

## University of Virginia Department of Orthopaedic Surgery Third Year Medical Student Rotation



Welcome from the Clerkship Director! Every resident and attending with whom you will work over the next two weeks was in your shoes at one point. We all remember our first day on a new service not knowing where to go or what to expect. While some of us had an interest in Orthopaedics going into medical school, many of us did not know what we wanted to do until our first Orthopaedic rotation. Now most of us cannot imagine doing anything else. You will be rotating onto a very busy service with a lot going on, but we hope that we are able to provide you a productive experience that will introduce you to the field of Orthopaedic surgery.

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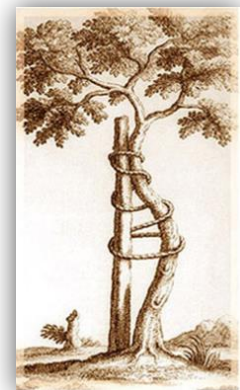
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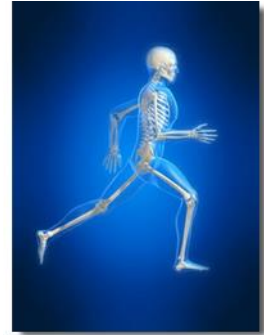
### What is Orthopaedic Surgery?

Orthopaedic Surgery is a surgical sub-specialty focusing on the musculoskeletal system. The term “Orthopaedics” was coined in 1741 by French Pediatrician Nicholas Andry as a neologism from the Greek roots “orthos” which means “straight” and “pais” which means “child”. As the name implies, correcting pediatric deformities formed the roots of Orthopaedic surgery, but the field has advanced to incorporate the diagnosis and treatment of conditions, injuries, and diseases of the bones, joints, tendons, ligaments, muscles, and nerves in patients of all ages. Orthopaedic surgeons now treat all sprains, strains, fractures, dislocations, deformities, and degenerative conditions of the extremities, pelvis, and spine.



## Orthopaedic Sub-specialties

While some Orthopaedic surgeons practice “General” Orthopaedics and treat the entire spectrum of musculoskeletal complaints, there is a trend toward sub-specialization to meet the increasing complexities within the field of Orthopaedic surgery. In most academic centers and tertiary referral centers such as U.Va., Orthopaedic surgeons have trained in post-residency fellowships to narrow and refine their field of practice. However, all Orthopaedic surgeons have general training and may consequently diagnose and treat a variety of injuries and conditions. Orthopaedic sub-specialties with the specific conditions treated are listed below along with the attendings for each service.



- **Adult Reconstruction (a.k.a. “Joints” or “Joint Replacement):** arthritic conditions of the hip and knee including primary and revision hip and knee replacements
  - o Drs. Thomas Brown (Division Head), James Browne, and Quanjun Cui
- **Foot and Ankle:** injuries and disorders of the foot and ankle to include sports injuries, arthritis, tendon dysfunction / ruptures, flatfoot deformity, adolescent / congenital deformity, fractures / dislocations, diabetic / Charcot deformity, and symptomatic forefoot deformity
  - o Drs. Joe Park (Division Head), M. Truitt Cooper, and Venkat Perumal
- **Hand and Upper Extremity:** injuries and disorders of the hand, wrist, and elbow including sports injuries, upper extremity trauma such as fractures and dislocations, nerve compression such as carpal tunnel and cubital tunnel syndrome, tendon, ligament, and neurovascular injuries, degenerative conditions of the elbow, wrist, and hand, and congenital hand differences
  - o Drs. A. Bobby Chhabra (Division Head), Rashard Dacus, Nicole Deal, and Aaron Freilich
- **Oncology:** benign and malignant tumors of the soft tissues and bones of the extremities and pelvis
  - o Dr. Greg Domson
- **Pediatric Orthopaedics:** musculoskeletal conditions and injuries in neonates, children, and adolescent to include broken bones, congenital and development deformities, musculoskeletal manifestations of cerebral palsy, myelodysplasia, and muscular dystrophies, and pediatric spine conditions such as scoliosis
  - o Drs. Mark Abel (Division Head), Mark Romness, and Leigh Ann Lather
- **Spine:** traumatic and degenerative conditions of the cervical, thoracic, and lumbo-sacral spine, spinal cord compression and spinal stenosis, nerve root compression and radiculopathy, and disc disease
  - o Drs. Frank Shen (Division Head), Hamid Hassanzadeh, Anuj Singla, and Adam Shimer
- **Orthopaedic Sports Medicine:** athletic and non-athletic injuries and conditions in patients of all ages to include rotator cuff tears, shoulder instability and labral tears, meniscus and cartilage damage, ACL injuries, knee ligament tears, and a variety of other injuries of the shoulder, hip, and knee
  - o Drs. Mark Miller (Division Head), Stephen Brockmeier, Eric Carson, David Diduch, and Winston Gwathmey
- **Orthopaedic Trauma:** traumatic musculoskeletal injuries to include complex fractures and dislocations of the extremities and pelvis
  - o Drs. David Weiss (Division Head), David Kahler, and Seth Yarboro

