In 2022-2023, the Trauma, Burns, and Surgical Critical Care Board (TBSCCB) of the American Board of Surgery (ABS) reviewed and revised the exam blueprint used for the Surgical Critical Care (SCC) exams, primarily the Certifying Exam (CE), so that the exams better reflect the training and practice of SCC diplomates. The revision process involved updating and reorganizing the content tested on the exam, specifying the dimensions of patient care tested on the exam (e.g., risk factors, diagnosis/work-up, perioperative care management, outcomes), and determining weights that dictate how these content categories and dimensions of patient care are represented on the exam. As part of the review, multiple stakeholders were consulted (e.g., TBSCCB Directors, SCC program directors, current SCC diplomates), and feedback from these groups was used to inform the content and weights.

**Content Distribution**
Included below are the major content categories and dimensions of patient care in the draft blueprint. Weights are also provided for each. The weights included here are considered *preliminary* and are based on the amount of content combined with the relative importance of that content. Concretely, the weights indicate the approximate percentage of questions to be included on the SCC CE; actual percentages may vary slightly from year to year.

**Content Categories**
Table 1 includes the major content categories for the exam. A complete listing of potential exam topics is included in the Appendix at the end of this document; please note that this list is meant to be comprehensive and that not every topic will be tested on the exam.

**Dimensions of Care**
Table 2 includes dimensions of care that will be tested on the exam. Exam questions will address *both* a topic from the content categories and a dimension of care (e.g., perioperative care for a specific type of shock). The weights included here represent the percentage of questions that will be devoted to each dimension of care.
<table>
<thead>
<tr>
<th>Content Category</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <em>Initial Resuscitation</em></td>
<td>7.0%</td>
</tr>
<tr>
<td>2. <em>Cardiovascular Physiology, Pathophysiology, and Therapy</em></td>
<td>9.0%</td>
</tr>
<tr>
<td>3. <em>Respiratory Physiology, Pathophysiology, and Therapy</em></td>
<td>10.0%</td>
</tr>
<tr>
<td>4. <em>Fluid and Electrolyte Pathophysiology and Therapy</em></td>
<td>6.0%</td>
</tr>
<tr>
<td>5. <em>Neurological Physiology, Pathophysiology, and Therapy</em></td>
<td>6.0%</td>
</tr>
<tr>
<td>6. <em>Metabolic, Endocrinologic, and Nutritional Effects of Surgical Illness</em></td>
<td>6.0%</td>
</tr>
<tr>
<td>7. <em>Infectious Disease, Pathophysiology, and Therapy</em></td>
<td>8.0%</td>
</tr>
<tr>
<td>8. <em>Hematologic Disorders Secondary to Acute Illness/Blood Transfusion</em></td>
<td>4.0%</td>
</tr>
<tr>
<td>9. <em>Acute Gastrointestinal, Genitourinary, and Obstetric-Gynecologic Disorders</em></td>
<td>10.0%</td>
</tr>
<tr>
<td>10. <em>Trauma</em></td>
<td>10.0%</td>
</tr>
<tr>
<td>11. <em>Thermal Injury</em></td>
<td>5.0%</td>
</tr>
<tr>
<td>12. <em>Life-Threatening Pediatric Conditions</em></td>
<td>3.0%</td>
</tr>
<tr>
<td>13. <em>Immunology, Transplantation, and Cell Biology</em></td>
<td>3.0%</td>
</tr>
<tr>
<td>14. <em>Pharmacology, Pharmacokinetics, and Drug Metabolism in Critical Illness</em></td>
<td>2.0%</td>
</tr>
<tr>
<td>15. <em>Monitoring, Bioengineering, and Biostatistics</em></td>
<td>6.0%</td>
</tr>
<tr>
<td>16. <em>Principles and Techniques of Administration and Management</em></td>
<td>3.0%</td>
</tr>
<tr>
<td>17. <em>Ethical and Legal Aspects in Surgical Critical Care Medicine</em></td>
<td>2.0%</td>
</tr>
</tbody>
</table>
Table 2 – Dimensions of Care

