

<b>Assurance of Student Learning 2020 – 2021</b>	
College of Health and Human Services	School of Kinesiology, Recreation & Sport
<b>Exercise Science 554P &amp; 554</b>	
<i>Dr. Mark Schafer</i>	

<i>Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages.</i>		
<b>Student Learning Outcome 1:</b> Students develop capacity as practitioners and researchers who use evidence-based practices to implement, assess, and revise consumer-based exercise prescriptions and community health initiatives.		
<b>Instrument 1</b>	<b>Direct:</b> A comprehensive exam in Exercise Testing & Prescription (EXS 412) evaluates core knowledge and performance domains for EXS students to be prepared for the American College of Sports Medicine (ACSM) Certified Exercise Physiologist (ACSM – EP) certification exam.	
<b>Instrument 2</b>	<b>Direct:</b> A comprehensive hands-on practical final exam in Exercise Testing & Prescription (EXS 412) evaluates core knowledge and performance domains for EXS students to be prepared for the American College of Sports Medicine (ACSM) Certified Exercise Physiologist (ACEM-EP) certification exam.	
<b>Instrument 3</b>	N/A	
<b>Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.</b>		<b>Met</b>
<b>Student Learning Outcome 2:</b> Interpret and apply advanced knowledge of the physiological influence of physical activity/exercise on health & fitness, sport performance, clinical practice, and professional programs (PT, OT, PA, AT, MS).		
<b>Instrument 1</b>	<b>Direct:</b> Senior internship portfolio – a comprehensive reflection of the student’s entire internship experience. Portfolio includes a log of their days/hours worked (signed by a supervisor), weekly summaries of activities and responsibilities, documents/literature associated with their internship site, pictures, weekly reports, and an overview reflection, as well as other things, as applicable.	
<b>Instrument 2</b>	<b>Indirect:</b> Student evaluation from internship agency supervisor.	
<b>Instrument 3</b>		
<b>Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.</b>		<b>Met</b>
<b>Student Learning Outcome 3:</b> Students develop and demonstrate the skills needed to recognize, evaluate and prescribe solutions from an integrated and holistic approach regarding human movement, wellness, and performance.		
<b>Instrument 1</b>	<b>Direct:</b> A comprehensive exam in Exercise and Aging (EXS 455) evaluates students’ knowledge and understanding of the biopsychosocial aspects of aging, the acute and chronic effects of exercise on older adults, and methodologies for assessing and evaluating the efficacy of exercise programs for older adults.	
<b>Instrument 2</b>	<b>Direct:</b> Students in Exercise and Aging (EXS 455) are directly observed implementing a community-based falls prevention program for older adults once per week for the duration of the semester. Their skills are demonstrated and assessed using a structured rubric.	
<b>Instrument 3</b>	<b>Direct:</b> Students in Exercise and Aging (EXS 455) create videos demonstrating their skill for recognizing, evaluating, and prescribing a community-based falls prevention program. including information presented during the lecture portion of the course.	
<b>Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.</b>		<b>Met</b>
<b>Program Summary (Briefly summarize the action and follow up items from your detailed responses on subsequent pages.)</b>		
Formative and summative assessment strategies are utilized across the continuum of course offerings in the Exercise Science (EXS) program. The program progresses students from knowledge to action. Based on the scaffolding of the EXS course offerings, each course level (100, 200, 300, and 400 level) introduces additional depth and difficulty for the students to integrate and demonstrate proficiency. Faculty development and communication efforts focus on creating continuity from course to course and course level to course level. Students demonstrate proficiency through high impact practice evaluation strategies that include examinations, lab practical exams, group projects, and co-		

evaluation with practicum/internship preceptors. The EXS courses (EXS 412, EXS 455, and EXS 496) in this Assessment of Student Learning represent the 400 level courses that are a reflection of the building of the knowledge, skills, and abilities in the EXS program and ultimately being prepared for their Internship.

Overall, this Assurance of Student Learning assessment supports that the SLO's for the EXS program have reached the program targets in each categories. Student Learning Outcome 3 was only partially met because students were not able to implement the community-based falls prevention program due to the pandemic. Moving forward, the EXS faculty will continue to collaborate and ensure that the learning needs of the EXS students are addressed in each of the courses and relevant and meaningful assessments are being used to evaluate student progress of the knowledge, skills, and abilities in the program.

