COURSE NUMBER: RSPT 1411
COURSE TITLE: Respiratory Care Procedures II
CREDIT HOURS: 4
LECTURE HOURS: 3
LAB HOURS: 4
PREREQUISITE: RSPT 1410
COREQUISITE: RSPT 1361, RSPT 2310, RSPT 2317
COLLEGE REPEAT POLICY: A student may repeat this course only once after receiving a grade, including "W"
COURSE DELIVERY METHOD: Lecture, Group work, Computer aided Lab, Audio-visual presentations and case study examples, and structured laboratory sessions.
SEMESTER: Spring 2010
INSTRUCTOR(S): Abe Johnson Th.M, RRT, RCP
Dawn Headrick, RRT-NPS, RCP (lab)
Lisa Clock RRT, RCP (lab)
Daniel Cluck RRT, RCP (lab)
TELEPHONE: (972) 548-6870
EMAIL: ajohnson@collin.edu
OFFICE & OFFICE HOURS: E 305; by appointment only
CLASS TIME & PLACE: Lecture: E-210 Mondays and Wednesdays 9:30 AM to 10:50 AM
Lab: E-313 Mondays and Wednesdays 12:00 PM to 4:00 PM
Wilkins, Scanlan et. al. (2008), Egan’s Fundamental of respiratory Care, 8th ed., Mosby

**SUGGESTED BIBLIOGRAPHY:**


**SUPPLIES**

Notes taking supplies

**STUDENT LEARNING OUTCOMES:**

At the successful completion of this course, the students will be able to do the following with a minimum accuracy of 75%.

1. Select, review, obtain and interpret data pertaining to airway care and mechanical ventilation.
2. Manipulate equipment for proper function; identify and correct equipment malfunctions.
3. Maintain patient records and communicate relevant information to members of the health care team
4. Recognize signs of airway emergencies.
5. Respond appropriately to airway emergencies and manage them.
6. Demonstrate with accuracy, the placement of oropharyngeal, nasopharyngeal, specialty airways, endotracheal, and tracheostomy airways.
7. Explain the use of tracheostomy tube and its care.
8. Explain endotracheal tube insertion, management and removal.
9. Describe the basic principles of mechanical ventilation.
10. Recommend the type of ventilation strategies including the right ventilator based on the patient’s clinical and pathological condition.
11. Explain various therapeutic modalities involved with managing mechanical ventilation
12. Recommend and/or modify mechanical ventilation in a variety of clinical situations
13. Describe the complications and the physiological effects of mechanical ventilation
14. Demonstrate setting up the mechanical ventilators (All available Mechanical Ventilators in the lab) ready for patient admission
15. Demonstrate managing the mechanical ventilator (All available Mechanical Ventilators in the lab) attached to a manikin or test lung for different clinical scenarios
16. Demonstrate troubleshooting ability during mechanical ventilation operation (All available Mechanical Ventilators in the lab)
17. Demonstrate ability to clean and prepare the ventilator for use in an aseptic way (All available Mechanical Ventilators in the lab).
18. Demonstrate with proficiency, transport of intubated patients using manikins

These general objectives are subject to change as dictated by evidence-based medicine and NBRC content matrix.
LEARNING OUTCOMES EVALUATION:

The above learning objectives will be measured for outcome in the following way via written testing and completion of laboratory assignments:

1. Content-based tests with questions covering the various cognitive levels identified by NBRC. A passing grade of 75% or more is required for each test.
2. Successful performance of 75% or more on each of the quizzes given in class. All quizzes are to be content-based covering all cognitive levels established by NBRC.
3. Successful performance of 75% or more on the comprehensive final exam patterned after the NBRC exam.
4. Successfully complete Lab (see lab instructor guidelines) and other assignments. Students must successfully complete all the required competencies in the lab in order to pass the class.

METHOD OF EVALUATION:

As outlined below.

