Mary Culver
Department of Surgery

The formal instruction in surgery begins in the third year with the required, 12-week Integrated Surgical Disciplines Clerkship. During this surgical clerkship, students are assigned to clinical rotations, mostly within the Department of Surgery, with some exposure to other surgical-related disciplines outside the department. The clerkship gives students opportunities to participate in the care of surgical patients, both in- and outpatient; to spend time in the operating rooms; and to attend seminars, teaching conferences and didactic sessions on a regular basis. In the fourth year, students may select sub-internship electives within the Division of General Surgery, which include a variety of general surgical specialties. In addition to the general surgery sub-internships, electives are available in several other surgical subspecialties (e.g., pediatric surgery, transplant surgery, vascular surgery, cardiovascular and thoracic surgery, urologic surgery, and plastic and reconstructive surgery).

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

Degrees & Requirements

While the Department of 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 Offered (http://bulletin.wustl.edu/medicine/degrees) section of this Bulletin.

Research

L. Michael Brunt, MD
Barnes-Jewish Hospital, 1160 Northwest Tower
Phone: 314-854-8877
Minimally invasive surgery, including endocrine applications. Minimum rotation length: four weeks. Under the auspices of the Washington University Institute for Minimally Invasive Surgery (WUIMIS), a number of surgeons are investigating the physiologic consequences of laparoscopic surgery and new applications for procedures and technologies. Dr. Brunt is currently investigating clinical outcomes of various laparoscopic surgical procedures, laparoscopic hiatal hernia surgery and adrenal surgery, and is carrying out education-related research of skills training for senior medical students planning to enter a surgical internship.

Division of Plastic and Reconstructive Surgery
660 S. Euclid, Box 8238
Phone: 314-747-0541

The Division of Plastic Surgery offers many opportunities for research projects on various topics related to plastic surgery. A project will be designed with the student prior to his/her rotation on plastic surgery so that all of the materials and methods will be available at the beginning of the rotation. The basic science laboratories investigate primarily nerve injury and regeneration including nerve transplantation. The student will be encouraged to design and complete his/her own research study during the elective. Minimum rotation length is six weeks. The research rotation can be conducted in the plastic surgery laboratories under the direction of Drs. Moore, Snyder-Warwick, Wood or Mackinnon.

Ongoing projects include:

1. influence of growth factors and blood flow on nerve regeneration;
2. neural tissue engineering;
3. diagnostic potential of biomarkers to identify nerve injury; and
4. investigation of glial cells at the neuromuscular junction during development, maintenance, aging, and following nerve injury.

Additional clinical and educational research opportunities in various fields of plastic surgery are available with Drs. Fox, Myckatyn, Patel, Tung, and Woo.

These various projects include:

1. in vivo tissue generation and tissue differentiation;
2. the mechanical, structural and biochemical effects of stress on scar tissue maturation;
3. in vivo anatomy of craniofacial deformities;
4. outcome analysis of methods of cleft lip and palate management;
5. breast reconstruction (3-D imaging of breasts after cosmetic or reconstructive surgery, interpretation of angiograms of the breast to measure nipple perfusion);
6. use of nerve transfer to improve hand function in patients with cervical spinal cord injury/quadruplegia; and
7. surgical education (specifically web-based multimedia strategies for peripheral nerve surgery education).

Faculty

Clerkship Director
John P. Kirby, MD, MS

Clerkship Associate Director
Eleanor Lynn Powell Drew, MD, AB

Visit our website for more information about our faculty (http://www.surgery.wustl.edu/Faculty) and their appointments.
A

Aaron Michael Abarbanell, MD, MS
Assistant Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
MD University of Michigan 2005
MS Indiana University Indianapolis 2010
BA Cornell University 1993

Rebecca L Aft, MD, PHD
Professor of Surgery (General Surgery) (primary appointment)
BS Univ of Wisconsin Madison 1978
MD Washington Univ in St. Louis 1992
PHD Univ of Wisconsin Madison 1983

Dorothy A Andriole, MD
Associate Professor of Surgery (General Surgery) (primary appointment)
Assistant Dean for Student Affairs and Medical Education
MD New York University 1980
BA New York University 1976

Gerald L Andriole, MD
Robert Killian Royce, M.D. Distinguished Professor of Urologic Surgery (primary appointment)
MD Jefferson Medical College 1978
BS Pennsylvania State University 1976

Christopher Thomas Arett, MD
Assistant Professor of Surgery (Urologic Surgery) (primary appointment)
BS Washington Univ in St. Louis 1999
MD Washington Univ in St. Louis 2003

Kenneth J Arnold, MD
Assistant Professor of Clinical Surgery (General Surgery) (primary appointment)
MD Washington Univ in St. Louis 1968
BA University of Notre Dame 1964

Michael Magdi Awad, MD, PHD
Associate Professor of Surgery (General Surgery) (primary appointment)
Associate Dean for Medical Education
BS Brown University 1994
MD Brown University 2001
PHD Brown University 2001

B

Jeffrey Allen Bailey, M PA, MD
Adjunct Assistant Professor of Surgery (General Surgery) (primary appointment)
M PA Golden Gate University 1986
MD Saint Louis University 1996

Joaquin Barnoya, MS, MD
Associate Professor of Surgery (Public Health Sciences) (primary appointment)
Associate Professor of Medicine
MS Harvard University 2001
MD Universidad de San Carlos 1998

Kenneth J Bennett, MD
Associate Professor of Clinical Surgery (General Surgery) (primary appointment)
MD Tulane University 1965

Sam B Bhayani, MD
Professor of Surgery (Urologic Surgery) (primary appointment)
MD Washington Univ in St. Louis 1996
BS Cornell University 1992

Lawrence J Billy, MD
Professor of Clinical Surgery (General Surgery) (primary appointment)
BA Youngstown St University 1962
MD Saint Louis University 1966

Jeffrey Alan Blatnik, MD
Assistant Professor of Surgery (General Surgery) (primary appointment)
MD Case Western Reserve Univ 2007
BA Miami University 2003

Grant Bochicchio, MD, M PH
Professor of Surgery (General Surgery) (primary appointment)
MD Pennsylvania State University 1993
M PH University of Pittsburgh 1989

Keith E Brandt, MD
William G. Hamm Professor of Surgery (Plastic and Reconstructive Surgery) (primary appointment)
BS Texas A&M University 1979
MD Univ Texas Health Science Ctr 1983

