

Program Name:	Program Number:			
NBRC Therapist Combined Detailed Content Outline Comparison with Curriculum (Effective: January 2027)	List Course Numbers(s)			
	Didactic	Lab	Clinical	Simulation

1. PATIENT DATA				
A. Evaluate Data in the Patient Record				
1. Patient history, for example, • history of present illness (HPI) • social, family, and medical history • consultations / orders • medication reconciliation • notes / flowsheet • DNR status / advance directives • vaccination status				
2. Laboratory results, for example, • CBC and differential • IgE • electrolytes • coagulation studies • Gram stain, culture, and sensitivities • respiratory pathogen studies • cardiac biomarkers • blood gas analysis and / or hemoximetry (CO-oximetry)				

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3. Pulmonary function testing results, for example • spirometry • lung volumes • DLCO				
4. Imaging study results, for example, • chest radiograph • CT scan • ultrasonography and / or echocardiography • ventilation / perfusion scan • ECG				
5. Maternal and perinatal / neonatal history, for example, • APGAR scores • gestational age • L / S ratio				
6. Sleep study results, for example, • apnea-hypopnea index (AHI)				
7. Trends in monitoring results				
a. fluid balance				
b. vital signs / hemodynamics				
c. intracranial pressure				
d. ventilator liberation parameters				

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e. pulmonary mechanics for screening - airway pressure - lung volume - flow				
f. transtracheal cuff pressure				
g. noninvasive, for example, - pulse oximetry and hemoximetry (CO-oximetry) - capnography - transcutaneous				
8. Determination of a patient's condition				
B. Perform Clinical Assessment				
1. Evaluating a patient through observation or interview				
a. general appearance				
b. mental status, level of consciousness and orientation, agitation, and ability to cooperate				
c. level of pain				
d. shortness of breath, cough, sputum (amount and character), and exercise tolerance				
e. signs of labored breathing				
f. vaping or smoking history				
g. occupational and environmental exposures				
h. activities of daily living				

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i. characteristics of the airway, for example, • patency • Mallampati classification • tracheal shift				
j. neonatal characteristics, for example, • APGAR scores • gestational age • cardiopulmonary status				
k. skin integrity, for example, • injuries related to positioning or devices • stoma site				
l. learning needs, for example, • literacy • preferred learning style and language • social / cultural				
m. social determinants of health and health inequality / barriers to healthcare				
2. Evaluating a patient through palpation				
a. pulse, rhythm, intensity				
b. asymmetrical chest movements, crepitus, tenderness, tactile rhonchi, and / or tracheal deviation				
3. Auscultating to assess cardiopulmonary system				

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4. Evaluating a patient's chest radiograph				
a. quality of imaging, for example, • patient positioning • penetration • lung inflation				
b. presence and position of tubes, airways, lines, and drains				
c. presence of foreign bodies				
d. heart size and position				
e. presence of, or change in,				
(i) cardiopulmonary abnormalities, for example, • pneumothorax • consolidation • pleural effusion • pulmonary edema				
(ii) diaphragm, mediastinum, and / or trachea				
C. Perform Procedures to Gather Clinical Information				
1. ECG				
2. Noninvasive monitoring, for example, • SpO₂ • SpCO • capnography • transcutaneous				
3. Mechanics of spontaneous ventilation linked to tidal volume, minute volume, maximal inspiratory pressure, and vital capacity				

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4. Blood gas sample collection				
5. Blood gas analysis / hemoximetry (CO-oximetry)				
6. Oxygen titration with exercise				
7. Cardiopulmonary calculations, for example, • $P(A-a)O_2$ • V_D/V_T • P/F • OI • SpO_2/FIO_2				
8. Pulmonary compliance and airway resistance				
9. Plateau pressure				
10. Auto-PEEP determination				
11. Spontaneous breathing trial (SBT)				
12. Apnea monitoring				
13. Apnea test (brain death determination)				
14. Overnight pulse oximetry / transcutaneous CO ₂ monitoring				
15. CPAP / NPPV titration during sleep				
16. Cuff management, for example, • tracheal • supraglottic airway				

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17. Sputum induction				
18. 6-minute walk test				
19. Oxygen titration				
20. Spirometry				
21. DLCO				
22. Lung volumes				
23. Tests of respiratory muscle strength – MIP, MEP, MV				
24. Mini-BAL				
D. Evaluate Procedure Results				
1. ECG				
2. Noninvasive monitoring, for example, • SpO₂ • SpCO • capnography • transcutaneous				
3. Peak flow				
4. Mechanics of spontaneous ventilation linked to tidal volume, minute volume, maximal inspiratory pressure, and vital capacity				
5. Blood gas analysis / hemoximetry (CO-oximetry)				
6. Oxygen titration with exercise				

