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| **PROFESSOR:**  S. Karpel, MPA, RRT, AE-C | **PHONE NUMBER:**  239-985-8306 |
| **OFFICE LOCATION:**  A-119 | **E-MAIL:**  sindee.karpel@fsw.edu |
| **OFFICE HOURS:**  Mon. 7:30a-12p; 1p-4p; Tues. 7:30a-12p; Weds. By appt.; Thurs. By appt.; Fri. 1p-2p | **SEMESTER:**  Fall 2017 |

1. **COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDITS:**

**RET 1024 INTRODUCTION TO CARDIOPULMONARY TECHNOLOGY (3 CREDITS)**

This course begins with an orientation to the Respiratory Care and Cardiovascular Technology Professions. The historical development of and current trends in cardiopulmonary technology are discussed. The basics of applied cardiopulmonary anatomy and physiology as related to cardiopulmonary structure and function are introduced. There are weekly assignments for selected Medical Terminology and basic medical practice, related to asepsis.

1. **PREREQUISITES FOR THIS COURSE:**

Permission to enter into the Respiratory Care or Cardiovascular Programs

**CO-REQUISITES FOR THIS COURSE:**

None

1. **GENERAL COURSE INFORMATION:** Topic Outline.

* Compare the job functions of a Respiratory therapist to those of a Cardiovascular Technologist.
* Name the national organizations, accrediting agencies and national examination bureau for Respiratory Care and Cardiovascular Technology.
* Define common terminology and abbreviations used in medicine particularly as it pertains to the cardiopulmonary systems.
* Locate and use medical journals and web sites provided by the school library and by professional organizations.
* Identify anatomic structures of the cardiopulmonary system from models or diagrams.
* Describe the function of anatomic structures of the cardiopulmonary system.
* Define lung volumes and capacities.
* Explain the concept of ventilation in terms of pleural and pulmonary pressure changes and gas flow.
* Label and describe the various histological layers of blood vessels.
* Name in sequence the blood vessels of the human body from the aorta through body tissues and back to the right heart.
* List the heart chambers and valves through which blood passes from the time it enters the vena cava, through its path through the lungs and back through the left heart to the aorta.
* Analyze a standard normal ECG in relation to cardiac electrical conductance.
* Calculate VT, VD, VA, VE.
* Explain basic gas laws as they pertain to ventilation and gas transport

1. **All courses at Florida SouthWestern State College contribute to the general education program by meeting one or more of the following general education competencies:**

**C**ommunicate clearly in a variety of modes and media.

**R**esearch and examine academic and non-academic information, resources, and evidence.

**E**valuate and utilize mathematical principles, technology, scientific and quantitative data.

**A**nalyze and create individual and collaborative works of art, literature, and performance.

**T**hink critically about questions to yield meaning and value.

**I**nvestigate and engage in the transdisciplinary applications of research, learning, and knowledge.

**V**isualize and engage the world from different historical, social, religious, and cultural approaches.

**E**ngage meanings of active citizenship in one’s community, nation, and the world.

**A.**  **General Education Competencies and Course Outcomes**

1. Listed here are the course outcomes/objectives assessed in this course which play an integral part in contributing to the student’s general education along with the general education competency it supports.

General Education Competency: **Evaluate**

Course Outcomes or Objectives Supporting the General Education Competency Selected:

* Analyze a standard normal ECG in relation to cardiac electrical conductance.
* Calculate VT, VD, VA, VE.
* Explain basic gas laws as they pertain to ventilation and gas transport.
* Demonstrate an advanced knowledge of cardiovascular anatomy and physiology.
* Discuss the transmission of blood through the body .

1. **DISTRICT-WIDE POLICIES:**

**Programs for Students with Disabilities**

Florida SouthWestern State College, in accordance with the Americans with Disabilities Act and the College’s guiding principles, offers students with documented disabilities programs to equalize access to the educational process. Students needing to request an accommodation in this class due to a disability, or who suspect that their academic performance is affected by a disability should contact the Office of Adaptive Services at the nearest campus. The office locations and telephone numbers for the Office of Adaptive Services at each campus can be found at <http://www.fsw.edu/adaptiveservices>.