Anoop k Brar, PHD
Professor of Surgery (Cardiothoracic Surgery) (Pending Dean's Approval) (primary appointment)
BS University of Edinburgh 1979
PHD University of Edinburgh 1983

L. Michael Brunt, MD
Professor of Surgery (General Surgery) (primary appointment)
BA University of Mississippi 1976
MD Johns Hopkins University Medc 1980

Donald William Buck, MD
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BS Indiana University Bloomington 2002
MD Johns Hopkins University 2006

Sara Anne Buckman, MD, PHARMD
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MD Univ of Wisconsin Madison 2008
PHARMD Univ of Wisconsin Madison 1999

John B Buettner, MD
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MD Washington Univ in St. Louis 1967
BA Dartmouth College 1963

Arnold D Bullock, MD
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Alan A and Edith L Wolff Distinguished Professor
MD Johns Hopkins University 1987
BS Xavier University Louisiana 1983

C

Yin Cao
Assistant Professor of Surgery (Public Health Sciences) (primary appointment)

David Anthony Caplin, MD
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MD University of Cincinnati 1975
BA Kenyon College 1971

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MA Mass Inst of Technology (MIT) 2004
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Will C Chapman, MD
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Chun-Cheng Chen, MD, PHD, BEE
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MD Vanderbilt University 2009
PHD Vanderbilt University 2006
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Gerald Jeung-II Cho
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John E. Codd, MD
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MD Saint Louis University 1963
BA Gonzaga University 1954

Graham A Colditz, M PH, DRPH, MBBS

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Deputy Director for the Institute of Public Health
Professor of Medicine
BS University of Queensland 1977
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DRPH Harvard University 1986
MBBS University of Queensland 1979

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UNKNOWN Duke University 1978
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MD1 University of Tennessee 1967
BS University of Mississippi 1964

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MD Duke University 1980

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PHS Harvard University 2015
AB Washington Univ in St. Louis 2018

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Head of the Department of Surgery
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D SC University of CA Los Angeles 1993
MS University of CA Los Angeles 1987
MD University of CA Los Angeles 1993

Zachary P Englert, DOST
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DOST Phil Coll of Osteopathic Med 2009

Sean Jason English, MD
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BA University of Oregon 2004
MD Baylor University 2009

Ryan Courtney Fields, MD
Associate Professor of Surgery (General Surgery) (primary appointment)
BS Davenport University 1998
MD Duke University 2003

Robert S Figenshau, MD
Taylor Family and Ralph V. Claman, M.D. Professor of Surgery (Urologic Surgery) (primary appointment)
BS Macalester College 1981
MD University of Minnesota 1987

Gerald Richard Fortuna Jr
Adjunct Assistant Professor of Surgery (primary appointment)

Ida K Fox, MD
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BS Haverford College 1994
MD University of Rochester 1999

Bradley D. Freeman, MD
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MD Duke University 1988

Anja G. Fuchs, PHD, MS
Assistant Professor of Surgery (General Surgery) (primary appointment)
BS School Not Listed 1994
PHD University of Manchester 2006
MS University of Manchester 2001

G

Feng Gao, PHD
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Associate Professor of Biostatistics
Associate Professor of Medicine
PHD Emory University 2003

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PHD University of Pennsylvania 2006

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BS Northwestern University 1989
MD Northwestern University 1991

William Ewald Gillanders, MS1, BA1, MS, MD
Professor of Surgery (General Surgery) (primary appointment)
Vice Chair for Research, Department of Surgery
MS1 Medical University of Sth Car 2006
BA Williams College 1987
BA1 Williams College 1987
MS Medical Univ South Carolina 2006
MD Duke University 1991

Sean C. Glasgow, MD
Associate Professor of Surgery (General Surgery) (primary appointment)
MD Duke University 1999
BS Duke University 1995

Katherine LuBell Glover-Collins, MD, PHD
Assistant Professor of Surgery (General Surgery) (primary appointment)
BS Xavier University Lousiana 2001
MD Meharry Med College 2009
PHD Meharry Med College 2009

Simon P Goedegebure, MA, PHD
Associate Professor of Surgery (General Surgery) (primary appointment)
BS School Not Listed 1982
MA School Not Listed 1985
PHD Erasmus University Rotterdam 1989

Jun Guo, PHD, MS
Assistant Professor of Surgery (Pediatric Surgery) (primary appointment)

PHD Shanghai Medical University 2000
BS Nanjing University 1991
MS Dalian Medical University 1997

Steven William Guyton
Associate Professor of Clinical Surgery (Cardiothoracic Surgery) (primary appointment)

H

Bruce Lee Hall, MD, MBA, PHD
Professor of Surgery (General Surgery) (primary appointment)
Fellow in the Center for Health Policy
Professor of Health Care Management (Olin School of Business)
MD Duke University 1992
BA Princeton University 1984
MBA Harvard University 2000
PHD Duke University 1991

Andrew Benjamin Hall, MD
Adjunct Assistant Professor of Surgery (primary appointment)
MD Saint Louis University 2008
BS Univ of Nebraska at Omaha 2004

Chet Hammill, MD, MS
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MD Univ of IL -Urbana-Champaign 2004
BS Univ of IL -Urbana-Champaign 1996
MS Oregon Health Science Univers 2012

William G. Hawkins, MD
Professor of Surgery (General Surgery) (primary appointment)
Neidorff Family and Robert C Packman Professor
BA New York University 1991
MD State Univ of NY Stonybrook 1995

Michael E Hayek, MS, MD
Instructor in Clinical Surgery (General Surgery) (primary appointment)
MS Saint Louis University 1978
BA Saint Louis University 1976
MD University of Missouri 1982

Mark Francis Heiland
Assistant Professor of Clinical Surgery (General Surgery) (primary appointment)

Virginia M Herrmann, MD
Professor of Surgery (General Surgery) (primary appointment)
Professor of Medicine
MD Saint Louis University 1974

