



# BROWARD COMMUNITY COLLEGE COURSE OUTLINE

**LAST REVIEW:** 2006-2007      **NEXT REVIEW:** 2011-2012      **STATUS:** A

**COURSE TITLE:** Disabilities and Therapeutic Procedures II

**COMMON COURSE NUMBER:** PHT 2224

**CREDIT HOURS:** 4

**CONTACT HOUR BREAKDOWN**

*(per 16 week term)*

**CLOCK HOURS:**

*(Voc. Course ONLY)*

Lecture:

Lab:

Clinic: 64

Other:

**PREREQUISITE(S):** PHT 1103

**COREQUISITE(S):** PHT 1211 and PHT 2224L

**PRE/COREQUISITE(S):**

**COURSE DESCRIPTION** *(750 characters, maximum):*

Course introduces concepts of therapeutic exercise with regards to its principles and objectives. The theory of and application of specific exercise regimes are presented. Principles of ROM and stretching techniques are presented. A basic introduction to goniometry and manual muscle testing procedures is presented as it pertains to the development of therapeutic exercise interventions.

## UNIT TITLES

- 1.0 *Foundations of Therapeutic Exercise*
- 2.0 *Method of Therapeutic Exercise Intervention: Range of Motion*
- 3.0 *Method of Therapeutic Exercise Intervention: Stretching*
- 4.0 *Method of Therapeutic Exercise Intervention: Resistance*
- 5.0 *Overview of Special Therapeutic Interventions*
- 6.0 *Posture*
- 7.0 *Functional Approach to Therapeutic Exercise of the Spine*
- 8.0 *Functional Approach to Therapeutic Exercise of the Upper Extremity*
- 9.0 *Functional Approach to Therapeutic Exercise of the Lower Extremity*
- 10.0 *Functional Approach to Therapeutic Exercise for Specific Impairments*



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## ASSESSMENT:

Please provide a brief description (250 characters maximum) that details how students will be assessed on the course outcomes.

1. Announced and unannounced quizzes and Unit examinations;
2. Mid term and/or Final Exam (cummulative/comprehensive);
3. Assessment of reading and online assignments via submission of homework projects;
4. Participation in Discussion Forums on the WebCT site

*\*\*\* Complete the following only if course is seeking general education status \*\*\**

## GENERAL EDUCATION Competencies and Skills \*:

Please highlight in green font all Competencies/Skills from the list below that apply to this course. In the box to the right of the Competency/Skill, enter all specific learning outcome numbers (i.e. 1.1, 2.7, 5.12) that apply.

1. Read with critical comprehension	
2. Speak and listen effectively	
3. Speak and listen effectively	
4. Think creatively, logically, critically, and reflectively (analyze, synthesize, apply, and evaluate)	
5. Demonstrate and apply literacy in its various forms: <i>(highlight in green ALL that apply)</i> ( 1. technological, 2. informational, 3. mathematical, 4. scientific, 5. cultural, 6. historical, 7. aesthetic and/or 8. environmental )	
6. Apply problem solving techniques to real-world experiences	
7. Apply methods of scientific inquiry	
8. Demonstrate an understanding of the physical and biological environment and how it is impacted by human beings	
9. Demonstrate an understanding of and appreciation for human diversities and commonalities	
10. Collaborate with others to achieve common goals.	
11. Research, synthesize and produce original work	
12. Practice ethical behavior	
13. Demonstrate self-direction and self motivation	
14. Assume responsibility for and understand the impact of personal behaviors on self and society	
15. Contribute to the welfare of the community	

*\* General Education Competencies and Skills endorsed by '05-'06 General Education Task Force*



**Common Course Number: PHT 2224**

**UNITS**

**Unit 1 Foundations of Therapeutic Exercise**

***General Outcome:***

- 1.0 The student will be able to analyze the general principles of therapeutic exercise interventions including the purpose of testing and measurement.

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 1.1 Define therapeutic exercise.
- 1.2 Describe objectives of therapeutic exercise.
- 1.3 Discuss the values of clinical qualities of muscle function.
- 1.4 Describe the goals of a therapeutic exercise intervention.
- 1.5 Identify techniques of communication as they relate to motivating patient performance.
- 1.6 Recognize patient's need to prevent deformity.
- 1.7 Recognize patient's need for improving muscle strengths, systematic functioning, and for maximizing remaining abilities.
- 1.8 Discuss the type of data collection required for a therapeutic exercise intervention.
- 1.9 Describe the key elements of documentation as it relates to a therapeutic exercise intervention.
- 1.10 Describe the disablement process.
- 1.11 Relate the patient management model to the development of an effective therapeutic exercise plan of care.
- 1.12 Identify specific information that should be gathered during a patient interview related to therapeutic exercise interventions.
- 1.13 Identify specific data to collect during a medical record review prior to performing therapeutic exercise interventions with a patient/client.
- 1.14 Suggest items that may be included in patient education related to therapeutic exercise.



