

The Ola Grimsby Institute - 12 Month Doctorate of Manual Therapy Program Syllabus

Course Code	Objectives	Lecture/Lab Group Activity	Quiz	Handouts Homework Readings
Intro to Residency and Review of Clinical Evidence DMT 600	Orientation about the program catalog, curriculum, research and enrollment agreements. The OGI policies and procedures for attendance, exams, and homework, etc. The purpose of the Ola Grimsby Institute.	Mandatory course presented in class first day. Home Study option Video: Research		Curriculum catalogue, research packet, curriculum content CD, etc. The students will be given information about the class requirements and exams.
History of Manual Therapy DMT 601	The history of manual therapy in Norway, the USA, and internationally. (cog. 1) The scope, and purpose of manual therapy. (cog. 1)	Mandatory course presented in class first day. Home Study option Video: History of MT		Presented on OGI CD-ROM and discussed in class with the instructor.
Clinical Problem Solving I DMT 602	Intro to the OGI Pyramid with examples from the spine and the extremities. The students will be taken through case studies utilizing the exhaustive approach (horizontally through the pyramid) to an evaluation (cog. 2), progressing towards a more intuitive, predictive (vertically) approach. (cog. 2)	A review of the APTAs guidelines to practice and define the varying styles to clinical problem solving. The students will be taken through the Diagnostic Pyramid in a group setting to review case studies and come up with diagnoses and treatment plans		Presented on OGI CD-ROM and discussed in class with the instructor.

<p>Biomechanics DMT 603</p>	<p>Joint motion: joint play, rolling, angulation, translation, gliding, distraction, and compression. (cog. 1-2) Joint surfaces: ovoid, sellar, concave, convex, plane and spheroid. (cog. 1-2) Joint classification systems. (cog. 1-2) Joint positions: position of reference, resting position, and closed-packed position. (cog. 1-2) Forces that affect cartilage, collagen, and bone formation, degeneration, and regeneration. (cog. 1-2) The mechanical properties of bone, cartilage, and collagen. (cog. 1-2) The energy storage in bone, cartilage, and collagen. (cog. 1-2) How loads/forces are distributed/resisted by the musculoskeletal structures during function. (cog. 1-2) Degrees of freedom. (cog. 1-2) Osteokinematic and arthrokinematic movements of bones and joints with concave/convex diagrams. (cog. 1-2) The Norwegian and Australian systems of grading joint motion. (cog. 1-2)</p>	<p>The curriculum will discuss the biomechanics definitions and concepts. This is equivalent to the MT-I courses - here it is presented after Residency orientation.</p> <p>Video: Biomechanics</p>			<p>Required readings: Kaltenborn Biomechanics section Gray's Anatomy (unabridged British ed.) OGI Residency Course Notes: Biomechanics Optional: Brunnstrom Frankel and Nordin</p>
<p>Histology DMT 604</p>	<p>The optimal stimuli for regeneration of biological tissues. (cog. 2-3) The influence of weight bearing, gravity, fat, calcium, Vitamin D, and estrogen on bone density. (cog. 2-3) The permeability, nutrition and degeneration of cartilage. (cog. 1-2) The affect of increased and decreased viscosity of hyaluronic acid on cartilage function and regeneration. (cog. 1-2) The biochemical sources and functions of lubrication/ nutrition of biomechanical tissues. (cog. 1-2)</p>	<p>The curriculum will discuss the theory and clinical applications of histology with emphasis on the optimal stimuli for regeneration of neuro-musculoskeletal tissues.</p> <p>Video: Histology Collagen I/II Cartilage Bone Disc</p>			<p>Grays Anatomy: Cartilage: pp. 283-291, Bone ossification: pp. 291-199.</p> <p>Section on histology: OGI Residency Course Notes: Histology</p>

<p>Neurophysiology DMT 605</p>	<p>The CNS and PNS, joint neurology, and the anatomical basis for pain, nerve conduction and transmission. (cog. 1-2) How the PNS and CNS relate to posture and equilibrium. (cog. 2-3) The structures within the neural canal and intervertebral foramen. (cog. 1-2) How pain can facilitate muscle guarding. (cog. 3) The reflex arc. (cog. 1-2) The neurophysiology of pain: a) The nature of vertebral/extremity joint and receptors. (cog. 1-2) b) The theory of referred pain. (cog. 1-2) c) Emotional responses to pain. (cog. 1-3) The rationale for clinical inhibition of pain and muscle guarding using neurological-mechanical mechanisms. (cog. 2-3) How to apply the principles of neurophysiology to the treatment of pain and muscle guarding. (cog. 3 & perform. 4) The influence of exercise and repetitions for motor learning. (cog. 2-3)</p>	<p>The curriculum will discuss pain, receptors, muscle facilitation, tonic reflexogenic effects, guarding, healing, and how pain is influenced by dorsal horn inhibition, reticular inhibition and opiates.</p> <p>Video: Neurophysiology</p>	<p>Quiz 2 Histology DMT 604</p>		<p>Section on neurophysiology: OGI Residency Course Notes: Neurophysiology Korr: The neural basis of the osteopathic lesion (1947). The Collected Paper of Irvin M Korr</p>
<p>Pathophysiology of Trauma DMT 606</p>	<p>The stages of inflammation and wound healing. (cog. 1-2) Pathogenesis and clinical features of degenerative or inflammatory arthropathies and viral or metabolic disorders affecting connective tissues including bone and fascia. (cog. 1-3) Changes that occur in the musculoskeletal system with trauma, overuse, immobilization, degenerative conditions, and aging. (cog. 1-3) The forces imparted to the structures during normal and abnormal and "loaded" activity apply knowledge of biochemical reactions in trauma, overuse, immobilization, tissue degeneration, repair, regeneration and aging to patient examination and treatment planning. (cog. 1-3)</p>	<p>The curriculum will discuss the pathophysiology of trauma including wound healing, the effects of applying heat and cold.</p> <p>Video:Traumatology</p>			<p>Crawford-Adams. Cyriax. Textbook of Orthopedic Medicine: Cailliet. Soft Tissue Pain and Disability: OGI Pathophysiology of Trauma</p>

