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: 314-454-8877

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); and
6. use of nerve transfer to improve hand function in patients with cervical spinal cord injury/quadriplegia; 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, MS, MD  
Assistant Professor of Surgery (Cardiothoracic Surgery) (primary appointment)  
MS Indiana University Indianopoli 2010  
MD University of Michigan 2005  
BA Cornell University 1993

Rebecca L Aft, MD, PHD  
Professor of Surgery (General Surgery) (primary appointment)  
MD Washington Univ in St. Louis 1992  
BS Univ of Wisconsin Madison 1978  
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)  
MD Washington Univ in St. Louis 2003  
BS Washington Univ in St. Louis 1999

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

B

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

Joaquin Barnoya, MS, MD  
Associate Professor of Surgery (Public Health Sciences) (primary appointment)  
Associate Professor of Medicine
Instructor in Clinical Surgery (General Surgery) (primary appointment)
BA Dartmouth College 1963
MD Washington Univ in St. Louis 1967
Arnold D Bullock, MD
Professor of Surgery (Urologic Surgery) (primary appointment)
Alan A and Edith L Wolff Distinguished Professor
BS Xavier University Louisiana 1983
MD Johns Hopkins University 1987

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

David Anthony Caplin, MD
Instructor in Clinical Surgery (Plastic and Reconstructive Surgery) (primary appointment)
MD University of Cincinnati 1975
BA Kenyon College 1971

Diego Casali, MD
Assistant Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
Assistant Professor of Anesthesiology
MD University of Brescia 2007

Su-Hsin Chang, PHD, MA
Assistant Professor of Surgery (Public Health Sciences) (primary appointment)
PHD Johns Hopkins University 2010
BA National Chengchi University 1995
MA Mass Inst of Technology (MIT) 2004

Will C Chapman, MD
Eugene M. Bricker Professor of Surgery (General Surgery) (primary appointment)
MD University of South Carolina 1984
BA University of North Carolina 1980

Chun-Cheng Chen, BEE, PHD, MD
Instructor in Surgery (General Surgery) (Pending Dean's Approval) (primary appointment)
BEE Mass Inst of Technology (MIT) 1999
PHD Vanderbilt University 2006
MD Vanderbilt University 2009

Gerald Jeung-II Cho
Assistant Professor of Surgery (Plastic and Reconstructive Surgery) (primary appointment)

John E. Codd, MD
Professor of Clinical Surgery (Cardiothoracic Surgery) (primary appointment)
MD Saint Louis University 1963
BA Gonzaga University 1954

Graham A Colditz, MBBS, DRPH, M PH
Niess-Gain Professor of Surgery (General Surgery) (primary appointment)
Deputy Director for the Institute of Public Health
Professor of Medicine
MBBS University of Queensland 1979
DRPH Harvard University 1986
BS University of Queensland 1977
M PH Harvard University 1982

H. Groves Cooke III, DDENT, MS
Instructor in Clinical Surgery (Plastic and Reconstructive Surgery) (primary appointment)
DDENT Washington Univ in St. Louis 1971
BA De Paul University 1967
MS George Washington University 1975

Douglas E Coplen, MD
Associate Professor of Surgery (Urologic Surgery) (primary appointment)
MD Indiana University Bloomington 1985
BA Wabash College 1981

James L Cox, MD, UNKNOWN, MD1
Evarts A. Graham Professor Emeritus of Surgery (Cardiothoracic Surgery) (primary appointment)
BS University of Mississippi 1964
MD University of Tennessee 1967
UNKNOWN Duke University 1978
MD1 University of Tennessee 1967

Michael Crittenden, MD, BS1
Associate Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
MD Georgetown University 1979
BS1 University of Notre Dame 1974

Amy Cyr, MD
Assistant Professor of Surgery (General Surgery) (primary appointment)
MD Univ of Nebraska Med Center 2002
BA Creighton University 1997

Ralph James Damiano Jr, MD
Evarts Ambrose Graham Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
BA Dartmouth College 1976
MD Duke University 1980

