APPLIED Exam Objective Structured Clinical Examination (OSCE) Content Outline

Each OSCE scenario will address one of the following skills.

A. Communications & Professionalism

1. Discussion of Treatment Options and Informed Consent *(Obtain informed consent from a patient or authorized health care proxy)*

The successful candidate will demonstrate the following behaviors:

- Demonstrates understanding of and concern for the situation of the patient
- Explains the indications for the proposed treatment options
- Explains conduct of proposed treatment options in lay terms
- Explains benefits and risks of treatment options, including both less severe/more common and more severe/less common relevant risks
- Discusses strategies for minimizing risks of the treatment options
- Elicits questions and responds appropriately in lay terms
- Confirms a final decision with the patient or authorized health care proxy regarding the treatment options and obtains affirmative consent without coercion

2. Peri-procedural complications *(Conduct a focused evaluation of a peri-procedural complication, formulate an action plan, and discuss this plan with the patient or designee)*

The successful candidate will demonstrate the following behaviors:

- Elicits history relevant to the complication and current symptoms
- Performs focused physical evaluation
- Discusses potential causes and contributing factors
- Discusses anticipated, likely, and potential outcomes
- Presents plan for further evaluation and/or treatment
- Elicits questions and responds in lay terms
- Demonstrates understanding of and concern for the situation of the patient

3. Ethical issues *(Frame and discuss appropriate plans to address common ethical dilemmas in clinical care settings)*

Anesthesiologists face ethical issues related to patients, colleagues, organizations, and society. To identify and frame ethical questions productively, anesthesiologists must understand ethical principles and act in a manner consistent with current ethical practices including core principles of respect for patient autonomy, beneficence, non-maleficence, accountability, ethical fidelity (promise keeping, trustworthiness), and social and distributive justice.

A successful candidate will demonstrate the ability to identify and address ethical issues by obtaining relevant information, clarifying options, determining preferences, negotiating differences, and arriving at a decision with patients, families, and other stakeholders as they relate to, for example:

- Allocation of resources
- Barriers to access to healthcare
- Care decisions involving family members or surrogate decision makers

- Confidentiality and privacy
- Decision-making capacity, informed consent, informed refusal, and voluntariness
- Diversity, equity, and inclusion identification and management in clinical and organizational situations
- Ethical obligations toward fellow clinicians
- Treatment of patients receiving investigational therapies or research protocols
- Life-sustaining medical treatment (e.g. end-of-life management)
- Procurement and allocation of organs
- Potentially inappropriate treatment
- Recognized or potential conflicts of interest

4. Communication with other professionals *(Effectively communicate with other healthcare team members in a professional manner)*

   The successful candidate will demonstrate the following behaviors:

   - Communicate in a clear and professional manner
   - Prioritize communication of information most relevant to patient care
   - Demonstrate understanding of the concerns and perspective of other health care professionals through active listening
   - Recognize the potential for conflict and initiate conflict resolution

   Candidates may also be asked to demonstrate understanding and application of team- related skills, including:

   - Leadership - team orientation and coordination
   - Mutual performance monitoring
   - Backup behavior
   - Adaptability
   - Providing formative feedback and facilitated debriefing

5. Practice-based Learning and Improvement *(Articulate and apply principles of patient safety and quality improvement to a clinical scenario)*

   The successful candidate will demonstrate behaviors consistent with the application of commonly accepted elements of quality improvement processes, including those directed toward patient safety; these elements include the following:

   - Measure current outcomes and benchmarks
   - Devise change in practice in collaboration with stakeholders
   - Educate and train clinicians regarding change in practice
   - Implement change in practice
   - Measure outcomes after change in practice

B. Technical Skills

The successful candidate will accurately identify clinical conditions, identify relevant anatomy, make qualitative diagnostic assessments, and provide treatment recommendations. Candidates may be asked to complete the following tasks:

- Interpret data presented on monitors
- Interpret echocardiograms and ultrasound images
- Use an ultrasound probe and demonstrate simulated needle placement techniques
- Identify clinical conditions, relevant anatomy, make qualitative diagnostic assessments, and provide treatment recommendations
- Perform and interpret airway assessment and management including physical exam and related information

The following topics and images may be included in technical skill stations. Stations may be composed of combinations of the below categories.