<p>General Evaluation DMT 607</p>	<p>The sequence of evaluating a patient: history taking, postural evaluation, active/passive/resisted movements, neurological tests, palpation, special tests, joint mobility tests, functional tests. (cog. 1-3) A logical rationale for performing each component of the evaluation. (cog. 2-3) How to analyze and integrate anatomy, biomechanics, pathology, and neurology into patient evaluation and treatment. (cog. 4) The history of patient evaluation including concepts from Cyriax and Maitland. (cog. 1-2) How pain, tissue pathology, and dysfunction influence the patient evaluation and analysis. (cog. 3)</p>	<p>The curriculum will discuss concepts of patient evaluation with emphasis on the systematic approach by Cyriax. Demonstrate the concepts of patient evaluation.</p>	<p>Quiz 3 Neuro-physiology and pathology of trauma. DPT 605 DPT 606</p>		<p>Cyriax: OM Magee Kaltenborn: Extremity Kaltenborn: Spine: OGI Residency Course Notes: General Eval Optional: Kendall Hoppenfeld: Maitland: Vertebral Manipulation:</p>
<p>Hand and Wrist Anatomy DMT 608</p>	<p>The hand and wrist's articular surfaces. (cog. 1) The O.I.I.A. of the hand and wrist muscles. (cog. 1) The pathway and supply of the hand and wrist nerves. (cog. 1) The primary hand and wrist ligaments, capsules, and vascular supply. (cog. 1-2) The anatomical and clinical relationship of the spine to the hand and wrist. (cog. 3-4) The spatial relationship of hand/wrist muscles, nerves, fascia and bone to surface anatomy. (cog. 2) How to integrate hand and wrist anatomy into patient evaluation and treatment. (cog. 3) The use of anatomy to identify a hand/wrist physical impairment. (cog. 3)</p>	<p>The curriculum will discuss hand and wrist anatomy. Show hand and wrist anatomy slides.</p>	<p>Quiz 4 Clinical problem solving and general evaluation. DPT 602 DPT 607</p>		<p>Required: OGI Residency Course Notes: Hand / Wrist Kapandji: Vol I Kaltenborn: Extremity Joints Optional: Brunnstrom Nordin Gray's Anatomy</p>

<p>Hand and Wrist Biomechanics DMT 608</p>	<p>Hand and wrist ROM, planes of motion, and degrees of freedom. (cog. 1) Hand and wrist positions of reference, resting position, & close-packed position. (cog. 1) Hand and wrist arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the hand and wrist joint surfaces and related joint motions. (cog. 1 & 3) The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the hand and wrist. (cog. 3) Primary and secondary actions of hand and wrist muscles. (cog. 1 & 3) How to integrate hand and wrist mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe hand and wrist treatment hand and wrist biomechanics.</p>			<p>Reading is required before class: OGI Residency Course Notes: Hand / Wrist Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed. Optional: Grays Anatomy</p>
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<p>Hand and Wrist Pathology DMT 608</p>	<p>The most common pathologies of the hand and wrist including "carpal tunnel syndrome", etc. (cog. 1-3) The correlation of patients' signs and symptoms to hand and wrist anatomy and biomechanics. (cog. 3) The results of abnormal hand and wrist biomechanics. (cog. 3-4) Changes that occur in the hand and wrist with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate hand and wrist pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe hand and wrist treatment hand and wrist pathology. Show slides on hand and wrist pathology.</p>			<p>Required: OGI Residency Course Notes: Hand / Wrist OGI Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability</p>
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<p>Hand and Wrist Evaluation DMT 608</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The hand and wrist evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for wrist and hand patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a hand and wrist patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient reassessment to determine effectiveness of treatment, make changes in a diagnosis, prognosis, or treatment. (cog. 4-6) Patient evaluation procedures: history, interview, active, passive, resisted, palpation, neurology, special tests, & segmental mobility tests of the hand and wrist. (perform. 4) Taking precautions to ensure the safety and well-being of the patient and therapist throughout the examination and treatment process. (affective)</p>	<p>The curriculum will Describe hand and wrist treatment hand and wrist evaluation procedures.</p> <p>Video: Hand and Wrist Flow of Procedures</p>			<p>Required: OGI Residency Course Notes: Hand / Wrist - evaluation OGI Technique Manual A muscle testing book Magee Kaltenborn: Extremities Cyriax: Textbook of Ortho Optional: Cyriax: Illustrated Manual OGI Special Test Manual</p>
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<p>Hand and Wrist Treatment DMT 608</p>	<p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with hand and wrist pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4)</p> <p>(Performance 4): 5 hand and wrist soft tissue treatment techniques. Hand and wrist articulation. Hand and wrist taping techniques. Hand and wrist exercises.</p>	<p>The curriculum will describe hand and wrist treatment</p>			<p>Required: OGI Residency Course Notes: Hand / Wrist Kaltenborn: Extremities Evjenth: Stretching Cyriax: Textbook of OM. OGI Technique Manual</p> <p>Optional Cyriax: Illustrated Manual</p>
<p>Elbow Anatomy DMT 608</p>	<p>The elbow's articular surfaces. (cog. 1) The O.I.I.A. of the elbow muscles. (cog. 1) The pathway and supply of the elbow nerves. (cog. 1) The primary elbow ligaments, capsules, and vascular supply. (cog. 1 & 2) The anatomical and clinical relationship of the spine to the elbow. (cog. 3 & 4) The spatial relationship of elbow muscles, nerves, fascia and bone to surface anatomy. (cog. 2) How to integrate elbow anatomy into patient evaluation and treatment. (cog. 3) The use of anatomy to identify an elbow physical impairment. (cog. 3)</p>	<p>The curriculum will describe elbow anatomy. Show elbow anatomy slides.</p>	<p>Quiz 5 Hand/Wrist DPT 608</p>		<p>Reading is required before class: OGI Residency Course Notes: Elbow Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed. Optional: Grays Anatomy</p>

<p>Elbow Biomechanics DMT 608</p>	<p>Elbow ROM, planes of motion, and degrees of freedom. (cog. 1) Elbow positions of reference, resting position, & close-packed position. (cog. 1) Elbow arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the elbow joint surfaces and related joint motions. (cog. 1 & 3) The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the elbow. (cog. 3) Primary and secondary actions of elbow muscles. (cog. 1 & 3) How to integrate elbow mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe elbow biomechanics.</p>			<p>Required: OGI Residency Course Notes: Elbow Kapandji: Vol I Kaltenborn: Extremity Joints</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
<p>Elbow Evaluation DMT 608</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The elbow evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for elbow patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a elbow patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient reassessment to determine effectiveness of treatment, make changes in a diagnosis, prognosis, or treatment. (cog. 4-6) Patient evaluation procedures: history, interview, active, passive, resisted, palpation, neurology, special tests, & segmental mobility tests of the elbow. (perform. 4) Taking precautions to ensure the safety and well-being of the patient and therapist throughout the examination and treatment process. (affective)</p>	<p>The curriculum will describe the evaluation procedures of the elbow and forearm.</p> <p>Video: Elbow flow of procedures</p>			<p>Required: OGI Residency Course Notes: Elbow A muscle testing book Magee Kaltenborn: Extremities Cyriax: Textbook of OM OGI Technique Manual</p> <p>Optional: Cyriax: Illustrated Manual OGI Special Test Manual</p>

