

CHATTANOOGA STATE COMMUNITY COLLEGE
DIVISION OF NURSING AND ALLIED HEALTH
COURSE SYLLABUS
NUCM 2145: Global Experiences in Nuclear Medicine

Instructor Information

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Office hours are by arrangement only, due to clinical travel schedule. Please always call ahead to ensure that we will be in the office, as clinic visits and meetings may conflict with the schedule.

Catalog Course Description

In this course, students will journey to international locations to explore the ways in which nuclear medicine and molecular imaging is performed. Radiopharmaceuticals, procedures, and technology not used or performed in the United States will be the focus of this course. Students will have the opportunity to visit hospitals and clinics in other countries and not only experience how nuclear medicine and molecular imaging is performed, but also gain an understanding on how health care in the host country works compared to the United States. Guest lecturers in the host country will present on various topics, including nuclear medicine procedures, patient care, and healthcare policies.

The course requires pre-travel planning and study classes, in collaboration with other colleges, to learn about the location and nuclear medicine and molecular imaging in the host country, along with cultural information. Several post-travel classes will occur to finalize the project and to plan for a presentation to the Chattanooga State Allied Health Community.

Prerequisite:

Successful completion of NUCM 2200, NUCM 2301, NUCM 2204, NUCM 2214, NUCM 2205, NUCM 2607, or permission of instructor.

Concurrent:

NUCM 2208, NUCM 2215, NUCM 2312, NUCM 2617, or permission of instructor.

Entry Level Standards:

The student must have successfully completed the first semester of the Nuclear Medicine Technology Program, or be part of the exchange program from another country.

Textbook & Course Materials

Required Text(s)

EANM Tech Guides—Downloadable from EANM Website
JNM and JNMT—access given through Chattanooga State Library

Student Learning Outcomes

The required competencies and student outcomes/instructional objectives in this course are utilized to meet the NMT Program overall mission to provide education and training experiences appropriate for the development of competent professional technologists in the use of radionuclides for diagnostic and therapeutic procedures. For more information on this, please see the NMT Program Student Handbook.

Institutional Student Learning Outcomes:

The knowledge, skills, and attitudes that a community college graduate is expected to have developed include:

- ISLO1. Effective Communication: Includes speaking, writing and graphic presentation skills
ISLO2. Analytical Skills/Critical Thinking Ability: Includes skills of categorization, decoding significance, clarifying meaning examining ideas, detecting arguments, and analyzing arguments into their component elements. Purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual, considerations upon which that judgment is based.
ISLO3. Informational Technology Skills: Includes use of computers, online learning, information seeking, use of new technologies
ISLO4. Global & Cultural Awareness: Includes awareness of how societal and cultural differences affect an individual's life, focusing on diversity and collaboration
ISLO5. Competency in a Specialty: The specialty-specific competencies that each graduate of the program is expected to achieve.
ISLO6. Work Ethic: Teamwork, professionalism, integrity and productivity.

Program Goals and Mission Statement:

Mission Statement: Provide education and training experiences appropriate for the development of competent professional technologist in the use of radionuclides for diagnostic and therapeutic procedures.

Program Student Learning Outcomes Assessed in this Course:

At the completion of the nuclear medicine technology program, the student will be prepared to perform the following: (See handbook for complete list of PSLO's)

PLSO1: (Patient Care and Professionalism)

Provide basic patient care, comfort, safety, and emergency procedures while utilizing professional standards and appropriate work ethic to include communicating effectively in the overall delivery of healthcare, following appropriate department management practices, as well as adhering to the guidelines of regulatory and licensing agencies.

- CSLO1: The student will display competence by using reading, writing, speaking, and listening skills to acquire, synthesize summarize, develop, and convey ideas and information.

- CSLO2: The student will become familiar with the establishment of a nuclear medicine department and the activities involved prior to performing procedures on patients.
- CSLO3: Demonstrate the ability to assimilate basic management theory into problem solving ability and display their own professional work ethic, as well as develop skills for life-long learning and promote scholarly activity through practice-based research.