Kia L Davis, PHS, AB, MPH
Assistant Professor of Surgery (Public Health Sciences) (primary appointment)
PHS Harvard University 2015
AB Washington Univ in St. Louis 2018
MPH Saint Louis University 2007

Alana C Desai, MD
Assistant Professor of Surgery (Urologic Surgery) (primary appointment)
BS Marquette University 1997
MD Georgetown University 2002

Patrick A Dillon, MD
Associate Professor of Surgery (Pediatric Surgery) (primary appointment)
Associate Professor of Pediatrics
MD Georgetown University 1988
BA Brown University 1983

Maria Bernadette Majella Doyle, MD
Associate Professor of Surgery (General Surgery) (primary appointment)
MD Trinity College Dublin 1996
BS Trinity College Dublin 1990

Bettina Drake, M PH, PHD
Associate Professor of Surgery (Public Health Sciences) (primary appointment)
M PH Univ Texas Health Science Ctr 2003
BS Baylor University 2001
PHD University of South Carolina 2006

Joseph W Eades, MD
Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery) (primary appointment)
MD Washington Univ in St. Louis 1960
BA Amherst College 1956

J. Chris Eagon, MD, MS
Associate Professor of Surgery (General Surgery) (primary appointment)
MD Harvard University 1988
MS University of Utah 1997
BA Williams College 1984

Stephen Ray Eaton, MD, MS1, BS1
Assistant Professor of Surgery (General Surgery) (primary appointment)
MD Ross University 2005
MS1 Southern Illinois University 2000
BS1 Southern Illinois University 1997

Timothy J Eberlein, MD, MA
Bixby Professor of Surgery (General Surgery) (primary appointment)
Director of The Alvin J. Siteman Cancer Center
Head of the Department of Surgery
Professor of Pathology and Immunology
Spencer T. and Ann W. Olin Distinguished Professor
MD University of Pittsburgh 1977
MA Harvard University 1996
BS University of Pittsburgh 1973

Shaina Rose Eckhouse, MD
Assistant Professor of Surgery (General Surgery) (primary appointment)
MD Univ Texas Health Sci San Anto 2008

Pirooz Eghtesady, MS, MD, D SC
Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
Professor of Pediatrics
MS University of CA Los Angeles 1987
MD University of CA Los Angeles 1993
BS University of CA Los Angeles 1987
D SC University of CA Los Angeles 1993

Zachary P Englert, DOST
Adjunct Assistant Professor of Surgery (primary appointment)
BS Pennsylvania State University 2005
DOST Phil Coll of Osteopathic Med 2009

Sean Jason English, MD
Assistant Professor of Surgery (General Surgery) (primary appointment)
BA College of Wooster 2000
MD University of Pennsylvania 2007

John Matthew Felder III, MD
Assistant Professor of Surgery (Plastic and Reconstructive Surgery) (primary appointment)
BA University of Oregon 2004
MD Baylor University 2009

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

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

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

G

Feng Gao, PHD
Associate Professor of Surgery (Public Health Science) (primary appointment)
Associate Professor of Biostatistics
Associate Professor of Medicine
PHD Emory University 2003

Andrew E. Gelman, PHD
Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
Professor of Pathology and Immunology
BS University of CA Los Angeles 1996
PHD University of Pennsylvania 2006

Patrick J Geraghty, MD
Professor of Surgery (General Surgery) (primary appointment)
BS Northwestern University 1989
MD Northwestern University 1991

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

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

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

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

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

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

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

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

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

Chet Hammill, MS, MD
Associate Professor of Surgery (General Surgery) (primary appointment)
MS Oregon Health Science Univers 2012
MD Univ of IL -Urbana-Champaign 2004
BS Univ of IL -Urbana-Champaign 1996

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

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

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)
M PH Northwestern University 2011
BA Vanderbilt University 1998
PHD Northwestern University 2011

**Steven R Hunt, MD**  
Associate Professor of Surgery (General Surgery) (primary appointment)  
MD Stanford University 1997  
BA Dartmouth College 1992

