

***This is a SouthArk Master Syllabus. The course syllabus distributed by the instructor may include additional requirements, must be followed by the student in the given term, and is considered to supersede the Master Syllabus.***

**Course Number**

PTAP 2304

**Course Title**

Pathophysiological Conditions

**Course Description**

Course Description: This course includes the study of disease pathophysiology, etiology, clinical signs and symptoms of many diseases and injury-related problems seen in physical therapy. Emphasis is placed on the process of inflammation and healing, pain, causes of disease, musculoskeletal conditions, cardiopulmonary conditions, and diseases affecting endocrine, immunity, vascular, and reproductive systems that are common to the field of physical therapy. Medical, surgical, and physical therapy management is presented. Medical literature research is required.

Lecture hours: 64 contact hours

**College Mission**

South Arkansas Community College promotes excellence in learning, teaching, and service; provides lifelong educational opportunities; and serves as a cultural, intellectual, and economic resource for the community.

**College Wide Student Learner Outcomes**

Critical Thinking                       Responsibility                       Communication

**ACTS Course**                       **Program Course**                       Physical Therapist Assistant

**ACTS Outcomes**

NA

**Program Goals and Objectives / Outcomes**

PTA Program Curriculum Goals: PTAP 2304, Pathophysiological Conditions includes preparation in the cognitive, affective and psychomotor domains utilizing critical thinking to become competent entry-level Physical Therapist Assistants. The PTA graduate:

- 4) Applies knowledge of anatomy and physiology of the human body as related to pathologies / injuries commonly seen in the practice of physical therapy;
- 8) Recognizes and responds appropriately to the emotional, psycho-social, economic, and relational aspects of physical therapy care with an appreciation of individual and cultural differences.

**Course Learner Objectives / Outcomes**

CLO #	Course Learner Outcomes (CLO)	Unit Outcomes/ Competencies	Program Outcomes	Critical Thinking	Communication	Responsibility	Assessment
CLO 1	Describe and assess pain	2, 3, 15	4, 8	CT1		R2	Written examination
CLO 2	Discuss various orthopedic conditions	1, 4, 5, 15	4, 8	CT1		R2	Written examination
CLO 3	Discuss pathophysiology, etiology of AIDS/STDS	1, 6, 15	4, 8	CT1		R2	Written examination
CLO 4	Describe and assess integumentary conditions	1, 7, 15	4, 8	CT1		R2	Written examination
CLO 5	Discuss cardiovascular and pulmonary conditions	1, 8, 9, 15	4, 8	CT1		R2	Written examination
CLO 6	Describe pathology of Diabetes Mellitus	1, 10, 15	4, 8	CT1		R2	Written examination

CLO 7	Describe diseases common to geriatrics	1, 8, 9, 10, 11, 15	4, 8	CT1		R2	Written examination
CLO 8	Describe diseases common to pediatrics	1, 12, 15	4, 8	CT1		R2	Written examination
CLO 9	Discuss various neurological conditions	1, 13, 15	4, 8	CT1		R2	Written examination
CLO 10	Explain common oncology conditions seen in physical therapy	1, 14, 15	4, 8	CT1		R2	Written examination
CLO 11	Conduct medical literature review	15, 16, 17	4, 8	CT4	C1 C2	R3	Class presentation

- 1) Written examinations: 75% of the measures for the above CLO were met on written examination/s.
- 2) Departmental rubric

### Unit Objectives / Outcomes / Competencies

Course Objectives: At the completion of this course, the student should be able to:

1. Explain the basic concepts of disease and tissue healing;
2. Discuss various pain theories and how physical therapy intervention affects pain;
3. Describe pain assessments;
4. Discuss various orthopedic conditions (osteoarthritis, Rheumatoid Arthritis, osteoporosis, ankylosing spondylitis) with regards to pathophysiology, etiology, clinical signs and symptoms, and basic physical therapy treatments;
5. Describe orthopedic conditions / injuries of the major joints of the human body, including pathology, mechanism of injury, etiology, clinical signs and symptoms, and basic physical therapy treatments;
6. Discuss pathophysiology, etiology, clinical signs and symptoms, and physical therapy intervention for AIDS and sexually transmitted diseases;
7. Describe the classifications of wounds and burns, including etiology, symptoms, sequelae, and basic physical therapy interventions;
8. Discuss common cardiovascular diseases / conditions seen in physical therapy, including risk factors, etiology, clinical signs and symptoms, and basic physical therapy interventions;
9. Discuss common pulmonary diseases seen in physical therapy, including risk factors, etiology, clinical signs and symptoms, and basic physical therapy interventions;
10. Describe pathophysiology, etiology, clinical signs and symptoms, potential problems, and physical therapy treatments associated with Diabetes Mellitus;
11. Describe disease pathologies common to geriatric patient;
12. Describe disease pathologies common to pediatric patients;
13. Discuss various neurological diseases / injuries (peripheral nerve injuries and neuropathies, SCI, CVA, TBI, Multiple Sclerosis, Guillian-Barre, ALS, Parkinsonism, Muscular Dystrophy, CP), including etiology, pathophysiology, clinical signs and symptoms, and basic physical therapy treatments;
14. Explain common oncology diseases seen in physical therapy;
15. Discuss the impact that disease/injury has on functional status and emotional/psycho-social well being.
16. Conduct medical literature review; and
17. Present selected pathology to class.

