

**LAST REVIEW:** 2010-2011    **NEXT REVIEW:** 2015-2016    **STATUS:** A**COURSE TITLE:** Survey of Musculoskeletal Deficits**COMMON COURSE NUMBER:** PHT 1310**CREDIT HOURS:** 2                      **CONTACT HOUR BREAKDOWN***(per 16 week term)***CLOCK HOURS:**                      **Lecture: 32**    **Lab:**  
*(Voc. Course ONLY)***PREREQUISITE(S):** BSC 1086                      **Clinic:**                      **Other:****COREQUISITE(S):** PHT 1300**PRE/COREQUISITE(S):****COURSE DESCRIPTION):**

Course introduces student to general pathological conditions with emphasis on those commonly seen in the field of physical therapy as they relate to the musculoskeletal systems. Descriptions of how musculoskeletal diseases are classified, diagnosed and treated, as well as the natural course/ prognosis of these diseases are presented. Implications of disease processes as well as contraindications, precautions and patient/ caregiver education related to physical therapy are discussed through case study analysis. The effects of aging upon disease and in general are considered.

**UNIT TITLES**

- 1.0 - Overview of Musculoskeletal System**
- 2.0 - Review of Tissue, Ligament, and Bone Healing**
- 3.0 - Review of Cartilage, Muscle, and Tendon Healing**
- 4.0 - Pathologies of the Head, Neck, and Face**
- 5.0 - Pathologies of the Spine and Thorax**
- 6.0 - Pathologies of the Shoulder Girdle**
- 7.0 - Pathologies of the Elbow and Forearm**
- 8.0 - Pathologies of the Wrist and Hand**
- 9.0 - Pathologies of the Pelvis and Hip**
- 10.0 - Pathologies of the Knee and Leg**
- 11.0 - Pathologies of the Foot and Ankle**

**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 (cumulative/comprehensive);**
3. **Assessment of reading and online assignments via submission of homework projects;**
4. **Participation in Discussion Forums on the e-learning site**
5. **Completion of Case Study Reviews, Grand Rounds or other projects (group or individual) as assigned**

**Common Course Number: PHT 1310**

**Unit 1 Overview of Musculoskeletal System**

**General Outcome:**

1.0 The student shall be able to provide an overview of the musculoskeletal system.

**Specific Measurable Learning Outcomes:**

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

- 1.1 Discuss the overall function of the musculoskeletal system.
- 1.2 Discuss the basic structures of the musculoskeletal system and their functions.
- 1.3 Discuss common diagnostic and treatment modalities/procedures related to the musculoskeletal system.
- 1.4 Understand changes that occur in the musculoskeletal system across the lifespan.
- 1.5 Discuss the three phases of tissue repair.
- 1.6 Define inflammation.
- 1.7 Discuss the five cardinal signs of inflammation.
- 1.8 Compare acute vs. chronic inflammation.
- 1.9 Discuss alternative therapies that are commonly used for the musculoskeletal system.
- 1.10 Distinguish between medical management including surgery and conservative management of conditions affecting the musculoskeletal system.

**Common Course Number: PHT 1310****Unit 2 Review of Tissue, Ligament and Bone Healing****General Outcome:**

- 2.0 The student shall be able to discuss considerations related to the healing of tissue, ligament, and bone.

**Specific Measurable Learning Outcomes:**

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

- 2.1 Discuss how local or systemic body temperature can be used for patient assessment.
- 2.2 Discuss how skin color changes can be used for patient assessment.
- 2.3 Define edema.
- 2.4 Discuss how the presence of edema can be used for patient assessment.
- 2.5 Discuss how the presence of pain can be used for patient assessment.
- 2.6 Discuss the composition of tissue, ligaments, and bone.
- 2.7 Discuss the effects of immobilization on ligaments and bone.
- 2.8 Discuss the effects of stress and exercise on ligaments and bone.
- 2.9 Discuss common injuries related to ligaments and bone.
- 2.10 Describe the mechanisms of healing tissue, ligaments, and bone.
- 2.11 Discuss classifications and types of fractures.
- 2.12 Discuss possible complications of bone healing.
- 2.13 Discuss types of fixation used with fractures.
- 2.14 Describe the medical interventions utilized to facilitate healing following a fracture.

