PTA 20

Pathology

SYLLABUS AND COURSE INFORMATION PACKET

Spring 2018

3 credits
3 hour lecture

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Kingsborough Community College
Of the
City University of New York

Physical Therapist Assistant Program

Course Syllabus

PTA 20

Pathology

Course Description: This course introduces the student to common pathologies managed, in part, by physical therapy. The pathologies introduced in this course are further explored in courses throughout the physical therapist assistant curriculum. The course is divided into four distinct units of: orthopedic, neurological, cardiopulmonary, and acute medical conditions. The course presents general overviews of common pathologies including: anatomical and physiological considerations, etiologies, and physical therapy management. Students complete electronic posters on assigned topics as well as engage in weekly group/active learning activities.

Co- Requisites: PTA 1, PTA 2, PTA 10, PTA 11.


Student Learning Objectives

As evidenced by successful performance and completion of written examinations, reports and assignments the students will:

1.0 Demonstrate an understanding of general principles of disease and disease prevention.
   1.1 Discuss the general causes and characteristics of disease.
   1.2 Identify signs and symptoms associated with major health problems.
   1.3 Identify implications health problems may have on the physical therapy program.
   1.4 Describe and summarize methods of disease prevention.
   1.5 Discuss the importance of universal precautions.
   1.6 Distinguish the major components of universal precautions and isolation techniques.
   1.7 Assess signs (observation, vital signs, etc.) and symptoms presented by a patient in order to make a judgment in relations to the patient’s need for
2.0 Demonstrate an understanding and recognition of common musculoskeletal pathologies and their management and interventions.

2.1 Explain the basic anatomy and function of the musculoskeletal system.
2.2 Describe the etiology, pathology, signs, symptoms and prognosis of common orthopedic disorder including: strains, sprains, joint derangements, fractures and dislocations, bursitis, tendonitis, synovitis, capsulitis, arthritis, muscle contractures and spasm, scoliosis, back pain and osteoporosis.
2.3 State medical management strategies for common musculoskeletal pathologies including secondary strategies such as contractures and impingement syndromes.
2.4 Summarize and list general physical therapy treatment goals for common orthopedic disorders including: strains, sprains, joint derangements, fractures and dislocations, bursitis, tendonitis, synovitis, capsulitis, arthritis, muscle contractures and spasm, scoliosis, back pain and osteoporosis.
2.5 Identify appropriate rehabilitation services to accomplish treatment goals.

3.0 Demonstrate an understanding and recognition of common neurological pathologies and their management and interventions.

3.1 Explain the basic anatomy and function of the nervous system.
3.2 Describe the etiology, pathology, signs, symptoms and prognosis of common neurological disorders including: peripheral neuropathies, Parkinson’s, multiple sclerosis, cerebral palsy, Alzheimer’s, traumatic brain injury, cerebral vascular accident, and spinal cord injuries.
3.3 State medical management strategies for common neurological disorder including secondary strategies such as decubitus and contracture prevention.
3.4 Summarize general physical therapy treatment goals for common neurological disorders including: peripheral neuropathies, Parkinson’s, multiple sclerosis, cerebral palsy, Alzheimer’s, traumatic brain injury, cerebral vascular accidents, and spinal cord injuries.
3.5 Identify appropriate rehabilitation services to accomplish treatment goals.

4.0 Demonstrate an understanding and recognition of common cardio-pulmonary disorders pathologies and their management and interventions.

4.1 Explain the basic anatomy and function of the cardiopulmonary systems.
4.2 Describe the etiology, pathology, signs, symptoms and prognosis of common cardiopulmonary disorder including: chronic obstructive pulmonary diseases, pneumonia, cystic fibrosis, coronary artery disease, and myocardial infarction.
4.3 State medical management strategies for common cardiopulmonary disorders including secondary strategies such as early mobilization and pulmonary hygiene.
4.4 Summarize and list general physical therapy treatment goals for common cardiopulmonary disorder including: chronic obstructive pulmonary diseases, pneumonia, cystic fibrosis, coronary artery disease, and myocardial infarction.