<p>Elbow Treatment DMT 608</p>	<p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with elbow pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4)</p> <p>(Performance 4): 5 elbow soft tissue treatment techniques. Elbow articulation. Elbow taping techniques. Elbow exercises.</p>	<p>The curriculum will describe treatment procedures of the elbow and forearm.</p>			<p>Required: OGI Residency Course Notes: Elbow Kaltenborn: Extremities Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual</p> <p>Optional Cyriax: Illustrated Manual</p>
<p>Shoulder Anatomy DMT 608</p>	<p>The shoulder's articular surfaces. (cog. 1) The O.I.I.A. of the shoulder muscles. (cog. 1) The pathway and supply of the shoulder nerves. (cog. 1) The primary shoulder ligaments, capsules, and vascular supply. (cog. 1 & 2) The anatomical and clinical relationship of the spine to the shoulder. (cog. 3 & 4) The spatial relationship of shoulder muscles, nerves, fascia and bone to surface anatomy. (cog. 2) How to integrate shoulder anatomy into patient evaluation and treatment. (cog. 3) The use of anatomy to identify a shoulder physical impairment. (cog. 3)</p>	<p>The curriculum will describe anatomy of the shoulder.</p>	<p>Quiz 6 Elbow DPT 608</p>		<p>Reading is required before class: OGI Residency Course Notes: Shoulder</p> <p>Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed.</p> <p>Optional: Grays Anatomy</p>

<p>Shoulder Biomechanics DMT 608</p>	<p>Shoulder ROM, planes of motion, and degrees of freedom. (cog. 1) Shoulder positions of reference, resting position, & close-packed position. (cog. 1) Shoulder arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the shoulder joint surfaces and related joint motions. (cog. 1 & 3) The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the shoulder. (cog. 3) Primary and secondary actions of shoulder muscles. (cog. 1 & 3) How to integrate shoulder mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe biomechanics of the shoulder.</p>			<p>Required: OGI Residency Course Notes: Shoulder Kapandji: Vol I Kaltenborn: Extremity Joints</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
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<p>Shoulder Pathology DMT 608</p>	<p>The most common pathologies of the shoulder. (cog. 1-3) The correlation of patients' signs and symptoms to shoulder anatomy and biomechanics. (cog. 3) The results of abnormal shoulder biomechanics. (cog. 3-4) Changes that occur in the shoulder with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate shoulder pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will present various shoulder pathologies</p>			<p>Required: OGI Residency Course Notes: Shoulder Kapandji: Vol I Kaltenborn: Extremity Joints</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
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<p>Shoulder Evaluation DMT 608</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The shoulder evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for shoulder patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a shoulder patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient reassessment to determine effectiveness of treatment, make changes in a diagnosis, prognosis, or treatment. (cog. 4-6) Patient evaluation procedures: history, interview, active, passive, resisted, palpation, neurology, special tests, & segmental mobility tests of the shoulder. (perform. 4) Taking precautions to ensure the safety and well-being of the patient and therapist throughout the examination and treatment process. (affective)</p>	<p>The curriculum will describe evaluation of the shoulder.</p> <p>Video: Shoulder flow of procedures</p>			<p>Required: OGI Residency Course Notes: Shoulder A muscle testing book Magee Kaltenborn: Extremities Cyriax: Textbook of OM OGI Technique Manual Optional: Cyriax: Illustrated Manual OGI Special Test Manual</p>
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<p>Shoulder Treatment DMT 608</p>	<p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with shoulder pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4) (Performance 4): 5 shoulder soft tissue treatment techniques. Shoulder articulation. Shoulder taping techniques. Shoulder exercises.</p>	<p>The curriculum will describe and illustrate the treatment procedures of the shoulder.</p>			<p>Required: OGI Residency Course Notes: Shoulder Kaltenborn: Extremities Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual</p> <p>Optional Cyriax: Illustrated Manual OGI Special Test Manual</p>
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<p>S.T.E.P. Exercise Physiology DMT 608A</p>	<p>The role of exercises in physical therapy. (cog. 3) Functional qualities (strength endurance, mobility, stability etc.) influenced by exercise. (cog. 2) Equipment and techniques used to localize an exercise to a specific joint or anatomical region. (perf. 4 cog. 4 & 5) Dosing exercise with: repetitions, resistance, speed, range of motion, sets, breaks, and frequency of exercise. (cog. 3, 4, 5) The effect of stress (total daily activities) exceeding 30% of daily energy capacity. (cog. 2) The principles of overload and its relationship to protein synthesis. (cog. 3) Muscle fiber anatomy, biomechanics, metabolism, and function and response to exercise. (cog. 2 & 3) Relationship of %RM and reps (cog. 2) Relationship of velocity and</p>	<p>The practical application will be presented in the STEP course.</p> <p>Video: STEP</p>			<p>Required: OGI Scientific Therapeutic Exercise Progression (STEP) Chapter</p> <p>Recommended: Medical Exercise Therapy. Faugli, HP. Laerergruppen for Medisinski, 1996. Training Therapy. Gustafson R. Thieme Inc., NY, 1985. Grimsby O. Scientific Therapeutic Exercise Progressions. J Man Manip Ther 2(3):94, 1994.</p>
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	<p>Percentage of RM isometric work & duration of hold. (cog. 2)</p> <p>The influence of velocity on conc. vs. eccentric work. (cog. 2)</p> <p>Length/tension in muscles during conc. vs. eccentric. (cog. 2)</p> <p>Stretching and absorption of elastic energy. (cog. 2)</p> <p>Definition and application of fixation of strength. (cog. 1-3)</p> <p>Exercises that influence: muscular, vascular, articular, collagenous, and neuro-muscular tissues or structures. (cog. 3)</p> <p>Starting position with variable degrees of resistance through range of motion. (cog. 3)</p> <p>An individual choice of resistance and repetitions, and speed for concentric and eccentric work in male and female patients. (cog 3 & 4)</p> <p>Tissue and region specific dosage for mobilizing and stabilizing exercises. (cog. 3 & 4)</p> <p>Progression of exercise with normal mobility and stability around physiological axis throughout ROM. (cog. 3 &4)</p>				
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<p>S.T.E.P. cont... DMT 609A</p>	<p>How to use exercises to facilitate strength, endurance, mobility, and stability etc. (cog. 3 & 5)</p> <p>How equipment and techniques are used to localize an exercise to a specific joint or anatomical region. (perform. 4) (cog. 4 & 5)</p> <p>How to dose exercise with repetitions, resistance, speed, range of motion, sets, breaks, and frequency of exercise. (cog. 3, 4, 5)</p> <p>The influence of velocity on concentric and eccentric work. (cog. 2)</p> <p>The effect of a muscle's length/tension on concentric and eccentric exercise. (cog. 2)</p> <p>Exercises that optimally influence muscular, vascular, articular, collagenous, and neurologic tissues or structures. (cog. 3)</p>	<p>Continued...</p>			<p>Continued...</p>
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	<p>The use of postures and positions for: 1) dosing exercise, 2) adapting to the needs of each patient, and 3) progressing the patient. (cog. 4-5) (perform. 4-5)</p> <p>Differences between males and females: resistance /repetitions, and speed for concentric and eccentric work . (cog 2)</p> <p>Optimal uses of and sequence of progression concentric and eccentric exercise. (cog. 3 & 5))</p> <p>Dosage differences of the cervical, thoracic, and lumbar spine for mobilizing and stabilizing exercises. (cog. 3 & 4)</p> <p>Designing an individualized exercise program for a given patient.</p> <p>Integrating STEP concepts by designing a progression of exercise to achieve normal mobility and stability around physiological axis throughout ROM. (cog. 3 & 4)</p>				
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<p>Foot and Ankle Anatomy DMT 610</p>	<p>The foot and ankle's articular surfaces. (cog. 1)The O.I.I.A. of the foot and ankle muscles. (cog. 1) The pathway and supply of the foot and ankle nerves. (cog. 1)</p> <p>The primary foot and ankle ligaments, capsules, and vascular supply. (cog. 1 & 2)</p> <p>The anatomical and clinical relationship of the spine to the foot and ankle. (cog. 3 & 4)</p> <p>The spatial relationship of foot/ankle muscles, nerves, fascia and bone to surface anatomy. (cog. 2)</p> <p>How to integrate foot and ankle anatomy into patient evaluation and treatment. (cog. 3)</p> <p>The use of anatomy to identify a foot/ankle physical impairment. (cog. 3)</p>	<p>The curriculum will describe foot and ankle anatomy. Show foot and ankle anatomy slides.</p>			<p>Reading is required before class: OGI Residency Course Notes: Foot and Ankle Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed.</p> <p>Optional: Grays Anatomy</p>
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<p>Foot and Ankle Biomechanics DMT 610</p>	<p>Foot and ankle ROM, planes of motion, and degrees of freedom. (cog. 1) Foot and ankle positions of reference, resting position, & close-packed position. (cog. 1) Foot and ankle arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the foot and ankle joint surfaces and related joint motions. (cog. 1 & 3) The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the foot and ankle. (cog. 3) Primary and secondary actions of foot and ankle muscles. (cog. 1 & 3) How to integrate foot and ankle mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe foot and ankle biomechanics.</p>			<p>Required: OGI Residency Course Notes: Foot and Ankle Kapandji: Vol I I Kaltenborn: Extremity Joints</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
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<p>Foot and Ankle Pathology DMT 610</p>	<p>The most common pathologies of the foot and ankle. (cog. 1-3) The correlation of patients' signs and symptoms to foot and ankle anatomy and biomechanics. (cog. 3) The results of abnormal foot and ankle biomechanics. (cog. 3-4) Changes that occur in the foot and ankle with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate foot and ankle pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe foot and ankle pathology. Show slides on foot and ankle pathology.</p>			<p>Required: OGI Residency Course Notes: Foot and Ankle Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability</p>
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<p>Foot and Ankle Evaluation DMT 610</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The foot and ankle evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with patient evaluation. (cog. 3) A list and rationale of function tests for foot and ankle patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a foot and ankle patient. (cog. 5) A rationale for selection of evaluation procedures based on : professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a (affective)</p>	<p>The curriculum will describe evaluation procedures of foot and ankle.</p> <p>Video: Foot and Ankle flow of procedures</p>		<p>s m</p>	<p>Required: OGI Residency Course Notes: Foot and Ankle A muscle testing book Magee Kaltenborn: <i>Extremities</i> Cyriax: <i>Textbook of OM OGI</i> Technique Manual Optional: Cyriax: <i>Illustrated Manual</i></p>
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<p>Foot and Ankle Treatment DMT 610</p>	<p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with foot and ankle pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4) (Performance 4): 5 foot and ankle soft tissue treatment techniques. Foot and ankle articulation. Foot and ankle taping techniques. Foot and ankle exercises.</p>	<p>The curriculum will describe foot and ankle treatment procedures.</p>			<p>Course Notes: Foot and Ankle section: Kaltenborn: Extremities Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual</p> <p>Optional Cyriax: Illustrated Manual STEP section</p>
<p>Knee Anatomy DMT 610</p>	<p>The knee's articular surfaces. (cog. 1) The O.I.I.A. of the knee muscles. (cog. 1) The pathway and supply of the knee nerves. (cog. 1) The primary knee ligaments, capsules, and vascular supply. (cog. 1 & 2) The anatomical and clinical relationship of the spine to the knee. (cog. 3 & 4) The spatial relationship of knee muscles, nerves, fascia and bone to surface anatomy. (cog. 2) How to integrate knee anatomy into patient evaluation and treatment. (cog. 3) The use of anatomy to identify a knee physical impairment. (cog. 3)</p>	<p>The curriculum will describe knee anatomy. Show knee anatomy slides.</p>	<p>Quiz 9 Foot/Ankle DPT 610</p>		<p>Reading is required before class: OGI Residency Course Notes: Knee Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed.</p> <p>Optional: Grays Anatomy</p>

