Mapping of Adult Acitical Care Postgraduate Curricular Competencies with Assessment Tools

الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

This outline maps curricular competencies\objectives with the assessment tools and potential test type. Tests will emphasize certain parts of the outline, and no single test will include questions on all aspects. Questions may include content that is not included in this outline.

Construct	Domain	Rotation	Level	Code	Performance indicator /Curriculum	Page #	Learning Domain	Assessment Method			
								Part 1 - written	Part 2 - Written	Part 2 - OSCE	Part 2 - SOE
A Medical expert	A1 Basic science	A1.1 Critical Care	All	A1.1.1	Describe the natural history of critical care illnesses encountered in the inpatient, ICU, and ER settings.	39, 50	1	*	*		*
				A1.1.2	Understand the pathophysiology of commonly observed diseases in critically ill patients	39, 50	1	*	*		
			Junior	A1.1.3	Pharmacokinetics and Dynamics: Drug Metabolism and Excretion in Critical Illness: 1. Uptake 2. Metabolism 3. Excretion	47	1	*	*		*
		A1.2 Coronary Care Unit	Junior	A1.2.1	Develop knowledge and experience in the hemodynamic complications of acute valvular (native and prosthetic) disease.	54	1	*	*		*
					Develop knowledge and experience in describing the common pathophysiology of patients admitted to a cardiac critical care setting who present with: a) Coronary artery disease, acute myocardial ischemia and infarction, and complications of myocardial infarction and thrombolytic therapy. b) Valvular heart disease with familiarity of the pathophysiological alterations induced by chronic valvular disease in critically ill patients. c) Shock and the use of volume resuscitation, venodilators/constrictors, inotropes, and lusitropes. d) Cardiac tamponade or constrictive pericarditis. e) Dilated, restrictive, and obstructive cardiomyopathy; congestive heart failure; and diastolic dysfunction. f) Aberrant conduction, dysrhythmia, and sudden acute and sub-acute ventricular and supra-ventricular arrhythmia. g) Pacemakers and the indications for and applications of the various modes of temporary pacing. h) Aortic dissection, thoracic and thoracoabdominal aortic aneurysm.	54	1	*	*		*
					i) Pulmonary edema. j) Commonly used cardiac drugs, heparin, thrombolytics, and antiplatelet agents and their appropriate dosages. k) Anti-fibrinolytic agents and their mechanism of action. l) Commonly used vasodilators, vasoconstrictors, and inotropic and lusitropic agents and their dosages and effects. m) Commonly used anti-arrhythmic agents. n) Interpret ECGs for ischemia, infarction, arrhythmias, and paced rhythms. Residents should know the relevance of special leads placement and recognize the limitations, sensitivity, and specificity of ECGs for monitoring ischemia. o) Gain procedural skills for complicated procedures such as pacemaker insertion, invasive and noninvasive hemodynamic and cardiac output monitoring, cardioversion, arterial line insertion, and pericardiocentesis under the supervision of the cardiologist. p) Describe current indications and recommendations for SBE prophylaxis						
				A1.2.2	Learn how to apply basic and clinical science to patient care.	56	1	*	*	*	*
		A1.3 Cardiac Surgery ICU	Junior	A1.3.1	Knowledge of the basic sciences as applied to the critical postoperative period after coronary artery bypass grafting, valve replacement or repair, and major vascular surgery.	56	1	*	*		
				A1.3.2	Accumulate the necessary knowledge to be a competent Critical Care Medicine physician	56	1	*	*	*	*
				A1.3.3	Describe the coronary anatomy and physiology in detail and their relevance to ischemia.	57	1	*	*		
				A1.3.4	Describe the important aspects of the anatomy and physiology of the cardiac valves, left and right ventricles (e.g., determinants of cardiac output, autoregulation), circulatory system, aorta, and pulmonary circulation.	57	1	*	*		
				A1.3.5	Describe the normal and abnormal conduction pathways and its clinical significance	57	1	*	*		
				A1.3.6	Describe the significance of temperatures postoperatively in cardiac and vascular patients.	57	1	*	*		
				A1.3.7	Learn how to apply basic and clinical science to patient care.	59	1	*	*	*	*
		A1.4 Core Anesthesia	Junior	A1.4.1	Explain the adult anatomy and physiology of the following systems and the pathophysiology of the disease states that affect them: - Cardiovascular - Upper airway and respiratory - Central and peripheral nervous - Hepatic - Renal - Endocrine - Hematologic	61	1	*	*		
				A1.4.2	Explain the principles of the function of all anesthetic equipment, including the anesthetic machine, mechanical ventilator, safe delivery of anesthetic gases, and monitoring equipment.	62	1	*	*		*
		A1.5 Trauma	Junior	A1.5.1	Demonstrate understanding of injury mechanisms and their possible impact on patients' presentation.	68	1	*	*		*
		A1.6 Thoracic Surgery	Senior	A1.6.1	The anatomy and physiology of the lungs, pleural space, and esophagus.	69	1		*		
				A1.6.2	Pharmacology of drugs commonly used in the management of thoracic diseases.	70	1		*		
		A1.7 Vascular Surgery	Senior	A1.7.1	Understand the pathophysiology of common vascular problems including arterial and venous disorders.	72	1		*		
		A1.8 Regional Anesthesia	Senior	A1.8.1	Anatomy related to specific regional anesthesia (RA) technique including surface landmarks, perineural structure, ultrasound anatomy, sensory innervation, motor innervation, and details of various regional blocks.	74	1		*		*
				A1.8.2	Physiology related to specific RA techniques and disease processes, including nerve transmission/blockade, physiologic response to acute pain, and chronic pain at surgery site	74	1		*		

				A1.8.3	Pharmacology of local anesthetics, adjuvants (e.g., epinephrine, opioids, HCO_3), and chronic opioid use in patients presenting for surgery	74	1		*		
				A1.8.4	RA equipment including needles, peripheral nerve stimulator, ultrasound, catheters, and stimulating catheters.	74	1		*		
				A1.8.5	Anatomy: Comprehensive knowledge of anatomy for different blocks.	75	1		*		
				A1.8.6	Describe the following physiological principles relevant to RA: **Nerve conduction:** a) Structural classification of nerve type and relevance to local anesthetics action. b) The generation of action potentials, refractory periods, and recovery. **Effects of neuroaxial block:** a) The differences and similarities between spinal and epidural blockades with respect to mechanism of action, effects of adjuvants, and cardiorespiratory physiology. b) Effects on cardiorespiratory system. c) Effects on coagulation. d) Neurohormonal stress response e) Effects on intraoperative blood loss. f) Effects on postoperative respiratory effects of surgery.	75	1		*		
				A1.8.7	Describe the system affected by the stress response and the overall impact on those systems.	75	1		*		
				A1.8.8	Demonstrate knowledge of pharmacodynamics and pharmacokinetics of local anesthetics with respect to: a) The mechanism of action of local anesthetics. b) The structure-activity relationship: the difference between amide and ester local anesthetics; physiochemical properties of potency and protein binding; and pKa and pH. c) Kinetics: how drug, patient, and technical factors contribute to speeding up the effects and recovery from local anesthetics, as well as the determinants of serum local anesthetic concentration, its measurement, and the role of protein binding in it. d) Adjuvants such as epinephrine, bicarbonate, opioids, and NMDA antagonists; also, the clinical indications, advantages, and disadvantages of inclusion of adjuvants in spinal, epidural, regional, and local infiltration.	75-76	1		*		
				A1.8.9	Demonstrate an understanding of the technology available both for identification of nerves to use plexus blocks and peripheral nerve blocks and for epidural space detections. a) Nerve stimulation - Rationale for using nerve stimulation. - Advantages, disadvantages, and limitations of nerve stimulators. - The different types of needles (insulated vs. non-insulated). -Use of a nerve stimulator. b) Ultrasound - The basic physics of ultrasound and their clinical relevance in locating different anatomical structures. - Advantages, disadvantages, and limitations of ultrasound in locating nerves. - Selection of appropriate ultrasound probe and machine settings to properly identify the desired structures. - In-plane vs. out-of-plane techniques.	76	1		*		*
		A1.9 Pain Medicine	Senior	A1.9.1	Demonstrate knowledge of anatomy and physiology of pain pathways in the peripheral and central nervous systems.	78	1		*		
				A1.9.2	Understand the role of psychological factors, particularly anxiety and depression, on pain perception and disability.	78	1		*		
				A1.9.3	Demonstrate knowledge of chronic pain medication (opioids, anti-inflammatories, anticonvulsants, antidepressants).	79	1		*		
				A1.9.4	Describe the physiological changes producing and induced by perioperative pain.	79	1		*		
		A1.10 Neuroanesthesia	Senior	A1.10.1	Demonstrate knowledge of basic sciences applicable to neuroanesthesia, including neuroanatomy, neurophysiology, and neuropharmacology.	81	1		*		
				A1.10.2	Understand the pathway and physiology of cerebrospinal fluid (CSF) circulation and factors affecting it, and demonstrate knowledge of the anatomy of cerebral circulation, the factors affecting it, and methods for controlling ICP.	81	1		*		
		A1.11 Cardiac Anesthesia	Senior	A1.11.1	Demonstrate knowledge of the normal coronary anatomy and variants, normal cardiac physiology, and the effects of disease states on normal physiology.	83	1		*		
				A1.11.2	Demonstrate knowledge of the anatomy and physiology of cardiac valves, the left and right ventricles, atria, major cardiac vessels, and circulatory system in both normal and diseased states.	84	1		*		
				A1.11.3	Demonstrate knowledge of the normal conduction pathways of the heart and their clinical significance to disease.	84	1		*		
				A1.11.4	Demonstrate knowledge of embryologic circulation, development of the heart, and fetal physiology as they apply to adult congenital heart disease.	84	1		*		
				A1.11.5	Demonstrate knowledge of the altered respiratory physiology of the immediately postoperative ventilated patient with significant surgical incisions and pain (e.g., sternotomy, large abdominal incisions).	84	1		*		
				A1.11.6	Demonstrate knowledge of common physiological changes occurring in the postoperative period and the impact these have on end organ function (neurologic, renal, cardiac, hepatic, GI).	84	1		*		
				A1.11.7	Pharmacology a. Commonly prescribed medications for cardiac surgical patients and their effects on the disease and anesthetic management. b. Commonly used cardiac anesthetics and dosages. c. Effects of heparin, antiplatelet agents, and anesthetics. d. Use of protamine for heparin reversal, along with the side effects and complications. e. Antifibrinolytic agents and their mechanisms of action and indications. f. Blood products (e.g., PRBC, FFP, platelets, cryoprecipitate) and blood alternatives (e.g., albumin, starch) as well as transfusion reactions and complications. g. Coagulation drugs (e.g., DDAVP, activated factor VIIa) and their indications, contraindications, dosages, and complications. h. Commonly used vasodilators, vasoconstrictors, and inotropic agents and their indications, dosages, and side effects. i. Appropriate use of pain medications, non-steroidal anti-inflammatory drugs, and RA techniques in cardiac surgical patients. j. Pharmacology of perioperative risk reduction strategies (e.g., lipid lowering agents, β-blockers, aspirin).	84	1		*		
		A1.12 Critical Care Ecography	Senior	A1.12.1	Understand the basic thoracic anatomy	89	1		*		
				A1.12.2	Understand the importance of proper positioning of the patient for optimal cardiac examination	89	1		*		*

				A1.12.3	Understand the basic principles of cardiac transducer orientation and positioning	89	1		*		*
				A1.12.4	Understand the anatomy and orientation of basic echocardiographic views.	89	1		*		*
				A1.12.5	Demonstrate knowledge of different equipment models, specifications, and use.	90	1		*		*
				A1.12.6	Understand specificity, sensitivity, and limitations of each radiological study.	89	1		*		*
		A1.13 Pulmonary Medicine	Senior	A1.13.1	Describe the epidemiology, genetics, and natural history of pulmonary disorders encountered in the inpatient and outpatient settings.	92	1		*		
		A1.14 Nephrology	Senior	A1.14.1	Describe the epidemiology, genetics, and natural history, of the renal disorders encountered in the inpatient setting.	95	1		*		
				A1.14.2	Describe the structure and function of the kidneys.	95	1		*		
		A1.15 Hematology and Oncology	Senior	A1.15.1	Describe the epidemiology, genetics, and natural history, of hematologic illnesses encountered in the inpatient setting	97	1		*		
				A1.15.2	Describe the functions and interplay of factors related to hemostasis and bleeding.	97	1		*		
				A1.15.3	Describe the epidemiology, genetics, and natural history, of different types of cancers encountered in the inpatient setting.	97	1		*		
				A1.15.4	Exhibit understanding of the epidemiology, pathology, of common complications of cancer, chemotherapy, and radiation therapy, including but not limited to tumor lysis syndrome, leukostasis, cord compression, neutropenic fever, and pain crises.	97	1		*		
		A1.16 Infectious Disease	Senior	A1.16.1	Describe the epidemiology, genetics, and natural history of infectious diseases encountered in the inpatient setting.	99	1		*		
				A1.16.2	Describe the functions and interplay of factors related to host defense, microbial infection, and treatment.	99	1		*		
		A1.17 Gastroenterology	Senior	A1.17.1	Describe the epidemiology, genetics, and natural history of GI illnesses encountered in the inpatient setting.	102	1		*		
				A1.17.2	Describe the structure and function of the GI tract, liver, and biliary systems.	102	1		*		
	A2 Assessment & Diagnosis	A2.1 Critical Care	All	A2.1.1	Describe the clinical expression of critical care illnesses encountered in the inpatient, ICU, and ER settings.	39, 50	1	*	*		*
				A2.1.2	Prioritize and summarize approaches to the evaluation of common presentations in Critical Care Medicine patients.	39, 50	1	*	*		*
				A2.1.3	Effectively obtain a relevant history and perform a pertinent physical examination of critically ill patients.	39, 50	2			*	
				A2.1.4	Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of pulmonary diseases.	39, 50	1	*	*		*
				A2.1.5	Effectively interpret diagnostic tests used in the evaluation of ICU patients such as interpretation of arterial blood gases, chest x-rays, abdominal films, and computerized tomography (CT) scans.	40, 51	1	*	*		*
				A2.1.6	Triage interventions, taking into account clinical urgency, the potential for unexpected outcomes, and available alternatives.	39, 50	1	*	*		*
				A2.1.7	Determine indicated interventions for assessment.	40, 51	1	*	*		*
				A2.1.8	Identify at-risk patients, perform appropriate physical examinations, formulate a problem list.	39, 50	1,2	*	*	*	*
				A2.1.9	Demonstrate competence in performing common procedures performed in the medical and surgical ICU, including central and arterial line insertions, orotracheal intubation, paracentesis, thoracentesis, and lumbar puncture.	39, 50	2			*	
				A2.1.10	Utilize validated instruments effectively in the assessment of functioning and quality of life to monitor and adjust therapy.	40, 51	1,2	*	*	*	*
		A2.2 Coronary Care Unit	Junior	A2.2.1	Develop knowledge and experience in: a) Coronary artery disease, acute myocardial ischemia and infarction, and complications of myocardial infarction. b) Valvular heart disease c) Shock d) Cardiac tamponade or constrictive pericarditis. e) Dilated, restrictive, and obstructive cardiomyopathy; congestive heart failure; and diastolic dysfunction. f) Aberrant conduction, dysrhythmia, and sudden acute and sub-acute ventricular and supra-ventricular arrhythmia. h) Aortic dissection, thoracic and thoracoabdominal aortic aneurysm. i) Pulmonary edema. n) Interpret ECGs for ischemia, infarction, arrhythmias, and paced rhythms. Residents should know the relevance of special leads placement and recognize the limitations, sensitivity, and specificity of ECGs for monitoring ischemia. o) Gain procedural skills for complicated procedures such as pacemaker insertion, invasive and noninvasive hemodynamic and cardiac output monitoring, cardioversion, arterial line insertion, and pericardiocentesis under the supervision of the cardiologist. p) Describe current indications and recommendations for SBE prophylaxis	54	1	*	*		*
				A2.2.2	Assessment of a wide variety of acute cardiac problems in the CCU including acute coronary syndrome, arrhythmias, syncope, cardiogenic shock, and congestive heart failure.	54	1	*	*		*
					a. Obtain a complete and thorough history with emphasis on the present problem. b. Perform a general physical examination including a detailed examination of the cardiovascular system.	55	2			*	
				A2.2.3	c. Identify and interpret the significance of any abnormal physical findings related to diseases of the cardiovascular system.	55	1	*	*		*
		A2.3 Cardiac surgery ICU	Junior	A2.3.1	Describe the basics of introductory transesophageal echocardiography (TEE) and its application to critical care patients.	57	1	*	*		
				A2.3.2	Recognizing postoperative complications, generating a differential diagnosis, and planning appropriate investigations.	56	1	*	*		*
				A2.3.3	Understand neurological sequelae after cardiac surgery.	57	1	*	*		*
				A2.3.4	Understand gastrointestinal complications following major vascular surgery.	57	1	*	*		*
				A2.3.5	Laboratory monitoring of the coagulation system in postoperative cardiac or vascular patients.	57	1	*	*		*
				A2.3.6	Recognize the parameters used for assessing postoperative blood loss.	57	1	*	*		*
				A2.3.7	Differentiate the critical differences between medical and surgical postoperative bleeding and collaborate with surgeons.	58	1	*	*		*
				A2.3.8	Recognize the most common complications after cardiac surgery.	58	1	*	*		*
		A2.4 General surgery	Junior	A2.4.1	Develop clinical assessment skills for acute abdomen, including relevant history and physical examination.	59	1	*	*	*	*
				A2.4.2	Develop differential diagnoses for sentinel general surgical presentations.	59	1	*	*		*
				A2.4.3	Be able to recognize acute surgical conditions.	59	1	*	*		*
				A2.4.4	Develop skills in identifying common general surgical problems.	59	1	*	*		*
				A2.4.5	Gain knowledge of, and where applicable, experience in the uses of and techniques related to diagnostic peritoneal lavage	59	1,2	*	*	*	*