**Mohsen Ibrahim, MD**  
Instructor in Surgery (Cardiothoracic Surgery) (primary appointment)  
MD University of Rome 1999

**Obeid Noor Ilahi, MD**  
Associate Professor of Surgery (General Surgery) (primary appointment)  
MD Aga Khan University 1992

**Akinobu Itoh, PHD, MD**  
Assistant Professor of Surgery (Cardiothoracic Surgery) (primary appointment)  
PHD Tohoku University Sendai Miyag 2010  
MD Tohoku University Sendai Miyag 1998

**Aimee S. James, MA, M PH, PHD**  
Associate Professor of Surgery (General Surgery) (primary appointment)  
MA University of Houston 1998  
M PH University of Texas Houston 2000  
PHD University of Houston 1999  
BA Goucher College 1995

**Senthil N Jayarajan, MD, MS**  
Assistant Professor of Surgery (General Surgery) (primary appointment)  
BS Illinois Institute of Technol 2004  
MD University of Michigan 2008  
MS Temple University 2012

**Jeffrey Jim, MD, MS**  
Associate Professor of Surgery (General Surgery) (primary appointment)  
MD University of CA Irvine 2003  
BS University of Southern Calif 1996  
MS University of Southern Calif 1999

**Dane P Johnson**  
Assistant Professor of Surgery (Urologic Surgery) (primary appointment)

**Puja Kachroo, MD, MS**  
Assistant Professor of Surgery (Cardiothoracic Surgery) (primary appointment)  
MD Ross Univ School of Medicine 2007

**BS Boston University 2001**  
**MS Columbia University 2003**

**Demetrios Katsikas, MD**  
Instructor in Clinical Surgery (Urological Surgery) (primary appointment)  
MD Wayne State University 1989  
BS University of Michigan 1985

**Martin S Keller, MD**  
Associate Professor of Surgery (Pediatric Surgery) (primary appointment)  
Associate Professor of Pediatrics  
MD University of Vermont 1990  
BS University of Pennsylvania 1985

**Adeel Khan, MD**  
Assistant Professor of Surgery (General Surgery) (primary appointment)  
BS Bahria University 1997  
MD Aga Khan University 2002

**Andrew M Kim, DDENT, MS**  
Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery) (primary appointment)  
Instructor in Clinical Otolaryngology  
BA California State University 1978  
DDENT Washington Univ in St. Louis 1984  
MS Ohio State University 1987

**John P. Kirby, MS, MD**  
Associate Professor of Surgery (General Surgery) (primary appointment)  
MS University of Illinois 1999  
MD University of Illinois 1993  
BS University of Illinois 1988

**Saul Klein, MD**  
Instructor in Clinical Surgery (Urologic Surgery) (primary appointment)  
MD Syracuse University 1959

**Mary E Klingensmith, MD**  
Professor of Surgery (General Surgery) (primary appointment)  
Mary Culver Distinguished Professor  
Vice Chairman for Education, Department of Surgery  
BA Wellesley College 1988  
MD Duke University 1992

**Benjamin D. Kozower, MD**  
Professor of Surgery (Cardiothoracic Surgery) (primary appointment)  
MD University of Rochester 1997  
BS University of Rochester 1993

**David Paul Krajcovic, MD**  
Instructor in Clinical Surgery (General Surgery) (primary appointment)  
BA Washington Univ in St. Louis 1965
MD Washington Univ in St. Louis 1969

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

L

Hing Hung H Lai, MD
Associate Professor of Surgery (Urologic Surgery) (primary appointment)
Associate Professor of Anesthesiology
BS Rice University 1994
MD Cornell University 1999

Constance Wye Leng Lee, MD
Instructor in Surgery (Pediatric Surgery) (primary appointment)
BS University of Virginia 2001
MD University of Virginia 2006

Jerome F Levy
Professor Emeritus of Surgery (General Surgery) (primary appointment)

