Department of Orthopaedic Surgery
Academic Sessions 2009-2011

Schedule:  
Basic Didactic Sessions (except Adult Reconstruction)–Tuesdays 7-10:30 a.m.
Adult Reconstruction Sessions.–Fridays 7-10:30 a.m. as assigned
Orthopaedic Grand Rounds-first Wednesday of every month 7-8:30 a.m.
Quality Assurance – second Wednesday of every month 7-8:00 a.m.

Standard format for sessions:  1 hour BS lecture
AAOS Basic Science textbook is the syllabus for this – the entire book is covered once a year.
The remaining time is spent on staff or upper level resident didactic sessions, case
presentations, and OITE review

Sessions begin the second week of September
Half of the sessions per section odd year; half even year

Section Education Heads are coordinators for the lectures meaning they coordinate who is
giving the lectures and are to secure handouts or a CD for each lecture/session.  Suggestions
for appropriate speakers are listed here but should be flexible based on availability.

N.D. the average retention 24 hours after a lecture without further review of the topic by the
resident is only 7% so handouts for later review are important.  All didactic sessions should
have an appropriate handout that should be provided to the education coordinator and
uploaded to MedHub for review.

YEAR I

JULY – AUGUST
Reserved for at least 2 arthroscopy sessions and anatomy lab surgical approach reviews
These sessions are the responsibility of the arthroscopy curriculum coordinator and the
chief residents respectively.

SEPTEMBER 11, 2009  (NA5-03/04)
Block 1 – Adult Reconstruction
7-8:30am  Lower Extremity Biomechanics – Barsoum / Brooks
• Understand free body diagrams of the knee
• Understand free body diagrams of the hip
• Understand the effects of increasing and decreasing offsets on the femoral
  and cup side of THR
• The role of osteotomy in malalignment

CASES: High Tibial Osteotomy, Distal Femoral Osteotomy, DDH hip

8-9:00am  Patellofemoral Malalignment (J Andrish)
• Understand the role of conservative management in PF malalignment
• Understand the role of radiographic tests in malalignment
• Understand the surgical treatments available for malalignment
• Soft tissue and bony
CASES: Albee osteotomy, Fulkerson, Lateral Release

9-10:00am Biomechanics/Chap 3 (Residents/Krebs)

10-10:30am OITE questions

SEPTEMBER 15, 2009 (NA5-03/04)
Block 2 – Pediatric Orthopaedics
7-8:00am Benign Orthopaedic Conditions in Childhood (Goodwin / Gurd)
  • Understand the etiology and natural history of benign orthopaedic conditions
  • Differentiate between benign conditions and ones requiring treatment

8-9:00am Lower Extremity Angular Deformities (Ballock)

9-10:00am Growth & Development of the Skeleton/Chap 7 (Residents/Ballock)

10-10:30am OITE questions

Cases should include: femoral anteversion, tibial torsion, posteromedial bowing, Osgood-Schlatters, Severs, calcaneovalgus, metatarsus adductus, physiologic genu varum/valgum

SEPTEMBER 25, 2009 (NA1-140)
Block 3 – Adult Reconstruction
7-8:00am Total Knee Arthroplasty (Krebs / Barsoum / Borden)

8-9:00am Case presentations/TKA (Residents / Krebs / Barsoum / Brooks / Fellows)

9-10:00am Articular Cartilage & Osteoarthritis/Chap 9 (Residents/McDevitt)

10-10:30am OITE questions

CASES: OATS procedure, osteochondral allografting

SEPTEMBER 29, 2009 (NA5-03/04)
Block 4 – Pediatric Orthopaedics
7-8:00am The Work Ethic of the Clinical Researcher (J Andrish) (B)
  • Understand the balance of the clinician / scientist practice
  •

8-9:00am Physical Exam of the Pediatric Patient (A Gurd / D Gurd)
  • Understand the fundamentals of the pediatric orthopaedic exam