## Student Learning Outcome 1

<b>Student Learning Outcome</b>	Students develop capacity as practitioners and researchers who use evidence-based practices to implement, assess, and revise consumer-based exercise prescriptions and community health initiatives.		
<b>Measurement Instrument 1</b>	<b>DIRECT:</b> A comprehensive exam in Exercise Testing & Prescription (EXS 412) evaluates core knowledge and performance domains for EXS students to be prepared for the American College of Sports Medicine (ACSM) Certified Exercise Physiologist (ACSM – EP) certification exam.		
<b>Criteria for Student Success</b>	Students will score $\geq 75\%$ on the comprehensive exam.		
<b>Program Success Target for this Measurement</b>	Our target is for $\geq 70\%$ of our students to attain the above criterion of a score of $\geq 75\%$ on the comprehensive exam.	<b>Percent of Program Achieving Target</b>	Fall 2020: 63% Spring 2021: 56%
<b>Methods</b>	<p>Student enrollment for Fall 2020, N =35 and Spring 2021 N = 36</p> <p>The multiple-choice comprehensive exam content addresses each of the ACSM – EP performance domains (Health and Fitness Assessment, Exercise Prescription and Implementation, Exercise Counseling and Behavior Modification, and Risk Management and Professional Responsibilities).</p> <p>Spring 2021- The multiple-choice and short answer comprehensive exam content addresses each of the ACSM – EP performance domains (Health and Fitness Assessment, Exercise Prescription and Implementation, Exercise Counseling and Behavior Modification, and Risk Management and Professional Responsibilities).</p>		
<b>Measurement Instrument 2</b>	<b>DIRECT:</b> A comprehensive hands-on practical final exam in Exercise Testing & Prescription (EXS 412) evaluates core knowledge and performance domains for EXS students to be prepared for the American College of Sports Medicine (ACSM) Certified Exercise Physiologist (ACEM-EP) certification exam. <b><u>Please attach any/all rubrics used.</u></b>		
<b>Criteria for Student Success</b>	Students will score $\geq 75\%$ on the hands-on practical final exam.		
<b>Program Success Target for this Measurement</b>	Our target is for $\geq 80\%$ of our students to attain the above criterion of a score of $\geq 80\%$ on the practical final exam.	<b>Percent of Program Achieving Target</b>	Fall 2020: 100% Spring 2021: NA
<b>Methods</b>	<p>Student enrollment for Fall 2020, N =35 and Spring 2021 N = 36</p> <p>A practical skills testing environment is designed to mimic exercise testing/prescription knowledge, skills, and abilities in a professional setting. At the end of each semester, EXS 412 students report to the Exercise Physiology lab and randomly draw from a list of practical skills (blood pressure, body composition, aerobic cycle test, flexibility, and strength tests) to perform on a simulated patient. An EXS faculty member utilizes a scoring rubric to assess the skills and abilities of each student.</p>		
<b>Measurement Instrument 3</b>	A cumulative project in Exercise Testing & Prescription (EXS 412) evaluates core knowledge and performance domains for EXS students to be prepared for the American College of Sports Medicine (ACSM) Certified Exercise Physiologist (ACSM–EP) certification exam		
<b>Criteria for Student Success</b>	Students will score $\geq 80\%$ on the project.		

<b>Program Success Target for this Measurement</b>	Our target is for $\geq 80\%$ of our students to attain the above criterion of a score of $\geq 75\%$ on the practical final exam.	<b>Percent of Program Achieving Target</b>	<b>Fall 2020: NA Spring 2021: 97%</b>
<b>Methods</b>	<p>Fall 2020, N =35 and Spring 2021 N = 36</p> <p>The cumulative project is an applied assignment in which students pair up with another member of the class to form a practitioner/client pairing. Students perform major elements of the exercise testing and prescription process (e.g., pre-participation health screen, pre-exercise evaluation, exercise testing, and exercise prescription) in accordance with the <i>ACSM's Guidelines for Exercise Testing and Prescription</i> textbook. Students complete various exercise tests on their client and develop a personalized exercise program for musculoskeletal and cardiorespiratory fitness.</p>		
<b>Based on your results, highlight whether the program met the goal Student Learning Outcome 1.</b>		<b>Met</b>	<b>Not Met</b>
<b>Actions</b> (Describe the decision-making process and actions for program improvement. The actions should include a timeline.)			
<p>Exercise Testing and Prescription (EXS 412) is a required senior level course with a lab (four credit hours). The course is designed to prepare students for the American College of Sports Medicine (ACSM) Certified Exercise Physiologist (ACSM -EP) certification exam. EXS students can sit for the ACSM – EP certification exam in their final semester their senior year or sit for the exam upon graduation. Based on the assessment of the SLO 1, EXS 412 course content and practical skills align well with ensuring that the EXS students are prepared with the knowledge and hands-on skills necessary to pass the ACSM – EP certification, and in preparing them for careers in physical activity/exercise, health &amp; fitness, sport performance, and/or when pursuing professional programs (PT, OT, PA, AT, MS). Additionally, SLO 3 was added to further emphasize how accurate exercise prescription is the culmination of multiple elements learned throughout the semester and give students experience in a practitioner/client relationship.</p>			
<b>Follow-Up</b> (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)			
<p>For future assessments of student learning outcomes, a continued effort will be made to ensure that the EXS 412 course content aligns with the current ACSM – EP certification performance domains and students continue to meet the criteria for student success at the completion of the course. Percentage required to achieve outcome (75%) and the percentage of students we anticipate to meet the standard (70%) are based on the required score to pass the ACSM certification course, and the documented pass rate for the exam among all test-takers across all nationwide. Using these standards puts our students and class in context of other programs across the Nation.</p> <p>Any updates and/or changes in ACSM guidelines will be integrated into the course content and practical skills. The EXS program will continue to collect information to via an alumni survey to determine the number of students who go on to take and pass the certification exam each year. Based on feedback from a recent alumni survey and individual student responses, students are successfully passing the certification exam. Whether or not the EXS students go on to take the ACSM –EP certification, it is imperative that the students possess the EXS 412 knowledge and skills to pursue a career in this or a closely related field.</p> <p>Outcome #1: The comprehensive exam was given in an in-class format for Spring 2021 and will be going forward (pending no additional closures to the University). Fall 2020 the exam was given in an online format with a timer due to COVID-19 and the online nature of the course.</p> <p>Outcome #2: The practical exam has been converted to an online format due to COVID-19 in Fall 2020. The practical exam involved a video that is to be submitted demonstrating their practical skills. Students are not randomly assigned a test to perform as they were face-to-face, but instead self-select any test they want to do. Because of this, the exam is slightly easier. The practical exam was not given in Spring 2021 due to COVID-19 concerns from the students and faculty (despite the in-person nature of the course). The in-person format will return in Fall 2021 and will remain as such pending no University closures.</p>			
<b>Next Assessment Cycle Plan</b>			

Outcomes (#1, #2, and #3) will be assessed again in Fall 2021 and Spring 2022. The data will be collected from Blackboard by the course instructor each semester. The course instructor enters grades for both the comprehensive and practical exam in Blackboard for each student each semester. The faculty will also plan to keep track of how many students take and/or pass the exam each semester to help assess whether or not the class is preparing them for certification.