4.5 Identify appropriate rehabilitation services to accomplish treatment goals.

5.0 Demonstrate an understanding and recognition of common medical conditions and their management and intervention.
   5.1 Describe the etiology, pathology, signs, symptoms and prognosis of common medical conditions including: diabetes mellitus, AIDS/HIV, secondary deconditioning, oncologic, and ventilation conditions.
   5.2 State medical/surgical management strategies for common medical conditions including secondary strategies such as decubitus and early mobilization.
   5.3 Summarize and list general physical therapy treatment goals for common medical conditions including: diabetes mellitus, AIDS/HIV, secondary deconditioning, oncologic, and ventilation conditions.
   5.4 Identify appropriate rehabilitation services to accomplish treatment goals.

6.0. Demonstrate appropriate professional behavior
   6.1 Attends and is on time for class, lab, and scheduled appointments.
   6.2 Is prepared for lab activities; attends to tasks assigned.
   6.3 Accept constructive criticism and respond and/or follow through appropriately.
   6.4 Maintain appropriate personal hygiene.
   6.5 Treat others with positive regard, dignity and respect.
   6.6 Analyze and examine professional literature considering: specific scientific methods, interpretation of results, and clinical significance in order to foster further personal investigation and clinical effectiveness.
   6.7 Explain the importance of lifelong learning.
   6.8 Describe how professional development can occur.

Student Assessment
As indicated in the student handbook, to receive a passing grade in this course the student must successfully complete the comprehensive final examination with a grade of C or higher in addition to achieving a minimum passing average of C or higher in all other assessments as listed below

<table>
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<tr>
<th>Grade Determination</th>
<th>%</th>
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<tbody>
<tr>
<td>Electronic Poster Projects</td>
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<tr>
<td>Oral Presentation</td>
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<td>3 - 5 Quizzes</td>
<td>40</td>
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<td>Mid- Term Examination</td>
<td>20</td>
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<td>Final Examination</td>
<td>20</td>
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<td>100</td>
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**Electronic Poster Projects**
Each student will be required to create two electronic posters on an assigned topic. The electronic posters summarize a current topic derived from a newspaper or magazine related to a common pathology that is at least in part managed by physical therapy. The specific format of the poster will be provided by the instructor. Electronic posters are uploaded to Blackboard for peer review and discussion.

**Topical Oral Presentation**
Each week a group of students will be required to present a specific aspect of a displayed electronic poster. Each week the class will be subdivided into different discussion groups. These groups will be responsible for reviewing and discussing the displayed topic and preparing an oral presentation based upon their in-class discussion and research. One group will be selected to present each week. Each member of the group must participate equally in the oral presentation.

**Quizzes**
Each student completes a series of short quizzes. Quizzes may include short answer, essay, and multiple choice questions.

**Mid-Term Examination**
Each student takes a cumulative written mid-term examination. This examination primarily consists of multiple choice questions, some short answer clinical reasoning questions may be included.

**Final Examination**
Each student takes a cumulative final written examination. This examination primarily consists of multiple choice questions, some short answer clinical reasoning questions may be included.

**Course Outline**

**Week #1 ~ Introduction to Disease Inflammatory Response, Disease Prevention, and Non-Pathological Consequences of Aging**
Assignment: Chapter 1, 2, Chapter 14 pp. 602-605, 615-620
This week’s lectures introduce students to common terminology associated with pathology.

**Week #2 ~ Introduction to Common Orthopedic Pathologies**
**Lecture**
Assignment: Chapter 5 & 6
These initial lectures introduce the student to principles of disease and disease prevention. Universal precautions are presented. A broad overview of the musculoskeletal system is provided (concurrent in depth exploration in Bio 11 and
Week # 3 ~ Common Orthopedic Pathologies cont.
Lecture
Assignment: Chapter 5 & 6

Specific disorders of the bones and joints are reviewed. Common fractures (Colles, malleolar, humeral, hip, etc.) are presented. Rheumatoid and osteoarthritis are discussed. Joint stiffness due to immobilization, trauma, and surgical conditions are reviewed. Physical therapy intervention and goals of treatment are presented and discussed. Student explore etiologies, signs, symptoms, and treatment of bursitis, capsulitis, ligament sprains, and cartilage injury. Common pathologies such as subdeltoid bursitis ankle sprain, ligament sprain, and meniscal injuries are reviewed. Muscle strains and tears, their treatment, and etiologies, are explored.

