



Endocrine Surgery	A1.46	Identify genetic factors associated with neoplastic disease regarding known proto - oncogenes.	48	1	*	*		*
	A1.47	Define current theories of carcinogenesis.	48	1	*	*		*
	A1.48	Summarize the tenets of tumor biology, including the biochemical events of invasion and metastasis; describe the natural history of these lesions.	48	1	*	*		*
	A1.50	Describe the enzymatic determinants of prognosis for epithelial derived cancers.	48	1	*	*		*
	A1.51	Relate tumor staging to prognosis.	49	1				
	A1.52	Describe the anatomy, histology, physiology, and pertinent biochemistry of the following organs:	51	1	*	*		*
	A1.53	Explain the integrated concept of clinical neuroendocrinology, the cells and organs of the amine precursor uptake decarboxylase (APUD) system, and the	51	1	*	*		*
	A1.54	Fully discuss the secretion and control of the following: a. Thyroid stimulating hormone	51	1	*	*		*
	A1.55	Explain the following disease entities as they relate to problems in the surgical patient:	52	1	*	*		*
	Breast Surgery	A1.57	Describe the anatomy of the breast.	54	1	*	*	
A1.58		Explain the hormonal regulation of the breast.	54	1	*	*		*
A1.59		Summarize the incidence, epidemiology, and risk factors associated with breast cancer.	54	1	*	*		*
A1.60		Describe the pathological types of breast cancer, including the history and prognosis of each of the following:	54	1	*	*		*
A1.62		Outline the genetic and environmental factors associated with carcinoma of the breast.	54	1				
A1.63		Explain the mechanics and potential value of the stereotactic needle biopsy.	55	1	*	*		*
A1.64		Explain the use of TNM staging in treatment of breast cancer.	55	1	*	*		*
A1.66		Assess the pathophysiology: a. Referred pain c. Guarding	58	1	*	*		*
A1.67		Discuss differences in the physiological response to stress in the surgical patient.	58	1	*	*		*
A1.68		Explain the mechanism of referred pain in: a. Ruptured spleen d. Renal colic g. Gastritis	58	1	*	*		*
Abdominal Surgery	A1.69	Discuss the following causes of paralytic ileus: a. Postoperative electrolyte imbalance	58	1	*	*		*
	A1.70	Explain absorption and secretory functions of the peritoneal surfaces and the diaphragm.	58	1	*	*		*
	A1.71	Describe the anatomy of the omentum and its role in the inflammatory processes.	58	1	*	*		*
	A1.72	Explain the formation of fistulas in each of the following disease processes or factors:	59	1	*	*		*
	A1.73	Differentiate between incarceration, strangulation, and obstruction in relation to hernias.	59	1	*	*		*
	A1.74	Know the physiological basis for the preoperative and postoperative management, and indications for surgery of the following gastrointestinal	59	1	*	*		*
	A1.75	Describe the anatomy different types of hernia.	59	1	*	*		*
	A1.76	Know the anatomy of the abdominal wall, inguinal area, esophagus and esophageal hiatus,	59	1	*	*		*
	A1.77	Emergent Gastro-Intestinal Problems: ☐ Understand the epidemiology and natural history of cecal/sigmoid volvulus.	60	1	*	*		*
	A1.79	Inflammatory Bowel Disease and Nutrition ☐ Understand the epidemiology and natural history of sigmoid diverticulitis.	61	1	*	*		*
Vascular Surgery	A1.80	Understand types of malignant esophageal neoplasms, including their histologic appearance.	60	1	*	*		*
	A1.81	Assist with hernia repairs in the groin or umbilicus, demonstrating a basic understanding of the anatomy and surgical repair.	67	1	*	*		*
	A1.82	Colo-Rectal Disease: ☐ Understand the anatomy, histology, and function of the anal canal, colon, and	62	1	*	*		*
	A1.83	Anal Condition ☐ Understand the pathogenesis of anal abscesses/fistulas/anal fissures.	63	1	*	*		*
	A1.84	Liver & Biliary Tract ☐ Describe the anatomy of the liver and biliary system, including commonly	63	1	*	*		*
	A1.85	Pancreas ☐ Describe the anatomy of the pancreas, including regional vascular anatomy.	64	1	*	*		*
	A1.86	Describe arterial and venous anatomy and basic vascular hemodynamics .	71	1	*	*		*
	A1.87	Discuss the anatomy, pathology, and pathophysiology of the arterial wall.	71	1	*	*		*
	A1.88	Summarize the etiology of specific categories of vascular disease: a. Venous disease:	71	1	*	*		*
	A1.89	b. Arterial and peripheral vascular disease: ☐ Aortic and other vascular aneurysms	72	1	*	*		*
A1.90	Explain the risk/reward ratio of surgical care for patients with vascular disease.	72	1	*	*		*	
A1.91	Discuss the principles of and contraindications for anticoagulation and thrombolytic therapy.	72	1	*	*		*	
A1.92	Discuss the principles of angiography to include the following considerations: a. Indications and complications (including contrast-induced renal failure)	72	1	*	*		*	
A1.93	Describe the natural history of medically treated vascular disease in the following categories:	72	1	*	*		*	
A1.94	Demonstrate knowledge of lower extremity occlusive disease in terms of the following:	73	1	*	*		*	
A1.95	Discuss clotting factors and how they interact (coagulation cascade).	73	1	*	*		*	
A1.96	Discuss the role of the following factors in maintaining homeostasis in the coagulation pathways:	73	1	*	*		*	

		A1-97	Demonstrate knowledge of the pathophysiology of abdominal aortic aneurysm (AAA).	73	1	*	*		*
		A1-98	Understand the principles of laparoscopy.	18	1	*	*		*
Trauma / Shock / Acute surgical care	Senior	A1.100	Describe and explain the mechanics/ballistics associated with various wounding agents	31	1		*		*
		A1.101	Identify and delineate Retroperitoneal Zones I, II, and III	32	1		*		*
Surgical Critical Care		A1.102	Explain tissue oxygen supply and demand; e. Explain changes in tissue O <sub>2</sub> delivery and uptake related to pH, temperature, and 2,3-diphosphoglycerate (2,3-DPG)	43	1		*		*
		A1.103	Discuss the physiological principles of Renal tubular acidosis (differentiate between Type I and II)	43	1		*		*
Surgical Oncology		A1.104	Discuss the known facts relative to tumor suppressive genes and implications of mutations.	49	1		*		*
		A1.106	Describe the indications and means for implementing nutritional support in the pre- and post- operative cancer patient.	49	1		*		*
		A1.107	Indicate potential alterations in pulmonary function in the elderly patient, which may affect preoperative preparation and postoperative management.	49	1		*		*
		A1.108	Analyze and explain the rationale for combined adjuvant modalities in the prevention and treatment of cancer recurrence.	49	1		*		*
Endocrine Surgery		A1.110	Discuss the pathophysiology of the following diseases: a. A solitary thyroid nodule	52	1		*		*
Breast Surgery		A1.111	Summarize the role of adjuvant chemotherapy and radiation therapy for the treatment of primary breast carcinoma.	55	1		*		*
		A1.112	Summarize the physiological changes associated with pregnancy, including breast problems peculiar to pregnancy.	55	1		*		*
		A1.113	Outline the importance of estrogen and progesterone and other receptors in the prognosis and treatment of breast cancer.	55	1				
Abdominal Surgery		A1.114	Describe the pathophysiology of ascites in the following: a. Malignancy d. Cardiac disease b. Cirrhosis e. Renal disease	65	1		*		*
		A1.115	Discuss the pathophysiology of hepatic cirrhosis and portal hypertension.	66	1		*		*
		A1.116	Describe the etiology and pathophysiology of chronic pancreatitis.	66	1		*		*
		A1.118	Analyze the pathophysiology of short-gut syndrome.	66	1		*		*
Vascular Surgery		A1.120	Identify and describe vascular anatomy and regional anatomy related to vascular disease.	73	1		*		*
		A1.122	Explain the physiological of vascular disease, such as renovascular hypertension, portal hypertension, and renal failure.	73	1		*		*
		A1.123	Describe the pathogenesis of aneurysmal disease.	74	1		*		*
		A1.125	Demonstrate basic knowledge of the various types of graft and suture material available.	74	1		*		*
	N/A	A1.126	Knowledge of the anatomy of the anterior abdominal wall, breast, neck, oral cavity, esophagus, stomach, duodenum, small intestine, appendix, large intestine, rectum and anal region, gallbladder, extrahepatic biliary tree, liver,	17	1	*	*		*
		A1.128	Knowledge of the pathology of common inflammatory and malignant conditions.	17	1	*	*		*
Anatomy		A1.130	Outline the general concepts of anatomy and its subdivisions: a. Gross and cellular anatomy b. Molecular biology	20	1	*	*		*
		A1.132	Review, identify, and delineate the vulnerable structures encountered in surgical operations:	20	1	*	*		*
		A1.133	Compare the characteristics and functions of tissues and their components: a. Skin e. Nervous system	20	1	*	*		*
		A1.135	Define and describe anatomical aspects of complex general surgical operations: a. Bowel exposure maneuvers d. Bowel resection b. Whipple procedure e. Radical neck dissection	20	1	*	*		*
Physiology		A1.137	Identify physiological variations in geriatric, immunosuppressed, and pregnant patients.	21	1	*	*		*
		A1.139	Apply the physiology of water and sodium imbalance to the following: a. Extracellular fluid volume (ECFV) depletion c. Hyponatremia (hypo	22	1				
		A1.140	Identify water and electrolyte changes in response to various stress situations: a. Diseases, including trauma and burns b. Operative and non-operative therapy	22	1	*	*		*
		A1.141	Describe body water volumes and distribution.	22	1	*	*		*
		A1.143	Outline the normal electrolyte content of body fluids such as blood, extracellular fluid (ECF), urine, saliva, gastric juice, bile, and pancreatic fluid.	22	1	*	*		*
		A1.144	Summarize normal potassium physiology, causes, and consequences of depletion and excess, and treatment for potassium imbalance.	22	1	*	*		*
		A1.145	Discuss complexities of calcium, phosphorus, and magnesium excesses and deficiencies in the following: a. Metastatic breast cancer c. Hyperparathyroidism	22	1	*	*		*
		A1.146	Outline the pathophysiology of fluid and electrolyte problems in cardiac and peripheral revascularization, including reperfusion injury.	22	1	*	*		*

		A1.147	Apply fluid and electrolyte principles.	23	1				
	Surgical Infections	A1.148	Discuss the mechanisms of infection acquisition in surgical patients, such as: a. Mode of transmission (Community-acquired, nosocomial, or procedure-related)	24	1	*	*		*
		A1.149	Explain the role of bacterial inoculum and virulence, as well as local and systemic adjuvant factors that contribute to infection and abscess formation.	24	1	*	*		*
		A1.151	Analyze the infectious disease risks to which patients and surgeons are exposed. Consider the most common infections.	24	1	*	*		*
		A1.152	Understand the operating room wound classification system as it applies to infection rate surveillance.	24	1	*	*		*
		A1.153	Understand the impact of "surgeon-related" factors to surgical infections such as length of operation, handling of tissues, electrocautery, choice of suture, and	24	1	*	*		*
		A1.154	Summarize related factors and frequency of occurrence of the following in a febrile patient:	24	1	*	*		*
		A1.155	Discuss the significance of the following organisms to patients: a. Gram-positive cocci (coagulase-negative staphylococci, Staph. aureus,	24	1	*	*		*
		A1.156	Summarize characteristics of those fungal infections of surgical significance, differentiating between community-acquired, nosocomial, and opportunistic	25		*	*		*
		A1.158	Describe viruses of surgical significance, indicating their prevalence and modes of transmission.	25	1	*	*		*
		A1.159	Discuss the pathophysiology of necrotizing fasciitis, with special attention to risk	25	1	*	*		*
	Wound Healing	A1.161	Describe the physiological process of normal wound healing.	27	1	*	*		*
		A1.162	Explain the factors that affect wound healing.	27	1	*	*		*
		A1.163	Describe the steps of normal wound healing, including a. Inflammation d. Epithelialization	27	1	*	*		*
		A1.164	Discuss the pathophysiology of delayed wound healing.	27	1	*	*		*
		A1.165	Summarize the principles of wound protection and subsequent healing using: a. Dressings	27	1	*	*		*
		A1.166	Describe the microbiology of gangrene and necrotizing fasciitis.	27	1	*	*		*
		A1.167	Explain principles associated with the selection of appropriate incisions (applying surgical anatomy) with respect to the following: a. Blood supply d. Strength	27	1	*	*		*
	Minimal Access Surgery	A1.169	Differentiate between conventional open and scope-assisted surgery, including the following: a. Anesthetic considerations d. Need for team participation b. Effects of pneumoperitoneum e. Differences in patient outcome c. Cardiovascular stability	69	1	*	*		*
		A1.171	Discuss techniques for gaining access to the abdomen, including the following: a. Veress needle b. Open (Hassan cannula)	69	1	*	*		*
		A1.172	Discuss the physical limitations imposed on the user participating in minimal access surgery: a. Two-dimensional perspective	69	1	*	*		*
		A1.174	List contraindications for laparoscopic surgery, and be able to explain why these	70	1	*	*		*
	Pediatric Surgery	A1.176	Classify congenital malformations of the newborn by type, origin, a. Head and neck: thyroglossal duct cyst, lymphadenopathy, cystic hygroma	76	1	*	*		*
	Plastic and Reconstructive Surgery	A1.177	Discuss and compare skin and connective tissue according to the following: a. Anatomy	77	1	*	*		*
		A1.179	Describe the physiology of various techniques of skin and composite tissue transplantation with particular regard to component tissue circulation: a. Skin grafts b. Flaps (define full c. Musocutaneous flap thickness) d.	78	1	*	*		*
		A1.180	Categorize the pathophysiology of thermal, chemical, and electrical burns, including consideration of the following:	78		*	*		*
		A1.182	Define the TNM classification system used for neoplasms of skin, soft tissue, and head and neck.	78	1	*	*		*
	Outpatient Care	A1.184	Delineate appropriate pain medications and dosages.	80	1	*	*		*
	Pediatric Surgery	A1.186	Understand the anatomical and physiological principles that guide successful operative repair.	76	1	*	*		*
	Vascular Surgery	A1.187	Demonstrate knowledge of the anatomy, physiology, and pathophysiology of the vascular system, including congenital and acquired diseases.	71	1	*	*		*
	Abdominal Surgery	A1.189	Demonstrate knowledge of the anatomy, physiology, and pathophysiology of the stomach, duodenum, small and large bowel, liver, biliary tract, spleen, and	57	1	*	*		*
		A1.190	Demonstrate knowledge of surgical pathophysiology, with an emphasis on surgical management of surgical jaundice and mesenteric ischemia.	58	1	*	*		*
		A1.191	Understand hepatobiliary, pancreatic, and gastrointestinal anatomy and physiology.	58	1	*	*		*
	Breast Surgery	A1.192	Demonstrate knowledge of the anatomy, physiology, and pathophysiology of the breast.	54	1	*	*		*
	Surgical Oncology	A1.194	Demonstrate an understanding of biology, pathology and prognosis of neoplastic diseases.	47	1	*	*		*
	Surgical Immunology	A1.195	Demonstrate an understanding of general immunological principles in relation to surgical practice.	45	1	*	*		*
	Trauma / Shock / Acute surgical care	A1.197	Demonstrate an understanding of the mechanism and pathophysiology of shock.	29	1	*	*		*
		A1.198	Demonstrate an understanding of the pathophysiologic effect of blunt and penetrating trauma.	29	1	*	*		*
	Surgical Infections	A1.199	Demonstrate an understanding of the principles of infection	24	1	*	*		*
		A1.200	Demonstrate an understanding of the presentation and treatment of common surgical infections.	24					
	Physiology	A1.201	Demonstrate knowledge of normal and abnormal physiology causing surgical diseases.	21	1	*	*		*
		A1.203	Demonstrate an understanding of normal fluid and electrolyte homeostasis.	21	1	*	*		*
	Anatomy	A1.204	Demonstrate knowledge of anatomy that is pertinent to the practice of surgery.	20	1	*	*		*