<p>Knee Biomechanics DMT 610</p>	<p>Knee ROM, planes of motion, and degrees of freedom. (cog. 1) Knee positions of reference, resting position, & close-packed position. (cog. 1) Knee arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the knee joint surfaces and related joint motions. (cog. 1 & 3) The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the knee. (cog. 3) Primary and secondary actions of knee muscles. (cog. 1 & 3) How to integrate knee mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe knee biomechanics.</p>			<p>Required: Knee chapter or section. Kapandji: Vol I Kaltenborn: Extremity Joints</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
<p>Knee Pathology DMT 610</p>	<p>The most common pathologies of the knee. (cog. 1-3) The correlation of patients' signs and symptoms to knee anatomy and biomechanics. (cog. 3) The results of abnormal knee biomechanics. (cog. 3-4) Changes that occur in the knee with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate knee pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe knee pathology. Show slides on knee pathology.</p>			<p>Required: Knee chapter or section: Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability OGI Residency Course Notes: Foot and Ankle</p>

<p>Knee Evaluation DMT 610</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The knee evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for knee patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a knee patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient reassessment to determine effectiveness of treatment, make changes in a diagnosis, prognosis, or treatment. (cog. 4-6) Patient evaluation procedures: history, interview, active, passive, resisted, palpation, neurology, special tests, & segmental mobility tests of the knee. (perform. 4) Taking precautions to ensure the safety and well-being of the patient and therapist throughout the examination and treatment process. (affective)</p>	<p>The curriculum will describe knee evaluation procedures.</p> <p>Video: Knee flow of procedures</p>			<p>Required: Knee chapter Magee Kaltenborn: Extremities Cyriax: Textbook of OM OGI Residency Course Notes: Foot and Ankle OGI Technique Manual</p> <p>Optional: Cyriax: Illustrated Manual OGI Special Test Manual</p>
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<p>Knee Treatment DMT 610</p>	<p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with knee pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4)</p> <p>(Performance 4): 5 knee soft tissue treatment techniques. Knee articulation. Knee taping techniques. Knee exercises.</p>	<p>The curriculum will describe knee treatment procedures.</p>			<p>Required: Knee section: Kaltenborn: Extremities Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual</p> <p>Optional Cyriax: Illustrated Manual STEP section</p>
<p>Hip Anatomy DMT 610</p>	<p>The hip's articular surfaces. (cog. 1) The O.I.I.A. of the hip muscles. (cog. 1) The pathway and supply of the hip nerves. (cog. 1) The primary hip ligaments, capsules, and vascular supply. (cog. 1 & 2) The anatomical and clinical relationship of the spine to the hip. (cog. 3 & 4) The spatial relationship of hip muscles, nerves, fascia and bone to surface anatomy. (cog. 2) How to integrate hip anatomy into patient evaluation and treatment. (cog. 3) The use of anatomy to identify a hip physical impairment. (cog. 3)</p>	<p>The curriculum will describe hip anatomy. Show hip anatomy slides.</p>	<p>Quiz 10 Knee DPT 610</p>		<p>Reading is required before class: Hip chapter or section: OGI Residency Course Notes: Hip Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed.</p> <p>Optional: Grays Anatomy</p>

