COURSE SYLLABUS
for
PHTA 1321
Pathophysiology for the PTA

CATALOGUE DESCRIPTION
Study of the pathophysiology of diseases/conditions encountered in physical therapy.

CREDIT/CONTACT HOURS
Credit hours: 3  Contact hours: 3 hours lecture

PREREQUISITES AND COREQUISITES
PTHA 1260, 1431, 2201, and 2435
Corequisite: PTHA 2409

COREQUISITE
PTHA 2409

ADA Statement
NHMCCD is dedicated to providing the least restrictive learning environment for all students. The college district promotes equity in academic access through the implementation of reasonable accommodations as required by the Vocational Rehabilitation Act of 1973, Title V, Section 504 and the Americans with Disabilities Act of 1990 (ADA) which will enable students with disabilities to participate in and benefit from all post-secondary educational programs and activities. If you require reasonable accommodations because of a physical, mental, or learning disability, please notify the instructor of this course within the first 2 weeks of the term.

PURPOSE
This course is designed so that student physical therapist assistants (PTA) will learn the diseases and disease processes involved in many diagnoses commonly encountered in the field of physical therapy. The student will identify and explain aspects of pathophysiology that affect physical therapy treatments, including physiological changes in patients’ conditions. The student will obtain and identify pertinent pharmacological information and its impact on patient care.

END-OF-COURSE OUTCOMES
On completion of this course, student PTA’s will:
1. Describe the etiology, pathogenesis, signs/symptoms, and treatments of selected diseases/ conditions. (F 1,6,9; C 1,11,15)
2. Identify the impact of the pathologies in physical therapy.
COURSE OBJECTIVES:
1. Synthesize precautions and contra-indications that affect physical therapy interventions.
   (F 10; C 1,7,11,13)
2. Formulate responses to acute physiologic changes. (F 1,8,9,10; C 11,15,20)
3. Determine pertinent medication and lab values which impact patient care. (F 1,3; C 7,11,15,20)
4. Design and manage the physical therapy treatment of people with cardiac and/or chronic lung disease, bariatric disorders, orthopedic pathologies and general medical disorders, as prescribed by the physical therapist. (F 1,6,9,10; C 10,13,15)
5. Develop the ability to perform lung clearance techniques (F 9,10,16; C 11,13,15,16,17,18,19,20)
6. Design strategies to identify the components of an ECG, normal and common arrhythmias. (F 10,12; C 1,11,12,13,18,19)
7. Synthesize etiology, role of physical therapy, and techniques used in the assessment and treatment of various chronic disorders and diseases, and/or how they can affect physical therapy treatment. (F 1,5,6,9,13; C 15,16,17,18,19)

REQUIRED MATERIALS

INSTRUCTOR
Dr. Nanette Meyer, PT, DPT
Building B, Suite 120, Office 120 U

Phone
Office: 936-273-7471 (and voice mail) FAX: 936-273-7050
eMail: Nanette.M.Meyer@Lonestar.edu

SEMESTER / LOCATION / TIME
Summer term 1/ Building B, Room 140/ 8:00am-12:00 pm M-TH

METHODS OF INSTRUCTION
A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

ASSESSMENT OF LEARNER OUTCOMES AND OBJECTIVES
Assessment methods include, but may not be limited to: written examinations, lab practicals, skill checklists, observation of skills and professional behavior, documentation assignments, evidence based journal club, research papers, oral presentations, PTA MACS, self-assessment surveys, and clinical educators rating. Plagiarism of any assignment will result in a 0% on that assignment as well as be addressed via the program integrity policy as outlined in the student handbook.
CONTRAINDICATIONS AND POTENTIAL HAZARDS ASSOCIATED WITH PROCEDURES APPLIED IN THIS COURSE

Within the course, students will be asked to apply and to receive various physical therapy treatment modalities. The list below is of contraindications and potential hazards which are associated with procedures applied in the course. The students are asked to provide informed consent to participate in the course and it is the student’s responsibility to inform the instructor of any contraindications or circumstances which may limit their full participation in these procedures both now and in the future.