<table>
<thead>
<tr>
<th>Dimensions of Care</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General*</td>
<td>10%</td>
</tr>
<tr>
<td>2. Epidemiology (incidence, common causes)</td>
<td>5%</td>
</tr>
<tr>
<td>3. Pathophysiology/Basic Science</td>
<td>8%</td>
</tr>
<tr>
<td>4. Risk Assessment (risk factors)</td>
<td>5%</td>
</tr>
<tr>
<td>5. Diagnosis/Work-up (imaging, lab testing, clinical exam)</td>
<td>10.5%</td>
</tr>
<tr>
<td>6. Monitoring</td>
<td>11%</td>
</tr>
<tr>
<td>7. Treatments</td>
<td>10%</td>
</tr>
<tr>
<td>8. Indications for Surgery</td>
<td>9%</td>
</tr>
<tr>
<td>9. Perioperative Care (Pre-, Intra-, Post-)</td>
<td>10%</td>
</tr>
<tr>
<td>10. Complications (common complications)</td>
<td>11%</td>
</tr>
<tr>
<td>11. Outcomes (mortality, long term sequela)</td>
<td>9%</td>
</tr>
<tr>
<td>12. Special Populations: Pregnancy</td>
<td>0.5%</td>
</tr>
<tr>
<td>13. Special Populations: Elderly</td>
<td>0.5%</td>
</tr>
<tr>
<td>14. Special Populations: Pediatric</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

*Note: General is for topics that do not otherwise fit into the dimensions of care (e.g., ethics, pharmacokinetics)
Appendix - Full Topic List

Please note this list is meant to be comprehensive and that not every topic will be tested on the exam.

1. Initial Resuscitation
   1. Types of shock
   2. Hemorrhagic shock
   3. Hypovolemic shock
   4. Obstructive shock
   5. Distributive shock
   6. Resuscitation strategies
   7. Endpoints of resuscitation
   8. Tissue perfusion
   9. Cardiac Arrest
   10. Anaphylaxis

2. Cardiovascular Physiology, Pathophysiology, and Therapy
   1. Cardiogenic shock
   2. Myocardial infarction
   3. Arrhythmias
   4. Conduction disturbances
   5. Tamponade
   6. Congenital cardiac lesions
   7. Acute valvular disorders
   8. Arterial vascular disease
   9. Venous disease (including DVT)
   10. Pulmonary embolism
   11. Hypertensive emergencies
   12. Pre-operative cardiac risk assessment
   13. Post cardiac surgery management
   14. Inotropic and vasopressor therapy
   15. Calculations and interpretation of hemodynamics
   16. Pacemakers
   17. Pericardiocentesis
   18. V-A ECMO
   19. Cardiac assist devices

3. Respiratory Physiology, Pathophysiology, and Therapy
   1. Acute respiratory failure
   2. ARDS
   3. Aspiration
   4. Pulmonary infections
   5. COVID
   6. Inhalation injury
7. COPD
8. Asthma/bronchoconstrictive disease
9. Chest wall disorders
10. Oxygen therapy
11. Noninvasive ventilation
12. Pulmonary function testing
13. Principles of mechanical ventilation
14. Thoracentesis and thoracostomy
15. Extubation criteria
16. Intubation
17. Surgical airways
18. V-V ECMO

4. Fluid and Electrolyte Pathophysiology and Therapy
   1. Acute kidney injury
   2. Acid-base disorders
   3. Electrolyte abnormalities
   4. Types of fluid therapy
   5. Principles of renal replacement therapy

5. Neurological Physiology, Pathophysiology, and Therapy
   1. TBI
   2. SCI
   3. Neurogenic shock
   4. Coma
   5. Brain death
   6. Stroke
   7. Aneurysmal subarachnoid hemorrhage
   8. Neuromuscular disorders
   9. CNS infections
   10. Seizures
   11. Psychiatric emergencies
   12. Delirium
   13. Dysautonomia
   14. Hepatic encephalopathy
   15. Analgesia
   16. Sedation

6. Metabolic, Endocrinologic, and Nutritional Effects of Surgical Illness
   1. Adrenal insufficiency
   2. Diabetes insipidus
   3. SIADH and cerebral salt wasting
   4. Thyroid disorders
   5. Hypopituitarism
   6. DKA/hyperglycemia/HHS
   7. Hypoglycemia
   8. Glucose management
9. Use of steroids in the critically ill
10. Principles of nutritional support
11. Assessment of nutritional status
12. Catabolic and anabolic responses to injury and illness
13. Parenteral nutrition
14. Enteral nutrition
15. Feeding tubes
16. Principles of Frailty

