

CLINICAL ORTHOPAEDICS (MCO)

MCO 6140 Articular Injuries of the Knee (1)

This course summarizes the current diagnosis, treatment (conservative and surgical) and expected outcomes of articular cartilaginous injuries of the knee. This course will provide the DScPAS-CO resident the knowledge needed to diagnose and guide a patient through the various current treatment options.

MCO 6141 Anterior Knee Pain and Patello-femoral Joint Instability (1)

This course summarizes the possible causes, clinical presentations, and treatment options for anterior knee pain. This will provide the DScPAS-CO resident with the knowledge needed to properly diagnose and treat this common, yet significant problem.

MCO 6142 Genetics I and II, Developmental Dysplasia of the Hip (DDH), Legg-Calve-Perthes Disease and Slipped (1)

This course provides the basic knowledge and skills that the DScPAS-CO resident will require throughout training and in clinic practice regarding genetic disorders and musculoskeletal conditions.

MCO 6143 Orthopaedic Surgery in the Immunocompromised Host (1)

This course brings to light the special requirements and potential complications of orthopaedic surgery in the immunocompromised patient. Being familiar with techniques used to decrease morbidity and mortality in this special subset of the population undergoing orthopaedic surgery is essential for the DScPAS-CO resident in today's society.

MCO 6144 Osteoarthritis (1)

This course is an overview of osteoarthritis, including the epidemiology, pathogenesis, clinical features, evaluation, and management. Clinically, osteoarthritis is a very common diagnosis, and being knowledgeable about this disease entity is essential for the DScPAS-CO resident.

MCO 6145 Benign Bone Tumors (1)

This course addresses the incidence, clinical and radiographic features, and management of benign bone tumors. Benign bone tumors are four to five times more common than malignant bone tumors, making familiarity with benign bone tumors essential for the DScPAS-CO resident.

MCO 6146 Prioritization and Management of the Polytrauma Patient (1)

This course discusses the prioritization and management of the polytrauma patient. The DScPAS-CO resident will become familiar with and utilize established trauma management protocols and learn how to integrate into a coordinated team of traumatologists.

MCO 6147 Ligamentous Injuries of the Foot and Ankle (1)

This course discusses common injuries of the foot and ankle. The DScPAS-CO resident will become familiar with and be able to differentiate surgical versus non-surgical ankle injuries and use well-established treatment options for non-surgical injuries.

MCO 6148 Knee Ligament and Meniscal Injuries: Epidemiology, Mechanism, Diagnosis and Natural History (1)

This course will give the DScPAS-CO resident knowledge necessary to identify, diagnose and determine the appropriate management course for knee ligamentous and meniscal injuries.

MCO 6150 Diagnosis and Management of Musculoskeletal Infection (1)

This course reviews the microbiology, history, physical exam findings, ancillary studies and management options for common musculoskeletal infections.

MCO 6151 Overview of Arthritis (1)

This course is an overview of arthritis. It touches on the impact of arthritis in our society and reviews some unique considerations in the care of the orthopaedic patient with arthritis.

MCO 6152 Pathophysiology of Bone Tumors (1)

This course is an overview of the pathophysiology of bone tumors. Understanding the pathophysiology of bone tumors will help the DScPAS-CO resident when evaluating a patient with an osseous lesion with regards to the expected natural course and the presenting symptoms.

MCO 6153 Orthopaedic Sports Medicine (1)

This course provides the basic knowledge and skills that the DScPAS-CO resident will require throughout training and in clinic practice regarding orthopaedic sports medicine.

MCO 6154 Spinal Pain (1)

This course covers the role of the spine in pathologic pain processes. Spinal pain is frequently non-specific and provides little insight into its source. The spine may be affected by a myriad of pathological disorders—traumatic, neoplastic, inflammatory, metabolic, or degenerative.

MCO 6201 Biomechanics of Fracture Fixation and Classification of Fractures (2)

This course will provide the DScPAS-CO resident with a basic introduction to the classification of fractures as well as the biomechanics of fractures, the biomechanics of implants used to fix fractures, and problems associated with implants and specific fracture patterns.