Contraindications/Precautions:
- Skin Disorders
- Low Back Disorders
- Cardiac Conditions
- Respiratory Conditions

EVALUATION

Testing
1. 4 Lecture Exams @100 points each 400 points total
2. Presentation of each research topic, see handout for instructions 100 points total
3. 5 SOAP notes, 1 for each of the topics below, due prior to the exam for that topic.
   - Cardiac
   - Pulmonary
   - Bariatric
   - Orthopedic
   - General medical = due the day of your presentation 50 points total
4. 1 practical exam 20 points **
5. Discussion answers, due at beginning of each class 120 points total
6. Exercise Development project 10 points total

TOTAL: 700 points

Grades:

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% - 100%</td>
<td>A</td>
<td>(630-700)</td>
</tr>
<tr>
<td>80% - 89%</td>
<td>B</td>
<td>(560-629)</td>
</tr>
<tr>
<td>75% - 79%</td>
<td>C</td>
<td>(525-559)</td>
</tr>
<tr>
<td>less than 75%</td>
<td>F</td>
<td>(0-524)</td>
</tr>
</tbody>
</table>

**check-offs as listed in the skill competencies sheet must be completed prior to the practical exam.

No plagiarized work may be turned in as your own. If any plagiarism can be detected, a 0 will be received for the assignment and disciplinary action may be taken, to include being dropped from the program and possibly the college.

In order to pass this class with a 75% you must:
- All exams must be taken, and a cumulative passing score (greater than 75%) must be obtained in each of the evaluation components in order to pass this class. These components include both the didactic (written exams) and the practical/skills (lab exams). Only after this requirement is met will the scores for other factors be included to determine the final grade.
In order to pass the lab portion of the class, the critical safety skills must be mastered on all practicals and check-offs. Proficiency must be attained in the laboratory within 3 attempts (75%). The original grade will remain the posted grade. If on the third attempt the skill is still not mastered for a maximum score of 75%, the student will receive a 0 for that exam. The student is not allowed to proceed until all critical skills are satisfactorily checked off. If a student cannot complete a critical skill, they fail the course, must reapply to the program and, if accepted, must repeat the course. This process verifies a student’s readiness to continue through the program and for clinicals.

Be prepared for any presentation at the time assigned or called upon. If you are not prepared with the correct information to turn in (references, research, documentation, etc) or are not able to load your presentation, you will have 10% automatically deducted from your grade.

You are required to participate in field trips and to be on time. You will have 10% deducted from your grade for being late and will have earned 0 points for absence.

You are to sign your notes correctly. If they are not signed correctly, no points will be awarded.

LATE TESTS AND ASSIGNMENTS

The semester moves fast. If you have to miss class on the day of a test, you must notify me before the test. If you have contacted me regarding your absence, and have a valid reason, you may take the test in the Testing Center (ground floor, ELC) within a time limit we will agree upon. If you do not contact me before the test you missed, I will consider your absence unexcused, and you will get a zero for that test. If you don’t take the test within the agreed time limit, you will also receive a zero. Please note that if you miss the final exam, there may not be time for you to have the option of taking it late.

No credit will be given for assigned work handed in after the due date.

Exceptions may be made for serious illness/hospitalization or other tragedy. In these circumstances, written verification will be required.

OTHER COURSE/CLASSROOM POLICIES

Lab Dress:
Appropriate dress is to be worn/available for all labs. This is to include shorts and short sleeve/sleeveless shirts, to expose as much skin as possible while studying those structures, while still being modest.