PSLO2: (Radiation Safety and Protection)

Apply as low as reasonably achievable philosophy (ALARA) to protect the patient, self, and others using knowledge of ionizing radiation, including interactions with the body and the biological effect of exposure in the performance of imaging and therapy, to perform all daily operations of the laboratory.

- CSLO4: The student will render safe and appropriate care by determining the appropriate radiopharmaceutical, administration route, dosage and handling of radioactive materials.

PSLO3: (Instrumentation Utilization and Quality Control)

Properly utilize imaging and non-imaging devices by performing acquisition and processing of patient studies, as well as perform and analyze all quality control procedures associated with the handling of radionuclides and imaging equipment.

- CSLO5: The student will maximize exam quality.

PSLO4: (Radiopharmaceuticals and Pharmaceuticals)

Prepare and administer radiopharmaceuticals and other agents used in conjunction with nuclear medicine procedures to patients by parenteral and non-parenteral routes according to proper medical procedure and governing regulations.

- CSLO6: The student will follow proper procedures when incongruence's exist between the requested procedure, stated pathology, patient preparation, and / or contraindications for clinical procedures or radionuclide therapy.

PSLO5: (Procedures Diagnostic and Therapeutic) Perform diagnostic/therapeutic procedures using appropriate patient clinical correlation with concern for ALARA, patient care and management, as well as governing regulations while utilizing proper acquisition, processing, and presentation techniques.

- CSLO7: The student will evaluate relationships between pathologies under consideration and clinical procedures requested.
- CSLO8: The student will critically evaluate the end-product of clinical procedures for quality in acquisition technique, processing and presentation.

PSLO6: (Global Nuclear Medicine) Perform interdisciplinary study of political, economic, ecological and cultural interconnectedness, as related to the medical field.

- CSLO9: The student will demonstrate knowledge of global nuclear medicine and molecular imaging through in-class participation, while applying theories and concepts to practical problems.
- CSLO10: The student will analyze various radiopharmaceuticals and procedures used in the host country through in-class discussions, reflective journals, and 1 creative project to demonstrate the ability to critically examine experiences.
- CSLO 11: The student will demonstrate knowledge and construct connections between experiences dealing with particular radiopharmaceuticals and procedures not available or performed in the United States through participation in guest lecturers' seminars.

Course Student Learning Outcomes (CSLO): *At the completion of this nuclear medicine technology course, the student will be prepared to perform the above outcomes.*

Assessment:**Grading Policy:**

Grades will be based on objective tests consisting of registry type multiple choice questions as well as discussion questions. The portfolio project will also contribute to the final grade. The grading scale is as follows:

90-100	A
80-89	B
75-79	C
65-74	D
65 and below	F

Students are expected to score at least a cumulative grade of 75% according to the weighting factors described below.

Assignment	Percentage
Project	50%
Reflective Journals	20%
Presentation	20%
ePortfolio	10%
	Total 100%

A score of less than 75% on any portion of the graded work MAY require the student to perform remediation work.

CSLO Assessments:

CSLO1 Project, Presentation
CSLO2 Reflective Journal
CSLO3 Project, Reflective Journal, Presentation
CSLO4 Reflective Journal
CSLO5 Reflective Journal
CSLO6 Reflective Journal
CSLO7 Reflective Journal
CSLO8 Reflective Journal, Project, Presentation
CSLO9 Reflective Journal, Project, Presentation
CSLO10 Reflective Journal, Project, Presentation
CSLO11 Reflective Journal, Project, Presentation

Learning Indicators:

Successful completion of this course requires the student demonstrate mastery of the following objectives

1. Identify the significance of nuclear medicine and molecular imaging in the global world.
2. Recognize the differences in nuclear medicine and molecular imaging in other countries.
3. Connect with students and other nuclear medicine/molecular imaging professionals around the world.
4. Demonstrate the value of professional networking by collaborating with fellow students at other colleges and universities in the United States.
5. Analyze various radiopharmaceuticals and procedures used in the host country through in-class discussions, and 1 creative project.

