Department of Orthopaedic Surgery

Orthopaedic surgery is concerned with the injuries, diseases and conditions of the musculoskeletal system. The WUSM III rotation in Musculoskeletal Surgery & Medicine exposes the student to multiple aspects of orthopaedic surgery, including caring for patients in the emergency department and the operating room as well as clinical practice in the emergency department and the outpatient and inpatient wards.

Website: http://www.ortho.wustl.edu

Degrees & Requirements

Although the Department of Orthopaedic Surgery does not offer its own degree, some of the department's courses are open to students in the MD and MSTP (MD/PhD) programs. Further information about the MD and MSTP degrees can be found in the Degrees & Programs of the School of Medicine (http://bulletin.wustl.edu/medicine/degrees) section of this Bulletin.

Research

M95 Surgery 900

Various orthopaedic surgery research opportunities are available with the following faculty attendings. If interested, please contact the Education Office at 314-747-2543, email the orthopaedic surgery department (orthsurg@wudosis.wustl.edu) or contact the faculty member directly.

- Yousef Abu-Amer, PhD
- Alexander Aleem, MD
- Robert L. Barrack, MD
- Robert Brophy, MD
- Jacob M. Buchowski, MD, MS
- Ryan Calfee, MD
- Aaron Chamberlain, MD
- Cara A. Cipriano, MD
- John Clohisy, MD
- Matthew Dobbs, MD
- Charles A. Goldfarb, MD
- Farshid Guilak, PhD
- Munish Gupta, MD
- Pooya Hosseinizadeh, MD
- Michael Kelly, MD
- Sandra Klein, MD
- Charles Lawrie, MD
- Scott J. Luhmann, MD
- Matthew J. Matava, MD
- Audrey McAlinden, PhD
- Chris McAndrew, MD
- Mark Miller, MD
- Jeff Nepple, MD
- Regis O'Keefe, MD
- Nathan Olafsen, MD
- Linda Sandell, PhD
- Perry Schoenecker, MD
- Matt Silva, PhD
- Matthew Smith, MD
- Lindley B. Wall, MD
- Rick Wright, MD

Faculty

Department Chair
Regis O'Keefe, MD, PhD

Visit our website for more information about our faculty (http://www.ortho.wustl.edu/content/Patient-Care/2295/Find-a-Physician/Physician-Directory.aspx) and their appointments.

A

Yousef Abu-Amer, PHD, MS
Professor of Orthopaedic Surgery (primary appointment)
Professor of Cell Biology and Physiology
BS Hebrew University 1985

Muyibat A Adelani, MD
Assistant Professor of Orthopaedic Surgery (primary appointment)
MD Vanderbilt University 2008

Alexander William Aleem, MD
Assistant Professor of Orthopaedic Surgery (primary appointment)
BS Johns Hopkins University 2006

B

Jonathon David Backus, MD
Assistant Professor of Orthopaedic Surgery (Pending Executive Faculty Approval) (primary appointment)
BS University of Urbana IL 2005

Robert L Barrack, MD
Charles F and Joanne Knight Distinguished Professor of Orthopaedic Surgery (primary appointment)
MD Vanderbilt University 1980

Donald R Bassman, MD
Instructor in Clinical Orthopaedic Surgery (primary appointment)
MD Washington Univ in St. Louis 1975
BA Washington Univ in St. Louis 1971

Marschall Brantling Berkes, MD
Assistant Professor of Orthopaedic Surgery (primary appointment)
MD Vanderbilt University 2008

Terra Rupert Blatnik, MD
Assistant Professor of Orthopaedic Surgery (primary appointment)
MD Case Western Reserve Univ 2007
BS Allegheny College 2003

Ljiljana Bogunovic, MD
Assistant Professor of Orthopaedic Surgery (primary appointment)
MD Cornell University 2009

Martin I Boyer, MS, MD
Carol B and Jerome T Loeb Professor of Orthopaedic Surgery (primary appointment)
MS University of Toronto 1993
MD University of Toronto 1988

Keith Happ Bridwell, MD
J Albert Key Distinguished Professor of Orthopaedic Surgery (primary appointment)
Professor of Neurological Surgery
BA Washington Univ in St. Louis 1973
MD Washington Univ in St. Louis 1977

David Micah Brogan, BE, MD, MS, MS1
Assistant Professor of Orthopaedic Surgery (primary appointment)
BE Vanderbilt University 2003
MD Washington Univ in St. Louis 2009
MS University College London 2004
MS1 University of London 2005