COURSE GRADING CRITERIA:

- Quizzes 15%
- Reading/Textbook Quizzes 5%
- Tests 30%
- Comprehensive Final exam 25%
- Lab 10%
- Simulation Lab 5%
- Software 10%

GRADING SCALE:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 – 100</td>
</tr>
<tr>
<td>B</td>
<td>80 – 89</td>
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<tr>
<td>C</td>
<td>75 – 79</td>
</tr>
<tr>
<td>D</td>
<td>60 – 74</td>
</tr>
</tbody>
</table>

*A course grade of 75% or higher is required to successfully pass this course and proceed in the Respiratory Care Program. See Respiratory Care student handbook for details.*

GRADING POLICIES:

1. Students absent on exam days must make-up the exam on the next scheduled class day.
2. All make-up exams are subject to a 15% reduction from the final score.
3. Quizzes may be announced or unannounced and there will be no make-up allowed for missed quizzes (a grade of zero will be assigned for missed quizzes).
4. The student must achieve an overall grade of 75% or better to pass the course.

SOFTWARE ASSIGNMENTS:

The student will be graded on their performance on assigned software. Ten points will be deducted from the grade of any assignment for each class day (this includes clinical days) it is turned in past the due date or time specified. Assignments may be turned in prior to assigned date.

The following Software Assignments are **required**:

1. Visible ventilator – **PB7200ae**: All students must take a quiz after successful completion of this software.
2. V-Sim Lab: All students must complete 7 labs and print out the notebook for each lab and turn it in to the instructor based on the schedule.
3. All students must complete the **Darger Evita 4** and **Evita XL** online tutorial. There will be a quiz on Drager ventilators.
4. There will be a quiz on Maquet Servo-i Ventilator
5. There will be quizzes on PB 840 and other brands of ventilators as well.
6. Demonstrate competency on Respironics Esprit Ventilator (When it becomes available)

CLASSROOM POLICIES:
The faculty will adhere to Collin College student handbook and the respiratory care student handbook for conduct and classroom expectations. Use of cell phones for texting messages or any other purpose while in class or lab is grounds for dismissal. Cell phones may not be used in place of a calculator. For all other specific issues, please refer to the above handbooks.

LABORATORY TIME: Mondays and Wednesdays 12:00 PM to 4:00 PM. Lab attendance is mandatory. The lab instructor will provide expectations and schedule on the first day of the lab. Please follow the lab instructor guidelines for securing a successful lab grade. Students must be available for both the days of lab. In addition, there will be multiple open labs on Saturdays for students to attend. Saturday open labs are open to all students, but not mandatory. Students must sign-up early for Saturday labs.

LAB COMPETENCIES:

*denotes lab competencies that are also completed as clinical competencies in RSPT 1361 this semester, clinical competencies are not permitted until lab competencies are complete

01. Adult Nasotracheal Suctioning*
02. Adult Tracheal Suctioning*
03. Adult Inline Suctioning
04. Adult ET Suctioning
05. Adult Intubation
06. Adult Securing an Artificial Airway
07. Adult Set-up and Ventilation via BVM*
08. Adult Set-up and Ventilation via ET Tube
09. Adult Extubation
10. Heat Moisture Exchanger
11. Adult Cuff Management
12. Adult Tracheostomy Care
13. Adult Ventilator Set-Up
14. Adult Ventilator Circuit Change
15. Adult Routine Ventilator Check
16. Adult Ventilator Parameter Change
17. Manual Ventilation during Transport
18. Generic: As determined by the lab instructor

Ventilator workshops, ventilator software, structured labs with competency on PB 7200, PB 840, Draeger, Servo-i, and E-vent, and oral/nasal airway insertion are all required activities in addition to the above competencies

ATTENDANCE POLICY:
Although there is no required attendance policy for the college it is expected that the student must attend ALL of the scheduled classes since there is material that is covered during each lecture and lab period that may or may not be tested but is essential to the overall learning process of the program. Lab participation is mandatory. In the event that a student must miss a class or lab, it is his or her responsibility to obtain the materials that was discussed in their absence. Students are responsible for officially withdrawing themselves from the course; failure to do so will result in a performance grade of "F".
WITHDAWAL POLICY: Beginning with the Fall 2007 semester, new first time students may not withdraw from more than six courses. Under section 51.907 of the Texas Education Code, an institute of higher education may not permit a student to withdraw from more than six courses, including any course a transfer student has withdrawn from at another institute of higher education.

Any course that a student withdraws from is counted toward the six course limit if:

1. Individual course withdrawal is done after the census date and,
2. The student's transcript indicates or will indicate that the student enrolled in the course and,
3. The student is not withdrawing from the course in order to withdraw from the institution
4. Courses dropped at another Texas public institution of higher education, unless it qualifies as an exception.

