Bergen Community College
Health Professions Division
Radiation Therapy Technology Program

Course Syllabus
RTT- 120-001/002 Radiation Therapy Practices I

Date of Most Recent Syllabus Revision:	Summer, 2018	
Course Typically Offered:	Fall semester	
Syllabus last reviewed by:	Curriculum Committee	Date: 2005

Course Description

RTT-120-001/002 Radiation Therapy Practices I – This course introduces the student radiation therapist to treatment equipment and techniques. Topics include patient immobilization, localization, simulation, documentation, patient positioning, treatment delivery parameters, prescriptions, patient care, and various laboratory experiments.
3 lecture / 3 lab – 4 credits
Prerequisites: None
Co-requisites: RTT 110, RTT 121

Student Learning Objectives:
As a result of meeting the requirements in this course, students will be able to:

1.	Discuss the policies and procedures of the educational program.
2.	Discuss the policies and procedures of clinical education settings.

3.	Discuss the evolution of the radiation therapy as a treatment modality for cancer.
4.	Discuss cancer from a therapeutic perspective: A. Central Nervous System B. Respiratory System C. Digestive System D. Male Reproductive and Genitourinary System
5.	Explain treatment modalities.
6.	Define malignant disease, diagnosis and the treatment process.
7.	Explain the treatment considerations that play a role in radiation therapy
8.	Demonstrate detailed knowledge and understanding of radiation therapy equipment. Explain tumor localization and simulation.
9.	Define beam directional devices and beam modification devices.
10.	Discuss the role of positioning and immobilization in treatment delivery.
11.	Describe the aspects of treatment delivery.
12.	Explain the requirements of a quality assurance program.
13.	

Means of Assessment:

The Student Learning Objectives (SLO) in this course are intended to be aligned with the accreditation requirements of The Joint Committee on Education in Radiologic Technology and the New Jersey Department of Environmental Protection regarding student orientation to the program and the practice of Radiation Therapy technology as it applies to the Radiation Therapist. These Student Learning Objectives are also correlated with the content specifications for the national registration examination in Radiation Therapy administered by The American Registry of Radiologic Technologists. Additional student learning objectives may be specified in particular units.
The major assessment types (means of assessment) utilized in this course is homework assignments, quizzes, laboratory modules, objective tests, and class participation.

Course Content:

Content is the first of a two-part sequence that is designed to provide the student with foundation concepts of treatment delivery and laboratory practice to maximize performance in the classroom as well as in the clinic.

Course Website:

RTT 120 – Radiation Therapy Practices I is a "web-enhanced" class. The class has its own website and each member of the class has an account for the website. The BCC online course management system is known as "Moodle". This website will provide the student with review and assessment materials.

Course Texts and/or Other Study Materials:

All text books are available through the Bergen Community College Bookstore.

Washington, Charles M., Leaver, Dennis. Principles and Practice of Radiation Therapy. St. Louis, MO: Mosby Elsevier Publishing, Inc., 4th.ed. 2015. ISBN: 978-0-323-28752-4 (referred to as "W&L")

Levy, Leia. Mosby's Radiation Therapy Study Guide and Exam Review. St. Louis, MO: Mosby, Inc. 1st ed. 2011.ISBN 978-0-323-06934-2 ISBN-10: 0323069347

Course Requirements and Learning Assessment:

A student's final grade for the course is based primarily on his or her performance on the required work for the course (research paper, examinations and class participation).

Quizzes (15% of final grade)
Students are expected to be prepared for a quiz in each lecture session. Quiz item format may vary. Missed quizzes may not be made up.

Homework Assignments (15% of final grade)
Homework assignments will be used to reinforce concepts and theories presented in the classroom. Assignments will be collected, graded and returned. Homework may require some research. Assignments must be submitted on or before the announced due date; late assignments will not be accepted.

Laboratory Quizzes (15% of final grade)
Laboratory quizzes will be used to reinforce the concepts and theories presented in the laboratory. These take-home quizzes may require some research. Quizzes will be collected, graded and returned. Students will be given one week for submission.

Examinations (50% of final grade)
Two tests will be administered in class. Each test will be worth 15% of your final grade. The tests cover the major topics of the course. The test schedule will follow the classroom presentation and the content of the test will be based on the required textbook readings, classroom presentations and handouts. PowerPoint presentations and supplemental handouts are distributed in class and are available through Moodle. All tests are required. In the event that a test is missed, the student will be given a comparable test. A make-up test is at the discretion of the instructor of the course.
Additionally, two practicum tests will be administered in the laboratory. Each test will be worth 10% of your final grade. Each practicum will require an oral presentation and a proficiency demonstration.

Laboratory Modules / Overall Classroom Participation (5% of final grade) Laboratory attendance is mandatory. Laboratory modules are to be completed by the instructor at each laboratory session. The laboratory serves as a prerequisite to clinical demonstrations and competencies. Laboratory module documentation must be completed before a student is eligible to participate in clinical demonstration and competency. In the event of an absence, the student is required to submit a three to four page typed paper on the topic covered.

Classroom Participation:

In order to participate in particular lectures and discussions, all related reading and assignments must be completed prior to that class session. Please be advised that you must be present to participate, yet that alone does not constitute active participation.

The following behaviors will be utilized to assess class participation:

Positive Behaviors:

1. Attend class regularly and on time and not leave early.
2. Be well-prepared for class by doing assigned reading.
3. Participate appropriately with relevant comments, questions or answers to questions presented in class.
4. Show respect and value for the content of the course.
5. Take all online tests.