Jean Marie Hunleth, M PH, PHD
Instructor in Surgery (Public Health Sciences) (primary appointment)
Instructor of Anthropology (Courtesy Affiliation)
BA Vanderbilt University 1998
M PH Northwestern University 2011
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tr>
<td>Steven R Hunt, MD</td>
<td>Associate Professor of Surgery (General Surgery)</td>
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<td>BA Dartmouth College 1992</td>
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<td>MD Stanford University 1997</td>
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<td>Mohsen Ibrahim, MD</td>
<td>Instructor in Surgery (Cardiothoracic Surgery)</td>
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<td>MD University of Rome 1999</td>
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<td>Obeid Noor Ilahi, MD</td>
<td>Associate Professor of Surgery (General Surgery)</td>
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<td>Akinobu Itoh, MD, PHD</td>
<td>Assistant Professor of Surgery (Cardiothoracic Surgery)</td>
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<td>MD Tohoku University Sendai Miyag 1998</td>
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<td>Aimee S. James, PHD, MA, M PH</td>
<td>Associate Professor of Surgery (General Surgery)</td>
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<td>Senthil N Jayarajan, MS, MD</td>
<td>Assistant Professor of Surgery (General Surgery)</td>
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<td>MS Temple University 2012</td>
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<td>Jeffrey Jim, MD, MS</td>
<td>Associate Professor of Surgery (General Surgery)</td>
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<tr>
<td>Dane P Johnson</td>
<td>Assistant Professor of Surgery (Urologic Surgery)</td>
<td>primary</td>
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<td>Puja Kachroo, MD, MS</td>
<td>Assistant Professor of Surgery (Cardiothoracic Surgery)</td>
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<td>MD Ross Univ School of Medicine 2007</td>
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<td>MS Columbia University 2003</td>
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<td>Demetrios Katsikas, MD</td>
<td>Instructor in Clinical Surgery (Urological Surgery)</td>
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<td>Martin S Keller, MD</td>
<td>Associate Professor of Surgery (Pediatric Surgery)</td>
<td>primary</td>
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<td>Associate Professor of Pediatrics</td>
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<td>MD University of Vermont 1990</td>
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<td>Adeel Khan, MD</td>
<td>Assistant Professor of Surgery (General Surgery)</td>
<td>primary</td>
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<td>appointment</td>
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<td></td>
<td>BS Bahria University 1997</td>
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<tr>
<td>Andrew M Kim, MS, DDENT</td>
<td>Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery)</td>
<td>primary appointment</td>
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<tr>
<td></td>
<td>Instructor in Clinical Otolaryngology</td>
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<td>MS Ohio State University 1987</td>
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<td>DDENT Washington Univ in St. Louis 1984</td>
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<td></td>
<td>BA California State University 1978</td>
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<tr>
<td>John P. Kirby, MD, MS</td>
<td>Associate Professor of Surgery (General Surgery)</td>
<td>primary</td>
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<tr>
<td>Saul Klein, MD</td>
<td>Instructor in Clinical Surgery (Urologic Surgery)</td>
<td>primary</td>
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<td></td>
<td>MD Syracuse University 1959</td>
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<tr>
<td>Mary E Klingensmith, MD</td>
<td>Professor of Surgery (General Surgery)</td>
<td>primary appointment</td>
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<td>Mary Culver Distinguished Professor</td>
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<td></td>
<td>Vice Chairman for Education, Department of Surgery</td>
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<td></td>
<td>MD Duke University 1992</td>
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<tr>
<td>Benjamin D. Kozower, MD</td>
<td>Professor of Surgery (Cardiothoracic Surgery)</td>
<td>primary</td>
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<td>MD University of Rochester 1997</td>
<td>appointment</td>
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<td>BS University of Rochester 1993</td>
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<tr>
<td>David Paul Krajcovic, MD</td>
<td>Instructor in Clinical Surgery (General Surgery)</td>
<td>primary</td>
</tr>
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<td>MD Washington Univ in St. Louis 1969</td>
<td>appointment</td>
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</tbody>
</table>
BA Washington Univ in St. Louis 1965

Daniel Kreisel, PHD, MD
Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
Professor of Pathology and Immunology
PHD University of Pennsylvania 2002
MD Mount Sinai School of Medicine 1995

L

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Associate Professor of Anesthesiology
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BS Rice University 1994

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BS University of Virginia 2001
MD University of Virginia 2006

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MS1 Northwestern University 2003
PHD University of Michigan 2014
BS1 Washington Univ in St. Louis 2000

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MD Southeast U Medical School 1995
PHD Texas Tech University 2006

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BA Washington Univ in St. Louis 1957
MD Washington Univ in St. Louis 1961

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BS Nankai University 1997
MS National Univ of Singapore 2002
PHD Medical College of Wisconsin 2007

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BA Emory University 1972

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Assistant Professor of Biostatistics
Assistant Professor of Medicine
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MS Renmin University of China 2001
MS1 Duke University 2003
BS Renmin University of China 1998

M

Susan E Mackinnon, MD
Sydney M., Jr. and Robert H. Shoenberg Professor of Surgery (Plastic and Reconstructive Surgery) (primary appointment)
Professor of Occupational Therapy
Professor of Otolaryngology
BA Queens College 1971
MD Queen's University 1975

Hersh Maniar, MD
Associate Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
Associate Professor of Medicine
BS University of Michigan 1994
MD University of Illinois 1998

Peter Bruce Manning, MD
Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
BS Bucknell University 1978
MD University of Michigan 1982

Julie Ann Margenthaler, MD
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BA Boston University 1993

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BA California State Fresno 1973
MD University of CA Los Angeles 1981
MS Univ of Wisconsin Madison 1975
PHD University of Minnesota 1993

Patricia A McGuire, MD
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MD University of Missouri 1985

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MD University of Utah 2002
BS Brigham Young University 1997

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Patrick and Joy Williamson Endowed Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
MD University of Chicago 1986
BA Yale University 1982

Jerry R Meyers, MD
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MD Washington Univ in St. Louis 1966
BA University of Texas Austin 1962

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Instructor in Clinical Surgery (General Surgery) (primary appointment)
MD Howard University 1985
BS Howard University 1981

Marc R Moon, MD
John M Shoenberg Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
MD Wayne State University 1988
BS University of Michigan 1983

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MD Virginia Comm University 2004

Julian C Mosley, MD
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BS Saint Louis University 2000
MD Washington Univ in St. Louis 1972

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BS University of Michigan 1981

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MD Washington Univ in St. Louis 1994

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BS Univ of Northern British Colu 2003
MD Univ of Northern British Colu 1997

Neal Neuman, MD
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MD Saint Louis University 1971

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BS Tulane University 1975
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BS Iowa State University 1979
DDENT University of Iowa 1983

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BA Washington Univ in St. Louis 1948

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Professor of Emergency Medicine in Medicine
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BS University of Houston 1992
MD Univ Texas Health Sci San Anto 1997