### Student Learning Outcome 2

<b>Student Learning Outcome</b>	Interpret and apply advanced knowledge of the physiological influence of physical activity/exercise on health & fitness, sport performance, clinical practice, and professional programs (PT, OT, PA, AT, MS).		
<b>Measurement Instrument 1</b>	<p><b>NOTE: Each student learning outcome should have at least one direct measure of student learning. Indirect measures are not required.</b></p> <p>Direct: Senior internship portfolio – a comprehensive reflection of the student’s entire internship experience. Portfolio includes a log of their days/hours worked (signed by a supervisor), weekly summaries of activities and responsibilities, documents/literature associated with their internship site, pictures, and an overall reflection, as well as other things, as applicable.</p>		
<b>Criteria for Student Success</b>	After completing the senior internship, students will receive an overall score of $\geq 90\%$ on their portfolio.		
<b>Program Success Target for this Measurement</b>	Our target is for $\geq 90\%$ of our students to attain the above criterion of a score of $\geq 90\%$ on the internship portfolio.	<b>Percent of Program Achieving Target</b>	98%
<b>Methods</b>	<p>Student enrollment for the Fall 2020, N = 14 and Spring 2021, N = 26.</p> <p>Students are provided guidelines and requirements for the portfolio at the time they register for the course. As the Exercise Science program also requires a shorter practicum during the students’ sophomore year, which also requires a portfolio, they are usually already aware of the expectations. The portfolios are constructed using the Bulb app (my.bulbapp.com) and a link to the portfolio is submitted via Blackboard. Moving the portfolios from the Blackboard platform to the Bulb app has allowed students to take even more liberty in being creative with their portfolio. The Bulb app has also allowed students to take their portfolio with them after graduating and share it with potential employers or graduate programs, which previously was not an option. Students are also required, <b>prior to beginning their internship hours</b>, to obtain and submit proof of student liability insurance as well as proof of current certification in CPR/First Aid/AED, regardless of where they are completing their hours.</p>		
<b>Measurement Instrument 2</b>	<b>Indirect:</b> Student evaluation from internship agency supervisor.		
<b>Criteria for Student Success</b>	After completing the senior internship, students will receive an overall score of $\geq 90\%$ on the evaluation from their internship supervisor.		
<b>Program Success Target for this Measurement</b>	Our target is for $\geq 90\%$ of our students to attain the above criterion of a score of $\geq 90\%$ on the evaluation from their internship supervisor.	<b>Percent of Program Achieving Target</b>	95%
<b>Methods</b>	<p>Student enrollment for the Fall 2020, N = 14 and Spring 2021, N = 26.</p> <p>Program faculty have been working with many of the internship supervisors for a number of years, though new ones do periodically get added as students locate new internship sites. Supervisors are informed at the beginning, before they agree to take on a student, of their requirement to submit an evaluation of the student and her/his internship performance. The evaluation is printed off for their supervisor to</p>		

	complete. The evaluation includes ten items with scoring ranging from one-to-ten for each item, and supervisors are able to mark the item as not applicable if necessary. There are also sections for the supervisor to submit qualitative comments. After completing the evaluation, the supervisor then has a meeting with the student to discuss the scoring that was assigned, observed strengths of the student, and/or suggested areas in need of improvement. Both supervisor and student signatures and dates are required to indicate this meeting took place. The student scans the document and submits it via Blackboard.				
<b>Measurement Instrument 3</b>	N/A				
<b>Criteria for Student Success</b>	N/A				
<b>Program Success Target for this Measurement</b>	N/A	<b>Percent of Program Achieving Target</b>	N/A		
<b>Methods</b>	N/A				
<b>Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.</b>			<table border="1"> <tr> <td style="background-color: yellow;"><b>Met</b></td> <td><b>Not Met</b></td> </tr> </table>	<b>Met</b>	<b>Not Met</b>
<b>Met</b>	<b>Not Met</b>				
<b>Actions</b> (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)					
<p>We plan to complete the following actions for improvement beginning in the fall of 2021.</p> <ol style="list-style-type: none"> <li>1. Meet with the Exercise Science Advisory Board to collect information regarding the Internship experience (i.e., things to change/adapt, things to add, and things to remove). Potential adjustments to the course, based on these suggestions, will be discussed by all EXS faculty. For any approved adjustments, implementation will be carried out by the EXS faculty teaching the course. The Exercise Science Advisory Board has provided suggestions in the past and most of them have led to improvements in the Internship experience.</li> <li>2. Incorporate weekly assignments into the course to prompt students to complete the requirements of their portfolio throughout the semester. This action</li> <li>3. Develop a faculty site visit form to be completed when faculty visit students at their agency site.</li> <li>4. Construct an evaluation/satisfaction instrument to distribute to our internship students upon completion of the internship. This evaluation was not collected previously, and this would be an effective tool for us to identify areas for improvement in our processes from the students' perspectives.</li> </ol>					
<b>Follow-Up</b> (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)					
<p>Follow-Up from planned actions for Fall 2020 and Spring 2021:</p> <ol style="list-style-type: none"> <li>1. Implement a mid-term evaluation by the supervisor delivered via Qualtrics survey. If a follow up is necessary by the faculty supervisor (as requested by the agency supervisor), one will be granted on the platform agreeable by both parties (videoconferencing, in person, etc.). <u>Follow-Up:</u> A mid-term evaluation was implemented; however, it was administered as a hard copy, then scanned and submitted via Blackboard. The hard copy was chosen, as the additional requirement of meeting and discussing the evaluation with the supervisor would be difficult after submitting the electronic evaluation. No follow up meetings between the agency and faculty supervisors were requested.</li> <li>2. Develop a faculty site visit form to be completed when faculty visit students at their agency site. <u>Follow-Up:</u> This planned action was not pursued due to COVID-19 restrictions of visiting Internship sites.</li> <li>3. Rework student evaluation forms onto Qualtrics platform. <u>Follow-Up:</u> This planned action was not taken, as online pedagogy dictates avoiding student confusion by having all assignments submitted the same way (i.e., scanning app and upload pdf to Blackboard).</li> <li>4. Make student portfolios available for all program faculty to begin developing an agreeable rubric for assessment. <u>Follow-Up:</u> This planned action was not completed; however, faculty teaching the course did meet via Zoom and begin the process of creating a rubric to assess student portfolios.</li> </ol> <p>While not noted in the last actions section, we have moved the portfolio from Blackboard to the Bulb app (my.bulbapp.com) which is easier for the students to use to create their portfolio and share it with the faculty instructor.</p>					
<b>Next Assessment Cycle Plan</b> (Please describe your assessment plan timetable for this outcome)					