Teaching/Learning Methods:

1. Class lectures will center on assigned reading material. A set of lecture notes with salient information will be distributed ahead of lectures. These lecture notes are not all inclusive.

2. Reading/Online assignments:
The student must be prepared for class. The reading and/or online assignments will be the basis for class discussions; therefore, the student must complete all assignments, including handouts and notes before they are discussed with the class.
3. ePortfolios are due on the final class meeting.
4. As part of the portfolio process, the reflections will include the student's attendance, preparedness, contribution and professionalism during the lectures and trip to the other country.

Instructional Activities:

There will be five graded assignments:

- Attendance of pre-travel planning and study classes.
- Group project: Students will be assigned to a group. Students will choose one of the following topics:
 - Healthcare policies
 - Radiopharmaceuticals
 - Nuclear medicine procedures
 - Scope of practice for nuclear medicine technologists

Students will be required to compare and contrast differences between the United States and the host country. The final submitted project will consist of an FAQ document that will be shared with the host country. Students will use these questions as a discussion tool with technologists in the host country.

- Reflective journals: While in the host country, students will journal their experience. The journal will include a daily entry, consisting of what they saw and what they learned.
- ePortfolio: Students will compile all course material in an ePortfolio.
- Presentation: Upon return to the United States, students will prepare a presentation outlining their experience. The presentation should include information from their group project, as well as their journals.

Schedule:

Example Trip Itinerary

Pre-Trip Meeting 1: Introduction to host country and/or other students from other colleges/universities.

Pre-Trip Meeting 2: Brief information on various topics that will be discussed during the international travel visits.

Pre-Trip Meeting 3: Healthcare structure in the host country. Reflective journals or brief discussion answers to questions asked.

In London:

Day 1: Leave for London.

Day 2: arrive London in the morning. Walking tour of London, then lunch together. In the evening, free to explore.

Day 3: Nuclear Medicine & Molecular Imaging--general nuclear procedures and/or oncology

lectures at hospital. Lunch together and then networking and group project work.

Day 4: Nuclear Medicine & Molecular Imaging—cardiac lectures in hospital. Lunch together then networking and group project work.

Day 5: Nuclear Medicine & Molecular Imaging—PET lectures at hospital. Split into groups and visit hospital departments.

Day 6: Excursion--Stonehenge

Day 7: Visit community hospital

Day 8: Free day

Day 9: Group projects and workshop/sharing in the evening

Day 10: Group Project “final touches” and brief meeting to discuss student writing projects and plan a presentation for Allied Health upon return.

Day 11: Fly home

In Australia:

Day 1: Leave for Australia.

Day 2: arrive Australia in the morning. Check into hotel and rest, after 20 hour flight, then free to explore the area on your own.

Day 3: Nuclear Medicine & Molecular Imaging--general nuclear procedures and/or oncology lectures at hospital. Lunch together and then networking and group project work.

Day 4: Nuclear Medicine & Molecular Imaging—cardiac lectures in hospital. Lunch together then networking and group project work.

Day 5: Nuclear Medicine & Molecular Imaging—PET lectures at hospital. Split into groups and visit hospital departments.

Day 6: Excursion

Day 7: Visit community hospital

Day 8: Free day

Day 9: Group projects and workshop/sharing in the evening

Day 10: Group Project “final touches” and brief meeting to discuss student writing projects and plan a presentation for Allied Health upon return.

Day 11: Fly home

Instructor Policies:

The attendance policy will follow the Chattanooga State Technical Community College NM Program Handbook. Students are responsible for attending all class sessions. Any exceptions should be made prior to the missed class. The student is responsible for any information presented during their absence and make up work does not have to be assigned by the instructor. Beginning with the first infraction, a subtraction of 5 points from the final grade shall be made for a tardy and/or absence unless documentation is provided. The student is responsible for all material learned in class for testing purposes, even though that material was missed.

Submission of Assignments

Students may be required to submit assignments and other coursework electronically as specified by the instructor. Deadlines may be set anytime during the week including weekends.