MCO 6202 The Multiply Injured Patient with Musculoskeletal Injuries and Anesthetic Care of the Trauma Patient (2)

This course will provide the orthopaedic PA resident familiarity with trauma team organization and responsibilities, ATLS guidelines, anesthetic care, DVT prophylaxis and orthopaedic management of the multiply injured patient.

MCO 6203 Non-Operative Fracture Treatment (2)

This course will provide the DScPAS-CO resident familiarity with the history of the evolution of fracture treatment and the effect of today's treatments on the natural skeletal repair process. The resident will also gain familiarity with identifying fractures of the upper and lower extremities, which are commonly treated non-operatively with and without manipulative reduction.

MCO 6204 Principles of Internal and External Fixation (2)

This course discusses the principles of internal and external fixation. Being familiar with the principles of internal and external fixation is essential for the DScPAS-CO resident while developing a treatment plan, assisting during operative procedures, and providing post-operative care and rehabilitation.

MCO 6205 Musculoskeletal Healing, Vascular Injuries and Compartment Syndromes (2)

This course provides the basic knowledge and skills that the orthopaedic PA resident will require throughout training and in clinic practice regarding bone and soft tissue healing, open fractures, vascular injuries, and compartment syndrome.

MCO 6206 Penetrating Trauma/Bone and Soft Tissue Reconstruction (2)

This course focuses on penetrating trauma caused by ballistic projectiles. Emphasis is on ballistic behavior and the resulting orthopaedic injuries. Initial management principles are explained with differentiation between the management of upper and lower extremity injuries.

MCO 6207 War Wounds, Limb Salvage Traumatic Amputations, and Periprosthetic Fractures (2)

This course covers explosive devices such as mortars, bombs, land mines and improvised explosive devices causing multiple torso, abdominal and extremity trauma. Initial management should focus on saving life and limb but also wound debridement and functional limb salvage for long-term functional and prosthesis use and the classification of common causes of pathologic and periprosthetic fractures.

MCO 6208 Complications of Injury to the Musculoskeletal System (2)

This course will give the OPA resident knowledge about the incidence, pathophysiology, examination, diagnostic testing and imaging, classification, and management of select common complications of traumatic, nontraumatic, and surgical (iatrogenic) injury to the musculoskeletal system.

MCO 6209 Fractures and Dislocations of the Hand and Wrist (2)

This course will provide the DScPAS-CO resident with a base knowledge of fractures and dislocations in the hand and wrist with insight into the complexities involved with even the seemingly insignificant appearing fractures.

MCO 6210 Fractures of the Radial and Ulnar Shafts and Isolated Distal Radius Fractures (2)

This course will provide the orthopaedic PA resident with the information and knowledge needed to diagnose, describe, reduce, and recommend for surgical fixation one of the most common fractures in all age groups.

MCO 6211 Fractures and Dislocations of the Elbow and Distal Humerus (2)

This course provides the basic knowledge and skills that the orthopaedic PA resident will require throughout training and in clinic practice regarding elbow dislocations and fractures about the elbow and distal humerus.

MCO 6212 Subluxations and Dislocations about the Glenohumeral, Acromioclavicular, and Sternoclavicular Joint (2)

This course will give the DScPAS-CO resident knowledge about the general anatomy, biomechanical pathology, examination, diagnostic imaging, and classification of select subluxations and dislocations of the glenohumeral joint and surrounding musculoskeletal tissues of the shoulder girdle.

MCO 6213 Fractures of the Shaft and Proximal Humerus (2)

This course discusses the evaluation and treatment of humeral shaft and proximal humerus fractures. Being familiar with the history, physical exam, radiological findings and treatment of humerus fractures is an essential skill for the orthopaedic PA.

MCO 6214 Fractures of the Clavicle and Scapula (2)

This course covers scapular fractures which can occur after high energy mechanisms, and have a significant (35% to 98%) amount of associated injuries. Fractures of the scapula occur infrequently at 0.4% to 1% of all fractures. Not until recently has it been determined that clavicle fractures are anything but routine and that some problematic types of clavicle fractures and non-unions need more in-depth treatment.

MCO 6215 Fractures of the Pelvic Ring and Acetabulum (2)

This course will provide the DScPAS-CO resident with the basic information necessary to diagnose, describe, reduce, and treat fractures of the pelvis and acetabulum.