<p>Hip Biomechanics DMT 610</p>	<p>Hip ROM, planes of motion, and degrees of freedom. (cog. 1) Hip positions of reference, resting position, & close-packed position. (cog. 1) Hip arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the hip joint surfaces and related joint motions. (cog. 1 & 3) The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the hip. (cog. 3) Primary and secondary actions of hip muscles. (cog. 1 & 3) How to integrate hip mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe hip biomechanics.</p>			<p>Required: Hip chapter or section. Kapandji: Vol I Kaltenborn: Extremity Joints OGI Residency Course Notes: Hip</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
<p>Hip Pathology DMT 610</p>	<p>The most common pathologies of the hip. (cog. 1-3) The correlation of patients' signs and symptoms to hip anatomy and biomechanics. (cog. 3) The results of abnormal hip biomechanics. (cog. 3-4) Changes that occur in the hip with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate hip pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe hip pathology. Show slides on hip pathology.</p>			<p>Required: Hip chapter or section: OGI Residency Course Notes: Hip Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability</p>

<p>Hip Evaluation DMT 310</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The hip evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for hip patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a hip patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient reassessment to determine effectiveness of treatment, make changes in a diagnosis, prognosis, or treatment. (cog. 4-6) Patient evaluation procedures: history, interview, active, passive, resisted, palpation, neurology, special tests, & segmental mobility tests of the hip. (perform. 4) Taking precautions to ensure the safety and well-being of the patient and therapist throughout the examination and treatment process. (affective)</p>	<p>The curriculum will describe hip evaluation procedures.</p> <p>Video: Hip flow of procedures</p>			<p>Required: Hip chapter or section: OGI Residency Course Notes: Hip A muscle testing book Magee Kaltenborn: Extremities Cyriax: Textbook of OM OGI Technique Manual</p> <p>Optional: Cyriax: Illustrated Manual</p>
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<p>Hip Treatment DMT 610</p>	<p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with hip pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4)</p> <p>(Performance 4): 5 knee soft tissue treatment techniques. Hip articulation. Hip exercises.</p>	<p>The curriculum will describe hip treatment procedures.</p>			<p>Required: Hip section: Kaltenborn: Extremities Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual</p> <p>Optional Cyriax: Illustrated Manual STEP section</p>
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Lumbar Spine Anatomy DMT 611	<p>Lumbar spine ROM, planes of motion, and degrees of freedom. (cog. 1)</p> <p>Lumbar spine positions of reference, resting position, & close-packed position. (cog. 1)</p> <p>Lumbar spine arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3)</p> <p>The classification of the lumbar spine joint surfaces and related joint motions. (cog. 1 & 3)</p> <p>The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the lumbar spine. (cog. 3)</p> <p>Primary and secondary actions of lumbar spine muscles. (cog. 1 & 3)</p> <p>How to integrate lumbar spine mechanics and function into patient evaluation and treatment. (cog. 3)</p>	The curriculum will describe lumbar spine anatomy. Show lumbar spine anatomy slides.	Quiz 11 Hip DPT 610		<p>Reading is required before class: Lumbar spine chapter or section: OGI Residency Course Notes Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed.</p> <p>Optional: Grays Anatomy</p>
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Lumbar Spine Biomechanics DMT 611	<p>Lumbar spine ROM, planes of motion, and degrees of freedom. (cog. 1)</p> <p>Lumbar spine positions of reference, resting position, & close-packed position. (cog. 1)</p> <p>Lumbar spine arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3)</p> <p>The classification of the lumbar spine joint surfaces and related joint motions. (cog. 1 & 3)</p> <p>The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the lumbar spine. (cog. 3)</p> <p>Primary and secondary actions of lumbar spine muscles. (cog. 1 & 3)</p> <p>How to integrate lumbar spine mechanics and function into patient evaluation and treatment. (cog. 3)</p>	The curriculum will describe lumbar spine biomechanics.			<p>Required: Lumbar spine chapter or section. Kapandji: Vol I II Kaltenborn: Spine OGI Residency Course Notes</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
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<p>Lumbar Spine Pathology DMT 611</p>	<p>The most common pathologies of the lumbar spine. (cog. 1-3) The correlation of patients' signs and symptoms to lumbar spine anatomy and biomechanics. (cog. 3) The results of abnormal lumbar spine biomechanics. (cog. 3-4) Changes that occur in the lumbar spine with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate lumbar spine pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe lumbar spine pathology. Show slides on lumbar spine pathology.</p>			<p>Required: Lumbar spine chapter or section: OGI Residency Course Notes Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability</p>
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<p>Lumbar Spine Evaluation DMT 611</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The lumbar spine evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for lumbar spine patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a lumbar spine patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient assessment to determine effectiveness of treatment, make changes in diagnosis, prognosis, or treatment. (cog. 4-6)</p>	<p>The curriculum will describe lumbar spine evaluation procedures.</p> <p>Video: Lumbar spine flow of procedures</p>			<p>Required: Lumbar spine chapter or section A muscle testing book Magee Kaltenborn: Spine Cyriax: Textbook of OM OGI Residency Course Notes OGI Technique Manual</p> <p>Optional: Cyriax: Illustrated Manual</p>
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Lumbar Spine Treatment DMT 611	<p>A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5)</p> <p>Given a patient with lumbar spine pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3)</p> <p>Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4)</p> <p>(Performance 4):</p> <p>5 lumbar spine soft tissue treatment techniques.</p> <p>Lumbar spine articulation.</p> <p>Lumbar spine taping techniques.</p> <p>Lumbar spine exercises.</p> <p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3)</p> <p>A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3)</p>	The curriculum will describe lumbar spine treatment procedures.			<p>Required: Lumbar spine section: Kaltenborn: Spine Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual OGI Residency Course Notes</p> <p>Optional Cyriax: Illustrated Manual STEP section</p>