1. During the Fall 2021 and Spring 2022 semesters, we plan to meet with the Exercise Science Advisory Board. Any approved adjustments from the Fall semester will be implemented during the Spring 2022 semester. Any approved adjustments from the Spring 2022 semester will be implemented during the Fall 2022 semester.
2. At the end of the Spring 2022, we plan to revisit the action steps to determine their effectiveness. Any changes necessary will be incorporated into the course during the Fall 2022 semester.

### Student Learning Outcome 3

<b>Student Learning Outcome</b>	Students develop and demonstrate the skills needed to recognize, evaluate and prescribe solutions from an integrated and holistic approach regarding human movement, wellness, and performance.		
<b>Measurement Instrument 1</b>	<b>DIRECT:</b> A comprehensive exam in Exercise and Aging (EXS 455) evaluates students' knowledge and understanding of the biopsychosocial aspects of aging, the acute and chronic effects of exercise on older adults, and methodologies for assessing and evaluating the efficacy of exercise programs for older adults.		
<b>Criteria for Student Success</b>	Students will score $\geq 75\%$ on the comprehensive exam.		
<b>Program Success Target for this Measurement</b>	Our target is for $\geq 80\%$ of our students to attain the above criterion of a score of $\geq 75\%$ on the comprehensive exam.	<b>Percent of Program Achieving Target</b>	<b>82%</b>
<b>Methods</b>	Student enrollment for the Fall 2020, N = 36 and Spring 2021, N = 32 .  Students are administered a multiple choice, true/false, and essay exam to assess their knowledge, skills, and abilities.		
<b>Measurement Instrument 2</b>	<b>DIRECT:</b> Students in Exercise and Aging (EXS 455) are directly observed implementing a community-based falls prevention program for older adults once per week for the duration of the semester. Their practical skills are demonstrated and assessed using a structured rubric.		
<b>Criteria for Student Success</b>	Students will score $\geq 75\%$ on the practical skills assessment.		
<b>Program Success Target for this Measurement</b>	Our target is for $\geq 80\%$ of our students to attain the above criterion of a score of $\geq 75\%$ on the practical skills assessment.	<b>Percent of Program Achieving Target</b>	<b>0%</b>
<b>Methods</b>	Student enrollment for the Fall 2020, N = 36 and Spring 2021, N = 32  The instructor travels to each community site at least one time during the semester to observe students' performances. A structured rubric is used to assess performance.		
<b>Measurement Instrument 3</b>	<b>DIRECT:</b> Students in Exercise and Aging (EXS 455) create videos demonstrating their skill for recognizing, evaluating, and prescribing a community-based falls prevention program, including information presented during the lecture portion of the course.		
<b>Criteria for Student Success</b>	Students will score $\geq 75\%$ on a rubric assessing students' ability to prescribe, implement, and evaluate the falls prevention program.		
<b>Program Success Target for this Measurement</b>	Our target is for $\geq 80\%$ of our students to attain the above criterion of a score of $\geq 75\%$ on the rubric assessing students' ability to prescribe, implement, and evaluate the falls prevention program.	<b>Percent of Program Achieving Target</b>	<b>91.5%</b>
<b>Methods</b>	Student enrollment for the Fall 2020, N = 36 and Spring 2021, N = 32  Groups of students present their videos during the final week of the semester and respond to questions from the instructor and other students. The videos are assessed using a structured rubric.		
<b>Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.</b>			<b>Met</b>
			<b>Not Met</b>