MCO 6216 Femoral Head, Neck, and Intertrochanteric Fractures and Hip Dislocations (2)

This course will give the DScPAS-CO resident knowledge of the general anatomy, biomechanical pathology, signs and symptoms, examination, diagnostic imaging, and classification of hip dislocations and fractures of the head, neck and intertrochanteric regions of the femur.

MCO 6217 Subtrochanteric Fractures and Fractures of the Shaft of the Femur (2)

This course will give the DScPAS-CO resident knowledge about the general anatomy, biomechanical pathology, signs and symptoms, examination, diagnostic imaging, and classification of subtrochanteric and femoral shaft fractures.

MCO 6218 Fractures of the Proximal Tibia, Fibula and Patella (2)

This course will give the DScPAS-CO resident knowledge about the general anatomy, biomechanical pathology, signs and symptoms, examination, diagnostic imaging, and classification of select common fractures of the proximal tibia, fibula and the patella.

MCO 6219 Knee Injuries and Fractures of the Tibia and Fibula Shafts (2)

This course will give the OPA resident knowledge about the general anatomy, biomechanical pathology, examination, diagnostic imaging, and classification of select common injuries of the knee as well as examination, diagnostic imaging, and classification of select common fractures of the tibia and fibula.

MCO 6220 Ankle Fractures and Fractures of the Talus (2)

This course will give the OPA resident knowledge about the general anatomy, biomechanical pathology, examination, diagnostic imaging, and classification of common select fractures and dislocations of the ankle and talus.

MCO 6221 Fractures and Dislocations of the Midfoot, Forefoot, and Calcaneous (2)

This course will give the OPA resident knowledge about the general anatomy, biomechanical pathology, examination, diagnostic imaging, and classification of common select fractures and dislocations of the calcaneus, midfoot, and forefoot.

MCO 6301 Foot and Ankle Practical Rotation (3)

This is a one-month clinical and surgical rotation on service with a fellowship-trained foot and ankle surgeon and a team of surgical residents.

MCO 6302 Orthopaedic Spine Rotation (3)

This is a one-month clinical and surgical rotation on service with a fellowship-trained orthopaedic spine surgeon and a team of surgical residents.

MCO 6303 Pediatric Orthopaedic Surgery Rotation (3)

This is a one-month clinical and surgical rotation on service with a fellowship-trained pediatric orthopaedic surgeon and a team of surgical residents.

MCO 6304 Orthopaedic Total Joint Rotation (3)

This is a one-month clinical and surgical rotation on service with a fellowship-trained total joint surgeon and a team of surgical residents.

MCO 6305 Orthopaedic Hand Surgery Rotation (3)

This is a one-month clinical and surgical rotation on service with a fellowship-trained hand surgeon and a team of surgical residents.

MCO 6306 Orthopaedic Tumor Rotation (3)

This is a one-month clinical and surgical rotation on service with a fellowship-trained musculoskeletal oncologist and a team of surgical residents.

MCO 6308 Orthopaedic Emergencies and Inpatient Care (3)

Instructs students on appropriate care for orthopaedic emergencies while on call for the Emergency Department and while doing daily rounds on orthopaedic inpatients. Instruction also covers daily wound care for orthopaedic inpatients as well as preoperative and postoperative management.

MCO 6346 Clinical Research (3)

The MCO 6346 course consists of a didactic phase during the first month of training, dedicated research blocks, and individual research days scheduled throughout the eighteen-month course. The research course is designed to familiarize residents with the research process and, more importantly, to facilitate the development of the skills necessary to critically analyze published scientific articles, including statistical aspects of those articles.

MCO 6350 Introduction to Orthopaedic Clinical Evaluation and Procedures (3)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic patients, and focusing on extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6351 Evidence Based Orthopaedic Care (3)

This course introduces the application of evidence-based medicine to the management of orthopaedic complaints, focusing on assessing current peer-reviewed journal articles for sound research design and valid conclusions so as to apply lessons learned from the literature to individual patients and patient populations.

MCO 6352 Orthopaedic Evaluation and Management of Spine Disorders (3)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic spine complaints, and focusing on spine anatomy, biomechanical pathology, physical examination, diagnostic imaging, and classification of common select fractures of the spine.

