Pediatric Learning Solutions' Course Alignment with CCRN® Exam Content Outline.

The following Pediatric Learning Solutions courses align to focus areas of the Neonatal CCRN® Exam Content Outline. These courses equip candidates with the foundational knowledge necessary to approach the Neonatal CCRN® exam with confidence. Go to the Association of Critical-Care Nurses site for more information on the CCRN Exam.
Clinical Judgement

**Pulmonary**

- Pediatric Assessment:
  - Introduction to Arterial Blood Gas Interpretation
  - Understanding Abnormal Blood Gases
  - Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation
  - Management of the Difficult Airway
  - Advanced Concepts in Respiratory Physiology
  - Mechanical Ventilation: Introduction to Pediatric Practices
  - High-Frequency Ventilation
  - Preventing Ventilator-Associated Pneumonia
  - Caring for a Child with a Tracheostomy
  - Neonatal Respiratory Distress Syndrome

- Acute Respiratory Failure
  - Introduction to Arterial Blood Gas Interpretation
  - Understanding Abnormal Blood Gases
  - Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation
  - Management of the Difficult Airway
  - Advanced Concepts in Respiratory Physiology
  - Mechanical Ventilation: Introduction to Pediatric Practices
  - High-Frequency Ventilation
  - Preventing Ventilator-Associated Pneumonia
  - Caring for a Child with a Tracheostomy

- Acute Respiratory Infection (e.g., pneumonia)
  - Neonatal Sepsis
  - Meconium Aspiration Syndrome
  - Mechanical Ventilation: Introduction to Pediatric Practices
  - High-Frequency Ventilation
  - Preventing Ventilator-Associated Pneumonia
  - Caring for a Child with a Tracheostomy
  - Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation

- Meconium Aspiration Syndrome (MAS)
  - Meconium Aspiration Syndrome

- Associated Pneumonia
  - Air-leak Syndromes
    - Neonatal Respiratory Distress Syndrome
    - Pneumothorax in the Neonate
    - Meconium Aspiration Syndrome
    - Nursing Management of Chest Tubes

- Apnea of Prematurity
  - Apnea of Prematurity
  - Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation

- Airway
  - Meconium Aspiration Syndrome
  - Neonatal Sepsis

- Bronchopulmonary Dysplasia
  - Bronchopulmonary Dysplasia
  - Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation
  - Neonatal Nutrition

- Congenital Anomalies
  - Comprehensive Assessment of the Neonate
  - Congenital Diaphragmatic Hernia
  - Esophageal Atresia and TE Fistula
  - Gastrochisis and Omphalocele
  - Management of the Difficult Airway
  - Maternal Factors Affecting the Newborn
  - Esophageal Atresia and TE Fistula

- Failure to Wean from Mechanical Ventilation
  - Advanced Concepts in Respiratory Physiology
  - Mechanical Ventilation: Introduction to Pediatric Practices
  - High-Frequency Ventilation
  - Preventing Ventilator-Associated Pneumonia
  - Caring for a Child with a Tracheostomy
  - Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation

- Persistent Pulmonary Hypertension of the Newborn (PPHN)
  - Persistent Pulmonary Hypertension of the Newborn (PPHN)
  - Extrauterine Life: Assessment of the Neonate’s Transition
  - Extrauterine Life: Fetal to Neonatal Circulation
  - High-Frequency Ventilation
  - Advanced Concepts in Respiratory Physiology
  - Mechanical Ventilation: Introduction to Pediatric Practices
  - High-Frequency Ventilation
  - Introduction to ECMO
  - Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation
  - Vasoactive Medications

- Pulmonary Hypertension
  - Persistent Pulmonary Hypertension of the Newborn (PPHN)
  - Extrauterine Life: Assessment of the Neonate’s Transition
  - Extrauterine Life: Fetal to Neonatal Circulation
  - Maternal Factors Affecting the Newborn
  - Advanced Concepts in Respiratory Physiology
  - Mechanical Ventilation: Introduction to Pediatric Practices
  - High-Frequency Ventilation
  - Introduction to ECMO
  - Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation
  - Vasoactive Medications
Clinical Judgement Cont.