**Common Course Number: PHT 1310**

**Unit 3 Review of Cartilage, Muscle and Tendon Healing**

**General Outcome:**

- 3.0 The student shall be able to discuss considerations related to the healing of cartilage, muscle, and tendon.

**Specific Measurable Learning Outcomes:**

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

- 3.1 Discuss the composition and function of articular cartilage, muscle, and tendon.
- 3.2 Identify common causes of injury to articular cartilage, muscles, and tendons.
- 3.3 Describe the mechanisms of healing cartilage, muscle, and tendon.
- 3.4 Discuss the effects of immobilization on cartilage, muscle, and tendon.
- 3.5 Discuss the effects of stress and exercise on cartilage, muscle, and tendon.

**Common Course Number: PHT 1310**

**Unit 4 Pathologies of the Head, Neck and Face**

**General Outcome:**

- 4.0 The student shall be able describe the specifics of musculoskeletal deficits affecting the head, neck, and face.

**Specific Measurable Learning Outcomes:**

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

- 4.1 Provide a general description and discuss the etiology, clinical presentation, diagnostics and treatment for pathologies related to the head, neck, and face, including but not limited to:

Sprains and strains  
Disk injuries  
Cervical Spondylosis  
Thoracic Outlet Syndrome  
Bell's Palsy  
Temporomandibular Joint Dysfunction  
Whiplash  
Cervical Radiculopathy  
Cervical Stenosis  
Torticollis

- 4.2 Correlate knowledge of musculoskeletal anatomy to pathologies of the head, neck, and face to discuss mechanism of injury, prevention, and functional deficits.
- 4.3 Detail specific precautions and special considerations for performing PT interventions for a patient/client with a disease affecting the head, neck, and face.

**Common Course Number: PHT 1310**

**Unit 5 Pathologies of the Spine and Thorax**

**General Outcome:**

- 5.0 The student shall be able describe the specifics of musculoskeletal deficits affecting the spine and thorax.

**Specific Measurable Learning Outcomes:**

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

- 5.1 Provide a general description and discuss the etiology, clinical presentation, diagnostics and treatment for pathologies related to the spine and thorax, including but not limited to:

Rib fracture  
Scoliosis  
Compression Fracture  
Lordosis  
Kyphosis  
Herniated Nucleus Pulposus  
Spinal Spondylosis  
Lumbar Stenosis  
Piriformis Syndrome  
Sciatica  
Osteoporosis  
Ankylosing Spondylitis  
Spondylolisthesis

- 5.2 Correlate knowledge of musculoskeletal anatomy to pathologies of the spine and thorax to discuss mechanism of injury, prevention, and functional deficits.
- 5.3 Detail specific precautions and special considerations for performing PT interventions for a patient/client with a disease affecting the spine and thorax.

**Common Course Number: PHT 1310**

**Unit 6 Pathologies of the Shoulder Girdle**

**General Outcome:**

6.0 The student shall be able describe the specifics of musculoskeletal deficits affecting the shoulder.

**Specific Measurable Learning Outcomes:**

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

6.1 Provide a general description and discuss the etiology, clinical presentation, diagnostics and treatment for pathologies related to the shoulder girdle, including but not limited to:

Shoulder Impingement  
Bicipital Tendonitis  
Subacromial Bursitis  
Acromioclavicular Joint Separation  
SLAP Tear/Lesion  
Rotator Cuff Injury  
Dislocation and Subluxation  
Bankart Lesion  
Hill-Sachs Lesion  
Adhesive Capsulitis  
Fractures

6.2 Correlate knowledge of musculoskeletal anatomy to pathologies of the shoulder to discuss mechanism of injury, prevention, and functional deficits.

6.3 Detail specific precautions and special considerations for performing PT interventions for a patient/client with a disease affecting the shoulder.

**Common Course Number: PHT 1310**

**Unit 7 Pathologies of the Elbow and Forearm**

**General Outcome:**

7.0 The student shall be able describe the specifics of musculoskeletal deficits affecting the elbow and forearm.

**Specific Measurable Learning Outcomes:**

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

7.1 Provide a general description and discuss the etiology, clinical presentation, diagnostics and treatment for pathologies related to the elbow and forearm, including but not limited to:

Medial and Lateral Epicondylitis  
Cubital Tunnel Syndrome  
Medial Valgus Stress Overload  
Fractures  
Bursitis

7.2 Correlate knowledge of musculoskeletal anatomy to pathologies of the elbow and forearm to discuss mechanism of injury, prevention, and functional deficits.