<b>Actions</b> (Describe the decision-making process and actions for program improvement. The actions should include a timeline.)		
<p>Exercise and Aging (EXS 455) is designed for students to gain a better understanding of the acute physiological responses and chronic adaptations associated with exercise in the aged population. Because it is critical students develop and demonstrate the skills needed to recognize, evaluate and prescribe solutions from an integrated and holistic approach, the course is heavily focused on engaging students in a semester-long service-learning initiative. Written and oral reflection are used as tools for awareness, deeper understanding, analysis, and interpretation in order to transform the service-learning experiences into meaningful learning. This process is continually updated to ensure complete and accurate assessment of students' service-learning experiences. The pandemic greatly impacted the course because no community engagement was possible. Students were asked to create exercise demonstration videos that are shared with older adults in the community.</p> <p>We plan to complete the following actions for improvement beginning in the fall of 2021.</p> <ol style="list-style-type: none"> <li>1. We plan to return to the community sites in the fall of 2021. At that time, we will modify the evaluation instrument to distribute to the community site supervisors at the service-learning sites. We are also modifying the evaluation instrument used to assess the students during implementation of the service-learning experience to more accurately assess their ability to integrate the information presented in the classroom.</li> <li>2. We will modify the group video project to better reflect and assess students' ability to holistically interact with the older adult participants at their service-learning sites. Specifically, students will be asked to provide more evidence of their ability to connect information presented in the classroom with the "real world" needs of older adults. This is valuable for students' future careers in all types of health care professions.</li> </ol>		
<b>Follow-Up</b> (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)		
<p>Follow-up from planned actions for Fall 2020 and Spring 2021:</p> <ol style="list-style-type: none"> <li>1. We required students to complete the US Center for Control STEADI training. This training better prepares students to access fall risk in older adults and, ultimately, prescribe appropriate physical activity interventions. <u>Follow-up:</u> All students successfully completed the U.S. Center for Disease Control STEADI training in fall 2020 and spring 2021.</li> <li>2. We were not able to complete the service-learning activity due to the pandemic. We did modify the evaluation instrument for eventual distribution to the community site supervisors at the service-learning sites. We also modified the evaluation instrument used to assess the students during implementation of the service-learning experience to more accurately assess their ability to integrate the information presented in the classroom. <u>Follow-up:</u> The evaluation instrument was modified, but due to the COVID-19 pandemic, were were not able to complete the service-learning activity. However, students did created exercise videos to share with older adults in the community.</li> <li>3. The community-engagement activity was not able to be completed due to the pandemic. However, when plan to return to the community sites in the fall of 2021. At that time, we will the group video project to better reflect and assess students' ability to holistically interact with the older adult participants at their service-learning sites.. <u>Follow-up:</u> We plan to return to the community sites to implement the service-learning activity in the fall of 2021.</li> </ol>		
<b>Next Assessment Cycle Plan</b> (Please describe your assessment plan timetable for this outcome)		
<p>Student learning outcome #3 will be assessed again after the fall of 2021 because the COVID-19 pandemic prevents students from participating in the service-learning activity at the older adult community sites.</p>		



## YMCA Submax Bike Test Evaluation

Name \_\_\_\_\_

Evaluator \_\_\_\_\_ Score (50 possible) \_\_\_\_\_

### Preparation (15 points)

Ask age and calculate Age predicted max and 85%	0	1	2	3
Explain purpose of test to client	0	1	2	3
<ul style="list-style-type: none"> <li>• Submax bike test that predicts aerobic status</li> <li>• Data recorded, multiple stages, pace, resistance increments</li> </ul>				
Explain HR monitor placement (with water) and have client do it	0	1		
Test client's HR monitor and hand it to evaluator	0	1		
Start timer	0	1		
Adjust seat height (i.e., knee flexed 5-10° with toes on pedal)	0	1	2	3
Palpate 30 Second HR with client seated on bike. Tell evaluator _____ / _____	0	1		
Have client pedal without any resistance or 0.25 kg at cadence for ~1 min	0	1	2	3

### Test (18 points)

Set pendulum resistance to 0.5 kg	0	1	2	3
Measure client's HR the 2 <sup>nd</sup> and 3 <sup>rd</sup> min (15 seconds)	0	1	2	3
<ul style="list-style-type: none"> <li>• Tell Evaluator: 1 _____ / _____, 2 _____ / _____, 3 _____ / _____ 4 _____ / _____, 5 _____ / _____, 6 _____ / _____</li> </ul>	0	1	2	3
Compare minute 2 HR to minute 3 HR during each stage.	0	1	2	3
<ul style="list-style-type: none"> <li>• If difference within 5 bpm, consider stage complete</li> <li>• If &gt; 5 bpm, continue stage until final 2 minutes of stage meet criteria</li> </ul>				
Set second stage pendulum resistance based on final HR of first stage	0	1	2	3
<ul style="list-style-type: none"> <li>• &lt; 80 bpm, set at 2.5 kg</li> <li>• 80-89 bpm, set at 2.0 kg</li> <li>• 90-100 bpm, set at 1.5 kg</li> <li>• &gt; 100 bpm, set at 1.0 kg</li> </ul>				
Compare minute 2 HR to minute 3 HR during each stage.	0	1	2	3
<ul style="list-style-type: none"> <li>• If difference within 5 bpm, consider stage complete</li> <li>• If &gt; 5 bpm, continue stage until final 2 minutes of stage meet criteria</li> </ul>				

### Cool-Down (3 points)

Allow client to cool down pedaling at 50 rpm with 0.5 kg of resistance	0	1		
Measure client's HR each minute until below 110 bpm or 3 minutes	0	1		
Thank client and information (i.e., est VO <sub>2max</sub> and ranking) available in future	0	1		

### General (5 points)

Regularly check client's status (i.e., once every stage)	0	1	2	
Regularly check pendulum resistance	0	1		
Regularly check client's RPM (per stage)	0	1		
Inform client of workload changes prior to increase (per stage)	0	1	2	

Quality (4 points) 1 2 3 4  
 Comments: \_\_\_\_\_

Interpretation (5 points): Points \_\_\_\_\_

Comments: \_\_\_\_\_

Name: \_\_\_\_\_

### **Step Test**

- 3- Excellent- still performed with excellent technique
- 2- Good- skill performed properly with no significant errors in technique
- 1-Poor- skill not performed or performed inconsistently

