

**Bergen Community College**  
Division of Health Professions  
Department of Respiratory Therapy  
**RSP 240 Diagnostic Monitoring and Patient Assessment**

**Semester and Year:** Fall

**Course and Section Number:** Diagnostic Monitoring and Patient Assessment, RSP-240-001-002-003-004

**Meeting Times and Locations**

**Instructor:**

**Office Location:**

**Phone:**

**Departmental Secretary:**

**Office Hours:**

**Email Address:**

**Course Description**

**3** Lecture with Lab hours; 3 credits

List prerequisites and co-requisites:

**Pre-req: RSP-226**

**Co-req: RSP 231, 250**

Course Description:

This course is designed to provide the students with practices in the art of patient assessment and an understanding of diagnostic and monitoring procedures. The course content includes the collection, analysis, and interpretation of various pulmonary, laboratory, and hemodynamic data. The collected data will then lead the student to consider possible therapeutic interventions and evaluation of patient treatment. Attention is given to those fundamental physiological concepts that provide a foundation for discussion of cardiopulmonary pathophysiology and common cardiopulmonary disorders.

**Student Learning Objectives:** At the completion of this course, the student will be able to:

Discuss the rationale for arterial puncture  
Recognize the proper sites and techniques for arterial puncture  
Identify the Henderson-Hasselbach equation and the ratio needed to maintain pH  
Define simple and mixed acid-base abnormalities  
Identify the compensation mechanisms which maintain acid-base status  
Given the results of an ABG, interpret the acid-base and oxygenation status of the patient  
Relate acid-base abnormalities to specific alterations or disease states  
Given appropriate values, calculate the anion gap  
Discuss treatment for various acid-base abnormalities  
Identify essential elements of carbon dioxide monitoring

Identify the general method of how x-rays are produced  
Identify terminology used in the interpretation of CXRs  
Identify the technique and indications for various CXR views  
Describe CXR markings of various disease patterns  
Recognize the role of CT scans, MRI, and PET scans in the diagnosis of chest diseases  
Discuss the rationale for pulmonary function testing  
Define terms and abbreviations used in pulmonary function testing  
State approximate normal values for lung volumes and capacities  
Identify the relationship of ATPS, BTPS and STPD to pulmonary function testing  
Describe tests of volume, flow, and gas exchange  
Describe special pulmonary function tests  
Identify the theory and methods used to measure FRC and RV  
State normal ranges for pulmonary function test results  
Interpret a PF report to identify patterns of disease  
Recognize the primary abnormalities associated with restrictive and obstructive disease  
Identify standard equipment found in a PFT lab and describe its basic use

Recognize normal values and significance of hematologic and chemistry lab tests  
Recognize the significance of microbiological lab tests; urinalysis; histologic and cytologic exams

Identify and define the following:

arterial blood pressure; mean arterial pressure; pulse pressure  
cardiac output; cardiac index  
pre-load; after-load; contractility; stroke volume; ejection fraction  
drugs which affect the contractility of the heart (inotropes and chronotropes)  
central venous pressure  
pulmonary artery pressure; pulmonary capillary wedge (occluding) pressure  
pulmonary vascular resistance; systemic vascular resistance  
arterial-venous oxygen content

Discuss arterial cannulation with regard to indications, sites; complications; waveforms  
Describe the pulmonary artery catheter  
Given appropriate data, calculate hemodynamic variables  
Recognize variations in measurements associated with ventilation  
Relate alterations in hemodynamic measurements to various disease states

**Course Content**

This course will be presented and delivered in a formal lecture incorporating student discussions, selected multi-media aids, and a guest speaker. There will be laboratory exercises, NBRC Exam Preparatory Practices, and case study presentations that cover hemodynamic issues in the field of Respiratory Care.

**Special Features of the Course (if any)**

MoodleRoom is used to enhance the interaction between the professor and the student. The course incorporates a laboratory section that will allow the student to have a hands-on learning experience using equipment relevant to the subject matter. For example, arterial line sampling equipment will be used, and the use of a pulmonary function testing machine to analyze patient diagnostic PFT tests.

**Course Texts and/or Other Study Materials**

**Required:** *Egan's Fundamentals of Respiratory Care, 11th Ed.* Kacmarek, ISBN- 978-0-323-34136-3

**Optional:** *Clinical Manifestations and Assessment of Respiratory Disease, 7<sup>th</sup> Ed.,* Des Jardins, T., Burton, G., ISBN-978-0-323-24479-4

**Research, Writing, and Examination Requirement(s)**

**This course will contain exams and quizzes. Patient case studies are optional and must be obtained from an actual patient encountered in the student's clinical site. Each case study will become the basis for research of an analysis, monitoring technique, or assessment procedure.**

**Grading Policy****Grade determinations**

- **Exams (5)** **50%**
- **Quizzes (4)** **10%**
- **Laboratory** **40%**

A	Student must show superior work, excel in laboratory skills and contribute positively to class discussions	93 - 100
B+	Student exceeds acceptable standards in classroom work and in practical exercises	88 – 92.9
B	Student must show above average work and standard of achievement in classwork and laboratory skills	83 – 87.9
C+	Student must meet and attain the standard of achievement with reasonable theoretical knowledge and laboratory skills	78 – 82.9
F	Student fails to meet acceptable standards in classroom or laboratory performance	<78
N	Incomplete. Failure to submit all reports will result in an incomplete (N) grade.	

## Course Policy

### \*\*\*Late work or Assignments:

Late work and make-up examinations will be penalized with a grade being no greater than 78%. Late work must be submitted as soon as possible; make-up examinations will be completed during the last week of school at the end of the semester.

### Attendance Policy:

Attendance and punctuality at all class sessions is required and will be factored into the student's overall final grade. Attendance for classroom lecture and lab will be factored into the total grade for the course. For every absence from classroom lecture or lab, 1 point will be deducted from the total grade for the course. If the student is late by 10 minutes for a lecture or lab, 0.5 points will be deducted from the total grade.

**Dress Code:** Student's must be in clinical uniform at all times when at the college, and must wear lab coat when in the laboratory and simulation center. Proper shoes must also be worn with uniform, especially in the lab.

## Departmental Policy Statements

1. Acceptable quality of work and mature behavior are expected from every student at all times. Students are regarded as professionals and are expected to conduct themselves accordingly.
2. High standards of professional performance demand that students maintain good academic progress throughout their course of study in the program.
3. Students demonstrating chronic tardiness or absenteeism will be placed on academic warning or probation, and may be subjected to termination from the program.
4. Absence from a class during a scheduled exam will be subject to the policy of the Instructor for that specific course. If the student is going to miss a scheduled exam It is expected that the student will contact the instructor ahead of time by e-mail or phone to the department office.
5. All students are required to adhere to the policies and procedures of the school as outlined in the college catalogue.
6. Electronic devices are not to be used during this class.
7. Additional department policies are located in the Student Policies and Procedures Manual.

## Student and Faculty Support Services

1. The program's faculty maintain office hours for counseling and are available to provide tutorial assistance to students.
2. Students must make appointments in advance to meet with the respective instructors.
3. Students may also obtain assistance from the College Tutoring Center. Appointments must be made in advance through this center.
4. The College has a personal counseling center for those students who may need personal assistance. Appointments are made directly through this center.
5. Any problems, concerns, or questions should be directed to the course instructor or the student's advisor.

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