7.3 Detail specific precautions and special considerations for performing PT interventions for a patient/client with a disease affecting the elbow and forearm.

**Common Course Number: PHT 1310**

**Unit 8 Pathologies of the Wrist and Hand**

**General Outcome:**

8.0 The student shall be able describe the specifics of musculoskeletal deficits affecting the wrist and hand.

**Specific Measurable Learning Outcomes:**

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

8.1 Provide a general description and discuss the etiology, clinical presentation, diagnostics and treatment for pathologies related to the wrist and hand, including but not limited to:

Carpal Tunnel Syndrome  
DeQuervain's Tenosynovitis  
Ligamentous Injuries  
Fractures  
Dupuytren's Contracture  
Finger Deformities  
Extensor/Flexor Tendon Injuries  
Reflex Sympathetic Dystrophy (RSD)  
Thumb Arthritis  
Ganglion Cysts  
Trigger Finger

8.2 Correlate knowledge of musculoskeletal anatomy to pathologies of the wrist and hand to discuss mechanism of injury, prevention, and functional deficits.

8.3 Detail specific precautions and special considerations for performing PT interventions for a patient/client with a disease affecting the wrist and hand.

**Common Course Number: PHT 1310**

**Unit 9 Pathologies of the Pelvis and Hip**

**General Outcome:**

9.0 The student shall be able describe the specifics of musculoskeletal deficits affecting the pelvis and hip.

**Specific Measurable Learning Outcomes:**

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

9.1 Provide a general description and discuss the etiology, clinical presentation, diagnostics and treatment for pathologies related to the pelvis and hip, including but not limited to:

Fractures  
Legg-Calve-Perthes Disease  
Bursitis  
Strains  
Osteoarthritis  
Trochanteric Bursitis  
Iliotibial Band Syndrome  
Hip Dysplasia

9.2 Correlate knowledge of musculoskeletal anatomy to pathologies of the pelvis and hip to discuss mechanism of injury, prevention, and functional deficits.

9.3 Detail specific precautions and special considerations for performing PT interventions for a patient/client with a disease affecting the pelvis and hip.

**Common Course Number: PHT 1310**

**Unit 10 Pathologies of the Knee and Leg**

**General Outcome:**

10.0 The student shall be able describe the specifics of musculoskeletal deficits affecting the knee and leg.

**Specific Measurable Learning Outcomes:**

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

10.1 Provide a general description and discuss the etiology, clinical presentation, diagnostics and treatment for pathologies related to the knee and leg, including but not limited to:

Fractures  
Ligamentous Injuries  
Meniscal Injuries  
Patellar Tracking Disorders  
Osteoarthritis  
Osgood Schlatter Disease  
Bursitis  
Patellar tendonitis  
Chondromalacia  
Shin Splints  
Compartment Syndrome

10.2 Correlate knowledge of musculoskeletal anatomy to pathologies of the knee and leg to discuss mechanism of injury, prevention, and functional deficits.

10.3 Detail specific precautions and special considerations for performing PT interventions for a patient/client with a disease affecting the knee and leg.

**Common Course Number: PHT 1310**

**Unit 11 Pathologies of the Foot and Ankle**

**General Outcome:**

11.0 The student shall be able describe the specifics of musculoskeletal deficits affecting the foot and ankle.

**Specific Measurable Learning Outcomes:**

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

11.1 Provide a general description and discuss the etiology, clinical presentation, diagnostics and treatment for pathologies related to the foot and ankle, including but not limited to:

Fractures  
Ligamentous Injuries  
Tendon Injuries  
Plantar Fasciitis  
Arch Deformities  
Morton's Neuroma  
Charcot Joints

11.2 Correlate knowledge of musculoskeletal anatomy to pathologies of the foot and ankle to discuss mechanism of injury, prevention, and functional deficits.

11.3 Detail specific precautions and special considerations for performing PT interventions for a patient/client with a disease affecting the foot and ankle.