Attendance Expectations:
• To do well in this course, you must attend regularly and keep up with assignments. You cannot make a satisfactory grade without studying. Since this is a 10-week semester, the course progresses very quickly -- you must discipline yourself to keep up and not fall behind.
• As this course uses discussion and the ability to work responsibly in a group, participation in the class discussions and activities is essential to successful completion.
• The instructor has the option to drop a student from the class after the student has accumulated absences of two or more classes, particularly if these are not excused. All absences should be explained to the instructor via phone or internet e-mail.
• The instructor will begin each class by recording the students present. If you come in 15 minutes after class has begun, you will be marked absent unless you see me after class and let me know you were there. In addition, each class may begin with a written quiz reviewing the last session’s work. If you are late, you will receive a zero on the daily written quiz.
• All travel to field trips will be on your own. You are expected to dress in business attire or scrubs for all classes held off campus.

NO LONGER ATTENDING CLASS DOES NOT CONSTITUTE WITHDRAWAL FROM THIS CLASS, NOR DOES A STUDENT’S NOTIFICATION TO THE INSTRUCTOR THAT THE STUDENT WISHES TO BE DROPPED. FAILURE OF A STUDENT TO FILL OUT A “SCHEDULE CHANGE FORM” TO OFFICIALLY DROP THIS CLASS MAY RESULT IN A GRADE OF “F.”
THE LAST DAY TO DROP THIS CLASS AND RECEIVE "W" IS FRIDAY, NOVEMBER 11, 2011, BY 4:00 P.M. AFTER THIS DATE, NO WITHDRAWALS WILL BE ISSUED.

CAMPUS SAFETY

Lone Star College System (LSCS) is committed to maintaining the safety of the students, faculty, staff, and guests while visiting any of our campuses. See http://www.lonestar.edu/oem for details. Register at http://www.lonestar.edu/12803.htm to receive emergency notifications. In the event of an emergency contact LSCS Police at (281) 290-5911 (or on campus ext.5911).

IF YOU ARE HAVING DIFFICULTY

- Please contact me. My goal is for you to succeed. You will have to do the work to meet the standards of the course, but there are many college resources available to help you do this -- but you need let me know if you need help. My office phone number and e-mail address are listed on this syllabus. Also, if you have any special academic needs, please talk with me after the first class and give me a copy of your documentation.

COUNSELING STATEMENT

- Counseling is available for academic, career, and personal matters. Contact either:
  - Terry Albores Office: B200S Phone: 936.273.7074
  - Amy Roberson Office: B120H Phone: 936.273.7039

Behavior in the Classroom:

- While active participation in class activities is encouraged, behavior that is disruptive and interferes with the ability of others to benefit from the education will not be tolerated.
- Students displaying disruptive behavior in a class will be asked to leave that class, and this will be considered as partial attendance.
- Repeated incidents of disruptive behavior will result in dismissal of the student from the course.
- Cell phones are to be turned off in the classroom. Two breaks will be given throughout the lecture and lab period. Please use this time to communicate via cell phone. In the event of family and childcare emergencies that require you to be “on call”, you must receive prior approval from the instructor. After the first violation of this policy all phones will be collected and returned after class.

Children:

- Generally, children are not allowed in class. However, under exceptional circumstances, a parent may bring their child to class with prior permission of the instructor.
- If a child is allowed into class, their behavior must not disrupt the normal conduct of that class or interfere with other students. This is the responsibility of the parent and will be treated in the same manner as other student disruptive behavior.
- Children may not be left unattended in the college.

Student Evaluations

In order to improve the quality of our PTA program, students are asked to complete student evaluation in My Lonestar by the 12th week of the course. Classroom or Lab time will be given to complete this very important feedback.