## UVA Orthopaedic Surgery Residency

With over 70 years of history, our residency is the lifeblood of our program and is the core of our educational program. Five residents per year train in our five year program. We also partner with the Orthopaedics Department at Carillion Roanoke Memorial Hospital, and at any given time, four residents (two PGY-3 and two PGY-4) are rotating two hours down the road in Roanoke, VA. Here in Charlottesville, our residents rotate through our sub-specialty services on 10 week blocks with a general arrangement of an upper level (PGY-4 or 5) paired with a junior level (PGY-2 or 3) on each service. Our residents are outstanding resources and educators for our medical students.



Our educational curriculum is designed for our residency training program. In addition to clinical and surgical experience, we have a comprehensive conference and didactic schedule that serves as the foundation of our educational program. Medical students rotating with us are expected to attend and participate in daily conferences.

Conference Schedule			
Day	Conference	Location	Subject
<b>Monday</b> 615 - 715 am	Fracture Conference	Moss Auditorium (1 <sup>st</sup> Floor Hospital)	Case based conference covering fractures and dislocations
<b>Tuesday</b> 615 – 715 am	Core Curriculum	OR Classroom (2 <sup>nd</sup> Floor Hospital)	Systematic lecture series covering the entire spectrum of Orthopaedic topics
<b>Wednesday</b> 7 – 845 am	Grand Rounds	Orthopaedic Office at Fontaine (3 <sup>rd</sup> Floor)	Quality assurance conference, Visiting Professors, Faculty-led conferences
<b>Thursday</b> 630 – 715 am	Service Specific	Location variable	Sub-specialty conference
<b>Friday</b> 630 – 715 am	Basic Science / Anatomy	6 Central classroom (6 <sup>th</sup> Floor Hospital)	Musculoskeletal anatomy, physiology, and pathophysiology

## Third Year Medical Student Rotation

You will be assigned to one sub-specialty service for the duration of the 2 weeks that you rotate with us. While you may request a specific service, we may not be able to fulfill all requests depending on the time of year and availability. You will receive an email the week before your scheduled rotation from Mindy Franke. If you do not receive an email by the Friday before the start of your rotation, please email Mindy ([mcf3f@virginia.edu](mailto:mcf3f@virginia.edu)) or call her at (434) 243.0265. If Mindy is unavailable, please email the clerkship director, Winston Gwathmey, at [fwg7d@virginia.edu](mailto:fwg7d@virginia.edu) to receive instructions. In her email, Mindy will identify the current residents on the service along with their PIC numbers and email addresses. Reach out to the senior resident on service to introduce yourself and coordinate the first day on the rotation. The rotation is meant to be flexible to accommodate each student's interest. Please work with your resident to create a schedule that maximizes your experience.

At the start of your rotation on Monday morning, plan to attend fracture conference at 6:15am at Moss Auditorium on the first floor of the University Hospital. There you will meet your resident who can introduce you to other members of the service.

### **Expectations of a third year medical student**

Third years students will rotate through our outpatient clinics and participate in surgical cases at the University Hospital main operating rooms as well as the out-patient operating rooms in the Battle Building.

While we do not expect the average third year student to have a strong Orthopaedic fund of knowledge coming into this rotation, we do expect that the student will have done some introductory reading and reviewed anatomy prior to our rotation. Anatomy is truly the foundation of Orthopaedic surgery and all students will be expected to be able to discuss musculoskeletal anatomy in some detail. No one will expect a medical student to be able to outline the fixation principles for rotator cuff repair, but a fundamental knowledge of the muscles that make up the rotator cuff along with their individual innervations is expected. Be inquisitive during your rotation to generate productive discussions and augment your education. Capable and interested students are frequently given increasingly involved roles during the rotation.

**DUTY HOURS: The University of Virginia Department of Orthopaedic Surgery adheres to all DUTY HOUR restrictions for medical students, residents, and fellows at all times. There are no exceptions. If at any time you feel pressured to violate this policy, please notify either Dr. Chhabra, Dr. Dacus, Dr. Gwathmey, or Mindy Franke so we can address the situation immediately.**

#### *Clinic:*

In the clinic, plan on shadowing the attending or senior resident initially. Introduce yourself to the attending at the start of the day and ask how you can help in the clinic. Also introduce yourself to the clinic staff as they will be able to direct you during clinic to make the day more efficient and productive. Much of the teaching in clinic will be indirect through clinician-patient interaction, but there is often time between patients to review specific topics or interesting findings. There is also extensive attending-resident discussions in which you should participate. As the rotation progresses, there may be opportunities for a third year student to take the history and perform portions of the physical examination so that the patient can be presented to the attending.