The course will be evaluated to determine if the stated objectives are being achieved by monitoring each student's test results, final grades, and class discussion. The assignments reflect mastery of these objectives; and therefore, provide a reasonable means of determining whether the stated objectives are being met. If it is determined that the objectives are not being met, the course content will be altered to better meet the student's needs.

College Policies

This class is governed by the policies and procedures stated in the current Chattanooga State Student Handbook. Additional or more specific guidelines may be found in the NMT Program Student Handbook, as well as the Allied Health Student Handbook.

Notice of Services for Students with Disabilities

Chattanooga State Community College is committed to providing reasonable accommodation to all persons with disabilities. Students who have disabilities should notify their instructors immediately, and should contact Disabilities Support Services early in the semester to discuss their particular circumstances so that reasonable accommodation can be requested in a timely manner. Students may be asked to provide documentation of their disability. Disabilities Support Services (Kathy Lutes Ebel, Director) is located in the Student Center room S-113, phone 423-697-4452, e-mail dss@chattanoogaastate.edu.

Affirmative Action: Statement of Nondiscrimination

Chattanooga State Community College does not authorize and will not tolerate any forms of discrimination or harassment. The College does not discriminate on the basis of race, color, religion, creed, ethnic or national origin, sex, disability, age, status as a covered veteran, and any other category protected by federal or state civil rights law related to the institutions and the office of the Tennessee Board of Regents. For more information or to file a grievance, contact Brian Evans (Affirmative Action Officer) at 423-697-3374, or e-mail brian.evans@chattanoogaastate.edu. His office is located in the CBIH Building, room 232.

Disruptive Students

The term "classroom disruption" means behavior which is abusive, obscene, lewd, indecent, violent, excessively noisy, disorderly, or which repeatedly interferes with the activities of a class. Students should refrain from inappropriate and/or offensive language, comments and actions (both on-ground and online). Online students are required to adhere to the same professional, legal and ethical standards of conduct as on-ground students, including the generally accepted standards of "etiquette" for all electronic communications online. Faculty are authorized to take

the following actions: direct persistently disruptive students to leave the class; dismiss the class, if appropriate; contact the Chattanooga State Police Department, if necessary. Faculty will also take these actions: tell the student(s) the reason for such actions; give them an opportunity to discuss the matter; consult with the department chair and/or division dean, and the college judicial officer. Any student concerned about the conduct of another student, should contact the teacher, department head, or division dean.

Academic Integrity/Academic Honesty

Plagiarism, cheating, and other forms of academic misconduct are prohibited. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions, which may be imposed through the regular institutional procedures as a result of academic misconduct, a student's grade in the course, or the assignment or examination affected by the alleged academic misconduct may be lowered to any extent, including a grade of "F". ***Any academic integrity/academic honesty violations may jeopardize a student's ability to obtain a favorable letter of recommendation for a job, to pursue further education, etc.***

Email Communication

Please note all communication with instructors about your course work should be through the eLearn email system. For assistance on how to use the eLearn Email tool, go to this URL:

http://river.chattanoogastate.edu/orientations/Student_PDFs/eLearn_eMail_aug09.pdf.

For all other communication the official email system used by the College is through TigerMail. This is accessible by clicking the blue paw icon from the top right hand side of your TigerWeb home page at

<https://tigerweb.chattanoogastate.edu/cp/home/displaylogin>.

Policy Regarding Children on Campus

The safety of children requires that children may not accompany adults into classrooms, laboratories, offices, or other workspaces nor be left unsupervised in the halls or grounds of the college.

Submission of Assignments

Students may be required to submit assignments and other coursework electronically as specified by the instructor. Deadlines may be set anytime during the week including weekends.

Emergency Alert System

Students, staff and faculty must log onto Tigerweb at the following web address:

<https://www.getrave.com/login/chattanoogastate> and sign up with the Emergency Alert System to receive emails and cell phone messages concerning ongoing emergency situations as well as campus delays and closings. For additional information go to

<http://www.chattanoogastate.edu/campuspolice/index.html>.

NOTE: Instructor reserves the right to modify this syllabus at any time with written notification to the students.