**Pulmonary Cont.**
- Thoracic Surgery
  - Congenital Heart Disease: Acyanotic Defects
  - Congenital Heart Disease: Cyanotic Defects
  - Congenital Diaphragmatic Hernia
  - Esophageal Atresia and TE Fistula
  - Nursing Management of Chest Tubes
  - Preventing Surgical Site Infections
  - Preventing Surgical Site Infections
- Transient Tachypnea of the Newborn (TTN)
  - Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation
  - Comprehensive Assessment of the Neonate
  - Extraterine Life: Assessment of the Neonate’s Transition
  - Extraterine Life: Fetal to Neonatal Circulation
  - Maternal Factors Affecting the Neonate

**Cardiovascular**
- Cardiac Surgery
  - Congenital Heart Disease:
    - Overview
    - Acyanotic Defects
    - Cyanotic Defects
  - Introduction to Hemodynamic Monitoring
  - Vasoactive Medications
  - Introduction to ECMO
  - Nursing Management of Chest Tubes
  - Cardiovascular Laboratory Procedures: Diagnostic & Interventional
  - Preventing Surgical Site Infections
  - Dysrhythmias
- Structure and Function of the Heart
  - Electrophysiology
  - The Cardiac Monitor
  - Lines, Waves and Segments
  - Analyzing the ECG Rhythm Strip
  - Sinus Rhythms
  - Atrial Arrhythmias
  - Junctional Arrhythmias
  - Ventricular Arrhythmias
  - Atrioventricular Arrhythmias
  - Channelopathies
  - Temporary Pacemakers
  - Permanent Pacemakers and ICDs
- Structural Heart Defects
  - Congenital Heart Disease: Acyanotic Defects
  - Congenital Heart Disease: Cyanotic Defects
  - Extraterine Life:
    - Assessment of the Neonate’s Transition
    - Fetal to Neonatal Circulation
    - Maternal Factors Affecting the Newborn