Negative Behaviors:

1. Being absent from or being late for class.
2. Leaving class early.
3. Walking out of and coming back into class.
4. Sleeping in class.
5. Devalue the content of the course.
6. Behaving inappropriately in class (e.g., acting silly, conducting private conversations in the back of the room, distracting behaviors such as eating, drinking or chewing gum in class; defacing classroom furniture; etc.)
7. Being impolite, rude, or discourteous to me or to your classmates.
8. Not being adequately prepared for class.
9. Speak without thinking – demonstrate a lack of reasoning and critical thinking skills.
10. Submit research paper late.
11. Be absent for testing.

Unacceptable behavior is at the discretion of the program. Disruptive behavior or inappropriate dress may result in dismissal from that class for the day and an unexcused absence.

Grading Policy:

The grading policy and course grade appeal policy of the program are stated in the Radiation Therapy Student Handbook. The program grading policy utilizes the standards of the American Registry of Radiologic Technologist national registry exam.

Letter Grade	Numerical Range	Conversion
A	92% to 100%	Excellent
B+	89% to 91.9%	Very Good
B	83% to 88.9%	Good
C+	80% to 82.9%	Marginal / Acceptable
C	77% to 79%	Poor / Failing
I	Incomplete	
E	Unofficial withdrawal	
W	Official Withdrawal	
D / F	Does not apply to RTT courses	

77% is minimum passing cut-off

There is no extra credit opportunities in this course.

Attendance Policy:

BCC Attendance Policy: All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These are to be established in writing on the individual course outline. Attendance will be kept by the instructor for administrative and counseling purposes.

Radiation Therapy Program Attendance Policy: Classroom attendance policy for the Radiation Therapy Program is stated in the Radiation Therapy Student Handbook. The student is responsible for adherence to this policy.

Attendance Policy in this Course: Students are expected to attend class regularly and punctually and for the full class period. Attendance will be taken at each class session. In the event of a late arrival, the student is expected to enter quietly without disturbing the class. In the event of an absence, it is the responsibility of the student to acquire the missed material. The attendance policy of this course will adhere to the attendance policy of the Radiation Therapy Program as stated in the Radiation Therapy Student Handbook.
Absences, lateness and early departures will diminish your overall performance in the course and, subsequently, will increase your risk of diminished performance on the ARRT national registry exam and the administration of responsible patient care. Additionally, the BCC

Radiation Therapy Program provides employment assistance upon graduation from the program and ARRT registration; your classroom attendance behavior may be used by your instructor as an indicator to your employment attendance behavior.
Quizzes: If late or absent from class, any quiz given, student will receive a 0 for that quiz.

Laboratory Policies and Procedures

All students are afforded a laboratory experience concurrent with the didactic component of the program.
RTT 120 Radiation Therapy Practices I 3 hours Fall semester
Labs are conducted at a clinical education site using energized radiation therapy equipment and computerized treatment planning systems. Students are required to maintain compliance to all program policies and procedures as stated in the Radiation Therapy Student Handbook, Clinical Manual Section I and Clinical Manual Section II.
The student is required to wear a BCC monitoring device/dosimeter. Failure to comply will result in dismissal and an unexcused absence for that lab.
The laboratory experience is an integral and required component of the program. Attendance is required prior to clinical participation.
In the event of a missed lab, the student will be required to submit a 3-4 paged typed paper demonstrating knowledge and understanding of the topic(s) demonstrated in the missed lab. In addition to foundational information on the topic, the paper must include a step-by-step sequential outline of the clinical procedure. The outline must include sufficient explanation of the procedure to assure that the student is adequately prepared to proceed to clinical demonstration and subsequent competence. The paper must adhere to standard format including double spacing and a font no larger than 12.

Other College, Divisional, and/or Departmental Policy Statements

The Radiation Therapy Program adheres to all Bergen Community College policies, including drug and alcohol use and smoking on campus, discrimination and harassment, rules and regulations governing conduct, rules governing academic integrity and acceptable use of information technology resources as stated in the BCC College Catalog – Policies.
The Bergen Community College Radiation Therapy Program adheres to a no cell phone policy in the classroom, laboratory and clinic.

Course Outline and Calendar

Note to Students: The following Course Outline and Calendar is tentative and subject to change, depending upon the progress of the class.

Topic	Presentations/Activities/Assignments	Lab	Readings W&L Chapter(s)
1	Radiation Therapy Manuals Simulator Design		21
2	Simulator Procedures Central Nervous System	Orientation to the Radiation Therapy Dept. Introduction to Simulation Safety Procedures	22 32
3	Simulation Procedures Central Nervous System	Immobilization Devices	22 32
4	Oncologic Emergencies Respiratory System Tumors	CNS / Brain	8 30
5	Respiratory System Tumors Treatment Procedures	Oncologic Emergencies / Spine	30 8
6	Treatment Procedures Mid-Term Exam	Lung	8 30
7	Treatment Procedures Digestive System Tumors	Mid-term Practicum	8 33
8	Digestive System Tumors Treatment Delivery Equipment	Clinical Set-ups / electron cone	33 7
9	Treatment Delivery Equipment Medical Imaging	Treatment Delivery Equipment	7 6
10	Medical Imaging Male Reproductive/Genitourinary	Abdomen	6 35
11	Male Reproductive/Genitourinary	Abdomen/Pelvis continued	35

12	Computed Tomography Simulation Electronic Charting	Portal Imaging	21 26
13	Electronic Charting	Treatment Chart Electronic Charting	26
14	Review	Review	
15	Final Exam	Final Lab Practicum	