Medical Knowledge and Patient Care:

Residents must demonstrate knowledge and application of the pathophysiology and epidemiology of the diseases listed below for this rotation, with the pertinent clinical and laboratory findings, differential diagnosis and therapeutic options including preventive measures, and procedural knowledge. They must show that they are able to gather accurate and relevant information using medical interviewing, physical examination, appropriate diagnostic workup, and use of information technology. They must be able to synthesize and apply information in the clinical setting to make informed recommendations about preventive, diagnostic and therapeutic options, based on clinical judgement, scientific evidence, and patient preferences. They should be able to prescribe, perform, and interpret surgical procedures listed below for this rotation.

All Residents are expected to understand:
1. Pre-operative evaluation of the surgical patient.
2. Post-operative management of the surgical patient.
3. Treatment of surgical wound infections.
4. Post-operative wound care.
5. Workup of a post-operative fever.
6. Social and support services, such as home health care, visiting nurse services, and rehabilitation facilities.
7. Resuscitation of a dehydrated or septic patient.

Disease-Based Learning Objectives:

Diverticular Disease:
1. Pathophysiology of diverticulosis, diverticulitis, and lower gastrointestinal hemorrhage.
2. Workup and management, and indications for operation in diverticulitis.
3. Non-operative and operative management of lower GI hemorrhage.

Acute Abdomen:
2. Pre-operative management.
4. Pathophysiology of acute appendicitis.
5. Operative and non-operative management of acute appendicitis.
6. Work up and management of appendiceal carcinoid.
Colitis:
1. Pathophysiology of ischemic, infectious, and radiation colitis/proctitis.
2. Evaluation of the patient with colitis.
4. Indications for operation and operative options.

Colorectal Cancer:
1. Pathophysiology and staging of adenomas and carcinomas of the colon and rectum.
2. Screening methods for colorectal cancer.
3. Pre-operative workup of colorectal cancer.
5. Operative techniques, including laparoscopy, for treatment of colorectal cancer.
7. Recognition and workup of hereditary colon cancer syndromes.
8. Recognition, workup, and operative treatment of polyposis syndromes.

Large Bowel Obstruction:
1. Pre-operative workup and operative management of a patient with colonic volvulus.
2. Workup and management of acute colonic pseudo-obstruction (Ogilvie's).

Inflammatory Bowel Disease:
2. Medical management of inflammatory bowel disease.
3. Pre-operative management of the patient with IBD.
4. Indications for operation in ulcerative colitis and Crohn's.
5. Operative options in ulcerative colitis and Crohn's.
6. Follow-up management of surgically-treated ulcerative colitis.
7. Natural history and follow-up of Crohn's disease.

Pelvic Floor Dysfunction:
1. Presentation and workup of the patient with rectal prolapse, bowel incontinence, and obstructive defecation.
2. Operative and non-operative management.
3. Surgical options.
4. Post-operative follow-up.

Hemorrhoids:
1. Anatomy and pathophysiology of hemorrhoids.
2. Presentation and workup of hemorrhoids, including bright red blood per rectum.
3. Medical management of hemorrhoidal disease.
4. Office-based procedures for hemorrhoids.
5. Indications and options for surgical treatment of hemorrhoids.

Peri-anal Abscess and Fistula:
1. Anatomy and pathophysiology of abscess/fistula.
2. Surgical treatment of abscess.

Anal Fissure:
1. Pathophysiology and presentation of fissure-in-ano.
2. Medical management.
3. Operative management.

Cancer of the Anal Canal:
1. Anatomy and histopathology of anal canal cancers.
2. Presentation and workup.
3. Non-operative and operative options.

Operations by level:

PGY-I:
1. Hemorrhoid ligation and hemorrhoidectomy.
2. Fulguration of condylomata.
3. Examination under anesthesia including anoscopy.
4. Open and laparoscopic appendectomy.
5. Fistulotomy.
6. Pilonidal cystectomy.

PGY-II and PGY-III: Above, plus
1. Incision and drainage of perianal abscess.
2. Internal sphincterotomy.
4. Colon resection.
5. Ileostomy and colostomy creation and reversal.
6. Rigid and flexible sigmoidoscopy, and colonoscopy.

PGY IV and PGY V: Above, plus
1. Anterior resection.
2. Abdominoperineal resection.
3. Laparoscopic colorectal resection.
4. Perineal rectosigmoidectomy.
5. Ileal pouch-anal anastomosis.
6. Anoplasty.
7. Trans-anal excision of rectal mass.