P

Sharad P Parikh, UNKNOWN
Instructor in Clinical Surgery (General Surgery) (primary appointment)
UNKNOWN University of Pune 1967

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BS EWHA Womans University 1994
MS1 EWHA Womans University 1996
PHD Harvard University 2005

Charles L Parks, MD
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BS University of South Dakota 1967
MD Washington Univ in St. Louis 1969

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MD University of Missouri 1987
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Professor of Radiology
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MD School Not Listed 1969
PHD School Not Listed 1975

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BS Barnard College 2001
M PHIL George Washington University 2004
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Laurie Jean Punch, MD
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BS Yale University 1997
MD University of Connecticut 2002

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MD Washington Univ in St. Louis 2009
MS Creighton University 2007

R

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S

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PHD Clemson University 1977

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MS PSYC Rutgers University 2003
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BS Illinois State University 1986

Paul Edward Wise, MD
Professor of Surgery (General Surgery) (primary appointment)
Courses


M95 Surgery 790 Integrated Surgical Disciplines Clerkship
During the 12-week surgery clerkship, each student is assigned to three separate rotations. Each student is assigned to a required general surgery rotation at Barnes-Jewish Hospital or the John Cochran Veterans Administration Medical Center. In addition, each student selects elective rotations in other general surgical fields, surgical subspecialties and related disciplines of critical care. The student is an active participant in the daily care of patients on each service and attends the service teaching conferences and rounds. For the duration of the 12-week rotation, there are weekly small-group tutorial sessions with faculty members and a biweekly lecture series. Credit 462 units.

M95 Surgery 803 Christian NE Hospital Surgical Clerkship
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. This surgical clerkship allows senior medical students to participate in a wide range of general and vascular surgical patient care. Students work closely with general surgeons in a community hospital setting. Credit 154 units.

M95 Surgery 804 Advanced Surgery Clerkship (Acting Internship in Surgery)
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. This course will give students an in-depth experience in clinical management of patients with surgical problems. It will provide students an opportunity to evaluate patients, decide on a diagnostic and management strategy, and provide care under house staff and faculty guidance. Students will serve as clerks on a busy general surgical service and will be responsible for patient management with house staff under the guidance of the chief resident and attending surgeon. The course will offer opportunities for students to gain experience in preoperative, and especially intraoperative, postoperative, patient management. There will be ample opportunity to attend and participate in conferences. Note: Due to the various preceptorship electives offered through the Division of General Surgery, space on some services through this elective may be limited. Students may request a particular service, but assignments will be made only to services with available space. It is recommended that students take this elective later in the academic year in order to increase the likelihood of receiving an assignment to a preferred service. If you have questions regarding this notice, please call Jackie Fleming at 314-362-8029.

M95 Surgery 810 Surgery Clerkship or Preceptorship
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. The sub-internship at Barnes-Jewish Hospital, North Campus, is a flexible rotation. The student has the opportunity to gain experience in many areas of general surgery including vascular surgery, laparoscopic surgery and surgery for breast disease. The student will be involved in inpatient care both on the ward and in the intensive care unit. The student may elect to spend the entire rotation on the general surgery service or to divide the rotation between the general surgery and the colorectal surgery services.

M95 Surgery 811 Colon and Rectal Surgery Preceptorship-Barnes-Jewish Hospital, North Campus
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. The student will work closely with the four Colorectal staff within the Section of Colon and...
Rectal Surgery. Student involvement in all aspects of clinical surgery is accomplished by student attendance in the outpatient office, preoperative patient evaluation, in-hospital patient management, and postoperative outpatient follow-up after discharge. Clinical exposure is focused on a wide range of benign and malignant colorectal disease. There is exposure to radiation oncology and the specialized areas of nursing related to care of patients with colorectal cancer and inflammatory bowel disease. The student is expected to attend and participate in all conferences. Specifics of the elective should be planned in advance with Dr. Kodner or Dr. Fleshman.

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**M95 Surgery 812 Trauma, Burns and Critical Care**

William W. Monafo, MD; 6104 Queeny Tower; 314-362-5297; four weeks; periods A-L; limit 2/period. In this elective the student will serve as a regular active member of the Trauma, Burns & Critical Care Service. They will be involved with the comprehensive hospital management of the patient with severe burns or trauma. Students will be active in the Emergency Department, the Operating Room, the Trauma and Burns Intensive Care Unit and the Trauma and Burn Convalescent Division. Practical experience will be obtained in resuscitation and shock management, hemodynamic monitoring, ventilatory support, nutrition support, surgical infections, wound care and rehabilitation. Students will participate in all regular rounds, conferences, and other activities of the service. Regular in-house night call is required. Students should meet with the course director prior to the beginning of the elective.

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**M95 Surgery 813 Unit III/Trauma Elective Rotation**

Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. The student will work closely with Dr. Buchman within the Section of Burns, Trauma and Surgical Critical Care, and will function as a sub-intern on the Trauma and Emergency Service. Student involvement in all aspects of clinical surgery is accomplished by student attendance in the outpatient office, preoperative patient evaluation, in-hospital patient management and postoperative outpatient follow-up after discharge. Practical experience will focus on the initial evaluation and resuscitation of traumatized patients and other emergency care patients. The student will also participate in regular rounds, conferences, and in-house call.

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**M95 Surgery 814 Acting Internship, Trauma Service**

The student on this elective will function as a sub-intern on the Trauma and Acute Care Surgical Service within the Section of Acute and Critical Care Surgery. Student involvement in all aspects of clinical surgery is accomplished by student attendance in the outpatient office, preoperative patient evaluation, in-hospital patient management, and postoperative outpatient follow-up after discharge. Practical experience will focus on the initial evaluation and resuscitation of traumatized patients and other emergency care patients. The student will also participate in regular rounds, conferences, and in-house call.

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**M95 Surgery 816 Emergency Department-Surgery**

William W. Monafo, MD; 6104 Queeny Tower; 314-362-5297; four weeks; periods A-L; limit 2/period. This elective provides the student with an intensive experience in the evaluation and management of a wide variety of medical and surgical emergencies. Students work closely with the Emergency Department Attending Physicians and senior house staff. As much as possible, students are allowed flexibility in scheduling and may choose to be on duty in either 24-hour blocks or 12-hour ones for approximately 72 hours per week. Students will participate in regular Emergency Department conferences as well as a weekly meeting with the course director. Final grade will be based on evaluations from Emergency Department attending staff, senior house staff, and the course director. Students should meet with the course director prior to the beginning of the elective.