Wenjun Li, MS, MD
Associate Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
MS Sun Yat-Sen University 2004
MD Guangdong Medical College 1991

Ying Lin, MD, PHD
Assistant Professor of Surgery (General Surgery) (primary appointment)
MD Washington Univ in St. Louis 2005
BS Duke University 1997
PHD Washington Univ in St. Louis 2005

Erin Lynn Linnenbringer, MS1, BS1, PHD
Instructor in Surgery (Public Health Sciences) (primary appointment)
MS1 Northwestern University 2003
BS1 Washington Univ in St. Louis 2000
PHD University of Michigan 2014

Ying Liu, MD, PHD
Assistant Professor of Surgery (Public Health Sciences) (primary appointment)
MD Southeast U Medical School 1995
PHD Texas Tech University 2006

Alan M Londe, MD
Instructor in Clinical Surgery (General Surgery) (primary appointment)
BA Washington Univ in St. Louis 1957
MD Washington Univ in St. Louis 1961

Stanley L London, MD

Associate Professor Emeritus of Clinical Surgery (General Surgery) (primary appointment)
MD Washington Univ in St. Louis 1949

Eshter Jiaxin Lu, PHD, MS
Assistant Professor of Surgery (Public Health Sciences) (primary appointment)
Assistant Professor of Biostatistics
BS Nankai University 1997
PHD Medical College of Wisconsin 2007
MS National Univ of Singapore 2002

Mark A Ludwig, MD
Instructor in Clinical Surgery (General Surgery) (primary appointment)
BA Emory University 1972
MD University of Chicago 1976

Jingqin Luo, PHD, MS1, MS
Assistant Professor of Surgery (Public Health Sciences) (primary appointment)
Assistant Professor of Biostatistics
Assistant Professor of Medicine
BS Renmin University of China 1998
PHD Duke University 2006
MS1 Duke University 2003
MS Renmin University of China 2001

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)
MD University of Michigan 1982
BS Bucknell University 1978

Julie Ann Margenthaler, MD
Professor of Surgery (General Surgery) (primary appointment)
MD Southern Illinois University 1997
BA Boston University 1993

Muhammad Faraz Masood, MD
Assistant Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
Mary Culver Department of Surgery (05/09/18)

John E. Mazuski, MD, PHD, MS
Professor of Surgery (General Surgery) (primary appointment)
BA California State Fresno 1973
MD University of CA Los Angeles 1981
PHD University of Minnesota 1993
MS Univ of Wisconsin Madison 1975

Patricia A McGuire, MD
Instructor in Clinical Surgery (Plastic and Reconstructive Surgery) (primary appointment)
MD University of Missouri 1985

Michelle L Medintz
Adjunct Assistant Professor of Surgery (primary appointment)

Spencer J Melby, MD
Associate Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
MD University of Utah 2002
BS Brigham Young University 1997

Bryan F Meyers, MD
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
Assistant Professor of Clinical Surgery (General Surgery) (primary appointment)
MD Washington Univ in St. Louis 1966
BA University of Texas Austin 1962

Kevin Joseph Mitchell, MD
Instructor in Clinical Surgery (General Surgery) (primary appointment)
BS Howard University 1981
MD Howard University 1985

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

Amy M. Moore, MD
Assistant Professor of Surgery (Plastic and Reconstructive Surgery) (primary appointment)
MD Virginia Comm University 2004

Julian C Mosley, MD
Instructor in Clinical Surgery (General Surgery) (primary appointment)
BS Saint Louis University 2000
MD Washington Univ in St. Louis 1972

Nabil A Munfakh, MD
Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
MD University of Michigan 1985
BS University of Michigan 1981

Gregory P Murphy
Assistant Professor of Surgery (Urological Surgery) (primary appointment)

Matthew G Mutch, MD
Professor of Surgery (General Surgery) (primary appointment)
BA St Olaf College 1990
MD Washington Univ in St. Louis 1994

Terence M. Myckatyn, MD
Professor of Surgery (Plastic and Reconstructive Surgery) (primary appointment)
MD Univ of Northern British Colu 1997
BS Univ of Northern British Colu 2003