Some exemptions for good cause could allow a student to withdraw from a course that does not count toward this limit, but it is the student’s responsibility to establish good cause.

Any Collin student affected by this statute who plans to attend another public institution of higher education should become familiar with that institution's policies.

Collin College will begin tracking dropped courses with the Fall, 2008 semester.

Policies and procedures are the implementation for this new law are being developed and will be published as soon as they are available.

Please contact the Academic Advising Office or Admissions and Records Office before you withdraw from a course.

Please visit URL to the right for details: [http://www.ccccd.edu/aro/withdrawal.htm](http://www.ccccd.edu/aro/withdrawal.htm)

Withdrawal date for the spring semester is March 12, 2010.

Religious Holy days: Please refer to the current Collin Student Handbook

ADA Statement: It is the policy of Collin County Community College to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student’s responsibility to contact the ACCESS office, SCC-G200 or 972.881.5898 (V/TTD: 972.881.5950) in a timely manner to arrange for appropriate accommodations.

ACADEMIC ETHICS: The College District may initiate disciplinary proceedings against a student accused of scholastic dishonesty. Scholastic dishonesty includes, but is not limited to, statements, acts, or omissions related to applications for enrollment or the award of a degree, and/or the submission as one’s own work material that is not one’s own. Scholastic dishonesty may involve, but is not limited to, one (1) or more of the following acts: cheating, plagiarism, collusion, use of annotated texts or teacher’s editions, and/or falsifying academic records.
**Plagiarism** is the use of an author’s words or ideas as if they were one’s own without giving credit to the source, including, but not limited to, failure to acknowledge a direct quotation.

**Cheating** is the willful giving or receiving of information in an unauthorized manner during an examination, illicitly obtaining examination questions in advance, copying computer or Internet files, using someone else’s work for assignments as if it were one’s own, or any other dishonest means of attempting to fulfill the requirements of a course.

**Collusion** is intentionally or unintentionally aiding or attempting to aid another in an act of scholastic dishonesty, including but not limited to, failing to secure academic work; providing a paper or project to another student; providing an inappropriate level of assistance; communicating answers to a classmate about an examination or any other course assignment; removing tests or answer sheets from a test site, and allowing a classmate to copy answers.

Please refer to the “Respiratory Care Student Handbook” and the CCCCD student hand book for policies and procedures involving academic conduct related to the Respiratory Care Program.

