**MTU Course Outline:**

**Week 1:**

*Lecture*:

Introduction and Pathophysiology of Cancer

* Incidence and Mortality
* Risk Factors for Cancer
* Cancer Physiology
* Signs and Symptoms of Cancer
* Cancer Staging
* Common Forms of Cancer
* Cancer Treatments
* Common Side Effects of Cancer Treatments

*Downloads*:

Emergency Procedures Form

*Assignments*:

Test Your Knowledge

Vocabulary

**Week 2**:

*Lecture*:

Physiology of Exercise

* What is Exercise Oncology?
* Exercise Oncology Considerations
* Metabolism
* Cardiovascular Physiology
* Muscular Physiology
* Fitness Assessments
* Exercise Programming

Physiological Effects of Exercise on Cancer

* General Benefits of Exercise
* Effects of Exercise on Cancer Treatment-Related Side Effects
* Components of an Exercise Program
	+ Fitness Assessment
	+ Exercise Prescription
	+ Exercise Programming
* Research Overview of Improved Patient Outcome

*Downloads*:

*Assignments*:

Treatment Toxicity Handout

**Week 3:**

*Lecture 1:*

Training Video: Fitness Assessment

*Download*: Data Collection Form

*Assignments:*

Karvonnen Formula Worksheet

Body Composition Case Study

VO2 Case Study

*Lecture 2*:

Training Video: Exercise Prescription

*Download*:

* Phase System Breakdown
* Exercise Oncology Guidelines
* Exercise Prescription Form
* Exercise Prescription Goals

**Week 4**:

*Lecture 3:*

Training Video: Exercise Programming

* Aerobic and anaerobic exercise benefits for cancer patients
	+ Cardiovascular activities
	+ Muscular strength and endurance activities
	+ Flexibility and range of motion activities
	+ Data Management
	+ Exercise Modifications/Safety Issues

*Lecture*:

Scope of Practice

*Assignment:*

Complete Study Guide

**Certification Exam**