9-10:00am Child Abuse & Neglect (Gurd)
  • Identify elements of the history, exam and imaging suggestive of abuse
  • Understand the appropriate avenues for management in abuse cases

10-10:30am OITE questions

Cases should include abuse, pathognemonic fractures, common physical findings
OCTOBER 6, 2009 (NA5-03/04)
Block 5 – Spine (Adult)
7-8:00am Form & Function of the Intervertebral Disk/Chap 14 (Resident/McLain)
8-9:00am Cervical Myelopathy (Mroz)
9-10:00am Cervical Radiculopathy (Mroz)
10-10:30am OITE questions/Cases

OCTOBER 12, 2009 (NA5-03/04)
Block 6 – Shoulder
7-8:00am Form & Function of Ligament/Chap 11 (Resident/Derwin)
  • Biomechanics of tendon/ligament structure and function
  • Testing methodologies
  • Data Analysis and Interpretation
  • Relationship between tissue structure and function
  • Cellular response to mechanical loads
8-9:00am Traumatic and Atraumatic Shoulder Instability (Brems)
  • Clinical history in discerning instability patterns
  • Physical examination of the unstable shoulder
  • Non-operative treatment of shoulder instability
  • Operative options in the management of instability
  • Surgical outcomes of open and arthroscopic instability repairs
9-10:00am Instability Cases (Brems)
10-10:30am OITE questions

Cases from the residents should include traumatic anterior instability, posterior instability and multidirectional instability.

OCTOBER 20, 2009 (NA5/03/04)
Block 7 – Hand
7-8:00am Function & Function of Tendon/Chap 11 (Resident/Derwin)
8-9:00am Tendon Injuries (Seitz)
9-10:00am Hand Infections (Hendrickson)
10-10:30am OITE questions/Cases

OCTOBER 27, 2009 (NA5-03/04)
Block 8 – Hand
7-8:00am Function & Function of Peripheral Nerve/Chap 13 (Resident/Lawton)
  • Anatomy
  • Histology
  • Physiology
8-9:00am Peripheral Nerve Injuries (Lawton)

9-10:00am Compression Neuropathies (Evans)
  • Diagnosis
  • Nonoperative and operative treatment

10-10:30am OITE questions/Cases

NOVEMBER 3, 2009 (NA5-03/04)
Block 9 – Foot & Ankle
7-8:00am Form & Function of Bone/Chap 8 (Resident/Licata)

8-9:00am Ankle Arthritis (B Donley)

9-10:00am Subtalar & Mid foot Arthritis (Donley)

10-10:30am OITE questions

Cases from the residents should include ankle arthritis, subtalar arthritis and isolated midfoot arthritis.

NOVEMBER 9, 2009 (NA5-03/04)
Block 10 – Shoulder
7-8:00am Molecular & Cell Biology in Orthopaedics (Resident/Hascall)

8-9:00am Tendon Injury and Repair (Iannotti)
  • Pathogenesis of Rotator Cuff Tears
  • Muscle changes with chronic tendon tear
  • Indications for repair, debridement vs transfer for full thickness cuff tears
  • Indications for use of a biologic augmentation device for tendon repair

9-10:00am Rotator Cuff Disease and Impingement (Brems)
  • Extrinsic impingement – What is it, is it real?
  • Anatomic aspects of shoulder impingement
  • Etiologies of rotator cuff disease
  • Diagnosis of rotator cuff disease
  • Non-operative management of rotator cuff disease
  • Operative management of cuff tears
  • Outcome studies and rotator cuff tears

10-10:30am OITE questions

Cases from the residents should include massive cuff tears, cuff tear arthropathy and chronic impingement syndrome

NOVEMBER 17, 2009 (NA5-03/04)
Block 11 – Foot & Ankle
7-8:00am  Orthopaedic Pharmacology & Therapeutics/Chap 17 (Resident/Ahrens)
8-9:00am  Achilles tendonitis/Posterior tibial tendonitis (Donley)
9-10:00am  Peroneal tendonitis/Flexor Hallucis longus tendonitis (Donley)
10-10:30am  OITE questions

Cases from the residents should include Achilles tendonitis and post tibial tendonitis.