Assessment:
Monthly core-competency based evaluations are used by faculty to evaluate residents. Also collective faculty feedback is given semi-annually where all the attendings collectively discuss individual resident strengths and weaknesses, and ways for improvement.
Practice Based Learning:

Objectives:
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to develop skills and habits to be able to:

- Identify strengths, deficiencies and limits in one’s knowledge and expertise
- Set learning and improvement goals
- Incorporate formative evaluation feedback into daily practice
- Use information technology to optimize learning
- Systematically analyze practice, using quality improvement methods, and implement changes with the goal of practice improvement
- Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems
- Participate in the education of patients, families, students, residents and other health professionals, as documented by evaluations of resident’s teaching abilities by faculty and/or learners

Teaching Methods:
Residents are encouraged to develop an individualized learning plan and are assigned a mentor to determine if those goals are being achieved. The mentor, along with program director/assistant program directors at the semi-annual review, guides residents to incorporate self-assessment and feedback of others as part of their learning portfolio. Residents also get departmental lectures on quality improvement methodology as well as online research tools available at the medical library. A monthly journal club is used to teach and promote use of evidence-based medicine principles. They also receive a departmental lecture on research methodology, and are encouraged to apply the principles of research methodology and statistical analysis to their own research projects. Case presentations by residents at Morbidity and Mortality conferences allow them to analyze practice, using evidence based medicine and quality improvement methods. Participation in an animal lab on a semi-annual basis, where residents practice and teach to junior residents, basic and advanced laparoscopic surgery in animal models, allows overall practice improvement.

Assessment:
Monthly core-competency based evaluations are used by faculty to evaluate residents. Also collective faculty feedback is given semi-annually where all the attendings collectively discuss individual resident strengths and weaknesses, and ways for improvement.
Systems Based Practice:

Objectives:
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:
- Work effectively in various health care delivery settings and systems, including private offices of surgeons
- Coordinate patient care within the health care system
- Incorporate considerations of cost awareness and risk-benefit analysis in patient care
- Use system resources to advocate for quality patient care and optimal patient care systems
- Work in interprofessional teams to enhance patient safety and improve patient care quality
- Participate in identifying systems errors and in implementing potential systems solutions

Teaching Methods:
Residents get departmental lectures of health care finance and cost-effective resource allocation, as well as on different health care delivery systems to help understand the financial underpinnings of various insurance models. They also participate in discussion of medical errors or “near-miss” events at general surgical conferences. There is a lecture on patient safety and medical liability for residents to better understand provision of quality patient care.

Assessment:
Monthly core-competency based evaluations are used by faculty to evaluate residents. Also collective faculty feedback is given semi-annually where all the attendings collectively discuss individual resident strengths and weaknesses, and ways for improvement.

Professionalism:

Objectives:
Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. They must demonstrate:
- Compassion, integrity and respect for others, including accountability to patients and society, and professional commitment to excellence.
• Adherence to ethical principles by practicing patient-centered care that encompasses confidentiality, respect and autonomy via appropriate informed consent and shared decision making
• Cultural competence, by being sensitive and responsive to a diverse patient population as well as colleagues, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

Teaching Methods:
Professionalism is taught
• primarily during clinical experiences where residents observe and adopt the behavior of senior residents and faculty
• by assigning mentors who are positive role-models
• using departmental lectures at the Monday morning conferences (Schwartz lecture series) by a member of the hospital Ethics committee and risk management team
• giving an institutional lecture to the incoming intern class on cultural sensitivity and diversity.

Assessment:
A global 360 degree multi-rater evaluation is used to assess resident performance with respect to professionalism and interpersonal and communication skills. These are filled out anonymously by health care professionals, including nurses, and by their colleagues. The residents are also assessed at semiannual meetings, where they get collective faculty assessment and feedback about professionalism and interpersonal and communication skills, in addition to other competencies.

Interpersonal and Communication Skills:

Objectives:
Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families and professional associates. They must demonstrate that they can:
• Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds
• Communicate effectively with physicians, other health professionals, and health related agencies
• Work effectively as a member or leader of a health care team
• Maintain comprehensive, timely and legible medical records
**Teaching Methods:**
Interpersonal and communication skills are taught primarily during clinical experiences where residents observe the faculty and senior residents, and participate in, delivering bad news, holding family meetings to discuss ongoing care, educating patients and their families, and resolving conflict. Also daily meetings of the junior residents with social workers and case managers, as well as conversations with consultants, refine the skill of communication with other health care professionals to provide better patient care. Communication with colleagues is encouraged by having a standardized method of hand-off between junior and senior residents to help reduce medical errors and promote continuity of care. The junior residents receive ongoing lectures from the chief residents to develop and refine the skill of seamless hand-off of patient care. The residents also get a lecture at the Schwartz lecture series about case management and documentation. Scholarly communication is taught by having residents present cases and literature search at Morbidity and Mortality conferences, as well as General and Vascular Surgery conferences on Thursday and Friday mornings. These conferences help develop effective lecture and teaching skills, as they communicate effectively to their colleagues by presenting cases, associated complications and data, as well as teach the medical students. The residents are also given a talk on research methodology and opportunities, and are encouraged to present their scholarly work via presentations, abstracts, or publications.

**Assessment:**
A global 360 degree multi-rater evaluation is used to assess resident performance with respect to professionalism and interpersonal and communication skills. These are filled out anonymously by health care professionals, including nurses, and by their colleagues. The residents are also assessed at semiannual meetings, where they get collective faculty assessment and feedback about professionalism and interpersonal and communication skills, in addition to other competencies.