**Common Course Number: PHT 2224**

**Unit 2 Method of Therapeutic Exercise Intervention: Range of Motion**

***General Outcome:***

- 2.0 The student will be able to explain the methods used as therapeutic exercise interventions in order to improve, restore or maintain range-of-motion, including principles of goniometric measurements.

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 2.1 Define joint and range-of-motion.
- 2.2 Distinguish between the types of range-of-motion exercises.
- 2.3 Discuss the functional description of joint motions.
- 2.4 List the factors influencing muscle control.
- 2.5 Detail the criteria for selecting a particular ROM intervention.
- 2.6 List the degrees of motion for each joint.
- 2.7 Describe the correct performance of each type of ROM intervention.
- 2.8 Understand how to document a ROM intervention in a progress note.
- 2.9 Define and discuss the concept of mobility.
- 2.10 Relate how mobility relates to functional abilities.
- 2.11 Discuss factors that affect mobility.
- 2.12 Distinguish between joint limitations and shortened musculature: contractile tissue vs. non-contractile tissue involvement.
- 2.13 Discuss the mobility present at different joints.
- 2.14 Describe joint mobilization as performed by a PT.
- 2.15 Discuss the clinical importance of joint mobilization in restoration of joint range of motion.
- 2.16 Discuss normal joint range of motion.
- 2.17 Discuss the purpose of a goniometer.
- 2.18 Detail specific procedure of joint measurement using goniometers.
- 2.19 Relate the significance of goniometry as it relates to assessing a patient.



**Common Course Number: PHT 2224**

**Unit 3 Method of Therapeutic Exercise Intervention: Stretching**

***General Outcome:***

- 3.0 The student will be able to explain the methods used as therapeutic exercise interventions in order to increase extensibility.

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 3.1 Discuss significance of 2 joint muscles when stretching.
- 3.2 Discuss use of positioning to stretch a given muscle.
- 3.3 Discuss hold-reflex and contract-relax techniques.
- 3.4 Explain indications, contraindications and goals of stretching.
- 3.5 Describe the neuro-physiologic and biophysical properties of muscle and connective tissue that affect the application and success of stretching.
- 3.6 Explain any precautions to follow during actual stretching techniques.
- 3.7 Differentiate between autogenic and reciprocal stretching interventions.
- 3.8 List specific information that should be gathered during a patient interview related to stretching as a therapeutic exercise intervention.
- 3.9 List specific data to collect during a medical record review prior to performing a stretching intervention.
- 3.10 Detail items that may be included in patient education re: a therapeutic exercise plan of care using stretching.



**Common Course Number: PHT 2224**

**Unit 4 Method of Therapeutic Exercise Intervention: Resistance**

***General Outcome:***

- 4.0 The student will be able to suggest methods that may be used as therapeutic exercise interventions in order to increase muscle performance, including principles of manual muscle testing

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 4.1 Explain the effects of gravity on muscle performance.
- 4.2 List and explain the muscle strength grading system.
- 4.3 Relate functional significance of utilizing knowledge of muscle strength grades in an exercise program.
- 4.4 Detail the principles of resistance exercises.
- 4.5 Discuss the various types of therapeutic exercise interventions used to improve muscle performance.
- 4.6 Discuss why and where passive exercise may be implemented as a therapeutic exercise intervention aimed at improving muscle performance.
- 4.7 Discuss why and where active-assistive exercise as a therapeutic exercise intervention aimed at improving muscle performance.
- 4.8 Discuss the role of active exercise in a plan of care established by the physical therapist.
- 4.9 Discuss why and where active resistance exercise as a therapeutic exercise intervention aimed at improving muscle performance.
- 4.10 Define repetition maximum as it relates to the development of a progressive resistive exercise protocol.
- 4.11 Define indications and goals of each form of exercise.
- 4.12 Relate the clinical significance of using self and mechanical assistive devices such as the finger ladder, wand, pulley, wheel, powder board, suspension devices, etc.
- 4.13 State the physiological and psychological benefits of exercise.
- 4.14 Define endurance.
- 4.15 Discuss the methods by which exercise may be utilized to improve a patient's endurance.
- 4.16 Discuss methods for assessing endurance.
- 4.17 Understand the clinical implications of aerobic endurance activities.
- 4.18 Discuss the clinical implications of a general conditioning program.
- 4.19 Discuss the rationale for use of isokinetic equipment.
- 4.20 Describe how a Swiss/Gymnastic Ball is utilized to improve strength and balance.
- 4.21 Discuss the purpose of manual muscle testing
- 4.22 Understand the basic concepts of manual muscle testing