NOVEMBER 24, 2009 (NA5-03/04)
Block 12 – Spine (Adult)
7-8:00am  Form & Function of the Spinal Cord/Chap 13 (Resident/McLain)
8-9:00am  Lumbar Disc Herniation (G Bell)
9-10:00am  Lumbar Stenosis/Discogenic LBP (I Lieberman / G Bell)
10-10:30am  OITE questions/Cases

DECEMBER 1, 2009 (NA5-03/04)
Block 13 – Sports Medicine
7-8:00am  Form & Function of the Meniscus/Chap 10 (Resident/McDevitt)
    • Understand the microscopic architecture of the meniscus
    • Understand the healing capabilities
    • Understand the differences between the medial and lateral meniscus
8-9:00am  Meniscal Injuries of the Knee (Parker)
9-10:00am  Meniscal Repair/Resection/Transplant
    • Understand indications for repair
    • Understand the indications for resection
    • Understand the indications for transplantation
10-10:30am  OITE questions

Resident Case Presentations:  Meniscectomy with arthritis, without arthritis, repair, repair in the unstable knee and transplantation.

DECEMBER 8, 2009 (NA5-03/04)
Block 14 – Tumor/Trauma
7-8:00am  Bone Injury, Regeneration & Repair/Chap 18 (Resident/Knothe)
8-9:00am  Care of the Trauma Patient (Joyce)
9-10:00am  Fracture Fixation Principles/AO Basic (Joyce)
10-10:30am  OITE questions
**Resident Case Presentations:** Allografts in joint replacement cases.

**DECEMBER 15, 2009 (NA5-03/04)**
**Block 15 – Sports Medicine**
7-8:00am Articular Cartilage Repair/Chap 19 (Resident/Apte)

8-9:00am Treatment Alternatives for Knee Arthritis in the Active Person: Nonoperative (Dimeff)
- Neutriceutical options
- Brace options
- NSAID family and options
- Viscosupplementation

9-10:00am Treatment Alternatives for Knee Arthritis in the Active Person: Operative (Parker)
- Role of Arthroscopy
- Role of Osteotomy
- Role of Meniscus
- Role of Arthroplasty

10-10:30am OITE questions

**Resident Case Presentations:** Medical management of OA, arthroscopic debridement, osteotomy, meniscal transplantation, unicompartmental arthroplasty and TKRA.

**DECEMBER 16, 2009 – JANUARY 1, 2010 – HOLIDAY BREAK**

**JANUARY 5, 2010 (NA5-03/04)**
**Block 16 – Tumor/Trauma**
7-8:00am Infections in Orthopaedics/Chap 16 (Resident / Joyce / Tomford)

8-9:00am Musculoskeletal Tissue Banking (M Joyce)
9-10:00am Musculoskeletal Allografts – Safety (M Joyce)
- Risk of disease transmission with various allograft forms
- Procurement of allografts

10-10:30am OITE questions

**Resident Case Presentations:** Allografts in tumor cases

**JANUARY 15, 2010 (NA5-03/04)**
**Block 17 – Adult Reconstruction**
7-8:00am Thromboembolism & Pulmonary Distress in the Setting of Orthopaedic Surgery (Resident/Froimson)
8-9:00am Alternatives to Total Knee Arthroplasty (Barsoum / Molloy)
  • Osteotomy, Unicompartmental knee, MIS approaches

9-10:00am Complications in Total Knee Arthroplasty (Molloy / Froimson)

10-10:30am OITE questions

CASES: Valgus TKA, Unicompartmental knee

JANUARY 19, 2010 (NA5-03/04)
Block 18 – Pediatric Orthopaedics
7-8:00am Metabolic Bone Disease/Chap 23 (Resident / Ballock / Levine)