**CONTENT OUTLINE:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Content</th>
<th>Assignments</th>
<th>Software</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 20 Wed</td>
<td><strong>Course Introduction</strong></td>
<td>Read Egan’s Chapter 33, Pages 693 to 741</td>
<td>none</td>
<td>• Review of Final exams: RSPT 1307 &amp; 1410</td>
</tr>
<tr>
<td></td>
<td><strong>Airway Management – 1</strong></td>
<td></td>
<td></td>
<td>• Sign up for lab</td>
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<td>• Partial and Complete Airway obstruction</td>
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<td>• Update contact information</td>
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<td></td>
<td>• Causes of AW obstruction</td>
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<td></td>
<td>• Methods for establishing a patent airway</td>
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<td></td>
<td>• Oral and Nasal Airways</td>
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<tr>
<td>Jan 25 Mon</td>
<td><strong>Airway Management – 2</strong></td>
<td>Read Egan’s Chapter 33, Pages 693 to 741</td>
<td>Introduction and practice of airway management</td>
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<tr>
<td></td>
<td>• Specialty Airways</td>
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<td>1. Oral airways</td>
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<td>• Endotracheal airways</td>
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<td>2. Nasal airways</td>
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<td>• Endotracheal Intubation</td>
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<td>3. LMA</td>
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<td>• Tracheostomy and tracheostomy tubes</td>
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<td>4. Combitube</td>
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<td>Review: ABGs</td>
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<tr>
<td>Jan 27 Wed</td>
<td><strong>Airway Management - 3</strong></td>
<td>Read Egan’s Chapter 33, Pages 693 to 741</td>
<td>V-Sim Lab 1 Due</td>
<td>Introduction and practice of airway management</td>
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<td></td>
<td>• Cuff management</td>
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<td>1. Oral airways</td>
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<td>• Speaking valves</td>
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<td>2. Nasal airways</td>
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<td>• Extubation and Decannulation</td>
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<td>3. LMA</td>
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<td>Review: ABGs</td>
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<td>4. Combitube</td>
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<tr>
<td>Feb 1 Mon</td>
<td><strong>Airway Management -4</strong></td>
<td>Pilbeam: Pages 15 - 23</td>
<td>Competency Evaluation</td>
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<td></td>
<td>• Catch-up</td>
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<td>• Case studies &amp; Review</td>
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<td>Review: Ventilation Principles</td>
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<td>Feb 3 Wed</td>
<td><strong>Test 1</strong></td>
<td>Covers Unit- I</td>
<td>Competency Evaluation</td>
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<td>Feb 8</td>
<td><strong>Principles of Mech. Ventilation -I</strong></td>
<td>Pilbeam: Pages V-Sim Lab 2 Nasotracheal</td>
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<tr>
<td>Date</td>
<td>Day</td>
<td>Topic</td>
<td>Pages</td>
<td>Due</td>
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<tr>
<td>March 1 Mon</td>
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<td>Initiating Mech. Ventilation - IV</td>
<td>Pilbeam: Pages 105 - 126</td>
<td>V-Sim Lab 5</td>
</tr>
<tr>
<td>March 8 Mon</td>
<td></td>
<td>Test -2</td>
<td>Covers unit II</td>
<td></td>
</tr>
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**UNIT III**
<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Event</th>
<th>Pages/Content</th>
<th>Due</th>
<th>Notes</th>
</tr>
</thead>
</table>
| March  | 10     | Wed Ventilator Management I  
• Monitoring (Abgs, Pressures, Mechanics)  
• Alarms                  | Pilbeam: Pages 151 - 176                                                  | V-Sim Lab 6 Due         | Competency Evaluation                                                                             |
| Mar 15 | Mon    | Spring Break                                                            |                                                                              |                      |                                                                                                 |
| Mar 17 | Wed    | Spring Break                                                            |                                                                              |                      |                                                                                                 |
| Mar 22 | Mon    | Ventilator Management II – Making Appropriate Changes  
• Monitoring  
• Methods to improve Ventilation  
• Methods to Improve Oxygenation | Pilbeam: Pages 257-315                                                   | Set-up & Ventilation  
Via ET Tube; Setup & operation of PB 840 and PB 7200;  
Ventilator circuits HME; Parameter Change; routine Ventilator check; Circuit Change | Set-up & Ventilation  
