Course Description
PTH 240 Therapeutic Exercises/Applications
This course provides the practical application of therapeutic exercise.
5.0 (4.0 lecture and 1.0 lab) 60 Lecture Hours; 45 Laboratory Hours
Prerequisites: PTH 202, PTH 205, BIO 211, ENG 102
Co-Requisites: PTH 242, PTH 252
5 Cr (4 lect/pres, 1 lab, 0 other)

Course Focus
This course provides the practical application of therapeutic exercise, goniometry and manual muscle testing. The use of various therapeutic exercise and data collection techniques by the physical therapist assistant is presented and practiced within the context of the plan of care developed by a licensed physical therapist. Students practice concepts related to patient education, appropriate communication, and documentation of patient care activities.

Instructional Strategies
Course objectives will be met through lectures, observations, skills practice and small group activities utilizing various media to maximize the clinical relevance of the material presented. Select laboratory activities will be conducted outside of regular class times and will include interactions with clinicians. These activities are required and will be scheduled in advance.

Text and References


Course Objectives:
At the completion of this course, students will be able to:
1. Examine the use of various therapeutic exercises as specified by the plan of care.
2. Discuss physiological responses to stretching, strengthening and aerobic exercise programs.
3. Create exercise programs that adhere to the plan of care developed by the physical therapist.
4. Participate in professional reading through preparation of a journal article review to emphasize the importance of lifelong learning.
5. Use the SOAP note format to document the provision of physical therapy interventions as directed by the plan of care developed by a licensed physical therapist.

Clinical Outcomes:
1. Demonstrate the ability to perform the following patient data collection techniques:
   a. *Manual muscle testing procedures*
   b. *Range of motion measurement*
2. Use information from data collection techniques to appropriately monitor and respond to changes in patient status.
3. Demonstrate effective muscle stretching techniques
4. Safely perform and demonstrate the following therapeutic exercise techniques:
   a. ROM exercise
   b. Strengthening exercises
   c. Flexibility exercises
   d. Aerobic exercises
   e. Conditioning exercises
   f. Aquatic exercises
   g. Relaxation exercises
   h. Balance exercises
* Indicates a course objective related to The Laboratory Skills Achievement List for PTH 240.

Course Goals
The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives. (*designates a CRUCIAL goal)
1. define therapeutic exercise terminology
2. determine PTA assessment responsibilities
3. analyze disablement models*
4. communicate patient information*
5. evaluate disablement models
6. distinguish subjective and objective patient data
7. document objective patient progress
8. document subjective patient progress
9. interpret medical record documentation
10. use effective communication skills
11. use therapeutic exercise terminology
12. define muscle flexibility terms
13. perform extremity active assistive ROM exercises
14. identify passive ROM exercise techniques
15. identify active ROM exercise techniques
16. perform extremity passive ROM exercises
17. explain muscle stretching physiological responses
18. specify soft tissue stretching contraindications*
19. cite potential hypomobility factors
20. demonstrate various muscle stretching techniques
21. demonstrate PNF techniques
22. evaluate various muscle stretching techniques
23. formulate muscle stretching exercise programs
24. demonstrate effective joint stabilization techniques
25. check muscle stretching responses
26. combine physical agents and stretching programs
27. describe goniometric reliability
28. describe goniometric validity
29. specify goniometric assessment purposes
30. list normal peripheral joint ROM values
31. recognize functional peripheral joint ROM values
32. review goniometry principals
33. record ROM measurements
34. describe manual muscle testing reliability
35. describe manual muscle testing validity
36. demonstrate manual muscle testing positions
37. demonstrate manual muscle testing techniques
38. apply manual muscle testing principles
39. specify manual muscle testing grades
40. perform extremity manual muscle tests
41. state manual muscle testing purposes
42. document muscle strength assessments
43. define strength training terminology
44. define muscle function terms
45. compare muscle fiber types
46. explain muscle strengthening physiological responses
47. specify resistance training contraindications*
48. specify resistance training precautions*
49. recognize muscle fatigue
50. recognize muscle relaxation
51. demonstrate closed-chain and open-chain exercises
52. evaluate various strength training techniques
53. formulate muscle strengthening exercise programs
54. distinguish aquatic environment properties
55. calculate aquatic immersion weight values
56. identify aquatic therapy indications
57. specify aquatic therapy contraindications*
58. specify aquatic therapy precautions*
59. demonstrate aquatic exercise equipment
60. differentiate aerobic versus anaerobic activity
61. define lung volumes
62. combine aerobic and resistance exercise programs
63. assess aerobic activity vital signs*
64. evaluate aerobic conditioning techniques
65. specify aerobic exercise precautions*
66. list patient intervention components
67. discern important patient information
68. identify physical therapy patient management process elements
69. modify progressive exercise plans
70. determine patient progress*
71. interpret patient compliance behaviors
72. revise age appropriate exercise techniques*
73. read a scientific research journal article
74. construct a research article review presentation
75. present a research article review