			A2.4.6	Order tests and procedures and book operating rooms (ORs) appropriately and efficiently.	60	2				
		A2.5 Core anesthesia	Junior	A2.5.1	Identify complications as they occur in the perioperative period.	62	1	*	*		*
				A2.5.2	Identify risk factors for postoperative complications.	62	1	*	*		*
				A2.5.3	Assess the suitability for discharge to ICU.	62	1	*	*		*
				A2.5.4	Predict and identify the alleviation of impediments to recovery in the perioperative period such as: - Postoperative nausea/vomiting - Pain - Functional impairment	62	1	*	*		*
				A2.5.5	Select, apply, and interpret the information from appropriate monitors, including invasive and noninvasive blood pressure amplifiers, 5-lead ECGs, neuromuscular monitors, oximeters, end-tidal gas monitors, temperature, urine output, and invasive monitors of cardiac output and filling.	62	1	*	*	*	*
				A2.5.6	Identify sources of error in the above monitoring equipment.	62	1	*	*	*	*
				A2.5.7	Identify complications of fluid and blood product administration throughout the entire perioperative period.	62	1	*	*		*
				A2.5.8	Appropriately assess the patient and his/her risks in the perioperative period.	62	1,2	*	*	*	*
		A2.6 Emergency Medicine	Junior	A2.6.1	Obtain a concise and accurate history from and perform a physical examination on patients with undifferentiated acute emergencies.	65,67	2			*	
				A2.6.2	Perform initial assessment of patient with shock.	66	2			*	
				A2.6.3	Develop approaches to assessing patients with toxin exposure, substance abuse, and drug overdose.	66	1	*	*		*
				A2.6.4	Develop skills for assessing a wide variety of acute medical conditions including: a. Environmental exposure (heat stroke, hypothermia, carbon monoxide poisoning, burn, and drowning or near drowning) b. Central nervous system disorders (acute stroke, seizure disorders, meningitis, and coma) c. Cardiovascular diseases (hypertensive emergencies/urgencies, pulmonary edema, dissecting aortic aneurysm, and acute ischemic syndrome) d. Respiratory disease (acute asthma exacerbation, chronic obstructive pulmonary disease [COPD] exacerbation, pneumonia, acute respiratory distress, and acute thromboembolic disorders) e. Gastrointestinal (GI) disorder (upper GI hemorrhage, hepatic encephalopathy, acute liver failure)	66	1	*	*		*
				A2.6.5	Develop the ability to assess acute abdomen, trauma, and fractures and interpret the related radiological imaging.	66	1	*	*		*
		A2.7 Trauma	Junior	A2.7.1	Demonstrate knowledge and skill in the initial assessment of patients with multiple traumas	68	1,2	*	*	*	*
				A2.7.2	Perform primary and secondary surveys of trauma victim.	68	2				
				A2.7.3	Understand the principles of FAST ultrasound and the indications of peritoneal lavage.	68	1	*	*		*
		A2.8Thoracic Surgery	Senior	A2.8.1	Obtain a history and perform a physical examination with an emphasis on aspects related to thoracic surgery.	69	2			*	
				A2.8.2	Formulate a differential diagnosis for common thoracic surgical problems.	69	1		*		*
				A2.8.3	Recognize acutely ill or injured patients and develop a systematic approach to assessment.	69	1		*		*
				A2.8.4	During this rotation, the Resident will be exposed to most of the following: 2. Diagnostic imaging of the chest, including CT and chest x-ray interpretation.	70	1		*		*
				A2.8.5	During this rotation, the Resident will be exposed to most of the following: 3. Laboratory procedures used in diagnosis of diseases of the chest, including endoscopy and function studies of the lungs and esophagus.	70	1		*		*
				A2.8.6	See and obtain work-ups of some or most of these specific disease entities: 1. Carcinoma of the lung, including staging,and pathology. 2. Pneumothorax, hemothorax, and pleural effusions 3. End-stage lung disease, including lung transplantation 4. Infections of the thorax, including empyema, lung abscess, and mediastinitis 5. Penetrating and blunt chest trauma 6. Mediastinal neoplasms 7. Esophageal carcinoma	70	1		*		*
		A2.9 Vascular Surgery	Senior	A2.9.1	Understand the pathophysiology, and clinical presentation of common vascular problems including arterial and venous disorders.	72	1		*		
				A2.9.2	Use and interpret the results obtained from a handheld Doppler	72	1		*		*
				A2.9.3	Interpret angiographic investigations of the carotid arteries and upper and lower limbs.	72	1		*		*
				A2.9.4	Interpret CT scans in patients with abdominal aortic aneurysms	72	1		*		*
				A2.9.5	Order tests and procedures and book ORs appropriately and efficiently.	73	2				
		A2.10 Regional Anesthesia	Senior	A2.10.1	Complications/side effects, including IV toxicity and management of local anesthetic overdose, neural injury, needle trauma to surrounding tissue, e.g., hematoma, pneumothorax, or dural puncture), and unintended neural blockade (i.e., phrenic nerve or epidural).	74	1		*		
				A2.10.2	Contraindications related to specific RA techniques including infection, anticoagulation, pre-existing neural injury, increased intracranial pressure (ICP), and pulmonary disease.	74	1		*		
				A2.10.3	Complications of Regional Anesthesia: Anesthesiologists should be able to describe the complications of RA and the risk factors, presentation, diagnosis, and treatment of: a) Failed block b) Intravascular injection of local anesthesia c) Systemic toxicity d) Total spinal block e) Overdose f) Epidural hematoma and abscess g) Postdural puncture headache h) Hypotension	77	1		*		*
				A2.10.4	Demonstrate the ability to perform the following specific objectives for all regional anesthetic techniques. - Discussion of combined RA and general anesthesia (GA) versus GA or RA only.	76	2			*	*
		A2.11 Pain medicine	Senior	A2.11.1	Obtain a complete pain history and perform relevant physical examinations.	78	2			*	
				A2.11.2	Formulate a differential diagnosis	78	1		*		*
				A2.11.3	Demonstrate knowledge of specific diagnostic modalities (indications, contraindications, complications, and technique).	79	1		*		*
				A2.11.4	Assess pain in the perioperative period.	79	1,2		*	*	*

		A2.12 Neuroanesthesia	Senior	A2.12.1	Demonstrate clinical knowledge and skills necessary for the practice of neuroanesthesia including: - Preoperative neurological assessment (using Glasgow Coma Scale, classifications for subarachnoid hemorrhage, and basic neurological exam) - Understanding basic principles of neurophysiologic monitoring (EEG, evoked potentials [somatosensory and brainstem auditory], transcranial Doppler)	81	1		*		*
				A2.12.2	Conduct cerebral oximetry and ICP monitoring methods	81	2			*	
		A2.13 Cardiac Anesthesia	Senior	A2.13.1	Demonstrate knowledge of the principles of noninvasive and invasive blood pressure monitoring and their pitfalls.	84	1		*		*
				A2.13.2	Interpret ECGs for ischemia, infarction, arrhythmias, and paced rhythms. They must be able to recognize the limitations and the sensitivity/specificity of ECGs as an ischemia monitor.	84	1		*		*
				A2.13.3	Understand laboratory monitoring of the coagulation system (e.g., partial thromboplastin time, international normalized ratio, fibrinogen), as applied to the cardiac patient.	85	1		*		*
				A2.13.4	Assess the adequacy of mechanical ventilation using clinical parameters and laboratory arterial blood gas analysis.	85	1		*		*
				A2.13.5	Recognize the parameters used to assess intraoperative blood loss and medical and surgical methods of treating blood loss.	85	1		*		*
				A2.13.6	Appreciate the indicators of volume status (especially during weaning from bypass), including findings from invasive monitors, TEE, and clinical indicators (e.g., urine volume).	85	1		*		*
				A2.13.7	Complete a detailed history and physical exam, order appropriate laboratory and ancillary investigations.	85	2			*	
		A2.14 Critical care radiology	Senior	A2.14.1	Demonstrate knowledge of the causes and ultrasound findings in respiratory failure due to various causes including: a) Pleural effusion b) Pneumothorax c) Alveolar-interstitial syndrome (e.g., congestive heart failure, acute respiratory distress syndrome) d) Normal aeration pattern (e.g., PE, obstructive lung disease) e) Lobar collapse	88	1		*		*
				A2.14.2	Develop the skills to interpret chest X-rays and CT scans of the thorax, with an emphasis on: a) Interstitial vs. air space disease b) Congestive heart failure c) Pleural effusion d) Lobar collapse e) Hilar adenopathy f) Pulmonary hypertension g) Pulmonary fibrosis h) Solitary lung nodule i) Barotrauma	87	1		*		*
				A2.14.3	Understand the indications for and read abdominal X-rays and CT scans of the abdomen, with emphasis on: a) Small bowel obstruction b) Large bowel obstruction c) Bowel edema/inflammation d) Liver masses/cysts e) Renal masses/cysts	87	1		*		*
				A2.14.4	Recognize the indications for and be able to interpret CT scans of the head, with emphasis on: a) Masses/cysts b) Hemorrhage c) Ischemic infarcts d) Brain edema e) Hydrocephalus	87	1		*		*
				A2.14.5	Recognize the indications for and use of ultrasound of the abdomen and chest, and determine the presence of significant pleural effusion or ascites.	87	1		*		*
				A2.14.6	Understand the indications for: a) MRI b) Angiograms/interventional radiology procedures c) Bone/gallium scans d) Other nuclear medicine scans	87	1		*		*
				A2.14.7	Generate general critical care ultrasound images in the assessment of pneumothorax, pleural effusion, and ascites.	88	2			*	
				A2.14.8	Demonstrate ability to perform ultrasound-guided procedures (e.g., pleurocentesis, paracentesis).	88	2			*	
				A2.14.9	Demonstrate ability to perform FAST exam, which is a limited ultrasound examination directed solely at identifying the presence of free intraperitoneal and pericardial fluid and hemothorax in trauma patients.	88	2			*	
		A2.15 Critical care echocardiography	Senior	A2.15.1	Obtain a safe and optimal echocardiographic examination via the transthoracic approach in acutely ill patients.	89	2			*	
				A2.15.2	Learn how to perform and interpret a “focused” and “goal-directed” echocardiographic examination.	89	2			*	
				A2.15.3	Demonstrate ability to identify the causes of hemodynamic instability: a) Cardiogenic b) Distributive c) Hypovolemic	89	1		*		*
		A2.16 Pulmonary Medicine	Senior	A2.16.1	Describe the clinical expression of pulmonary disorders encountered in the inpatient and outpatient settings.	92	1		*		
				A2.16.2	Summarize approaches to the evaluation of common pulmonary disease presentations.	93	1		*		*
				A2.16.3	Interpret diagnostic tests used in the evaluation of inpatients with suspected pulmonary disease.	93	1		*		*
				A2.16.4	Effectively obtain a comprehensive history and perform a complete physical examination of patients with respiratory symptoms or known pulmonary	93	2			*	
				A2.16.5	Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of pulmonary diseases.	93	1		*		*
				A2.16.6	Utilize validated instruments in the assessment of function and quality of life to monitor and adjust therapy.	93	1		*		*
		A2.17 Nephrology	Senior	A2.17.1	Describe the clinical expression of the renal disorders encountered in the inpatient setting.	95	1		*		
				A2.17.2	Summarize approaches to the evaluation of the common presentations of renal disorders.	95	1		*		*
				A2.17.3	Interpret diagnostic tests used in the evaluation of inpatients with ssuspected renal disorders..	95	1		*		*
				A2.17.4	Effectively obtain a comprehensive history and perform a complete physical examination in patients with renal symptoms, abnormal creatinine clearance, or acute or chronic renal disorders.	95	2			*	
				A2.17.5	Construct an appropriate differential diagnosis.	95	1		*		*
				A2.17.6	Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of renal disorders.	95	1		*		*
				A2.17.7	Describe the appropriate use of validated instruments in the assessment of pain, function, and quality of life to monitor and adjust therapy.	95	1		*		*
		A2.18 Hematology and Oncology	Senior	A2.18.1	Describe the clinical expression of hematologic illnesses encountered in the inpatient setting	97	1		*		

				A2.18.2	Exhibit understanding of the clinical presentation, and diagnosis of common complications of cancer, chemotherapy, and radiation therapy, including but not limited to tumor lysis syndrome, leukostasis, cord compression, neutropenic fever, and pain crises.	97	11		*		
				A2.18.3	Summarize approaches to the evaluation of common presentations of hematologic illnesses (e.g., bleeding, clotting, cytopenias).	97	1		*		*
				A2.18.4	Interpret diagnostic tests used in the evaluation of inpatients with suspected hematologic disorders.	97	1		*		*
				A2.18.5	Summarize approaches to the evaluation of common cancer presentations.	97	1		*		*
				A2.18.6	Interpret diagnostic tests used in the evaluation of inpatients with suspected cancer	97	1		*		*
				A2.18.7	Effectively obtain a comprehensive history and perform a complete physical examination in patients with hematologic symptoms, abnormal coagulation tests, or acute or chronic hematologic disorders.	97	2			*	
				A2.18.8	Effectively obtain a comprehensive history and perform a complete physical examination in patients with cancer or its complications.	97	2			*	
				A2.18.9	Construct an appropriate differential diagnosis.	97	1		*		*
				A2.18.10	Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of hematologic disorders.	97	1		*		*
				A2.18.11	Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of cancer or its complications.	97	1		*		*
				A2.18.12	Describe the appropriate use of validated instruments in the assessment of pain, function, and quality of life to monitor and adjust therapy.	97	1		*		*
				A2.18.13	Utilize validated instruments in the assessment of function and quality of life to monitor and adjust therapy.	97	2			*	
		A2.19 Infectious Disease	Senior	A2.19.1	Describe the clinical expression of infectious diseases encountered in the inpatient setting.	99	1		*		
				A2.19.2	Summarize approaches to the evaluation of common presentations of infectious diseases (e.g., AIDS, pneumonia, urinary tract infections, sepsis).	99	1		*		*
				A2.19.3	Interpret diagnostic tests used in the evaluation of inpatientswith suspected infectious diseases.	99	1		*		*
				A2.19.4	Effectively obtain a comprehensive history and perform a complete physical examination in patients with infectious symptoms or chronic infectious disease.	100	2			*	
				A2.19.5	Construct an appropriate differential diagnosis.	100	1		*		*
				A2.19.6	Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of infectious diseases.	100	1		*		*
				A2.19.7	Describe the appropriate use of validated instruments in the assessment of pain, function, and quality of life to monitor and adjust therapy.	100	1		*		*
		A2.20 Gastroenterology	Senior	A.20.1	Describe the clinical expression of GI illnesses encountered in the inpatient setting.	102	1		*		
				A.20.2	Summarize approaches to the evaluation of the common presentations of GI illness (e.g., GI bleeding, diarrhea, jaundice/transaminitis).	102	1		*		*
				A.20.3	Distinguish patients with functional bowel disorders from those with other, "organic" bowel diseases.	102	1		*		*
				A.20.4	Interpret diagnostic tests used in the evaluation of outpatients with suspected GI illness.	102	1		*		*
				A.20.5	Effectively obtain a comprehensive history and perform a complete physical examination in patients with GI symptoms, abnormal liver function tests, or acute or chronic GI disorders	102	2			*	
				A.20.6	Construct an appropriate differential diagnosis.	102	1		*		*
				A.20.7	Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of GI disorders	102	1		*		*
				A.20.8	Describe the appropriate use of validated instruments in the assessment of pain, function, and quality of life to monitor and adjust therapy.	102	1		*		*
				A.20.9	Perform a complete and appropriate assessment of a patient.	104	2			*	
				A.20.10	Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic.	104	2			*	
	A3 Management	A3.1 Critical Care	All	A3.1.1	Institute a course of therapy for patients at risk under the direction of senior personnel.	39, 50	2				
				A3.1.2	Demonstrate a working knowledge of Critical Care Medicine by actively participating in the management of critically ill patients.	39, 50	1	*	*		*
				A3.1.3	Become comfortable in the management of cardiac arrest and the acute resuscitation of a traumatized or acutely ill patient.	39, 50	3				
				A3.1.4	Construct a comprehensive treatment plan and assess patient response to therapy.	40, 51	1	*	*		*
				A3.1.5	Demonstrate competence in performing common procedures performed in the medical and surgical ICU, including central and arterial line insertions, orotracheal intubation, paracentesis, thoracentesis, and lumbar puncture.	39, 50	2			*	
				A3.1.6	Determine indicated interventions for management.	40, 51	1	*	*		*
				A3.1.7	Identify at-risk patients, perform appropriate physical examinations, formulate a problem list, and institute a course of therapy under the direction of senior personnel.	39, 50	1	*	*		*
			Junior	A3.1.8	Management of the following domains: 1. Shock: Hypovolemic, Cardiogenic, Distributive, Obstructive 2. Myocardial infarction and its complications 3. Cardiac arrhythmia, conduction disturbances, and indications for pacemakers 4. Pulmonary embolism 5. Pulmonary edema (cardiogenic and non-cardiogenic) 6. Cardiac tamponade and other acute pericardial diseases 7. Acute valvular disorders 8. Acute aortic and peripheral vascular disorders including arteriovenous fistulae (optional) 9. Acute complications of cardiomyopathies and myocarditis 10. Vasoactive and inotropic therapy 11. Complications of devices and artificial hearts (optional) 12. Complications of angioplasty (optional) 13. Current concepts of the Frank–Starling law of the heart and perfusion to calculate and interpret hemodynamic parameters 14. Hemodynamic effects caused by ventilator assist devices 15. Thrombolytic therapy 16. Perioperative management of patient undergoing cardiovascular surgery (optional) 17. Recognition, evaluation, and management of hypertensive emergencies	42-43	1	*	*		*