Via ET Tube; Setup & operation of PB 840 and PB 7200;  
Ventilator circuits HME; Parameter Change; routine Ventilator check; Circuit Change |
| Mar 24 | Wed    | Ventilator Management III – Making Appropriate Changes  
• Monitoring  
• Methods to improve Ventilation  
• Methods to Improve Oxygenation | Pilbeam: Pages 257-315                                                   | Set-up & Ventilation  
Via ET Tube; Setup & operation of PB 840 and PB 7200;  
Ventilator circuits HME; Parameter Change; routine Ventilator check; Circuit Change | Set-up & Ventilation  
Via ET Tube; Setup & operation of PB 840 and PB 7200;  
Ventilator circuits HME; Parameter Change; routine Ventilator check; Circuit Change |
| Mar 29 | Mon    | Ventilator Management IV  
• ARDS  
• COPD  
• NM  
• Asthma  
• Cardiogenic Pulmonary Edema   | Notes; Pilbeam: Pages 316-334                                             | Practice: Set-up & Ventilation  
Via ET Tube; Setup & operation of PB 840 and PB 7200;  
Ventilator circuits HME; Parameter Change; routine Ventilator check; Circuit Change | Practice: Set-up & Ventilation  
Via ET Tube; Setup & operation of PB 840 and PB 7200;  
Ventilator circuits HME; Parameter Change; routine Ventilator check; Circuit Change |
| Mar 31 | Wed    | Effects of Mechanical Ventilation  
• Cardiovascular  
• Pulmonary  
• Renal, GI and Hepatic | Pilbeam: Pages 345-390                                                   | Practice: Set-up & Ventilation  
Via ET Tube; Setup & operation of PB 840 and PB 7200;  
Ventilator circuits HME; Parameter Change; routine Ventilator check; Circuit Change | Practice: Set-up & Ventilation  
Via ET Tube; Setup & operation of PB 840 and PB 7200;  
Ventilator circuits HME; Parameter Change; routine Ventilator check; Circuit Change |
<p>| April  | 5      | Effects of Mechanical Ventilation                                       | Pilbeam: Pages                                                           |                      | Competency                                                                                       |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Topic</th>
<th>Notes</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 7</td>
<td>Mon</td>
<td>Cardiovascular • Pulmonary • Renal, GI and Hepatic</td>
<td>345 - 390</td>
<td>Evaluation</td>
</tr>
<tr>
<td>April 7</td>
<td>Wed</td>
<td>Troubleshooting and Problem Solving</td>
<td>Notes Pilbeam 391 - 416</td>
<td>PB 7200 &amp; Covidien PB 840 Quiz Due</td>
</tr>
<tr>
<td>April 12</td>
<td>Mon</td>
<td>Troubleshooting and Problem solving</td>
<td>Notes Pilbeam 391 - 416</td>
<td>Set-up and operation of Drager Evita XL and Maquet Servo-I; Avea; Parameter Change; routine Ventilator check; Circuit Change</td>
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<tr>
<td>April 14</td>
<td>Wed</td>
<td>Test - 3</td>
<td>Covers Unit III</td>
<td>Set-up and operation of Drager Evita XL and Maquet Servo-I; Avea; Parameter Change; routine Ventilator check; Circuit Change</td>
</tr>
<tr>
<td>Apr 19</td>
<td>Mon</td>
<td>Management of Mech. Ventilation • Care of the artificial airway • Fluid balance • Electrolyte balance • Nutrition • Adjunctive management strategies</td>
<td>Notes Pilbeam: Pages 279 - 294</td>
<td>Drager Ventilator Quiz due</td>
</tr>
<tr>
<td>Apr 21</td>
<td>Wed</td>
<td>Pharmacotherapy in Mech. Vent • Drugs for improving ventilation • MDI and SVN in –Line • NMBA • Sedatives and Anxiolytics • Narcotic Analgesics • Anticonvulsives • Other agents</td>
<td>Pilbeam: Pages 335 - 344</td>
<td>Practice: Set-up and operation of Drager Evita XL and Maquet Servo-I; Avea; Parameter Change; routine Ventilator check; Circuit Change</td>
</tr>
<tr>
<td>Apr 26</td>
<td>Mon</td>
<td>Pharmacotherapy in Mech. Vent • Drugs for improving ventilation • MDI and SVN in –Line • NMBA • Sedatives and Anxiolytics • Narcotic Analgesics • Anticonvulsives • Other agents</td>
<td>Pilbeam: Pages 335 - 344</td>
<td>Competency Evaluation</td>
</tr>
<tr>
<td>Date</td>
<td>Case Studies</td>
<td>Handouts</td>
<td>Servo-i Quiz due</td>
<td>Competency Evaluation</td>
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<td>Apr 28</td>
<td>1, 2, 3 &amp; 4</td>
<td>Handouts</td>
<td>Quiz due</td>
<td>Handouts</td>
</tr>
<tr>
<td>Wed</td>
<td>COPD, Status Asthmaticus, Post Surgical, Head Injury</td>
<td>Competency Evaluation</td>
<td>Manual Ventilation &amp; Transport with Competency Evaluation</td>
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<tr>
<td>May 3</td>
<td>5, 6, 7 &amp; 8</td>
<td>Review</td>
<td>Comprehensive review</td>
<td>Manual Ventilation &amp; Transport with Competency Evaluation</td>
</tr>
<tr>
<td>Mon</td>
<td>Smoke Inhalation, Drug OD, ARDS, NM</td>
<td>Review</td>
<td>Comprehensive review</td>
<td>Manual Ventilation &amp; Transport with Competency Evaluation</td>
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<tr>
<td>May 5</td>
<td>Review</td>
<td>Comprehensive review</td>
<td>Manual Ventilation &amp; Transport with Competency Evaluation</td>
<td></td>
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<tr>
<td>Wed</td>
<td>Final Exam - Comprehensive</td>
<td>10:00 AM</td>
<td>Room: B-112</td>
<td>Final Exam - Comprehensive</td>
</tr>
</tbody>
</table>

**NOTE:** A copy of the generic syllabus is available in the division office and on the college website at: [http://iws.ccccd.edu/syllabus](http://iws.ccccd.edu/syllabus)

**OPEN LAB FOR VENTILATOR PRACTICE:**

**TBA**

Please sign-up for at least one 2-hour slot. You may attend all three open labs.