<p>SI Joint Anatomy DMT 612</p>	<p>The most common pathologies of the SI joint. (cog. 1-3) The correlation of patients' signs and symptoms to SI joint anatomy and biomechanics. (cog. 3) The results of abnormal SI joint biomechanics. (cog. 3-4) Changes that occur in the SI joint with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate SI joint pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe SI joint pathology. Show slides on SI joint pathology.</p>	<p>Quiz 12 Lumbar Spine DMT 611</p>		<p>Required: SI Joint chapter or section: OGI Residency Course Notes Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability</p>
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<p>SI Joint Biomechanics DMT 612</p>	<p>SI Joint ROM, planes of motion, and degrees of freedom. (cog. 1) SI Joint positions of reference, resting position, & close-packed position. (cog. 1) SI Joint arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the SI joint joint surfaces and related joint motions. (cog. 1 & 3) The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the SI joint. (cog. 3) Primary and secondary actions of SI joint muscles. (cog. 1 & 3) How to integrate SI joint mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe SI joint biomechanics.</p>			<p>Required: SI Joint chapter or section. Kapandji: Vol III Kaltenborn: Spine OGI Residency Course Notes</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
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<p>SI Joint Pathology DMT 612</p>	<p>The most common pathologies of the SI joint. (cog. 1-3) The correlation of patients' signs and symptoms to SI joint anatomy and biomechanics. (cog. 3) The results of abnormal SI joint biomechanics. (cog. 3-4) Changes that occur in the SI joint with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate SI joint pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe SI joint pathology. Show slides on SI joint pathology.</p>			<p>Required: SI Joint chapter or section: OGI Residency Course Notes Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability</p>
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<p>SI Joint Evaluation DMT 612</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The SI joint evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for SI joint patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a SI joint patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient reassessment to determine effectiveness of treatment, make changes in a diagnosis, prognosis, or treatment. (cog. 4-6)</p> <p>Patient evaluation procedures: history, interview, active, passive, resisted, palpation, neurology, special tests, & segmental mobility tests of the SI joint. (perform. 4) Taking precautions to ensure the safety and well-being of the patient and therapist throughout the examination and treatment process. (affective)</p>	<p>The curriculum will describe SI joint evaluation procedures.</p> <p>Video: SI Joint flow of procedures</p>			<p>Required: SI Joint chapter or section A muscle testing book Magee Kaltenborn: Spine Cyriax: Textbook of OM OGI Residency Course Notes OGI Technique Manual</p> <p>Optional: Cyriax: Illustrated Manual</p>
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<p>SI Joint Treatment DMT 612</p>	<p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with SI joint pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4) (Performance 4): 5 SI joint soft tissue treatment techniques. SI Joint articulation. SI Joint taping techniques. SI Joint exercises.</p>	<p>The curriculum will describe SI joint treatment procedures.</p>			<p>Required: SI Joint section: Kaltenborn: Spine Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual OGI Residency Course Notes</p> <p>Optional Cyriax: Illustrated Manual STEP section</p>
<p>Thoracic Spine Anatomy DMT 613</p>	<p>The articular surfaces of the ribs and thoracic vertebrae. (cog. 1) The O.I.I.A. of the ribs and thoracic spine muscles. (cog. 1) The pathway of the thoracic nerves. (cog. 1) Muscles and skin innervated by the thoracic nerves. The primary rib and thoracic spine ligaments, capsules, and vascular supply. (cog. 1 & 2) The spatial relationship of ribs and thoracic spine muscles, nerves, fascia and bone to surface anatomy. (cog. 2) How to integrate rib and thoracic spine anatomy into patient evaluation and treatment. (cog. 3) The use of anatomy to identify a rib and/or thoracic spine physical impairment. (cog. 3)</p>	<p>The curriculum will describe rib and thoracic spine anatomy. Show rib and thoracic spine anatomy slides.</p>	<p>Quiz 13 Sacro-Iliac DPT 625</p>		<p>Reading is required before class: Thoracic spine chapter or section: OGI Residency Course Notes Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed.</p> <p>Optional: Grays Anatomy</p>

<p>Thoracic Spine Biomechanics DMT 613</p>	<p>Rib and thoracic spine ROM, planes of motion, and degrees of freedom. (cog. 1) Rib and thoracic spine positions of reference, resting position, & close-packed position. (cog. 1) Rib and thoracic spine arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the rib and thoracic spine joint surfaces and related joint motions. (cog. 1 & 3) The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the thoracic spine. (cog. 3) Primary and secondary actions of rib and thoracic spine muscles. (cog. 1 & 3) How to integrate rib and thoracic spine mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe on rib and thoracic spine biomechanics.</p>			<p>Required: Thoracic spine chapter or section. Kapandji: Vol III Kaltenborn: Spine OGI Residency Course Notes</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
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<p>Thoracic Spine Pathology DMT 613</p>	<p>The most common rib and thoracic spine pathologies. (cog. 1-3) The correlation of patients' signs and symptoms to rib and thoracic spine anatomy and biomechanics. (cog. 3) The results of abnormal rib and thoracic spine biomechanics. (cog. 3-4) Changes that occur in the ribs and thoracic spine with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate rib and thoracic spine pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe thoracic and rib spine pathology. Show slides on rib or thoracic spine pathology.</p>			<p>Required: Thoracic spine chapter or section: OGI Residency Course Notes Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability</p> <p>Home Work: Contra and indications of Extremity manipulations</p>
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<p>Thoracic Spine Evaluation DMT 613</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The rib and thoracic spine evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for rib and thoracic spine patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a rib and/or thoracic spine patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient reassessment to determine effectiveness of treatment, make changes in a diagnosis, prognosis, or treatment. (cog. 4-6)</p> <p>Patient evaluation procedures: history, interview, active, passive, resisted, palpation, neurology, special tests, & segmental mobility tests of the thoracic spine. (perform. 4) Taking precautions to ensure the safety and well-being of the patient and therapist throughout the examination and treatment process. (affective)</p>	<p>The curriculum will describe rib and thoracic spine evaluation procedures.</p> <p>Video: Thoracic spine flow of procedures</p>			<p>Required: Thoracic spine chapter or section Magee Kaltenborn: Spine Cyriax: Textbook of OM OGI Residency Course Notes OGI Technique Manual</p> <p>Optional: Cyriax: Illustrated Manual</p>
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<p>Thoracic Spine Treatment DMT 613</p>	<p>Rationale for rib and thoracic spine soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with rib or thoracic spine pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4)</p> <p>(Performance 4): 5 rib and thoracic spine soft tissue treatment techniques. Thoracic spine and rib articulation. Thoracic spine and rib taping techniques. Thoracic spine and rib exercises.</p>	<p>The curriculum will describe rib and thoracic spine treatment procedures.</p>			<p>Required: Thoracic spine section: Kaltenborn: Spine Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual OGI Residency Course Notes</p> <p>Optional Cyriax: Illustrated Manual STEP section</p>
<p>Cervical Spine Anatomy DMT 614</p>	<p>The articular surfaces of the cervical vertebrae. (cog. 1) The O.I.I.A. of the cervical spine muscles. (cog. 1) The pathway of the brachial plexus and the nerve supply to the cervical spine and upper extremity. (cog. 1) The primary cervical spine ligaments, capsules, and vascular supply. (cog. 1 & 2) The spatial relationship of cervical spine muscles, nerves, fascia and bone to surface anatomy. (cog. 2) How to integrate cervical spine anatomy into patient evaluation and treatment. (cog. 3) The use of anatomy to identify a cervical spine physical impairment. (cog. 3)</p>	<p>The curriculum will describe cervical spine anatomy. Show cervical spine anatomy slides.</p>	<p>Quiz 14 Thoracic Spine DMT 613</p>		<p>Reading is required before class: Cervical spine chapter or section: OGI Residency Course Notes Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed.</p> <p>Optional: Grays Anatomy</p>