A3.1.9	Management of: D. Infectious Disease Physiology, Pathology, Pathophysiology, and Therapy 1. Antimicrobial agents: a. Aminoglycosides b. Antifungal agents c. Antituberculosis agents d. Penicillin and other antibiotics e. Antiviral agents f. Agents for parasitic infections 2. Infection control for special care units 3. Anaerobic infections 4. Systemic sepsis 5. Tetanus 6. Hospital-acquired and opportunistic infections in critically ill patients 7. Adverse reactions to antimicrobial agents 8. AIDS 9. Infectious risks to health care workers	45	1	*	*		*
A3.1.10	E. Hematological Disorders Secondary to Acute Illness 1. Acute defects in hemostasis: a. Thrombocytopenia b. Disseminated intravascular coagulation c. Primary fibrinolytic therapy 2. Anticoagulation and fibrinolytic therapy 3. Principles of blood component therapy a. Platelet transfusion b. Packed red cells, including frozen red cells c. Fresh frozen plasma d. Specific coagulation factor concentrates e. Albumin and plasma protein fraction f. Stroma-free hemoglobin g. White blood cell transfusion h. Cryoprecipitate		1	*	*		*
A3.1.11	F. Gastrointestinal (GI), Genitourinary (GU), Obstetric/Gynecological (Ob/Gyn) Acute Disorders 1. Acute pancreatitis with shock 2. Upper GI bleeding including variceal bleeding 3. Lower GI bleeding 4. Acute and fulminant hepatic failure 5. Toxic megacolon 6. Acute perforations of the GI tract 7. Ruptured esophagus 8. Acute inflammatory diseases of the intestine 9. Acute vascular disorders of the intestine including mesenteric infarction 10. Obstructive uropathy and acute urinary retention 11. Urinary tract bleeding 12. Toxemia of pregnancy and amniotic fluid embolism (optional for pediatrics) 13. Hydatidiform mole 14. Perioperative management of patients undergoing GI, GU, or Ob/Gyn surgery 15. Stress ulcer prophylaxis 16. Drug dosing in hepatic failure	46	1	*	*		*
A3.1.12	Management of Immunology and Transplantation 1. Principles of transplantation (organ donation, procurement, preservation, transportation, allocation, implantation, and national organization of transplantation activities) 2. Immunosuppression 3. Transplantation of different organs (indications and post-operative care)	46	1	*	*		*
A3.1.13	Management of Trauma and Burns 1. Initial approaches to the management of multisystem trauma 2. central nervous system trauma (brain and spinal cord) 3. Skeletal trauma including the spine 4. Chest trauma: a. Blunt b. Penetrating c. Cardiac 5. Abdominal trauma (blunt and penetrating) 6. Crush injury	46	1	*	*		*
A3.1.14	Management of: I. Monitoring, Bioengineering, and Biostatistics 1. Prognostic indices and severity and therapeutic intervention scores 2. Principles of electrocardiographic monitoring, measurement of skin temperature and resistance, and transcutaneous measurements. 3. Invasive hemodynamic monitoring a. Principles of strain gauge transducers b. Signal conditioners, calibration, and gain adjustment c. Display techniquesd. Principles of PiCCO and arterial, central venous, and pulmonary artery pressure catheterization and monitoring e. Assessment of cardiac function and derived hemodynamic parameters 4. Noninvasive hemodynamic monitoring (Vigileo and LiDCO) 5. Electrical safety 6. Thermoregulation 7. Brain monitoring (intracranial pressure, cerebral blood flow, cerebral metabolic rate, and electroencephalograms).	46	1,2	*	*	*	*
	8. Respiratory monitoring (airway pressure, intrathoracic pressure, tidal volume, pulse oximetry, dead-space to tidal volume ratio, compliance, resistance, and capnography). 9. Metabolic monitoring (oxygen consumption, carbon dioxide production, and respiratory quotient). 10. Use of computers in critical care units (optional)						

A3.1.15	Management of: L. Ethical and Legal Aspects of Critical Care Medicine: 1. Death and dying 2. Foregoing life-sustaining treatment and orders not to resuscitate 3. Standards of treatment for patients with disabilities and mental retardation 4. Rights of patients and the right to refuse treatment 5. Living wills, advance directives, durable power of attorney (options)	47-50	1	*	*		*
A3.1.16	M. Psychosocial Aspects: Awareness of the physiological and social effects of life-threatening illness on patients and families (optional).	47-50	1	*	*		*
A3.1.17	Be proficient in the following procedural skills as well as understand the indications, contraindications, complications, and pitfalls of these interventions: A. Airway Management: 1. Open airway maintenance in non-intubated, unconscious, paralyzed patients 2. Intubation (oral and nasotracheal) 3. Cricothyrotomy, transtracheal catheterization and tracheostomy	47-50	1,2	*	*	*	*
	B. Breathing and Ventilation 1. Ventilation of bag and mask 2. Indications, applications, techniques, criteria, and physiological effects of positive end-expiratory pressure; intermittent positive pressure breathing; intermittent mandatory ventilation; continuous positive airway pressure; pressure support ventilation; and (optionally) noninvasive ventilation. 3. Airway pressure release ventilation 4. Suction techniques 5. Chest physiotherapy and incentive spirometry (optional) 6. Fiber optic laryngotracheobronchoscopy 7. Weaning techniques 8. Management of pneumothorax (needle and chest tube insertion drainage systems) 9. Monitoring of airway pressures 10. Operation of mechanical ventilators 11. Measurement of endotracheal tube cuff pressures 12. Interpretation of sputum cultures by smear 13. Performance of bedside pulmonary functions tests 14. Application of appropriate oxygen therapy						
	C. Circulation 1. Arterial puncture and blood sampling 2. Insertion of monitoring lines a. Central venous b. Arterial c. Pulmonary artery catheters 3. Pericardiocentesis 4. Management of arterial and venous air embolism 5. Transvenous pacemaker insertion 6. Cardiac output estimates by thermodilution techniques 7. Use of computers and calculators to determine derived parameters including systemic and pulmonary vascular resistance 8. Obtain 12-lead ECGs. 9. Dynamic ECG interpretation 10. Infusion of epinephrine, dopamine, norepinephrine, nitroglycerine, dobutamine, isoproterenol, nitroprusside, and other vasoactive drugs 11. Use of infusion pumps for vasoactive drugs 12. Cardioversion 13. Application and regulation of intra-aortic assist devices 14. Application of noninvasive cardiovascular monitoring 15. Transcutaneous pacing/defibrillation						
	D. Central Nervous System 1. Lumbar puncture 2. Management of intracranial pressure monitors and intracranial hypertension (optional) 3. Monitoring of modified EEG 4. Application of hypothermia E. Renal 1. Management of peritoneal dialysis 2. Management of CAVH and CAVHD 3. Insertion of hemodialysis catheters F. GI Tract 1. Insertion of transesophageal devices 2. Prevention and management of upper GI bleeding G. Hematology 1. Insertion of transesophageal devices 2. Management of massive transfusions 3. Autotransfusion 4. Proper ordering and interpretation of coagulation studies						
	H. Infection 1. ICU sterility techniques and precautions 2. Sampling, staining, and interpretation of blood, sputum, urine, drainage, and other body fluids. 3. Interpretation of antibiotic levels and sensitivities						

					l. Metabolism and Nutrition 1. Tube feeding 2. Parental nutrition 3. Monitoring and assessment of metabolism and nutrition 4. Maintenance of temperature homeostasis J. Monitoring of Bioengineering 1. Utilization, zeroing, and calibration of transducers 2. Use of amplifiers and recorders 3. Troubleshooting equipment 4. Correcting basic electrical safety hazards K. Trauma 1. Temporary immobilization of fractures 2. G-suit applications 3. Use of special beds (e.g., circle electrical bed, roto bed, Flexicare bed) 4. Peritoneal lavage L. ICU Laboratory 1. Blood gas analysis 2. Calculation of oxygen content, intrapulmonary shunt, Alveolar-arterial gradients, systemic and pulmonary vascular resistance, oxygen transport, oxygen consumption						
			Senior	A3.1.18	Execute interventions in a skillful and safe manner and adapt to new findings or changing clinical circumstances.	51	2			*	
				A3.1.19	Recognize when care should be transferred to another physician or health care provider.	51	1		*		*
		A3.2 Coronary Care Unit	Junior	A3.2.1	Develop knowledge and experience in the basic principles of applying an intra-aortic balloon pump as well as its indication and contraindication.	54	1	*	*		*
				A3.2.2	Management of a wide variety of acute cardiac problems in the CCU including acute coronary syndrome, arrhythmias, syncope, cardiogenic shock, and congestive heart failure.	54	1	*	*		*
				A3.2.3	When a patient presents with a cardiac problem, the Resident should be able to: a. Obtain a complete and thorough history with emphasis on the present problem. b. Perform a general physical examination including a detailed examination of the cardiovascular system. c. Identify and interpret the significance of any abnormal physical findings related to diseases of the cardiovascular system.	55	2			*	
				A3.2.4	Work to develop effective and efficient patient management strategies by: Obtaining an in-depth experience in acute cardiac care by being responsible for the management of patients in the CCU.	55	1,2,3	*	*	*	*
		A3.3 Cardiac surgery ICU	Junior	A3.3.1	Understand the following: 1.Commonly used cardiac drugs, heparin, thrombolytics, antiplatelet agents, and their dosages. 2. The use of blood products (e.g., packed red blood cells [PRBC], fresh frozen plasma [FFP], platelets, cryoprecipitate) and blood alternatives (e.g., albumin, synthetic starches) as well as transfusion reactions and complications. 3. Currently available coagulation drugs (e.g., DDAVP, activated factor VII, protamine) and their indications, contraindications, and complications. 4. Commonly used vasodilators, vasoconstrictors, and inotropic and lusitropic agents, and their dosages and effects. 5. Commonly used anti-arrhythmic agents (e.g., procainamide, amiodarone, sotalol) for prophylaxis and treatment of post-operative atrial fibrillation, supraventricular tachycardia, and ventricular arrhythmias.	57	1	*	*		
				A3.3.2	Develop skills in managing common general surgical problems.	59	1	*	*		*
				A3.3.3	Plan appropriate management for post operative complications.	56	1	*	*		*
				A3.3.4	Management of routine postoperative cardiac surgery patients, patients undergoing valve replacement or repair (aortic and mitral), and patients undergoing major vascular surgery such as abdominal and thoracic aortic aneurysm repair and aortobifemoral grafting procedures.	56	1	*	*		*
				A3.3.5	Basic use of intra-aortic balloon pumps and extracorporeal membrane oxygenation.	56	1	*	*		*
				A3.3.6	Perform arterial and central venous cannulation, peripheral venous cannulation, and pulmonary artery catheterization; be able to interpret central venous pressure (CVP) and data from pulmonary artery catheter (pulmonary artery pressure [PAP], pulmonary capillary wedge pressure [PAWP], cardiac output); and know the indications, complications, and management of these procedures.	57	1,2	*	*	*	*
				A3.3.7	Discuss the principles of surgery and the application of basic sciences to surgical treatment.	60	1	*	*		*
		A3.4 General surgery	Junior	A3.4.1	Develop skills in managing common general surgical problems.	59	1	*	*		*
				A3.4.2	Develop skills in managing victims of trauma (if at a trauma center)	59	1	*	*		*
				A3.4.3	Develop skills in managing common general surgical problems.	59	1	*	*		*
				A3.4.4	Gain experience in the following technical skills: - Central venous access - Tube thoracostomy - Incision and drainage - Suturing and hemostasis - Knot-tying - Focused assessment with sonography in trauma (FAST)	59-60	2			*	
		A3.5 Core anesthesia	Junior	A3.5.1	Select and administer appropriate fluids and blood products, taking into account the indications, contraindications, and correct procedures of said products.	62	1	*	*		*
				A3.5.2	Manage complications as they occur in the perioperative period.	62	1	*	*		*
				A3.5.3	Identify risk factors for postoperative complications and modify anesthetic plans to minimize those complications.	62	1	*	*		*
				A3.5.4	Predict, identify, and contribute to the alleviation of impediments to recovery in the perioperative period such as: - Postoperative nausea/vomiting - Pain - Functional impairment	62	1	*	*		*
				A3.5.5	Identify and correct sources of error in monitoring equipment.	62	1	*	*		*
				A3.5.6	Manage complications of fluid and blood product administration throughout the entire perioperative period.	62	1	*	*		*
				A3.5.7	Formulate and implement an appropriate individualized plan for perioperative management to patients at risk , considering the implications of the patient's underlying problem, surgical procedure, and coexisting patient factors such as other medical problems, anxiety, discomfort, culture, language, ethnicity, age, and gender.	62	1,2	*	*	*	*
				A3.5.8	Assess the suitability for discharge to ICU, intermediate care, ward, and home settings.	62	1	*	*		*