7. **Infectious Disease, Pathophysiology, and Therapy**
   1. Sepsis and septic shock
   2. MODS
   3. Bacterial infections
   4. Fungal infections
   5. Viral infections
   6. Soft tissue infections
   7. Nosocomial infections
   8. Antimicrobials

8. **Hematologic Disorders Secondary to Acute Illness/Blood Transfusion**
   1. Coagulopathy and fibrinolysis
   2. Anticoagulation and reversal
   3. Acute hemolytic disorders
   4. HITT
   5. Transfusions
   6. Monitoring coagulation

9. **Acute Gastrointestinal, Genitourinary, and Obstetric-Gynecologic Disorders**
   1. Acute pancreatitis
   2. Acute hepatic failure
   3. GI bleed
   4. Stress ulcer prophylaxis
   5. Perforations of the GI tract
   6. Acute inflammatory conditions of the GI tract
   7. Acute ischemia of the GI tract
   8. Intraabdominal infections
   9. Acalculous cholecystitis
   10. Ileus (+/- bowel obstruction)
   11. Abdominal compartment syndrome
   12. Obstructive uropathy
   13. Hematuria
   14. Urinary tract infections
   15. Postpartum hemorrhage
   16. Emergency conditions in obstetrics
   17. Physiological changes in pregnancy

10. **Trauma**
   1. Initial resuscitation
2. Priorities in multisystem trauma
3. Principles of hemorrhage control
4. Pulmonary contusions
5. Rib fractures
6. Blunt myocardial injury
7. Hemothorax
8. Tracheal and bronchial injuries
9. Great vessel injury
10. Traumatic aortic injury
11. Pneumothorax, including tension
12. Thoracic esophageal injury
13. Splenic injury
14. Duodenal injury
15. Liver injury
16. Small bowel and colon injury
17. Pancreatic injury
18. Kidney injury
19. Ureter injury
20. Splanchnic vascular/mesenteric injury
21. Rectal injury
22. Bladder injury
23. Diaphragm injury
24. Pelvic fracture
25. BCVI
26. Penetrating vascular injury
27. Pharynx/esophageal injury
28. Larynx/thyroid/airway injury
29. Extremity vascular injury
30. Extremity compartment syndrome

11. Thermal Injury
   1. Thermal burns
   2. Accidental hypothermia
   3. Chemical burns
   4. Electrical burns
   5. Hyperthermia

12. Life-Threatening Pediatric Conditions
   1. Resuscitation in pediatric shock
   2. Pediatric specific infections
   3. Life threatening congenital conditions
   4. Necrotizing enterocolitis
   5. Cardiac arrest in children
   6. Pediatric trauma
   7. Pediatric burns
   8. Nonaccidental trauma
9. Intubation of infants and children

13. Immunology, Transplantation, and Cell Biology
   1. Infections in the immunocompromised host
   2. Post transplant complications
   3. Acute rejection
   4. Immunosuppressives

14. Pharmacology, Pharmacokinetics, and Drug Metabolism in Critical Illness
   1. Toxic injections and exposures
   2. Malignant hyperthermia
   3. Pharmacokinetics
   4. General anesthetics
   5. Regional analgesia
   6. Drug interactions
   7. Hyperbaric oxygen

15. Monitoring, Bioengineering, and Biostatistics
   1. Noninvasive hemodynamic monitoring
   2. Invasive hemodynamic monitoring
   3. Point of care echocardiography
   4. Point of care ultrasound
   5. Focused assessment with sonography for trauma (FAST)
   6. EKGs
   7. Respiratory monitoring
   8. Neuromonitoring
   9. Metabolic monitoring
   10. Biostatistics
   11. Trial design
   12. Principles of evidence based medicine

16. Principles and Techniques of Administration and Management
   1. ICU bundles
   2. ICU coding
   3. Patient safety
   4. Quality improvement
   5. Disaster management

17. Ethical and Legal Aspects in Surgical Critical Care Medicine
   1. Principals of bioethics
   2. Informed consent
   3. Advanced care directives
   4. Palliative Care
   5. Organ donation
   6. Health Equity/Disparities/Social Determinants of Health