Robert Henry Brophy IV, MD, MS
Professor of Orthopaedic Surgery (primary appointment)
MD Washington Univ in St. Louis 2001
BS Stanford University 1994
MS Stanford University 1995
BA Stanford University 1994

Jacob M Buchowski, MD, MS
Lawrence G and Elizabeth A Lenke Distinguished Professor of Orthopaedic Surgery (primary appointment)
Professor of Neurological Surgery
MD Johns Hopkins University 2000
MS Yale University 1996
BS Yale University 1996

Ryan Patrick Calfee, MD

Associate Professor of Orthopaedic Surgery (primary appointment)
BS University of Virginia 1997
MD Washington Univ in St. Louis 2001

Eric Ward Carson, MD
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MD University of Illinois Chicago 1989
BS Tufts University 1982

Aaron Mark Chamberlain, B MUS, MD
Associate Professor of Orthopaedic Surgery (primary appointment)
B MUS University of Utah 2002
MD University of CA San Francisco 2006

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MD Washington Univ in St. Louis 2013

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BS Williams College 2003
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BA Northwestern University 1985
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Assistant Professor of Orthopaedic Surgery (primary appointment)
Assistant Professor of Neurology
BS University of Iowa 2004
DOST Des Moines University 2009
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Associate Professor of Orthopaedic Surgery (Pending Executive Faculty Approval) (primary appointment)

Laura C DePalma, DOST
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Matthew Barrett Dobbs, MD
Dr Asa C and Mrs Dorothy W Jones Professorship in Orthopaedic Surgery (primary appointment)
BS University of Notre Dame 1991
MD University of Iowa 1995

Christopher J. Dy, MD, M PH
Assistant Professor of Orthopaedic Surgery (primary appointment)
BS University of Miami 2004
MD University of Miami 2008
M PH University of Miami 2008

E

Kelly Eileen Estes, MS, MD, MPH
Assistant Professor of Orthopaedic Surgery (primary appointment)
Assistant Professor of Emergency Medicine in Medicine
BS Kalamazoo College 2005
MS Columbia University 2016
MD Wright State University 2012
MPH Wright State University 2012

Lawrence Glennon Evans Jr
Instructor in Orthopaedic Surgery (primary appointment)

F

Roberta Faccio, PHD
Professor of Orthopaedic Surgery (primary appointment)
Professor of Cell Biology and Physiology
PHD University of Bari 2000

G

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Professor of Orthopaedic Surgery (primary appointment)
MD University of Tennessee 1969
BA University of North Carolina 1965

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MD University of Alabama 1996
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Professor of Developmental Biology
BS Rensselaer Poly Institute 1985
MS Rensselaer Poly Institute 1987
MPH Columbia University 1990
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MD Northwestern University Med 1986

H

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BS Univ of Wisconsin Madison 1994
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MD Saint Louis University 2013

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BS Truman State University 1998

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Associate Professor of Neurology
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J

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MD Georgetown University 1980
BA Duke University 1976

K

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Assistant Professor of Neurological Surgery
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Associate Professor of Neurological Surgery
BS Boston College 1999
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MD Washington Univ in St. Louis 1983  
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MD Loyola University Chicago 1998  
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MD University of Minnesota 1991

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MD Tulane University 1983

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MD Case Western Reserve Univ 1981

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Professor of Orthopaedic Surgery (primary appointment)  
Professor of Physical Therapy  
BA University of MO Kansas City 1986  
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Associate Professor of Cell Biology and Physiology  
PHD University of London 1998

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BS Clemson University 2004  
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PHD Case Western Reserve Univ 2011

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Associate Professor of Orthopaedic Surgery (primary appointment)  
BS Dartmouth College 1999  
MD Loyola University Chicago 2003

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Professor of Orthopaedic Surgery (primary appointment)  
BS St Johns University 1978  
MD University of Minnesota 1982

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BS Texas A&M University 1991  
MD University of Texas Galveston 1995

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MD Vanderbilt University 1993  
BS Washington Univ in St. Louis 1988

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BA Rice University 2001  
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MD Jefferson Medical College 1977  
BA University of Chicago 1973

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Assistant Professor of Orthopaedic Surgery (primary appointment)  
MD Harvard University 2008  
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BS Truman State University 2003  
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MD University of North Carolina 2002  
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Fred C Reynolds Professor of Orthopaedic Surgery (primary appointment)
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MD Harvard University 1985
PHD University of Rochester 2000
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MD Universidad del Buenos Aires 2000