				A3.5.9	Perform basic and advanced airway management including: - Bag mask ventilation - Direct laryngoscopy - Use of different intubation techniques in case of difficult intubation (e.g., laryngeal mask airway, GlideScope)	61	2			*	
				A3.5.10	Appropriately select and administer a complete spectrum of anesthetic and analgesic agents for the induction and maintenance of anesthesia, considering the relative advantages and disadvantages of each approach and tailoring that approach to the specific anesthetic goals for each case.	62	1,2	*	*	*	*
				A3.5.11	Appropriately select and administer a complete spectrum of drugs for cardiovascular support and resuscitation during anesthesia and the perioperative period, considering the relative advantages and disadvantages of each approach and tailoring that approach to the specific anesthetic goals for each case.	62	1,2	*	*	*	*
				A3.5.12	Perform awake fiberoptic intubation.	62	2			*	
				A3.5.13	Provide specialized anesthetic care to pregnant patients undergoing obstetric and non-obstetric procedures, geriatric patients, and ambulatory patients	62	1	*	*		*
				A3.5.14	Perform specific techniques (under supervision) for the administration of general, local, and regional anesthesia, with a sufficient range of choices to meet the anesthetic goals for all patients within the scope of practice defined above.	62	2			*	
				A3.5.15	Effectively use the anesthesia machine to provide anesthesia care, including being able to perform an appropriate safety inspection of the machine.	62	2			*	
				A3.5.16	Identify and correct equipment malfunction before and during anesthesia care.	62	1,2	*	*	*	*
				A3.5.17	Appropriately modify management in response to monitoring information and changes in patient, anesthetic, or surgical factors.	62	1	*	*		*
				A3.5.18	Initiate appropriate, individualized perioperative pain management strategies.	63	1	*	*		*
				A3.5.19	Manage adult patients in a variety of settings, including: - Elective, urgent, and emergency/trauma procedures - Sites distant from the operating room - Unforeseen emergencies (e.g., malignant hyperthermia, anaphylaxis)	63	1	*	*		*
				A3.5.20	Perform all technical skills (initially under supervision and then independently) necessary to manage adult patients in the perioperative period, including: - Routine and difficult airway management - Techniques of monitored anesthesia care (MAC) - Local and regional anesthesia - General anesthesia techniques including those related to induction, maintenance, and emergence - Peripheral and central venous access invasive monitoring - Resuscitation of critically ill adult patients (with reference to ACLS and ATLS procedures and protocols)	63	2			*	
				A3.5.21	Manage urgent and crisis situations such as cardiac arrest, trauma, anaphylaxis, and malignant hyperthermia as a team member or team leader.	64	1	*	*		*
		A3.6 Emergency Medicine	Junior	A3.6.1	Understand the principles of managing disasters.	67	1	*	*		*
				A3.6.2	Perform management of patient with shock.	66	1	*	*		*
				A3.6.3	Formulate appropriate plans of management of patient present with acute emergency.	66	1	*	*		*
				A3.6.4	Develop an organized approach to resuscitation, ensuring maintenance of airways, breathing, and circulation.	66	1	*	*		*
				A3.6.5	Perform initial management of compromised airways, including intubation of the trachea and the use of various airway adjuncts.	66	1	*	*		*
				A3.6.6	Perform initial management of patients with cardiac arrhythmias and acute coronary syndrome.	66	1	*	*		*
				A3.6.7	Develop skills for managing a wide variety of acute medical conditions including: a. Environmental exposure (heat stroke, hypothermia, carbon monoxide poisoning, burn, and drowning or near drowning) b. Central nervous system disorders (acute stroke, seizure disorders, meningitis, and coma) c. Cardiovascular diseases (hypertensive emergencies/urgencies, pulmonary edema, dissecting aortic aneurysm, and acute ischemic syndrome) d. Respiratory disease (acute asthma exacerbation, chronic obstructive pulmonary disease [COPD] exacerbation, pneumonia, acute respiratory distress, and acute thromboembolic disorders) e. Gastrointestinal (GI) disorder (upper GI hemorrhage, hepatic encephalopathy, acute liver failure)	66	1	*	*		*
				A3.6.8	Develop the ability to assess and initially manage acute abdomen, trauma, and fractures and interpret the related radiological imaging.	66	1	*	*		*
				A3.6.9	Develop a care plan for a patient they have assessed, including investigation, treatment, and continuing care, in collaboration with the members of the interdisciplinary team	67	1	*	*		*
				A3.6.10	Ensure follow-up of care and enhance care continuity.	67	1	*	*		*
		A3.7 Trauma	Junior	A3.7.1	Understand the principles of FAST ultrasound and the indications of peritoneal lavage.	68	1	*	*		*
				A3.7.2	Demonstrate knowledge of appropriate blood product transfusion	68	1	*	*		*
				A3.7.3	Understand the principles of managing disasters.	69	1	*	*		*
				A3.7.4	Demonstrate knowledge and skill in management of patients with multiple traumas	68	1	*	*		*
				A3.7.5	Demonstrate proficiency in trauma resuscitation and wound care.	68					
		A3.8 Thoracic Surgery	Senior	A3.8.1	Principles of oncology, including radiation therapy and chemotherapy.	70	1		*		*
				A3.8.2	Recognize acutely ill or injured patients and develop a systematic approach to assessment and management.	69	1		*		*
				A3.8.3	Formulate a plan of management for common surgical problems, including investigation and treatment.	69	1		*		*
				A3.8.4	Develop familiarity with the conduct of common thoracic operations	69	1		*		*
				A3.8.5	Participate in postoperative care of thoracic surgical patients	69	2				
				A3.8.6	Learn: 1. General conduct of a surgical procedure, including scrubbing and sterile technique 2. Chest tube placement 3. Thoracentesis 4. Simple suturing 5. Knot-tying	70	2			*	
				A3.8.7	Management of Carcinoma of the lung.	70	1		*		*

			A3.8.8	Discuss the principles of surgery and the application of basic sciences to surgical treatment.	71	1		*		*
		A3.9 Vascular surgery	Senior	A3.9.1	Understand the management of common vascular problems including arterial and venous disorders.	72	1		*		*
				A3.9.2	Understand the management of and risk factor reduction for the following common conditions: a) Abdominal aortic aneurysms b) Carotid artery disease c) Chronic critical limb ischemia d) Chronic venous disease e) Understand and manage associated complex medical problems in patients with peripheral vascular disease	72	1		*		*
				A3.9.3	Manage vascular access in patients with chronic renal failure.	72	1		*		*
				A3.9.4	Understand the management of and risk factor reduction for the following common conditions: a) Abdominal aortic aneurysms b) Carotid artery disease c) Chronic critical limb ischemia d) Chronic venous disease e) Understand and manage associated complex medical problems in patients with peripheral vascular disease	72	1		*		*
				A3.9.5	Discuss the principles of surgery and the application of basic sciences to surgical treatment.	73	1		*		*
		A3.10 Regional anesthesis	Senior	A3.10.1	Complications/side effects, including IV toxicity and management of local anesthetic overdose, neural injury, needle trauma to surrounding tissue, e.g., hematoma, pneumothorax, or dural puncture), and unintended neural blockade (i.e., phrenic nerve or epidural).	74	1		*		*
				A3.10.2	Spectrum of Anesthesia: Anesthesiologists should demonstrate an understanding of the spectrum of RA techniques and ability to perform those relevant to their level of training. They must be able to describe site-specific equipment, contraindications, and appropriate drug selections for each block.	77	1		*		*
				A3.10.3	The Resident must be able to do/assist with the following procedures: a. IV regional anesthesia b. Spinal anesthesia c. Epidural anesthesia/analgesia - Thoracic - Lumbar d. Cervical plexus block or brachial plexus block - Interscalene - Supraclavicular - Axillary - Infraclavicular e. Intercostal or intrapleural block f. Paravertebral block (thoracic or lumbar) g. Lower limb blocks - Femoral - Sciatic - Obturator - Lateral femoral cutaneous - Ankle	74-75	2			*	
				A3.10.4	Demonstrate the ability to perform the following specific objectives for all regional anesthetic techniques. a) Anesthetic planning - Development of an anesthetic plan including appropriate options, contingency plans, and expansions. - Selection of appropriate RA techniques for anesthetic care. - RA techniques in pediatrics. b) Nerve localization - The anatomic landmarks for use with blocks. - Utilization of nerve stimulators or ultrasound for identification of plexuses and peripheral nerves.	76	1		*		*
		A3.11 Pain Medicine	Senior	A3.11.1	Formulate a differential diagnosis and treatment plan that incorporates pharmacologic and non-pharmacologic modalities of treatment.	78	1		*		*
				A3.11.2	Demonstrate knowledge of specific diagnostic/treatment modalities (indications, contraindications, complications, and technique).	79	1		*		*
				A3.11.3	Incorporate the effective use of consultation services in chronic pain management.	79	1		*		*
				A3.11.4	Assess pain in the perioperative period.	79	1		*		*
				A3.11.5	Describe the options available for perioperative analgesia, their advantages and disadvantages, and select appropriate therapies for individual patients.	79	1		*		*
				A3.11.6	Apply knowledge gained in the treatment of the following specific pain disorders: 1. Complex regional pain syndrome 2. Neuropathic pain syndromes, e.g., peripheral diabetic neuropathy or post-herpetic neuralgia) 3. Central pain syndromes 4. Intractable anginal pain 5. Visceral pain 6. Pelvic pain 7. Headaches 8. Pain related to peripheral vascular insufficiency 9. Role of personality disorders, anxiety states, depression, compensation, and disability	79	1		*		*
				A3.11.7	Demonstrate knowledge of basic interventional techniques commonly employed in chronic pain medicine, including peripheral nerve blocks, sympathetic blockade for the upper and lower extremities, trigger point injections, epidural steroid injections, blocks for diagnosis and treatment of facet joint syndrome, and sacroiliac joint injections.	79	1		*		*
				A3.11.8	Incorporate national practice guidelines for chronic pain management, especially in relation to controlled medications.	79	1		*		*
				A3.11.9	Use a multimodal approach by utilizing both pharmacological and nonpharmacological modalities.	79	1		*		*
				A3.11.10	Demonstrate knowledge of basic legal, social, and bioethical issues encountered in chronic pain management, including informed consent.	79	1		*		*
		A3.12 Neuroanesthesia	Senior	A3.12.1	Demonstrate basic understanding of the impact of commonly performed neurosurgical procedures on anesthetic management.	81	1		*		*

				A3.12.2	Demonstrate clinical knowledge and skills necessary for the practice of neuroanesthesia including: - Intraoperative support (special positioning, i.e., sitting, prone, park-bench, lateral, and knee-chest).	81	1		*		*
				A3.12.3	Perform anesthesia techniques safely to avoid increases in ICP during induction, intubation, and emergence from anesthesia.	81	2			*	
				A3.12.4	Demonstrate knowledge of specific interventions, including systemic arterial hypotension/hypertension, CSF drainage, ICP management, hypothermia, and precordial Doppler monitoring of air embolus	81	1		*		*
				A3.12.5	Management of specific perioperative complications such as seizures, cerebral ischemia, intracranial hypertension, intraoperative aneurysm rupture, air embolism, cranial nerve dysfunction, and neuroendocrine disturbance (e.g., diabetes insipidus, syndrome of inappropriate antidiuretic hormone secretion).	81	1		*		*
				A3.12.6	Postoperative management of neurological patients in the post-anesthesia care unit, ICU, and neuro-observation unit. - Demonstrate competence in all technical procedures commonly employed in neuroanesthesia practice, including airway management (basic and advanced), cardiovascular resuscitation, neuro-resuscitation, and invasive monitoring (arterial line, central line, and lumbar puncture drain placement). -Develop and implement a rational anesthetic management plan for each of the following neurosurgical procedures: o Craniotomy for mass lesions (tumor, abscess, hematoma) o Cerebrovascular procedures (aneurysm, AVM, carotid vascular disease) o CSF shunting procedures o Transsphenoidal surgery o Stereotactic procedures o Awake craniotomy o Neuroradiological procedures (embolization, thrombolytic therapy, and MRI) o Spine surgery	81 - 82	1,2		*	*	*
		A3.13 Cardiac Anesthesia	Senior	A3.13.1	Demonstrate knowledge of the significance of temperature management in the intraoperative period, including hypothermic techniques and the importance of normothermia during beating heart procedures.	85	1		*		*
				A3.13.2	Provide a management plan for a cardiac surgical patient.	85	1		*		*
				A3.13.3	Perform arterial and central venous cannulation (with ultrasound), peripheral venous cannulation, and pulmonary artery catheterization; interpret CVP and data from pulmonary artery catheters (e.g., PAP, PCWP, cardiac output) and know it indications, complications, and management; and know basics of introductory TEE, including techniques of probe insertion and several basic views and its implications and application to critical care patients.	84	2			*	
				A3.13.4	Utilize appropriate intraoperative blood work for the management of patient care, and learn of new monitoring devices (e.g., noninvasive cardiac output, bispectral index) and their potential applications during cardiac surgery.	85	1		*		*
				A3.13.5	Management of patients with complications of: 1. Coronary artery disease, acute myocardial ischemia and infarction, and complications of myocardial infarction and thrombolytic therapy 2. Valvular heart disease and valve replacement or repair 3. Aortic dissection and thoracic and thoracoabdominal aortic aneurysm 4. Shock and the use of volume resuscitation, venodilators /constrictors, inotropes, and lusitropes 5. Emergencies requiring ACLS 6. Cardiac tamponade and constrictive pericarditis 7. Dilated, restrictive, and obstructive cardiomyopathy, congestive heart failure, and diastolic dysfunction 8. Aberrant conduction, dysrhythmia, sudden acute and sub-acute ventricular and supraventricular arrhythmia 9. Pacemakers and the indications for and applications of the various modes of temporary pacing 10. Pneumohemothorax 11. Pulmonary edema and pneumonia 12. COPD, asthma, and sleep apnea in ventilated patients	85-86	1		*		*
					13. Heparin-induced thrombocytopenia and heparin resistance 14. Neurologic risk stratification during cardiopulmonary bypass procedures 15. Renal failure and its management 16. Diabetes and endocrine control, and the implications of hyperglycemia				*		*
				A3.13.6	Manage medical bleeding.	85	1		*		*
					Correct common metabolic and electrolyte disturbances in the intraoperative period.	85	1		*		*
				A3.13.7	Apply the basic principles of cardiac support devices including intra-aortic balloon pumps and ECMO.	85	2			*	
		A3.14 Critical Care Echocardiography	Senior	A3.14.1	Demonstrate an ability to answer focus questions through focused or goal-directed examination, which are usually related to: a) Left ventricular size and function b) Right ventricular size and function c) Pericardial space for fluid and tamponade d) Fluid status and responsiveness	89	1		*		*
		A4.15 Pulmonary Medicine	Senior	A3.15.1	Demonstrate competence in performing common procedures used in a general medicine service, including paracentesis, thoracentesis, and lumbar puncture.	92	2			*	
				A3.15.2	Construct a comprehensive treatment plan and assess patient response to therapy.	93	1		*		*
		A3.16 Nephrology	Senior	A3.16.1	Construct a comprehensive treatment plan and assess patient response to therapy.	95	1		*		*
		A4.17 Hematology and Oncology	Senior	A3.17.1	Exhibit understanding of the treatment of common complications of cancer, chemotherapy, and radiation therapy, including but not limited to tumor lysis syndrome, leukostasis, cord compression, neutropenic fever, and pain crises.	97	1		*		
				A3.117	Construct a comprehensive treatment plan and assess patient response to therapy.	97	1		*		*
		A3.18 Infectious Disease	Senior	A3.18.1	Construct a comprehensive treatment plan and assess patient response to therapy.	97	1		*		*
		A3.19 Gastroenterology	Senior	A3.19.1	Construct a comprehensive treatment plan and assess patient response to therapy.	97	1		*		*
	A4 Health promotion & Illness prevention		All	A4.1	Educate patients and families about and promote the importance of long-term healthy behaviors and preventive health care (e.g., smoking cessation, screening tests, vaccinations, exercise, nutrition).	41, 52	2			*	
			Junior	A4.2	Demonstrate an understanding of injury prevention.	60, 69, 71, 73	1	*	*		*
				A4.3	Promote and participate in patient safety efforts.	60, 69, 71, 73	2			*	

