

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



MASTER SYLLABUS

PHTA 204 – Cardiopulmonary and Integumentary Pathologies

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School of Science, Health, and Criminal Justice

Department: Physical Therapist Assistant

Semester/Year: Fall 2021

- A. **TITLE:** Cardiopulmonary and Integumentary Pathologies
- B. **COURSE NUMBER:** PHTA 204
- C. **CREDIT HOURS:** (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)

Credit Hours: 4
Lecture Hours: 3 per week
Lab Hours: 3 per week

Course Length: 15 Weeks

- D. **WRITING INTENSIVE COURSE:** Yes No
- E. **GER CATEGORY:** None: Yes: GER
If course satisfies more than one: GER
- F. **SEMESTER(S) OFFERED:** Fall Spring Fall & Spring

G. **COURSE DESCRIPTION:**

In this course, students will apply musculoskeletal knowledge from the previous semester to amputee and prosthetic rehabilitation, and orthotics. Students will study the cardiovascular and pulmonary systems and related pathologies. Cardiopulmonary rehabilitation principles and management will be discussed and applied. Conditions of the integumentary system will be discussed with emphasis on physical therapy management of wounds and burns. Students will also receive an introduction to common conditions related to other body systems and their management from a physical therapy perspective. Other systems will include endocrine and metabolic, gastrointestinal, genital and reproductive, hematologic, hepatic and biliary, immune, lymphatic, renal and urologic.

- H. **PRE-REQUISITES:** None Yes If yes, list below:

PHTA 104, BIOL 217, BIOL 218, or permission of instructor.

CO-REQUISITES: None Yes If yes, list below:

I. STUDENT LEARNING OUTCOMES: (see key below)

By the end of this course, the student will be able to:

<u>Course Student Learning Outcome</u> <u>[SLO]</u>	<u>Program Student Learning Outcome</u> <u>[PSLO]</u>	<u>GER</u> <u>[If Applicable]</u>	<u>ISLO & SUBSETS</u>	
1. Apply knowledge of anatomy and physiology to thoroughly understand clinical presentation, medical management, and principles of rehabilitation for: a. Cardiopulmonary Pathologies b. Peripheral Vascular Disease c. Amputations d. Diabetes Mellitus e. Integumentary Injuries f. Lymphedema	PSLO #5 Communicate an understanding of the plan of care developed by the physical therapist to achieve short and long term goals and intended outcomes.		5-Ind, Prof, Disc, Know Skills ISLO ISLO	None Subsets Subsets Subsets
2. Discuss clinical presentation and physical therapy considerations for common conditions of the following systems: a. Endocrine and metabolic b. Gastrointestinal c. Genital and reproductive d. Hematologic e. Hepatic and biliary f. Immune g. Renal and urologic	PSLO #5 Communicate an understanding of the plan of care developed by the physical therapist to achieve short and long term goals and intended outcomes.		5-Ind, Prof, Disc, Know Skills	
3. Appropriately instruct patients with amputation, cardiopulmonary, or integumentary pathology in rehabilitation techniques based on the physical therapy plan of care.	PSLO #9 Participate in educating and providing patient-related instruction to patients, family members, and caregivers based on the plan of care.		5-Ind, Prof, Disc, Know Skills	None
4. Demonstrate comprehension of the physical therapy plan of care for patients with cardiopulmonary and integumentary pathologies and amputations, through case scenario implementation.	PSLO #5 Communicate an understanding of the plan of care developed by the physical therapist to achieve short and long term goals and intended outcomes.		5-Ind, Prof, Disc, Know Skills ISLO ISLO	None Subsets Subsets Subsets
5. Demonstrate awareness of changes in cardiopulmonary status and make appropriate decisions using the Problem Solving Algorithm for the PTA.	PSLO #8 Demonstrate sound clinical problem solving in the provision of physical therapy services.		2- Crit Think ISLO	PS Subsets Subsets Subsets
6. Demonstrate effective communication skills while acting as a student PTA during lab	PSLO #1 Communicate verbally and non-		1-Comm Skills	O

competencies and practicals.	verbally with the patient, the physical therapist, health care delivery personnel, and others in an effective, appropriate, and capable manner.			
7. Produce clear, accurate, concise, timely, and legible documentation.	PSLO #10 Complete accurate and timely documentation in accordance with regulatory guidelines to support the delivery of physical therapy services.		5-Ind, Prof, Disc, Know Skills ISLO ISLO	None
8. Recognize individual differences and needs and respond appropriately through case scenario implementation.	PSLO #2 Recognize individual differences, values, preferences, and expressed needs and respond appropriately in all aspects of physical therapy services.		4-Soc Respons ISLO ISLO	IK Subsets Subsets Subsets
9. Describe effective interaction with appropriate members of the healthcare team during case scenario implementation.	PSLO #12 Participate in activities that contribute to the effective function of the healthcare environment.		5-Ind, Prof, Disc, Know & Skills	None
10. Provide accurate billing following case scenario implementation.	PSLO #13 Participate in practice management functions within a physical therapy service, including billing and organizational planning.		5-Ind, Prof, Disc, Know & Skills	None
11. Demonstrate competence in performing physical therapy interventions related to rehabilitation of the patient with cardiopulmonary and/or integumentary pathology, including: a. Airway Clearance Techniques b. Application of Devices and Equipment c. Functional training d. Biophysical agents e. Motor function training f. Therapeutic exercise g. Wound management	PSLO #6 Demonstrate competence in implementing and adjusting selected components of interventions identified in the plan of care established by the physical therapist.		5-Ind, Prof, Disc, Know Skills	None
12. Demonstrate competence in performing data collection techniques related to management of the patient with cardiopulmonary and integumentary pathology, including:	PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying		5-Ind, Prof, Disc, Know Skills	None