A2 Assessment & Diagnosis	Trauma / Shock / Acute surgical care	Junior	A2.1	Specify the trauma services needed for initial evaluation and resuscitation.	29	1	*	*	*	*
			A2.3	Outline basic techniques of evaluation of trauma patients using the ATLS protocol.	29	1	*	*	*	*
			A2.4	Summarize the clinical presentation and hemodynamic parameters associated with each type of shock using clinical terms (e.g., heart rate, respiratory rate,	30	1	*	*	*	*
			A2.5	Propose an algorithm for diagnosing each shock type: a. Cardiogenic	30	1	*	*	*	*
			A2.6	Describe the indications and potential complications for the following surgical interventions: a. Bag mask ventilation b. Endotracheal intubation (oral and nasal) c.	31	1	*	*	*	*
			A2.8	Review the importance of serial physical exams, hemodynamic monitoring, and serial lab evaluations.	31	1	*	*	*	*
			A2.9	Participate in trauma evaluation and intensive care unit (ICU) supervision of a multiply injured patient.	32	3				
			A2.10	Recognize airway obstruction.	32	1	*	*	*	*
			A2.11	Diagnose cardiac arrest and rhythm disturbances.	32	1	*	*	*	*
			A2.12	Evaluate critical care parameters	33	1	*	*	*	*
			A2.14	Assess nutritional needs and institute necessary nutritional support.	33					
			A2.16	Monitor the trauma patient in the intensive care unit	33	1,2	*	*	*	*
			A2.18	Outline the basic principles of triage in the emergency department, including a. Immediate treatment d. Expectant treatment	34	1	*	*	*	*
			A2.19	Explain ATLS protocol for the resuscitation and stabilization of a seriously ill or injured patient.	34	1	*	*	*	*
			A2.20	Describe the typical case scenarios for the following life-threatening problems requiring appropriate urgent/emergent action: a. Multiple system trauma h. Pulmonary embolus	35	1	*	*	*	*
			A2.21	Discuss the principles of evaluation for the following common minor problems: a. Laceration evaluation c. Wound infection and treatment	35	1	*	*	*	*
	A2.22	Summarize significant steps in the examination of dental/oral emergencies with which a general surgeon should be familiar.	35	1	*	*	*	*		
	A2.23	Perform triage of emergency trauma patients.	36	1	*	*	*	*		
	A2.24	Assess patients presenting emergency conditions using the appropriate diagnostic protocol.	36	1	*	*	*	*		
	A2.25	Prioritize requests for diagnostic studies based on need and time required to obtain results.	36	1	*	*	*	*		
	A2.26	Identify and outline criteria for admitting patients to the intensive care unit (ICU). Include the following:	37	1						
	A2.27	Identify and outline criteria for discharging patients from the ICU, including the following:	38	1	*	*	*	*		
	A2.28	Outline indications for providing nutritional support: a. Discuss indications of parenteral versus enteral forms of nutrition.	38	1	*	*	*	*		
	A2.29	Outline indications and methods for providing nutritional support: a. Discuss indications, selection of formulations, and route of administration of d. Estimate protein calorie requirements for patients of varying degrees of illness, and be	38	1	*	*	*	*		
	A2.30	Review cardiac function and hemodynamic monitoring from the following standpoints, and	39	1	*	*	*	*		
	A2.31	Outline the protocol for defining patterns of hemodynamically unstable patients: a. Predict improvements in hemodynamic status.	41	1	*	*	*	*		
	A2.32	Describe the initial evaluation, ongoing, acute monitoring, of possible neurological or behavioral abnormalities occurring in the ICU setting:	41	1	*	*	*	*		
	A2.33	Provide initial evaluation of the critically ill postoperative patient.	42	1	*	*	*	*		
	A2.34	Manage critically ill patients in the intensive care unit: a. Determine need for ventilation	44	1	*	*	*	*		
	A2.35	Distinguish between congenital and acquired immunodeficiency states.	45	1	*	*	*	*		
	A2.36	Describe side effects and their treatment.	46	1	*	*	*	*		
	A2.37	Explain the clinical definition of brain death, including a discussion of the available laboratory and radiologic studies to support the clinical criteria.	46	1	*	*	*	*		
	A2.38	Recognize wound infections and other complex disorders in chronically immunosuppressed patients undergoing elective and emergent surgery.	47	1	*	*	*	*		
	A2.39	Identify and differentiate diagnostic features of benign versus malignant neoplasms (gross and microscopic).	47	1	*	*	*	*		
	A2.40	Predict patterns of presentation of malignant neoplasms.	48	1	*	*	*	*		
	A2.41	Describe characteristics of various staging systems and explain their use in evaluating neoplasms.	48	1	*	*	*	*		
	A2.42	Perform complete histories and physical examinations of patients with cancer.	48	1						
	A2.43	Formulate an appropriate differential cancer diagnosis for each cancer patient assigned.	49	2	*	*	*	*		
	A2.44	Summarize the following aspects of endocrine pathology: a. The criteria for the diagnosis of malignancy b. Chromosomal abnormalities as a source of diagnostic tool	49	1	*	*	*	*		
	A2.45	Outline the differential diagnosis of the following: a. Hypercalcemia b. Hypoadrenalism	51	1	*	*	*	*		
	A2.46	Complete a preliminary evaluation of patients suspected of having endocrine disease to include: a. Focused history b. Physical examination	52	1	*	*	*	*		
	A2.47	Perform a detailed evaluation of patients with suspected endocrine disease.	53	1,2	*	*	*	*		
	A2.48	Distinguish between these common entities in the differential diagnosis of breast masses: a. Fibroadenomas d. Fibrocystic disease	53	1,2	*	*	*	*		
	A2.49	Explain the general indications, uses, and limitations of mammography.	54	1	*	*	*	*		
	A2.50	Describe the presentation, history of the following benign breast diseases: a. Lactational breast abscess d. Atypical epithelial hyperplasia b. Chronic recurring subareolar abscess c. Fibroadenoma	54	1	*	*	*	*		
	A2.51		54	1	*	*	*	*		
	A2.52		54	1	*	*	*	*		
	A2.53		54	1	*	*	*	*		
	A2.54		54	1	*	*	*	*		

Abdominal Surgery	A2.56	Discuss several causes of gynecomastia and outline an appropriate work-up.	55	1	*	*		*
	A2.58	Explain the clinical decision-making steps for the work-up of a breast mass.	55	1	*	*		*
	A2.59	Perform simple procedures such as: b. Drainage of simple breast abscesses	56	2			*	
	A2.61	Demonstrate an increasing level of skill in the physical examination of the breast, including recognition of the range of variation in the normal breast.	56	2			*	
	A2.62	Identify common lesions such as fibroadenomas, cysts, mastitis, and cancer.	56	1	*	*		*
	A2.64	Perform simple mastectomy, lumpectomy, and excision of intraductal papillomas, under direct supervision.	57	2				
	A2.66	Assess the following signs associated with acute abdomen: a. Referred pain c. Guarding b. Rebound tenderness d. Rigidity	58	1	*	*		*
	A2.68	When considering the possibility of wound complications: a. What are the risk factors for abdominal wound infection? b. What are the contributing factors for abdominal wound dehiscence and evisceration? c. What are the usual clinical presentations and timing?	59		*	*		*
	A2.70	Describe the presentation, and complications of non-operative management of different types of hernia.	59	1				
	A2.71	Know the clinical presentation, causes and diagnosis of motility disorders of the esophagus/paraesophageal hernias.	59	1	*	*		*
	A2.72	Know the clinical presentation, diagnosis of esophageal perforation.	60	1	*	*		*
	A2.73	Discuss types of benign esophageal neoplasms, including their clinical presentation, diagnosis, and treatment.	60	1	*	*		*
	A2.74	Understand types of malignant esophageal neoplasms, including their presentation, diagnosis, histologic appearance	60	1	*	*		*
	A2.75	Emergent Gastro-Intestinal Problems: Recognize and diagnose colonic volvulus.	60	1	*	*		*
	A2.76	Acute Abdomen and Peritonitis: Develop a differential diagnosis through history and physical examination.	60	1,2			*	*
	A2.77	Recognize the clinical manifestations of non-surgical conditions such as pelvic inflammatory disease (PID) and acute pancreatitis, and differentiate from	61	1	*	*		*
	A2.78	Inflammatory Bowel Disease and Nutrition Recognize acute and chronic diverticulitis. Recognize the complications of Crohn's disease and ulcerative colitis and	61	1	*	*		*
	A2.79	Stomach and Upper GIT: Describe the diagnosis of stress gastritis & peptic ulcer Understand the diagnosis of different types of post-gastrectomy	62	1	*	*		*
	A2.80	Colo-Rectal Disease: Recognize bleeding, obstruction, and perforation from colonic lesions Understand the principles of investigation in a patient with rectal bleeding. Know when to plan investigations: carcinoembryonic antigen (CEA),	62	1	*	*		*
	A2.81	Learn indications for genetic screening of families for familial adenomatous polyposis (FAP)/hereditary nonpolyposis colorectal cancer (HNPCC)/MUTYH gene mutation.	63	1	*	*		*
A2.83	Discuss the principal characteristics of the following: a. Metastatic lesions to the liver b. Primary malignancies of the liver and biliary tree	64	1	*	*		*	
A2.85	Evaluate and diagnose acute abdomen and abdominal emergencies.	67	1	*	*		*	
A2.86	Evaluate abdominal wound problems, including the following: a. Infection c. Fasciitis b. Evisceration d. Dehiscence	67	1					
A2.88	Interpret the following, in coordination with attending radiologists and staff: a. Acute abdominal series (identify free air, bowel obstruction, volvulus, and atelectasis)	67	1	*	*		*	
A2.90	Anal Condition Recognize anorectal abscesses	63	1	*	*		*	
A2.92	Perform appropriate preoperative work-up, and supervise postoperative care of patients undergoing laparoscopic procedures.	70	1					
A2.93	Assess patients' vascular systems using appropriate skills in history-taking and clinical	71	1,2			*	*	
A2.95	Describe the relationship of the following disorders/practices to atherosclerotic vascular disease: a. Diabetes mellitus d. Congestive heart failure	71	1	*	*		*	
A2.96	Describe life-threatening signs of vascular disease and indicate when immediate intervention is required.	71	1	*	*		*	
A2.98	Summarize the therapeutic options of specific categories of vascular disease: a. Venous disease: b. Arterial and peripheral vascular disease: c. Aortic and other vascular aneurysms d. Fibromuscular vascular disease	71	1	*	*		*	
A2.99	Summarize the principles of non-invasive laboratory diagnosis; include a description of the role and limitations of the vascular laboratory.	72	1	*	*		*	
A2.100	Outline the principles of non-invasive laboratory diagnosis; include a description of the role and limitations of the vascular laboratory.	72	1	*	*		*	
A2.101	Summarize principles for the preoperative assessment of patients undergoing major vascular surgical procedures.	72	1	*	*		*	
A2.103	Describe the surgically correctable causes of hypertension and their diagnostic modalities.	72	1	*	*		*	
A2.105	Demonstrate knowledge of the screening and diagnostic tests, and complications of abdominal aortic aneurysm (AAA).	73	1	*	*		*	
A2.106	Evaluate patients for vascular disease.	74	1	*	*		*	
Minimal Access Surgery								
Vascular Surgery								