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**M95 Surgery 818 Surgical Night Float & ER Sub-Internship**

This sub-internship is specifically designed to give senior medical students an intern-level experience in managing acute on-call problems in surgical patients and in evaluating urgent and emergent problems in the ED. The rotation will be divided into two, two-week segments — one segment in the ED and the second on night float call on the surgical floors. Students will gain experience evaluating and managing the types of acute problems they will encounter as surgical interns. Students will be involved with surgical residents and will function as surgical interns. Students will participate in morning work rounds, attend the operative procedures of their choice, and attend weekly conferences and teaching rounds. Students will be introduced not only to the surgical procedures but also to the postoperative care of the surgical patients. On the pediatric and adult cardiac services, students will be introduced to the principles of cardiopulmonary bypass, ventricular assist devices, cardiac transplantation, coronary artery bypass surgery (on and off pump), valve repair and replacement, complex aortic surgery, the MAZE procedures and others. On the adult cardiac surgery service, students will function as sub-interns under the direct supervision of a faculty member. On the thoracic surgical rotation, students will have the opportunity of performing bronchoscopy, esophagoscopy, gastroscopy, and participate in surgical resections of lung cancer and esophageal cancer, as well as surgery for emphysema and for benign esophageal conditions. Students will also participate in lung transplantation surgery.

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**M95 Surgery 820 Cardiothoracic Surgery**

Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. The senior elective in cardiothoracic surgery is a four-week clinical rotation with two-week blocks divided between adult cardiac, pediatric cardiothoracic, and general thoracic surgery according to the student's preference. Students will participate in morning work rounds, attend the operative procedures of their choice, and attend weekly conferences and teaching rounds. Students will be introduced not only to the surgical procedures but also to the postoperative care of the surgical patients. On the pediatric and adult cardiac services, students will be introduced to the principles of cardiopulmonary bypass, ventricular assist devices, cardiac transplantation, coronary artery bypass surgery (on and off pump), valve repair and replacement, complex aortic surgery, the MAZE procedures and others. On the adult cardiac surgery service, students will function as sub-interns under the direct supervision of a faculty member. On the thoracic surgical rotation, students will have the opportunity of performing bronchoscopy, esophagoscopy, gastroscopy, and participate in surgical resections of lung cancer and esophageal cancer, as well as surgery for emphysema and for benign esophageal conditions. Students will also participate in lung transplantation surgery.
congenital anomalies, microvascular surgery, surgery of the upper extremity, peripheral nerve surgery, cosmetic surgery, and general reconstructive plastic surgery. Credit 154 units.

**M95 Surgery 832 Plastic Surgery Externship**
This course is for visiting medical students only. Flexible start days for two-week to four-week blocks are available through December 31. Certain rotation dates and week durations may be limited depending on the number of students requesting rotations. Students rotate on different Plastic Surgery Services for two weeks each to maximize exposure to all faculty. The student will assume an active role on the plastic surgery service and will participate in the total management of a wide variety of surgical problems including congenital anomalies, microvascular surgery, surgery of the upper extremity, peripheral nerve surgery, cosmetic surgery, and general reconstructive plastic surgery. Participation in conferences is expected. Student will perform a 10-minute case presentation.

**M95 Surgery 838 Pediatric Orthopaedic Spine & Sports Surgery**
Clinical elective available for four weeks during which time the student will work with attending surgeon primarily at St. Louis Children's Hospital observing and assisting in outpatient and inpatient care. To be included are activities in the OR, ER, and outpatient clinics. In addition to general pediatric orthopaedics, Dr. Luhmann has special interests in the treatment of pediatric spinal injuries and disorders as well as pediatric sports medicine. Attendance at and participation in the weekly pediatric orthopaedic conference activities required.

**M95 Surgery 839 Orthopaedic Sports Medicine**
This clinical elective is available for four weeks during which the student participates in orthopaedic conferences, outpatient clinics, surgical cases, and patient rounds on the Sports Medicine service.

**M95 Surgery 840 Orthopaedic Surgery-Foot/Ankle**
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. This clinical elective is available for four weeks during which the student participates in orthopaedic conferences, outpatient clinics, surgical cases, and patient rounds. The medical students electing this rotation will serve as an active and integral part of the orthopaedic team.

**M95 Surgery 840A Orthopaedic Surgery-Foot/Ankle**
This four-week clinical elective is available to medical students looking to further their knowledge/experience in orthopaedics, 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.

**M95 Surgery 840B Orthopaedic Surgery-Foot/Ankle**
This four-week clinical elective is available to medical students looking to further their knowledge/experience in orthopaedics, 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.

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**M95 Surgery 841 Orthopaedic Surgery-Reconstructive**
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. This clinical elective is available for four weeks during which time the student will participate in orthopaedic conferences, outpatient clinics, surgical cases, and patient rounds. Night call is optional but is advisable. The medical students electing this clerkship will serve as an active and integral part of the orthopaedic team. Credit variable, maximum 154 units.

**M95 Surgery 842 Orthopaedic Shoulder/Elbow Surgery**
M95-842 A, B and C are identical courses with different course directors. Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. 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 orthopaedic conferences, and dissection of upper-extremity anatomical specimens. Credit variable, maximum 154 units.

**M95 Surgery 842A Orthopaedic Shoulder/Elbow Surgery**
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 orthopaedic conferences, and dissection of upper-extremity anatomical specimens.

**M95 Surgery 842B Orthopaedic Shoulder/Elbow Surgery**
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 orthopaedic conferences, and dissection of upper-extremity anatomical specimens.

**M95 Surgery 842C Orthopaedic Shoulder/Elbow Surgery**
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 orthopaedic conferences, and dissection of upper-extremity anatomical specimens.

**M95 Surgery 845 Orthopedic Hand and Upper Extremity Surgery**
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. 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 orthopaedic conferences, and dissection of upper-extremity anatomical specimens. Please note that the hand/upper extremity fellow...
assigned to Dr. Manske's service will also participate in the instruction of students choosing this elective.

**M95 Surgery 845A Orthopedic Hand and Upper Extremity Surgery**
Clinical elective available, during which time the student will work with attending surgeons primarily at Chesterfield and Center for Advanced Medicine. The service includes care of adult patients with traumatic, sports (arthroscopy), nerve, and degenerative disease. Activities will include instruction of students choosing this elective.