				A4.4	Understands the role of screening programs for general surgical disease (e.g., breast or colon cancer)	60	1	*	*		*
				A4.5	Recognize individual and systemic issues that have an impact on anesthetic care and safety of adult patients.	64	1	*	*		*
				A4.6	Expedite patient transfer from the emergency department.	67	2			*	
				A4.7	Identify and engage in opportunities for patient counseling and education regarding patients disease.	67	1,2	*	*	*	*
				A4.8	Demonstrate the ability to council patients and families in the setting of acute trauma.	68	2			*	
			Senior	A4.9	Educate patients, families, and other members of the health care team about patients pain conditions.	80	2			*	
				A4.10	Demonstrate knowledge of risk reduction strategies, including use of ultrasound and sterile technique for invasive lines.	86	1		*		*
				A4.11	Demonstrate knowledge of current indications and recommendations for SBE prophylaxis.	85	1		*		*
				A4.12	Educate and counsel patients and their families with regard to the factors that influence their health	88	1,2		*	*	*
				A4.13	Promote and understand radiation safety.	88	1,2		*	*	*
				A4.14	Recognize the risk factors for a variety of common cardiac critical illnesses and counsel families and colleagues in such a way as to minimize said risk.	90	1		*		*
				A4.15	Counsel patients concerning their diagnosis, planned diagnostic testing, and recommended therapies.	93	2			*	
				A4.16	Educate patients and families about and promote the importance of long-term healthy behaviors and preventive health care (e.g., smoking cessation, screening tests, vaccinations, exercise, and nutrition).	94, 96, 99, 101, 102, 103	2			*	
				A4.17	Counsel patients concerning their diagnosis, planned diagnostic testing, and recommended therapies.	95, 97, 100, 102	2			*	
				A4.18	Use preventive and therapeutic interventions effectively.	104	2			*	
				A4.19	Respond to individual patient health needs and issues as part of patient care.	105	2			*	
B Communicator		B1 Critical Care	All	B1.1	Obtain and document informed consent from patients and explain the risks, benefits, and rationale for the options discussed.	40, 51	2			*	
				B1.2	Counsel patients concerning their diagnosis, planned diagnostic testing, and recommended therapies.	40, 51	2			*	
				B1.3	Communicate effectively using a patient-centered approach and demonstrate empathy and respect in all patient encounters.	40, 51	2			*	
				B1.4	Communicate well with patients, families, and admitting services about daily patient progress.	40, 51	2			*	
				B1.5	Communicate well with an ICU team (nurses, other Residents, or attending staff) about patient care issues.	40	2			*	
				B1.6	Recognize and respond appropriately to patients non-verbal communication behaviors.	40, 51	1,2	*	*	*	*
				B1.7	Demonstrate counseling skills and decision aids to help patients or patients' decision makers make informed choices or give informed consent.	40, 51	2			*	
				B1.8	Demonstrate effective skills in listening and speaking with patients, families, and other members of the health care team.	40, 51	2			*	
				B1.9	Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending physician.	40, 51	2			*	
				B1.10	Disclose adverse events and procedural complications to patients and their families accurately and appropriately.	40, 51	2			*	
				B1.11	Participate in end-of-life discussions with the ICU team and family members.	40, 52	2			*	
				B1.12	Demonstrate competency in documentation including histories and physical, progress, and discharge notes.	40, 51	2			*	
				B1.13	Obtain and document informed consent from patients and explain the risks, benefits, and rationale for the options discussed.	40, 51	2			*	
				B1.14	Document clinical encounters accurately and in a timely manner in compliance with the legal and regulatory requirements.	40, 52	2			*	
				B1.15	Use information technology appropriately.	41, 52	2			*	
				B1.16	Effectively use technology to manage information, support patient care decisions, and promote both patient and physician education.	42	2			*	
				B1.17	Demonstrate integrity, honesty, and openness in discussion of therapeutic options with patients and respect for patient's preferences and cultural differences.	42, 53	3			*	
				B1.18	Recognize the importance of patient primacy, privacy, and autonomy; informed consent; and equitable respect and care to all.	42, 53	1	*	*	*	*
				B1.19	Optimize the physical environment for patient comfort, dignity, privacy, and safety.	40, 51	2			*	
		B2 Coronary Care Unit	Junior	B2.1	Be aware of the importance of clear and effective communication with patients as well as the involved family members and other members of the health care team.	55	1	*	*		*
				B2.2	Embrace the attitudes conducive to effective relationships between physicians and patients/families; physicians and other physicians; and physicians and allied health care workers.	56	2			*	
		B3 Critical Care	All	B3.1	Share information with patients and appropriate others in a manner that respects patients' privacy and confidentiality.	40, 52	2			*	
			Senior	B3.2	Perform an appropriately timed consultation and present well-documented assessments and recommendations in written, electronic, or oral formats.	51	2			*	
		B4 Coronary Care Unit	Junior	B4.1	Document the basic essential components of all clinical encounters clearly utilizing progress, procedural, and consultation notes. The synthesis and management plans should be recorded at a level that accords with the level of training.	55	2			*	
				B4.2	Work to develop effective and efficient patient management strategies by: Using information technology appropriately	55	2			*	
		B5 Cardiac Surgery ICU	Junior	B5.1	Obtain an accurate and relevant history and perform a detailed physical examination using effective listening skills.	57	2			*	
				B5.2	Explain critical care patients status and expected progress to their families.	57	2			*	
				B5.3	Communicate patient information to and outline a management plan for the attending physician in a professional and intelligent manner.	58	2			*	
				B5.4	Communicate management plan effectively in routine and emergency situations	58	2			*	
				B5.5	Discuss the clinical parameters of possible surgical re-exploration in a calm and intelligent manner	58	2			*	
				B5.6	Effectively consult with other physicians and health care professionals.	58	2			*	
				B5.7	Continue to develop respect and appreciation for the importance of communication with allied health care workers and referring physicians in the care of the patients	58	3			*	
				B5.8	Obtain an accurate and relevant history and perform a detailed physical examination using effective listening skills.	57	2			*	
		B6 General Surgery ICU	Junior	B6.1	Communicate effectively with patients and families.	60	2			*	
				B6.2	Give formal presentations during rounds and lead discussions on patients surgical condition.	60	2			*	
				B6.3	Communicate treatment plans to all members of the team	60	2			*	
				B6.4	Keep accurate and efficient records.	60	2			*	
				B6.5	Complete surgical notes and dictations appropriately and in a timely fashion.	60	2			*	
				B6.6	Order tests and procedures and book operating rooms (ORs) appropriately and efficiently.	60	2			*	

		B6.7	Display teamwork and respect for all members of the health care team.	61	2			*	
		B6.8	Maintain patient privacy and dignity and act with personal integrity.	61	2			*	
B7 Core Anesthesia	Junior	B7.1	Establish a therapeutic relationship with patients and family members as appropriate, including: a) Encouraging patient participation in decision-making in consultative, elective, and emergency situations as well as in more challenging situations such as patient anger or confusion, language or ethno-cultural differences, or extremes of age b) Listening to patients, answering their questions, and attempting to alleviate their anxiety c) Demonstrating respect and empathy in relationships with patients	63	2			*	
		B7.2	Gather sufficient information from the patient, family members, and medical personnel to identify all issues that will have implications for perioperative management a) The medical and surgical status of the patient b) Patient expectations, beliefs, and concerns (in addition to medical problem information), while also considering the influence of age, gender, and background (ethno-cultural, spiritual, and socio-economic) on the medical problem.	63	2			*	
		B7.3	Impart sufficient information to patients and appropriate family members or delegates to allow a complete understanding of the implications of the planned procedure, alternatives, risks, and benefits	63	2			*	
		B7.4	Be able to break bad news to patients and family members.	63	2			*	
		B7.5	Obtain complete informed consent for anesthetic care.	63	2			*	
		B7.6	Communicate effectively with other team members	64	2			*	
		B7.7	Communicate identified concerns and risks to patients, other health care professionals, and administration as necessary.	64	2			*	
		B7.8	Obtain a focused medical history from the patients or their families.	66	2			*	
		B7.9	Gather sufficient information from the patient, family members, and medical personnel to identify all issues that will have implications for perioperative management a) The medical and surgical status of the patient b) Patient expectations, beliefs, and concerns (in addition to medical problem information), while also considering the influence of age, gender, and background (ethno-cultural, spiritual, and socio-economic) on the medical problem.	63	2			*	
		B7.10	Record appropriate information for the anesthetics and consultations provided.	64	2			*	
B8 Emergency Medicine	Junior	B8.1	Discuss a wide variety of medical conditions and their treatments with patients and their families in a language that they can understand	66	2			*	
		B8.2	Establish and maintain a therapeutic relationship with patients, their families, and the medical team while fostering an environment of understanding, trust, empathy, and confidentiality.	66	2			*	
		B8.3	Initiate appropriate telephone consultations with other specialists at local and remote locations	66	2			*	
		B8.4	Keep thorough and accurate written medical records.	66	2			*	
		B8.5	Treat all patients with dignity and respect.	67	3			*	
B9 Trauma	Junior	B9.1	Demonstrate the ability to council patients and families in the setting of acute trauma.	68	2			*	
		B9.2	Communicate effectively with a multidisciplinary team involved in patient care.	68	2			*	
		B9.3	Ensure appropriate patient disposition, referral, and follow-up.	68	2			*	
		B9.4	Keep thorough and accurate written medical records.	68	2			*	
		B9.5	Display teamwork and respect for all members of the health care team.	69	2			*	
		B9.6	Maintain patient privacy and dignity and act with personal integrity.	69	2			*	
B10 Critical Care	Senior	B10.1	Perform an appropriately timed consultation and present well-documented assessments and recommendations in written, electronic, or oral formats.	51	2			*	
		B10.2	Use counseling skills to effectively communicate end-of-life care issues to patients or patients' families.	52	2			*	
B11 Thoracic Surgery	Senior	B11.1	Communicate effectively with patients and families	70	2			*	
		B11.2	Give formal presentations at rounds and lead discussions on patients surgical condition.	70	2			*	
		B11.3	Communicate treatment plans to all members of the team	70	2			*	
		B11.4	Elicit relevant information and perspectives from patients, families, and the health care team.	70	2			*	
		B11.5	Keep accurate and efficient records.	70	2			*	
		B11.6	Obtain informed consent.	70	2			*	
		B11.7	Display teamwork and respect for all members of the health care team.	71	2			*	
		B11.8	Maintain patient privacy and dignity and act with personal integrity.	71	2			*	
		B11.9	Complete surgical notes and dictations appropriately and in a timely fashion	71	2			*	
		B11.10	Employ information technology appropriately for patient care.	71	2			*	
B12 Vascular Surgery	Senior	B12.1	Elicit relevant information and perspectives from patients, families, and the health care team	72	2			*	
		B12.2	Establish rapport, trust, and a therapeutic relationship with patients and families.	72	2			*	
		B12.3	Communicate effectively with patients and families.	72	2			*	
		B12.4	Give formal presentations at rounds and lead discussions on patients surgical condition.	72	2			*	
		B12.5	Communicate treatment plans to all members of the team	72	2			*	
		B12.6	Keep accurate and efficient records.	72	2			*	
		B12.7	Obtain informed consent.	72	2			*	
		B12.8	Complete surgical notes and dictations appropriately and in a timely fashion.	73	2			*	
		B12.9	Employ information technology appropriately for patient care.	73	2			*	
		B12.10	Display teamwork and respect for all members of the health care team.	73	2			*	
		B12.11	Maintain patient privacy and dignity and act with personal integrity.	73	2			*	
B13 Regional Anesthesia	Senior	B13.1	Residents must demonstrate effective communication skills in dealing with patient problems.	77	2			*	
		B13.2	Residents must demonstrate respect and compassion, be able to communicate that patients' problems have been understood, and describe alternatives, side effects, and complications of various anesthetic drugs to enable patients to make an informed decision regarding their choices of anesthesia	77	2			*	
		B13.3	For patients' families, the Resident must be able to accurately provide information on each patient's condition and the treatment prognosis. The Resident must demonstrate an ability to make decisions when the family must be relied upon for substitute decision-making when patients are incapable of deciding for themselves.	77	2			*	
		B13.4	Demonstrate the ability to perform the following specific objectives for all regional anesthetic techniques. - Discussion of advantages, disadvantages, and physiological implications of RA with patient	76	2			*	
		B13.5	Demonstrate an ability to provide appropriate information to patients or their families so that they can make an informed decision (and obtain consent) regarding RA as: 1. A primary anesthetic technique. 2. A component of their intraoperative and postoperative analgesia. 3. A means of dealing with adverse outcomes.	78	2			*	

B14 Pain Medicine	Senior	B14.1	Establish a professional relationship with patients and families.	79	2			*	
		B14.2	Obtain and collate a relevant history from patients and families	79	2			*	
		B14.3	Demonstrate appropriate oral and written communication skills in inpatient, outpatient, and OR environments	79	2			*	
		B14.4	Inform patients of the options available, the associated risks and benefits of those options, and the expectations and progress in a manner that is understandable to the patient.	80	2			*	
		B14.5	Listen effectively.	79	2			*	
		B14.6	Demonstrate appropriate oral and written communication skills in inpatient, outpatient, and OR environments	79	2			*	
B15 Neuroanesthesia	Senior	B15.1	Establish a therapeutic relationship with patients and their families in the limited time available.	82	2			*	
		B15.2	Obtain and collate a relevant history from patients and families	82	2			*	
		B15.3	Communicate effectively with medical/surgical colleagues, nurses, and paramedical personnel regarding the anesthetic management of the patient.	82	2			*	
		B15.4	Demonstrate empathy, consideration, and compassion in communicating with patients and families.	82	2			*	
		B15.5	Demonstrate appropriate written communication skills through accurate, legible, and complete documentation of the anesthetic record, patient chart, and notes during consultation.	82	2			*	
B16 Cardiac Anesthesia	Senior	B16.1	Demonstrate effective communication with patients and families (e.g., description of procedures, informed consent, anesthetic options, and risks).	86	2			*	
		B16.2	Demonstrate effective communication with the OR (e.g., cardiac surgeons, nurses, perfusionists) and postoperative teams, particularly during the initiation, conduct, and removal of cardiopulmonary bypass.	86	2			*	
		B16.3	Provide clear and concise written consultation and anesthetic records	86	2			*	
		B16.4	Demonstrate appropriate interactions with colleagues and staff.	87	2			*	
B17 Critical Care Radiology	Senior	B17.1	Interact efficiently with other health care professionals and discuss the indications and results of various radiological tests.	88	2			*	
		B17.2	Communicate important positive findings to the referring physician	88	2			*	
		B17.3	Use technology to optimize patient care.	88	2			*	
		B17.4	Obtain important clinical information related to radiological studies.	88	2			*	
B18 Critical Care Ecography	Senior	B18.1	Establish effective communication with patients and their families and obtain appropriate information relevant to the performance of a planned echocardiographic study.	90	2			*	
		B18.2	Establish effective communication with medical and non-medical colleagues.	90	2			*	
		B18.3	Learn to communicate effectively and efficiently with colleagues both verbally and through written records (e.g., medical records, discharge summaries, consultation reports, family conferences).	90	2			*	
B19 Critical Care Echocardiography	Senior	B19.1	Refer problem issues or problem cases appropriately.	90	2			*	
		B19.2	Learn to communicate effectively and efficiently with colleagues both verbally and through written records (e.g., medical records, discharge summaries, consultation reports, family conferences).	90	2			*	
		B19.3	Learn to identify and minimize the stresses placed upon the patients, their relatives, and hospital staff	90	2			*	
B20 Research	Senior	B20.1	Recognize the need for effective communication with patients and their families as it pertains to research.	91	2			*	
		B20.2	Recognize the need for effective communication with medical and non-medical colleagues.	91	2			*	
B21 Pulmonary Medicine	Senior	B21.1	Exercise empathy in all patient encounters.	93	2			*	
		B21.2	Demonstrate effective skills in listening and speaking with patients, families, and other members of the health care team	93	2			*	
		B21.3	Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending physician.	93	2			*	
		B21.4	Counsel patients, families, and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate.	94	2			*	
		B21.5	Demonstrate competency in documentation including histories and physical, progress, and discharge notes.	94	2			*	
		B21.6	Respect patients, patients families, staff, and colleagues.	94	2			*	
B22 Nephrology	Senior	B22.1	Exercise empathy in all patient encounters.	96	2			*	
		B22.2	Demonstrate effective skills of listening and speaking with patients, families, and other members of the health care team.	96	2			*	
		B22.3	Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending physician.	96	2			*	
		B22.4	Counsel patients, families, and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate.	96	2			*	
		B22.5	Respect patients, patients families, staff, and colleagues.	96	2			*	
		B22.6	Demonstrate competency in documentation including histories and physical, progress, and discharge notes.	96	2			*	
B23 Hematology and Oncology	Senior	B23.1	Demonstrate effective skills in listening and speaking with patients, families, and other members of the health care team	98	2			*	
		B23.2	Approach patients with an empathetic and understandable manner.	98	2			*	
		B23.3	Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending physician.	98	2			*	
		B23.4	Counsel patients, families, and colleagues regarding the side effects and appropriate use of specific medications, providing written documentation when appropriate.	98	2			*	
		B23.5	Exercise empathy in all patient encounters.	98	2			*	
		B23.6	Compose clear consultation reports and interval notes/letters in a timely fashion, including a precise diagnosis whenever possible, differential diagnoses when appropriate, and recommendations for follow-up or additional studies.	98	2			*	
		B23.7	Demonstrate competency in documentation including histories and physical, progress, and discharge notes.	98	2			*	
		B23.8	Respect patients, patients families, staff, and colleagues.	98	2			*	
B24 Infectious Disease	Senior	B24.1	Approach patients with an empathetic and understandable manner.	101	2			*	
		B24.2	Demonstrate effective skills of listening and speaking with patients, families, and other members of the health care team.	101	2			*	
		B24.3	Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.	101	2			*	
		B24.4	Exercise empathy in all patient encounters.	101	2			*	
		B24.5	Counsel patients, families, and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate	101	2			*	
		B24.6	Demonstrate respect for patients and their families, staff, and colleagues.	100	2			*	
		B24.7	Compose clear consultation reports and interval notes/letters in a timely manner, including a precise diagnosis whenever possible and a differential diagnosis when appropriate, and recommend follow-ups or additional studies.	101	2			*	
		B24.8	Demonstrate competency in documentation including histories and physical, progress, and discharge notes.	101	2			*	
B25 Gastroenterology	Senior	B25.1	Demonstrate effective skills in listening and speaking with patients, families, and other members of the health care team	103	2			*	
		B25.2	Approach patients with an empathetic and understandable manner.	103	2			*	