Week # 4 ~ Common Orthopedic Pathologies cont.
Lecture
Assignment: Chapter 5 & 6

Discussion of muscular pathologies is completed. Etiologies, signs, symptoms and interventions of common disorders of the spine are reviewed. Specific attention is paid to scoliosis, low back and cervical pain, spondylosis, and degenerative disc disease.

Week # 5 ~ Common Neurological Disorders
Lecture
Assignment: Chapter 7

A broad overview of the human nervous system is presented (concurrent in depth study in Bio 11 ). Differences between central nervous system and peripheral nervous system disorders are distinguished. General etiologies, and treatment goals are discussed

Week # 6 ~ Common Neurological Disorders cont.
Lecture

Assignment: Chapter 7

The signs, symptoms, etiologies and intervention of specific neurological disorders are reviewed including: Parkinson’s, multiple sclerosis and other degenerative diseases, cerebral palsy, Alzheimer’s and traumatic brain injury.
Week # 7 ~ Common Neurological Disorders cont.
Lecture
Assignment: Chapter 7

This week’s lecture explore the etiology, signs, symptoms, prognosis and treatment of cerebral vascular accident. A broad overview of the vascular anatomy of the brain is presented in relation to pathological impact. Intervention approaches and goal are reviewed.

Week #8 ~ Common Neurological Disorders cont.
Lecture
Assignment: Chapter 7

This week’s lectures present the etiology, signs, symptoms and treatment of spinal cord injuries. The functional organization of the spinal cord is reviewed. Emphasis is placed on levels of injuries, functional consequences, and secondary conditions. Psycho-social impacts of spinal cord injuries are discussed.

Week #9 ~ Common Cardiopulmonary Disorders
Lecture
Assignment: Chapter 3 & 4

A broad overview of the cardiopulmonary system is presented. General etiologies, signs, symptoms, and physical therapy interventions are reviewed.

Week #10 ~ Common Cardiopulmonary Disorders cont.
Lecture
Assignment: Chapter 3 & 4

Specific pathologies of the cardiopulmonary system are explored including: chronic obstructive pulmonary diseases, pneumonia, coronary artery disease, and myocardial infarction. Physical therapy interventions and goals are reviewed.

Week #11 ~ Common Acute Medical Conditions
Lecture
Assignment: Chapter 9 & 10, 13

The function, goals and characteristics of the acute medical facility are briefly reviewed (learned in PTA 10). General etiologies of pathologies are discussed. General physical therapy treatment goals are also discussed. The student is introduced to specific conditions encountered in the acute care facility.
Week #12  ~ Common Acute Medical Conditions cont.

Lecture

Assignment: Chapter 8, 11, 13

Discussions of specific conditions and their physical therapy interventions and goals are continued. General medical and surgical, deconditioning, vascular, oncologic, and ventilation conditions are considered.

*Access-Ability Services (AAS) serves as a liaison and resource to the KCC community regarding disability issues, promotes equal access to all KCC programs and activities, and makes every reasonable effort to provide appropriate accommodations and assistance to students with disabilities. Please contact this office if you require such accommodations and assistance. Your instructor will be glad to make the accommodations you need, but you must have documentation from the Access-Ability office for any accommodations.

**Academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion. Additional information can be found in the College catalog (http://www.kingsborough.edu/sub-registration/Pages/catalog.aspx). Plagiarism is a violation of academic integrity. Plagiarism is the intentional theft(s) of someone else’s intellectual property without attribution (proper credit). Determination and penalty – ranging from grade reduction to course failure – will be decided by the instructor.

***Class attendance is a vital part of the learning experience. A student who has been absent 15% or more of the total instructional hours that a class meets may be considered excessively absent by the instructor. The instructor may consider excessive absences as a factor in the assignment of a student’s grade.

****The course professor utilizes a variety of teaching methodologies to facilitate accomplishment of student learning objectives. These methodologies may include interactive lecturing, supervised group and simulation activities, web-based instruction, use of custom computer based study guides, and active learning strategies.