		A2.108	Perform soft tissue lump excision and lymph node biopsy.	18	2			*	
		A2.110	Develop clinical skills such as physical examination and practical procedures related to general surgery.	13	2			*	
Trauma / Shock / Acute surgical care	Senior	A2.112	Identify indications for emergency operative procedures, such as cricothyrotomy and resuscitative thoracotomy.	31	1		*		*
		A2.114	Define and describe the Le Fort maxillary fracture classification system.	32	1		*		*
Emergency		A2.115	Identify and delineate Zones I, II, and III of penetrating injuries to the neck, and their management.	32	1		*		*
		A2.116	Triage multiple trauma victims.	33	1		*		*
		A2.117	Analyze the decision process in evaluating the need for emergency operative intervention in trauma or disease.	35	1		*		*
Surgical Critical Care		A2.118	Perform triage of several sets of multiply traumatized patients (single victims) requiring in-hospital resuscitation or operative intervention.	36	1		*		*
		A2.120	Describe the criteria for preoperatively predicting the patient's need for critical care, including the following:	42	1		*		*
		A2.121	Summarize the following moral and ethical problems encountered in the ICU: a. The need for organ donation and the identification of potential donors	42	1		*		*
		A2.122	Discuss the use of sepsis severity scores.	42	1		*		*
		A2.123	Distinguish between the major characteristics of septic shock and hypovolemic shock:	42	1		*		*
Surgical Oncology		A2.124	Demonstrate the ability to perform the following: a. Calculate oxygen delivery	43	1				
		A2.125	Discuss the evaluation of the following bleeding disorders: a. The role of blood vessels, platelets, fibrin cascade, and degeneration in normal	43	1		*		*
		A2.127	Recognize typical presentations and clinical manifestations for different types of neoplasms.	48	1		*		*
		A2.129	Describe differences in presentation and outcomes for malignancy in older patients.	49	1		*		*
		A2.131	Explain the rationale and methodology employed in lymphatic mapping and sentinel node biopsies, along with the expected level of positive findings.	49	1		*		*
		A2.132	Describe the criteria and necessary procedures for intraoperative monitoring of cardiovascular and pulmonary functions of the cancer patient.	49	1		*		*
		A2.133	Stage specific neoplasms clinically and pathologically using the TNM system.	50	1		*		*
Endocrine Surgery		A2.135	Assess need and institute appropriate monitoring both preoperatively and postoperatively.	50	1		*		*
		A2.136	Discuss the clinical presentation and work-up of the following diseases: a. A solitary thyroid nodule	52	1		*		*
Breast Surgery		A2.137	Evaluate patients with complex endocrine disease and present a differential	54	1		*		*
		A2.138	Describe the characteristics and diagnosis of less common lesions of the breast: a. Inflammatory carcinoma d. Cystosarcoma phylloides b. Paget's disease e. Bilateral breast carcinoma	55	1		*		*
		A2.139	Describe the basics of staging and treatment of metastatic breast cancer, including the role of the following: a. Chemotherapy	55	1				
		A2.140	Summarize the major considerations for post-mastectomy breast reconstruction.	56	1		*		*
		A2.141	Explain the role of sentinel lymph node biopsy for breast cancer in terms of the following:	56	1,2		*	*	*
Abdominal Surgery		A2.142	Identify and analyze data addressing controversial areas of breast disease, such as the following:	56	1		*		*
		A2.143	Formulate a diagnostic work-up for most common breast problems, including the common types of breast carcinomas.	57	1		*		*
		A2.144	Independently evaluate a new breast patient through history & physical examination, ordering appropriate tests: e.g., mammogram, ultrasound, or MRI.	57	1,2		*	*	*
		A2.145	Describe the etiology and manifestations of the following: a. Desmoid tumors	65	1		*		*
		A2.147	Describe the diagnosis of different types of post-gastrectomy syndromes, including the following:	66	1		*		*
		A2.148	Analyze the diagnosis of short-gut syndrome.	66	1		*		*
		A2.149	Discuss the diagnosis, and evaluation of cystic neoplasms of the pancreas (mucinous and serous cystadenomas; cystadenocarcinoma).	66	1		*		*
		A2.150	Describe the diagnosis, and evaluation of the following islet cell tumors of the pancreas:	66	1		*		*
		A2.151	Describe the diagnosis of pancreas divisum.	66	1		*		*
		A2.152	Describe the more common retroperitoneal tumors, sarcomas, and liposarcomas. (What are their clinical presentations and prognoses?)	66	1		*		*
Vascular Surgery		A2.153	Discuss the broad range of vascular illnesses, including congenital vascular disease and diseases of the venous and lymphatic systems.	73	1		*		*
		A2.154	Explain the organic manifestations of vascular disease, such as renovascular hypertension, portal hypertension, and renal failure.	74	1		*		*
		A2.155	Describe the complications of aneurysmal disease.	74	1		*		*
		A2.156	Describe the indications for angioplasty and vascular stent placement along with risks and complications.	74					
		A2.157	Diagnosis prosthetic graft infections	76	1				
		A2.158	Apply knowledge to provide appropriate clinical care related to core clinical problems of general surgery.	13	1		*		*
		A2.159	Analyze and interpret findings using clinical skills to develop appropriate differential diagnoses for patients.	13	1		*		*

Anatomy	N/A	A2.160	Be able to prioritize problems appropriately.	15	1		*	*	*	
		A2.161	Ability to perform a concise history of present illness and physical exam.	17	2			*		
		A2.162	Ability to interpret common laboratory & radiologic tests.	17	1	*	*		*	
		A2.163	Ability to diagnose, history, investigation the following: b. The breast and endocrine system	18	1	*	*		*	
		A2.164	The diagnosis of general surgical diseases	21	1	*	*		*	
	Physiology		A2.165	Indicate the normal values of commonly applied clinical tests.	21	1	*	*		*
			A2.166	Describe the application of physiological principles to surgical monitoring and therapy, including the following approaches: d. Interpretation of results of common metabolic panel blood tests e. Interpretation of electrocardiogram (EKG), cardiac echoes, and other cardiac	21	1	*	*		*
			A2.167		22	1	*	*		*
			A2.168	Interpret hemodynamic monitoring and adjust treatment to restore homeostasis. Insert, maintain, and monitor arterial, venous, and central line	23	1	*	*		*
	Surgical Infections		A2.170	Analyze pulmonary function tests, solve problems of abnormal respiration, and delineate weaning parameters.	23	1	*	*		*
		A2.171	Estimate the patient's state of sodium and water balance by history and physical examination, in the following locations/situations:	23	1,2	*	*	*	*	
		A2.173	Differentiate between cellulitis, lymphangitis, lymphadenitis, fasciitis, and abscess	25	1	*	*		*	
		A2.175	Describe the mode of transmission, and diagnosis of surgical infections for the	25	1	*	*		*	
		A2.177	Differentiate between types of postop pneumonia (non-ventilatory-associated, aspiration acquired, ventilatory-associated), and their risk factors, diagnostic clues	25	1	*	*		*	
		A2.178	Discuss the diagnosis of necrotizing fasciitis, with special attention to physical examination findings.	25	1	*	*		*	
		A2.179	Analyze situations where prophylactic antibiotics are discouraged: a. Burns c. Early aspiration	25	1	*	*		*	
		A2.181	Appropriately diagnose common infections seen in surgical patients.	26	1	*	*		*	
		A2.182	Make appropriate and timely diagnoses for infections in postoperative patients	26	1	*	*		*	
		A2.183	Diagnose necrotizing fasciitis and Clostridium perfringens infections.	26	1	*	*		*	
Wound Healing		A2.184	Identify sources of implantable device infection; and confirm diagnosis	26	1	*	*		*	
		A2.185	Define and describe the causes of postoperative wound complications such as a. Dehiscence c. Fasciitis	27	1	*	*		*	
		A2.186	Discuss potential problems in complicated wound healing.	27	1	*	*		*	
		A2.187	Assess the properties and uses of different suture material (absorbable/non-absorbable).	28	1	*	*		*	
Pediatric Surgery		A2.188	Evaluate the progress of wound healing.	28	1	*	*		*	
		A2.189	Demonstrate an understanding of the applications and risks of minimal access surgery (MAS).	69	1	*	*		*	
		A2.190	Discuss recognition of complications, including major vascular injury, massive carbon dioxide embolus, or visceral injury.	70	1	*	*		*	
		A2.191	Summarize the basic approach to the diagnosis of more common surgical	76	1	*	*		*	
	Plastic and Reconstructive Surgery		A2.193	Explain the principles of diagnosis of common causes of gastrointestinal	77	1	*	*		*
			A2.195	Demonstrate an understanding of the nature of congenital and acquired defects of the head, neck, trunk, and extremities.	77	1	*	*		*
		A2.197	Explain the methods for performing incisional and excisional biopsies of skin and oral cavity.	78	1	*	*		*	
Abdominal Surgery		A2.199	Participate in the evaluation of a burned patient.	79	1,3	*	*		*	
		A2.201	Demonstrate an understanding of the presentation of diseases of the abdominal cavity and pelvis.	57	1	*	*		*	
Outpatient Care		A2.202	Demonstrate the ability to formulate and implement a diagnostic plan for diseases of the abdomen and pelvis that are amenable to surgical intervention.	57	1	*	*		*	
		A2.203	Demonstrate an understanding of endoscopic procedures such as upper endoscopy, colonoscopy, and flexible sigmoidoscopy.	58	1	*	*		*	
		A2.204	Demonstrate the ability to obtain the essential elements of a focused preoperative history, including assessment of medications.	80	1,2	*	*	*	*	
		A2.205	Accurately interpret clinical laboratory results, pathology reports, and radiographic studies.	80	1	*	*		*	
		A2.206	Delineate the components of and discuss the importance of a focused history and physical examination performed in an outpatient setting on a patient with a surgical disease.	80	1	*	*		*	
		A2.207	Distinguish between different types of biopsy techniques in an outpatient setting.	80	1	*	*		*	
		A2.208	Specify indications for common office procedures such as anoscopy.	80	1	*	*		*	
		A2.209	Describe the expected appearance of wound sites at various postoperative intervals.	80	1	*	*		*	
		A2.210	Postoperatively, obtain appropriate follow-up history, including: a. General well-being b. Pain control c. Nutritional state (ability to eat, nausea) d. Level of activity	81	2			*		
		A2.211	Provide appropriate wound care. Identify wound problems, including the following: a. Superficial wound separation; abdominal dehiscence b. Seromas c. Infections (cellulitis or abscess, determining the need for antibiotics, drainage) d. Incisional hernia	81	1,2	*	*	*	*	
Surgical Oncology		A2.212	Perform appropriate postoperative examination of the surgical site.	81	2			*		
		A2.213	Assess the patient's ability to maintain levels of activity (driving, work, exercise).	81	2			*		
		A2.214	Develop and hone skills in history taking, physical examination	80	2			*		
		A2.215	Demonstrate proficiency in diagnosis of the cancer patient	47	1	*	*		*	
Surgical Critical Care		A2.216	Demonstrate an understanding of the diagnosis of neoplastic diseases.	47	1	*	*		*	
		A2.217	Demonstrate the ability to diagnose patients with interrelated system disorders.	37	1	*	*		*	



A3 Management	Trauma / Shock / Acute surgical care	junior	Emergency	A2.218	Demonstrate knowledge of the principles associated with the diagnosis of critically ill patients, including knowledge of multiple organ system normalities and abnormalities.	37	1	*	*	*	*
			A2.219	Demonstrate the ability to evaluate all acute or life-threatening conditions, including major trauma in an emergency setting.	34	1	*	*	*	*	
			A2.220	Demonstrate knowledge of disaster management, including the role of triage, and display the ability to apply this knowledge in an emergency setting.	34	1	*	*	*	*	
			Anatomy	A2.221	Apply knowledge of anatomy to the diagnosis surgical patients.	20	1	*	*	*	*
			A3.1	Summarize basic critical care management principles.	29	1	*	*	*	*	
			A3.2	Discuss the management of trauma involving the musculoskeletal system.	29	1	*	*	*	*	
			A3.3	Outline basic techniques of resuscitation of trauma patients using the ATLS protocol.	29	1	*	*	*	*	
			A3.4	Identify management principles for a trauma patient in the intensive care unit.	30	1	*	*	*	*	
			A3.5	Outline indications for basic surgical procedures such as a. Laparotomy b. Debridement of injured tissues c. Ultrasound d. Diagnostic peritoneal lavage (DPL) e. Thoracotomy/thoracostomy f. Hemorrhage control	30	1	*	*	*	*	
			A3.6	Propose an algorithm for initiating treatment for each shock type: a. Cardiogenic b. Hypovolemic c. Distributive (septic, anaphylactic, neurogenic, and adrenal insufficiency mediated) d. Obstructive (cardiac tamponade, tension pneumothorax, pulmonary embolus)	30	1	*	*	*	*	
			A3.7	Analyze methods for initiating and maintaining ventilator/weaning support.	31	1	*	*	*	*	
			A3.8	Define appropriate interventions in adult and pediatric patients with acute airway obstruction and	31	1	*	*	*	*	
			A3.9	Outline the management of the following drains and tubes: nasogastric tube (NGT), urinary bladder catheter, chest tube, central venous line (CVL), and arterial line.	31	1	*	*	*	*	
			A3.10	Participate in trauma resuscitation, operative management of a multiply injured patient.	32	1,3	*	*	*	*	
			A3.11	Manage the unconscious patient.	32	1	*	*	*	*	
			A3.12	Manage airway obstruction.	32	1,2	*	*	*	*	
			A3.13	Manage flail chest (pneumothorax, hemothorax, and obstructive shock states).	32	1	*	*	*	*	
			A3.14	Manage cardiogenic and septic shock.	32	1	*	*	*	*	
			A3.15	Perform endotracheal and nasotracheal intubation.	32	2				*	
			A3.16	Perform cricothyrotomy and tracheostomy.	32	2				*	
A3.17	Apply closed-chest cardiac massage (CPR).	32	2				*				
A3.18	Perform closed-chest defibrillation.	32	2				*				
A3.19	Perform venous access procedures: subclavian, jugular, and femoral vein catheterizations, and saphenous vein cutdown.	32	2				*				
A3.20	Estimate volume requirements in acute trauma and burns, and initiate replacement.	32	1	*	*	*	*				
A3.21	Control external blood loss.	32	1	*	*	*	*				
A3.22	Insert a variety of tubes (e.g., endotracheal, DPL, urinary catheter, NGT)	32	2				*				
A3.23	Apply and remove all types of dressings and splints, including vacuum pack dressing.	32	2				*				
A3.24	Perform emergency therapeutic procedures such as a. Insertion of chest tubes b. Central line insertion c. Pericardiocentesis	33	2			*	*				
A3.25	Suggest changes in management of patients in the intensive care unit as indicated.	33	1	*	*	*	*				
A3.26	Make decisions, under direct supervision, regarding changes in critical care parameters	33	1	*	*	*	*				
A3.27	Make and close a variety of incisions and tie knots using the sterile technique	33	2				*				
A3.28	Assess nutritional needs and institute necessary nutritional support.	33	1	*	*	*	*				
A3.29	Direct the evaluation of an acutely injured patient to include resuscitation and the decision regarding operation.	33	1	*	*	*	*				
A3.30	Formulate rehabilitation plans for trauma patients.	33	1	*	*	*	*				
A3.31	Suggest changes in management as indicated for the trauma patient in the intensive care unit	33	1	*	*	*	*				
A3.32	Manage pharmacologic treatment plans for patients during resuscitation and in the critical care unit.	33	1	*	*	*	*				
Emergency	A3.33	Describe the initial management of the injured patient(s) in the following stages of care: a. Provide care in pre-hospital settings, including BLS b. Conduct triage in emergency departments c. Serve as team leader and member during ATLS d. Coordinate patient transport to tertiary facilities	34	1	*	*	*	*			
A3.34	Describe the considerations for establishing an airway appropriate to the patient's condition, including a. Nasal trumpets/nasopharyngeal airway b. Bag-mask assistance c. Endotracheal tube d. Surgically created airways (cricothyroidotomy-needle or tube)	34	1	*	*	*	*				
A3.35	Discuss the principles of management for the following common minor problems: a. Laceration evaluation c. Wound infection and treatment b. Tetanus prophylaxis d. Surgical repair of wounds	35	1	*	*	*	*				
A3.36	Discuss the principles of evaluation and management for the following common minor problems: a. Laceration evaluation c. Wound infection and treatment b. Tetanus prophylaxis d. Surgical repair of wounds	35	1	*	*	*	*				
A3.37	Explain the indications and appropriate methods for the following: a. Peritoneal lavage d. Suprapubic catheter insertion b. Insertion of chest tubes e. Central line insertion c. Pericardiocentesis f. Cricothyroidotomy	35	1	*	*	*	*				
A3.38	Define the requirements for informed consent in the emergency setting: a. Life-threatening conditions b. Minor surgery c. Patients who are minors d. Patients unable to provide informed consent (non compos mentis)	35	1	*	*	*	*				
A3.39	Summarize significant steps in the treatment of dental/oral emergencies with which a general surgeon should be familiar: a. Cellulitis, including Ludwig's angina b. Peritonsillar abscess (Quinsy)	35	1	*	*	*	*				
A3.40	Perform minor surgical procedures such as the following: a. Drainage of abscesses d. Wound debridement b. Wound closure e. Bladder catheterization c. Removal of foreign bodies	36	2				*				
A3.41	Perform basic surgical procedures such as the following: a. Laparotomy b. Wound debridement	36	2				*				
A3.42	Establish emergency stabilization of the traumatized patient via the following precautions: a. Cervical spine protection b. Prevention of hypothermia	36	2				*				
A3.43	Establish the following airways: a. Perform bag-mask ventilation b. Insert nasopharyngeal or oropharyngeal airways c. Perform endotracheal intubation (oro- and naso-pharyngeal) d. Perform a cricothyroidotomy	36	2				*				

