

**UNIVERSITY OF SOUTH ALABAMA
COLLEGE OF ALLIED HEALTH PROFESSIONS
DEPARTMENT OF CARDIORESPIRATORY CARE**

(Revised 8/4/17)

CRC 342 - Clinical Observation and Practicum I
Fall Semester

3 semester hours
Course Format: no web component

COURSE MASTER: Bill Pruitt, RRT, CPFT, AE-C
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OFFICE HOURS: Wednesday and Thursday, 2:00-3:30 p.m.; other times by appointment

DESCRIPTION: Clinical experiences will involve providing care for patients who receive respiratory care modalities, and diagnostic procedures. Prior to the full-time clinical experience, students will have a period of shadowing (observation-only) a respiratory therapist in the clinical setting and will be evaluated on knowledge/performance of selected procedures in the simulation lab. There will be a special fee of \$80 fee for access to Typhon for web-based documentation during clinical. This is a one-time fee that will allow student access for a 3 year period. The Typhon system will be used each semester throughout the program.

COURSE CONTENT:

- Module I - Cylinders, Safety Systems, Regulators, and Flowmeters
- Module II - Oxygen Therapy
- Module III - Humidity/Aerosol Therapy
- Module IV - Rounds and Charting
- Module V - Isolation Technique
- Module VI - Chest Physical Assessment
- Module VII - Bronchial Hygiene Therapy
- Module VIII - Medicated Aerosol Therapy
- Module IX - Hyperinflation Therapy
- Module X - Disinfection and Sterilization
- Module XI – Electrocardiography
- Addendum: Clinical Simulation/oral exam

COURSE GOALS Following this course the student will be able to clinically perform and/or work with the following procedures and/or equipment:

- 1) Compressed medical gas tanks, safety systems, regulators and flowmeters
- 2) Oxygen and aerosol/humidity therapy
- 3) Rounds and charting
- 4) Isolation techniques
- 5) Assessment for therapist driven protocols
- 6) IPPB therapy, chest physical therapy, incentive spirometry, aerosol therapy
- 7) Decontamination and sterilization
- 8) Electrocardiography

CLINICAL ATTENDANCE POLICY:

1. Students are expected to be present for each scheduled clinical day. Because of the nature of clinical experiences, any loss of time will result in a diminished experience for the student.
2. Perfect attendance, while desirable, is not always possible. Therefore, students may miss clinical time for illness, family emergency, or similar extenuating circumstances. However, any absence, unless it is made up, will carry a grade penalty.
3. All absences must be reported both to the clinical site and to our office. Clinical instructors at the designated clinical sites should be notified as soon as possible when an absence is anticipated. This notification must be made within 15 minutes of the scheduled arrival time. The USA Department of Cardiorespiratory Care **MUST** be notified within two hours of the scheduled arrival time. Our number is 251-445-9284.
4. Within three days of returning from an absence, the student must schedule an appointment with the Course Master or the Director of Clinical Education to review reasons for the absence. The student may bring any documentation that is felt to be necessary. Based on this review, the absence will be classified as an excused or unexcused absence. Each day of unexcused absence will result in a lowering of the final clinical course grade by 2 percentage points.
5. Punctuality is expected for each rotation at every clinical site. If you anticipate being tardy or absent, you must call the clinical site and the CRC department (445-9284) within 15 minutes of the starting time of the clinical rotation. An excused absence requires that you must have a legitimate reason for being absent. Each unexcused absence, or of failure to give notice of absence for a legitimate reason, will result in **a letter grade reduction** in your final grade in this course. Each excused absence must be made up or will result in a 2% reduction in your final grade for each unresolved absence. Students must re-schedule missed clinical days with the faculty member of the section involved within 3 business days of the absence. An unreported absence is automatically classified as an unexcused absence. Tardiness in excess of 30 minutes will be classified as an absence and the clinical instructor/preceptor may at his/her discretion elect to send the student home. Chronic tardiness may also result in a grade penalty. Each reported instance of chronic tardiness will result in the lowering of the clinical grade by 2 percentage points.
6. Students who have excessive absences because of extended illness, frequent illness, or other extenuating circumstances may request the scheduling of make-up days. If this entails scheduling past the normal end of the semester, the student may be granted an "I" until the make-up clinical time is completed. University policies as related to the grade of "I" will apply in these circumstances.
7. One excused absence may be allowed without grade penalty each semester at the discretion of the Course Master. If an excused absence is made up, no grade penalty will apply.
8. Make-up time will only be arranged upon a request initiated by the student to the Course Master or Director of Clinical Education. Make-up time may be scheduled for week-ends at the discretion of the DCE. In some instances, it may not be possible to schedule make-up clinical time.
9. Students should report to the clinical site promptly as scheduled. If a student must be late due to unusual or unforeseen circumstances, the student should contact both the clinical site and the USA Department of Cardiorespiratory Care in the same time frame as for an absence (see item #3). Our number is 251-445-9284. Tardiness in excess of 30 minutes

will be classified as an absence and the clinical instructor/preceptor may at his/her discretion elect to send the student home. Chronic tardiness may also result in a grade penalty. Each reported instance of chronic tardiness will result in the lowering of the clinical grade by 2 percentage points.