\_\_\_\_\_ Describes the test to the patient

\_\_\_\_\_ Properly sets up all needed elements for the test

\_\_\_\_\_ Ensures patient follows all instructions/performs the test properly (protocol below)

\_\_\_\_\_ Terminates test at the correct time

\_\_\_\_\_ Appropriate cool-down techniques

### **Step Test Procedure**

1. Set up the heart rate monitor. Start by moistening the sensor and then attach it to the strap.
2. Tie the strap around the chest of the participant just below the chest muscles and attach the hook to the other end of the strap. Adjust the strap to fit tightly but comfortably. The moistened sensor should rest firmly against the skin and the Polar logo should be in a central and upright position (refer to images on the following page)
3. Have the participant put on the heart rate monitor watch. Press the button on the watch so that it will pair with the sensor and wait for the heart rate to be displayed. Take the participant's radial pulse and compare it to that of the heart rate monitor (refer to the heart rate activity of the lab for instructions on taking radial pulse if you have yet to do this). This will allow you to practice skills and to check to see if the monitor is accurate.
4. Have the participant sit on the step for 3 minutes to allow their resting heart rate to reach steady state.
5. Afterward, record the heart rate reading displayed on the monitor before starting the step test.
6. Set the metronome cadence. The cadence should be set to 88 beats per minute for females and 96 beats per minute for males.
7. Allow the participant to listen to the cadence and become familiar with their stepping rhythm for a moment.
8. Instruct the participant that when performing the test, they should step up onto the bench with the lead foot and then bring their second foot onto the bench. Once both feet are on the bench the participant should then step down, still using one foot at a time
9. In order to reduce fatigue of the leg muscles, instruct the participant to switch the lead leg during the test. Have them switch at least once, even if they feel that they don't have to.
10. When the participant indicates that he or she is ready, instruct them to begin the test. When the subject begins, start the timer.
11. After the test has started, record the participant's heart rate every 30 seconds as indicated by the data sheet.

12. At the 3-minute mark, instruct the participant to cease the test and sit on the bench (Do not stop the timer yet). The administrator should then record the participant's heart rate at 3:20. This is the recovery HR value that will be used to predict their VO<sub>2</sub>Max.
13. Have the participant remain seated. Continue to record their heart rate every 30 seconds until it returns to their baseline value.
14. Use the recovery heart value that you recorded to predict VO<sub>2</sub>max
15. Compare the predicted VO<sub>2</sub>Max values to the normative data and determine a percentile and rank for the participant.

Name: \_\_\_\_\_

### **Sit and Reach**

- 3- Excellent- still performed with excellent technique
- 2- Good- skill performed properly with no significant errors in technique
- 1-Poor- skill not performed or performed inconsistently

### **Test 1- Box**

1. \_\_\_\_\_ Describe test to the patient
2. \_\_\_\_\_ Make sure muscles feel warm and loose- can do some stretching before the test.  
Remove shoes.
3. \_\_\_\_\_ Put soles of the feet flat against the sit-and-reach box.
4. \_\_\_\_\_ Stack hands one on top of the other- keep them parallel and do not lead with one or the other.
5. \_\_\_\_\_ Slowly reach forward with both hands as far as possible and hold position for approximately 2 seconds. Exhale and drop the head between the arms when reaching. Knees must remain extended.

### **Test 2- Wall**

6. \_\_\_\_\_ Describe test to the patient
7. \_\_\_\_\_ Make sure muscles feel warm and loose- can do some stretching before the test.  
Remove shoes.
8. \_\_\_\_\_ Put soles of the feet flat against the sit-and-reach box.
9. \_\_\_\_\_ Stack hands one on top of the other- keep them parallel and do not lead with one or the other.
10. \_\_\_\_\_ Slowly reach forward with both hands as far as possible and hold position for approximately 2 seconds. Exhale and drop the head between the arms when reaching. Knees must remain extended.

### **Traditional Sit-and-Reach**

1. Place the sit-and-reach box against a wall and instruct the participant to remove shoes.

2. The participant sits with the soles of the feet flat against a sit-and-reach box with the zero mark (metal piece) at 26 cm. Inner edges of the soles should be 6 in apart.
3. Instruct the participant to slowly reach forward with both hands as far as possible, holding this position approximately 2 seconds. Ensure the participant to keep the hands parallel and do not lead with one hand, or bounce. Fingertips can be overlapped and should be in contact with the measuring portion or yardstick of the sit-and-reach box.
4. The score is the most distant point reached with the fingertips. Perform 3 trials and calculate the average score. To assist with the best attempt, the client should exhale and drop the head between the arms with reaching. Testers should ensure that the knees of the participant stay extended; however, the participant's knees should not be pressed down by the test administrator. The participant should breathe normally during the test and should not hold his or her breath at any time.

### **Wall Sit-and-Reach**

1. Instruct the participant to sit on the floor with his or her hips, back and head against a wall.
2. Have the participant extend his or her legs with the feet roughly 20 to 30 cm (8-12 in.) apart.
3. Position the sit-and-reach box against the subject's heels. Stand at the end of the box so it does not slide when the participant performs a reach.
4. Instruct the participant to place one hand on top of the other with palms facing down.
5. Instruct the participant to reach forward as far as possible while keeping his or her hips, back and head in contact with the wall. Shoulders can move forward. Determine how far the person's fingertips reach and record the measurement to the nearest 1.25 cm (0.5 in.). This is called the INDEX line or zero position.
6. Having established a zero position, instruct the subject to reach forward three times during the same movement along the device while making sure to keep his or her palms against the measuring device. The subject should hold the third movement for 2 s while you measure and record.
7. Subtract the measure from Step 5 from the value determined in Step 6. Record on data sheet.
8. Repeat Steps 5 through 7 two more times.
9. Record the best of three trials in the appropriate location on the data sheet.
10. Interpret the results of the test by comparing them with normative data presented on Table 4.13 (purple).