			B25.3	Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending physician.	103	2			*	
			B25.4	Counsel patients, families, and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate.	103	2			*	
			B25.5	Compose clear consultation reports and interval notes/letters in a timely manner, including a precise diagnosis whenever possible and a differential diagnosis when appropriate, and recommend follow-ups or additional studies.	103	2			*	
			B25.6	Demonstrate respect for patients and their families, staff, and colleagues	103	2			*	
		B26 Elective Rotation	Senior	B26.1	Accurately elicit and synthesize relevant information and the perspectives of patients, patients' families, colleagues, and other professionals.	104	2			*	
				B26.2	Convey relevant information and explanations accurately to patients, patients' families, colleagues, and other professionals.	104	2			*	
				B26.3	Develop rapport, trust, and ethical therapeutic relationships with patients and families.	104	2			*	
				B26.4	Convey effective oral and written information about a medical encounter.	104	2			*	
				B26.5	Convey effective oral and written information about a medical encounter.	104	2			*	
C Collaborator		C1 Critical Care	All	C1.1	Participate in effective teamwork and demonstrate a respectful attitude toward other colleagues and staff members of inter- and intraprofessional teams.	41, 52	2				
				C1.2	Demonstrate a teamwork attitude and promote collaborative learning.	42 + 53	2				
				C1.3	Promote a teamwork culture that recognizes, supports, and responds effectively to colleagues in need during patient care.	42 + 53	2				
				C1.4	Establish the roles of the patient and all team members for follow-up investigations of treatment response and consultations and ensure that the agreed-upon follow-up takes place; this is especially necessary after a change of service such as on-call or transfer of the patient within the hospital or to an outside facility.	40, 51	2				
				C1.5	Demonstrate effective and safe handover during sign-out or transition of responsibility of care, either within the institution or to a different setting or stage of care.	41, 52	2			*	
				C1.6	Demonstrate effective collaboration with other health care providers	41, 52	2				
				C1.7	Work efficiently and effectively within a health care system.	41, 52	2				
				C1.8	Demonstrate an understanding of the integrative nature of disease in critically ill patients and the interdisciplinary approach to the management of such patients.	39, 50	1	*	*		*
		C2 Coronary Care Unit	Junior	C2.1	Embrace the attitudes conducive to effective relationships between physicians and patients/families; physicians and other physicians; and physicians and allied health care workers.	56	3				
				C2.2	Refer problem issues or problem cases appropriately.	55	1	*	*		*
				C2.3	Recognize and integrate the roles of other health care providers into patient management.	55	1	*	*		*
				C2.4	Effectively consult with other physicians and health care professionals.	55	2				
				C2.5	Work effectively as part of a multidisciplinary team.	55	2				
				C2.6	Continue to develop respect and appreciation for the importance of communication with allied health care workers and referring physicians in patient care.	55	3				
				C2.7	Work to develop effective and efficient patient management strategies by: Contributing to unit activities and encouraging others to do so by instilling enthusiasm amongst workplace colleagues.	55	3				
				C2.8	Embrace the attitudes conducive to effective relationships between physicians and patients/families; physicians and other physicians; and physicians and allied health care workers.	56	3				
				C2.9	Recognize the role played by physicians in the care of patients with cardiac disease in the health care system.	56	1				
		C3 Cardiac Surgery ICU	Junior	C3.1	Recognize the impact of a collaborative care plan on facilitating patient care.	58	1	*	*		*
				C3.2	Communicate patient information to and outline a management plan for the attending physician in a professional and intelligent manner.	58	2			*	
				C3.3	Recognize the most common complications after cardiac surgery and facilitate interactions with cardiac surgeons and ICU staff.	58	1,2	*	*	*	*
				C3.4	Participate in interdisciplinary rounds and other activities involving other health care professionals.	60	2				
				C3.5	Display teamwork and respect for all members of the health care team.	61	2				
				C3.6	Recognize and integrate the roles of other health care providers into patient management.	58	1,2	*	*	*	*
				C3.7	Work effectively as part of a multidisciplinary team	58	2				
				C3.8	Continue to develop respect and appreciation for the importance of communication with allied health care workers and referring physicians in the care of the patients	58	3				
		C4 General Surgery	Junior	C4.1	Communicate treatment plans to all members of the team	60	2			*	
				C4.2	Recognize the roles and interact effectively with other physicians and health care workers.	60	1,2	*	*	*	*
				C4.3	Consult effectively with other physicians and health care professionals	60	2	*	*	*	*
		C5 Core Anesthesia	Junior	C5.1	Function well in the clinical environment using the full abilities of all team members.	63	3				
				C5.2	Coordinate care of adult patients with other members of the OR team, post anesthesia care unit, ICU staff, and other physicians.	63	2				
				C5.3	Manage urgent and crisis situations such as cardiac arrest, trauma, anaphylaxis, and malignant hyperthermia as a team member or team leader.	64	2			*	
				C5.4	Resolve conflicts or provide feedback where appropriate.	64	2			*	
				C5.5	Consult other physicians and allied health professionals in order to provide optimal perioperative care.	64	2			*	
		C6 Emergency Medicine	Junior	C6.1	Establish and maintain a therapeutic relationship with patients, their families, and the medical team while fostering an environment of understanding, trust, empathy, and confidentiality.	66	2				
				C6.2	Consult judiciously and effectively.	67	2				
				C6.3	Accurately describe a patient's clinical condition to consultants using appropriate medical terminology.	66	2			*	
				C6.4	Initiate appropriate telephone consultations with other specialists at local and remote locations	66	2			*	
				C6.5	Work collaboratively with allied healthcare professionals in the emergency room.	66	2			*	
				C6.6	Collaborate with other health care professionals to ensure smooth transition of patient care within or outside the hospital.	67	2			*	
				C6.7	Work effectively as a member of a team.	67	2				
				C6.8	Demonstrate integrity in all interactions with colleagues.	67	3				
		C7 Trauma	Junior	C7.1	Develop a care plan for patients they have assessed, including collaboration with the members of the interdisciplinary team.	68	1	*	*		*
				C7.2	Consult judiciously and effectively	68	2			*	
				C7.3	Work effectively as a member of a team.	69	3				
				C7.4	Communicate effectively with a multidisciplinary team involved in patient care.	68	2				
				C7.5	Work collaboratively with a multidisciplinary team caring for trauma patients.	68	2				
				C7.6	Collaborate with other healthcare professionals to ensure smooth transition of patient care within or outside the hospital.	68	2				
		C8 Thoracic Surgery	Senior	C8.1	Recognize the roles and interact effectively with other physicians and health care workers.	70	1	*	*		*
				C8.2	Participate in interdisciplinary rounds and other activities involving other health care professionals.	70	2				

				C8.3	Give formal presentations at rounds and lead discussions on patients surgical condition.	70	2				
				C8.4	Communicate treatment plans to all members of the team	70	2			*	
				C8.5	Consult effectively with other physicians and health care professionals	70	2			*	
				C8.6	Demonstrate a team approach to health care.	70	2				
				C8.7	Work with others to assess, plan, provide, and integrate care of the surgical patient.	70	2			*	
		C9 Vascular Surgery	Senior	C9.1	Participate in interdisciplinary rounds and other activities involving other health care professionals.	72	2				
				C9.2	Demonstrate a team approach to health care	72	2				
				C9.3	Give formal presentations at rounds and lead discussions on patients surgical condition.	72	2				
				C9.4	Communicate treatment plans to all members of the team	72	2			*	
				C9.5	Recognize the roles of and interact effectively with other physicians and health care workers.	72	1,2	*	*	*	*
				C9.6	Consult effectively with other physicians and health care professionals	72	2			*	
				C9.7	Work with others to assess, plan, provide, and integrate care of surgical patients.	72	2			*	
		C10 Regional Anesthesia	Senior	C10.1	Adopt a professional attitude and competent manner when acting as a consultant as well as be able to consult physicians of other disciplines when appropriate.	77	3				
				C10.2	Involve the attending anesthesiologist and surgeon in all decisions pertaining to a patient's postoperative analgesia management plans.	77	3				
		C11 Pain Medicine	Senior	C11.1	Demonstrate an understanding of the respective abilities of all team members	80	1				
				C11.2	Act as a team player.	80	3				
				C11.3	Consult effectively with other physicians and health care professionals.	80	2				
		C12 Neuroanesthesia	Senior	C12.1	Demonstrate the ability to function in the clinical environment using the full abilities of all team members (surgical, nursing, ICU, etc.).	82	3				
				C12.2	Develop an anesthetic plan for their patients in consultation and in concert with surgery, nursing, and ICU staff for more complicated neurosurgical patients.	82	2				
				C12.3	Understand and value the skills of other specialists and health care professionals.	82	1		*		*
				C12.4	Understand the limits of their knowledge and skills.	82	1		*		*
				C12.5	Be able to understand, accept, and respect the opinions of others on the neuro team.	82	3				
				C12.6	Communicate effectively with medical/surgical colleagues, nurses, and paramedical personnel regarding the anesthetic management of the patient.	82	2				
				C12.7	Function in the OR as a member of the neuro team and work in a positive, constructive manner, respecting the importance of the roles of all team members.	82	3				
		C13 Cardiac Anesthesia	Senior	C13.1	Recognize the need to utilize other specialists for the care and management of critical care patients.	86	1		*		*
				C13.2	Foster healthy team relationships.	86	3				
		C14 Critical Care Radiology	Senior	C14.1	Identify the necessities and benefits of consulting other physicians and health-care professionals	88	1		*		*
				C14.2	Interact efficiently with other health care professionals and discuss the indications and results of various radiological tests.	88	2				
				C14.3	Collaborate with health care providers to address patient needs and provide the most suitable radiological study	88	2				
				C14.4	Collaborate with radiology premedical staff to identify the optimal radiological study.	88	2				
		C15 Critical Care Echocardiography	Senior	C15.1	Work cooperatively with other health care professionals who are involved in the care of patients in the echocardiography laboratory.	90	2				
				C15.2	Work effectively as part of multidisciplinary team.	90	2				
				C15.3	Work collaboratively with paramedical staff.	90	2				
		C16 Research	Senior	C16.1	Delegate responsibilities in a fair and non-threatening manner.	91	2				
				C16.2	Effectively consult with other physicians and health care professionals.	91	2				
				C16.3	Work effectively as part of multidisciplinary team.	91	2				
				C16.4	Coordinate research with colleagues from different disciplines.	91	2				
		C17 Pulmonary Medicine	Senior	C17.1	Discuss how the health care system affects the management of inpatients with pulmonary diseases.	93	1		*		*
				C17.2	Demonstrate effective collaboration with other health care providers.	93	2				
		C18 Nephrology	Senior	C18.1	Discuss how the health care system affects the management of outpatients with renal disorders.	95	1		*		*
				C18.2	Demonstrate effective collaboration with other health care providers, including nursing.	95	2				
		C19 Hematology and Oncology	Senior	C19.1	Discuss how the health care system affects the management of outpatients with hematologic disorders.	98	1		*		*
				C19.2	Demonstrate effective collaboration with other health care providers, including nurses, counselors, and transfusion medicine specialists, in the care of patients with hematologic disorders.	98	2				
				C19.3	Demonstrate effective collaboration with other health care providers, including nursing staff, therapists, counselors, surgeons, and consultants in the care of patients with cancer.	98	2				
		C20 Infectious Disease	Senior	C20.1	Discuss how the health care system affects the management of outpatients with infectious diseases.	100	1		*		*
				C20.2	Demonstrate effective collaboration with other health care providers, including nurses, counselors, and Ministry of Health staff in the care of patients with infectious diseases	100					
		C21 Gastroenterology	Senior	C21.1	Discuss how the health care system affects the management of outpatients with GI diseases.	102	1		*		*
				C21.2	Demonstrate effective collaboration with other health care providers, including nutritionists and GI surgeons, in the care of patients with GI illness.	102	2				
		22 Elective Rotatio	Senior	C22.1	Develop a common understanding of the issues, problems, and plans with other professionals to develop a shared care plan.	104	2			*	
				C22.2	Seek appropriate consultation from other health professionals, recognizing the limits of their expertise.	104	2			*	
				C22.3	Participate effectively and appropriately in a multidisciplinary health care team.	105	2				
				C22.4	Work with other health professionals effectively to prevent, negotiate, and resolve interprofessional conflict.	105	2			*	
D Manager/ Leader		D1 Critical Care	All	D1.1	Establish the roles of the patient and all team members for follow-up investigations of treatment response and consultations and ensure that the agreed-upon follow-up takes place; this is especially necessary after a change of service such as on-call or transfer of the patient within the hospital or to an outside facility.	40, 51	1,2,3				
				D1.2	Recognize personal limitations and seek help when appropriate.	41, 52	3				
				D1.3	Utilize resources effectively to balance patient care, continuing education, and personal activities.	41, 52	2				
				D1.4	Demonstrate a knowledge of the physical requirements of the design of an ICU.	41, 52	1				
				D1.5	Set, assess, and prioritize individualized learning goals.	42, 53	1				
				D1.6	Recognize own knowledge gaps in clinical and other professional encounters.	42, 53	3				

		D1.7	Demonstrate self-responsibility, including personal care, to best serve others.	42, 53	3				
		D1.8	Recognize own differences, misunderstandings, and limitations with respect to others' point of views and opinions.	41, 52	3				
		D1.9	Efficiently carry out patient care tasks allocated during ward rounds.	41, 52	3				
		D1.10	Understand and judiciously allocate health care resources.	41, 52	1,3				
		D1.11	Apply the principles of quality improvement and quality assurance.	41, 53	1				
		D1.12	Demonstrate a commitment to maintaining and enhancing competence, quality improvement, and patient safety.	42 + 53		*	*		*
		D1.13	Demonstrate awareness of the impact of diagnostic and therapeutic recommendations on the health care system.	41, 52	1	*	*		*
		D1.14	Discuss how the health care system affects the management of inpatient ICU care.	41, 52	1				
		D1.15	Promote patient safety and a safe learning environment.	42, 53	3				
		D1.16	Analyze own clinical experience and employ a systematic methodology for improvement	42, 53	1				
	Junior	D1.17	Administrative and Management Principles and Techniques: 1. Recommendations for training physicians in Critical Care Medicine 2. Organization and staffing of critical care units 3. Standards for special care units and the Joint Commission on Accreditation of Health Care Organizations 4. Medical record keeping in special care units: a. Problem-oriented record approach b. System-structure record approach c. Manual versus mechanical (computerized) record generation d. Organization for physician, nursing, technical, and laboratory records within special care units 5. Prioritize the care of critically ill or injured patients 6. Collaborative practice principles 7. Emergency medical systems in pre-hospital care 8. Quality improvement principles and practices 9. Principles of triage and resource allocation	47	1,2,3				
		D1.18	N. Medical Economics: Essential principles of hospital financial reimbursement.		1				
D2 Coronary Care Unit	Junior	D2.1	Describe the duties of an intensive care specialist and CCU director.	55	1				
		D2.2	Utilize resources to effectively balance patient care and health care economics.	55	2				
		D2.3	Work to develop effective and efficient patient management strategies by: a) Avoiding duplication of services b) Involving other caregivers d) Knowing the physical requirements of a CCU design	55	3				
		D2.4	Act as a leader of a multidisciplinary team.	55	3				
		D2.5	Contributing to unit activities and encouraging others to do so by instilling enthusiasm amongst workplace colleagues	55	3				
D3 Cardiac Surgery ICU	Junior	D3.1	Utilize resources to effectively balance patient care and health care economics.	58	3				
		D3.2	Work to develop effective and efficient patient management strategies by: a) Collaborative care plans in resource optimization. b) Appropriate time management in coordinating discharge with scheduled surgical admissions and the impact of surgery cancellations due to limit resources on patients and families; use of the waiting list; and effective human resource allocations. c) Arranging the discharge of postoperative cardiac patients according to their needs (e.g., step-down or telemetry floors).	58	1,2				
		D3.3	Act as a leader of a multidisciplinary team.	58	3				
		D3.4	Understand the duties of the cardiac surgery intensive care specialist and unit director.	58	1				
D4 General Surgery ICU	Junior	D4.1	Utilize resources effectively to balance patient care, continuing educational needs and other activities.	60	3				
		D4.2	Multitask appropriately and effectively, prioritize tasks appropriately, and understand the principles of effective delegation.	60	1,2				
		D4.3	Delegate responsibilities appropriately or accept delegated tasks appropriately.	60	3				
		D4.4	Develop team leadership skills.	60	3				
		D4.5	Participate in interdisciplinary rounds and other activities involving other health care professionals.	60	2				
		D4.6	Employ information technology appropriately for patient care.	60	2				
D5 Core Anesthesia	Junior	D5.1	Participate in the assessment of patient care outcomes and practice including quality assurance. This will include: a. Maintaining a personal record of experience and outcomes b. Participating in any appropriate case reviews	64	2				
		D5.2	Demonstrate knowledge of the principles of quality assurance and be able to conduct morbidity and mortality reviews.	64	1				
		D5.3	Manage assigned room/slate in terms of maintaining the schedule or changing the schedule in response to emergencies, delays, additional cases, etc.	64	2				
		D5.4	Manage after-hours scheduling of cases including prioritization and adapting to changes.	64	2				
		D5.5	Use limited health resources appropriately, including: a. Time for patient assessment, OR equipment preparation, anesthesia induction and emergence, OR change over b. Expenses of anesthesia resources including cost-effective choices of drugs, techniques, equipment, and invasive monitoring	64	2				
		D5.6	Explain how an anesthetic department is structured and managed.	64	1				
		D5.7	Utilize personal and outside resources effectively to balance patient care, continuing education, practice, and personal activities.	64	3				
		D5.8	Manage urgent and crisis situations such as cardiac arrest, trauma, anaphylaxis, and malignant hyperthermia as a team member or team leader.	64	3				
		D5.9	Demonstrate knowledge of the management of operating rooms.	64	1				
		D5.10	Demonstrate knowledge of the contributors to anesthetic expenditures.	64	1				
		D5.11	Demonstrate knowledge of the national guidelines concerning anesthetic practice and equipment.	64	1	*	*		*
		D5.12	Schedule other Residents to various listed assignments when Senior Resident.	64	2				
		D5.13	Identify problems of physical and mental health in oneself and others including chemical dependence, stress, depression, and ways to deal with these problems.	65	1				
D6 Trauma	Junior	D6.1	Multitask appropriately and effectively, prioritize tasks appropriately, and understand the principles of effective delegation.	68	1,2				
		D6.2	Delegate responsibilities or accept delegated tasks appropriately.	68	2				
		D6.3	Develop team leadership skills.	68	3				
		D6.4	Utilize resources effectively to balance patient care and personal learning needs.	68	2				
D7 Emergency Medicine	Junior	D7.1	Make clinical decisions and judgments based on sound evidence for the benefit of individual patients and the population served.	67	1	*	*		*