### Course Outline:

- I. Introduction
  - A. Basic concepts and characteristics of disease and healing
    - 1) Inflammation
    - 2) Tissue repair
    - 3) Chronic inflammation
    - 4) Effects of modalities on tissue healing
- II. Pain
  - A. Pain theories
  - B. Peripheral mechanisms of pain
  - C. Central mechanisms of pain
  - D. Pain assessment
  - E. Stages of pain (acute, subacute, chronic, referred)
  - F. Effects of modalities on treatment of pain
  - G. Functional status and emotional/psycho-social impact
- III. Orthopedic conditions treated in physical therapy
  - A. Osteoporosis
    - 1) Pathophysiology

- 2) Etiology
- 3) Clinical signs and symptoms
- 4) Physical therapy treatment
- B. Arthritis (osteoarthritis, Rheumatoid Arthritis)
  - 1) Pathophysiology
  - 2) Etiology
  - 3) Clinical signs and symptoms
  - 4) Physical therapy treatment
- C. Ankylosing spondylitis
  - 1) Pathophysiology
  - 2) Etiology
  - 3) Clinical signs and symptoms
  - 4) Physical therapy treatment
- D. Injuries / pathologies of specific joints
  - 1) Spine pathology / injury
    - a) Pathophysiology / mechanism of injury
    - b) Etiology
    - c) Clinical signs and symptoms
    - d) Physical therapy treatment
  - 2) Shoulder pathology / injury
    - a) Pathophysiology / mechanism of injury
    - b) Etiology
    - c) Clinical signs and symptoms
    - d) Physical therapy treatment
  - 3) Elbow pathology / injury
    - a) Pathophysiology / mechanism of injury
    - b) Etiology
    - c) Clinical signs and symptoms
    - d) Physical therapy treatment
  - 4) Forearm, wrist, and hand pathology / injury
    - a) Pathophysiology / mechanism of injury
    - b) Etiology
    - c) Clinical signs and symptoms
    - d) Physical therapy treatment
  - 5) Hip pathology / injury
    - a) Pathophysiology / mechanism of injury
    - b) Etiology
    - c) Clinical signs and symptoms
    - d) Physical therapy treatment
  - 6) Knee pathology / injury
    - a) Pathophysiology / mechanism of injury
    - b) Etiology
    - c) Clinical signs and symptoms
    - d) Physical therapy treatment
  - 7) Ankle and foot pathology / injury
    - a) Pathophysiology / mechanism of injury
    - b) Etiology
    - c) Clinical signs and symptoms
    - d) Physical therapy treatment
- E. Functional status and emotional/psycho-social impact
- IV. AIDS / STDS
  - A. Classifications of diseases
  - B. Pathophysiology
  - C. Etiology
  - D. Clinical signs and symptoms
  - E. Physical therapy treatment
  - F. Functional status and emotional/psycho-social impact
- V. Wounds / burns
  - A. Pathophysiology / mechanism of injury
  - B. Etiology
  - C. Classification of wounds and burns
  - D. Clinical signs and symptoms