<p>Cervical Spine Biomechanics DMT 614</p>	<p>Cervical spine ROM, planes of motion, and degrees of freedom. (cog. 1) Cervical spine positions of reference, resting position, & close-packed position. (cog. 1) Cervical spine arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the cervical spine joint surfaces and related joint motions. (cog. 1 & 3) The relationship of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the cervical spine. (cog. 3) Primary and secondary actions of cervical spine muscles. (cog. 1 & 3) How to integrate cervical spine mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe cervical spine biomechanics.</p>			<p>Required: Cervical spine chapter or section. Kapandji: Vol III Kaltenborn: Spine OGI Residency Course Notes</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
<p>Cervical Spine Pathology DMT 614</p>	<p>The most common pathologies of the cervical spine. (cog. 1-3) The correlation of patients' signs and symptoms to cervical spine anatomy and biomechanics. (cog. 3) The results of abnormal cervical spine biomechanics. (cog. 3-4) Changes that occur in the cervical spine with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate cervical spine pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe cervical spine pathology. Show slides on cervical spine pathology.</p>			<p>Required: Cervical spine chapter or section: OGI Residency Course Notes Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability</p>

<p>Cervical Spine Evaluation DMT 614</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The cervical spine evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for cervical spine patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a cervical spine patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient reassessment to determine effectiveness of treatment, make changes in a diagnosis, prognosis, or treatment. (cog. 4-6)</p> <p>Patient evaluation procedures: history, interview, active, passive, resisted, palpation, neurology, special tests, & segmental mobility tests of the cervical spine. (perform. 4) Taking precautions to ensure the safety and well-being of the patient and therapist throughout the examination and treatment process. (affective)</p>	<p>The curriculum will describe cervical spine evaluation procedures.</p> <p>Video: Cervical spine flow of procedures</p>			<p>Required: Cervical spine chapter or section A muscle testing book Magee Kaltenborn: Spine Cyriax: Textbook of OM OGI Residency Course Notes OGI Technique Manual</p> <p>Optional: Cyriax: Illustrated Manual</p>
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<p>Cervical Spine Treatment DMT 614</p>	<p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with cervical spine pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4)</p> <p>(Performance 4): 5 cervical spine soft tissue treatment techniques. Cervical spine articulation. Cervical spine exercises.</p>	<p>The curriculum will describe cervical spine treatment procedures.</p>			<p>Required: Cervical spine section: Kaltenborn: Spine Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual OGI Residency Course Notes</p> <p>Optional Cyriax: Illustrated Manual STEP section</p>
<p>TMJ Anatomy DMT 615</p>	<p>The TMJ's articular surfaces. (cog. 1) The O.I.I.A. of the TMJ muscles. (cog. 1) The pathway and supply of the TMJ nerves. (cog. 1) The primary TMJ ligaments, capsules, and vascular supply. (cog. 1 & 2) The anatomical and clinical relations TMJ of the spine to the TMJ. (cog. 3 & 4) The spatial relations TMJ of TMJ muscles, nerves, fascia and bone to surface anatomy. (cog. 2) How to integrate TMJ anatomy into patient evaluation and treatment. (cog. 3) The use of anatomy to identify a TMJ physical impairment. (cog. 3)</p>	<p>The curriculum will describe TMJ anatomy. Show TMJ anatomy slides.</p>	<p>Quiz 15 Cervical Spine DMT 614</p>		<p>Reading is required before class: TMJ chapter or section: OGI Residency Course Notes Anatomy Textbook equivalent to Grays Anatomy Unabridged British ed.</p> <p>Optional: Grays Anatomy</p>

<p>TMJ Biomechanics DMT 615</p>	<p>TMJ ROM, planes of motion, and degrees of freedom. (cog. 1) TMJ positions of reference, resting position, & close-packed position. (cog. 1) TMJ arthrokinematics: distraction, compression, tension, angulation, translation, and conjunct rotation. (cog. 1 & 3) The classification of the TMJ joint surfaces and related joint motions. (cog. 1 & 3) The relationsTMJ of cartilage, disc, muscles and other soft tissues to movements of bones and joints of the TMJ. (cog. 3) Primary and secondary actions of TMJ muscles. (cog. 1 & 3) How to integrate TMJ mechanics and function into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe TMJ biomechanics.</p>			<p>Required: TMJ chapter or section. Kapandji: Vol III Kaltenborn: Spine OGI Residency Course Notes</p> <p>Optional: Brunnstrom Nordin Gray's Anatomy</p>
<p>TMJ Pathology DMT 615</p>	<p>The most common pathologies of the TMJ. (cog. 1-3) The correlation of patients' signs and symptoms to TMJ anatomy and biomechanics. (cog. 3) The results of abnormal TMJ biomechanics. (cog. 3-4) Changes that occur in the TMJ with trauma, overuse, poor postures/habits, immobilization, degenerative conditions, and with aging. (cog. 3) Abnormal motion, postures, and positions etc. that predispose a patient to pathology or reinjury. (cog. 3-5) How pathology can develop from normal forces on abnormal tissues and from abnormal forces on normal tissues. (cog. 3-5) How to integrate TMJ pathology into patient evaluation and treatment. (cog. 3)</p>	<p>The curriculum will describe TMJ pathology. Show slides on TMJ pathology.</p>			<p>Required: TMJ chapter or section: OGI Spine Crawford-Adams Cyriax: Textbook of OM Cailliet: Soft Tissue Pain and Disability</p>