10. Special projects or events associated with this course may be scheduled at times through the semester (this may include simulations, lectures, etc.). Notification will be sent by email for these events with the intention of at least one week notice. Attendance is expected and unexcused absences will carry a penalty.

POLICY ON EARLY DISMISSAL OF STUDENTS FROM CLINICAL ACTIVITIES:

1. Students shall remain at their assigned clinical site for the entire time scheduled. Clinical schedules are distributed at the beginning of each semester to the students and clinical preceptors.
2. Changes in clinical scheduling must be approved by the Director of Clinical Education (DCE) or other CRC program faculty.
3. Students may leave the clinical site for pursuits directly related to their current clinical rotation (example: neonatal transport to a referring hospital).
4. Students should not use clinical time to study for exams or to use the library for study related to regular class work. Clinical preceptors may assign students to go to on-site libraries for the purpose of research related to clinical activities. These library visits should be of short duration (30 minutes) and the students should report back to the preceptor at the conclusion of the visit.
5. Students may only leave clinical activities early for compelling reasons (illness, family emergency, etc.). In these circumstances, the student must first get approval from the DCE or other program faculty before leaving the clinical site. The DCE or other faculty must inform the clinical preceptor of this approval. In certain rotations, hours may have to be adjusted because of availability of clinical preceptors or changes in hours of operation. The student is required to report such changes to the Course Master of Director of Clinical Education.
6. A single violation of the early dismissal policy will result in a decrease of the final clinical grade by five (5) percentage points. A second violation will result in a decrease of the clinical grade by an additional ten (10) percentage points. Subsequent violations will carry similar grade penalties and would usually lead to a failing grade in the clinical course.
7. Students may be dismissed early for disciplinary reasons if their behavior or dress is seen as disruptive by the clinical preceptor. Penalties for this type of dismissal will be as specified in #6.

SEE “STUDENT ORIENTATION AND HANDBOOK” - APPENDIX B FOR CLINICAL POLICIES. The attendance policy and the early dismissal policy applies to all scheduled clinical time including “Observation-only” time, regular clinical rotations, and any make-up days.

EVALUATION: Students will be assessed according to their ability to perform various tests and procedures, operate the equipment, and interpret the data. Evaluation will occur via a written comprehensive final examination, performance checklists, affective assessments, and a case report. Successful completion of this course is defined as achieving a minimum average of 70% of all assessments. The format of the comprehensive final examination will be multiple

choice and fill-in-the-blank or short answer. Final letter grades will be determined as follows: A – 90 to 100%, B -80 to 89%, C- 70 to 79%, D 60 to 69%, F – 0 to 59%. The final course grade will be determined as follows:

Checklists, Typhon activity and attendance	40%
Simulations/oral exam	10%
Daily logs and Affective assessments	20%
Final written exam	30%

A grade of F* will be assigned in cases where the student does not officially withdraw, but fails to attend, or fails to complete assignments, or who fails to participate in class activities. It will be used when, in the opinion of the instructor, completed assignments or course activities are insufficient to make normal evaluation of academic performance possible.

STUDENTS WITH DISABILITIES:

In accordance with the Americans with Disabilities Act, students with bona fide disabilities will be afforded reasonable accommodations. The Office of Special Student Services (OSSS) will certify a disability and advise faculty members of reasonable accommodations. If you have a specific disability that qualifies you for academic accommodations, please notify the instructor/professor and provide certification from the Office of Special Student Services. OSSS is located at 5828 Old Shell Road at Jaguar Drive, (251-460-7212).

STUDENT ACADEMIC CONDUCT POLICY

The University of South Alabama's policy regarding Student Academic Conduct Policy is found in The Lowdown <http://www.southalabama.edu/lowdown/academicconductpolicy.shtml>: The University of South Alabama is a community of scholars in which the ideals of freedom of inquiry, freedom of thought, freedom of expression, and freedom of the individual are sustained. The University is committed to supporting the exercise of any right guaranteed to individuals by the Constitution and the Code of Alabama and to educating students relative to their responsibilities.