**Musculoskeletal/Neurology/Psychosocial**
- Musculoskeletal
  - Infections
    - Comprehensive Assessment of the Neonate
    - Neonatal Sepsis
  - Osteopenia
    - Neonatal Nutrition
- Neurology
  - Birth Injuries
    - Maternal Factors Affecting the Neonate
    - Intracranial Pressure Monitoring
    - Hypoxic Ischemic Encephalopathy
  - Brain Death
    - Hypoxic Ischemic Encephalopathy
    - Organ and Tissue Donation: The Gift of Life
    - Intracranial Pressure Monitoring
  - Congenital Neurologic Abnormalities (e.g., AV malformation, myelomeningoceles, encephalocoele)
    - Neonatal Cranial Hemorrhage
    - Hydrocephalus
    - Maternal Factors Affecting the Neonate
    - Cranietomy
  - Encephalopathy
    - Neonatal Sepsis
    - Meningitis and Encephalitis
    - Intracranial Pressure Monitoring
  - Hemorrhage (ICH, IVH, subarachnoid)
    - Neonatal Cranial Hemorrhage
    - Intracranial Pressure Monitoring
    - Cranietomy
  - Hydrocephalus
    - Hydrocephalus
    - Intracranial Pressure Monitoring
    - Cranietomy
  - Neurologic Infectious Disease (e.g., viral, bacterial, fungal)
    - Neonatal Sepsis
    - Meningitis and Encephalitis
  - Neurosurgery
    - Hydrocephalus
    - Intracranial Pressure Monitoring
    - Cranietomy
  - Seizure Disorders
    - Status Epilepticus
    - Neonatal Seizures
- Behavioral/Psychosocial
  - Agitation
    - Maternal Factors Affecting the Neonate
    - Pediatric Restraint and Seclusion
    - Neonatal Pain Assessment and Management
  - Developmental Delays
    - Developmental Care of the Newborn
  - Failure to Thrive
    - Nutrition in the Critically Ill Child
    - Neonatal Nutrition
    - Pediatric Nutritional Overview
    - Congestive Heart Failure
  - Stress in Extremely Low Birth Weight Infants
    - Developmental Care of the Newborn
    - Neonatal Pain Assessment and Management
  - Substance Dependence or Abuse
    - Maternal Factors Affecting the Neonate
<table>
<thead>
<tr>
<th>Endocrine/Hematology/Gastrointestinal/Renal/Integumentary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Endocrine</strong></td>
</tr>
<tr>
<td>o Hyperglycemia</td>
</tr>
<tr>
<td>▪ Glucose Homeostasis in the Neonate</td>
</tr>
<tr>
<td>▪ Diabetes Insipidus and SIADH</td>
</tr>
<tr>
<td>▪ Maternal Factors Affecting the Newborn</td>
</tr>
<tr>
<td>o Inborn Errors of Metabolism</td>
</tr>
<tr>
<td>▪ Metabolic Disorders of the Newborn</td>
</tr>
<tr>
<td>▪ Comprehensive Assessment of the Neonate</td>
</tr>
<tr>
<td>o Neonatal Hypoglycemia</td>
</tr>
<tr>
<td>▪ Metabolic Disorders of the Newborn</td>
</tr>
<tr>
<td>▪ Glucose Homeostasis in the Neonate</td>
</tr>
<tr>
<td>▪ Maternal Factors Affecting the Newborn</td>
</tr>
<tr>
<td><strong>Hematology/Immunology</strong></td>
</tr>
<tr>
<td>o Anemia/Anemia of Prematurity</td>
</tr>
<tr>
<td>▪ Anemia and Polycythemia in the Neonate</td>
</tr>
<tr>
<td>▪ Disseminated Intravascular Coagulation</td>
</tr>
<tr>
<td>o Coagulopathies (e.g., ITP, DIC, HIT)</td>
</tr>
<tr>
<td>▪ Disseminated Intravascular Coagulation</td>
</tr>
<tr>
<td>▪ Thrombocytopenia: ITP and HIT/T</td>
</tr>
<tr>
<td>o Immune Deficiencies</td>
</tr>
<tr>
<td>▪ Neonatal Sepsis</td>
</tr>
<tr>
<td>o Hyperbilirubinemia</td>
</tr>
<tr>
<td>▪ Hyperbilirubinemia</td>
</tr>
<tr>
<td>▪ Anemia and Polycythemia in the Neonate</td>
</tr>
<tr>
<td>▪ Blood Administration: Exchange Transfusion</td>
</tr>
<tr>
<td>o Leukopenia</td>
</tr>
<tr>
<td>▪ Neonatal Sepsis</td>
</tr>
<tr>
<td>o Rh/ABO incompatibilities, hydrops fetalis</td>
</tr>
<tr>
<td>▪ Anemia and Polycythemia in the Neonate</td>
</tr>
<tr>
<td>▪ Maternal Factors Affecting the Neonate</td>
</tr>
<tr>
<td>▪ Hyperbilirubinemia</td>
</tr>
<tr>
<td>▪ Blood Administration: Exchange Transfusion</td>
</tr>
<tr>
<td>▪ Congestive Heart Failure</td>
</tr>
<tr>
<td>o Thrombocytopenia</td>
</tr>
<tr>
<td>▪ Disseminated Intravascular Coagulation</td>
</tr>
<tr>
<td><strong>Gastrointestinal</strong></td>
</tr>
<tr>
<td>o Bowel</td>
</tr>
<tr>
<td>▪ Infarction/Obstruction/Perforation</td>
</tr>
<tr>
<td>▪ Necrotizing Enterocolitis</td>
</tr>
<tr>
<td>▪ Gastroschisis and Omphalocoele</td>
</tr>
<tr>
<td>▪ Neonatal Sepsis</td>
</tr>
<tr>
<td>o Gastroesophageal reflux</td>
</tr>
<tr>
<td>▪ Neonatal Nutrition</td>
</tr>
<tr>
<td>▪ Nutrition in the Critically III Child</td>
</tr>
<tr>
<td>▪ Esophageal Atresia and TE Fistula</td>
</tr>
<tr>
<td>o GI Abnormalities (e.g., omphalocoele; gastroschisis, volvulus, imperforate anus, Hirschsprung disease, malrotation, intusseption)</td>
</tr>
<tr>
<td>▪ Comprehensive Assessment of the Neonate</td>
</tr>
<tr>
<td>▪ Gastroschisis and Omphalocoele</td>
</tr>
<tr>
<td>▪ Congenital Diaphragmatic Hernia</td>
</tr>
<tr>
<td>▪ Necrotizing Enterocolitis</td>
</tr>
<tr>