Surgical Critical Care	A3-44	Assist with acute resuscitation procedures as indicated.	36	3					
	A3-45	Establish access to the central venous system.	36	2			*		
	A3-46	Describe, apply, and revise appropriate treatment interventions based upon an analysis of changes in the patient's clinical and laboratory parameters: a. Adjustment of intravenous fluids with respect to expected stress, including metabolic, hormonal, cardiovascular, and renal responses to replacement of fluid losses b. Efficacy of prophylactic measures for pulmonary embolism, stress ulceration, and infection c. Adequacy of nutritional support in a patient with multiple sites of protein losses (e.g., fistulas, drain sites, or metabolic stressors [infection, acute lung injury {ALI}]) d. Analysis and methods of treatment of postoperative fever e. Events leading to and responsible for initiation of ventilatory support f. Differences in low cardiac output, hypotensive/hypertensive states in terms of preload, pump, or afterload. g. Analysis and treatment of seizures or acute changes in mental status, including the role of the following: ☐ ABC's (airway, breathing, circulation) ☐ Intravenous glucose/thiamine h. Analysis and treatment of acute respiratory failure from changes in airway, pump, and lung	39	1		*	*	*	*
	A3-47	Describe the commonly used indications for initiation of ventilation support, including the following: a. Indications and commonly acceptable values for initiation of mechanical ventilation b. Evaluation of airway c. Evaluation of adequacy of thoracic pump (muscle strength) d. Evaluation of lung parenchymal characteristics (arterial blood gases and chest x-ray) e. Analysis of commonly used pulmonary values (e.g., tidal volume [V <sub>T</sub> ], positive end expiratory pressure (PEEP), auto PEEP, airway pressure) f. Indications and commonly acceptable values for weaning from mechanical ventilation	39	1,2		*	*	*	*
	A3-48	Outline methods for providing nutritional support: a. Discuss selection of formulations, and route of administration of parenteral versus enteral forms of nutrition. b. Select methods to avoid complications of parenteral and enteral routes of feeding.	38	1		*	*		*
	A3-49	Review the management of and create a diagram of a plan for the care of the critically ill surgical patient with multiple medical problems, such as the following: a. Cardiac dysrhythmias b. Pulmonary insufficiency from airway, bellows (pump), or parenchymal problems c. Acute/chronic renal failure with hemodynamic instability or need for specific fluid therapy (TPN), renal replacement therapy, or high output GI fistulas d. Diabetes mellitus and its special problems in the realm of nutritional support e. Hemodynamic instability in the face of acute/chronic renal or pulmonary insufficiency	39	1		*	*		*
	A3-50	Describe the management of ventilator-dependent patients, including the following: a. Pneumonias (aspiration or nosocomial) b. Acute renal failure c. Cardiac failure d. Prevention of malnutrition or restitution of body stores e. SIRS, multiple organ dysfunction syndrome (MODS) f. Sepsis g. Skin care problems h. Physical therapy (maintenance of muscle function, prevention of contractions) i. Psychological support for both patient and family	40	1		*	*		*
	A3-51	Review management of the mechanically ventilated patient with the following problems: a. Areas of differing compliance b. Borderline cardiac reserve	40	1		*	*		*
	A3-52	Outline the protocol for managing hemodynamically unstable patients, and analyze the selection of appropriate therapy by completing these activities: b. Detect and revise therapies based on the use of invasive/noninvasive monitoring devices.	41	1		*	*		*
	A3-53	Outline the protocol for defining patterns and managing hemodynamically unstable patients, and analyze the selection of appropriate therapy by completing these activities: a. Predict improvements in hemodynamic status. b. Detect and revise therapies based on the use of invasive/noninvasive monitoring devices.	41	1		*	*		*
	A3-54	Discuss the identification and correction of complex acid-base problems, such as choice of intravenous fluids for electrolyte replacement, in the following: a. Hyperchloremic, metabolic-acidotic patient b. Hypochloremic, metabolic-alkalotic patient c. Stuporous, dehydrated, hyponatremic patient d. Stuporous, dehydrated, hypernatremic patient	41	1		*	*		*
	A3-55	Describe the long term management of possible neurological or behavioral abnormalities occurring in the ICU setting: a. Seizures b. Coma c. Stroke d. Multifactorial effects of "post-op confusion" e. Delirium f. Brain death	42	1		*	*		*
	A3-56	Provide management of the critically ill postoperative patient.	44	1		*	*		*
	A3-57	Institute the following therapeutic interventions: a. Manage fluid orders. b. Determine ventilator settings. c. Order supportive drugs. d. Determine the need for and duration of antibiotic therapy.	44	1		*	*		*

	A3-58	Perform the following procedures: a. Orotracheal and nasotracheal intubation; nasogastric and bladder intubation b. Arterial catheter insertion c. Central venous and pulmonary artery catheter insertion d. Placement of tube thoracotomy e. Cricothyrotomy f. Pericardiocentesis	44	2		*				
Surgical Immunology	A3-59	Manage critically ill patients in the intensive care unit: a. Select initial ventilator settings. b. Compute initial and ongoing fluid requirements. c. Establish IV access and maintain appropriate sterile techniques for evaluation of fever.	45	1	*	*	*	*	*	*
	A3-60	Explain therapeutics of intravenous immunoglobulin and viral vaccines.	46	1	*	*	*	*	*	*
	A3-61	Distinguish between congenital and acquired immunodeficiency states.	46	1	*	*	*	*	*	*
	A3-62	Treat wound infections and other complex disorders in chronically immunosuppressed patients undergoing elective and emergent surgery.	47	1	*	*	*	*	*	*
	A3-63	Participate in the perioperative management of immunosuppressive agents in chronically-medicated patients undergoing general surgery.	47	3						
Surgical Oncology	A3-64	Plan and perform elective surgery in immunosuppressed patients with minimizing infectious risks. Perform emergent surgical intervention in similar high-risk patients.	47	1,2	*	*	*	*	*	*
	A3-65	Analyze and formulate a plan for management of the organ donor.	47	1	*	*	*	*	*	*
	A3-66	Describe surgical techniques and operative procedures designed to treat malignant diseases and their application to endoscopic operative techniques.	48	1	*	*	*	*	*	*
	A3-67	Describe indications for curative versus palliative treatment, and formulate therapeutic plans for each approach.	48	1	*	*	*	*	*	*
	A3-68	Summarize the nutritional requirements for cancer patients, and describe how they differ from those recommended for a healthy patient.	48	1	*	*	*	*	*	*
	A3-69	Excise benign lesions of skin, dermal appendages, and breast.	50	2						*
	A3-70	Demonstrate proper wound care and follow-up management.	50	1,2,3	*	*	*	*	*	*
	A3-71	Close wounds following major resections.	50	2						*
Endocrine Surgery	A3-72	Manage colostomies and ileostomies.	50	1,2	*	*	*	*	*	*
	A3-73	Assist with colostomies, ileostomies, and wedge resections of lung and liver.	50	3						*
	A3-74	Perform feeding gastrostomies and tube jejunostomies.	50	2						*
	A3-75	Outline the approach to the surgical management of diseases of the endocrine system: a. Is the treatment of each disease primarily surgical or medical? b. Is surgical treatment different for benign versus malignant disease? c. Is surgical treatment curative or palliative? d. Is surgical treatment directed at the target organ or primary organ? e. What role does lesion localization play in endocrine disorders?	51	1	*	*	*	*	*	*
	A3-76	Participate in the preoperative and postoperative care of patients undergoing endocrine surgery.	53	3						
	A3-77	Observe endocrine surgery cases.	53	3						
	A3-78	Observe and assist in surgery of the thyroid, parathyroid, adrenal glands, and pancreas.	53	3						
Breast Surgery	A3-79	Manage the preoperative and postoperative care of patients with endocrine disease, under supervision.	53	1	*	*	*	*	*	*
	A3-80	Describe the treatment of the following benign breast diseases: a. Lactational breast abscess d. Atypical epithelial hyperplasia b. Chronic recurring subareolar abscess e. Fibroadenoma c. Intraductal papilloma	54	1	*	*	*	*	*	*
	A3-81	Discuss principles for the treatment of breast cancer, such as the following: a. Local control (surgery/radiation therapy) b. Systemic control (chemotherapy/hormonal therapy/targeted therapy) c. Palliative therapy	55	1	*	*	*	*	*	*
	A3-82	Perform simple procedures such as: a. Diagnostic fine-needle aspiration of cysts c. Core needle & Open biopsy of breast masses	56	2						*
	A3-83	Perform open breast biopsies	57	2						*
Abdominal Surgery	A3-84	Demonstrate familiarity with male breast problems, e.g., gynecomastia and breast cancer. a. Discuss risk factors b. Outline appropriate work-up and management	57	1	*	*	*	*	*	*
	A3-85	Be familiar with the indications for splenectomy and the perioperative preparation and management of patients undergoing splenectomy for hematologic disease.	59	1	*	*	*	*	*	*
	A3-86	Understand the principal laparotomy incisions and techniques for closure of abdominal wall incisions, including the characteristics of common suture materials, and the rationale for choosing a given material and/or technique.	59	1	*	*	*	*	*	*
	A3-87	Know the treatment of motility disorders of the esophagus, as well as management of paraesophageal hernias.	59	1	*	*	*	*	*	*
	A3-88	Know the management of esophageal perforation.	60	1	*	*	*	*	*	*
	A3-89	Understand types of malignant esophageal neoplasms, including their treatment.	60	1	*	*	*	*	*	*
	A3-90	Review principles of nutritional management of patients with esophageal neoplasms.	60	1						
	A3-91	Emergent Gastro-Intestinal Problems: ☐ Discuss alternative approaches to acute bowel obstruction. ☐ Treat colonic volvulus. ☐ Understand treatment of acute and chronic cholecystitis. ☐ Treat acute diverticulitis. ☐ Treat GI bleeding of the upper and lower tract. ☐ Treat bowel perforation and peritonitis. ☐ Treat acute intestinal ischemia, including ischemic colitis. ☐ Understand decision-making for recurrent colorectal and anal cancer. ☐ Understand the emergency surgical management of incarcerated, strangulated, and gangrenous abdominal intestinal herniae (e.g., inguinal, femoral, umbilicus). ☐ Treat Ogilvie's syndrome.	60	1	*	*	*	*	*	*
	A3-92	Acute Abdomen and Peritonitis: ☐ Outline therapeutic options for with acute abdomen	61	1	*	*	*	*	*	*
	A3-93	Inflammatory Bowel Disease and Nutrition ☐ Understand the differences between Crohn's disease and ulcerative colitis. ☐ Discuss the indications for surgery in ulcerative colitis and Crohn's disease. ☐ Summarize the conditions favoring operative versus non-operative treatment for fistulae. ☐ Describe the medical and surgical treatment of morbid obesity. ☐ Understand the principles of surgical management of obesity. ☐ Prepare and manage obese patients perioperatively for bariatric and non-bariatric surgery. ☐ Recognize the physiological changes following bariatric surgery and the common complications.	61	1	*	*	*	*	*	*