**REPORTING TITLE IX VIOLATIONS**

Florida SouthWestern State College, in accordance with Title IX and the Violence Against Women Act, has established a set of procedures for reporting and investigating Title IX violations including sexual misconduct.  Students who need to report an incident or need to receive support regarding an incident should contact the Equity Officer at [equity@fsw.edu](mailto:equity@fsw.edu).  Incoming students are encouraged to participate in the Sexual Violence Prevention training offered online.  Additional information and resources can be found on the College’s website at <http://www.fsw.edu/sexualassault>.

1. **REQUIREMENTS FOR THE STUDENTS:**

These include required reading as assigned, participation in class or laboratory observation/ demonstrations, attendance and discussion in class, interaction with appropriate Canvas resources and successful completion of course written homework assignments, quizzes (in class and on-line) and section examinations.

1. **ATTENDANCE POLICY:**

Because this course will include a considerable amount of lecture, discussion and demonstrated activities as well as weekly quizzes or exams, attendance is essential. Any course material missed due to absences from class must be made up to ensure success. This is the student’s responsibility. Alternative access to course content is available via the Canvas site set up for this course. A missed exam or quiz, will result in a grade of zero for that portion of the final grade unless prior alternative arrangements are made with the professor. A missed Quiz or Exam will result in a score of “0” unless prior arrangements are made with the professor.

1. **GRADING POLICY:**

Minimum passing grade for this course is 750 points (75%). A passing grade MUST be achieved in this course, in order to continue in either the cardiovascular technology or respiratory care programs. In addition, the student MUST pass the final examination with a score of 75% or more to progress in either program. In the event that the student does not earn a 75% or higher on the final exam the student will be given a final grade of no more than a “D” despite the student’s final average.

**Grading Scale:**

**93 - 100 = A**

**85 - 92 = B**

**75 - 84 = C \*minimum passing grade**

**60 - 74 = D**

**Below 60 = F**

(Note: The “incomplete” grade [“I”] should be given only when unusual circumstances warrant. An “incomplete” is not a substitute for a “D,” “F,” or “W.” Refer to the policy on “incomplete grades.)

Quizzes are either an in class or on-line activity and **may not be made up.** However, students who must miss a scheduled Section Exam because of illness or an emergency MUST call the professor’s office no later than the day of the exam (239-985-8306). Under those circumstances ONLY, students will be permitted to make up any missed examination prior to the next class meeting date. Making up an examination requires the permission of the professor. Any exam not made up within the specified time will result in a grade of zero (0) for that exam. A student’s grade in this course will be based on the following:

Section Exams (3) 600 points

Weekly Quizzes (10) 100 points

Final exam 300 points (**Must be passed to pass this course**)

Total points 1000 points (**minimum passing = 750 points**)

1. **REQUIRED COURSE MATERIALS:**

* Des Jardins, T. (2013). Cardiopulmonary Anatomy & Physiology. Clifton Park, NY: Thomson Delmar Learning. (w/Access Code)
* Des Jardins, T. & Des Jardins, T. (2013). Workbook to accompany Cardiopulmonary anatomy & physiology, sixth edition. Clifton Park, NY: Delmar Cengage Learning.
* Basic Life Support (BLS) Provider Manual 15-1010

1. **RESERVED MATERIALS FOR THE COURSE:**

Canvas posted materials are extensive. Content Notes, Power point lecture material, Flashcards, Glossary and Sample Quizzes and MP4’s for lectures are very helpful. Videos may also be posted to help enhance the student’s learning. The Canvas site tracks the student’s use of these materials. The opportunities for live & electronic interaction with other students and the professors are also established for the student’s development as a Cardiopulmonary Professional.