- E. Physical therapy treatment
- F. Functional status and emotional/psycho-social impact
- VI. Diabetes Mellitus
  - A. Pathophysiology
  - B. Etiology
  - C. Clinical signs and symptoms
  - D. Potential problems associated with Diabetes Mellitus
    - 1) neuropathies
    - 2) retinopathy
    - 3) wound healing
    - 4) glucose monitoring
  - E. Physical therapy treatment
  - F. Functional status and emotional/psycho-social impact
- VII. Cardiovascular pathologies (CAD, ASHD, HTN, PVD, CABG, MI)
  - A. Classification of diseases / conditions
  - B. Pathophysiology
  - C. Etiology / risk factors
  - D. Clinical signs and symptoms
  - E. Surgical managements
    - 1) cardiac surgery
    - 2) bypass surgery
    - 3) amputation
  - F. Physical therapy treatment
  - G. Functional status and emotional/psycho-social impact
- VIII. Pulmonary pathologies (COPD, emphysema, asthma, post-surgical, cystic fibrosis)
  - A. Pathophysiology
  - B. Etiology / risk factors
  - C. Clinical signs and symptoms
  - D. Physical therapy treatment
  - E. Functional status and emotional/psycho-social impact
- IX. Pathologies common to geriatric patients
  - A. Classification of problems
  - B. Clinical signs and symptoms
  - C. Physical therapy treatment
  - D. Functional status and emotional/psycho-social impact
- X. Pediatric pathologies
  - A. Classification of problems
  - B. Clinical signs and symptoms
  - C. Physical therapy treatments
  - D. Functional status and emotional/psycho-social impact
- XI. Neurological Conditions
  - A. Cerebral vascular accidents
    - 1) Pathophysiology / mechanisms of injury
    - 2) Etiology
    - 3) Clinical signs and symptoms
    - 4) Physical therapy treatment
  - B. Traumatic brain injuries
    - 1) Pathophysiology / mechanisms of injury
    - 2) Etiology
    - 3) Clinical signs and symptoms
    - 4) Physical therapy treatment
  - C. Spinal cord injuries
    - 1) Pathophysiology / mechanisms of injury
    - 2) Etiology
    - 3) Clinical signs and symptoms
    - 4) Physical therapy treatment
  - D. Peripheral nerve injuries
    - 1) Pathophysiology / mechanisms of injury
    - 2) Etiology
    - 3) Clinical signs and symptoms
    - 4) Physical therapy treatment
  - E. Peripheral neuropathies

- 1) Pathophysiology / mechanisms of injury
- 2) Etiology
- 3) Clinical signs and symptoms
- 4) Physical therapy treatment
- F. Degenerative nervous system diseases
  - 1) Classification of conditions (Multiple Sclerosis, Guillian-Barre, Parkinsonism, Muscular Dystrophy)
  - 2) Pathophysiology / mechanisms of injury
  - 3) Etiology
  - 4) Clinical signs and symptoms
  - 5) Physical therapy treatment
- G. Functional status and emotional/psycho-social impact
- XII. Oncology
  - A. Common conditions seen in physical therapy
  - B. Pathophysiology
  - C. Etiology
  - D. Clinical signs and symptoms
  - E. Physical therapy treatment
  - F. Functional status and emotional/psycho-social impact
- XIII. Student presentation

**Assessment Description(s)**

Written examinations are criterion referenced scored.  
 Class presentations are scored based upon department developed rubric.

**Materials and Technological Requirements**

Pathology for the Physical Therapist Assistant, by Catherine C. Goodman, Kenda Fuller, et al., Elsevier/Saunders Publishing, 2012.

Practical Orthopedics, 6th edition, by Lonnie R. Mercier, Mosby Publishing, 2008.

Physical Rehabilitation for the Physical Therapist Assistant, by Michelle H. Cameron & Linda G. Monroe, Elsevier/Saunders Publishing, 2011.

**Class Attendance Policy**

Students are expected to attend all classes in which they are enrolled. If a student is absent from a class session, it is the student's responsibility to make arrangements to complete or make up any work missed. No make-up work for missed classes will be allowed without the approval of the instructor. Students who enroll late must assume all responsibility for work missed. Classes not attended as a result of late enrollment may be counted toward excessive absences. Students not attending the entire class period may be counted absent for that period. An instructor may drop students with a grade of "WE" if students have been absent for an excessive number of days. Warning letters will be sent to the students advising them of the consequences of nonattendance and urging them to contact their instructors immediately. Excessive absences are defined as follows:

**Regular Semester**

- Courses which meet once a week.....2 absences
- Courses that meet twice per week .....3 absences
- Courses that meet four times per week.....5 absences

**Summer Session**

- Courses that meet four times per week in a five week session .....3 absences
- Courses which meet two evenings per week in a 10 week session.....3 absences

Students enrolled in special programs or individualized instruction should contact their program director/instructor regarding specific attendance requirements for the program/course. Some of the selective-admission, health-science programs have specific criteria regarding attendance. Students are encouraged to refer to program policies in these matters.

Jury Duty/Military/Official School Function

Scheduled absences are those that occur due to college-related activities or as a result of summons to jury duty or military duty. Classes missed as a result of scheduled absences will not be counted as excessive absences if the instructor is notified and provided documentation prior to the absence(s). Make-up work for scheduled absences will be at the discretion of the instructor.