<td>o GI Surgeries</td>
</tr>
<tr>
<td>▪ Gastroschisis and Omphalocoele</td>
</tr>
<tr>
<td>▪ Congenital Diaphragmatic Hernia</td>
</tr>
<tr>
<td>▪ Esophageal Atresia and TE Fistula</td>
</tr>
<tr>
<td>▪ General Post-Op Care of the Transplant Patient</td>
</tr>
<tr>
<td>▪ Preventing Surgical Site Infections</td>
</tr>
<tr>
<td>o Malnutrition and Malabsorption</td>
</tr>
<tr>
<td>▪ Neonatal Nutrition</td>
</tr>
<tr>
<td>▪ Nutrition in the Critically III Child</td>
</tr>
<tr>
<td>▪ Necrotizing Enterocolitis</td>
</tr>
<tr>
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</tr>
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</tr>
<tr>
<td>▪ Neonatal Nutrition</td>
</tr>
<tr>
<td>▪ Disseminated Intravascular Coagulation</td>
</tr>
<tr>
<td>▪ Neonatal Sepsis</td>
</tr>
<tr>
<td><strong>Renal/Genitourinary</strong></td>
</tr>
<tr>
<td>o Acute Kidney Injury, Failure, Acute Tubular Necrosis</td>
</tr>
<tr>
<td><strong>Renal Failure in the Pediatric Patient</strong></td>
</tr>
<tr>
<td><strong>Hemodialysis</strong></td>
</tr>
<tr>
<td><strong>Continuous Renal Replacement Therapy</strong></td>
</tr>
<tr>
<td><strong>Neonatal Pharmacokinetics</strong></td>
</tr>
<tr>
<td><strong>Renal/GI Infections</strong></td>
</tr>
<tr>
<td><strong>Neonatal Sepsis</strong></td>
</tr>
<tr>
<td><strong>Comprehensive Assessment of the Neonate</strong></td>
</tr>
<tr>
<td><strong>Life-threatening Electrolyte Imbalances</strong></td>
</tr>
<tr>
<td><strong>Neonatal Nutrition</strong></td>
</tr>
<tr>
<td><strong>Fluids and Electrolytes: Laboratory Assessment</strong></td>
</tr>
<tr>
<td><strong>Fluids and Electrolytes: Physical Assessment</strong></td>
</tr>
<tr>
<td><strong>Fluids and Electrolytes: Physiological Differences</strong></td>
</tr>
<tr>
<td><strong>Fluids and Electrolytes: Replacement Therapy</strong></td>
</tr>
<tr>
<td><strong>Fluids and Electrolytes: Water Intoxication and Fluid Shift</strong></td>
</tr>
<tr>
<td><strong>Polycystic Kidney Disease</strong></td>
</tr>
<tr>
<td><strong>Renal Failure in the Pediatric Patient</strong></td>
</tr>
<tr>
<td><strong>Integumentary</strong></td>
</tr>
<tr>
<td>o IV Infiltration</td>
</tr>
<tr>
<td>▪ Neonatal Skin Care</td>
</tr>
<tr>
<td>▪ Pediatric Peripheral IV Care &amp; Management</td>
</tr>
<tr>
<td>▪ Management of PIV Complications in the Pediatric Patient</td>
</tr>
<tr>
<td>o Wounds (surgical)</td>
</tr>
<tr>
<td>▪ Neonatal Skin Care</td>
</tr>
<tr>
<td>▪ Preventing Surgical Site Infections</td>
</tr>
<tr>
<td>▪ Introduction to Pediatric Pressure Injuries</td>
</tr>
<tr>
<td>▪ Pressure Injuries in the Pediatric Population: Staging and Care</td>
</tr>
<tr>
<td>▪ Pressure Injuries Staging Assessment</td>
</tr>
</tbody>
</table>
### Multisystem
- **Asphyxia**
  - Acute Respiratory Distress Syndrome
  - Hypoxic Ischemic Encephalopathy
  - Maternal Factors Affecting the Newborn
- **End of Life**
  - Care of the Dying Child: Care Issues
  - Care of the Dying Child: Grief
  - Care of the Dying Child: The Dying Process
  - Health Care Advance Directives: Communicating Wishes
  - Organ and Tissue Donation: The Gift of Life
- **Healthcare-associated Infections (CLABSI, CAUTI, VAP)**
  - Preventing Catheter-Associated Urinary Tract Infection (CAUTI)
  - Preventing Central Line-Associated Bloodstream Infections (CLABSI)
  - Preventing Surgical Site Infections
  - Preventing Ventilator-Associated Infections
  - Central Lines in the Neonate
- **Hypotension**
  - Vasoactive Medications
- **Infectious Diseases (MDROs; influenza)**
  - Management of MDROs in the Health Care Setting (Clinical)
  - Tuberculosis
- **Life-threatening Maternal-Fetal Complications**
  - Maternal Factors Affecting the Newborn
  - Anemia and Polycythemia in the Neonate
- **Low Birth Weight/Prematurity**
  - Comprehensive Assessment of the Neonate
  - Retinopathy of Prematurity
  - Neonatal Nutrition
- **Multi-organ Dysfunction Syndrome (MODS)**
  - Neonatal Sepsis
- **Pain**
  - Neonatal Pain Assessment and Management
  - Pain Management: Assessment of Pain
  - Pain Management: Non-Pharmacological Therapies in the Management of Pediatric Pain
  - Pain Pathophysiology
  - Pain Management: Pharmacological Management of Pediatric Pain
  - Procedural Sedation in the Pediatric Patient
- **Sepsis Continuum (SIRS, sepsis, severe sepsis, septic shock)**
  - Neonatal Sepsis
  - Pediatric Sepsis
  - Care of the Pediatric Patient in Shock
  - Blood Administration: Exchange Transfusion
- **Shock States (distributive, hypovolemic)**
  - Care of the Pediatric Patient in Shock
  - Introduction to ECMO
- **Thermoregulation**
  - Thermoregulation of the Newborn Infant
  - Neonatal Skin Care
- **Toxin/Drug Exposure**
  - Pediatric Toxicology Exposure
  - Neonatal Pharmacokinetics