### **V-Sit Sit-and-Reach**

**\*This test does not require a sit-and-reach box.**

1. Have the subject sit on the floor and fully extend his or her legs with the feet separated by 30 cm (12 in.).
2. Place a meterstick between the subject's legs so that the 23 cm (9.1 in.) mark aligns with the heels. In order to prevent the meterstick from moving, tape it to the floor.
3. Hold the subject's knees to ensure that his or her legs do not bend.
4. Have the subject place one hand on top of the other with palms down and fingertips aligned (Figure 3.7a).
5. Instruct the participant to lean forward and move his or her hands along the meterstick until they are fully extended (Figure 3.7b). This position should be held for 1 or 2 seconds. Record the distance achieved in the data sheet.
6. Repeat steps 3-5 two more times and consider the third trial as the maximal stretch. Record the results of the last trial in the appropriate part of the data sheet.
7. Calculate the average of the three trials and record this value on the data sheet.

8. Compare the average achieved during the tests with the normative data and percentile ranks for the traditional sit-and-reach test.

Name: \_\_\_\_\_

### Push-Up Test

- 3- Excellent- still performed with excellent technique
- 2- Good- skill performed properly with no significant errors in technique
- 1-Poor- skill not performed or performed inconsistently

\_\_\_\_\_ Describes the test to the patient

\_\_\_\_\_ Properly sets up all needed elements for the test

\_\_\_\_\_ Ensures patient follows all instructions/performs the test properly

\_\_\_\_\_ Terminates test at the correct time

#### Procedure:

1. The push up test is administered with men starting in the standard position (Figure 11.7) (hands pointing forward and under the shoulder, back straight, head up, using the toes as the pivotal point) and women in the modified “knee push-up” position (legs together, lower leg in contact with mat with ankles plantar-flexed, back straight, hands shoulder width apart, head up, using the knees as a pivotal point) (Figure 11.8).
2. The client/patient must raise the body by straightening the elbows and return to the “down” position, until the chin touches the mat.
3. For both men and women, the subject’s back must be straight at all times, and the subject must push up to a straight arm position.
4. The maximal number of push-ups performed consecutively without rest is counted as the score.
5. The test is stopped when the client strains forcibly or unable to maintain the appropriate technique within two repetitions.

Name: \_\_\_\_\_

3- Excellent- still performed with excellent technique

2- Good- skill performed properly with no significant errors in technique

1-Poor- skill not performed or performed inconsistently

## Curl-Up Test

We will be doing a curl-up or crunch test based on the Canadian Society for Exercise Physiology's Health and Fitness Program. This involves concentric and eccentric contractions of the core (abdominal) muscles.

- A. \_\_\_\_\_ Describes the test to the patient.
- B. \_\_\_\_\_ Puts them in a supine position on the ground with the knees bent at 90 degrees. The arms are at the sides, palms facing down with the middle finger touching a piece of tape on the ground (0 mark). A second piece of tape is placed 10 cm apart.
- C. \_\_\_\_\_ Set a metronome to a cadence of 50 beats/minute.
- D. \_\_\_\_\_ Once timing starts, perform slow, controlled curl-ups in time with the metronome to lift the shoulder blades off the ground (trunk makes about a 30-degree angle with the ground) and slide the middle finger 10 cm to the second marker tape. During the curl-up the palms and heels must remain in contact with the ground. On the return, the shoulder blades and head must contact the ground and the fingertips of both hands must touch the 0 mark.

The curl-up cadence is 25/minute.

- E. \_\_\_\_\_ Instruct them to perform as many curl-ups as possible in cadence with the metronome without pausing.
- F. \_\_\_\_\_ The test is stopped when the subject is unable to maintain the required cadence or is unable to maintain the proper curl-up technique on two consecutive repetitions.



Name: \_\_\_\_\_ Section: \_\_\_\_\_ Date: \_\_\_\_\_ Grade: \_\_\_\_/50

Blood Pressure and Heart Rate Measurement Evaluation

Excellent (5 pts): Skill performed with excellent technique  
 Good (3 pts): Skill performed properly with no significant errors in technique  
 Poor (1pt): Skill not performed or performed incorrectly

Skill	Excellent	Good	Poor	Comments
Student sizes cuff to arm				
Proper cuff size is used				
Cuff is applied properly (proper location on arm with respect to artery and antecubital fossa; cuff is applied snugly)				
Arm is supported and elbow is Straight				
Arm is positioned properly (artery at heart level of client)				
Brachial pulse is palpated				
Stethoscope is placed over brachial pulse				
Stethoscope ear tips are facing forward				
Cuff is properly inflated and deflated				
Blood pressure is accurately heard				

Student BP reading \_\_\_\_\_

Faculty BP reading \_\_\_\_\_

Faculty asks student: Where does that blood pressure place them in term of risk? Normal, pre, or hypertensive?