**Student Contributions**
Each student is required to actively participate in laboratory sessions by practicing the application of various skills on fellow classmates. Appropriate and professional behavior is expected at all times in the laboratory setting. Shorts and a T-shirt are the required attire for all laboratory activities. A sweatshirt or sweatpants may be worn over these if such clothing does not interfere with the laboratory activities. Clothing must allow access to various parts of the body during specified laboratory activities.

**Course Evaluation**
Each student must demonstrate safety and competence in required laboratory skills. Students are responsible for insuring that laboratory skills are checked off by the instructor. The Laboratory Skills Achievement List for this course can be found at the back of this syllabus. Course objectives related to these skills are indicated above with an asterisk (*).

- Midterm Exam: 200 points
- Cumulative Final Exam: 300 points
- Article Review: 100 points
- Two (2) Exercise Plans: 200 points
- Homework: 100 points
- Skills Checks: 100 points
- Total Points: 1000 points

**Course Schedule**
Lecture: 8:30 - 11:00 TWTH
Lab: 12:00-2:30 TWTH

**ADA STATEMENT**
The Technical College of the Lowcountry provides access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the counselor for students with disabilities at (843) 525-8228 during the first ten business days of the academic term.

**ATTENDANCE**
1. The College’s statement of policy indicates that students must attend ninety percent of total class hours or they will be in violation of the attendance policy.
2. Students not physically attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
3. Students taking an online/internet class must sign in and communicate with the instructor within the first ten calendar days from the start of the semester to indicate attendance in the
class. Students not attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.

4. Reinstatement requires the signature of the division dean.
   a. In the event it becomes necessary for a student to withdraw from the course OR if a student stops attending class, it is the student's responsibility to initiate and complete the necessary paperwork. Withdrawing from class may have consequences associated with financial aid and time to completion.
   b. When a student exceeds the allowed absences, the student is in violation of the attendance policy. The instructor MUST withdrawal the student with a grade of “W”, “WP”, or “WF” depending on the date the student exceeded the allowed absences and the student’s progress up to the last date of attendance or
   c. under extenuating circumstances and at the discretion of the faculty member teaching the class, allow the student to continue in the class and make-up the work. This exception must be documented at the time the allowed absences are exceeded.
   d. Absences are counted from the first day of class. There are no "excused" absences. All absences are counted, regardless of the reason for the absence.

5. A student must take the final exam or be excused from the final exam in order to earn a non-withdrawal grade.

6. Students are expected to be in class on time. Arrival to class after the scheduled start time or leaving class prior to dismissal counts as a tardy. Three tardies and/or early departures are considered as one absence unless stated otherwise.

7. It is the student's responsibility to sign the roll/verify attendance with instructor upon entering the classroom. Failure to sign the roll/verify attendance results in a recorded absence. In the event of tardiness, it is the student’s responsibility to insure that attendance is marked. The student is responsible for all material/announcements presented, whether present or absent.

8. Continuity of classroom and laboratory (which includes clinical experiences) is essential to the student's progress in providing safe and competent patient care. Students are expected to use appropriate judgment for participating in clinical activities. To evaluate the student's knowledge and skills, it is necessary for the student to be present for all clinical experiences. If absence does occur, the designated clinical site, in addition to the Division of Health Sciences Administrative Assistant, must be notified by telephone no later than 30 minutes prior to the start of the clinical experience. The Division of Health Sciences telephone number is 843-525-8267.

A copy of TCL’s STATEMENT OF POLICY NUMBER: 3-1-307 CLASS ATTENDANCE (WITHDRAWAL) is on file in the Division Office and in the Learning Resources Center.