#### *Operating room:*

All students who rotate on Orthopaedic surgery will be expected to have experience with sterile technique and operating room etiquette. If you have never been in the operating room prior to this rotation, please inform your chief resident so that you may be appropriately oriented. Also let your resident know what you are comfortable doing in the operating room so that you may be included in the case as appropriate. The more we can involve you in the case, the more you will get out of the experience.

## Rotation Locations

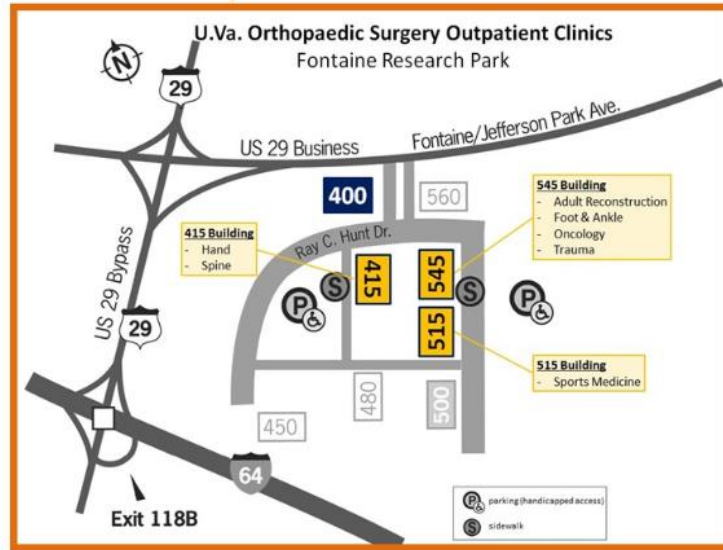
### Clinic

Adult Orthopaedic clinics are all located at Fontaine Research Park off of Fontaine Avenue on Ray C. Hunt Drive. A list of subspecialty clinics and a map is below.

415 Building:  
Hand (3<sup>rd</sup> Floor)  
Spine (3<sup>rd</sup> Floor)

515 Building:  
Sports Medicine

545 Building:  
Adult Reconstruction  
Foot and Ankle  
Oncology  
Trauma



Pediatric Orthopaedics is located on the 4<sup>th</sup> Floor of the Battle Building at 1204 West Main Street.

### Operating Room

Surgery takes place in the Main OR on the second floor of the University Hospital or the Battle Building. In general, in-patient cases (joint replacement, fracture surgery, spine surgery, etc.) takes place at the main OR while out-patient cases (arthroscopy, hand surgery, foot and ankle surgery, etc.) takes place at the out-patient surgery center in the basement of the Battle Building.

### Evaluations

Written evaluations will be completed at the end of the rotation by the chief resident and attending on your service. Mindy Franke will coordinate completion of these evaluations. If you would like direct feedback at the end of your rotation, please arrange with your chief resident or attending.

## Resources

### On-line:

American Academy of Orthopaedic Surgery ([www.aaos.org](http://www.aaos.org))

AAOS Orthopaedic Info ([www.orthoinfo.org](http://www.orthoinfo.org))

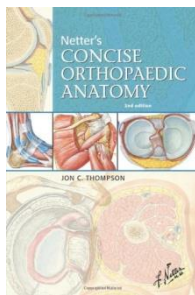
UVA Orthopaedic Surgery ([www.uvaortho.com](http://www.uvaortho.com))

Skeletal Trauma Radiology (<http://www.med-ed.virginia.edu/courses/rad/ext/index.html>)

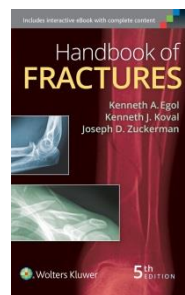
Orthobullets ([www.orthobullets.com](http://www.orthobullets.com))

Wheeless' Textbook of Orthopaedics ([www.wheelsonline.com](http://www.wheelsonline.com))

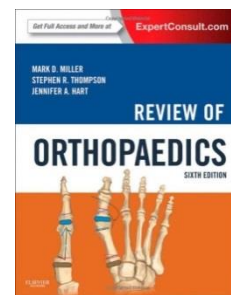
### Books



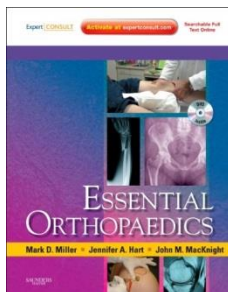
Netter's Concise Orthopaedic Anatomy



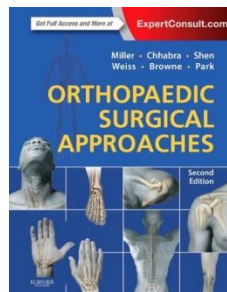
Handbook of Fractures



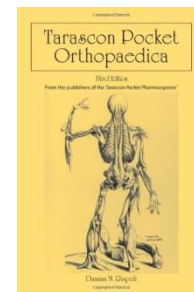
Miller's Review of Orthopaedics



Essential Orthopaedics



Orthopaedic Surgical Approaches



Tarascon Pocket Orthopaedics