# Pediatric Pulmonology and Sleep Medicine

**Course Director**  
William Wooten, MD/ Justin Paulson, MD

**Duration**  
2 Weeks (Can be selected twice for 4 weeks total)

## Course Goals
The pediatric pulmonology elective provides experience in multiple aspects of a pediatric pulmonary practice, including outpatient clinics, inpatient consultations, and procedures such as flexible bronchoscopy. Students participate in the clinical management of common pediatric pulmonary diseases including bronchopulmonary dysplasia, asthma, cystic fibrosis, and obstructive sleep apnea. Students will gain exposure to diagnostic tests including pulmonary function testing, allergy skin testing, and overnight polysomnography.

## Educational Objectives
1. Discuss aspects of pulmonary physiology including ventilation/perfusion and respiratory mechanics as it relates to common medical problems seen in pediatric pulmonology clinic, including patients with obstructive / restrictive diseases and tracheostomy.
2. Identify common abnormalities of respiration upon physical examination, including signs of respiratory distress, stridor, wheezing, and crackles.
3. Perform appropriate history and physical exam and develop an appropriate differential diagnosis for patients with pediatric pulmonary problems.
4. Discuss the natural history and clinical features of chronic pulmonary problems including asthma, cystic fibrosis, chest wall abnormalities and bronchopulmonary dysplasia.
5. Recognize signs and symptoms of obstructive sleep apnea and describe the diagnosis and management of sleep disordered breathing.
6. Compare and contrast the appropriate use, risks and benefits of therapeutic interventions including inhaler/medication use, airway clearance techniques, systemic and inhaled corticosteroids, and antibiotics.
7. Recognize abnormal findings on diagnostic testing including blood gas analysis, chest imaging, flexible bronchoscopy, and overnight polysomnography and utilize to inform next steps in management.

## Course Readings
Selected readings in pediatric pulmonology will provided to each student by the course director at beginning of rotation. Students will be also be provided with individualized, patient-related readings from primary literature during the elective.

## Course Activities/Experience
- Lectures, clinics, conferences to be attended?
  - Pediatric morning report, grand rounds, transitional care unit (TCU)
team interdisciplinary rounds, CF team meetings

- In what location will students be observed on this elective?
  - Pediatric Pulmonology Outpatient Clinic at the ECU Pediatric Subspecialty Building
  - ECU Pulmonary Sleep Clinic in the Moye 1 Building
  - Vidant Medical Center Maynard Children’s Hospital

- How will students receive mid-course, formative feedback of their performance?
  - Verbal feedback will be provided to the student at the mid-rotation point of the elective
  - Formal written evaluation will be completed at end of the elective

- Oral presentation, written assignments required?
  - Oral discussion based on a review of the literature pertinent to a clinical case. Topic to be arranged during first 2 weeks of the 4-week rotation by the course director.

- Research requirement? None

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<tr>
<th><strong>On Call Requirements</strong></th>
<th>No on-call requirement. Student is present during usual clinical hours (8:00am – 5:00pm, Monday – Friday, excluding holidays as determined by the ECU calendar).</th>
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<tbody>
<tr>
<td><strong>Student Performance &amp; Assessment</strong></td>
<td>Student performance is assessed by demonstration of medical knowledge during encounters with patients, by performing problem-focused history and physical examinations, and ability to develop differential diagnoses and appropriate assessment/plan. The student will also be evaluated on quality of interaction with patients, families, and staff during the rotation. Students completing the rotation as a two-week required Core Clinical Selective will be assigned a grade of Pass or Fail. Students completing the rotation as an M4 elective, either two or four weeks in duration, will be assigned a letter grade.</td>
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<td><strong>Other Info</strong></td>
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