

## **Exercise Oncology Instructor Course Training and Certification Exam**

### **Course Description:**

The course will provide critical content information and practical application that will prepare individuals to design and conduct exercise intervention programs for cancer patients. The physiological alterations that occur during and following cancer therapy and the effects that exercise has on eliminating or reducing these effects will be presented.

### **Course Objective:**

Provide the opportunity for students to develop comprehensive knowledge and skills regarding the components of cancer, cancer treatments, the physiological alterations that result from cancer treatments, and the concepts of rehabilitating cancer patients from cancer treatment related using exercise interventions.

### **Student Objectives:**

1. Demonstrate a thorough knowledge of the concepts of cancer treatment related effects, exercise physiology, and exercise programs presented throughout the course.
2. Demonstrate proficiency in the application of this content through case studies.
3. Understand specific concerns associated with exercising cancer patients.
4. Be able to perform the necessary calculations involved in the assessments, exercise program development, and prescription intervention.
5. Be able to perform a physical assessment and analyze an exercise prescription.
6. Be able to design and implement exercise interventions in cancer rehabilitation programs.

**Required Textbook:** Wonders, K.Y. (2022). Exercise Oncology Instructor: Principles and Practice. Maple Tree Cancer Alliance.

### **Course Outline:**

#### **Module 1: Foundations** (*Textbook Chapters 1-2*)

#### **Introductions:**

- Exercise Oncology Instructor Training Introduction
- Exercise in a Cancer Population

#### **Cancer Overview:**

- Lifestyle Factors Associated with Cancer Incidence, Recurrence, and Survival
- Basic Cancer Terminology
- Cancer Staging and Grading
- Cancer Treatments
- Common Side Effects of Cancer

#### **Special Topics:**

- Breast Cancer
- Prostate Cancer

- Lung Cancer
- Colorectal Cancer
- Pediatric Oncology

**Assignments:**

- Test Your Knowledge
- Vocab Terms

**Unit 2: Basic Exercise Physiology** (*Textbook Chapters 3.1-3.9*)

**Exercise Physiology 101:**

- Basic Terminology
- Role of Exercise During Cancer Treatment
- Current ACSM Guidelines for Exercise Oncology
- Cellular Respiration
- Neuromuscular Physiology

**Exercise Training Principles:**

- Exercise Programming and Adaptations
- Exercise Training Principles
- Cardiorespiratory Physiology
- Resistance Training
- Flexibility Training
- Balance Training

**Assignments:**

- Treatment Toxicities
- Case Study 1

**Module 3: Exercise Testing Procedures** (*Textbook Chapter 3.10*)

**Introduction to MTCA System of Exercise:**

- Maple Tree Phase System
- Patient Pathway

**Comprehensive Fitness Assessment:**

- What is a Fitness Assessment?
- Initial Fitness Assessment Guidelines
- Pre-Participation Paperwork
- Resting Values
- Body Composition
- Posture and Balance Tests
- Circumference and Range of Motion

- Cardiorespiratory Fitness
- Muscular Endurance
- Muscular Strength
- Flexibility Tests

**Assignments:**

- Case Study 2
- Case Study 3
- Case Study 4

**Module 4: Exercise Programming** (*Textbook Chapters 3.11-3.14*)

**Exercise Prescription:**

- How to Get Started
- Principles of FITT
- Safety Considerations and Contraindications to Exercise

**Exercise Programming:**

- Aerobic Exercise, Resistance Training, Flexibility, and Balance Exercises
- Resistance Training – General Program Design

**Special Considerations for a Cancer Population:**

- Lung Cancer
- Breast Cancer
- Prostate Cancer
- Colon Cancer
- Exercise During Prehabilitation
- Exercise During Surgical Recovery
- Exercise During Infusion Therapy
- Exercise During Radiation Therapy
- Exercise During Post-Treatment/End of Life

**Preparing for the EOI Certification:**

- Preparing for the EOI Certification, How Certificates are Awarded, and Staying Up-to-Date

**Assignments:**

- Case Study 5