Neal Neuman, MD
Instructor in Clinical Surgery (Urologic Surgery) (primary appointment)
MD Saint Louis University 1971

Thomas E Niesen, MD
Instructor in Clinical Surgery (General Surgery) (primary appointment)
BS Tulane University 1975
MD Tulane University 1979

Richard James Nissen, MS, DDENT
Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery) (primary appointment)
MS Washington Univ in St. Louis 1985
DDENT University of Iowa 1983
BS Iowa State University 1979

Anthony Ian Nunez
Instructor in Clinical Surgery (Cardio Surgery) (primary appointment)

O

John Westley Ohman
Assistant Professor of Surgery (General Surgery) (primary appointment)

George A Oliver, MD
Assistant Professor Emeritus of Clinical Surgery (General Surgery) (primary appointment)
MD Washington Univ in St. Louis 1952
BA Washington Univ in St. Louis 1948

Tiffany Medlin Osborn, MD, M PH
Professor of Surgery (General Surgery) (primary appointment)
Professor of Emergency Medicine in Medicine
MD Univ Texas Health Sci San Anto 1997
M PH London Hygiene & Tropical Med 2009
Sharad P Parikh, UNKNOWN
Instructor in Clinical Surgery (General Surgery) (primary appointment)
UNKNOWN University of Pune 1967

Yikyung Park, MS1, PHD
Associate Professor of Surgery (Public Health Sciences) (primary appointment)
MS1 EWHA Womans University 1996
BS EWHA Womans University 1994
PHD Harvard University 2005

Charles L Parks, MD
Instructor in Clinical Surgery (General Surgery) (primary appointment)
MD Washington Univ in St. Louis 1969
BS University of South Dakota 1967

Jeffrey Andrew Parres, MD
Instructor in Clinical Surgery (Urologic Surgery) (primary appointment)
MD University of Missouri 1987
BA Washington Univ in St. Louis 1983

Michael K Pasque, MD
Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
Professor of Biomedical Engineering
Professor of Radiology
MD University of Oklahoma 1978

Kamlesh Babulal Patel, MD
Associate Professor of Surgery (Plastic and Reconstructive Surgery) (primary appointment)
BS University of MO Kansas City 2000
MD University of Arizona 2005

G Alexander Patterson, MD
Joseph C Bancroft Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
MD Queen’s University 1974

Enrique Pedro Perinetti, PHD, MD
Instructor in Clinical Surgery (Urologic Surgery) (primary appointment)
PHD School Not Listed 1975
MD School Not Listed 1969

Mary Politi, PHD, M PHIL
Associate Professor of Surgery (General Surgery) (primary appointment)
PHD George Washington University 2006
M PHIL George Washington University 2004
BS Barnard College 2001

Laurie Jean Punch, MD
Assistant Professor of Surgery (General Surgery) (primary appointment)
BS Yale University 1997
BS Yale University 1997
MD University of Connecticut 2002

Varun Puri, MS, MD
Associate Professor of Surgery (Cardiothoracic Surgery) (primary appointment)
MS Creighton University 2007
BS All-India Inst of Medical Sci 1998
MD Washington Univ in St. Louis 2009

Nishant Raj
Assistant Professor of Surgery (General Surgery) (primary appointment)

Ricardo Rao, MD
Instructor in Clinical Surgery (General Surgery) (primary appointment)
BA University of CA San Diego 1983
MD University of Missouri 1987

Nanette Rahee Reed, MD
Assistant Professor of Surgery (General Surgery) (primary appointment)
MD Baylor College of Medicine 2004
BS University of Notre Dame 2000

Frank O Richards, MD
Assistant Professor Emeritus of Clinical Surgery (General Surgery) (primary appointment)
MD Howard University 1947
BA Talladega College 1944

Shale M Rifkin, MD
Assistant Professor of Clinical Surgery (General Surgery) (primary appointment)
MD Washington Univ in St. Louis 1948