1. **CLASS SCHEDULE:** **FALL 2017 (subject to change)**

Aug. 25 Orientation to Cardiopulmonary Programs

Introduction of faculty and staff

Course Syllabus Review

Lecture Topic: History & Development of the CVT & RC Professions

Guest Speaker: Professor Davis

Sept. 1 **Quiz 1** – Professional Acronyms and Basic Medical Terms

Lecture Topic: The Airways and Lung Structures (Chapter 1)

Sept. 8 **Quiz 2** – Airways, Lung Structures and Medical Terms **(This quiz will be online)**

**Online Lecture Topic:** The Alveoli and Parenchymal Tissues (Chapter 1)

Sept. 15 **Quiz 3** – Alveoli, Parenchymal Tissues and Medical Terms

Lecture Topic: Pulmonary Defense Systems and Musculoskeletal System of Thorax (Chapter 1)

**Sept. 22** **Exam 1** [*Course material covered from 8/25 through 9/15*]

Lecture Topic: The Blood and Basic Cardiovascular Systems (Chapter 5)

Guest Speaker: Professor Davis

Sept. 29 **Quiz 4** – The Blood, Basic Cardiovascular Systems related Medical Terms

Lecture Topic: Structure and Function of the Heart (Chapter 5)

Guest Speaker: Professor Davis

Oct. 6 **Quiz 5** -- Structure and Function of the Heart

Lecture Topic: Vascular Structure, Cardiopulmonary Circulation and C-V Physiology

(Chapter 5) Guest Speaker: Professor Davis

Oct. 13 **Quiz 6** – Vascular Structure, Circulation and C-V Physiology

Lecture Topic: Basic Electrophysiology and ECG (Chapter 12)

Guest Speaker: Professor Davis

**Oct. 20**  **Exam 2** [*Course material covered from 9/22 to 10/13]*

Lecture Topic: Ventilation Basics, Alveolar Ventilation and “Mechanics of How We Breathe” (Chapter 2)

Oct. 27 **Quiz 7** – Ventilation Basics and Alveolar Ventilation

Lecture Topic: Lung Volumes, Ventilation Physics and Abnormal Breathing

Patterns (Chapter 2 & 4)

Nov. 3 **Quiz 8** – Lung Volumes, Ventilation Physics and Abnormal Breathing Patterns

Lecture Topic: Pulmonary Function Measurements--Lung Volumes and Abnormal

Breathing Patterns. Laboratory Assessment of Lung Capacities (Chapter 3)

Nov. 10 Veterans Day – College Closed

Nov. 17 Lecture Topic: Pulmonary Function (P.F.) Measurements continued

**Quiz 9** – P.F. Measurements (This quiz is online and due on 11/26/16)

Nov. 24 Thanksgiving Holiday – College Closed

Dec. 1 **Exam 3** [Course material covered from 10/20 to 11/17]

Lecture Topic: Review for Final Examination

**Quiz 10** – Cardiopulmonary Anatomy (This quiz is online and due on 12/9/17)

**Dec. 9**  **Final Cumulative Examination 9am to 11am in A-105**

1. **ANY OTHER INFORMATION OR CLASS PROCEDURES OR POLICIES:**

The class is scheduled to meet in A-105 (Walker Hall) on Friday mornings from 0830 to 1150. Some classes and tutorial sessions may meet in room A-214 to facilitate demonstrations or exam security.

The Canvas content has been established to give students a broad variety of means for learning assigned and related Cardiopulmonary Anatomy and Physiology that is essential for safe practice as a CVT or RCP. The Canvas website is a very helpful resource for this course. It is configured to assist the student in overcoming obstacles to study posed by time and distance. Study groups are encouraged. You should sample the resources and develop study habits that make use of those resources that facilitate your unique learning abilities.

Use of cell phones and pagers is prohibited during class as per the Student Code of Conduct in the College Catalog. **ALL CELL PHONES NEED TO BE TURNED OFF OR PUT INTO AIRPLANE MODE.** Any student who has a cell phone that rings during class will be asked to leave. Use of a cell phone for outgoing, as well as incoming, calls and texts will receive a ONE GRADE LEVEL DEDUCTION ON THEIR FINAL AVERAGE.

Visitors, including children, are not permitted in class.

Students who fall asleep or disrupt the class by talking excessively will be asked to leave and lose 100 points off their total points for the course.

**Academic Dishonesty (Cheating)** is defined as completing written assignments, quizzes or exams with unauthorized electronic, written or verbal assistance. It is also defined as providing unauthorized electronic written or verbal assistance to another student during a required assignment, quizzes or exams. Academic dishonesty is unacceptable behavior. This behavior is subject to sanctions ranging from complete loss of credit on a required assignment, quiz or exam to dismissal from the Respiratory Care or the Cardiovascular Technology Program.