A3-94	Stomach and Upper GIT: <ul style="list-style-type: none"> <li>☐ Understand management of peptic ulcer disease.</li> <li>☐ Describe treatment, and prophylaxis of stress gastritis.</li> <li>☐ Understand the management of different types of post gastrectomy syndromes including: <ul style="list-style-type: none"> <li>a. Dumping syndrome</li> <li>b. Metabolic disturbances</li> <li>c. Efferent loop syndrome</li> <li>d. Alkaline reflux gastritis</li> <li>e. Afferent loop syndrome</li> <li>f. Gastric atony</li> </ul> </li> </ul>	62	1	*	*		*
A3-95	Colo-Rectal Disease: <ul style="list-style-type: none"> <li>☐ Follow a patient treated for colorectal carcinoma.</li> <li>☐ Know how to manage benign and malignant polyps, including villous tumors of the rectum.</li> <li>☐ Understand the principles of adjuvant therapy (chemotherapy and radiation) in colorectal carcinoma.</li> <li>☐ Understand the progression of normal colonic epithelium to cancer.</li> </ul>	62	1	*	*		*
A3-96	Anal Condition <ul style="list-style-type: none"> <li>☐ Know how to treat causes of anorectal bleeding, pain, soiling, and prolapse.</li> <li>☐ Offer alternative treatment for prolapsing hemorrhoids.</li> <li>☐ Treat thrombosed external hemorrhoids and prolapsed internal hemorrhoids.</li> <li>☐ Know the treatment for perianal and ischioanal abscesses.</li> <li>☐ Manage common anorectal problems, including hemorrhoids ( internal and external), anal fissure, fistula/abscesses, pruritus ani, and pilonidal disease.</li> </ul>	63	1	*	*		*
A3-97	Liver & Biliary Tract <ul style="list-style-type: none"> <li>☐ Discuss various types of liver cysts (parasitic and nonparasitic) and the appropriate management of each.</li> </ul>	63	1	*	*		*
A3-98	Discuss the treatment of the following: a. Metastatic lesions to the liver b. Primary malignancies of the liver and biliary tree c. Benign tumors of the liver ☐ Summarize the etiology and management of pyogenic and amebic hepatic abscesses. ☐ Outline the pathophysiology, evaluation, and management of the following: a. Choledochal cysts                      h. Gallstone pancreatitis b. Caroli's disease                          i. Benign biliary strictures c. Sclerosing cholangitis                  j. Acute cholecystitis d. Primary biliary cirrhosis                k. Symptomatic gallstones e. Secondary biliary cirrhosis            l. Acalculous cholecystitis f. Cholangitis                                  m. Biliary dyskinesia g. Gallstone ileus                            n. Congenital biliary atresia	64	1	*	*		*
A3-99	Pancreas <ul style="list-style-type: none"> <li>☐ Management of the following in relation to pancreatitis: abscess, sterile pancreatic necrosis, and infected pancreatic necrosis</li> <li>☐ Provide indications for operative management of pancreatitis.</li> <li>☐ Manage gallstone pancreatitis with timing of surgery.</li> </ul>	64	1	*	*		*
A3-100	c. Indications for: i. Operative versus nonoperative biliary drainage ii. Percutaneous versus endoscopic stenting iii. Resection iv. Concomitant gastrojejunostomy with operative biliary bypass ☐ Discuss presentation, evaluation, and management of pancreatic pseudocysts with attention to the following: a. Complications of pseudocysts (hemorrhage, infection, rupture) b. Timing of drainage c. Percutaneous versus surgical drainage d. Indications for external versus internal drainage e. Choice of internal drainage procedure ☐ Explain the diagnosis and management of pancreatic ascites.	65	1	*	*		*
A3-101	Institute management of abdominal wound problems, including the following: a. Infection                                  c. Fasciitis b. Evisceration                              d. Dehiscence	67	1	*	*		*
A3-102	Coordinate preoperative and postoperative care for the patient with acute abdomen.	67	1	*	*		*
A3-103	Assist in the management of the patient with acute abdomen and abdominal emergencies.	67	1,2	*	*	*	*
A3-104	Assist in the perioperative management of patients undergoing abdominal surgery.	67	1,2	*	*	*	*
A3-105	Institute drainage for abdominal wall fistula and protection of surrounding skin.	67	2			*	
A3-106	Assist in closure of abdominal incisions; exhibit competency in suture technique	67	1,2	*	*	*	*
A3-107	Assist and properly perform surgical hemorrhoidectomy, perianal abscess drainage, and perianal fistulectomy.	67	2,3				
A3-108	Assist and properly perform surgical open and laparoscopic appendectomy.	67	2,3				
A3-109	Assist and properly perform surgical laparoscopic cholecystectomy.	68	2,3				
A3-110	Perform uncomplicated hepatobiliary surgery under supervision, such as cholecystectomy, both laparoscopic and open, with operative cholangiography.	68	2				
A3-111	Perform entry of body cavities using open (Hassan cannula) versus closed (Veress needle) access.	70	2				
A3-112	Perform procedures of increasing complexity under supervision, including the following: a. Diagnostic laparoscopy b. Laparoscopic cholecystectomy and appendectomy	70	2				
A3-113	Provide assistance in laparoscopic surgery (e.g., manage camera, first assist).	70	3				
A3-114	Demonstrate familiarity with laparoscopic equipment, including setup and trouble-shooting.	70	1,2	*	*	*	*
A3-115	Demonstrate an understanding of basic principles of patient positioning and room setup for diagnostic laparoscopy and laparoscopic cholecystectomy.	70	1	*	*		*
A3-116	Demonstrate the ability to convert from a minimal access to open approach.	70	2			*	
A3-117	Outline the principles of care for ischemic limbs.	72	1	*	*		*
A3-118	Summarize principles of postoperative care of patients undergoing major vascular surgical procedures.	72	1	*	*		*
A3-119	Outline the fundamental elements of nonoperative care of the vascular patient	72	1	*	*		*
A3-120	Indicate the role of anticoagulant agents, including antiplatelet agents, in the management of patients with vascular disease.	72	1	*	*		*
A3-121	Demonstrate knowledge of the manifestation and management of lower extremity occlusive disease in terms of the following: f. Limitations of the ABI in diabetic patients and the value of toe pressure measurements	73	1	*	*		*
A3-122	Illustrate the general principles of vascular surgical techniques, including the following: a. Vascular control and suturing   c. Angioplasty b. Endarterectomy                      d. Bypass grafting	73	1,2	*	*	*	*
A3-123	Demonstrate knowledge of the management and surgical approaches of abdominal aortic aneurysm (AAA).	73	1	*	*		*
A3-124	Participate in surgery for varicose vein disease, including the following: a. Ligation and stripping b. Management of venous stasis ulcers c. Management of venous thrombosis	74	2,3				

Minimal Access Surgery

Vascular Surgery

		A3-125	Participate in amputations with specific attention to: a. Demarcation levels b. Control of toxicity	75	2,3				
		A3-126	Participate in thromboendarterectomy and thrombectomy.	75	2,3				
		A3-127	Demonstrate skill in basic surgical techniques, including the following: a. Knot tying      d. Incisions and closure b. Exposure and retraction      e. Handling of graft material c. Knowledge of instrumentation	74	2				
		A3-128	Demonstrate proficiency in venous access procedures.	75	2,3				
		A3-129	Obtain vascular control of diseased or traumatically occluded blood vessels using: a. Vascular clamp b. Vessel loop c. Balloon occlusion	75	2				
		A3-130	Demonstrate appropriate vascular suture techniques.	75	2,3				
		A3-131	Evaluate and manage sympathectomy procedures.	75	1,2	*	*		*
		A3-132	Demonstrate aseptic technique in performing operative and bedside procedures. Recognize the appearance of normal and abnormal tissues in the operating room.	18	2,3				
		A3-133	Perform an umbilical, inguinal, and femoral hernia repair using tension-free techniques.	18	2				
		A3-134	Perform an open incisional hernia repair with or without mesh.	18	2				
		A3-135	Perform lateral internal sphincterotomy for anal fissure under anesthesia.	18	2				
		A3-136	Perform breast biopsy and breast lump excision.	18	2				
		A3-137	Gain proficiency in a variety of psychomotor skills (e.g., reduction of incarcerated inguinal hernia, wound closure, knot tying).	18	2				
		A3-138	Obtain fundamental knowledge related to core clinical problems of general surgery	13	1	*	*		*
Trauma / Shock / Acute surgical care	Senior	A3-139	Analyze pharmacological support for trauma resuscitation patients.	30	1		*		*
		A3-140	Develop a treatment plan to treat abdominal compartment syndrome.	31	1		*		*
		A3-141	Discuss the management of associated medical conditions seen in the trauma patient, such as diabetes, chronic obstructive pulmonary disease, hypertension, and HIV.	31	1		*		*
		A3-142	Formulate a plan for rehabilitation to return the trauma patient to full functional life.	31	1		*		*
		A3-143	Define abdominal compartment syndrome. develop a treatment plan to treat abdominal compartment syndrome.	31	1		*		*
		A3-144	Define "damage control surgery." Describe the sequence of damage control surgery in the treatment of the traumatized patient.	31	1		*		*
		A3-145	Identify and delineate the management of blunt and penetrating retroperitoneal injuries.	32	1		*		*
		A3-146	Analyze the transfer of a patient to an appropriate facility utilizing air medical services.	32	1		*		*
		A3-147	Manage penetrating wounds through an understanding of the injury potential of wounding mechanisms.	33	1		*		*
		A3-148	Provide management for pre-existing disease states in injured patients with appropriate consultation.	33	1		*		*
Emergency		A3-149	Perform all operative and management procedures for trauma to the chest, abdomen, extremities, and head, with direct supervision.	33	2				
		A3-150	Practice the principles of damage control surgery in severely injured patients.	33	1,2		*	*	*
		A3-151	Manage trauma to the upper airway.	33	1		*		*
		A3-152	Describe indications for emergency thoracotomy and the appropriate operative approach.	35	1		*		*
		A3-153	Perform resuscitative thoracotomies as necessary.	36	2			*	
Surgical Critical Care		A3-154	Demonstrate technical capability in advanced trauma care in the emergency department, intensive care units, and operating rooms.	37	2&3			*	
		A3-155	Treat traumatized patients and perform needed operative repair.	37	1,2		*	*	*
		A3-156	Distinguish between the major characteristics of septic shock and hypovolemic shock: b. Analyze therapeutic options. c. Revise therapeutic options based on clinical parameters obtained from monitoring.	42	1		*		*
		A3-157	Summarize the following moral and ethical problems encountered in the ICU: c. Care for the mentally incapacitated or incompetent patient	42	1		*		*
		A3-158	Discuss management of the overall hospital course for patients with altered physiological states: a. Preoperative considerations specific to their disease b. Operative considerations specific to their disease c. Postoperative considerations specific to their disease	43	1		*		*
		A3-159	Define specific management aspects associated with the following complex acid-base problems: a. Renal tubular acidosis (differentiate between Type I and II) b. Management of high output loss states from the GI tract in patients with poor cardiac function c. Management of volume excess states associated with eunatremia or hyponatremia	43	1		*		*
		A3-160	Discuss the treatment of the following bleeding disorders: a. The role of blood vessels, platelets, fibrin cascade, and degeneration in normal hemostasis b. Disseminated intravascular coagulopathy (DIC), defining common causes and therapy c. Thrombocytopenia as a failure of production, accelerated destruction, or dilution d. Hemophilia A e. Idiopathic thrombocytopenic purpura (ITP) and thrombotic thrombocytopenic purpura (TTP) as causes of thrombocytopenia (compare and contrast) f. Heparin and Coumadin therapy and misapplication g. Advanced liver disease h. The roles of Protein C and S <sub>1</sub> in coagulation and bleeding disorders	43	1		*		*
		A3-161	Describe and specify therapy for the following, in association with critical care: a. Hypothyroidism/hyperthyroidism b. Hyperparathyroidism/hypoparathyroidism (changes in calcium and magnesium) c. Adrenal cortical excess (Cushing's disease and syndrome) d. Adrenal cortical deficiency states (Addison's disease)	44	1		*		*
		A3-162	Review and summarize the management of hepatic and renal failure, including the following: a. Utility/disutility of disease-specific nutritional formulations b. Adjustment or elimination of toxic substances (antibiotics, contrast material, narcotics) c. Current means for support of renal failure, high-dose diuretics, continuous veno-venous hemofiltration (CVVH), continuous veno-venous hemodialysis (CVVHD), dialysis	44	1		*		*
		A3-163	Manage invasive monitoring catheters, interpret the data obtained, and manipulate the hemodynamic variables toward calculated goals.	45	1		*		*

Surgical Oncology	A3-164	Manage the following situations: a. Multiple organ system failure; providing support for failing, failed, or normal organs b. Life threatening surgical infections (e.g., ascending cholangitis, gangrene) c. Hypovolemic shock d. Renal failure e. Nutritional failure f. Liver failure	45	1		*		*
	A3-165	Identify margins of resection and their relation to local recurrence.	49	1,2		*	*	*
	A3-166	Summarize the indications and appropriate modalities for adjuvant therapy within the scope of general surgery, including chemotherapy, radiation therapy, immunotherapy, and gene therapy.	49	1		*		*
	A3-167	Describe differences in treatment for malignancy in older patients.	49	1		*		*
	A3-168	Compare applicable treatment modalities to the prognosis for tumors within the scope of general surgery.	49	1		*		*
	A3-169	Analyze the medical preparation of patients for cancer surgery, including the correction of metabolic and nutritional deficits.	49	1		*		*
	A3-170	Define and apply the criteria for palliative versus curative treatment plans.	49	1		*		*
	A3-171	Outline indications and initiate requests for appropriate consultation.	49	1,3		*		*
	A3-172	Demonstrate the ability to function independently in all aspects of cancer patient management, including palliative care planning.	50	3		*		*
	A3-173	Prepare patients medically for cancer surgery, with correction of nutritional and metabolic deficits.	50	1		*		*
	A3-174	Specify and prepare management plans for nutritional support in the cancer patient.	50	1		*		*
	A3-175	Prepare an operative plan for treatment of malignant disease.	50	1		*		*
	A3-176	Perform colostomies, colostomy closures, and bowel anastomoses of all types.	50	2		*		*
	A3-177	Perform, with appropriate supervision, major resections in the neck, chest, abdomen, breast, and extremities, including complex operative procedures (e.g., Whipple procedure, major neck dissection).	50	2		*		*
	Endocrine Surgery	A3-178	Discuss preoperative preparation/management of the following: a. Hypercalcemic crisis b. Thyroid "storm" c. Grave's and Hashimoto's disease d. Pheochromocytoma e. Hyperaldosteronism	52	1		*	
A3-179		Discuss the treatment of the following diseases: a. A solitary thyroid nodule b. A multinodular thyroid gland c. Thyrotoxicosis d. Insulinoma/glucagonoma/vipom e. Zollinger-Ellison syndrome f. Gastrointestinal carcinoid tumors g. Endogenous hypercortisolism h. Pheochromocytoma i. Primary hyperaldosteronism j. Incidental adrenal mass k. Primary, secondary, and tertiary hyperparathyroidism	52	1		*		*
A3-180		Discuss surgical approaches to the following: a. Left/right adrenal gland b. Head of the pancreas c. Body/tail of the pancreas d. Inferior/superior parathyroid glands e. Parathyroid glands f. A retrosternal goiter	53	1		*		*
A3-181		Summarize significant issues in the management of anesthesia in endocrine surgery, including the following: a. Airway management during neck surgery b. Cardiovascular manipulation during thyroid and pheochromocytoma operations c. Special attention to electrolyte management	53	1		*		*
A3-182		Critique the role of the following developments in the surgical management of endocrine problems: a. Localizing modalities (e.g., metalodobenzylguanidine [MIBG], sestamibi, selective venous sampling, parathyroid hormone [PTH] assays) b. Diagnostic assays (e.g., sensitive TSH, C-peptide, fine needle aspiration)	53	1		*		*
A3-183		Develop a comprehensive plan for the surgical management of endocrine disease.	53	1		*		*
A3-184		Perform or assist in the performance of adrenal, thyroid, and parathyroid surgery.	53	2,3		*		*
A3-185		Perform surgery on the adrenals, pancreas, thyroid, and parathyroids.	54	2		*		*
A3-186		Manage the diagnosis, and preoperative, intraoperative, and postoperative care of a variety of endocrine surgery cases.	54	1		*		*
A3-187		Formulate plans for basic patient care, including preoperative, intraoperative, and postoperative care.	55	2		*		*
A3-188		Describe the therapy of less common lesions of the breast: a. Inflammatory carcinoma d. Cystosarcoma phylloides b. Paget's disease e. Bilateral breast carcinoma c. Mondor's disease g. Male breast carcinoma	55	1		*		*
A3-189		Define appropriate breast conservation therapies and their benefits and comparative outcomes. Compare them with modified radical mastectomy.	55	1		*		*
A3-190		Summarize the major considerations for post-mastectomy breast reconstruction.	56	1		*		*
A3-191		Formulate a treatment plan for most common breast problems, including the common types of breast carcinomas.	57	1		*		*
A3-192		Perform, under direct supervision, more advanced procedures on the breast such as: a. Modified radical mastectomy d. Sentinel lymph node biopsy b. Simple mastectomy e. Excision of lactiferous duct fistula c. Lumpectomy & axillary dissection f. Needle-localized breast biopsy	57	2		*		*
Abdominal Surgery	A3-193	Manage unusual breast diseases such as: a. Inflammatory carcinoma d. Bilateral breast cancer b. Paget's disease e. Male breast cancer c. Lactiferous duct fistula f. Cystosarcoma phylloides	57	1		*		*
	A3-194	Outline the uses of prosthetic material and management of infection for incisional or recurrent hernias involving prosthetic material.	65	1		*		*
	A3-195	Outline the techniques for wound closure (including type of suture material).	65	1		*		*
	A3-196	Describe the use and method of placement of retention sutures.	65	1		*		*
	A3-197	Describe the treatment of ascites in the following: a. Malignancy d. Cardiac disease b. Cirrhosis e. Renal disease c. Bile leak	65	1		*		*
	A3-198	Describe the treatment of the following: a. Desmoid tumors b. Retroperitoneal fibrosis c. Rectus sheath hematoma	65	1		*		*
	A3-199	Describe the management of different types of post-gastrectomy syndromes, including the following: a. Dumping syndrome d. Alkaline reflux gastritis b. Metabolic disturbances e. Afferent loop syndrome c. Efferent loop syndrome f. Gastric atony	66	1		*		*