Brian G Rubin, MD
Professor of Surgery (General Surgery) (primary appointment)
Professor of Radiology
BA Colgate University 1979
MD University of Vermont 1984

Jacqueline Mitsouko Saito, MD
Associate Professor of Surgery (Pediatric Surgery) (primary appointment)
BS Harvard Radcliff 1989
MD Columbia University 1993

Arghavan Salles, PHD, MD
Assistant Professor of Surgery (General Surgery) (primary appointment)
PHD Stanford University 2014
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luis A Sanchez, MD</td>
<td>Professor of Surgery (General Surgery)</td>
<td>Stanford University in Stanford 2006</td>
</tr>
<tr>
<td></td>
<td>Gregorio A. Sicard Distinguished Professor</td>
<td></td>
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<tr>
<td></td>
<td>Professor of Radiology</td>
<td></td>
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<tr>
<td></td>
<td>BS Yale University 1983</td>
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<tr>
<td></td>
<td>MD Harvard University 1987</td>
<td></td>
</tr>
<tr>
<td>Donald C Sauer, MD</td>
<td>Assistant Professor Emeritus of Clinical Surgery (General Surgery)</td>
<td>Washington University in St. Louis 1956</td>
</tr>
<tr>
<td></td>
<td>BA Washington Unv in St. Louis</td>
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<tr>
<td></td>
<td>MD Washington Unv in St. Louis</td>
<td></td>
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<tr>
<td>Douglas J Schuerer, MD</td>
<td>Professor of Surgery (General Surgery)</td>
<td>University of Pittsburgh 1995</td>
</tr>
<tr>
<td></td>
<td>BS Allegheny College 1991</td>
<td></td>
</tr>
<tr>
<td>Richard B Schuessler, MS, PHD</td>
<td>Professor of Surgery (Cardiothoracic Surgery)</td>
<td>Yale University 1983</td>
</tr>
<tr>
<td></td>
<td>Associate Professor of Biomedical Engineering</td>
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<tr>
<td></td>
<td>BS University of Missouri 1973</td>
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<tr>
<td>Maryls E Schuh, BS1, MD</td>
<td>Instructor in Clinical Surgery (General Surgery)</td>
<td>University of North Dakota 1977</td>
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<tr>
<td></td>
<td>BA Washington Unv in St. Louis</td>
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<tr>
<td></td>
<td>BS Washington Unv in St. Louis</td>
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<tr>
<td>Homayoun Sedighi, DDENT</td>
<td>Assistant Professor of Clinical Surgery (Plastic and Reconstructive Surgery)</td>
<td>Washington Unv in St. Louis 1987</td>
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<tr>
<td></td>
<td>BS Indiana University Bloomington 1983</td>
<td></td>
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<tr>
<td>Debra L Seoane, MD</td>
<td>Instructor in Clinical Surgery (General Surgery)</td>
<td>University of Miami 1986</td>
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<td>BA Stanford University 1978</td>
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<td>MD Vanderbilt University 1982</td>
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<td>Courtney Shands III, MD</td>
<td>Instructor in Clinical Surgery (Urologic Surgery)</td>
<td>University of North Dakota 1973</td>
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<td>Surendra Shenoy, PHD, MD</td>
<td>Professor of Surgery (General Surgery)</td>
<td>Kasturba Medical College 1984</td>
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<td>PHD Institute of Medical Science 1989</td>
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<td>Matthew Leon Silviera, MS1, MD</td>
<td>Assistant Professor of Surgery (General Surgery)</td>
<td>Temple University 2010</td>
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<td>BS Pennsylvania State University 2001</td>
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<td>MD Temple University 2005</td>
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<td>David Siroospour, MD</td>
<td>Assistant Professor of Clinical Surgery (General Surgery)</td>
<td>Washington University in St. Louis 2010</td>
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<td>Jason Andrew Snyder, MD</td>
<td>Assistant Professor of Surgery (General Surgery)</td>
<td>Marshall University 2008</td>
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<td>Jason Andrew Snyder, MD</td>
<td>BS Kettering University 2004</td>
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<td>Alison K Snyder-Warwick, MD</td>
<td>Assistant Professor of Surgery (Plastic and Reconstructive Surgery)</td>
<td>Knox College 2000</td>
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<td>Dirk M Spitzer, PHD</td>
<td>Assistant Professor of Surgery (General Surgery)</td>
<td>University of Wisconsin Madison 1972</td>
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<td>Alan Joel Stein, MD</td>
<td>Assistant Professor of Clinical Surgery (Urologic Surgery)</td>
<td>Wayne State University 1976</td>
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<td>Daniel Charles Stoeckel</td>
<td>Instructor in Clinical Surgery</td>
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<td>Steven M Strasberg, MD</td>
<td>Pruett Professor of Surgery (General Surgery)</td>
<td>University of Toronto 1963</td>
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<tr>
<td>Herbert Sunshine, MD</td>
<td>Instructor in Clinical Surgery (Urologic Surgery)</td>
<td>Washington Unv in St. Louis 1954</td>
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<tr>
<td>Siobhan Sutcliffe, MS, MHS, PHD</td>
<td>Associate Professor of Surgery (Public Health Sciences)</td>
<td>Johns Hopkins University 2004</td>
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<td>MD Stanford University 2006</td>
<td>Instructor in Clinical Surgery</td>
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<td>MD University of MO Kansas City 2010</td>
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<td>Assistant Professor of Surgery (Plastic and Reconstructive Surgery)</td>
<td>Knox College 2000</td>
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Marissa Morningstar Tenenbaum, MD
Associate Professor of Surgery (Plastic and Reconstructive Surgery) (primary appointment)
MD Washington Univ in St. Louis 2002
BS Univ of Wisconsin Madison 1998

