

# RSPT 88: INTERVENTIONAL PULMONOLOGY RESEARCH PROJECT

## Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2023
Units:	1
Hours:	1 lecture per week (12 total per quarter)
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

## Student Learning Outcomes

- The student will be able to describe basic statistical concepts.
- The student will be able to understand basic research principles.

## Description

Research project on a specialized area of interventional pulmonology. Specific topics to be determined by the instructor.

## Course Objectives

The student will be able to:

- Understand basic research principles
- Understand and evaluate quantitative studies and clinical research
- Understand levels of evidence
- Describe benchmarking
- Understand statistical concepts
- Plan and conduct a research study
- Prepare the study for publishing

## Course Content

- Basic research principles
  - Ethics and research
  - Outcomes research
- Quantitative studies and clinical research
  - How to read a research article
  - Quantitative research
  - Clinical research
  - Statistical concepts
  - Outcomes research
- Evidence-based medicine Levels of Evidence
  - Levels
    - Level 1a
    - Level 1b
    - Level 1c
    - Level 2a

- Level 2b
- Level 2c
- Level 3a
- Level 3b
- Level 4
- Level 5
- Grades of recommendation
- Benchmarking
  - Ratio indicators
  - Process indicators
  - Outcome indicators
- Understand statistical concepts
  - Biostatistics
  - Review descriptive statistics
- Plan and conduct a research study
  - Employ the scientific method
  - Complete all steps involved in conducting the scientific research
    - Develop the study idea
    - Search the literature
    - Consult the experts
    - Write the protocol
    - Obtain the necessary permission
    - Collect the data
    - Measure the data
    - Describe the data
- Prepare the study for publishing
  - Select a venue for submission
  - Structure of student's capstone project
    - Title
    - Abstract
    - Introduction
    - Methods
    - Results
    - Discussion
    - Conclusion
    - Illustrations
  - Submission of student's capstone project
    - First steps involved in submitting student's paper
    - Peer review process
    - Revision process
    - Production process

## Lab Content

Not applicable.

## Special Facilities and/or Equipment

- Multimedia classroom
- Computer access for online component

## Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Evaluation of the capstone project using a project grade checklist

Weekly assignments corresponding to the steps involved in the development of the research topic for the capstone project

## 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

Ernst and Herth. Principles and Practice of Interventional Pulmonology. 2013.

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, research articles, and clinical studies
- b. Cooperative learning exercises
- c. Online content
- d. Weekly assignments apply the steps in developing the selected research topic
- e. This course will culminate in a capstone project in the form of research or other project that articulates the design, organization, statistics, and data analysis used. The project will be prepared for oral and written presentation that could be submitted for publication

## Discipline(s)

Respiratory Technologies