		D7.2	Effectively manage the care of multiple patients while working in the emergency department.	67	1	*	*		*
		D7.3	Effectively triage patients and manage emergency department flow.	67	2				
D8 Thoracic Surgery	Senior	D8.1	Multitask appropriately and effectively, prioritize tasks appropriately, and understand the principles of effective delegation.	71	1,2				
		D8.2	Delegate responsibilities or accept delegated tasks appropriately.	71	2				
		D8.3	Develop team leadership skills.	71	3				
		D8.4	Utilize resources effectively to balance patient care, personal learning needs, and outside activities	71	2				
		D8.5	Order tests and procedures and book ORs appropriately and efficiently.	71	2				
D9 Vascular Surgery	Senior	D9.1	Multitask appropriately and effectively, prioritize tasks appropriately, and understand the principles of effective delegation.	73	1,2				
		D9.2	Delegate responsibilities or accept delegated tasks appropriately.	73	2				
		D9.3	Develop team leadership skills.	73	3				
		D9.4	Utilize resources effectively to balance patient care, personal learning needs, and outside activities	72	2				
		D9.5	Order tests and procedures and book ORs appropriately and efficiently.	73	2				
D10 Regional Anesthesia	Junior	D10.1	Contraindication and Complications: A competent anesthetist should know about relative and absolute contraindications. a) Anesthesiologists should understand the guidelines for RA for patients with anticoagulation, and be able to interact with surgeons and administrators to create policies governing the interaction of anticoagulation and anesthetic/analgesic managementment	76	1,2,3				
	Senior	D10.2	Demonstrate responsibility in providing consultations and interventions in a timely manner.	77	3			*	
		D10.3	Be aware of the monitoring requirements of various regional techniques according to the standard guidelines.	77	1		*		*
		D10.4	Be aware of the cost of various treatment modalities and the necessity of allocating resources appropriately.	77	1		*		*
		D10.5	Be aware of the value of quality assurance and morbidity and mortality review.	77	1		*		*
D11 Pain Medicine	Senior	D11.1	Demonstrate knowledge of quality assurance to outcomes in a chronic pain clinic.	80	1		*		*
		D11.2	Demonstrate effective time management skills	80	3			*	
		D11.3	Demonstrate understanding of: a) The structure of the pain medicine service and how it fits in the administrative structure of the institution. b) Discuss the advantages and disadvantages of alternative models. c) Explain the costs incurred by pain management strategies.	80	1				
		D11.4	Utilize information technology to optimize patient care and life-long learning.	80	2,3				
D12 Neuroanesthesia	Senior	D12.1	Demonstrate the ability to manage their operating room	82	3				
		D12.2	Prepare for anticipated complications.	82	1		*		*
		D12.3	Adopt a leadership role in the postoperative care of their patients by anticipating and arranging for post-anesthesia unit, ICU, or neuro-observation unit care.	83	3				
		D12.4	Ensuring that the necessary equipment, monitoring, and medications are available for each case.	82	2				
		D12.5	Conduct all these activities in an effective, efficient, and timely manner in order to avoid OR delays	82	3				
		D12.6	Utilize personal resources effectively in order to balance patient care, continuing education, and personal activities.	83	2				
		D12.7	Utilize information technology to optimize patient care and lifelong learning.	83	2				
D13 Cardiac Anesthesia	Senior	D13.1	Manage OR time by efficiently conducting anesthetic, continuing education, and personal activities.	86	2				
		D13.2	Make effective use of health care resources.	86	3				
D14 Critical Care Radiology	Senior	D14.1	Use health care resources effectively.	88	3				
		D14.2	Work effectively and efficiently.	88	3				
		D14.3	Understand the dynamics and work flow of the radiology department.	88	1				
D15 Critical Care Echocardiography	Senior	D15.1	Triage multiple requests for echocardiographic studies.	90	1		*		*
		D15.2	Disinfect echocardiography equipment and demonstrate knowledge of the proper care/handling of this equipment.	90	2				
D16 Research	Senior	D16.1	Act as a leader of a multidisciplinary team.	91	3				
		D16.2	Instill enthusiasm amongst colleagues in the workplace	91	3				
		D16.3	Demonstrate knowledge of how to be a competent critical care physician.	92	1				
		D16.4	Utilize resources to effectively balance patient care and health care economics.	91	2,3				
D17 Pulmonary Medicine	Senior	D17.1	Demonstrate an awareness of the impact of diagnostic and therapeutic recommendations on the health care system, cost of a procedure, insurance coverage, and resources utilized.	93	1		*		*
		D17.2	Learn to efficiently carry out patient care tasks allocated during ward rounds.	94	3				
		D17.3	Recognize personal limitations and seek help when appropriate	94	3				
		D17.4	Work efficiently and effectively within a health care system.	94	3				
		D17.5	Determine cost-effectiveness of alternative proposed interventions.	93	1		*		*
		D17.6	Design cost-effective plans based on knowledge of best practices.	93	1		*		*
		D17.7	Utilize personal resources effectively to balance patient care, continuing education, and personal activities.	94	1		*		*
		D17.8	Understand and judiciously allocate health care resources.	94	1		*		*
		D17.9	Apply the principles of quality improvement and quality assurance.	94	1		*		*
D18 Nephrology	Senior	D18.1	Demonstrate an awareness of the impact of diagnostic and therapeutic recommendations on the health care system, cost of a procedure, insurance coverage, and resources utilized.	95	1		*		*
		D18.2	Recognize personal limitations and seek help when appropriate	96	3				
		D18.3	Work efficiently and effectively within a health care system.	96	3				
		D18.4	Efficiently carry out patient care tasks allocated during ward rounds.	96	3				
D19 Hematology and Oncology	Senior	D19.1	Determine the cost-effectiveness of alternative proposed interventions.	98	1		*		*
		D19.2	Design cost-effective plans based on knowledge of best practices.	98	1		*		*
		D19.3	Utilize personal resources effectively to balance patient care, continuing education, and personal activities.	99	3				
		D19.4	Understand and judiciously allocate health care resources.	99	1		*		*
		D19.5	Demonstrate an awareness of the impact of diagnostic and therapeutic recommendations on the health care system, cost of a procedure, insurance coverage, and resources utilized.	98	1		*		*
		D19.6	Efficiently carry out patient care tasks allocated during ward rounds.	99	3				
		D19.7	Recognize personal limitations and seek help when appropriate	99	3				
		D19.8	Work efficiently and effectively within a health care system.	99	3				
D20 Infectious Disease	Senior	D20.1	Efficiently carry out patient care tasks allocated during ward rounds.	101	3				
		D20.2	Recognize personal limitations and seek help when appropriate	101	3				
		D20.3	Work efficiently and effectively within a health care system.	101	3				
		D20.4	Demonstrate an awareness of the impact of diagnostic and therapeutic recommendations on the health care system, cost of a procedure, insurance coverage, and resources utilized.	100	1		*		*
		D20.5	Utilize personal resources effectively to balance patient care, continuing education, and personal activities.	101	1		*		*
		D20.6	Understand and judiciously allocate health care resources.	101	1		*		*
		D20.7	Determine the cost-effectiveness of alternative proposed interventions.	100	1		*		*
		D20.8	Design cost-effective plans based on knowledge of best practices.	100,101	1		*		*
		D20.9	Apply the principles of quality improvement and quality assurance.	101	1		*		*

		D21 Gastroenterology	Senior	D21.1	Efficiently carry out patient care tasks allocated during ward rounds.	103	3				
				D21.2	Recognize personal limitations and seek help when appropriate	103	3				
				D21.3	Work efficiently and effectively within a health care system.	103	3				
				D21.4	Demonstrate an awareness of the impact of diagnostic and therapeutic recommendations on the health care system, cost of a procedure, insurance coverage, and resources utilized.	103	1		*		*
				D21.5	Determine the cost-effectiveness of alternative proposed interventions.	102	1		*		*
				D21.6	Design cost-effective plans based on knowledge of best practices.	102	1		*		*
				D21.7	Utilize personal resources effectively to balance patient care, continuing education, and personal activities.	103	3				
				D21.8	Understand and judiciously allocate health care resources.	103	1		*		*
				D21.9	Apply the principles of quality improvement and quality assurance.	104	1		*		*
		D22 Elective Rotation	Senior	D22.1	Allocate finite health care resources appropriately.	105	1		*		*
				D22.2	Serve in administration and leadership roles as appropriate.	105	2				
				D22.3	Function effectively as consultants to provide optimal ethical and patient-centered medical care.	104	2,3				
				D22.4	Establish and maintain clinical knowledge, skills, and attitudes appropriate to the rotation subject.	104	3				
				D22.5	Participate in activities that contribute to the effectiveness of their health care organizations and systems.	105	2				
				D22.6	Manage their practice and career effectively.	105	3				
E Scholar		E1 Research	Senior	E1.1	Understand the principles and process for development and implementation of clinical trials.	91	1		*		
				E1.2	Understand common statistical principles and tests and their usefulness.	91	1		*		
				E1.3	Understand the importance of good record keeping in research.	91	1		*		
				E1.4	Understand the ethical considerations in research involving humans and animal subjects.	91	1		*		
				E1.5	Demonstrate knowledge of how to prepare protocols involved in hypothesis and observational research.	91	1		*		
				E1.6	Understand the process of organizing a laboratory research project.	91	1		*		
				E1.7	Understand the principles of evidence-based medicine techniques.	91	1		*		
				E1.8	Prepare and refine a workable research protocol, including a proposal for ethics committee review.	91	1				
				E1.9	Prepare, organize, and analyze a data base.	91	2				
				E1.10	Prepare a draft manuscript and abstract.	91	2				
				E1.11	Apply basic and clinical science to patient care.	92	1		*		*
				E1.12	Establish a comprehensive self-directed learning and educational strategy.	92	1				
				E1.13	Impart a similar enthusiasm to their colleagues.	92	3				
				E1.14	Create a stimulating research environment.	91	3				
				E1.15	Appreciate the difficult and stressful situations associated with the environment of Critical Care Medicine and how that relates to research.	92	3				
				E1.16	Develop an appreciation of the role of critical analysis in the assessment of current scientific developments.	92	3				
				E1.17	Participate in the processes of clinical audit and quality improvement activities.	92	2				
		E2 Critical Care	All	E2.1	Utilize information technology for optimal patient care and personal scholarship.	41, 52	2				
				E2.2	Develop, monitor, and revise a personal learning plan by utilizing meaningful feedback and evaluations to promote goal-directed learning.	42 , 53	1				
				E2.3	Use assessment tools and practices in a given learning context.	42 , 53	3				
				E2.4	Integrate evidence into decision making.	42 , 53	1	*	*		*
				E2.5	Demonstrate a teamwork attitude and promote collaborative learning.	42	3				
				E2.6	Integrate and apply knowledge obtained from multiple study sources to the care of critically ill patients.	42 , 53	1	*	*		*
				E2.7	Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.	42 , 53	2				
				E2.8	Pose medically and scientifically relevant questions that are amenable to scholarly investigation and address the critique of a given scholarly question.	42 , 53	1				
				E2.9	Demonstrate an ability to critically appraise and cite pertinent literature.	40, 51	1				
				E2.10	Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care.	42 , 53	3				
		E3 Coronary Care Unit Rotation	Junior	E3.1	Develop an appreciation of the role of critical appraisal in the assessment of current scientific developments.	56	3				
				E3.2	Recognize the on-going need for self-assessment and the role of self-directed learning.	56	1				
				E3.3	Develop an understanding of evidence-based medicine and incorporate the appropriate references to the literature in complex cases.	56	1	*	*		*
				E3.4	Contributing to unit activities and encouraging others to do so by instilling enthusiasm amongst workplace colleagues	55	2				
				E3.5	Contribute to the education of medical, nursing, and paramedical staff.	55	2				
		E4 Cardiac Surgery ICU	Junior	E4.1	Identify important determinants of health and success of cardiac patients during cardiac surgery ICU admission.	58	1				
				E4.2	Identify areas of controversy in the management of Critical Care Medicine patients using clinical observations and literature reviews, and seek to practice evidence based medicine.	58	1				
				E4.3	Contribute to the education of medical, nursing, and paramedical staff.	58	2				
				E4.4	Contribute to the medical education of other health professionals (e.g., clerks, novice nurses and respiratory therapists, etc.).	59	2				
				E4.5	Recognize the ongoing need for self-assessment and the role of self-directed learning.	59	3				
				E4.6	Critically appraise the general surgical literature and apply current literature into daily practice.	60	1				
				E4.7	Demonstrate the ability for continuing self-learning	60	3				
				E4.8	Facilitate the learning of patients, staff, students, and other health care professionals through formal and informal teaching opportunities.	61	2				
				E4.9	Integrate critical appraisal conclusions into clinical care.	61	1	*	*		*
				E4.10	Attend and participate in divisional academic activities.	61	2				
		E5 Core Anesthesia	Junior	E5.1	Develop and maintain a personal learning strategy that will be continued after acquiring certification.	65	1				
				E5.2	Seek out and critically appraise literature to support clinical care decisions and apply new evidence-based knowledge	65	1				
				E5.3	Contribute to the appropriate application, dissemination, and development of new knowledge	65	2				
				E5.4	Teach medical students, other Residents, faculty members, other health professionals, and patients using the principles and methods of adult learning.	65	2				
				E5.5	Continually review own personal and professional abilities and demonstrate continuing development of skills and knowledge through education.	65	1				
		E6 Emergency Medicine	Junior	E6.1	Identify his/her own learning needs and make use of available learning resources.	67	1				
				E6.2	Demonstrate critical thinking and integrate critical appraisal of the literature into the bedside approach.	67	1				
				E6.3	Apply appropriate clinical evidence to patient care.	67	1	*	*		*
		E7 Trauma	Junior	E7.1	Critically appraise trauma-related literature and apply knowledge obtained from the current literature to daily practice.	69	1				
				E7.2	Demonstrate the ability for continual self-learning.	69	3				
				E7.3	Integrate critical appraisal conclusions into clinical care.	69	1	*	*		*
					Attend and participate in divisional academic activities.	69	2				
		E8 Thoracic Surgery	Senior	E8.1	Critically appraise general surgical literature and apply current literature to daily practice.	71	1				
				E8.2	Demonstrate the capacity for continual self-learning.	71	3				