Robert W Thompson, MD
Professor of Surgery (General Surgery) (primary appointment)
Professor of Cell Biology and Physiology
Professor of Radiology
MD University of Michigan 1983
BA Hope College 1979

Adetunji Toriola, PHD
Assistant Professor of Surgery (General Surgery) (primary appointment)
PHD University of Tampere 2011

Ralph J Torrence, MD
Assistant Professor of Surgery (Urologic Surgery) (primary appointment)
MD Georgetown University 1983

Erica J Traxel, MD
Assistant Professor of Surgery (Urologic Surgery) (primary appointment)
MD Beaufort Technical College 2002
BS Texas A&M University 1998

Thomas H Tung, MD
Professor of Surgery (Plastic and Reconstructive Surgery) (primary appointment)
BS Duke University 1986
MD University of Maryland 1990

Isaiah Turnbull, MS, MD
Assistant Professor of Surgery (General Surgery) (primary appointment)
BS University of Oregon 1998
MS Washington Univ in St. Louis 2008
MD Washington Univ in St. Louis 2008

Kelly Jean Vallar
Assistant Professor of Surgery (General Surgery) (primary appointment)

Ramakrishna Venkatesh, MD, MS, MS1
Professor of Surgery (Urologic Surgery) (primary appointment)
MD Bangalore University 1988
MS Bangalore University 1991
MS1 School Not Listed 1991

Jesse Daya Vrecenak, MD
Assistant Professor of Surgery (Pediatric Surgery) (primary appointment)
MD University of Pennsylvania 2007
BS Yale University 2003

Gino J Vricella, MD
Assistant Professor of Surgery (Urologic Surgery) (primary appointment)
BS Saint Louis University 2012
MD University of MO Columbia 2006

Howard S Walker, MD
Instructor in Clinical Surgery (Cardiothoracic Surgery) (primary appointment)
MD Beaufort Technical College 1974
BA Citadel 1971

Brad W. Warner, MD
Jessie L. Ternberg, M.D., PhD. Distinguished Professor of Pediatric Surgery in Surgery (Pediatric Surgery) (primary appointment)
Professor of Pediatrics
BS University of MO Kansas City 1982
MD University of MO Kansas City 1982

