	Clinical Indications for Neck Imaging; Patient Preparation and Positioning for Neck Imaging	Mod 7 Assignment 2	25
Part 3	Clinical Indications for Cervical Spine Imaging; Patient Preparation and Positioning for Cervical Spine Imaging	Mod 7 Assignment 3	25
Part 4	Clinical Indications for Thoracic and Lumbar Spine Imaging; Patient Preparation and Positioning for Thoracic and Lumbar Spine Imaging	Mod 7 Assignment 4	25
Part 5	Image Critique of the Head	Mod 7 Assignment 5	25
Part 6	Image Critique of the Neck	Mod 7 Assignment 6	25
Part 7	Image Critique of the Cervical Spine	Mod 7 Assignment 7	25
Part 8	Image Critique of the Thoracic and Lumbar Spine	Mod 7 Assignment 8	25
	Final Exam Activity	Accumulative	50
Total			250

**\*SUBJECT TO CHANGE WITH NOTIFICATION\***