<p>TMJ Evaluation DMT 615</p>	<p>The value of questions used in taking a patient's history. (cog. 3) The TMJ evaluation flow of procedures. (cog. 3) The integration of anatomy, biomechanics, pathology, histology, and radiology with the patient evaluation. (cog. 3) A list and rationale of function tests for TMJ patients. (cog. 1-3) A summary, analysis, and integration of the results of a patient evaluation to build a case study of a TMJ patient. (cog. 5) A rationale for selection of evaluation procedures based on: professional literature, basic sciences, research and clinical experience. (cog. 2) Analysis of a patient reassessment to determine effectiveness of treatment, make changes in a diagnosis, prognosis, or treatment. (cog. 4-6)</p> <p>Patient evaluation procedures: history, interview, active, passive, resisted, palpation, neurology, special tests, & segmental mobility tests of the TMJ. (perform. 4) Taking precautions to ensure the safety and well-being of the patient and therapist throughout the examination and treatment process. (affective)</p>	<p>The curriculum will describe TMJ evaluation procedures.</p> <p>Video: TMJ flow of procedures</p>			<p>Required: TMJ chapter or section A muscle testing book Magee Kaltenborn: Spine Cyriax: Textbook of OM OGI Residency Course Notes OGI Technique Manual</p> <p>Optional: Cyriax: Illustrated Manual</p>
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<p>TMJ Treatment DMT 615</p>	<p>Rationale for soft tissue, articulation, and taping techniques. (cog. 3) A list of patient education information for prevention of further injury and treatment of present injury. (cog. 3) A full progression of exercises including the goals and dosage of exercises and rationale. (cog. 5) Given a patient with TMJ pathology, list the tissues in dysfunction, then discuss how to apply the concepts of optimal stimuli for regeneration of these tissues. (cog. 3) Appropriateness of spinal and other extremity treatments relevant to the patient's evaluation findings. (cog. 3-4)</p> <p>(Performance 4): 5 TMJ soft tissue treatment techniques. TMJ articulation. TMJ exercises.</p>	<p>The curriculum will describe TMJ treatment procedures.</p>			<p>Required: TMJ section: Kaltenborn: Spine Evjenth: Stretching Cyriax: Textbook of OM. OGI: Technique Manual OGI Residency Course Notes</p> <p>Optional Cyriax: Illustrated Manual</p>
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<p>S.T.E.P. B DMT 609B</p>	<p>The role of exercises in physical therapy. (cog. 3) Functional qualities (strength endurance, mobility, stability etc.) influenced by exercise. (cog. 2) Equipment and techniques used to localize an exercise to a specific joint or anatomical region. (perf. 4 cog. 4 & 5) Dosing exercise with: repetitions, resistance, speed, range of motion, sets, breaks, and frequency of exercise. (cog. 3, 4, 5) The effect of stress (total daily activities) exceeding 30% of daily energy capacity. (cog. 2) The principles of overload and its relationship to protein synthesis. (cog. 3) Muscle fiber anatomy, biomechanics, metabolism, and function and response to exercise. (cog. 2 & 3)</p>	<p>The curriculum will describe the principles and clinical application of exercise physiology (work physiology). design mathematical equations for determining 1RM, reps and Resistance. The clinical procedures will be practiced at the STEP course.</p>	<p>Quiz 16 TMJ DMT 615</p>		<p>Required: OGI Scientific Therapeutic Exercise Progression (STEP) Chapter</p> <p>Recommended: Medical Exercise Therapy. Faugli, HP. Laerergruppen for Medisinski, 1996. Training Therapy. Gustafson R. Thieme Inc., NY, 1985. Grimsby O. Scientific Therapeutic Exercise Progressions. J Man Manip Ther 2(3):94, 1994.</p>
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<p>Relationship of %RM and reps (cog. 2)</p> <p>Relationship of velocity and resistance. (cog. 2)</p> <p>Percentage of RM isometric work & duration of hold. (cog. 2)</p> <p>The influence of velocity on conc. vs. eccentric work. (cog. 2)</p> <p>Length/tension in muscles during conc. vs. eccentric. (cog. 2)</p> <p>Stretching and absorption of elastic energy. (cog. 2)</p> <p>Definition and application of fixation of strength. (cog. 1-3)</p> <p>Exercises that influence: muscular, vascular, articular, collagenous, and neuro-muscular tissues or structures. (cog. 3)</p> <p>Starting position with variable degrees of resistance through range of motion. (cog. 3)</p> <p>An individual choice of resistance and repetitions, and speed for concentric and eccentric work in male and female patients. (cog 3 & 4)</p> <p>Tissue and region specific dosage for mobilizing and stabilizing exercises. (cog. 3 & 4)</p> <p>Progression of exercise with normal mobility and stability around physiological axis throughout ROM. (cog. 3 &4)</p>				
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<p>S.T.E.P. B continued DMT 609B</p>	<p>How to use exercises to facilitate strength, endurance, mobility, and stability etc. (cog. 3 & 5) How equipment and techniques are used to localize an exercise to a specific joint or anatomical region. (perform. 4) (cog. 4 & 5) How to dose exercise with repetitions, resistance, speed, range of motion, sets, breaks, and frequency of exercise. (cog. 3, 4, 5) The influence of velocity on concentric and eccentric work. (cog. 2) The effect of a muscle's length/tension on concentric and eccentric exercise. (cog. 2) Exercises that optimally influence muscular, vascular, articular, collagenous, and neurologic tissues or structures. (cog. 3) The use of postures and positions for: 1) dosing exercise, 2) adapting to the needs of each patient, and 3) progressing the patient. (cog. 4-5) (perform. 4-5) Differences between males and females: resistance /repetitions, and speed for concentric and eccentric work . (cog 2) Optimal uses of and sequence of progression concentric and eccentric exercise. (cog. 3 & 5)) Dosage differences of the cervical, thoracic, and lumbar spine for mobilizing and stabilizing exercises. (cog. 3 & 4) Designing an individualized exercise program for a given patient. Integrating STEP concepts by designing a progression of exercise to achieve normal mobility and stability around physiological axis throughout ROM. (cog. 3 & 4)</p>	<p>Continued.</p>	<p>Quiz 17 DPT 609B Spine</p>		<p>Continued.</p>

Clinical Mentoring: 150 Clinical Hours DMT 616	150 Clinical Hours: Students will participate in a clinical supervision experience with an OGI approved instructor for a minimum of 150 1:1 contact hours.				
440 Supervised Clinical Hours DMT 617	Students are required to perform an additional 440 hours of clinical supervision that can be performed at the student's routine work environment; however, they will be in contact with an OGI faculty member via phone, e-mail, or other method of communication during that clinical time.				
DMT Research Portfolio I DMT 618	Research Proposal: The student must receive approval regarding his/her research topic and complete a scientific inquiry toward a dissertation.				
Clinical Problem Solving Course MT-5	Both extremity and spinal Pathology is covered in this course. Through case studies and group work differential tissue diagnosis is developed systematically. Clinical procedures for evaluations and treatments are demonstrated and/or practiced in lab. Mandatory for all Residency students.				
MT of the Extremities (3 days) MT-2	2 of 6 mandatory courses for Independent Study Students				
MT of the Spine (3 days) MT-3	3 of 6 mandatory courses for Independent Study Students				
S.T.E.P. A Extremities (2 days) MT-4A	4 of 6 mandatory courses for Independent Study Students				
S.T.E.P. B Spine(3 days) MT-4A	5 of 6 mandatory courses for Independent Study Students				

Manipulation Course(2 days) SSM-MT	6 of 6 mandatory courses for Independent Study Students				
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