Erika Waters, M PH, PHD, MS PSYC
Associate Professor of Surgery (Public Health Sciences) (primary appointment)
M PH Johns Hopkns University Medic 2007
PHD Rutgers University 2006
MS PSYC Rutgers University 2003
BS Arizona State University 1999

Michael D Weiss, BS1, MD
Assistant Professor of Surgery (General Surgery) (primary appointment)
BS1 Ohio State University 1977
MD Ohio College of Podiatric Medi 1981

Jason R Wellen, MD
Associate Professor of Surgery (General Surgery) (primary appointment)
BS Emory University 1998
MD St George's University 2002

Bruce I White, MD
Instructor in Clinical Surgery (Plastic and Reconstructive Surgery) (primary appointment)
MD Washington Univ in St. Louis 1964

Brad C White, MD
Instructor in Clinical Surgery (Urologic Surgery) (primary appointment)
BS Illinois State University 1986
MD Loyola University Chicago 1993

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 may elect to spend the entire rotation on the general surgery service, or to divide the rotation between the general surgery service and the colorectal surgery services. 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 preparative, and especially intraoperative and 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.
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.

M95 Surgery 812 Trauma, Burns and Critical Care
William W. Monafo, MD; 6104 Queeny Tower; 314-362-5297; four weeks; periods A-I; 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.

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.

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.

M95 Surgery 816 Emergency Department-Surgery
William W. Monafo, MD; 6104 Queeny Tower; 314-362-5297; four weeks; periods A-I; 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.

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 would encounter as surgical interns involved with surgical critical care. Students will be active in the ED and the surgical floors. Students will have a structured experience in order to maximize development of their diagnostic, management, and case presentation skills in the acute care setting so that they may more smoothly make the transition to a surgical internship.

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 subs-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.

M95 Surgery 830 Plastic Reconstructive Surgery
Valid start weeks for four-week blocks are: Weeks 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41. The period on plastic surgery may either be spent as a clinical clerkship or conducting a basic laboratory project. The purpose of the clinical clerkship is to familiarize the student with the basic principles of tissue repair and reconstruction. The student will have successive assignments to each of the attending staff and the ward resident during the four weeks. This will expose the student to the breadth and depth of plastic surgery. Alternatively, if the student has identified a focus of interest, the student may participate on those services of special interest, such as hand or pediatric plastic surgery. 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.

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 surgeons 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. 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 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.

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 participation in outpatient procedures, attendance at faculty clinic office hours, and attendance at orthopaedic conferences.

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 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 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 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, attendance at designated 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 Shriner's 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 orthopaedic conferences, and dissection of upper-extremity anatomical specimens.

M95 Surgery 846 Orthopaedic Trauma Elective
M95 846 A and B are the same elective 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 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.

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
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 work with the attending surgeon at Barnes-Jewish Hospital observing and assisting when appropriate in inpatient and outpatient care. To be included are activities in the OR, ER, and outpatient clinics. Attendance at and participation in the weekly pediatric 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 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. Attendance at and participation in the weekly pediatric orthopaedic conference activities is 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. Attendance at and participation in the weekly pediatric orthopaedic conference activities is 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. Attendance at and participation in the weekly pediatric orthopaedic conference activities is required.

M95 Surgery 849 Orthopaedic Spine Surgery in Adult Patients
M95 849A and B are the same elective 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. 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 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 849B Orthopaedic Spine Surgery in Adult Patients**
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 849C Orthopaedic Spine Surgery in Adult Patients**
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 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 urology will offer the interested student experience with a spectrum of problems in clinical urology. 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 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 surgeons primarily at Shriner's Hospital for Children-St. Louis observing and assisting in outpatient 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 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 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. A four-week clinical clerkship in spine and spinal conference activities is suggested. Credit variable, maximum 154 units.

**M95 Surgery 855 Reconstructive/Joint Preservation Surgery**
M95 855A and B and C 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 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 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 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.
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 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 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, 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 of 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 Brun), Colon and Rectal 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. 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 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 8991 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.