MCO 6353 Evaluation and Management of Neurologic Disorders (3)

This course introduces advanced principles of orthopaedic evaluation, diagnosis and treatment necessary for regular clinical application, applying evidence-based medicine to the management of neurologic complaints, and focusing on spine and head anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and classification of common select fractures of the head and spine.

MCO 6354 Evaluation and Management of Pediatric Orthopaedic Disorders (3)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of pediatric orthopaedic complaints, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, congenital disorders, and classification of pediatric fractures.

MCO 6355 Advanced Orthopaedic Clinical Evaluation and Procedures (3)

This course furthers critical principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic patients, and focusing on extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6356 Techniques for Medical Research Presentation (3)

Pre-requisite(s): CITI training only

This course introduces various techniques for medical research presentation. It takes information obtained in developing a high-quality clinical research project, demographic and outcome measure data, and statistical analysis, and generates oral and written products for presentation at local and national venues.

MCO 6401 Orthopaedic Sports Rotation (4)

This is a two-month clinical and surgical rotation on service with an orthopaedic sports medicine surgeon and a team of surgical residents.

MCO 6402 Orthopaedic Trauma Rotation (4)

This is a two-month clinical and surgical rotation on service with a fellowship-trained orthopaedic traumatologist and a team of surgical residents.

MCO 6410 Introduction to Upper Extremity Sports Injury Management (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of patient athletes, and focusing on upper extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6411 Introduction to Lower Extremity Sports Injury Management (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of patient athletes, and focusing on lower extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6412 Evaluation and Management of Hand and Elbow Disorders (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application; applies evidence-based medicine to the management of orthopaedic upper extremity complaints; and focuses on microsurgery, upper extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and classification of common select fractures and dislocations of the upper extremity.

MCO 6413 Evaluation and Management of Foot and Ankle Disorders (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic complaints, and focusing on lower extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and classification of common select fractures and dislocations of the leg, ankle, and foot.

MCO 6414 Evaluation and Management of Complex Wounds (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of patients with complex wounds, and focusing on general anatomy, biochemistry, physical examination, diagnostic imaging, laboratory studies, and medical and surgical management of complex wounds.

MCO 6415 Evaluation of Joint Arthritis and Trauma Managed with Joint Reconstruction (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic complaints, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, classification of periarticular fractures, and arthritis.

MCO 6416 Musculoskeletal Oncology Evaluation and Management (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of musculoskeletal neoplasms and infections, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of oncologic lesions and pathologic fractures.

MCO 6417 Introduction to Evaluation and Management of Orthopaedic Trauma (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of musculoskeletal trauma, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of orthopaedic trauma.

MCO 6418 Introduction to Evaluation and Management of General Trauma (4)

This course introduces advanced principles of surgical evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of multisystem trauma, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of multisystem trauma.

MCO 6419 Introduction to Critical Care Management (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of intensive care unit patients, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and medical management of critical patients.

MCO 6420 Advanced Sports Injury Management (4)

This course further examines critical principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of patient athletes, and focusing on extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6421 Advanced evaluation and management of orthopaedic trauma (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of musculoskeletal trauma, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of orthopaedic trauma.

MCO 6422 Advanced Critical Care Management (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of intensive care unit patients, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and medical management of critical patients.

MCO 6423 Medical Research Design (4)

Pre-requisite(s): CITI training only

This course introduces medical research design, focusing on generating a testable research question, developing a research design that addresses the question, and conducting a literature review that supports the study design.

MCO 6424 Approaches to Medical Data Collection and Analysis (4)

Pre-requisite(s): CITI training only

This course introduces approaches to medical data collection and analysis, focusing on executing a research protocol, collecting outcome measures data, and then participating in the analysis of the data.

MCO 6425 Urgent Orthopaedic Evaluation (4)

This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of musculoskeletal trauma, and focusing on extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of orthopaedic trauma.

MCO 6426 Advanced Joint Reconstruction (4)

Pre-requisite(s): MCO 6417

This course advances principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application. It applies evidence-based medicine to the management of orthopaedic complaints. The course focuses on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, classification of periarticular fractures, and arthritis.