Foothill College Course Outline of Record

<table>
<thead>
<tr>
<th>Heading</th>
<th>Value</th>
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<tbody>
<tr>
<td>Effective Term:</td>
<td>Summer 2023</td>
</tr>
<tr>
<td>Units:</td>
<td>5</td>
</tr>
<tr>
<td>Hours:</td>
<td>5 lecture per week (60 total per quarter)</td>
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<tr>
<td>Degree &amp; Credit Status:</td>
<td>Degree-Applicable Credit Course</td>
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<tr>
<td>Foothill GE:</td>
<td>Non-GE</td>
</tr>
<tr>
<td>Transferable:</td>
<td>CSU</td>
</tr>
<tr>
<td>Grade Type:</td>
<td>Letter Grade Only</td>
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<tr>
<td>Repeatability:</td>
<td>Not Repeatable</td>
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Student Learning Outcomes

- The student will be able to understand endoscopic imaging.
- The student will be able to contrast moderate and deep sedation techniques.

Description

Provides the general principles of interventional pulmonology. Disease-specific application, including diagnostic and therapeutic interventions, techniques, and procedures, are introduced.

Course Objectives

The student will be able to:

a. Describe pulmonary diseases and disorders, including their cause, clinical features, treatment, and management
b. Define interventional pulmonology
c. Describe the evolution of interventional pulmonology
d. Describe the current and future status of interventional pulmonology
e. Describe education and training in interventional pulmonology
f. Define medical terminology related to interventional pulmonology procedures
g. Describe patient monitoring during interventional pulmonology procedures
h. Describe general infection control and universal precautions
  i. Describe radiation protection
j. Contrast moderate and deep sedation techniques
k. Understand the physiology of fixed airway obstruction
l. Explain airway imaging equipment
m. Describe simulation for endoscopy and bronchoscopy training

Course Content

a. Pulmonary diseases
   i. Restrictive vs. obstructive diseases
   ii. Infectious diseases
   iii. Interstitial lung diseases
   iv. Chronic obstructive pulmonary disease (COPD)
   v. Asthma
   vi. Cystic fibrosis and related diseases
   vii. Pleural diseases
   viii. Pulmonary vascular diseases
   ix. Acute lung injury
   x. Pulmonary edema
   xi. Multiple system organ failure
   xii. Diseases of the chest wall, including neuromuscular diseases
   xiii. Neonatal and pediatric respiratory disorders
xiv. Lung cancer
   1. Small cell lung CA
   2. Non-small cell lung CA
      a. Adenocarcinoma
      b. Squamous cell carcinoma
      c. Large cell carcinoma
   3. Staging of lung cancer
      a. TNM classification
      b. Stages for non-small cell CA
         i. Stage 0
         ii. Stage I
         iii. Stage II
         iv. Stage IIIA
         v. Stage IIIB
         vi. Stage IV
      c. Staging for small cell CA
         i. Limited
         ii. Extensive
b. Interventional pulmonology
   i. Definition of interventional pulmonology
c. Evolution of interventional pulmonology
   i. Development of interventional pulmonology
   ii. The development of the first endoscopes
   iii. The invention of bronchoscopy
      1. The rigid bronchoscope
      2. The flexible bronchoscope
   iv. Technical developments
      1. Illumination
      2. Documentation using media
      3. Simulation models
d. Current and future status of interventional pulmonology
   i. Interventional pulmonology, 1980s, 1990s, and 2000s
   ii. Future projections in interventional pulmonology
e. Education and training in the field of interventional pulmonology
   i. Current medical fellowship programs for pulmonologists
f. Medical terminology
   i. Medicine and specialties related to interventional pulmonology
   ii. Related diagnostic, therapeutic, and surgical terms associated with interventional pulmonology
   iii. Related body systems associated with interventional pulmonology
   iv. Diseases and disorders associated with interventional pulmonology
g. Patient monitoring
i. Vital signs
ii. Review of ECG monitoring
iii. Pulse oximetry review
iv. Capnometry review
v. Hemodynamic monitoring
vi. Postoperative complications
   1. Prevention
   2. Management
h. Infection control and universal precaution
   i. Medical asepsis
   ii. Universal precautions
   iii. Isolation procedures
i. Radiation protection during procedures
   i. Therapist protection from radiation exposure
      1. Aprons
      2. Shields
   ii. Dosimeters
   iii. Closing doors during procedures
   iv. Safety precautions
j. Moderate and deep sedation techniques
   i. Analgesia
   ii. Minimal sedation
   iii. Moderate sedation
   iv. Deep sedation
v. General anesthesia
vi. Mallampati classifications
   1. Class I
   2. Class II
   3. Class III
   4. Class IV
vii. Comorbidity assessments
   1. ASA physical status
viii. Equipment and monitors
  ix. Post-procedure recovery
x. Pharmacology
k. Physiology of fixed airway obstruction
   i. Spirometry
   ii. Diagnosis
l. Airway imaging
   i. Autofluorescence imaging (AFI)
   ii. Narrow band imaging (NBI)
   iii. Confocal microscopy
m. Simulation for endoscopy and bronchoscopy training
   i. Simulation in bronchoscopy education
   ii. Lo-fidelity simulation
   iii. Hi-fidelity simulation
   iv. Simulation for advanced procedures

2. Computer access for online component

Method(s) of Evaluation
Methods of Evaluation may include but are not limited to the following:

- Discussion board posts
- Quizzes
- Midterm
- Comprehensive final examination for knowledge of subject matter

Method(s) of Instruction
Methods of Instruction may include but are not limited to the following:

- Lecture
- Discussion
- Online modules and tutorials

Representative Text(s) and Other Materials

Despite being older than five years, this is a seminal textbook in this area of study.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

a. Weekly reading from the textbook
b. Cooperative learning exercises
c. Online content

discipline(s)

Respiratory Technologies

Lab Content
Not applicable.

Special Facilities and/or Equipment

1. Multimedia classroom