1. Interpretation of Monitors

   The candidate will be presented with simulated monitors which will include relevant parameters from the list below:

   - Electrocardiogram
   - Arterial blood pressure: non-invasive (value) or invasive (waveform and value)
   - Central venous pressure – waveform and value
   - Pulmonary arterial pressure – waveform and value
   - Pulmonary artery occlusion pressure - value
   - Cardiac output - value
   - Mixed venous oxygen saturation - value
   - Pulse oximetry – waveform and value
   - Capnography – waveform and end tidal value
   - Qualitative and quantitative neuromuscular blockade – value (testing to start in 2026)
   - Fetal heart rate monitor – waveform and value (testing to start in 2026)
   - Airway pressure – waveform and peak, PEEP values
   - Airway flow - waveform
   - Tidal volume – waveform and end-tidal values
   - Respiratory rate, Inspiratory and Expiratory Times
   - Flow-volume loops - waveform
   - Temperature - value

   The successful candidate will integrate this information to identify clinical conditions chosen from among the following areas:

   - Perioperative cardiac events
   - Perioperative respiratory events
   - Other perioperative/peripartum events
   - Ventilatory modes used in normal and critically ill patients

2. Interpretation of Echocardiography and Ultrasonography

   The successful candidate will be able to use 2-dimensional and color flow Doppler, and M-mode (lung ultrasound) to identify relevant anatomy, make qualitative diagnostic assessments, and provide treatment recommendations. Exam will not include pulsed-wave and continuous-wave Doppler. Scenarios may include the following:

   - Biventricular function and wall motion
   - Presence or absence of an atrial septal defect
   - Volume status assessment- hypovolemia and response to volume therapy
   - Pulmonary emboli
   - Air emboli
   - Basic valvular lesions
   - Pericardial effusions
   - Aortic dissection
   - Pleural effusion
   - Pneumothorax
   - Pulmonary edema

   Lung and diaphragm images may include:

- Lung
- Pleura
- Diaphragm
- Artifacts (A-lines, B-lines)

Abdominal ultrasound images may include (testing to start in 2026)

- Right Upper Quadrant
- Left Upper Quadrant
- Pelvis
- Gastric

Point of care ultrasound images may include

- Heart
    - Parasternal Long Axis
    - Parasternal Short Axis (Left Ventricle Midpapillary)
    - Apical Four Chamber
    - Subcostal Four Chamber
    - Subcostal IVC View
- Lung Pleura
    - Diaphragm
    - Artifacts (A-lines, B-lines)
- Abdomen (testing to start 2025)
    - Right upper quadrant (assessment for free fluid)
    - Left upper quadrant (assessment for free fluid)
    - Pelvis (assessment for free fluid)
    - Gastric (assessment of content and volume)
- Airway-related structures (Testing to start 2027)
    - Trachea
    - Tracheal rings
    - Cricoid cartilage
    - Cricothyroid membrane
    - Thyroid cartilage
    - Vocal cords,
    - Hyoid bone
    - Epiglottis
    - Tongue
    - Esophagus

Transesophageal echocardiography images may include any of the following 11 standard views:

- Midesophageal Four Chamber
- Midesophageal Two Chamber
- Midesophageal Long Axis
- Midesophageal Ascending Aortic Long Axis
- Midesophageal Ascending Aortic Short Axis
- Midesophageal Aortic Valve Short Axis
- Midesophageal Right Ventricular Inflow-Outflow
- Midesophageal Bicaval
- Transgastric Midpapillary Short Axis
- Descending Aortic Short Axis
- Descending Aortic Long Axis

3. Application of Ultrasound

The successful candidate may be asked to demonstrate simulated needle placement technique for scenarios chosen from among the following procedures:

- Vascular cannulation
  - Internal jugular vein
  - Cubital fossa vessels
  - Radial artery
  - Femoral vessels

- Nerve blocks
  - Interscalene brachial plexus
  - Supraclavicular brachial plexus
  - Infraclavicular brachial plexus
  - Axillary brachial plexus
  - Transversus abdominis plane (TAP)
  - Femoral
  - Adductor canal (saphenous)
  - Popliteal sciatic
  - Airway (superior laryngeal, transtracheal) (2027)

4. *Airway Management (2027)*

The successful candidate will demonstrate principles of airway management that may include any of the following items:

- Airway examination including identification of normal anatomical structures and markers of anticipated difficult mask ventilation and/ or difficult intubation
- Identification of landmarks for airway blocks (e.g. superior laryngeal n., transtracheal) and emergency surgical airway placement
- Navigation of American Society of Anesthesiologists Difficult Airway Algorithm
- Demonstrate choice and use of airway management techniques including:
  - Laryngoscopy
  - Video Laryngoscopy
  - Supraglottic airway placement
  - Fiberoptic bronchoscopy and intubation
  - Lung isolation with devices including Bronchial blockers and Double-lumen endotracheal tubes
  - Cricothyroidotomy
  - Airway exchange catheter placement
  - Jet ventilation