ACADEMIC INTEGRITY

The following is taken directly from the Lone Star College System Catalog concerning academic integrity:

“The Lone Star College System upholds the core values of learning: honesty, respect, fairness, and accountability. The system promotes the importance of personal and academic honesty. The system embraces
the belief that all learners – students, faculty, staff and administrators – will act with integrity and honesty and must produce their own work and give appropriate credit to the work of others. Fabrication of sources, cheating, or unauthorized collaboration is not permitted on any work submitted within the system. The consequences for academic dishonesty are determined by the professor, or the professor and academic dean, or the professor and chief student services officer and can include but are not limited to:

1. Having additional class requirements imposed,
2. Receiving a grade of zero or “F” for an exam or assignment,
3. Receiving a grade of “F” for the course,
4. Being withdrawn from the course or program,
5. Being expelled from the college system.

Professors should clearly explain how the student’s actions violated the academic integrity policy, how a grade was calculated, and the actions taken.” (Lone Star College System 2011-2012 Catalog, Page 73)
## PROPOSED CALENDAR

### Lectures:

<table>
<thead>
<tr>
<th>Wk</th>
<th>Topics</th>
<th>Text components</th>
</tr>
</thead>
</table>
| 1  | Cardiac and EKG  
    Pulmonary rehab  
    **LAB PRACTICAL/ LECTURE EXAM 1** / Bariatric Pathology and implications | A ch 16 B ch 12  
A ch 15 B ch 15 |
| 2  | Bariatric Pathology and implications (con’t)  
    **LECTURE EXAM 2**  
    Hip dysplasia, Osgood Schlater, Legg-Calve-Perthes,  
    anteverision/ retroversion, hammer toes, bunions, plantar fascitis,  
    patellofemoral syn, DVT  
    Erb's palsy, Thoracic Outlet Syndrome, Winging Scapula, Sprengel's Deformity,  
    Yergason, Drop Arm, Apprehension, Adhesive Capsulitis  
    Boutonniere, Swan neck, Mallet Finger, Trigger finger  
    Ganglion cyst, Carpal tunnel,  
    Torticollis, Paget's disease  
    Osteoprosis, osteomalicia, DDD, DJD,  
    Laminectomies, Spondylolisthesis, Spondylosis, Ankylosing Spondylitis,  
    Fusions | B. Ch 2  
B. 1126, 1315, 1311  
459, 586, 564, 996, 524, 625  
1147, 1612, 313 (292), 292  
302, 301, 285, 991  
1267, 1267, 1604  
1145, 1176  
1157, 1173, 1258, 1250, 1262, 1260, 675, 1262  
1145, 1176, 1157, 1173, 1258, 1250, 1262, 1260, 675, 1262 /http://orthoinfo.aaos.org/topic.cfm?topic=A00348 |
| 3  | SLE, HIV/ AIDS  
    DM 1 and 2, Peripheral neuropathy  
    Diabetic kidney disease, hepatitis, pancreatitis  
    Wallarian Degeneration, Referred pain / radiculopathy  
    Multiple Sclerosis, Headaches  
    Amyotrophic Lateral Sclerosis, Alzheimers  
    Epstein-Barr Virus, Cytomegalovirus  
    Guillain- Barre, Charcot-Marie-Tooth  
    Myasthenia gravis, fibromyalgia  
    diverticulitis, Crohn's  
    discitis, septic arthritis  
    osteomyelitis, scleraderma  
    Parkinsons, Cancer  
    Components of Lab value panel, including CBC and INR and description of  
    each and why important to PT  
    leukemia, hemophilia, sickle cell  
    Renal failure, liver, pancreas disorders and transplants with each  
    Cellulitis, necrotizing fascitis  
    Candidiasis, Scabies,  
    Ringworm, gout  
    Tuberculosis, Polio & Post-Polio Syndrome  
    Dystonia, Tourette's Syndrome  
    Peripheral Vascular Disease & Raynaud's,  
    Reflex Sympathetic Dystrophy, Neuralgia  
    Rheumatoid Arthritis, Osteoarthritis  
    Huntington's, Epilepsy  
    **LECTURE EXAM 4** | B. See Goodman/ O'Sullivan index for appropriate titles and pages  
C. Ch 13 for selected topics |

**Text Key:**