**M95 Surgery 845B Orthopedic Hand and Upper Extremity Surgery**
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 inpatient and outpatient procedures, attendance at faculty clinic office hours, attendance at orthopaedic conferences, and dissection of upper-extremity anatomical specimens.

**M95 Surgery 845C Orthopedic Hand and Upper Extremity Surgery**
Clinical elective available, during which time the student will work with attending surgeon 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 orthopaedic conferences, and dissection of upper-extremity anatomical specimens.

**M95 Surgery 845D Orthopedic Hand Surgery**
Clinical elective available, during which time the student will work with attending surgeon 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, and attendance at orthopaedic conferences, and dissection of upper-extremity anatomical specimens.

**M95 Surgery 845E Orthopedic Hand and Upper Extremity Surgery**
Clinical elective available, during which time the student will work with attending surgeons primarily at 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 inpatient procedures, attendance at faculty clinic office hours, attendance at orthopaedic conferences, and dissection of upper-extremity anatomical specimens.

**M95 Surgery 846 Orthopaedic Trauma**
Clinical elective available for a four-week period, during which time the student will work in orthopaedic trauma at Barnes-Jewish Hospital. The student will work with a team of attendings, residents, PAs, and NPs to provide care for orthopaedic trauma patients. Activities include participation in the care of hospitalized inpatients, inpatient surgical procedures, outpatient office visits and daily conferences.

**M95 Surgery 846A Orthopaedic Trauma**
Clinical elective available for a four-week period, during which time the student will work in orthopaedic trauma at Barnes-Jewish Hospital. The student will work with a team of attendings, residents, PAs, and NPs to provide care for orthopaedic trauma patients. Activities include participation in the care of hospitalized inpatients, inpatient surgical procedures, outpatient office visits and daily conferences.

**M95 Surgery 846B Orthopaedic Trauma**
Clinical elective available for a four-week period, during which time the student will work in orthopaedic trauma at Barnes-Jewish Hospital. The student will work with a team of attendings, residents, PAs, and NPs to provide care for orthopaedic trauma patients. Activities include participation in the care of hospitalized inpatients, inpatient surgical procedures, outpatient office visits and daily conferences.

**M95 Surgery 847 Orthopedic Spine Surgery**
Clinical elective available for a four-week period, during which time the student will work in orthopaedic trauma at Barnes-Jewish Hospital. The student will work with a team of attendings, residents, PAs, and NPs to provide care for orthopaedic trauma patients. Activities include participation in the care of hospitalized inpatients, inpatient surgical procedures, outpatient office visits and daily conferences.

**M95 Surgery 848 Orthopedic Pediatric Surgery Elective**
Clinical elective available for four weeks during which time the student will work with attending surgeon primarily at St Louis Children's Hospital observing and assisting in outpatient and inpatient care. To be included are activities in the OR, ER, and outpatient clinics. Activities include participation in the weekly pediatric orthopaedic conference activities required. The spine fellow assigned to this service will serve as a primary contributor to the student's education experience on this rotation.

**M95 Surgery 848A Orthopaedic Pediatric Surgery Elective**
Clinical elective available for four weeks during which time the student will work with attending surgeon primarily at St Louis Children's Hospital observing and assisting in outpatient and inpatient care. To be included are activities in the OR, ER, and outpatient clinics. Activities include participation in the weekly pediatric orthopaedic conference activities required.

**M95 Surgery 848B Orthopaedic Pediatric Surgery Elective**
Clinical elective available for four weeks during which time the student will work with attending surgeon primarily at St Louis Children's Hospital observing and assisting in outpatient and inpatient care. To be included are activities in the OR, ER, and outpatient clinics. Activities include participation in the weekly pediatric orthopaedic conference activities required.

**M95 Surgery 848C Orthopaedic Pediatric Surgery Elective**
Clinical elective available for four weeks during which time the student will work with attending surgeon primarily at St Louis Children's Hospital observing and assisting in outpatient and inpatient care. To be included are activities in the OR, ER, and outpatient clinics. Activities include participation in the weekly pediatric orthopaedic conference activities required.

**M95 Surgery 849 Orthopaedic Spine Surgery in Adult**
Clinical elective available for a four-week period, during which time the student will work in orthopaedic trauma at Barnes-Jewish Hospital. Activities will include participation in the care of hospitalized inpatients, participation in inpatient and outpatient procedures, attendance at designated orthopaedic conferences, and participation in ongoing research projects.
5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. This clinical elective is available for four weeks during which time the student will work with the attending surgeon primarily at Barnes-Jewish Hospital observing and assisting when appropriate in outpatient and inpatient care. To be included are activities in the OR, ER, and outpatient clinics. Attendance at and participation in the weekly orthopaedic conference activities is required. The spine fellow assigned to this service will serve as a primary contributor to the student's education experience on this rotation.

**M95 Surgery 849A Orthopaedic Spine Surgery In Adult Patients**

This clinical elective is available for four weeks during which the student will work with the attending surgeon primarily at Barnes-Jewish Hospital observing and assisting when appropriate in outpatient and inpatient care. To be included are activities in the OR, ER, and outpatient clinics. Attendance at and participation in the weekly orthopaedic conference activities is required. The spine fellow assigned to this service will serve as a primary contributor to the student's education experience on this rotation.

**M95 Surgery 849B Orthopaedic Spine Surgery in Adult Patients**

This clinical elective is available for four weeks during which the student will work with the attending surgeon primarily at Barnes-Jewish Hospital observing and assisting when appropriate in outpatient and inpatient care. To be included are activities in the OR, ER, and outpatient clinics. Attendance at and participation in the weekly orthopaedic conference activities is required. The spine fellow assigned to this service will serve as a primary contributor to the student's education experience on this rotation.

**M95 Surgery 849C Orthopaedic Spine Surgery in Adult Patients**

This clinical elective is available for four weeks during which the student will work with the attending surgeon primarily at Barnes-Jewish Hospital observing and assisting when appropriate in outpatient and inpatient care. To be included are activities in the OR, ER, and outpatient clinics. Attendance at and participation in the weekly orthopaedic conference activities is required. The spine fellow assigned to this service will serve as a primary contributor to the student's education experience on this rotation.

**M95 Surgery 850 Urology**

Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. A four-week clinical clerkship in pediatric and/or adult urology will offer the interested student experience with a spectrum of problems in clinical urology. The student will learn the basic diagnostic procedures and management of surgical and nonsurgical aspects of patient care on the private and ward services under the supervision of the attending staff and house staff. Clinical conferences are held four days per week.