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7. Cardiopulmonary calculations, for example, • $P(A-a)O_2$ • V_D / V_T • P / F • OI • SpO_2 / FiO_2				
8. Hemodynamic parameters				
9. Pulmonary compliance and airway resistance				
10. Plateau pressure				
11. Auto-PEEP				
12. Spontaneous breathing trial (SBT)				
13. Apnea monitoring				
14. Apnea test (brain death determination)				
15. Overnight pulse oximetry / transcutaneous CO ₂ monitoring				
16. CPAP / NPPV titration during sleep				
17. Cuff status, for example, • tracheal • supraglottic airway				
18. Sputum sample characteristics				
19. 6-minute walk test				
20. Oxygen titration				
21. Spirometry				
22. DLCO				
23. Lung volumes				
24. Tests of respiratory muscle strength – MIP, MEP, MVV				
25. Mini-BAL				

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E. Recommend Diagnostic Procedures				
1. Testing for tuberculosis				
2. Laboratory tests, for example, • CBC and differential • IgE • electrolytes • coagulation studies • sputum culture and sensitivities • cardiac biomarkers • respiratory pathogen studies				
3. Imaging studies				
4. Bronchoscopy – diagnostic, therapeutic				
5. Bronchoalveolar lavage (BAL)				
6. Pulmonary function testing – spirometry, lung volumes, DLCO				
7. Noninvasive monitoring, for example, • SpO₂ • SpCO • capnography • transcutaneous				
8. Blood gas and/or hemoximetry (CO-oximetry)				
9. ECG				
10. Exhaled gas analysis, for example, • CO₂ • CO				
11. Hemodynamic monitoring				
12. Sleep studies				
13. Thoracentesis				

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II. MANAGEMENT of DEVICES and PATIENT SAFETY PROCEDURES				
A. Troubleshoot Devices During and After Assembling				
1. Medical gas delivery interfaces, for example, • mask • cannula				
2. Medical gas delivery and /or clinical analyzing devices, for example, • concentrator • liquid system • flowmeter • regulator • gas cylinder • blender • air compressor • gas analyzer				
3. Heated high-flow devices				
4. CPAP / NPPV with patient interfaces				
5. Humidifiers				
6. Nebulizers				

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7. Inhalers and accessories, for example, • MDI • DPI • SMI • spacer • valved holding chamber				
8. Resuscitation equipment, for example, • self-inflating resuscitator • flow-inflating resuscitator • T-piece resuscitator • defibrillator				
9. Mechanical ventilators				
10. Intubation equipment, for example, • direct laryngoscope • video laryngoscope • flexible fiberoptic bronchoscope				

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11. Artificial airways and accessories, for example • cuff manometer • endotracheal tube • supraglottic airway • tracheostomy / laryngectomy tube				
12. Suctioning equipment, for example, • regulator • canister • tubing • catheter				
13. Blood analyzers, for example, • hemoximetry (CO-oximetry) • point of care • blood gas				
14. Breathing circuits				
15. Hyperinflation devices				
16. Secretion clearance devices				
17. Inhaled gas or medication delivery devices, for example, • He/O₂ • nitric oxide • epoprostenol				
18. Portable spirometer				
19. Lung testing equipment in a pulmonary function laboratory				
20. Chest drainage system				

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21. Noninvasive monitoring, for example, • pulse oximeter • capnometer • transcutaneous				
22. Bronchoscopes				
23. Hemodynamic monitors, transducers, and arterial catheters				
B. Ensure Infection Prevention or Control, Safety, and Performance of Quality Assurance Procedures				
1. Adhering to infection prevention / control policies and procedures, for example, • Standard Precautions • donning/doffing • isolation				
2. Adhering to disinfection policies and procedures				
3. Proper handling of biohazardous materials				
4. Performing quality control procedures				
a. blood analyzers				
b. gas analyzers				
c. pulmonary function equipment for testing				
d. mechanical ventilators				
e. noninvasive monitors				
5. Initiating protocols to prevent ventilator-associated events (VAE)				

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III. INITIATION and MODIFICATION of INTERVENTIONS				
A. Maintain a Patent Airway Including the Care of Artificial Airways				
1. Proper positioning of a patient				
2. Recognizing a difficult airway				
3. Establishing and managing a patient's airway				
a. nasopharyngeal airway				
b. oropharyngeal airway				
c. supraglottic airway				
d. endotracheal tube				
e. tracheostomy tube				
f. laryngectomy tube				
g. speaking valve				
h. device that assists with intubation, for example, • endotracheal tube exchanger • video laryngoscope • bougie				
4. Performing tracheostomy care				
5. Exchanging artificial airways				
6. Maintaining adequate humidification				
7. Performing extubation				
B. Perform Airway Clearance and Lung Expansion Techniques				
1. Postural drainage, percussion, or vibration				
2. Suctioning, for example, • nasotracheal • oropharyngeal • artificial airway				