**Common Course Number: PHT 2224**

**Unit 4 Method of Therapeutic Exercise Intervention: Resistance**

***Specific Instructional Objectives: continued***

Upon successful completion of this unit, the student will be able to:

- 4.23 Discuss the significance of manual muscle testing as it relates to assessing a patient.
- 4.24 Detail specific positions for various muscles to be tested.
- 4.25 Define manual muscle testing grades.
- 4.26 List specific information that should be gathered during a patient interview related to utilizing resistance as a therapeutic exercise intervention.
- 4.27 List specific data to collect during a medical record review prior to performing a resistance intervention with a patient/client.
- 4.28 Detail items that may be included in patient education related to a therapeutic exercise plan of care using resistance techniques.



**Common Course Number: PHT 2224**

**Unit 5 Overview of Special Therapeutic Exercise Interventions**

***General Outcome:***

5.0 The student will be able to detail the basic principles of special therapeutic exercise interventions.

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 5.1 Describe the physiology of soft tissue repair.
- 5.2 Relate basic principles of treating connective tissue disorders.
- 5.3 Relate the basic considerations in the management of sprains, strains, contusions and tendon injuries.
- 5.4 Relate the basic considerations of management of fractures.
- 5.5 Relate concepts of surgical rehabilitation.
- 5.6 Review the physiological principles upon which aquatic physical therapy is based.
- 5.7 Understand how aquatic PT might be effective in a plan of care.
- 5.8 Discuss the basic physiological principles of closed kinetic chain training.
- 5.9 List the guidelines and contraindications for plyometric training.
- 5.10 Explain how plyometric training impacts functional activities.
- 5.11 List specific information that should be gathered during a patient interview related to special therapeutic intervention discussed.
- 5.12 List specific data to collect during a medical record review prior to performing the special therapeutic interventions discussed.
- 5.13 Detail items that may be included in patient education related to the special therapeutic interventions discussed.



**Common Course Number: PHT 2224**

**Unit 6 Posture**

***General Outcome:***

- 6.0 The student will be able to integrate concepts of proper body alignment and posture and relate back to possible muscular weakness and/or tightness.

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 6.1 Locate anatomical landmarks used to evaluate posture.
- 6.2 Discuss positions in which posture is observed.
- 6.3 Discuss normal, good posture in relation to anatomical landmarks.
- 6.4 Describe deviations from the norm.
- 6.5 List muscles most frequently found to contribute to faulty posture.
- 6.6 Construct exercises to correct faulty posture.
- 6.7 Identify common postural faults and dysfunctions in cervical, thoracic and lumbar regions.
- 6.8 Define postural awareness.
- 6.9 Discuss the possible injuries or reductions in performance that may occur secondary to poor postural alignment.
- 6.10 Review aspects of body mechanics that relate to maintenance of proper alignment.
- 6.11 List specific information that should be gathered during a patient interview related to posture.
- 6.12 List specific data to collect during a medical record review prior to performing an intervention to improve posture.
- 6.13 Detail items that may be included in patient education related to maintaining proper posture.



**Common Course Number: PHT 2224**

**Unit 7      Functional Approach to Therapeutic Exercise for the Spine**

***General Outcome:***

- 7.0 The student will be able to detail specifics regarding the functional approach therapeutic exercise for the spine including basic goniometry and manual muscle testing.