In all instances, documentation must be provided to the instructor within 24 hours of receipt. Documentation should come from an appropriate party on letterhead or other official stationery with a signature and contact information. Documentation should list the corresponding dates of the leave.

### Medical leave

For medical-related absences, documentation must include written notice from the treating medical professional documenting time needed off related to medical reasons and time student may resume classes. The medical reason does not need to be listed on the documentation; the documentation must include only that there is a medical reason, the amount of time the student needs to be absent, and the time the student should be able to return to classes. Students who elect to work at home while on excused leave must meet with their instructors to make arrangements to do so. Working on coursework while on medical leave is not a requirement but can be requested by students. If students request that they be allowed to work at home while on an excused leave, the instructor will make every reasonable effort to ensure that the student is able to do so.

For students who have a medical condition necessitating time off or accommodation:

- 1) They may work at home on assignments if they choose to if on medical leave approved by a medical professional
- 2) Receive appropriate accommodations related to coursework (i.e., excused from labs with potentially harmful chemicals, have a larger desk, etc.)
- 3) Resume their studies where they left off once they return to classes
- 4) Be allowed to make up any missed work related to medical leave
- 5) Receive incompletes on their transcripts until coursework is completed, according to the incomplete grade contract.
- 6) Be given a reasonable time frame in which to complete missed coursework

### **Academic Honesty Policy**

Students enrolled at South Arkansas Community College are expected at all times to uphold standards of integrity. Students are expected to perform honestly and to work in every way possible to eliminate academic dishonesty. Academic dishonesty includes cheating and plagiarism, which are defined as follows:

- Cheating is an attempt to deceive the instructor in his/her effort to evaluate fairly an academic exercise. Cheating includes copying another student's homework, class work, or required project (in whole or in part) and/or presenting another's work as the student's own. Cheating also includes giving, receiving, offering, and/or soliciting information on a quiz, test, or examination.
- Plagiarism is the copying of any published work such as books, magazines, audiovisual programs, electronic media, and films or copying the theme or manuscript of another student. It is plagiarism when one uses direct quotations without proper credit or when one uses the ideas of another without giving proper credit. When three or more consecutive words are borrowed, the borrowing should be recognized by the use of quotation marks and proper parenthetical and bibliographic notations.

If, upon investigation, the instructor determines that the student is guilty of cheating or plagiarism, the following penalties will apply:

- The student will receive a penalty of no less than a zero on the work in question.
- The instructor will submit a Student Academic Misconduct Form, written report of the incident, to the appropriate dean.
- The dean will submit form to Vice President for Learning to determine disciplinary action.
- The Vice President for Learning will determine whether further disciplinary action will be taken.
- All decisions may be appealed for review through the college's academic appeals procedure.

### **Equal Opportunity-Affirmative Action Statement**

South Arkansas Community College does not discriminate on the basis of age, race, color, creed, gender, religion, marital status, veteran's status, national origin, disability, or sexual orientation in making decisions regarding employment, student admission, or other functions, operations, or activities.

### **Library Services**

Library Homepage: <http://southark.libguides.com/homepage> Library Contact: LibraryStaff@southark.edu or 870.864.7115

### **Procedures to Accommodate Students with Disabilities:**

If you need reasonable accommodations because of a disability, please report this to the Vice President of Student Services with proper documentation. . VPSS Contact: 870.875.7262

### **The Early Alert System**

In an effort to ensure student retention and success, South Arkansas Community College employs an Early Alert System to identify and support at-risk students as soon as possible in a given semester. The intent of Early Alert is to provide this assistance while there is still time to address behaviors or issues that have the potential of preventing students from completing their courses and degree plans. Students referred through the Early Alert System will be required to work on a corrective action plan with their student advising coach and to include attendance accountability and mandatory academic tutoring either in the academic division or in the Testing and Learning Center (TLC).

Once the Student Advising Coach has met with the referred student, and again when the student has met the prescribed corrective actions, the coach will update the Early Alert System so that the instructor is kept informed of the progress in resolving issues.

#### **Behavioral Review Team**

At South Arkansas Community College (SouthArk), we are committed to proactive leadership in student wellbeing and campus safety. By focusing on prevention and early intervention with campus situations that involve any person experiencing distress or engaging in harmful or disruptive behaviors, the BRT will serve as the coordinating hub of existing resources to develop intervention and support strategies and offer case management. Students, faculty, staff, and campus guests are encouraged to report any person on campus who is a concern. BRT Contact: 870.875.7262  
BRT@southark.edu

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