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3. Mechanical devices, for example, • high-frequency chest wall oscillation • vibratory PEP • oscillating lung expansion • insufflation / exsufflation				
4. Assisted cough, for example, • huff • abdominal thrust				
5. Hyperinflation therapy				
6. Inspiratory muscle training				
C. Support Oxygenation and Ventilation				
1. Minimizing hypoxemia, for example, • patient positioning • airway clearance				
2. Initiating, maintaining, and titrating				
a. oxygen therapy				
b. heated high-flow devices				
c. CPAP by mask or nasal interface				
3. Initiating, maintaining, and titrating mechanical ventilation settings				
a. invasive mechanical ventilation				
b. noninvasive ventilation				
c. high-frequency ventilation				

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d. alarms				
4. Recognizing and correcting patient-ventilator dyssynchrony				
5. Using ventilator graphics				
6. Performing lung recruitment maneuvers				
7. Liberating a patient from mechanical ventilation				
D. Administer Medications and Specialty Gases				
1. Aerosolized therapies				
a. Antimicrobials				
b. pulmonary vasodilators				
c. bronchodilators				
d. mucolytics				
e. steroids				
f. antifibrinolytics				
g. anticoagulants				
2. Endotracheal instillation				

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3. Specialty gases, for example, • He/O₂ • inhaled NO				
E. Make or Recommend Changes to the Respiratory Care Plan				
1. Treatment termination for a severe complication or adverse event				
2. Recommendations				
a. Initiation of treatment based on patient response				
b. treatment of pneumothorax				
c. adjustment of fluid balance				
d. treatment of electrolyte imbalances, for example, • hyperkalemia				
e. insertion or change of artificial airway				
f. liberation from mechanical ventilation				
g. extubation				
h. discontinuation of treatment based on patient response				
i. consultation from a specialist				
j. patient positioning				
k. oxygen therapy				
l. humidification				
m. airway clearance				
n. hyperinflation				
o. mechanical ventilation				

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3. Recommendations for pharmacologic interventions				
a. Bronchodilators				
b. anti-inflammatory drugs				
c. mucolytics				
d. inhaled pulmonary vasodilators				
e. vasoactives and antiarrhythmics				
f. antimicrobials - inhaled and systemic				
g. sedatives and hypnotics				
h. analgesics				
i. antagonists – narcotic and benzodiazepine				
j. neuromuscular blocking and reversal agents				
k. diuretics				
l. surfactants				
m. antifibrinolytics				
n. biologics for asthma, for example, • dupilumab (Dupixent)				
o. CFTR modulators for cystic fibrosis, for example • elexacaftor / tezacaftor / ivacaftor (Trikafta)				
p. changes to drug, dosage, administration frequency, mode, or concentration				

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F. Use Evidence-Based Practice				
1. Adherence to respiratory-driven protocols - oxygen titration - weaning - aerosol therapy				
2. Classification of disease severity				
3. Application of national or international guidelines for diseases / conditions, for example, - ARDS - asthma - COPD - brain death - cystic fibrosis				
G. Provide Respiratory Care in High-Risk Situations				
1. Emergency				
a. cardiopulmonary emergencies, excluding CP				
b. neonatal resuscitation				
c. disaster management				
d. medical emergency team (MET)				
2. Closed loop communication				
3. Patient transport				
a. land / air between hospitals				
b. within a hospital				
4. Debriefing following adverse patient events				

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H. Assist a Physician or Provider in Performing Procedures				
1. Intubation				
2. Bronchoscopy				
3. Specialized bronchoscopy, for example, • endobronchial ultrasound (EBUS) • electromagnetic navigational bronchoscopy (ENB)				
4. Thoracentesis				
5. Tracheotomy				
6. Chest tube insertion				
7. Insertion of arterial or venous catheter				
8. Moderate (conscious) sedation				
9. Cardioversion				
10. Withdrawal of life support				
I. Interact with Team Members, Patients, and Families				
1. Interdisciplinary Team				
a. transitioning care / handoffs				
b. responding to proposed care plan modifications from other team members				
c. communicating concerns leading to the escalation of care				
d. providing education about available respiratory care services				

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e. facilitating optimal team and patient interactions, for example, • patient-centered • trauma-informed • culturally aware				
2. Patient and family education				
a. safety and infection control				
b. home care and related equipment				
c. lifestyle changes, for example, • smoking / vaping cessation • exercise				
d. pulmonary rehabilitation				
e. disease / condition management, for example, • asthma • COPD • Cystic Fibrosis • tracheostomy care • ventilator dependent				