A3-200	Describe the treatment, complications, and outcomes of different types of upper gastrointestinal neoplasm, including the following: a. Gastric cancer      b. Gastric lymphoma c. Gastrointestinal stromal tumors      d. Small bowel tumors	66	1		*		*
A3-201	Analyze alternatives to surgery in the management of gallstones, such as the following: a. Oral dissolution with ursodeoxycholic acid b. Endoscopic sphincterotomy	66	1		*		*
A3-202	Assess management alternatives for common bile duct stones: a. Open versus laparoscopic common bile duct exploration b. ERCP	66	1		*		*
A3-203	Describe the more common retroperitoneal tumors, sarcomas, and liposarcomas. (What are their treatments?)	66			*		*
A3-204	Compare laparoscopic versus open cholecystectomy.	66	1		*		*
A3-205	Describe the management of chronic pancreatitis.	66	1		*		*
A3-206	Analyze the management options in the treatment of short-gut syndrome.	66	1		*		*
A3-207	Discuss the surgical management of cystic neoplasms of the pancreas (mucinous and serous cystadenomas; cystadenocarcinoma).	66	1		*		*
A3-208	Describe the surgical management of the following islet cell tumors of the pancreas: a. Gastrinoma      d. Somatostatinoma b. Glucagonoma      e. Insulinoma c. VIPomas, WDHA Syndrome	66	1		*		*
A3-209	Describe the management of pancreas divisum.	66	1		*		*
A3-210	Open and close abdominal incisions of all varieties.	68	2				
A3-211	Treat wound complications such as infections and evisceration.	68	1		*		*
A3-212	Assist with thoracoabdominal and retroperitoneal exposures.	68	2				
A3-213	Assist in surgical laparoscopic colon and sigmoid resection.	68	2				
A3-214	Assist and properly perform laparoscopic and open cholecystectomy.	68	2				
A3-215	Assist in and properly perform laparoscopic and open bile duct exploration.	68	2				
A3-216	Assist and properly perform surgical open splenectomy.	68	2				
A3-217	Perform laparotomy for acute abdomen, demonstrating a systematic approach for determination of the etiology of the process. Use systematic abdominal exploration and appropriate measures for management (e.g., acute appendicitis, small bowel obstruction, perforated peptic ulcer [be able to guide the junior resident through the case]).	68	2				
A3-218	Perform more complex laparotomies, involving diffuse peritonitis in the septic patient (e.g., gangrenous or inflamed gallbladder or perforated diverticulitis requiring resection).	68	2				
A3-219	Perform colon resection, including hand-sewn anastomoses, with direction from the supervising attending surgeon.	68	2				
A3-220	Create bowel anastomoses (hand sewn and using a gastrointestinal anastomosis [GIA] stapler).	68	2				
A3-221	Divide bowel mesentery for mobilization; construct Roux-en-Y limb.	68	2				
A3-222	Under supervision, perform more complex hepatobiliary surgery: a. Biliary drainage procedures, such as Roux-en-Y and cholecystojejunostomy b. Complicated cholecystectomy (acute, gangrenous)	68	2				
A3-223	Perform more complex abdominal surgeries such as: a. Internal drainage of pseudocysts with Roux-en-Y cystojejunostomy b. Longitudinal pancreaticojejunostomy (Puestow Procedure) c. Distal pancreatectomy d. Biliary bypass for carcinoma e. Colostomies, for bowel obstructions	68	2				
A3-224	f. Hartmans procedure g. Emergency laparotomy and damage control surgery, in cases of trauma h. Temporary ileostomies i. Surgical colostomy/ileostomy closures	69	2				
A3-225	Demonstrate facility in endoscopic knot tying, stapling, and suturing, either in a box-trainer, an animal model, or the operating room.	70	2			*	
A3-226	List equipment needed for complex procedures, set up room (including patient position) and equipment, and troubleshoot equipment when malfunction occurs.	70	1		*		*
A3-227	Discuss the broad range of vascular illnesses, including congenital vascular disease and diseases of the venous and lymphatic systems.	73	1		*		*
A3-228	Differentiate between the different operative approaches to the vascular system, including the following: a. Incisions and exposure      e. Reoperative vascular surgery b. Handling of vascular tissues      f. Principles of endarterectomy c. Principles of vascular bypass      d. grafting      Emergency vascular d. Endovascular techniques	73	1		*		*
A3-229	Outline the indications of surgery for claudication, abdominal aortic aneurysm, and amputation.	74	1		*		*
A3-230	Illustrate the operative exposure of the major vessels, including the following: a. Aortic arch      e. Suprarenal aorta b. Proximal subclavian      f. Infrarenal aorta c. Carotid artery      g. Femoral artery d. Descending thoracic aorta      h. Popliteal artery	74	1,2		*	*	*
A3-231	Summarize the treatment of diabetic foot infection.	74	1		*		*
A3-232	Categorize management of operative and postoperative complications, including graft infections, ischemic bowel, graft thrombosis, and extremity ischemia.	74	1		*		*
A3-233	Outline procedures for managing vascular surgical emergencies, such as acute tissue ischemia or major hemorrhage (traumatic or ruptured aneurysm).	74	1		*		*
A3-234	Analyze the options for treatment of patients with chronic venous insufficiency and venous ulceration.	74	1		*		*
A3-235	Summarize surgical techniques available for managing the following vascular disorders: a. Abdominal aortic bypass or aneurysmectomy b. Carotid stenosis c. Femoral-popliteal occlusion	74	1		*		*
A3-236	Demonstrate the appropriate incisions and exposure of the following: a. Abdominal aorta and its branches      c. Peripheral arterial system b. Portal venous system      d. Carotid arterial system c. Arteriovenous fistula	75	2				
A3-237	Obtain vascular control of major vessels a. Aorta      b. Vena cava	75	2				
A3-238	Demonstrate ability to manage graft and suture materials.	75	2				
A3-239	Perform selected operative procedures or selected parts of the following operative procedures under supervision: a. Aortic aneurysm repair      d. Femoral popliteal occlusive disease b. Carotid endarterectomy      f. Peripheral vascular trauma c. Aorto-iliac occlusive disease	75	2				
A3-240	Participate in endarterectomy and bypass grafting.	75	3				
A3-241	Use proper advanced techniques in managing patients with a variety of vascular disorders, such as the following: a. Ruptured aortic aneurysm      c. Supra-renal aortic aneurysm b. Central vascular trauma      d. Renovascular hypertension	75	2				
A3-242	Perform alternative methods of bypass grafting such as: a. Bypass, principles and techniques b. Indirect revascularization c. In situ techniques d. Sequential and composite techniques	75, 76	2				

Minimal Access Surgery

Vascular Surgery

	A3-243	Manage prosthetic graft infections: b. Selection of revascularization routes c. Selection of appropriate graft materials d. Timing	76	1		*		*
	A3-244	Manage complications of common major vascular procedures such as the following: a. Aortic reconstruction b. Lower extremity vascular reconstruction	76	1		*		*
	A3-245	Perform basic laparoscopic techniques: o Perform trocar insertion using the open technique in different locations of the abdomen, including with patients who have had extensive previous abdominal surgery. o Troubleshoot equipment. o Perform simple suturing using laparoscopic instruments. o Perform laparoscopic cholecystectomy, both electively and for acute cholecystitis. o Mobilize the right and left colon laparoscopically. o Mobilize the esophagus laparoscopically. o Perform lysis of adhesions and run the small bowel by laparoscopy. o Perform laparoscopic appendectomy. o Perform laparoscopic incisional hernia repair.	19	2				
	A3-246	Perform thyroidectomy and parathyroidectomy.	19	2		*		*
	A3-247	Be familiar with the techniques and use of a harmonic scalpel, bipolar sealing device, and monopolar cautery, including the pitfalls and potential risks. o Colonic and rectal resections and reconstructions, using sutured and stapled techniques, for malignant disease and inflammatory bowel disease o Gastric resection and reconstruction (gastro-jejunostomy, Roux en-Y) o Small bowel and large bowel resection; low anterior resection o Standard ileostomy and colostomy formation and closure o Biliary tract disease: common bile duct exploration; biliary enteric anastomosis o Distal pancreatectomy o Splenectomy	19	1				
	A3-248	Apply knowledge to provide appropriate clinical care related to core clinical problems of general surgery.	13	1		*		*
	A3-249	Analyze and interpret findings using clinical skills to develop appropriate management plans for patients.	13	1		*		*
Anatomy	N/A	A3-250 Ability to manage the following: o The breast and endocrine system o Hernias, abdominal wall, and soft tissue tumors o Upper GIT (esophagus, stomach, and small intestine) o Lower GIT (appendix, colon, rectum, and anus) o Gastrointestinal bleeding o Hepatobiliary (liver, pancreas, and spleen) o Acute abdomen o Surgical management of obesity o Subspecialty surgery (vascular/pediatric/plastic)	18	1	*	*		*
Physiology		A3-251 The performance of surgical procedures appropriate for the level of training	21	2	*	*		*
	A3-252	Postoperative management of the patient, including long-term follow-up	21	1	*	*		*
	A3-253	Explain the treatment of water and sodium imbalances, and complications of diuretic use and fluid restrictions.	22	1	*	*		*
	A3-254	Illustrate treatments for high and low calcium, phosphorus, and magnesium.	22	1	*	*		*
	A3-255	Manage patients with surgical illnesses and/or major physiological disruptions: a. Liver failure b. Malnutrition c. Renal failure d. Bowel obstruction e. Hemorrhage f. Cardiopulmonary failure g. Electrolyte imbalance h. Endocrine disorders ) i. Sepsis j. Shock k. Immunosuppression l. Diabetes m. Advanced age	23	1	*	*		*
	A3-256	Adapt treatment plans to reflect physiological variations in pediatric, geriatric, and pregnant patients.	23	1	*	*		*
	A3-257	Utilize clinical findings, laboratory tests, and hemodynamic measurements to alter patient physiology.	23	1	*	*		*
	A3-258	Solve problems interfering with normal hemostasis.	23	1	*	*		*
	A3-259	Use patient fluid balance data as a general measure of fluid homeostasis.	23	1	*	*		*
	A3-260	Coordinate orders involving nutrition, acid-base, and electrolyte problems.	23	1	*	*		*
	A3-261	Manage outpatients and inpatients with hypo- and hyper-kalemia.	23	1	*	*		*
	A3-262	Manage patients with hypo- and hyper-calcemia.	23	1	*	*		*
	A3-263	Demonstrate an understanding of the principles of infection treatment.	24	1	*	*		*
	A3-264	Discuss the treatment of necrotizing fasciitis	25	1	*	*		*
	A3-265	Manage cellulitis, lymphangitis, lymphadenitis, fasciitis, and abscess	25	1	*	*		*
Surgical Infections		A3-266 Demonstrate an understanding of intra-abdominal abscesses, paying attention to Surgical management	25	1	*	*		*
	A3-267	Outline management strategies for the treatment of infected catheters, implantable devices, and surgical hardware.	25	1	*	*		*
	A3-268	Outline the advanced trauma life support (ATLS) guidelines for tetanus prophylaxis and treatment for Clostridium tetani infection.	25	1	*	*		*
	A3-269	Describe the treatment of surgical infections for the following: a. Those common to all patients (pneumonia, urinary tract infections, skin infections) b. Those cared for by surgeons (e.g., diabetic foot ulcers, postop abdominal abscesses)	25	1	*	*		*
	A3-270	Describe sources of postoperative fever; outline plan for intervention.	25	1	*	*		*
	A3-271	Differentiate between treatment of the different types of postop pneumonia (non-ventilatory-associated, aspiration acquired, ventilatory-associated)	25	1	*	*		*
	A3-272	Demonstrate an understanding of methods used to minimize infectious complications.	24	1	*	*		*
	A3-273	Summarize the method by which microbiologic data are gathered, interpreted, and applied to altering antibiotic choice, dose, and duration.	26	1	*	*		*
	A3-274	Prepare patients for elective surgery by providing prophylactic antibiotics when indicated.	26	2				
	A3-275	Alter therapy as dictated by clinical, radiologic, and microbiologic response for infections in the postoperative patients	26	1	*	*		*
	A3-276	Coordinate the treatment of aggressive soft tissue infections to include: a. Early operative debridement and re-debridement as necessary b. Urinary and fecal diversion when necessary c. Antibiotic management d. Postoperative critical care, including fluid and nutrition management	26	1	*	*		*
	A3-277	Justify the empirical first-line approach to antibiotic use in the treatment of surgical infections and early intra-abdominal infection.	26	1	*	*		*
	A3-278	Appropriately treat common infections seen in surgical patients.	26	1	*	*		*
Wound Healing		A3-279 Discuss the principles of aseptic technique in uncomplicated cases related to the following: a. Incision making                      c. Wound closures b. Debridement                            d. Dressings, splints, and casts	27	1	*	*		*