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BS University of Bombay 1985
PHD University of Pittsburgh 1993
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MD Saint Louis University 1975

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Professor of Neurology
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BA Drury College 1987

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PHD Freie University 2008

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BS University of Maryland 2007
PHD University of North Carolina 2013
MD Johns Hopkins University 2009

Perry Lee Schoenecker, MD
Professor of Orthopaedic Surgery (primary appointment)
BS Univ of Wisconsin Madison 1964
MD Univ of Wisconsin Madison 1968

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Instructor in Orthopaedic Surgery (primary appointment)
MD Capital U of Medical Sciences 1991
MS Chinese Academy of Med Science 1996
PHD University of Konstanz 2002

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BS Nanjing University 2005
PHD University of Rochester 2012
MS University of Rochester 2011

Matthew J Silva, ME, PHD
Julia and Walter R Peterson Professor of Orthopaedic Research (primary appointment)
Assistant Professor of Biomedical Engineering
ME Cornell University 1984
BS Cornell University 1982
PHD Mass Inst of Technology (MIT) 1996

Scott A. Simpson, MD
Assistant Professor of Orthopedic Surgery (primary appointment)
Assistant Professor of Neurology
BA Columbia University 2005
MD University of Rochester 2010

Matthew Vernon Smith, MD
Associate Professor of Orthopaedic Surgery (primary appointment)
MD Virginia Comm University 2002

Gaurav Swarnkar, PHD
Instructor in Orthopaedic Surgery (primary appointment)
PHD CENTRAL DRUG RESEARCH INSTITUT 2011

Chi-Tsai Tang, MD
Assistant Professor of Orthopaedic Surgery (primary appointment)
Assistant Professor of Neurology
MD University of North Carolina 2004

Simon Tang, PHD, MS
Assistant Professor of Orthopaedic Surgery (primary appointment)
BS University of CA Berkeley 2003
PHD Rensselaer Poly Institute 2007
MS Rensselaer Poly Institute 2005

Lindley Bevelle Wall, MD
Associate Professor of Orthopaedic Surgery (primary appointment)
the elective, students should have gained a basic knowledge
and weekly didactic sessions/conferences. At the completion of
participate in surgical cases, outpatient clinics, inpatient care,
orthopedics, specifically foot and ankle surgery. Students will
looking to further their knowledge of and experience in
This four-week clinical elective is available to medical students
Ankle

M96 Ortho 810B Orthopedic Surgery Subinternship — Foot/
Ankle
This four-week clinical elective is available to medical students
looking to further their knowledge of and experience in
orthopedics, specifically foot and ankle surgery. Students will
participate in surgical cases, outpatient clinics, inpatient care,
and weekly didactic sessions/conferences. At the completion of
the elective, students should have gained a basic knowledge
of foot and ankle problems as well as their operative and
nonoperative care.

M96 Ortho 820A Orthopedic Surgery Subinternship — Hand
Clinical elective available during which time the student will
work with attending surgeons, primarily at Barnes-Jewish
Center for Advanced Medicine. The service includes care of
adult patients with traumatic, sports (arthroscopy), nerve, and
degenerative disease. Activities will include participation in
outpatient procedures, attendance at designated office hours, attendance at orthopedic conferences.

Courses
Visit online course listings to view offerings for M96 Ortho

M96 Ortho 801A Orthopedic Surgery Subinternship —
Sports
This clinical elective is available for four weeks during which the
student participates in orthopedic conferences, outpatient clinics,
surgical cases, and patient rounds on the Sports Medicine
service.

M96 Ortho 801B Orthopedic Surgery Subinternship —
Sports
This clinical elective is available for four weeks during which the
student participates in orthopedic conferences, outpatient clinics,
surgical cases, and patient rounds on the Sports Medicine
service.

M96 Ortho 801C Orthopedic Surgery Subinternship —
Sports
This clinical elective is available for four weeks during which the
student participates in orthopedic conferences, outpatient clinics,
surgical cases, and patient rounds on the Sports Medicine
service.

M96 Ortho 810A Orthopedic Surgery Subinternship — Foot/
Ankle
This four-week clinical elective is available to medical students
looking to further their knowledge of and experience in
orthopedics, specifically foot and ankle surgery. Students will
participate in surgical cases, outpatient clinics, inpatient care,
and weekly didactic sessions/conferences. At the completion of
the elective, students should have gained a basic knowledge

M96 Ortho 820B Orthopedic Surgery Subinternship — Hand
Clinical elective available during which time the student will
work with attending surgeons, primarily at Barnes-Jewish
Hospital. Activities will include participation in the care of hospitalized
inpatients, participation in inpatient and outpatient procedures,
attendance at designated office hours, attendance at orthopedic conferences.

