

**Virginia Western Community College**  
**PTH 226**  
**Therapeutic Exercise**

**Prerequisites**

PTH 131 and PTA program placement

**Course Description**

Emphasizes the basic principles underlying different approaches to exercise including rationale for treatment and may include neurological treatments such as simple facilitation and inhibitory techniques and the teaching of home programs. The course focuses on the application of therapeutic exercise and functional activities as they relate to patients with medical and surgical conditions in a variety of treatment settings.

**Semester Credits: 4 Lecture Hours: 2 Lab: 4**

**Required Materials**

1. Mobility in Context: Principles of Patient Care Skills, 3rd edition by Charity Johansson & Susan A. Chinworth; ISBN: 9780803658172
2. Physical Rehabilitation, 7th edition by Susan O'Sullivan, Thomas Schmitz, and George Fulk; ISBN: 978-0-8036- 6162-2
3. PhysioU Subscription

**Course Outcomes**

At the completion of this course, students will be able to correctly:

1. Identify common lines, tubes, and equipment used in the treatment and management of patients with medically complex conditions.
2. Demonstrate competence in the management of common lines and tubes utilized in the acute and subacute care settings during the performance of mobility tasks.
3. Identify common restraints utilized in acute and subacute care settings.
4. Recognize red flags and other symptoms which would result in discontinuing treatment of patients with medically complex conditions and initiating communication with the supervising physical therapist.
5. Recognize when treatments should not be performed with patients with medically complex conditions based on patient presentation or when intervention is beyond that which is appropriate for the PTA.
6. Outline the appropriate response to common medical emergencies that may occur with medically complex patients in therapy setting.
7. Compare various therapy settings to assist in contributing to care planning and follow-up as directed by the supervising physical therapist.
8. Identify characteristics of pulmonary disorders commonly treated in physical therapy.
9. Recognize physical therapy assessment techniques utilized for pulmonary diagnoses.
10. Recognize physical therapy treatment interventions utilized for pulmonary diagnoses.
11. Demonstrate competence in performing postural drainage using appropriate positioning for bronchopulmonary segments.
12. Demonstrate competence in educating a simulated patient in common breathing and coughing techniques and exercises.
13. Demonstrate competent assessment of changes in thoracoabdominal movement and breathing patterns.

14. Compare normal and abnormal cough and sputum characteristics.
15. Differentiate the phases of cardiac rehabilitation, including the role of the PTA in each phase.
16. Differentiate normal and abnormal ECG characteristics.
17. Demonstrate competent assessment of vital signs during and after therapeutic exercise and with position changes in patients with complex medical conditions.
18. Design an evidence-based treatment session and treatment progression for a patient with a cardiopulmonary diagnosis utilizing interventions from the physical therapist's plan of care.
19. Demonstrate competent implementation and modification of a treatment session for a patient with a cardiopulmonary diagnosis due to changes in patient status.
20. Identify the principles of rehabilitation for patients with a lower extremity amputation.
21. Identify common musculoskeletal, integumentary, and nervous system complications following an amputation and with prosthetic use.
22. Differentiate the expected functional outcomes for patients with different levels of lower extremity amputation.
23. Demonstrate competent performance of a treatment session utilizing interventions from the physical therapist's plan of care for a patient with an amputation.
24. Recognize the components of transtibial and transfemoral prosthetic devices.
25. Compare musculoskeletal and prosthetic causes of gait deviations in patients with a lower extremity amputation.
26. Describe therapeutic exercises and exercise progressions commonly utilized for a patient with a lower extremity amputation.
27. Demonstrate competence in performing residual limb wrapping.
28. Identify the ability of a patient and caregiver to care for a prosthetic device.
29. Recognize common orthotic devices utilized within physical therapy.
30. Identify common orthopedic and integumentary complications due to the utilization of an orthotic device.
31. Demonstrate competence in donning and doffing common orthotic devices used in a physical therapy setting.
32. Outline normal and abnormal wound healing processes.
33. Compare the causes and hallmark characteristics of different types of wounds.
34. Differentiate the different staging criteria of pressure injuries.
35. Recognize the indications and precautions for different types of wound care interventions including dressings.
36. Identify the etiology, treatment, and physical therapy implications integumentary injury due to burns.
37. Describe the role of physical therapy in the assessment and management of wounds, burns, and lymphedema.
38. Differentiate between the signs and symptoms of lymphedema and other causes of edema.
39. Outline the impact of integumentary injury on physical therapy interventions including therapeutic exercise.
40. Demonstrate the ability to set-up and maintain a sterile field.
41. Demonstrate competence in applying simple facilitation and inhibitory techniques to patients with medically complex conditions and those with amputation.
42. Differentiate between positions for medically complex patients to manage pain, for skin protection, and to relieve edema or dyspnea.
43. Based on the physical therapy evaluation, plan of care, and patient health records, select the most appropriate assistive device to utilize with patients with medically complex conditions.
44. Based on the PT plan of care and a review of health records, select the most appropriate physical therapy interventions to address short- and long-term goals for a medically complex patient.
45. Recognize appropriate modifications to treatment of a medically complex patient when acting in consideration of patient differences, values, preferences, and needs.
46. Design a home exercise program including interventions from within the physical therapy plan of

- care appropriate for a patient discharging home from an inpatient setting.
47. Compose an accurate SOAP note for a simulated treatment session for patients with medically complex conditions including the patient's response to treatment
  48. Accurately apply billing practices for patients treated in an inpatient or subacute setting.
  49. Display appropriate professional behaviors in all interactions with classmates and instructors by displaying at least seven professional behaviors at least at an intermediate level and displaying all other professional behaviors at least at beginning level.
  50. Demonstrate ability to educate physical therapy support personnel how to safely assist the treating clinician when providing interventions to medically complex patients.

### **Topical Description**

This course will cover the following topics:

- The hospital environment/medical equipment and the impact on exercise and physical therapy care.
- Application of therapeutic exercise principles to patients with the following diagnoses:
  - Cardiac disease
  - Pulmonary disease
  - Wounds/burns
  - Amputation
  - Medical complex/multiple diagnosis
- Use of prosthetic and orthotic devices and their impact on physical therapy.
- Facilitation and inhibition techniques.

### **Notes to Instructors**

- This course should follow all PTA program policies.