A3-280	Describe the common chemical agents that are used in relation to burns, and their antidotes.	27	1	*	*	*	*
A3-281	Treat necrotizing fasciitis and Clostridium perfringens infections.	27	1	*	*	*	*
A3-282	treat patients with implantable device infection	27	1	*	*	*	*
A3-283	Explain the principles of wound care as they relate to the following: a. Debridement d. Chronic wounds b. Traumatic wounds e. High-pressure injection injuries c. Burn wounds f. Medication infiltration	27	1	*	*	*	*
A3-284	Discuss potential problems in complicated wound healing.	27	1	*	*	*	*
A3-285	Discuss the concept of the reconstructive ladder.	27	1	*	*	*	*
A3-286	Analyze therapeutic options for treatment of delayed wound healing due to the following: a. Host resistance d. Radiation b. Infection e. Ischemia c. Diabetes mellitus	28	1	*	*	*	*
A3-287	Discuss treatment choices for the following wound healing problems: a. Infection b. Hernia c. Dehiscence	28	1	*	*	*	*
A3-288	Provide basic care to wounds from abrasions and small lacerations, including acute debridement, closure, and dressing placement.		1	*	*	*	*
A3-289	Provide care for complex traumatic injuries, considering the following: a. Management of hemorrhage d. Debridement b. Acute pain control e. Acute closure or coverage c. When to explore operatively f. Secondary reconstruction	28	1	*	*	*	*
A3-290	Apply all types of complex dressings, including body casts.	28	2				
A3-291	Debride complex wounds and provide post-debridement care of such wounds.	28	2				
A3-292	Manage wounds of various complexities, and alter therapy as indicated.	28	1	*	*	*	*
A3-293	Manage wound complications: dehiscence, infections, and incisional hernias.	28	1	*	*	*	*
A3-294	Describe the rationale in selecting appropriate wound closure and reconstruction, related to wound healing in the following: a. Primary and delayed primary closure d. Local and regional flaps b. Secondary healing e. Microvascular flaps c. Skin graft, split, and full thickness f. Composite grafts	28	1	*	*	*	*
A3-295	Analyze factors affecting the decision to select a minimal access approach (as opposed to an open surgical approach) for a particular clinical problem.	69	1	*	*	*	*
A3-296	Describe the sequence of steps involved in establishing a pneumoperitoneum, including the following: a. Selection of first puncture site d. Initial insufflation b. Initial entry via Veress needle or Hassan e. Initial exploration of abdomen c. Tests to confirm entry into peritoneum f. Placement of additional trocars	70	1	*	*	*	*
A3-297	Discuss management of complications, including major vascular injury, massive carbon dioxide embolus, or visceral injury.	70	1	*	*	*	*
A3-298	Classify congenital malformations of the newborn and the need for surgical intervention: a. Head and neck: thyroglossal duct cyst, lymphadenopathy, cystic hygroma b. Gastrointestinal: pyloric stenosis, appendicitis c. Respiratory: tracheal lesions d. Abdominal wall defects: omphalomesenteric and urachal malformations	76	1	*	*	*	*
A3-299	Learn the principles of preoperative diagnosis of the sick child.	76	1	*	*	*	*
A3-300	Learn principles of routine postoperative care and postoperative critical care management.	76	1	*	*	*	*
A3-301	Summarize the basic approach to the management of more common surgical problems of infancy and childhood, such as the following: a. Pyloric stenosis b. Perforated appendicitis c. Intussusception	76	1	*	*	*	*
A3-302	Describe the fundamental considerations in the preoperative and postoperative care of infants and children.	77	1	*	*	*	*
A3-303	Explain the approach to surgical management, (i.e., diagnosis, perioperative care, surgical therapy, and postoperative follow-up) of complex surgical procedures for infants and children: a. Antireflux procedure b. Bowel resection c. Repair of hepatic, biliary, and pancreatic injury d. Splenectomy and splenorrhaphy e. Management of the seriously injured patient	77	1	*	*	*	*
A3-304	Identify the technical aspects of the following procedures: a. Excision of skin and subcutaneous lesions d. Chest tube placement b. Incision and drainage of abscesses e. Oral intubation c. Lymph node biopsy f. Hemiorrhaphy in older children	77	1,2	*	*	*	*
A3-305	Explain basic techniques for surgical repair of superficial incisions and lacerations of the head, neck, trunk, and extremities to include the following considerations: a. Skin d. Dressings b. Subcutaneous tissue e. Suturing and knot tying c. Superficial muscle and fascia	77	1	*	*	*	*
A3-306	Explain the principles of treatment of common causes of gastrointestinal hemorrhage in the neonate, infant, and child.	77	1	*	*	*	*
A3-307	Demonstrate an understanding of the principles of correction and reconstruction of congenital and acquired defects of the head, neck, trunk, and extremities.	77	1	*	*	*	*
A3-308	Analyze treatment options for comprehensive care of the burn patient, including the following: a. Excision of burn c. Xenografting b. Homografting d. Autografting	78	1	*	*	*	*
A3-309	Discuss treatment of cutaneous malignancies in the geriatric patient, including the following: a. Skin cancer rates (basal cell carcinoma [BCC], squamous cell carcinoma [SCC]) b. Average age of onset for BCC/SCC c. Etiology of BCC/SCC d. Usual modes of treatment for BCC/SCC (Mohs Technique, radiation, chemotherapy) e. Prevention using medications (isotretinoin, beta-carotene)	78	1	*	*	*	*
A3-310	Discuss surgical treatment of the following: a. Common hand injuries and tumors b. Surgical repair of facial trauma, soft tissue, and bony defects c. Resection of skin and soft tissue neoplasms requiring complex reconstruction d. Reconstruction of the breast for congenital and acquired defects e. Management of the burned hand and face f. Reconstruction of congenital craniofacial defects	78	1	*	*	*	*
A3-311	Participate in the evaluation and formulation of treatment plans for: a. Hand injuries d. Congenital anomalies b. Facial fractures e. Breast deformities c. Head and neck cancer f. Burn patients	79	1,3	*	*	*	*
A3-312	Under the direction of a plastic surgeon, assist in the planning and performance of complex reconstructive operations.	79	2				

Minimal Access Surgery

Pediatric Surgery

Plastic and Reconstructive Surgery

			A3-313	Assess and act as first assistant and attending-supervised surgeon for the following: a. Complex soft tissue injury b. Nerve, tendon, and bone surgery of the hand c. Vascular injuries	79	1,3	*	*	*	*
			A3-314	Act as first assistant or attending supervised surgeon for the following: a. Reconstruction and reparative surgery of the hand b. Surgical repair of facial trauma c. Resection of neoplasms of the head and neck d. Resection of major skin and soft tissue neoplasms requiring complex reconstruction e. Reconstruction of the breast f. Complex wound reconstruction using flap both local, regional, and free microvascular	79	2,3				
			A3-315	Summarize currently accepted surgical techniques for treating the following: a. Correction of congenital lesions of the head/neck and hand/trunk b. Craniofacial anomalies, including cleft lip and palate c. Breast reconstruction after mastectomy d. Reconstruction and ablative head and neck surgery e. Aesthetic rejuvenation of the face and body	79	1	*	*	*	*
			A3-316	Participate in the acute resuscitation and initial treatment of a burned patient.	79	2,3				
			A3-317	Treat simple and intermediate abrasions and burns of the face, trunk, and extremities.	79	1	*	*	*	*
			A3-318	Debride and suture major non-facial wounds and burns.	79	2				
			A3-319	Harvest and apply full-thickness skin grafts and local flaps.	79	2				
			A3-320	Reconstruct defects with random flaps, composite flaps, and grafts.	79	2				
			A3-321	Raise muscle and skin-muscle flaps under direct supervision.	79	2				
			A3-322	Perform major excision of burns, escharotomy, and skin grafting.	79	2				
			A3-323	Perform a complete physical examination with cardiopulmonary assessment for surgery.	80	2				
			A3-324	Order appropriate investigations, for screening, preoperative and postoperative evaluation.	80	1	*	*	*	*
			A3-325	Develop appropriate plans for management and Order appropriate consultations.	80	1	*	*	*	*
			A3-326	Explain the prospective surgical approach to the patient.	80	1	*	*	*	*
			A3-327	Specify indications for common office procedures such as anoscopy.	80	1	*	*	*	*
			A3-328	Recognize patient or patient family responsibilities that may affect the timing of surgery.	81	3				
			A3-329	Demonstrate an understanding of, and sensitivity to, patient socioeconomic concerns regarding issues such as possible loss of work time and wages.	81	3				
			A3-330	Provide appropriate wound care manage wound problems, including the following: a. Superficial wound separation; abdominal dehiscence b. Seromas c. Infections (cellulitis or abscess, determining the need for antibiotics, drainage) d. Incisional hernia	81	1,2	*	*	*	*
			A3-331	Display a working knowledge of the management of the outpatient surgical setting.	81	1	*	*	*	*
			A3-332	Maintain continuity in terms of care for the patient with surgical diseases, from pre-hospital evaluation through post-surgical management and follow-up.	80	3				
		Plastic and Reconstructive Surgery	A3-333	Demonstrate the ability to manage the treatment of acute, chronic, and neoplastic defects not requiring complex reconstruction.	77	1	*	*	*	*
		Vascular Surgery	A3-334	Demonstrate the ability to surgically manage the preoperative, operative, and postoperative care of patients with arterial, venous, and lymphatic disease.	71	1,3	*	*	*	*
		Minimal Access Surgery	A3-335	Develop specific technical skills and demonstrate proficiency in performance of basic laparoscopy, laparoscopic cholecystectomy, and other minimal access procedures.	69	2				
			A3-336	Demonstrate an understanding of the technical and physiological principles of minimal access surgery.	69	1	*	*	*	*
		Abdominal Surgery	A3-337	Manage disease and injury of the stomach, duodenum, small and large bowel, liver, biliary tract, spleen and pancreas, that is amenable to surgical intervention.	57	1	*	*	*	*
			A3-338	Demonstrate the ability to formulate and implement treatment plan for diseases of the abdomen and pelvis that are amenable to surgical intervention.	57	1	*	*	*	*
			A3-339	Be conversant with neoadjuvant and adjuvant therapies for neoplasms of the GI tract.	58	1,2	*	*	*	*
		Breast Surgery	A3-340	Demonstrate the ability to surgically manage diseases of the breast.	54	1,2,3	*	*	*	*
			A3-341	Understand advancements in minimally invasive and conservative breast surgeries.	54	1	*	*	*	*
		Endocrine Surgery	A3-342	Demonstrate the ability to apply this knowledge ( knowledge of endocrine anatomy and physiology) to the surgical care of patients.	50	1	*	*	*	*
		Surgical Immunology	A3-343	Demonstrate an understanding of the principles of care for patients with abnormal immune function who are undergoing general surgery procedures.	45	1	*	*	*	*
		Surgical Oncology	A3-344	Demonstrate an understanding of the treatment of neoplastic diseases.	47	1	*	*	*	*
			A3-345	Demonstrate proficiency in preparation, operative treatment, and total management of the cancer patient, including long term follow-up care.	47	1	*	*	*	*
			A3-346	Understand surgical options of curative and palliative care for cancer patients.	47	1	*	*	*	*
		Surgical Critical Care	A3-347	Demonstrate the ability to treat patients with interrelated system disorders.	37	1	*	*	*	*
			A3-348	Demonstrate knowledge of the principles associated with the management of critically ill patients, including knowledge of multiple organ system normalities and abnormalities.	37	1	*	*	*	*
		Emergency	A3-349	Manage a variety of surgical conditions in an emergency setting.	34	1,2,3	*	*	*	*
			A3-350	Demonstrate knowledge of patient stabilization & transport in an emergency.	34	1	*	*	*	*
			A3-351	Demonstrate the ability to effectively manage all acute or life-threatening conditions, including major trauma in an emergency setting.	34	1	*	*	*	*
			A3-352	Demonstrate knowledge of disaster management, including the role of triage, and display the ability to apply this knowledge in an emergency setting.	34	1	*	*	*	*
		Trauma / Shock / Acute surgical care	A3-353	Demonstrate the ability to manage the treatment of shock and cardiopulmonary arrest.	29	1,2,3	*	*	*	*
			A3-354	Demonstrate the ability to effectively manage the surgical care of a patient with complex multisystem injuries.	29	1,2,3	*	*	*	*
		Physiology	A3-355	Demonstrate the ability to maintain homeostasis by recognizing and correcting fluid and electrolyte derangements.	21	1,2,3	*	*	*	*
			A3-356	Apply physiological knowledge to the clinical and operative management of surgical diseases.	21	1	*	*	*	*
		Anatomy	A3-357	Apply knowledge of anatomy to the treatment of surgical patients.	20	1	*	*	*	*
A4 Health Promotion & Illness prevention	Trauma / Shock / Acute surgical care	Junior	A4.1	Discuss wound care management in the emergency department and other settings.	29	1	*	*	*	*

