COMPUTED TOMOGRAPHY CERTIFICATE

Computed Tomography Technologists are skilled professionals who use the knowledge of anatomy and physiology, cross sectional anatomy, and proper radiation safety to assist physicians in the diagnosis and treatment of patients with various medical issues while ensuring the safety and well-being of the patient. The certification program is designed to prepare the student for an entry-level position as a Computed Tomography Technologist.

The Computed Tomography Certificate is a two semester, six course curriculum designed to provide Radiologic Technologists, Nuclear Medicine Technologists, and Radiation Therapy Technologists the opportunity to develop clinical skills as well as critical thinking skills needed to be eligible to take the ARRT post-primary certification test. This program is designed to prepare the technologist to enter the workforce as an entry-level CT Technologist.

The clinical component consists of two semesters with direct supervision at an approved clinical site by Albany State University. Technologist will be required to perform CT exams including head, neck, chest, abdomen, pelvis, extremity as well as angiography.

The didactic portion of the CT program consists of four courses that will be instructed as online courses. The curriculum includes topics such as:

- contrast agents,
- patient assessment,
- patient preparation,
- data processing,
- image reconstruction,
- image quality, and
- cross sectional anatomy.

Computed Tomography Program Requirements

a. Student must earn a "C" or better in all courses related to the Computed Tomography Certificate Program.
b. Student is required to have an acceptable background check.
c. Student must maintain current CPR certification for the duration of the program.
d. Students must abide by the policies and procedures of the Computed Tomography program as described in the program Handbook.
e. The Computed Tomography Program reserves the right to discontinue, at any time, the enrollment of a Computed Tomography student if, in the judgment, of the Vice President for Academic Affairs and the Computed Tomography Faculty, the student does not appear to have the necessary qualifications for a career as a Computed Tomography Technologist. Refer to the Program Handbook for further details.
f. Student must possess:
    i. Visual acuity with or without corrective lenses to be able to read computer screens as well as information on medication bottles. Also must be able to identify cardiac arrest or any type of emergency.
    ii. Hearing with or without auditory aids to understand the normal speaking voice without viewing the speaker's face (to ensure that the Computed Technologist will be able to attend to a patient's call for help)
    iii. Physical ability---able to lift 40 pounds---ability to transfer patients (minimal impairment of upper and lower extremities) to perform CPR in a safe and timely manner.
    iv. Speech - to be able to communicate information verbally to others in an appropriate and timely fashion.
g. Student is expected to assume responsibility for their own health in the event of illness, accident or exposure to communicable diseases in lab and clinic.
h. Student is required to have approved uniforms.

Additional Costs and Requirements

a. Student will be responsible for additional fees to cover the costs of uniforms, liability insurance, testing, and dosimeters prior to clinical assignment.
b. Travel to clinical sites will be required for the duration of the Computed Tomography Program. The student is responsible for any costs related to travel to and from the clinical site.
c. Student will be required to undergo a criminal background check before clinical assignment. Fees are assessed during the first semester of the professional curriculum. Albany State University uses a company called PreCheck for this purpose.

Admission Requirements

a. Admission to Albany State University
b. Completion of a CTCP application, which is available in the Health Sciences Division office.
c. Student must have a minimum overall GPA of 2.0 or greater in all previous college course work.
d. Student must be a graduate from an accredited program and has passed the ARRT certification exam or will take the exam within 2 weeks of starting the program. (Programs include: Radiologic Technologist (ARRT), Nuclear Medicine (ARRT/NMTCB), Radiation Therapy (ARRT)
e. A copy of the technologist's registry card must be sent to the Program Director before a student will be accepted to the Computed Tomography Certificate Program.
f. Students must possess an unrestricted license by the State of which they will be attending clinicals.
g. Submit copy of current CPR for Healthcare Provider.

Recommended Courses for Certificate Program

Pre-requisite

Applicants must be graduates from an accredited program and have passed the ARRT certification exam or will have taken the exam within 2 weeks of starting the program. (Radiologic Technologist (ARRT), Nuclear Medicine (ARRT/NMTCB), Radiation Therapy (ARRT) — a copy of the students ARRT/NMTCB registry card must be with the application.

Code	Title	Semester Hours
First Semester		
CTCP 2100	Introduction to Computed Tomography	2
CTCP 2120	Sectional Anatomy I (Head, Spine, Chest)	4
CTCP 2140	Clinical Application I	4

Second Semester

CTCP 2110	Physical Principles, Instrumentation and Quality Control	3
CTCP 2130	Sectional Anatomy II (Abdomen, Pelvis, Neck, Extremity)	4
CTCP 2150	Clinical Application II	5
Total Semester Hours		**22**

Depending on your enrollment status, you may be required to take ASU 1101, "First Year Experience."