8-9:00am Pediatric Disorders of Bone Metabolism (Gurd)
  • Identify common metabolic bone conditions in childhood
  • Understand the indications for treatment in these disorders, pharmacotherapy, surgery
  • Understand the principles osteotomy, epiphyseodesis, and stapling

9-10:00am Bowlegs & Knocknees (Ballock)

10-10:30am OITE questions

Cases should include: Blounts disease, rickets, osteogenesis imperfecta, juvenile osteoporosis, toxicities

JANUARY 29, 2010 (NA5-03/04)
Block 19 – Adult Reconstruction
7-8:00am Biomaterials (Resident/Bauer)

8-9:00am Revision Total Knee Arthroplasty (Matejczyk / Brooks / Molloy)
  • Restoring Joint Line
  • Use of offsets and stems

9-10:00am Management of Bone Loss on TKA (Matejczyk / Brooks / Molloy)

10-10:30am OITE questions

CASES: Hinged TKA, TS TKS

FEBRUARY 2, 2010 (NA5-03/04)
Block 20 – Pediatric Orthopaedics
7-8:00am Form & Function of Skeletal Muscle/Chap 12 (Resident/Chemali)

8-9:00am Pediatric & Adolescent Spine Deformity (Kuivila / Goodwin)
  • Identify common pediatric spine deformities (Scoliosis, kyphosis, spondylolisthesis)
  • Understand the indications for bracing and surgical treatment
  • Understand the rationale for both fusion and non-fusion treatments
  • Understand the work-up and treatment rationale for back pain in children
9-10:00am  Back Pain in Children (Gurd / Goodwin / Kuivila)

10-10:30am  OITE questions

Cases should include idiopathic scoliosis, congenital scoliosis, juvenile scoliosis, kyphosis, spondylolisthesis, spondylolysis, Scheuermann’s kyphosis

**FEBRUARY 9, 2010 (NA5-03/04)**  
**Block 21 - Hand**

7-8:00am  Review of Peripheral Nerve Basic Science (Evans)

8-9:00am  Electrodiagnostics (Evans)

9-10:00am  Upper Extremity Tendon Transfers (Evans)

10-10:30am  OITE questions/Cases

**FEBRUARY 17, 2010 (NA1-140)**  
**Block 22 – Shoulder**

7-8:00am  Tendon and Ligament Tissue Engineering (Iannotti)

- Strategies for use of scaffolds, gene therapy, growth factors and cell based therapies for soft tissue repair
- Biomechanical requirements for functional tissue engineering

8-9:00am  Diagnostic Imaging of the Shoulder (Schils)

- Plain radiographs of the shoulder – Why do them?
- Advanced modalities of shoulder imaging
  - CT scanning – new technologies
  - MRI scanning
  - Ultrasonography of the shoulder
  - Nuclear scanning

9-10:00am  Case Presentations (Resident / Iannotti / Schils)

10-10:30am  OITE questions

Cases from the residents should include CT scans of glenoid erosion, MRI’s and MR arthrograms of labral and biceps disease of the shoulder.

**FEBRUARY 23, 2010 (NA5-03/04)**  
**Block 23 – Hand**

7-8:00am  Review of Peripheral Nerve Basic Science (Resident/Evans)

8-9:00am  Vascular Disorders (Evans)

- Arterial
- Venous
• Vasospastic

9-10:00am Arthritis Hand (Lawton)
  • CMC
  • MP
  • IP
  • Arthroplasty, arthrodesis

10-10:30am OITE questions/Cases

MARCH 2, 2010 (NA5-03/04)
Block 26 – Foot & Ankle
7-8:00am Kinesiology (Resident/van den Bogart)
8-9:00am Ankle Fractures (J Sferra)
9-10:00am Calcaneus, Talus & Midfoot Fractures (Sferra)
10-10:30am OITE questions

Cases from the residents should include talus fractures and ankle fractures.