		E8.3	Facilitate learning in patients, staff, students, and other health care professionals through formal and informal teaching opportunities.	71	2				
		E8.4	Integrate critical appraisal conclusions into clinical care.	71	1		*		*
		E8.5	Attend and participate in divisional academic activities.	71	3				
E9 Vascular Surgery	Senior	E9.1	Critically appraise the general surgical literature and apply current literature to daily practice.	73	1				
		E9.2	Demonstrate the ability for continual self-learning.	73	3				
		E9.3	Facilitate learning of patients, staff, students, and other health care professionals through formal and informal teaching opportunities.	73	2				
		E9.4	Integrate critical appraisal conclusions into clinical care.	73	1		*		*
		E9.5	Attend and participate in divisional academic activities.	73	3				
E10 Regional Anesthesia	Senior	E10.1	Develop and maintain a personal learning strategy that will be continued after acquiring certification.	78	1				
		E10.2	Seek out and critically appraise literature to support clinical care decisions and apply new evidence-based knowledge.	78	1				
		E10.3	Contribute to the appropriate application, dissemination, and development of new knowledge.	78	1				
		E10.4	Teach medical students, other Residents, faculty members, other health professionals, and patients using the principles and methods of adult learning.	78	2				
E11 Pain Medicine	Senior	E11.1	Critically appraise sources of information in the pain management literature.	80	1				
		E11.2	Be able to judge whether a research project is properly designed using critical appraisal methods.	80	1				
		E11.3	Establish a pattern of continuing development of personal clinical skills and knowledge through medical education.	80	1				
E12 Neuroanesthesia	Senior	E12.1	Be responsible for developing, implementing, and regularly re-evaluating a personal continuing education strategy.	83	1				
		E12.2	Contribute to the development of new knowledge through facilitation/participation in ongoing departmental research activities.	83	1				
		E12.3	Prepare in advance for scheduled OR cases through additional reading and patient chart review/assessment.	83	2				
E13 Cardiac Anesthesia	Senior	E13.1	Demonstrate an appropriate sense of responsibility to themselves and their patients.	86	3				
		E13.2	Demonstrate a commitment to continual personal education including use of information technology.	86	3				
		E13.3	Critically review cardiac anesthesia literature and describe the principles of research relevant to cardiac patients.	86	1				
		E13.4	Assist in the education of other members of the OR team.	86	2				
E14 Critical Care Radiology	Senior	E14.1	Critically appraise sources of medical information	89	1				
		E14.2	Engage in evidence-based clinical practice	89	2				
E15 Critical Care Ecography	Senior	E15.1	Establish a comprehensive self-directed learning and educational strategy.	90	1				
		E15.2	Appreciate the role of critical appraisal in the assessment of current scientific developments.	90	3				
		E15.3	Commit to forever pushing the boundaries of excellence in caring for critically ill patients	90	3				
E16 Pulmonary Medicine	Senior	E16.1	Demonstrate the ability to critically appraise and cite literature pertinent to the evaluation of inpatients (or outpatients during the clinic rotation) with pulmonary diseases.	93	1				
		E16.2	Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.	93	2				
		E16.3	Integrate and apply knowledge obtained from multiple sources to the care of inpatients with pulmonary diseases.	93	1				
		E16.4	Demonstrate an ability to critically assess the scientific literature.	93	1				
		E16.5	Set and assess individualized learning goals.	93	1				
		E16.6	Analyze clinical experience and employ a systematic methodology for improvement	93	1				
		E16.7	Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care.	93	3				
		E16.8	Utilize information technology for optimal patient care and personal scholarship.	94	2				
E17 Nephrology	Senior	E17.1	Demonstrate the ability to critically appraise and cite literature pertinent to the evaluation of inpatients with renal disorders.	95	1				
		E17.2	Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.	95	2				
		E17.3	Integrate and apply knowledge obtained from multiple sources to the care of inpatients.	95	1				
		E17.4	Demonstrate an ability to critically assess the scientific literature.	95	1				
		E17.5	Set and assess individualized learning goals.	95	1				
		E17.6	Analyze clinical experience and employ a systematic methodology for improvement.	95	1				
		E17.7	Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care.	95	3				
		E17.8	Utilize information technology for optimal patient care and personal scholarship.	96	2				
E18 Hematology and Oncology	Senior	E18.1	Demonstrate the ability to critically appraise and cite literature pertinent to the evaluation of inpatients with hematologic disorders	97	1				
		E18.2	Demonstrate an ability to critically appraise and cite literature pertinent to the evaluation of inpatients with cancer.	97	1				
		E18.3	Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.	98	2				
		E18.4	Integrate and apply knowledge obtained from multiple sources to the care of inpatients.	98	1				
		E18.5	Demonstrate an ability to critically assess the scientific literature.	98	1				
		E18.6	Set and assess individualized learning goals.	98	1				
		E18.7	Analyze clinical experience and employ a systematic methodology for improvement.	98	1				
		E18.8	Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care.	98	3				
		E18.9	Utilize information technology for optimal patient care and personal scholarship.	99	1				
E19 Infectious Disease	Senior	E19.1	Demonstrate an ability to critically appraise and cite literature pertinent to the evaluation of inpatients with infectious diseases.	99	1				
		E19.2	Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.	100	2				
		E19.3	Integrate and apply knowledge obtained from multiple sources to the care of inpatients.	100	1				
		E19.4	Demonstrate an ability to critically assess the scientific literature.	100	1				
		E19.5	Set and assess individualized learning goals.	100	1				
		E19.6	Analyze clinical experience and employ a systematic methodology for improvement.	100	1				
		E19.7	Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care.	100	1				
		E19.8	Utilize information technology for optimal patient care and personal scholarship.	101	2				
E20 Gastroenterology	Senior	E20.1	Demonstrate an ability to critically appraise and cite literature pertinent to the evaluation of inpatients with GI disorders.	102	1				
		E20.2	Use technology to manage information, support patient care decisions, and enhance both patient and physician education.	102	2				
		E20.3	Integrate and apply knowledge obtained from multiple sources to the care of inpatients.	102	1				

				E20.4	Demonstrate an ability to critically assess the scientific literature.	102	1				
				E20.5	Set and assess individualized learning goals.	102	1				
				E20.6	Analyze clinical experience and employ a systematic methodology for improvement.	102	1				
				E20.7	Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care.	102	3				
				E20.8	Utilize information technology for optimal patient care and personal scholarship.	103	2				
		E21 Elective Rotation	Senior	E21.1	Maintain and improve professional activities through ongoing learning.	105	3				
				E21.2	Critically evaluate medical information and its sources and apply this information appropriately to practice decisions.	105	1				
				E21.3	Facilitate the learning of patients, families, students, other Residents, other health professionals, the public, and others.	105	2				
				E21.4	Contribute to the development, dissemination, and translation of new knowledge and practices.	105	2				
F Health advocate		F1 Critical Care	All	F1.1	Identify the important determinants of health affecting patients.	41, 52	1				
				F1.2	Contribute effectively to improving the health of patients and communities.	41, 52	2				
				F1.3	Recognize and respond to issues where health advocacy is appropriate.	41, 52	1				
				F1.4	Appreciate the existence of global health advocacy and initiatives for the elimination of diseases (e.g., TB, malaria, HIV) and the roles of advocacy groups and funding agencies.	41, 53	3				
				F1.5	Respect and empower patient autonomy	41, 52	3				
		F2 Cardiac Surgery ICU	Junior	F2.1	Identify important determinants of health and success of cardiac patients during cardiac surgery ICU admission.	58	1				
				F2.2	Recognize the importance of pain management, arrhythmia prophylaxis, etc. on hospital length of stay.	58	1				
		F3 General Surgery ICU	Junior	F3.1	Understand when and how to appropriately advocate on behalf of patients.	60	1				
				F3.2	Identify the important determinants of health affecting patients.	60	1				
		F4 Core Anesthesia	Junior	F4.1	Provide direction to health administrators regarding compliance with national practice guidelines and equipment standards for anesthesia.	64	2				
				F4.2	Recognize the opportunities for anesthesiologists to advocate for resources for pain management, emerging medical technologies, and new health care practices in general.	64	1				
				F4.3	Intervene on behalf of individual patients and the system as a whole regarding quality of care and safety.	65	2				
				F4.4	Identify and react to risks to health care providers such as: a. Substance abuse among anesthesiologists and other health care providers b. Hazards in the workplace environment	65	1,2				
				F4.5	Implement standards and guidelines related to anesthetic practice and equipment.	65	2				
		F5 Trauma	Junior	F5.1	Ensure timely access to relevant consultations and investigation.	69	3				
				F5.2	Understand when and how to appropriately advocate on behalf of patients.	69	1				
		F6 Thoracic Surgery	Senior	F6.1	Understand when and how to appropriately advocate on behalf of patients.	71	1				
				F6.2	Identify the important determinants of health affecting patients.	71	1				
		F7 Vascular Surgery	Senior	F7.1	Understand when and how to appropriately advocate on behalf of patients.	73	1				
				F7.2	Identify the important determinants of health affecting patients.	73	1				
		F8 Pain Medicine	Senior	F8.1	Identify the important determinants of health, particularly those relating to pain, that affect patients.	80	1				
				F8.2	Recognize opportunities for anesthesiologists to advocate for resources for pain management.	80	1				
		F9 Neuroanesthesia	Senior	F9.1	Recognize the opportunities for Critical Care Medicine Specialists to advocate for neurosurgical patients, particularly with regard to patient safety.	83	1				
		F10 Critical Care Radiology	Senior	F10.1	Provide timely access for emergency cases.	88	1				
				F10.2	Recognize the risk factors for a variety of common cardiac critical illnesses and counsel families and colleagues in such a way as to minimize said risk.	90	1				
				F10.3	Understand that patients welfare always takes precedence in the event of medical, political, or ethical conflicts.	90	1				
		F11 Research	Senior	F11.1	Recognize the risk factors for a variety of common critical illnesses and counsel families and colleagues in such a way as to minimize said risk.	92	1				
				F11.2	Understand that patients welfare always takes precedence in the event of medical or ethical conflicts.	92	1				
		F12 Pulmonary Medicine	Senior	F12.1	Identify the important determinants of health affecting patients.	94	1				
				F12.2	Contribute effectively to improving the health of patients and communities.	94	2				
				F12.3	Recognize and respond to issues where advocacy is appropriate.	94	1,2				
				F12.4	Respect and empower patient autonomy.	94	3				
				F12.5	Appreciate the existence of global health advocacy and initiatives for the elimination of disease (e.g., TB, malaria, HIV) and the roles of advocacy groups and funding agencies.	94	3				
		F13 Nephrology	Senior	F13.1	Identify the important determinants of health affecting patients.	96	1				
				F13.2	Contribute effectively to improving the health of patients and communities.	96	2				
				F13.3	Recognize and respond to issues where advocacy is appropriate.	96	1,2				
				F13.4	Respect and empower patient autonomy.	96	3				
				F13.5	Appreciate the existence of global health advocacy and initiatives for the elimination of disease (TB, Malaria, HIV) and the role of advocacy groups and funding agencies.	96	3				
		F14 Hematology and Oncology	Senior	F14.1	Identify the important determinants of health affecting patients.	99	1				
				F14.2	Contribute effectively to improving the health of patients and communities.	99	2				
				F14.3	Recognize and respond to issues where advocacy is appropriate.	99	1,2				
				F14.4	Respect and empower patient autonomy.	99	3				
				F14.5	Apply the principles of quality improvement and quality assurance.	99	1				
				F14.6	Appreciate the existence of global health advocacy and initiatives for the elimination of disease (e.g., TB, malaria, HIV) and the roles of advocacy groups and funding agencies.	99	3				
		F15 Infectious Disease	Senior	F15.1	Identify the important determinants of health affecting patients.	101	1				
				F15.2	Contribute effectively to improving the health of patients and communities.	101	2				
				F15.3	Recognize and respond to issues where advocacy is appropriate.	101	1,2				
				F15.4	Respect and empower patient autonomy.	101	3				
				F15.5	Appreciate the existence of global health advocacy and initiatives for the elimination of disease (e.g., TB, malaria, HIV) and the roles of advocacy groups and funding agencies.	101	3				
		F16 Gastroenterology	Senior	F16.1	Identify the important determinants of health affecting patients.	103	1				
				F16.2	Contribute effectively to improving the health of patients and communities.	103	2				
				F16.3	Recognize and respond to issues where advocacy is appropriate.	103	1,2				
				F16.4	Respect and empower patient autonomy.	103	3				
				F16.5	Appreciate the existence of global health advocacy and initiatives for the elimination of disease (e.g., TB, malaria, HIV) and the roles of advocacy groups and funding agencies.	103	3				

		17 Elective Rotatio	Senior	F17.1	Respond to the health needs of the communities that they serve.	105	2				
				F17.2	Identify the determinants of health affecting the populations that they serve.	105	1				
				F17.3	Promote the health of individual patients, communities, and populations.	105	1,2				
G Professional				G1	Recognize and professionally respond to unprofessional and unethical behaviors in other staff.	41, 42, 52, 53	1,3				
				G2	Promote fair health care.	41, 53	3				
				G3	Exhibit professional commitment to rounds	42 , 53	3				
				G4	Model ethical behavior by reporting back any key clinical findings to the attending and referring providers; following through on clinical questions, laboratory testing, and other patient care issues; and recognizing potential conflicts of interest.	42 , 53, 94, 96, 99, 100, 103	2				
				G5	Engage patients in a way that is respectful and non-judgmental with regard to their religious values, cultural values, and biases.	40, 51	3			*	
				G6	Respect patients, patients' families, staff, and colleagues	42 , 53	3			*	
				G7	Respond to phone calls, pages, and messages in a timely manner.	42 , 53	2				
				G8	Demonstrate commitment to the disclosure of error and or adverse events and their impact.	42 , 53	3				
				G9	Apply knowledge of patient autonomy and the religious, ethnic, and psychosocial factors which influence the physician–patient relationship, and consider these factors when solving problems and understanding decisions made by patients and their families.	55	1,3			*	
				G10	Demonstrate integrity, honesty, and openness in discussion of therapeutic options with patients and respect for patient's preferences and cultural differences.	42 , 53, 94, 96, 99, 103	3			*	
				G11	Develop an ethical framework for delivery of the highest quality care	56, 59, 90, 92	1				
				G12	Understand professional obligations to patients and colleagues.	56, 59	1				
				G13	Exhibit appropriate personal and interpersonal professional behaviors.	56, 59, 61, 69, 71, 73,	3			*	
				G14	Act with integrity, honesty, fairness, and compassion in the delivery of the highest quality health care.	56, 59, 80.89, 91, 92	3			*	
				G15	Embrace the attitudes conducive to effective relationships between physicians and patients/families; physicians and other physicians; and physicians and allied health care workers.	59	3				
				G16	Remain calm and organized in stressful or emergency situations.	59, 86	3				
				G17	Deliver the highest quality care with integrity, honesty, and compassion.	61, 65, 69, 71, 73, 80, 89,	3				
				G18	Develop ethical relationships with colleagues, patients, and relatives.	61, 71, 73	3				
				G19	Demonstrate sensitivity to age, gender, culture, and ethnicity in dealing with patients and their families.	61, 69, 71, 73,	3			*	
				G20	Understand the legal issues related to surgical consent, confidentiality, and refusal of treatment.	61, 71, 73,	1	*	*		*
				G21	Fulfill the ethical and legal aspects of patient care.	65	3				
				G22	Maintain patient confidentiality.	65	3				
				G23	Demonstrate appropriate interpersonal and professional behavior & boundaries	65, 83	3				
				G24	Recognize personal limitations through appropriate consultation (with staff supervisors, other physicians, and other health professionals) and show appropriate respect for those consulted.	65	3				
				G25	Recognize conflict in patient care situations, professional relationships, and value systems, and demonstrate the ability to discuss and resolve differences of opinion.	65	2,3				
				G26	Accept constructive feedback and criticism, and implement appropriate advice.	65	3				
				G27	Be punctual for shifts, meetings, and educational events.	67	3				
				G28	Be respectful, honest, and compassionate when dealing with patients, families, and other professionals.	67	3				
				G29	Demonstrate knowledge of and appropriate conduct in dealing with issues of patient confidentiality	68	1,2	*	*		
				G30	Demonstrate appropriate behaviors and attitude towards patients, their families, and all personnel involved in the care of those patients, as well as the anesthesiology team, surgical team, and nursing staff.	78	3				
				G31	Respond to calls from the post-anesthesia care unit when needed for acute pain issues.	78	3				
				G32	Provide appropriate handover to on-call Residents at the end of their day	78	2			*	
				G33	Demonstrate knowledge of basic legal, social, and bioethical issues encountered in chronic pain management, including informed consent.	79	1	*	*	*	*
				G34	Practice medicine ethically and consistent with the obligations of a physician.	80	3				
				G35	Respect the opinions of fellow consultants and referring physicians in the management of patient problems and be willing to discuss and resolve differences of opinion.	80	3				
				G36	Demonstrate a commitment to executing his/her professional responsibilities with integrity, honesty, and compassion.	83	3				
				G37	Recognize the limitations of his/her personal skill and knowledge by appropriately consulting other physicians when caring for the patient.	83	3				
				G38	Always demonstrate respectful and compassionate behavior toward patients, their families, and other health care providers.	86	3			*	
				G39	Maintain patient privacy and dignity and act with personal integrity.	89	3				
				G40	Recognize and resolve ethical issues and unprofessional behavious as they arise in clinical practice.	89	1,2		*		*
				G41	Understand professional obligations to patients and colleagues.	91, 92	1		*		
				G42	Act with integrity, honesty, fairness, and compassion in the delivery of the highest quality health care.	91, 92,	3				
				G43	Recognize the importance of patient primacy, privacy, and autonomy; informed consent, and equitable respect and care to all.	94, 96, 98,	1				
				G44	Respond to phone calls, pages, and messages in a timely manner.	94, 96, 99, 100, 103	2				
				G45	Be prompt and prepared for rounds and/or clinic.	96, 98	2				
				G46	Promote fair health care.	96, 99, 101, 103	2				
				G47	Exhibit punctuality for all assigned duties.	100, 103	3				
				G48	Incorporate the principles of patient primacy, privacy, and autonomy; informed consent; and equitable respect in the care of patients	100, 103	3				
				G49	Demonstrate a commitment to their patients, profession, and society through ethical practice and participation in profession led regulation.	105	3				
				G50	Demonstrate a commitment to physician health and sustainable practice	105	3				