M96 Ortho 823A Orthopedic Surgery Subinternship — Hand/
Pediatric Hand
Clinical elective available during which time the student will
work with attending surgeons, primarily at Barnes-Jewish
Hospital, St. Louis Children's Hospital, and Shriners Hospital.
The service includes care of adult and pediatric patients
with congenital, traumatic, sports (arthroscopy), nerve, and
degenerative disease. Activities will include participation in
outpatient procedures, attendance at faculty clinic office hours, attendance at orthopedic conferences, and dissection of upper-
extrremity anatomical specimens.

M96 Ortho 823B Orthopedic Surgery Subinternship — Hand/
Pediatric Hand
Clinical elective available during which time the student will
work with attending surgeons, primarily at St. Louis Children's
Hospital, Shriners Hospital, Chesterfield; Center for Advanced
Medicine; and St. Louis Children's Specialty Care Center.
The service includes care of adult and pediatric patients
with congenital, traumatic, sports (arthroscopy), nerve, and
degenerative disease. Activities will include participation in
outpatient procedures, attendance at faculty clinic office hours, attendance at orthopedic conferences, and dissection of upper-
extrremity anatomical specimens.

M96 Ortho 825A Orthopedic Surgery Subinternship — Hand/
Nerve
Clinical elective available during which time the student will work
with attending surgeons, primarily at Barnes-Jewish Hospital,
St. Louis Children's Hospital, and Washington University
Orthopedics at Center for Advanced Medicine and South
County. The service includes care of adult and pediatric patients with traumatic, sports (arthroscopy), nerve, and degenerative disease. The rotation will cover general hand surgery as well as brachial plexus and peripheral nerve surgery. Activities will include participation in outpatient procedures, attendance at faculty clinic office hours, and attendance at orthopedic conferences.

**M96 Ortho 827A Orthopedic Surgery Subinternship — Hand/Microsurgery**
Clinical elective available during which time the student will work with attending surgeons, primarily at Barnes-Jewish Hospital, Center for Advanced Medicine, and the Chesterfield office. The service includes care of adult and pediatric patients with traumatic, sports (arthroscopy), nerve, and degenerative disease. Activities will include participation in outpatient procedures, attendance at faculty clinic office hours, and attendance at orthopedic conferences.

**M96 Ortho 830A Orthopedic Surgery Subinternship — Shoulder/Elbow**
Clinical elective available during which time the student will work with attending surgeons, primarily at Barnes-Jewish Hospital. Activities will include participation in the care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated attending office hours, attendance at designated orthopedic conferences, and dissection of upper-extremity anatomical specimens.

**M96 Ortho 840A Orthopedic Surgery Subinternship — Trauma**
Clinical elective available for a four-week period during which time the student will work in orthopedic trauma at Barnes-Jewish Hospital. The student will work with a team of attendings, residents, physician assistants, and nurse practitioners to provide care for orthopedic trauma patients. Activities include participation in the care of hospitalized inpatients, inpatient surgical procedures, outpatient office visits, and daily conferences.

**M96 Ortho 850A Orthopedic Surgery Subinternship — Pediatrics**
Clinical elective available for four weeks during which time the student will work with attending surgeons, primarily at St. Louis Children's Hospital, observing and assisting with outpatient and inpatient care. Activities in the operating room, emergency room, and outpatient clinics are to be included. Attendance at and participation in the weekly pediatric orthopedic conference activities are required.

**M96 Ortho 850B Orthopedic Surgery Subinternship — Pediatrics**
Clinical elective available for four weeks during which time the student will work with attending surgeons, primarily at St. Louis Children's Hospital, observing and assisting with outpatient and inpatient care. Activities in the operating room, emergency room, and outpatient clinics are to be included. Attendance at and participation in the weekly pediatric orthopedic conference activities are required.

**M96 Ortho 860A Orthopedic Surgery Subinternship — Spine**
This clinical elective is available for four weeks during which time the student will work with attending surgeons, primarily at Barnes-Jewish Hospital, observing and assisting when appropriate in outpatient and inpatient care. Activities in the operating room, emergency room, and outpatient clinics are to be included. Attendance at and participation in the weekly orthopedic conference activities are required. The spine fellow assigned to this service will serve as a primary contributor to the student’s education experience on this rotation.