MARCH 9, 2010 (NA5-03/04)
Block 25 – Spine (Adult)
7-8:00am Rheumatoid Arthritis/Chap 22 (Resident/Husni)
8-9:00am Perioperative Management of Patients with Rheumatic Disease (Husni)
9-10:00am Seronegative Spondyloarthropathies (I Lieberman)
10-10:30am OITE questions/Cases

MARCH 10-13, 2010 – AAOS

MARCH 17, 2010 (NA1-140)
Block 24 – Shoulder
7-8:00am Osteoarthritis/Chap 22 (Resident/McCarron)
8-9:00am AC and SC Joint Injuries (Anderson)
  • Classification of AC and SC joint injuries
  • Management options in AC SC joint injuries
  • Outcome analysis in AC and SC joint injuries
9-10:00am Arthroscopic Management of Shoulder Pathology (McCarron)
  • Portal considerations
  • Normal arthroscopic anatomy
  • Instability patterns: Bankart, ALPSA lesions
  • Cuff pathology and considerations for repair
10-10:30am OITE questions
Cases from the residents should include AC joint separations, AC arthritis and osteolysis of the clavicle, clavicle fracture.

**MARCH 23, 2010 (NA5-03/04)**
**Block 27 – Spine (Adult)**
7-8:00am Neuromuscular Diseases/Chap 24 (Resident/Chemali)
8-9:00am Vertebral Osteomyelitis (McLain)
9-10:00am Postoperative & Disc Space Infections (McLain)
10-10:30am OITE questions/Cases

**MARCH 30, 2010 (NA5-03/04)**
**Block 28 – Foot & Ankle**
7-8:00am Evidence-Based Orthopaedics/Chap 5 pp 87-96 (Resident/Andrish)
8-9:00am Sports Injuries of the Foot and Ankle (B Donley)
  • Osteochondral lesions of the talus
  • Lisfranc sprains
9-10:00am Sports Injuries of the Foot & Ankle (Donley)
  • Fifth Metatarsal fractures
  • Syndesmotic injuries
10-10:30am OITE questions

Cases from the residents should include osteochondral lesions of the talus and 5th metatarsal fractures.

**APRIL 6, 2010 (NA5-03/04)**
**Block 29 – Tumor/Trauma**
7-8:00am The Clinical Side of Osteoporosis (A Licata)
  • Clinical factors associated with osteoporosis
  • Bone density analysis & interpretation of data
  • Other demineralizing bone diseases that mimic osteoporosis
  • Risk factors for osteoporosis
8-9:00am Paget's Disease (M Joyce)
  • Pathophysiology
  • Pre-op & Post-op treatment
9-10:00am Cases: Paget’s disease (Joyce)
10-10:30am OITE questions

**APRIL 13, 2010 (NA5-03/04)**
Block 30 – Sports Medicine
7-8:00am Cartilage Tissue Engineering (A Calabro)
  • Understand the biology of tissue engineering
  • Understand the limitations of current technology
  • Understand the difference between hyaline-like and hyaline cartilage

8-9:00am Cartilage Restoration: ACI, OATS, Microfracture (Miniacci)
9-10:00am Cartilage Restoration Cases (Miniacci)
10-10:30am OITE questions

Resident Case Presentations: Microfracture, OCT, ACI, and new technologies.

APRIL 20, 2010 (NA5-03/04)
Block 31 – Tumor/Trauma
7-8:00am Medical Treatment of Metabolic Bone Disease (Deal)

8-9:00am Metabolic Bone Disease from an Orthopaedic Perspective (M Joyce)
  • Peri-operative considerations
  • Intra-operative considerations

9-10:00am Cases: Metabolic Bone Disease (Joyce)
10-10:30am OITE questions

Resident Case Presentations: Osteomalacia

APRIL 27, 2010 (NA5-03/04)
Block 32 – Sports Medicine

ARTHROSCOPY LAB – KNEE (Saluan)