### Professional Caring and Ethical Practice
- **Advocacy/Moral Agency**
  - Introduction to Ethics
  - Family-Centered Care in the NICU
  - Therapeutic Relationships and Professional Behaviors
- **Caring Practices**
  - Introduction to Ethics
  - Family-Centered Care in the NICU
- **Response to Diversity**
  - Introduction to Workplace Diversity
  - Family-Centered Care in the NICU
- **Facilitation of Learning**
  - Precepting:
    - Adult Learners
    - Preceptor Roles and Responsibilities
  - Collaboration
    - Building Effective Teams
    - Clinical Delegation
    - Coaching
    - Empowering Teams
    - Giving and Receiving Feedback
    - Therapeutic Relationships and Professional Behaviors
  - Systems Thinking
    - Building Effective Teams
    - Empowering Teams
  - Clinical Inquiry
    - Introduction to Research Ethics
Other related and supporting PLS Content

<table>
<thead>
<tr>
<th>Patient care</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assessment of the Critically Ill Child</td>
<td>• Blood Administration: Blood Components</td>
</tr>
<tr>
<td>• Blood Administration: Administration of Blood and Blood Components</td>
<td>• Blood Administration: Transfusion Reaction</td>
</tr>
<tr>
<td></td>
<td>• Caring for the Complex Patient</td>
</tr>
</tbody>
</table>