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 7.1 Detail the considerations of exercise interventions that may be utilized within an established plan of care for patients with postural deficits such as scoliosis, kyphosis and lordosis.
- 7.2 Detail considerations of exercise interventions that may be utilized within an established plan of care for patients undergoing spinal surgery in terms of pre and post operative interventions.
- 7.3 Describe the general principles of several therapeutic exercise interventions such as William's flexion and McKenzie's Extension.
- 7.4 Describe proper patient positioning, hand placement, and stabilization used when applying stretching techniques to the spine.
- 7.5 Relate the methods of therapeutic exercise interventions that can be used with impairments/conditions affecting the spine.
- 7.6 Understand the implications of a therapeutic exercise intervention designed for patients exhibiting soft tissue and joint lesions in various regions of the spine in order to restore optimum function.
- 7.7 Detail considerations when developing a home exercise program for a patient who has impairment, functional loss or disability of the spine.
- 7.8 Discuss the principles of goniometry as they relate to the spine.
- 7.9 Discuss the principles of manual muscle testing as they relate to the spine.



**Common Course Number: PHT 2224**

**Unit 8      Functional Approach to Therapeutic Exercise for the Upper Extremity**

***General Outcome:***

- 8.0      The student will be able to detail the specifics regarding the functional approach to therapeutic exercise for the upper extremity including basic goniometry and manual muscle testing.

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 8.1      Understand the implications of a therapeutic exercise intervention designed for patients exhibiting soft tissue and joint lesions in various regions of the upper extremity in order to restore optimum function.
- 8.2      Describe proper patient positioning, hand placement, and stabilization used when applying stretching techniques to upper extremity.
- 8.3      Relate the methods of therapeutic exercise interventions that can be used with impairments/conditions affecting the upper extremity.
- 8.4      Discuss the method of therapeutic exercise intervention for total joint replacements especially the shoulder joint.
- 8.5      Detail considerations when developing a home exercise program for a patient who has impairment, functional loss or disability of the upper extremity.
- 8.6      Discuss the principles of goniometry as they relate to the upper extremity.
- 8.7      Discuss the principles of manual muscle testing as they relate to the upper extremity.



**Common Course Number: PHT 2224**

**Unit 9      Functional Approach to Therapeutic Exercise of the Lower Extremity**

***General Outcome:***

- 9.0      The student will be able to detail the specifics regarding the functional approach to therapeutic exercise for the lower extremity including basic goniometry and manual muscle testing

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 9.1      Understand the implications of a therapeutic exercise intervention designed for patients exhibiting soft tissue and joint lesions in various regions of the lower extremity in order to restore optimum function.
- 9.2      Describe proper patient positioning, hand placement, and stabilization used when applying stretching techniques to the lower extremity.
- 9.3      Relate the methods of therapeutic exercise interventions that can be used with impairments/conditions affecting the lower extremity.
- 9.4      Detail considerations of exercise interventions that may be utilized within an established plan of care for patients with for a patient with PVD.
- 9.5      Discuss the method of therapeutic exercise intervention for total joint replacements especially the hip and knee joints.
- 9.6      Detail considerations when developing a home exercise program for a patient who has impairment, functional loss or disability of the lower extremity.
- 9.7      Discuss the principles of goniometry as they relate to the lower extremity.
- 9.8      Discuss the principles of manual muscle testing as they relate to the lower extremity



**Common Course Number: PHT 2224**

**Unit 10      Functional Approach to Therapeutic Exercise for Specific Impairments**

***General Outcome:***

- 10.0 The student will be able to detail the specifics regarding the functional approach to therapeutic exercise for specific impairments/conditions.

***Specific Instructional Objectives:***

Upon successful completion of this unit, the student will be able to:

- 10.1 Discuss the terms coordination and balance and understand their significance.
- 10.2 List examples of coordination exercise.
- 10.3 Relate the clinical significance of coordination exercises.
- 10.4 Discuss how impairment in coordination may affect functional abilities.
- 10.5 Differentiate between static and dynamic balance therapeutic exercise interventions.
- 10.6 Describe several forms of balance retraining techniques.
- 10.7 Detail the consideration of exercise regime for an OB-GYN patient.
- 10.8 Discuss the typical components of a cardiac rehabilitation plan of care including the significance of vital sign values as a response to activity.
- 10.9 Discuss the typical components of diaphragmatic and segmental breathing exercises.
- 10.10 Discuss the typical components of an exercise intervention for Bells Palsy.
- 10.11 Discuss the principles of relaxation.
- 10.12 Relate the various techniques used to promote relaxation.
- 10.13 Detail the clinical significance of relaxation re: its effect on performance.
- 10.14 Explain the types of activities that are referred to as Activities of Daily Living.
- 10.15 List various measurement tools to assess patient's level of ADL.
- 10.16 Explain the difference between BADLs and IADLs
- 10.17 Discuss components of a Work Capacity Evaluation
- 10.18 Detail the specifics of a Work Hardening Program.