**M95 Surgery 851 Orthopaedic Pediatric Surgery**

Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. Clinical elective available for four weeks during which time the student will work with attending surgeon primarily at Shriners Hospital for Children-St. Louis observing and assisting in out- and inpatient care. Attendance at and participation in the weekly pediatric orthopaedic conference activities required.

**M95 Surgery 852 Orthopaedic Surgery - VA**

Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. Clinical elective available for four weeks during which time the student will participate in orthopedic conferences, outpatient clinics, surgical cases, and patient rounds. Night call is optional but is advisable. The medical students electing this clerkship will serve as an active and integral part of the orthopaedic team. Credit variable, maximum 154 units.

**M95 Surgery 854 Orthopaedic Spine Surgery with Emphasis On Cervical Spine**

Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. Clinical elective available for four weeks during which time the student will work with attending surgeons primarily at Barnes-Jewish and St. Louis Children's Hospitals observing and assisting in outpatient and inpatient care. To be included in the OR and outpatient clinics. Attendance at and participation in the weekly orthopaedic and spinal conference activities is suggested. Credit variable, maximum 154 units.

**M95 Surgery 855 Reconstructive/Joint Preservation Surgery**

M95 855A and B are same; different course directors. Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. 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 primarily centered at Barnes-Jewish Hospital and includes care of hospitalized inpatients, participant in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopaedic educational conferences and anatomy sessions.

**M95 Surgery 855A Reconstructive/Joint Preservation Surgery**

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, participant in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopaedic educational conferences and anatomy sessions.

**M95 Surgery 855B Reconstructive/Joint Preservation Surgery**

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, participant in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopaedic educational conferences and anatomy sessions.

**M95 Surgery 855C Reconstructive/Joint Preservation Surgery**

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 young patients with hip impingement pathology and older patients with end stage joint arthritis, hospitalized inpatients, participant in inpatient and outpatient procedures, attendance at designated office hours, and attendance at and participation in orthopaedic educational conferences and anatomy sessions.

**M95 Surgery 855D Reconstructive/Joint Preservation Surgery**
This clinical elective is available for four weeks during which the student participates in orthopaedic conferences, outpatient clinics, surgical cases, and patient rounds on the Reconstructive and Joint Preservation Surgery service.

**M95 Surgery 859 Orthopaedic Oncology**
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. This clinical elective, centered primarily at Barnes-Jewish Hospital, is available for four weeks during which the student participates in orthopaedic conferences, outpatient clinics, surgical cases, and patient rounds on the Musculoskeletal Oncology service.

**M95 Surgery 859A Orthopaedic Oncology**
This clinical elective, centered primarily at Barnes-Jewish Hospital, is available for four weeks during which the student participates in orthopaedic conferences, outpatient clinics, surgical cases, and patient rounds on the Musculoskeletal Oncology service.

**M95 Surgery 861 Surgical Oncology and Endocrine Surgery**
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. The student will work closely with Dr. Moley or Dr. Doherty within the Oncology and Endocrine Section of the Division of General Surgery. Student involvement in all aspects of clinical surgery is accomplished by student attendance in the outpatient office, preoperative patient's evaluation, in-hospital patient management, and postoperative outpatient follow-up after discharge. Clinical exposure is focused on thyroid, parathyroid and adrenal surgery, as well as breast oncology, GI oncology, melanoma, and soft-tissue sarcomas. Credit variable, maximum 154 units.

**M95 Surgery 862 Acting Internship, Colon and Rectal Surgery**
This sub-internship elective is designed to give students in-depth experience in the clinical management of patients on the Colorectal Surgery Service. Students work closely with the attendings within the Section of Colon and Rectal Surgery, and clinical exposure is focused on a wide range of benign and malignant colorectal diseases. There is exposure to radiation oncology and the specialized areas of nursing related to care of patients with colorectal cancer and inflammatory bowel disease. The course will offer opportunities for students to gain experience in preoperative, intraoperative and postoperative patient management under house staff, fellows, and faculty guidance, as well as ample opportunity to attend and participate in conferences. Notice: If a student desires to work more closely with a specific attending, they must make special arrangements with the Colorectal Surgery Office prior to beginning this elective.

**M95 Surgery 863 Acting Internship, Surgery Oncology-Endocrine**
This sub-internship elective is designed to give students in-depth experience in the clinical management of patients on the Endocrine and Surgical Oncology Service (Unit I Service). Students will serve as clerks and will be responsible for patient management with house staff under the guidance of the chief resident and attending surgeons. Clinical exposure is focused on thyroid, parathyroid, and adrenal surgery, as well as breast oncology, melanoma, and soft-tissue sarcomas. The course will offer opportunities for students to gain experience in preoperative, intraoperative, and postoperative patient management. There will be opportunity for students to evaluate patients, decide on a diagnostic and management strategy and provide care under house staff and faculty guidance, as well as ample opportunity to attend and participate in conferences. Note: If a student desires to work more closely with a specific attending, they must make special arrangements with the faculty member prior to beginning this elective.

**M95 Surgery 864 Ethical Challenges in Surgery and Medicine**
Enrollment limit per period: 2. Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 33, 37 and 41. This elective will involve exploration of the ethical challenges discussed during four years of presentations at the monthly "Surgery/Ethics/ Pizza Rounds" conducted by the Department of Surgery at Washington University School of Medicine and the WU Center for the Study of Ethics and Human Values. The readings, discussions and conclusions will be guided by Washington University and Barnes-Jewish Hospital ethicists and will result in a finished manuscript to be published, with the student as co-author, in the journal, Surgery. This elective provides the opportunity to work closely with the faculty in surgery and ethics and to participate in the many activities within the school, the Center, and BJH. It should appeal to any in the medical system interested in the ethical and humanitarian challenges facing medicine and society, in general.

**M95 Surgery 871 Acting Internship, Vascular Surgery**
This sub-internship elective is designed to give students in-depth experience in the clinical management of patients on the Vascular Surgery Service. The elective will offer opportunities for students to gain experience in preoperative, intraoperative and postoperative management of patients with surgically treated vascular diseases/conditions. Students will serve as clerks and will be responsible for patient management with house staff under the guidance of the chief resident and attending surgeons. There will be opportunity for students to evaluate patients, decide on a diagnostic and management strategy and provide care under house staff and faculty guidance, as well as ample opportunity to attend and participate in conferences. Notice: If a student desires to work more closely with a specific attending, they must make special arrangements with the faculty member prior to beginning this elective.