MAY 7, 2010 (NA5-03/04)
Block 33 – Adult Reconstruction
7-8:00am The Biologic Response to Orthopaedic Implants (Resident/Muschler)

8-9:00am Knee Osteotomy/Fusion (Brooks / Walker / Moore / Knothe)
  • The lateral parapatellar approach
  • Mid vastus and subvastus approach to TKA
  • Use of intramedullary device and Ex-fix for fusion
  • Indications for knee fusion and osteotomy

9-10:00am Case presentations (Brooks / Walker / Moore / Knothe)
10-10:30am OITE questions
CASES: Fusion with IM Nail and Ex-Fix, MIS TKA

MAY 11, 2010 (NA5-03/04)
Block 34 – Pediatric Orthopaedics
7-8:00am The Genetic Basis of Disorders with Orthopaedic Manifestations/Chap 2
(Resident / Ballock / Kuivila)

8-9:00am Muscular Dystrophies and Myopathies (A Gurd / D Gurd)
  • Identify the common muscular dystrophies and myopathies
  • Understand the common orthopaedic manifestations of these disorders
  • Understand the indications for surgical and non-surgical treatment

9-10:00am Cases (Gurd / Goodwin / Kuivila)

10-10:30am OITE questions

Cases should include: Duchenne, Becker, Myotonic, SMA

MAY 18, 2010 (NA5-03/04)
Block 35 – Hand
7-8:00am Upper Extremity Biomechanics – Shoulder & Elbow (Resident/Evans)

8-9:00am Distal Humerus Fractures (Lawton)

9-10:00am Radial Head Fractures (Lawton)

10-10:30am OITE questions/Cases

MAY 25, 2010 (NA5-03/04)
Block 36 – Pediatric Orthopaedics
7-8:00am Resident Intro to Coding (Barnes)

8-9:00am Upper Extremity Trauma – Shoulder & Elbow (Goodwin / D Gurd)
  • Identify common fractures in the child’s upper extremity
  • Understand the rationale and indications for surgical treatment
  • Understand the nature of physeal fractures and potential complications

9-10:00am Upper Extremity Trauma – Forearm & Hand (Goodwin / D Gurd)

10-10:30am OITE questions

Cases to include all upper extremity fractures – humerus, forearm, and elbow

JUNE 8, 2010 (NA5-03/04)
Block 37 – Spine (Adult)
7-8:00am Pain Therapy (Mazanec)

8-9:00am Dural Injury and Other Complications (G Bell / McLain)
9-10:00am Failed Back (D Orr)

10-10:30am OITE questions/Cases

**JUNE 15, 2010 (NA5-03/04)**

**Block 38 – Tumor/Trauma**

7-8:00am Molecular Basis of Cancer/Chap 21 (Resident/Lietman)

8-9:00am Biopsy/Staging of Tumors/ Management Osteosarcoma/Ewings (Joyce / Lietman)

9-10:00am Limb Salvage (Mark / Lietman)
  - In what situations should limb salvage be attempted?
  - Specific limb salvage techniques

10-10:30am OITE questions

**Resident Case Presentations:** Osteosarcoma, Ewing’s cases

**JUNE 22, 2010**

**Block 39 – Sports Medicine**

7-8:00am Evidence-Based Orthopaedics/Chap 5 pp 97-100 (Resident/Bershadsky/Andrish)

8-9:00am Auto/Allograft Materials for Isolated/Multi-Ligament Knee Injury (Miniaci)
  - Graft options for reconstruction
  - Fixation issues
  - Timing and consideration for intra and extra (collateral) repair reconstruction

9-10:00am Isolated/Multi-Ligament Knee Injury (Parker)
  - Surgical algorithm for treatment of knee ligaments
  - Clinical algorithm for evaluation of multi ligament injured knee

10-10:30am OITE questions

**Resident Case Presentations:** Isolated ligament acute/chronic repair, MVA dislocated knee, athletic knee dislocation.