College of Health and Human Performance
Department of Exercise Sciences

ExSc 625---ADVANCED TOPICS OF PHYSICAL MEDICINE & REHABILITATION

TOPIC: EXTREMITY JOINT MOBILIZATION AND MANUAL THERAPY

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Overview: This class is intended for the graduate or upper level athletic training or physical therapy student. The goal is to supplement the student's education with advanced techniques not usually taught at the undergraduate level. *You will be given an opportunity to learn these techniques on your classmates, and then use them on actual patients*. Though not required competencies for entry-level practice, learning these advanced techniques will provide the student with added skills and knowledge that should help them provide better health care services. The course is divided into two modules, each lasting from 6-8 weeks.

The **first module** will deal with ***joint mobilization*** and ***traction in rehabilitation.*** The learner will be provided with theory and rationale for this technique, as well as ample hands-on practice of joint mobilization/traction for several articulations including the shoulder, elbow, wrist, hand, hip, knee and ankle. This unit will conclude with an exam.

Outline:

A. Introduction and history of joint mobilization
B. Physiologic and Accessory movements
C. Concave-Convex rule
D. Passive angular stretching versus joint glide stretching
E. Effects of immobilization versus joint movement
F. Indications for joint mobilization
G. Contraindications for joint mobilization.
H. Maitland and Kaltenborn techniques compared
I. Procedures for joint mobilization
J. Lower extremity joint mobilization (labs)
K. Upper extremity joint mobilization (labs)

The **second module** will deal with ***positional release therapy; strain-counter strain, and muscle energy techniques.*** The learner will be provided with theory and rationale for these techniques, as well as ample hands-on practice of PRT and SCS for several injuries and conditions. This unit will conclude with an exam.

Outline:

A. Introduction and history of positional release therapy

B. Theory and Physiology of positional release therapy
C. Indications for positional release therapy
D. Contraindications for positional release therapy.
E. Procedures for positional release therapy
F. Lower extremity & lumbar positional release therapy (labs)
G. Upper extremity & cervical positional release therapy (labs)

Texts: Manual Mobilization of the Joints: Vol. I The Extremities. Kaltenborn, FM. (6th ed) Olaf Norlis Bokhandel publishing, Oslo, Norway, 2002.

Positional Release Therapy: Assessment & Treatment of Musculoskeletal Dysfunction. Ambrogio, KJ, Roth, GB. Mosby; St. Louis, 1997.

Readings:

Seiger C, **Draper DO**. Use of Pulsed Shortwave Diathermy and Joint Mobilizations to Increase Ankle Range of Motion in the Presence of Surgical Implanted Metal: A Case Series. *Journal of Orthopaedic and Sports Physical Therapy.* 2006; 36(9) 669-677.

Oates D, **Draper DO**. Retoring wrist range of motion using ultrasound and mobilization: A case study. *Athletic Therapy Today*. 2006; 11(1), 57-59.

Brucker JB, Knight KL, Rubley MD, **Draper DO**. Effect of an 18-day stretching regimen, with or without pulsed shortwave diathermy on ankle dorsiflexion and 3 weeks. *J Athl Train*. 2005:40(4) 104-108.

Draper DO. Inversion table traction as a therapeutic modality, Part 2. *Athletic Therapy Today*. 2005; 10(4), 40-42.

Draper DO. Inversion table traction as a therapeutic modality, Part 1: Oh my aching back. *Athletic Therapy Today*. 2005; 10(3), 42-43.

Draper DO, Castel JC, Castel D. Low-Watt Pulsed Shortwave Diathermy and Metal-Plate Fixation of the Elbow. *Athletic Therapy Today*. 2004; September: 27-31.

Draper DO, Castro J, Schulthies SS, Feland JB, Eggett D. Pulsed short-wave diathermy and low-load, long-duration stretching increase hamstring flexibility more than low-load, long-duration stretching alone. *Journal of Orthopaedic and Sports Physical Therapy.* 2004;34(1) 13-19.

Draper DO, Miner L, Knight KL, Ricard MD. The carry-over effects of diathermy and stretching in developing hamstring flexibility. *J Athl Train*. 2002;37(1):37-42.

Peres S, **Draper DO,** Knight KL, Ricard MD: Pulsed shortwave diathermy and prolonged stretch increases dorsiflexion range of motion more than prolonged stretch alone. *J Athl Train*. 2002;37(1):43-50.

Speicher T, **Draper DO**. Top-10 Positional – Release Therapy Techniques to Break the Chain of Pain, Part 2. *Athletic Therapy Today*. 2006; 11(6) 56-58.

Speicher T, **Draper DO**. Top-10 Positional – Release Therapy Techniques to Break the Chain of Pain, Part 1. *Athletic Therapy Today*. 2006; 11(5) 69-71.