**M95 Surgery 879 Acting Intern, Hepatobiliary Pancreatic Surgery**
This sub-internship elective is designed to give students in-depth experience in the clinical management of patients on the Hepatobiliary-Pancreatic (Unit II) Service. The Unit II Service is a busy upper-gastrointestinal service with a focus on hepatobiliary and pancreatic diseases and their treatment. The course will offer opportunities for students to gain
experience in preoperative, intraoperative, and postoperative patient management. Students will serve as clerks and will be responsible for patient management with house staff under the guidance of the fellow, chief resident and attending surgeons. There will be opportunity for students to evaluate patients, decide on a diagnostic and management strategy, and provide care under house staff and faculty guidance, as well as ample opportunity to attend and participate in conferences. Note: If a student desires to work more closely with a specific attending, they must make special arrangements with the faculty member prior to beginning this elective.

M95 Surgery 880 Pediatric Surgery
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. The student will participate as a sub-intern in all aspects of pediatric surgical patient care and will be exposed to a wide variety of pediatric surgical cases. This includes the preoperative and postoperative evaluation of patients as well as the care of pediatric trauma patients. Daily rounds are made with both the resident and attending staff and active participation is expected in the pediatric surgery clinic and the operating room. Weekly conferences include Mortality and Morbidity, Radiology, Pathology and case presentations, with the student expected to prepare a conference presentation on a topic of interest.

M95 Surgery 891 Organ Transplantation
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. The care of transplant patients requires the integration of multiple diverse medical and surgical disciplines. This elective clerkship in organ transplantation encompasses the preoperative evaluation and management of adult and pediatric recipients of liver, kidney and pancreas. Students participate in procurement of allografts from cadaveric or living donors, organ preservation, and transplantation. Emphasis is also placed on postoperative care, multimodality immunosuppression and management of allograft rejection. Basic hepatic and renal physiology, fluid and electrolyte balance, and transplantation immunology are stressed. Rotation provides an elaborate exposure to different facets of management of end-stage renal and liver disease. Management of the complications of diabetes, hypertension, portal hypertension, and infectious problems are an integral part of pre- and post-transplant care. This course is designed to offer the student an overview of the field of organ transplantation. The student functions as a member of the transplant team and assumes appropriate responsibilities under supervision.

M95 Surgery 892 Minimally Invasive Surgery
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. An elective rotation in minimally invasive surgery is being offered by the Division of General Surgery. The coordinator for the rotation is Nathaniel J. Soper, MD, a member of the Hepatobiliary Pancreatic (HPB) Section of the General Surgery Division. Surgeons in this section of the Division of General Surgery regularly perform the following procedures laparoscopically: cholecystectomy, splenectomy, adrenalectomy, hiatal hernia repair, endoscopic myotomy for achalasia, inguinal hernia repair, ventral hernia repair and bariatric surgery for morbid obesity. The medical student electing this rotation will participate in the outpatient office and direct patient care, assist and observe in a wide range of laparoscopic procedures, and participate in teaching rounds and conferences. During this rotation, the student will also have the opportunity to observe and participate in minimally invasive surgical procedures performed by surgeons in other specialty sections within the Division of General Surgery, including Endocrine/Oncology (Drs. Doherty, and Brunt), Colorectal Surgery (Dr. Fleshman), and Urologic Surgery (Drs. Clayman and McDougall). The student may also elect to participate in the laboratory of the Washington University Institute for Minimally Invasive Surgery one or two days per week.

M95 Surgery 893 Acting Internship, Minimally Invasive Surgery
This sub-internship elective in minimally invasive surgery is offered by the chief of the Section of Minimally Invasive Surgery in the General Surgery Division. Surgeons in the Minimally Invasive Surgery group regularly perform the following procedures laparoscopically: cholecystectomy, splenectomy, adrenalectomy, hiatal hernia repair, endoscopic myotomy for achalasia, inguinal hernia repair, ventral hernia repair and bariatric surgery for morbid obesity. The medical student electing this rotation will participate in the outpatient office and direct patient care, assist and observe in a wide range of laparoscopic procedures, and participate in teaching rounds and conferences. During this rotation, the student will also have the opportunity to observe and participate in minimally invasive surgical procedures performed by various surgeons within the Section of Minimally Invasive Surgery and will function as an acting intern. Note: If a student desires to work more closely with a specific attending, they must make special arrangements with the faculty member prior to beginning this elective.

M95 Surgery 896 Preceptorships In General Surgery-Various Physicians
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. Student involvement in all aspects of clinical surgery is accomplished by student attendance in the outpatient office, preoperative patient evaluation, in-hospital patient management, and postoperative outpatient follow-up after discharge. 896-F, Dr. Gregorio Sicard, 314-362-7841, Vascular Section, General Surgery.

M95 Surgery 897 Preceptorship In General Surgery-Dr. Norton
The student will work closely with Dr. Norton within the Section of Surgical Oncology and Endocrinology. Student involvement in all aspects of clinical surgery is accomplished by student attendance in the outpatient office, preoperative patient evaluation, in-hospital patient management, and postoperative outpatient follow-up after discharge.

M95 Surgery 898 Preceptorship In General Surgery-Dr. Strasberg
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. The student will work closely with Dr. Steven Strasberg within the Hepatobiliary Pancreatic Section in the Division of General Surgery. Student involvement in all aspects of clinical surgery is accomplished by student attendance in the outpatient office, preoperative patient evaluation, in-hospital patient management, and postoperative outpatient follow-up after discharge.

M95 Surgery 899 Orthopaedic Surgery Externship-Visiting Students Only
Flexible scheduling is available for this externship. Students rotate on Orthopaedic Services in four-week blocks. During
their rotations, students are assigned to two different services for two weeks each. Some subspecialties that students may rotate on include sports medicine, hand and upper extremity, foot and ankle, musculoskeletal oncology, adult reconstructive surgery, pediatric orthopaedics, shoulder and elbow, and spine. For more information about the Orthopaedic Surgery Externship Program, visit the Externship Program webpage (http://www.ortho.wustl.edu/content/Education/2905/Training-Programs/Med-Student-Programs/Externship-Program/Overview.aspx).

**M95 Surgery 900 Research Opportunities-Surgery**
Research opportunities may be available. If interested, please contact the department of Surgery.