CTCP 2100. Introduction to Computed Tomography. (2 Credits)
This course serves as an introduction to computed tomography with an emphasis on basic patient care while in a Computed Tomography department, as well as the history of CT and the components of a CT scanner. Additional topics include patient history, vital signs, laboratory values, contrast agents (oral and intravenous), medical ethics, patient confidentiality, as well as research contributors in CT, historical events, scanner generations, characteristics of radiation, detectors and data acquisition system. Corequisite: Graduation from an accredited Radiology, Nuclear Medicine or Radiation Therapy Program. Prerequisite: Registered Radiologic Technologist, Nuclear Medicine Technologist, or a Radiation Therapy Technologist with the ARRT or Nuclear Medicine Technology Certification Board (NMTCB). Offered: Fall, Spring, Summer.

CTCP 2110. Physical Principles, Instrumentation and Quality Control. (3 Credits)
This course is an overview of the system operation, components and quality control. To be able to understand the different functions and capabilities and identify the components of the CT scanner to provide quality care during a CT examination. Topics include data acquisition, data processing, reconstruction, manipulation, image quaity, console, high voltage generator, filter, detectors, and confolution, interpolation and pitch. Corequisite: Graduation from an accredited Radiology, Nuclear Medicine or Radiation Therapy Program. Prerequisite: Registered Radiologic Technologist, Nuclear Medicine Technologist, or a Radiation Therapy Technologist with the ARRT or Nuclear Medicine Technology Certification Board (NMTCB). Offered: Fall, Spring, Summer .

CTCP 2120. Sectional Anatomy I (Head, Spine, Chest). (4 Credits)
This is an overview of cross-sectional anatomy that is imaged during a Computed Tomography examination. The course will provide information about normal head, spine and chest anatomy. Students will be able to identify and recall normal anatomical structures on cross-sectional images in order to perform quality care for patients. Topics include the Circle of Willis, gray/white matter, pons, vetebral body, lamina, spinous process, spinal cord, heart (ventricle/atrium), lungs and ribs. Corequisite: Graduation from accredited Radiology, Nuclear Medicine or Radiation Therapy Program. Prerequisite: Registered Radiologic Technologist, Nuclear Medicine Technologist, or a Radiation Therapy Technologist with the ARRT or Nuclear Medicine Technology Certificate Board (NMTCB). Offered: Fall, Spring, Summer.

CTCP 2130. Sectional Anatomy II (Abdomen, Pelvis, Neck, Extremity). (4 Credits)
This is an overview of cross-sectional anatomy that is imaged during a Computed Tomography examination. This course will provide basic information about normal neck, abdomen, pelvis and extremities anatomy. Students will be able to identify and recall normal anatomical structures on cross-sectional images in order to perform quality care for patients. Topics include the liver, aorta, spleen, pancreas, kidneys, ureters, pelvic girdle, sma celiac artery, femoral arteries, popliteal arteries and bony structures such as the ribs, femur, humerus, ankle, shoulder. Corequisite: Graduation from an accredited Radiology, Nuclear Medicine or Radiation Therapy Program. Prerequisite: Registered Radiologic Technologist, Nuclear Medicine Technologist, or a Radiation Therapy Technologist with the ARRT or Nuclear Medicine Technology Certification Board (NMTCB). Offered: Fall, Spring, Summer.

CTCP 2140. Clinical Application I. (4 Credits)
This course introduces students to the clinical setting of a Computed Tomography (CT) department. It allows students to observe and gain knowledge of CT procedures as well as patient care while in the CT department. Introduces the student to the CT scanner, protocols, equipment used, contrast agents, as well as starting to work toward their clinical competencies needed for this course and the American Registry or Radiologic Technologists (ARRT). Corequisite: Graduation from an accredited Radiology, Nuclear Medicine or Radiation Therapy Program. Prerequisite: Registered Radiologic Technologist, Nuclear Medicine Technologist, or a Radiation Therapy Technologist with the ARRT or Nuclear Medicine Technology Certification Board (NMTCB) Offered: Fall, Spring, Summer.

CTCP 2150. Clinical Application II. (5 Credits)
This course is a continuation of the hands-on training about the CT scanner, protocols, equipment, contrast agents, as well as post-processing that was introduced in the previous clinical course. It allows students to become more proficient as well as gain work experience needed to join the workforce as an entry-level technologist and towards the completion of their clinical competencies needed for this course, as well as the American Registry of Radiologic Technologists (ARRT). Corequisite: Graduation from an accredited Radiology, Nuclear Medicine or Radiation Therapy Program. Prerequisite: Registered Radiologic Technologist, Nuclear Medicine Technologist, or a Radiation Therapy Technologist with the ARRT or Nuclear Medicine Technology Certification Board (NMTCB). Offered: Fall, Spring, Summer .