Policy on plagiarism software. Students may learn about the meaning of plagiarism and how to avoid it at the following link:

<http://www.southalabama.edu/univlib/instruction/plagiarismforstudents.html>.

ONLINE WRITING SUPPORT

The University of South Alabama provides online writing tutoring services through SMARTHINKING, an online tutoring service. SMARTHINKING is available at <http://services.smarthinking.com>. Students may enter the site by logging on with their Jag number and using the last four digits of the social security number as the password. For log-on problems, technical questions and/or on-campus writing assistance, contact the USA Writing Center at 251-460-6480 or e-mail csaint-paul@usouthal.edu.

Information about the University Writing Center and Online Writing Lab can be found online at <http://www.southalabama.edu/univlib/instruction/antiplagiarism/writinghelp.html>.

ACADEMIC DISRUPTION POLICY

The University of South Alabama's policy regarding Academic Disruption is found in The Lowdown, the student handbook.

<http://www.southalabama.edu/lowdown/academicdisruption.shtml>:

Disruptive academic behavior is defined as individual or group conduct that interrupts or interferes with any educational activity or environment, infringes upon the rights and privileges of others, results in or threatens the destruction of property and/or is otherwise prejudicial to the maintenance of order in an academic environment.

The faculty expects students to be cordial, courteous and respectful of faculty members and fellow students.

CHANGES IN COURSE REQUIREMENTS:

Not all classes progress at the same rate thus course requirements might have to be modified as circumstances dictate. You will be given written notice by email if the course requirements need to be changed

TEXTBOOKS AND RESOURCES:

Wilkins, Egan's Fundamentals of Respiratory Therapy, 11th ed.

Cairo & Pilbeam, Mosby's Respiratory Care Equipment, 9th ed.

White, Basic Clinical Lab Competencies for Respiratory Care, 5th ed.

Respiratory Therapy Procedure Manuals, See local hospitals

Cell phones are to be left in the department or your car. Do not carry a cell phone into any patient care areas. Making/receiving calls should be limited to emergencies. Checking and sending text messages, etc. are ALLOWED ONLY DURING A BREAK OR MEAL TIME.

GOALS and OBJECTIVES: Upon successful completion of the course, students will gain clinical skills in intermittent respiratory care.

I. Module I - Medical Gases, Safety, and Oxygen Delivery Systems

Through written evaluation and performance checklists, the student will be able to:

1. Transport "G," "H," and "E" cylinders
2. Attach regulators to "G," "H," and "E" cylinders.
3. Prepare a portable O₂ system for patient use.
4. Install flowmeters into wall outlets.
5. Differentiate between compensated and uncompensated flowmeters.
6. Differentiate among various index safety systems employed in the use of gas regulators and cylinders.
7. Describe effects of interchanging flowmeters from one gas to another.
8. Explain the significance of cylinder markings.
9. Differentiate between types of cylinder valves and safety relief devices.
10. Determine cylinder flow duration for size "E," "G," and "H" cylinders.

11. Demonstrate the use of the following regulators:
 - A. Pre-set
 - B. Adjustable
12. Identify gauges for recording flow and pressure
13. Distinguish between Thorpe tube flowmeter and Bourdon gauges.

Module II - Oxygen Therapy

Through written evaluation and performance checklists, the student will be able to

1. Demonstrate oxygen administration via the following equipment:

* Nasal cannula	* Tracheostomy mask
* Simple mask	* Infant hoods
* Venturi mask	* Isolette
* Briggs adaptor	* Partial rebreather mask
* Aerosol mask	* Non-rebreather mask
2. Select appropriate equipment for oxygen administration as indicated by clinical situations.
3. Demonstrate checking for the adequate operation of an oxygen administering system.
4. Discuss the hazards associated with oxygen administration.
5. Physically evaluate the patient to assess effectiveness of oxygen therapy.
6. State the range of concentrations which can be delivered by various oxygen devices.
7. Calculate air/O₂ entrainment ratios.

Module III - Humidity/Aerosol Therapy

Through written evaluation and performance checklists, the student will be able to:

1. Discuss the clinical indications for humidity therapy.
2. Assemble equipment required to implement humidity therapy.
3. Troubleshoot common malfunctions that may occur in various types of humidity equipment.
4. Differentiate between nebulization and humidification.
5. Describe aerosol deposition in the respiratory tract.
6. Explain the indications for aerosol therapy.
7. Discuss hazards associated with inhaled aerosols.
8. Disassemble/assemble a pneumatic aerosol device (hand-held nebulizer)
9. Assemble an aerosol enclosure (pediatric tent)
10. Demonstrate the position and breathing technique used during aerosol therapy.
11. Assemble equipment required to implement aerosol therapy.
12. Troubleshoot common malfunctions that may occur in various nebulization equipment.

