



# BAKER COLLEGE

## STUDENT LEARNING OUTCOMES

PTA2750 Physical Agents

3 Semester Hours

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### Student Learning Outcomes and Enabling Objectives

At the completion of this course, the student will be able to perform the following outcomes with a minimum competency of 77% (C+) or better on all coursework:

1. Describe the principles underlying physical agents including physics concepts, pain theories, tissue injury and response to healing.
  - a. Explain energy transfer, conduction/convection, conversion, evaporation, and radiation
  - b. Identify principles of electrical current and wave forms used in therapeutic modalities
2. Perform appropriately selected application of physical agents (cryotherapy, thermotherapy, hydrotherapy, and ultrasound) to various patient conditions within the plan of care established by the physical therapist. 7D23, 7D23c, 7D23g
  - a. Model the preparation of patient including positioning, draping, skin integrity and pain assessment before and after applying physical agents. 7D19
  - b. Explain the indications, contraindications, dosage, parameters and desired therapeutic effects of various modes of physical agents. 7D23g
  - c. Demonstrate safe and appropriate application, patient handling and patient education for commonly used physical agents.
  - d. Apply the various forms of therapeutic ultrasound for pain reduction, deep heat, reduction of inflammation, and tissue healing. 7D23c
  - e. Explain other physical agents used in the clinical setting including paraffin baths, hydrotherapy, light therapies, and fluidotherapy.
3. Perform appropriately selected application of mechanical traction to various patient conditions within the plan of care established by the physical therapist. 7D23g
  - a. Apply the various types of cervical and lumbar mechanical traction to include intermittent, positional, and sustained traction based on patient condition and desired effects.
  - b. Model the preparation of patient including positioning, draping, skin integrity and pain assessment before and after applying mechanical modalities. 7D19
  - c. Explain the indications, contraindications, and desired therapeutic effects of various modes of mechanical modalities.
  - d. Demonstrate safe and appropriate application, patient handling and patient education for commonly used mechanical modalities. 7D23g
4. Perform appropriately selected application of electrotherapeutic modalities (biofeedback, iontophoresis, and electrical stimulation) to various patient conditions within the plan of care established by the physical therapist. 7D23c.
  - a. Demonstrate safe and appropriate application of biofeedback.
  - b. Demonstrate safe and appropriate application of iontophoresis.

- c. Demonstrate safe and appropriate application of electrical stimulation.
  5. Model the preparation of patient including positioning, draping, skin integrity and pain assessment before and after applying electrotherapeutic modalities. 7D23g, 7D19
    - a. Explain the indications, contraindications, and desired therapeutic effects of various modes of electrotherapeutic modalities.
    - b. Demonstrate safe and appropriate application, patient handling and patient education for commonly used electrotherapeutic modalities. 7D23c
    - c. Apply the various types of electrical stimulation for muscle strengthening, muscle reeducation, tissue repair, pain management, and edema management. Explain other less commonly used electrotherapeutic modalities such as microcurrent, galvanic electrical stimulation, high volt current, point stimulation, and functional electrical stimulation. 7D7, 7D17
  6. Select relevant information for documentation. 7D25
    - a. Demonstrate the ability effectively document the patient response to the modality treatment.
    - b. Demonstrate the ability document a complete treatment session that is accurate concise, timely, legible, grammatically and technically correct.
  7. Develop a treatment session based on the plan of care established by the physical therapist and patient condition. 7D9, 7D17, 7D18.
    - a. Demonstrate appropriate selection and sequencing of therapeutic interventions based on case studies.
    - b. Apply therapeutic modalities based on case studies.
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### **Big Ideas**

- Review physics concepts, surface anatomy, and patient handling
  - Pain assessment and pain theories
  - Heat and cold
  - Ultrasound
  - Electrical stimulation
  - Mechanical Traction
  - Other modalities
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### **Required Elements**

RE 1. Lab Competency Rubrics.

RE 2. The final lab practical exam scenario and rubric

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These SLOs are not approved for experiential credit.

**Effective: Fall 2018**