**M96 Ortho 860B Orthopedic Surgery Subinternship — Spine**
This clinical elective is available for four weeks during which time the student will work with attending surgeons, primarily at Barnes-Jewish Hospital, observing and assisting when appropriate in outpatient and inpatient care. Activities in the operating room, emergency room, and outpatient clinics are to be included. Attendance at and participation in the weekly orthopedic conference activities are required. The spine fellow assigned to this service will serve as a primary contributor to the student’s education experience on this rotation.

**M96 Ortho 860C Orthopedic Surgery Subinternship — Spine**
This clinical elective is available for four weeks during which time the student will work with attending surgeons, primarily at Barnes-Jewish Hospital, Barnes-Jewish West County Hospital, and Washington University Orthopedics - Center for Advanced Medicine observing and assisting when appropriate in outpatient and inpatient care. Activities in the operating room, emergency room, and outpatient clinics are to be included. Attendance at and participation in the weekly orthopedic conference activities are required. The spine fellow assigned to this service will serve as a primary contributor to the student’s education experience on this rotation.

**M96 Ortho 863A Orthopedic Surgery Subinternship — Pediatric Spine**
Clinical elective available for four weeks during which time the student will work with attending surgeons, primarily at St. Louis Children’s Hospital, observing and assisting in outpatient and inpatient care. Activities in the operating room, emergency room, and outpatient clinics are to be included. Attendance at and participation in the weekly pediatric orthopedic conference activities are required.

**M96 Ortho 863B Orthopedic Surgery Subinternship — Pediatric Spine**
Clinical elective available for four weeks during which time the student will work with attending surgeons, primarily at St. Louis Children’s Hospital, observing and assisting in outpatient and inpatient care. Activities in the operating room, emergency room, and outpatient clinics are to be included. Attendance at and participation in the weekly pediatric orthopedic conference activities are required.

**M96 Ortho 870A Orthopedic Surgery Subinternship — Joint Preservation & Reconstruction**
Clinical elective available during which time the student will work with attending physicians on the Adult Reconstruction and Joint Preservation/Replacement service. This rotation is primarily centered at Barnes-Jewish Hospital and includes care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopedic educational conferences and anatomy sessions.
M96 Ortho 870B Orthopedic Surgery Subinternship — Joint Preservation & Reconstruction
Clinical elective available during which time the student will work with attending physicians on the Adult Reconstruction and Joint Preservation/Replacement service. This rotation is primarily centered at Barnes-Jewish Hospital and includes care of young patients with hip impingement pathology and older patients with end-stage joint arthritis, hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopedic educational conferences and anatomy sessions.

M96 Ortho 870C Orthopedic Surgery Subinternship — Joint Preservation & Reconstruction
Clinical elective available during which time the student will work with attending physicians on the Adult Reconstruction and Joint Preservation/Replacement service. This rotation is primarily centered at Barnes-Jewish Hospital and includes care of young patients with hip impingement pathology and older patients with end-stage joint arthritis, hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopedic educational conferences and anatomy sessions.

M96 Ortho 875A Orthopedic Surgery Subinternship — Joint Reconstruction
Clinical elective available during which time the student will work with the attending physician on the Adult Reconstruction and Joint Preservation/Replacement service. This rotation is primarily centered at Barnes-Jewish Hospital and includes care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopedic educational conferences and anatomy sessions.

M96 Ortho 880A Orthopedic Surgery Subinternship — Oncology/Joint Reconstruction
Clinical elective available for four weeks, during which time the student will work with the attending physicians on the Musculoskeletal Oncology service. The student will participate in orthopedic conferences, outpatient clinics, surgical cases and patient rounds.

M96 Ortho 880B Orthopedic Surgery Subinternship — Oncology/Joint Reconstruction
Clinical elective available for four weeks, during which time the student will work with the attending physicians on the Musculoskeletal Oncology service. The student will participate in orthopedic conferences, outpatient clinics, surgical cases and patient rounds.

M96 Ortho 890 Orthopedic Surgery Externship
Students rotate on Orthopaedic Services in four-week blocks. During their rotations, students are assigned to two different services for two weeks each. Students may rotate on a variety of subspecialties, including trauma sports medicine, hand and upper extremity, foot and ankle, musculoskeletal oncology, adult reconstructive surgery, pediatric orthopaedics, shoulder and elbow, and spine.