	Emergency	A4.2	Describe prophylactic measures routinely used in critical care such as the following: a. GI bleeding prophylaxis, including neutralizing, inhibitory compounds, and surface agents b. Prophylactic antibiotics (differences between prophylactic, empiric, and therapeutic uses) c. Pulmonary morbidity prophylaxis (incentive spirometry) d. Prophylaxis against venous thromboembolic events e. Aseptic technique f. Universal precautions g. Skin care protocols h. Guide-wire catheter changes for work-up of fever or change in clinical status	38	1	*	*		*		
	Surgical Infections	A4.3	Explain prophylactic roles of intravenous immunoglobulin and viral vaccines.	46	1	*	*		*		
	Breast Surgery	A4.4	Educate patients to perform breast self-examination.	57	3						
	Vascular Surgery	A4.5	Outline the role of risk assessment and preventive measures in non-operative care of the vascular patients.	72	1	*	*		*		
	Trauma / Shock / Acute surgical care	Senior	A4.6	Explain trauma preventive measures (e.g., use of helmets, seat belts).	31	1	*	*		*	
	Surgical Oncology	A4.7	Apply clinical screening for common malignancies.	48	1	*	*		*		
	Breast Surgery	A4.8	Identify and analyze data addressing controversial areas of breast disease, such as the following: b. Cancer prevention techniques, such as tamoxifen e. Benefit and frequency of screening mammograms	56	1	*	*		*		
	Vascular Surgery	A4.9	Categorize the prevention of operative and postoperative complications, including graft infections, ischemic bowel, graft thrombosis, and extremity ischemia.	74	1	*	*		*		
	Surgical Infections	N/A	A4.10	Discuss the mechanisms of infection acquisition in surgical patients, such as: c. Methods of prevention	24	1	*	*		*	
			A4.11	Demonstrate an understanding of and correct technique for hand washing (the most important method for preventing infectious disease transmission).	24	1	*	*		*	
			A4.12	Analyze the infectious disease risks to which patients and surgeons are exposed and the use of universal precautions to minimize disease transmission.	24	1	*	*		*	
			A4.13	Summarize indications for prescribing prophylactic antibiotics associated with: a. Clean procedures (hernia, vascular, thyroid) b. Clean-contaminated procedures (gastrointestinal (GI), genitourinary (GU), oropharyngeal) c. Contaminated procedures d. Implantable devices: ▢ Vascular grafts ▢ Soft tissue implants and synthetic reinforcements (breast, hernia)	25	1	*	*		*	
			A4.14	Demonstrate an understanding of techniques to minimize risk of viral infection (e.g., hepatitis, HIV/AIDS)	24	1	*	*		*	
			A4.15	Practice the effective use of universal precautions, including meticulous hand washing to minimize infection transmission risk from health care professional (HCP) to patient, and vice versa.	26	2					
		Plastic and Reconstructive Surgery	A4.16	Discuss prevention of cutaneous malignancies in the geriatric patient, including the following: a. Skin cancer rates (basal cell carcinoma [BCC], squamous cell carcinoma [SCC]) b. Average age of onset for BCC/SCC c. Etiology of BCC/SCC d. Usual modes of treatment for BCC/SCC (Mohs Technique, radiation, chemotherapy) e. Prevention using medications (isotretinoin, beta-carotene)	78	1	*	*		*	
	B Communicator			Junior	B1	Function as a surgical consultant, by assessing and developing differential diagnoses and discussing recommendations with senior residents or attending instructor.	33	3			
B2				Explain the patient's condition and proposed therapy to family; obtain appropriate informed consent.	33	2,3			*		
B3				Discuss management options with the patient and family.	33	3			*		
B4				Communicate the importance of injury prevention to patients, patient families, and staff, in the quest to control trauma as a disease of modern society.	33	3			*		
B5				Explain priorities for the diagnosis and/or assessment of illness/injury for patients presenting to the emergency department	34	3			*		
B6				Discuss the patient's condition and future care with the family.	36	3			*		
B7				Record an independent, written diagnosis for each cancer patient assigned.	49	2			*		
B8				Perform, record, and report complete patient evaluations and assessments for different abdominal pathology.	67	2			*		
B9				Record clinical and pathological correlations by presenting the clinical picture and operative findings for each assigned cancer patient.	50				*		
Senior				B10	Analyze and explain a holistic approach to the treatment of patients with cancer.	49	3			*	
B11				Summarize the following moral and ethical problems encountered in the ICU: d. Dealing with a difficult family and futility of care e. Identifying and interacting with alternate religious/cultural beliefs	42	1,2		*	*	*	
B12				Demonstrate the communication skills necessary to obtain a thorough and focused history.	13	3			*		
B13				Convey pertinent information from the history and physical examination in diverse circumstances.	13	3			*		
B14				Communicate effectively with patients and their families with respect to their medical conditions, in the ER, clinic, and ward.	13	3			*		
B15				Demonstrate sympathy to the family and patient. Discuss individual patients with the appropriate attending staff on a daily basis.	13	3			*		
B16				Cohesively and concisely discuss patients at weekly service rounds.	13	3			*		
B17				Present and discuss complications at the morbidity and mortality rounds.	13	3			*		
B18				Interact effectively with other healthcare professionals.	13	3			*		
B19				Demonstrate good communication skills with patients in the emergency room and clinic.	13	3			*		
B20				Discuss the diagnosis and treatment plan in a way that fosters patient satisfaction and compliance.	13	3			*		
B21				Demonstrate good communication skills with the supervising surgeon and other members of the healthcare team, including nurses, physiotherapists, and occupational therapists (and social workers, for senior and chief residents in particular).	13	3			*		
B22				Deliver information in a humane manner that is understandable and encourages discussion.	14	3			*		
B23				Establish a trusting relationship with patients.	14	3			*		
B24	Effectively present cancer cases to a Tumor Board and discuss the results with the patients and their families.	14	2			*					
B25	Demonstrate the ability to use information technology, whether it is a hospital clinical information system (CIS) or the Internet, to optimize patient management.	15	2			*					
B26	Demonstrate an ability to interact with patients, nurses, pharmacists, etc. with integrity, honesty, and compassion.	17	3			*					
B27	Explanations to patients and their families regarding: ▢ Planning of surgical procedures ▢ Progress of disease ▢ Explanation of complications	21	3			*					

			B28	Appropriately and sensitively counsel the patient and patient's family regarding: a. Disease entity (prognosis, treatment options, additional treatment) b. Surgical issues i. Operative procedures and risks (possible complications, including mortality) ii. Anesthesia iii. Prognosis (curative vs. palliative) c. Other treatment options (no treatment and non-surgical therapy) d. Informed consent	80	3				*	
			B29	Develop and hone skills interpersonal communication	80	3				*	
			B30	Communicate appropriately and sensitively with the patient and family.	81	3				*	
			B31	Demonstrate sensitivity and flexibility regarding patient fears and concerns, including the following: a. Preoperatively i. Anxiety about pain and the procedure's findings b. Intraoperatively i. Pain and individual response to pain c. Postoperatively i. Ability to care for self ii. Drugs iii. Level of function iv. Prognosis	81	3				*	
			B32	Document the patient's admission and progress accurately while in the hospital, with emphasis on the relevant issues.	13	2				*	
			B33	Ability to provide a legible, clear, and concise written record of consultation reports, pre-op and postop notes, progress notes, and discharge prescriptions.	17	2				*	
C Collaborator		Senior		Participate in a multidisciplinary tumor board.	50	3					
				Consult and interact with other members of the professional cancer team in explaining options to the newly diagnosed breast cancer patient.	57	3					
		N/A		Participate in social service rounds and meetings with family members to discuss the smooth transition from hospital to home.	13	3					
				Understand the importance of working in a healthcare team.	14	1	*	*		*	
				Demonstrate effective and thoughtful use of consultants in the management of the surgical patient.	14	3					
				Identify the need to and benefit of consulting other healthcare professionals and be able to discuss patient management in a collegial way.	14	1					
				Demonstrate a willingness to be consulted by other healthcare professionals and discuss patient management in a collegial way.	14	3					
				Participate in the Tumor Board conference and discuss newly diagnosed cancer cases in terms of radiation and medical oncology.	14	3					
				Consult other healthcare professionals, demonstrate respect for their opinions, and develop a care plan in collaboration with these professionals.	14	3					
				Demonstrate a willingness to consult other physicians (such as hepatologists and microbiologists) when managing their patients.	14	3					
				Understand limitations in terms of the ability to consult other services in a hospital.	14	3	*	*		*	
				Work with members of infectious disease teams in the management of complex surgical wounds.	26						
				Demonstrate knowledge of physician-to-physician communication in an emergency.	34	1	*	*		*	
				Understand that in a community hospital, collaboration with family physicians both inside and outside the operating room (OR) is crucial.	14	1	*	*		*	
D Manager/ Leader		Junior	D1	Complete an ATLS course as a provider.	32	3					
			D2	Function as a surgical consultant, by assessing and developing differential diagnoses and discussing recommendations with senior residents or attending instructor.	33	3					
			D3	Complete the coursework and testing to obtain basic life support (BLS) and ATLS certification.	34						
			D4	Recommend ways in which the emergency department (ED) physical environment can be adapted to better meet the needs of patients. Discuss these issues: a. Confidentiality b. Poor lighting c. High ambient noise level d. Lack of adequate communication and/or reassuring dialogue	35	3					
			D5	Complete the coursework and testing to obtain Basic and Advanced Cardiac Life Support (BLS and ACLS) and ATLS certification.	37	3					
			D6	Define and describe the role of the surgeon in the critical care setting to include these aspects: a. Unit administration/management (surgeon as unit director) i. Triage of patients ii. Data collection and computer usage iii. Infection control and total quality management (TQM) issues iv. Ethical concerns b. Management/consultation of specific surgical conditions	37	1	*	*		*	
			D7	Discuss the economic and psychosocial issues associated with malignant disease, and analyze how these affect the management of patients with cancer, including the following: a. Ethics of cancer management      d. Pre-admission procedures b. Rehabilitation                              e. Conservation of in-patient resources c. Enterostomal therapy                      f. Special problems of the elderly	48	1	*	*		*	
			Senior	D9	Supervise the placement central lines, cricothyroidotomy, chest tubes, and DPL by juniors.	33	3				
				D10	Function as the multi-specialty team leader by coordinating timing and sequencing of operative interventions of the chest, abdomen, head, and musculoskeletal considerations.	37	3				
				D11	Demonstrate the ability to perform as senior trauma leader in coordinating the patient's care, delegating duties to junior team members, and conferring with subspecialty consultants as needed.	37	3				
				D12	Identify new modes of intensive care therapeutics by completing the following activities: a. Predict and analyze the need for a new technology. b. Formulate a plan for the institution of new technologies or therapeutics.	42	1	*	*		*
				D13	Direct all surgical management of patients in the ICU, including taking direct responsibility for admission and discharge.	45	3				
				D14	Supervise a junior resident through the repair of a simple hernia (inguinal or umbilical).	68	3				
				D15	For senior residents, be able to build a cohesive team that is punctual, and respects the personal life of all its members.	15	3				
		N/A		D16	Demonstrate judicious use of expensive radiologic tests and interventions. As a senior or chief resident, demonstrate skill at running the team.	14	3				
			D17	As a junior resident, demonstrate the ability to manage time appropriately between the ward, emergency room, and OR responsibilities.	14	3					
			D18	Demonstrate the ability to organize ancillary tests in a timely fashion	14	3					
			D19	Demonstrate an ability to manage patients on the ward and in the emergency room with appropriate and efficient use of ancillary tests.	15	3					
			D20	Be able to work efficiently and effectively.	15	3					
			D21	Make clinical decisions in the emergency room based on an efficient and effective use of healthcare resources.	15	3					
			D22	Understand how to utilize information technology to optimize patient care and continued self-learning.	15	3					

			D23	Demonstrate an understanding of the importance of properly utilizing finite healthcare resources in the management of diseases such as gallstone pancreatitis.	15	3					
			D24	Learn to manage patients within the limited resources of a community hospital. Learn when and how to transfer patients to tertiary facilities for care.	15	3					
			D25	Recognize areas of weakness in knowledge or skills.	15	3					
			D26	Formulate a plan to correct the weakness (e.g., spend more time in the Laparoscopic Skills Lab; perform structured literature searches about a specific clinical question encountered during service).	15	3					
			D27	Recognize and identify gaps in knowledge and expertise surrounding clinical questions. Formulate a plan to fill gaps and present newly acquired knowledge at General Surgery Rounds.	15	3					
			D28	Demonstrate a balance between personal and professional roles and responsibilities and identify methods to resolve conflicts and role strain.	16	3					
			D29	Demonstrate a desire and ability to teach others, including junior residents, non general surgery residents, and medical students.	16	3					
			D30	Understand the principles of adult learning when teaching others.	16	2					
			D31	Demonstrate self-directed learning in the preparation of cases for Rounds or for the OR.	16	3					
			D32	Help community hospital surgeons discuss recent research literature and bring evidence-based surgery into the community hospital.	16	3					
			D33	Encourage evidence-based review (Journal Club) presentations and appropriate use of information technologies.	16	3					
			D34	Demonstrate self-evaluation and continued receptiveness to criticism.	17	3					
			D35	Demonstrate an understanding of one's own limitations and know when to call for help in difficult situations.	17	3					
			D36	Continually assess one's medical practice in order to improve: a. Commitment to lifelong learning by reading textbooks and journals, discussing difficult/complex cases at rounds, and participating in teaching and research. b. Emphasis on honesty, including full disclosure of iatrogenic complications, taking responsibility, and having collegial/collaborative relationships with all healthcare workers. c. Sensitivity to the impact of age, gender, socio-economic status, and cultural differences on the perception of illness, outcome, and treatment by patients and their families. d. Appreciation for the medico-legal aspects of detailed legible documentation, informed consent, and complications, occurring in the context of training. e. An understanding of the importance of cost-effective management of available resources in the current healthcare industry.	17	3					
			D37	Delineate hospital mechanisms for admitting patients.	80	1	*	*		*	
			D38	Develop and hone skills in self-directed learning.	80	3					
			D39	Estimate costs of hospitalization and various surgeries.	80	1	*	*		*	
			D40	Have a working understanding of the surgeon's role as primary care giver in clinical settings.	81	1	*	*		*	
E Scholar		Senior	E1	Assume teaching responsibilities for junior residents as assigned.	50	3					
			E2	Assist and supervise junior residents as they perform surgical hemorrhoidectomy.	68	3					
			N/A	E3	Participate in the Journal Club.	15	3				
			E4	Demonstrate a willingness to teach others during rotations.	15	3					
			E5	Demonstrate the ability to use evidence-based medicine to address clinical dilemmas.	15	1	*	*		*	
			E6	Offer critical analysis and discussion of current literature at Surgical Grand Rounds.	15	3					
			E7	Critically appraise sources of medical information.	15	1					
			E8	Based on their clinical exposure, residents will have the opportunity to start generating a research question (basic science, clinical, population health, or a combination).	16	1					
			E9	They will develop a proposal to answer the research question through the following steps: a. Conduct an appropriate literature search. b. Assimilate and critically evaluate the literature. c. Propose appropriate methods for conducting the research. d. Conduct the research and present the results.	16	1					
			E10	Develop and hone skills in critical appraisal	80	1	*	*		*	
F Health advocate		senior	F1	Discuss the availability and use of institutional and community support services for trauma patients (e.g., social worker, home health care, and rehabilitation).	32	1		*		*	
			N/A	F2	Identify determinants of health unique to a hospital serving a multi-ethnic community (i.e.: genetic diseases such as breast and colorectal cancer).	14	1		*		*
			F3	Advise patients and their families regarding prevention of disease, screening, and health maintenance.	14	3			*		
			F4	Disseminate the population screening guidelines for breast and colorectal cancer.	14	3					
			F5	Disseminate the complications of excess body weight and identify those that can be reversed with significant weight loss.	14	3					
			F6	Respond to the particular community's health needs.	14	3					
G Professional		Junior	G1	Recommend ways in which the emergency department (ED) physical environment can be adapted to better meet the needs of patients. Discuss these issues: a. Confidentiality b. Poor lighting c. High ambient noise level d. Lack of adequate communication and/or reassuring dialogue	35	3					
			N/A	G2	Understand the impact of the community on the patient.	14	1	*	*		*
			G3	Demonstrate professionalism (honesty, altruism, integrity, and compassion) in one's attitudes towards patients and other healthcare professionals.	16	3			*		
			G4	Know and understand the professional, legal, and ethical codes to which physicians are bound. Demonstrate humility in one's approach to clinical practice.	16	1	*	*		*	
			G5	Demonstrate a level of professionalism consistent with the practice of surgery, particularly in the areas of: i. Punctuality ii. Politeness iii. Availability iv. Empathy v. Appropriate dress vi. Respect for patients' privacy	16	3				*	
			G6	Demonstrate a sense of responsibility by ensuring continuity of care for patients.	16	3					
			G7	Recognize and resolve ethical issues as they arise in surgical care, including issues of informed consent, level of intervention discussions, and advance directives.	17	3					
			G8	Practice medicine with integrity and honesty.	17	3					
			G9	Respect the particular needs of the community physicians and patients.	17	3					
			G10	Demonstrate professionalism, empathy, and compassion by showing respect for a patient's privacy and self-esteem during aspects of the physical examination.	81	3				*	
			G11	Demonstrate an awareness of, and respect for, patient autonomy.	81	3				*	