<ul style="list-style-type: none"> a. Aerobic Capacity & Endurance b. Anthropometrical Characteristics c. Mental Functions d. Assistive Technology e. Gait, Locomotion, & Balance f. Integumentary Integrity g. Joint Integrity & Mobility h. Muscle Performance i. Pain j. Posture k. Self-Care and Civic, Community, Domestic, Education, Social, and Work Life l. Ventilation, Respiration, and Circulation 	out the plan of care.			
13. Maintain safe working environment and assures safety of patient and self during all interactions.	PSLO #4 Demonstrate safe practice in all situations.		5-Ind,Prof, Disc, Know Skills	None
14. Demonstrate the ability to adjust components of intervention as necessary and within the guidelines of the plan of care based on patient response during case scenario implementation.	PSLO #8 Demonstrate sound clinical problem solving in the provision of physical therapy services.		2-Crit Think	PS

KEY	Institutional Student Learning Outcomes [ISLO 1 – 5]
ISLO #	ISLO & Subsets
1	Communication Skills Oral [O], Written [W]
2	Critical Thinking <i>Critical Analysis [CA] , Inquiry & Analysis [IA] , Problem Solving [PS]</i>
3	Foundational Skills <i>Information Management [IM], Quantitative Lit./Reasoning [QTR]</i>
4	Social Responsibility <i>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</i>
5	Industry, Professional, Discipline Specific Knowledge and Skills

*Include program objectives if applicable. Please consult with Program Coordinator

J. APPLIED LEARNING COMPONENT:

Yes No

If YES, select one or more of the following categories:

- Classroom/Lab
- Internship
- Clinical Placement
- Practicum
- Service Learning
- Community Service

- Civic Engagement
- Creative Works/Senior Project
- Research
- Entrepreneurship
(program, class, project)

K. TEXTS:

O'Sullivan, S.B., Schmitz, T.J., Fulk, G.D. (2019) Physical Rehabilitation, Philadelphia: F.A.Davis.

Cameron, M.H. (2018) Physical Agents in Rehabilitation, St. Louis: Elsevier.

L. REFERENCES:

Kisner, C and Colby, L.A., (2018) Therapeutic Exercise: Foundations and Techniques, Philadelphia: F.A. Davis.

Goodman, C (2012) Pathology for the Physical Therapist Assistant, St. Louis: Elsevier.

Kisner, C and Colby, L.A., (2007) Therapeutic Exercise: Foundations and Techniques, Philadelphia: F.A. Davis.

Sussman, C and Bates-Jensen, B (2012) Wound Care: A Collaborative Practice Manual for Health Professionals, Baltimore: Lippincott WW.

M. EQUIPMENT: None Needed: Physical therapy lab equipment and supplies

N. GRADING METHOD: A-F as per PTA program standards

The grading scale for the Physical Therapist Assistant program is as follows:

A	= 90-100	C	= 70-74
B+	= 85-89	D+	= 65-69
B	= 80-84	D	= 60-64
C+	= 75-79	F	= below 60

O. SUGGESTED MEASUREMENT CRITERIA/METHODS:

Written Exams

Case Exam

Lab Competencies

Lab Practical

Quizzes

Homework Assignments

P. DETAILED COURSE OUTLINE:

I. Cardiopulmonary Pathologies

A. Cardiopulmonary A&P

B. Cardiac Pathologies related to O₂ supply

C. Cardiac Pathologies related to contractility

D. Cardiac Pathologies related to electrical conduction

E. Restrictive Pulmonary Disease/Dysfunction

F. Obstructive Pulmonary Disease

G. Cardiopulmonary Pharmacology/Lab Values

H. Cardiopulmonary Rehabilitation

II. Diabetes and Peripheral Vascular Disease

A. Diabetes Mellitus Type I/II

B. Arterial PVD

C. Venous PVD

III. Amputations, Prosthetics, Orthotics

A. Lower extremity amputation

B. Transtibial Prosthetics

C. Transfemoral Prosthetics

D. Lower Extremity Orthotics

IV. Integumentary Pathologies

A. Wound Healing

B. Burns

C. Lymphedema

V. Other Systems

A. Endocrine and Metabolic

B. Gastrointestinal

C. Genital and Reproductive

D. Hematologic

E. Hepatic and Biliary

F. Immune

G. Renal and Urologic

Q. **LABORATORY OUTLINE:** None Yes

I. Cardiopulmonary

A. Cardiopulmonary Assessment Techniques

B. Airway Clearance Techniques

C. Tubes, Lines, and Wires

D. Cardiopulmonary Rehabilitation

II. Amputee Rehab

A. Acute Amputee Rehab

B. Pre-Prosthetic Training

C. Prosthetic Training

III. Integumentary

A. Wound Care

B. Burn Rehab

C. Lymphedema Management