HAZARDOUS WEATHER
In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WGZO 103.1, WFXH 106.1, WWVV 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLHV 101.1, WSOK 1230 AM, WAEV 97.3, WTOC TV, WTGS TV, WJWJ TV, and WSAV TV. Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. www.tcl.edu/textalert.asp
ACADEMIC MISCONDUCT
There is no tolerance at TCL for academic dishonesty and misconduct. The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship.

It is the student’s responsibility to address any questions regarding what might constitute academic misconduct to the course instructor for further clarification.

The College adheres to the Student Code for the South Carolina Technical College System. Copies of the Student Code and Grievance Procedure are provided in the TCL Student Handbook, the Division Office, and the Learning Resources Center.

Health care professionals hold the public trust. Academic misconduct by health science students calls that trust into question and academic integrity is expected.

It is a fundamental requirement that any work presented by students will be their own. Examples of academic misconduct include (but are not limited to):
1. copying the work of another student or allowing another student to copy working papers, printed output, electronic files, quizzes, tests, or assignments.
2. completing the work of another student or allowing another student to complete or contribute to working papers, printed output, electronic files, quizzes, tests, or assignments.
3. viewing another student’s computer screen during a quiz or examination.
4. talking or communicating with another student during a test.
5. violating procedures prescribed by the instructor to protect the integrity of a quiz, test, or assignment.
6. plagiarism in any form, including, but not limited to: copying/pasting from a website, textbook, previously submitted student work, or any instructor-prepared class material; obvious violation of any copyright-protected materials.
7. knowingly aiding a person involved in academic misconduct.
8. providing false information to staff and/or faculty.
9. entering an office unaccompanied by faculty or staff.
10. misuse of electronic devices.

GRADING POLICY

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<td>withdraw with failing grade</td>
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Grading Methodology. The final grade must be 75.00 or more in order to pass the course and progress in the program. In addition, each student must pass the final exam with a grade of 75.00 or above. If a student fails the final exam a second attempt will be given. The highest grade a student can achieve on a second attempt of the final exam is 75.00. Grades are not rounded up. Students absent from an examination or presentation will receive a “0” grade for the examination unless other arrangements are made with the individual instructor prior to the examination or presentation day or on the examination or presentation day before the test/presentation is scheduled to be given. It is the responsibility of the student to contact the appropriate instructor to arrange to make up the examination. Arrangements may be completed by telephone. If the instructor is not available, a message should be left on the
instructor’s voice mail AND with another member of the faculty or administrative assistant. The instructor will decide the time and method of make-up examinations on an individual basis. Messages sent by other students are unacceptable. The student is responsible for notifying the instructor of the reason for the absence. Grades are posted on Blackboard within one week of administration of tests and examinations.

Lecture: 8:30 – 11:00 TWTH
Lab: 12:00-2:30 TWTH

Instructors
Lecture: Cindy Buchanan, PhD, PT
Office Location: Room 208, Building 1
Telephone: 843-525-8230
cbuchanan@tcl.edu

Lab: Jennifer Culbreth, BS, PTA
Office Location: Room 125, Building 4
Telephone: 843-470-5956
E-MAIL: jculbreth@tcl.edu

Adjunct: Kevin Green, PTA
Partner, Carolina SportsCare
kgreen@carolinasportscare.com

Date of Development: Spring, 2006
Revision Date: Summer, 2011
PTH 240 Therapeutic Exercise/Application
LABORATORY SKILLS ACHIEVEMENT LIST

*Passive Range of Motion
Goniometry: Shoulder
Goniometry: Elbow
Goniometry: Wrist
Goniometry: Hip
Goniometry: Knee
Goniometry: Ankle

*Muscle/Joint Stretching Techniques
   Plantar flexors
   Hamstrings
   Quadriceps
   Hip flexors
   ITB
   Hip Adductors
   Pectoral Muscles
   Shoulder Lateral Rotators
   Shoulder Medial Rotators
MMT: Scapular Muscle Groups
MMT: Shoulder Muscle Groups
MMT: Elbow Muscle Groups
MMT: Wrist Muscle Groups
MMT: Hip Muscle Groups
MMT: Knee Muscle Groups
MMT: Ankle Muscle Groups

* Indicates a critical safety skill.
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<tr>
<th>Date</th>
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<th>Lab</th>
<th>Readings</th>
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