Module IV - Oxygen Rounds/Charting

Through written evaluation and performance checklists, the student will be able to:

1. State the rationale for conducting rounds.
2. State the various aspects of a device which warrants inspection to ensure proper operation.
3. Given a clinical situation, demonstrate the charting for each modality using proper abbreviations and medical terminology.

4. Demonstrate the installation of various oxygen devices.
5. Identify the necessary information required in written oxygen orders.
6. Demonstrate the proper routine for changing equipment.
7. Demonstrate the proper departmental charting procedures.

Module V - Isolation Techniques

Through written evaluation and performance checklists, the student will be able to:

1. State the major mechanisms for the transmission of many infectious diseases.
2. Define the various types of isolation:
 - a. strict
 - b. respiratory
 - c. protective
 - d. enteric
 - e. wound and skin
3. Describe the gowning procedure for isolation.
4. Describe the dress required for each type of isolation.

Module VI - Chest Physical Assessment

Through written evaluation and performance checklists, the student will be able to:

1. Examine the patient's chart to determine history, physical, diagnosis and present complaints.
2. Behaving in a professional, caring manner in the presence of other health professionals and patients.
3. Perform patient assessment according to established protocols.
4. Perform a clinical scoring and classification of patient.
5. Complete documentation appropriately.

Module VII - Chest Physical Therapy

Through written evaluation and performance checklists, the student will be able to:

1. Identify by name the lobes and segments of the lungs using a lung model.
2. Justify the use of the following therapeutic modalities:
 - a. postural drainage
 - b. percussion
 - c. vibration
 - d. high frequency chest wall oscillation (Vest therapy)
 - e. vibratory positive expiratory pressure therapy (Flutter, Accapella, Coronet, etc.)
3. Demonstrate all the postural drainage positions used for effective pulmonary drainage.
4. Demonstrate the procedures for percussion and vibration on an adult and infant.
5. Explain the limitations and contraindications of chest physical therapy.

Module VIII - Aerosol Therapy & IPPB Therapy

Through written evaluation and performance checklists, the student will be able to:

1. Evaluate the appropriateness of the physician's orders.
2. Recognize the need for instituting aerosol or IPPB therapy.
3. Evaluate the patient before, during, and after aerosol, IPPB therapy.
4. Describe situations warranting the termination of an aerosol, IPPB treatment.
5. Determine the need for the discontinuation of aerosol, IPPB therapy.
6. Demonstrate the performance of a routine aerosol, IPPB therapy treatment.
7. Demonstrate the performance of aerosol therapy via hand held nebulizer.
8. Demonstrate the ability to instruct and/or assist a patient in the use of metered dose inhalers (MDI) and dry powder inhalers (DPI) for the delivery of medicated aerosols to the lungs.
9. State the classification, dosages, side effects and desired effects of the drugs commonly used in aerosol therapy.

Module IX - Incentive Spirometry

Through written evaluation and performance checklists, the student will be able to:

1. Evaluate the appropriateness of the physician's orders.
2. Recognize the need for instituting incentive spirometry.
3. Evaluate the patient before, during and after incentive spirometry.
4. Determine the need for the discontinuation of incentive spirometry.
5. Demonstrate the performance of a routine incentive spirometry treatment.

Module X - Disinfection and Sterilization Techniques

Through written evaluation and performance checklists, the student will be able to:

1. Prepare respiratory therapy equipment for disinfection.
2. Wash equipment.
3. Pasteurize or otherwise disinfect equipment.

Module XI - Electrocardiography

Through written evaluation and performance checklists, the student will be able to:

1. Prepare the ECG machine and the patient with proper lead placement to record a 3-lead and a 12-lead
2. Discuss basic arrhythmias, discuss steps to take if a serious arrhythmia is noted, and troubleshoot problems with the recording
3. Explain the charting and billing requirements
4. Explain the handling of the recording (where do reports go, where does the ECG go)

Addendum: Clinical Simulation/oral exam

Prior to the full-time weeks in clinical rotations at the hospitals, students will be evaluated for knowledge and performance of selected procedures from the above listings in Modules I-X. These procedures will have been presented in lecture and lab and will have been observed in the observation sessions at the hospitals. Students will be expected to perform the procedures and answer questions regarding the procedure and their performance.