Carroll University  
EXP 517: Laboratory Methods II  
Spring 2017

Instructor: John Harrell, PhD  
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Email: jharrell@carrollu.edu  
Phone: (262) 951 – 3031  
Office Hours: By appointment

Credits Hours: 2  
Meeting Location & Time: CGS LL17 & Lab  
MW 2.00 – 3.50 PM

Prerequisite. EXP 510: Advanced Exercise Testing & Prescription  
Co-requisite. EXP 516: Exercise Testing & Prescription for Clinical Populations

Course Description. Provides students with hands-on experience with techniques and research applications for assessing, evaluating, and interpreting various physiological parameters in clinical populations as well as applied skills utilized in inpatient and outpatient cardiac rehabilitation and diagnostic exercise testing to include patient simulation experiences.

Required Resources.  
• Additional resources will be posted on eLearning.  
• Please bring the clinical equipment you were given during orientation (stethoscope, HR monitor, pulse oximeter, sphygmomanometer, etc.).

Course Objectives. Upon successful completion of this course, students should be able to:  
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1. Demonstrate the ability to perform and interpret a wide variety of clinical assessments.  
2. Demonstrate knowledge of lab tests and normal values for common physiological measures.  
3. Demonstrate knowledge of current evidence-based guidelines and recommendations for exercise testing for individuals with known cardiovascular, pulmonary, and metabolic diseases.  
4. Demonstrate the ability to integrate knowledge of exercise physiology, pathophysiology, and pharmacology in interpreting exercise test results.  
5. Demonstrate an advanced knowledge of normal vs. abnormal responses to physical activity in clients with known cardiovascular, pulmonary, and metabolic diseases.  
6. Demonstrate appropriate decision-making skills related to implementing appropriate exercise interventions for clients in cardiac rehabilitation.

Laboratory Guidelines. Students should be appropriately dressed for each lab session. A professional atmosphere will be maintained in the lab. The safety, comfort, and privacy of subjects and volunteers is a top priority.

Expectations of students include the following:  
• There is absolutely no eating or drinking in the lab areas.  
• All students are expected to follow universal precautions in the event of exposure to a bloodborne pathogen.  
• Take personal responsibility for the proper care, cleaning, and maintenance of all equipment in the laboratory.
• Do not wear shoes on any equipment that contacts human skin (i.e., tables/plinths, exercise mats, etc.).
• Do not sit, stand, or put your shoes on tables, counters, etc.
• Only use lab equipment for its intended use.
• Immediately report broken equipment to the lab instructor.
• Return small lab equipment to the counter area, and follow specific instructions for the proper care and cleaning of equipment.
• Return larger lab equipment and furniture to appropriate places after each use.
• Clean sinks and surrounding areas after use.
• Push chairs in at the lab tables and clean table surface at the end of the lab session.
• Please properly dispose of any refuse with you when you leave the lab.
• Dirty towels/linens should be placed in the appropriate container.
• Failure to comply with lab policies will result in the loss of lab privileges.

For safety purposes, hands should be washed (soap and water, or hand sanitizer) prior to and at the completion of laboratory work and before touching each new subject. Students are not to use equipment without prior instruction and supervision of an authorized faculty member.

**Student Assessment & Requirements.** Student performance will be assessed by completion of following assignments and evaluations.

- **Participation** (10%). Students are expected to both attend and fully participate in each lab. Full participation may include being the subject/volunteer or collecting data. Do not be an idle bystander to the laboratory activities. Participation points will be based on data collection checked off by the instructor at the end of each lab. Finally, you should come to each lab session ready to exercise. You are the participants for all of the labs.

- **Exams** (30%). There will be 3 written exams each worth 10% of your final grade. Exams questions will be a variety of formats (short answer, multiple choice, true / false, etc.).

- **Lab Reports** (30%). There will be 6 written lab reports, each worth 20 points. Lab reports are due by the start of class on the date they are due. Lab reports should be submitted via eLearning. Lab reports will emphasize your ability to succinctly articulate the methods, appropriately present data, and briefly discuss data in written format.

- **Lab Activities** (30%). There will be 6 lab activities, each worth 20 points. Lab activities will take the form of assignments or practical evaluations. Lab activities will typically take place during class time.

**Grading.** The table below illustrates the point value for each assignment.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points (%)</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>40 (10%)</td>
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<tr>
<td>Exam 2</td>
<td>40 (10%)</td>
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<tr>
<td>Exam 3</td>
<td>40 (10%)</td>
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<tr>
<td>6 Lab Reports (20 pts.)</td>
<td>120 (30%)</td>
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<tr>
<td>6 Lab Activities (20 pts.)</td>
<td>120 (30%)</td>
</tr>
<tr>
<td>Participation</td>
<td>40 (10%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>400 (100%)</strong></td>
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</tbody>
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**Grading Scale.** Final grades will be determined by the percentage of total points earned in this course during the semester. Final grades will be rounded to two decimal points and assigned as listed below. This scale is firm.

- **A:** 90.00% or greater
- **B:** 80.00 – 89.99%
- **C:** 70.00 – 79.99%
- **D:** 60.00 – 69.99%
- **F:** 59.99% or lower

**Academic Honesty and Due Notification.** The Carroll University Academic Integrity Policy is located in your student handbook. If a student violates this policy in any way, I reserve the right to impose a sanction of failure on the assignment/assessment and/or failure in the course. If you have questions about appropriate citation, when group collaboration is appropriate, or other related issues, please ask.

**Statement of Right to Modify Course Content.** The information in this syllabus will likely not change; however, the instructor reserves the right to modify the syllabus as the curriculum and/or program require(s).

**Accommodation of Special Needs.** Students with documented disabilities who need accommodations, or any student considering obtaining documentation should make an appointment with the Walter Young Center [(262) 524 – 7621] no later than the first week of class. Please let the instructor know if you have a physical limitation to participating in the lab activities. Reasonable accommodations will be made.

**Communication Policy.** During the work week, the instructor will respond to course-related emails within 24 hours of receipt.