Response: \_\_\_\_\_

Skill	Excellent	Good	Poor	Comments
Anatomical landmark palpated(radial)				
Proper technique				
Correct mathematical procedure				
Apply Polar Monitor properly				
Obtain a reading from Polar Monitor				

Student HR: \_\_\_\_\_

Polar HR: \_\_\_\_\_

## Skinfold Test Evaluation

Name \_\_\_\_\_

Evaluator \_\_\_\_\_ Score (50 possible) \_\_\_\_\_

### Preparation (6 points)

Introduce yourself and get client's name	0	1		
Weigh client (or ask) and get personal information (i.e., age)	0	1		
Explain purpose and procedures of test to client	0	1	2	
• Skin thickness to predict percent body fat (not absolute measure)				
• Principle that subcutaneous fat proportional to total body fat				
Ask client if there are any questions or concerns	0	1		
<u>Politely request clothing removal that will affect skinfold assessments</u>	0	1		

### Assessment (27 points)

Take all assessments on right side of body	0	1		
Firmly grasp skinfold between thumb and index finger (left hand overgrip)	0	1	2	
• Pinch starts ~3 inches apart perpendicular to long axis of skinfold site				
• Obese individuals require fingers to be spread apart > 3 inches				
Hold caliper in right hand with contact surfaces of caliper 1 cm below fingers	0	1		
Release caliper grip while continuing to support calipers with right hand	0	1		
Determine reading within 2 seconds after releasing caliper claws	0	1	2	
• Measure skinfold to nearest 0.5 mm				
Avoids jaw slippage by opening calipers before removing from skinfold	0	1		
Record the reading for each skinfold site. Tell evaluator results.	0	1	2	
Rotate through all skinfold sites	0	1		
• tricep (vertical, mid-humerus) _____	0	1	2	
• subscapular (diagonal, below inferior angle) _____	0	1	2	
• pectoral (men 1/2 & women 1/3 between axilla & nipple) _____	0	1	2	
• midaxillary (vertical, midaxillary line, level of xiphoid) _____	0	1	2	
• suprailiac (diagonal, at anterior axillary line) _____	0	1	2	
• abdominal (vertical, 1" to right of navel) _____	0	1	2	
• thigh (vertical, mid-femur) _____	0	1	2	
Measure each skinfold site at least one more time	0	1	2	
• If not within 1 or 2 mm, then retest each individual site				

### Conclusion (2 points)

Have client get dressed immediately after skinfold assessments	0	1		
Thank client and information (i.e., %Body Fat and ranking) available in future	0	1		

### General (2 points)

Briefly mentions where client will be touched prior to each skinfold site	0	1	2	
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<u>Quality</u> (5 points)	1	2	3	4	5
Comments:					

Interpretation (8 points): Points \_\_\_\_\_

    Comments:

Name Exercises for Older Adults Assignment

Description

Rubric Detail

Levels of Achievement

Criteria	Novice	Competent	Proficient	Exemplary
<b>Formatting &amp; Organization</b>  <b>Weight</b> <b>7.50%</b>	<b>65.00 %</b> Did not use the template from the examples. Information and descriptions unorganized and not complete.	<b>75.00 %</b> Limited use of the template from the examples. Limited descriptions of the exercise and limited organization.	<b>85.00 %</b> Used the majority of the template from the examples. Some organization problems, but exercise descriptions were on target	<b>100.00 %</b> Used the template from the examples on the rubric. Exercises were organized within the template
<b>Appropriateness of exercises</b>  <b>Weight</b> <b>35.00%</b>	<b>65.00 %</b> All exercises were appropriate for older with varied physical and cognitive abilities. Adaptations were not described for any exercises including seated/standing.	<b>75.00 %</b> All exercises were appropriate for older with varied physical and cognitive abilities. Adaptations were described for only a few exercises including seated/standing.	<b>85.00 %</b> The majority of the exercises were appropriate for older with varied physical and cognitive abilities. Adaptations were described for the majority of exercises including seated/standing.	<b>100.00 %</b> All exercises were appropriate for older with varied physical and cognitive abilities. Adaptations were described for all exercises including seated/standing. There were 20 different exercises. Descriptions of exercises were complete.

Levels of Achievement

Criteria	Novice	Competent	Proficient	Exemplary
<p><b>Creativity</b></p> <p><b>Weight</b> <b>7.50%</b></p>	<p><b>65.00 %</b></p> <p>None of the exercises were unique; no exercise names were creative and practical</p>	<p><b>75.00 %</b></p> <p>At least 25% of exercises were unique; few exercise names were creative and practical</p>	<p><b>85.00 %</b></p> <p>At least 40% of exercises were unique; some exercise names were creative and practical</p>	<p><b>100.00 %</b></p> <p>More than half of the exercises were unique; all exercise names were creative and practical</p>
<p><b>Exercise videos</b></p> <p><b>Weight</b> <b>50.00%</b></p>	<p><b>65.00 %</b></p> <p>A separate video is not created for each exercise. Verbal description of the exercise is incomplete or missing; audio is not clear and audible. Majority of exercise are improperly demonstrated and at no alternative modifications are presented for older adults with more significant physical and cognitive impairment. Videos are poor quality and are not appropriate for viewing by older adults. Youtube links do not work or the majority of videos</p>	<p><b>75.00 %</b></p> <p>A separate video is created for each exercise. Verbal description of the exercises are incomplete and/or inappropriate; audio is not clear or audible. Headset or Air Pods not used. Majority of exercises are not properly demonstrated and no alternative modifications are presented for older adults with more significant physical and cognitive impairment. Videos are poorly done and lack a background that allows older adults to clearly see the person demonstrating the exercise ; Some YouTube links are broken</p>	<p><b>85.00 %</b></p> <p>A separate video is created for each exercise. Verbal description of the exercises are partially complete and/or audio isn't clear and audible. Headset or Air Pods are used. Some exercises are properly demonstrated and at least one alternative modification is presented for each exercise for older adults with more significant physical and cognitive impairment. Videos are clear, but lack sufficient background that allows older adults to clearly see the person demonstrating the exercise links to YouTube are easily accessible and work correctly</p>	<p><b>100.00 %</b></p> <p>A separate video is created for each exercise. Verbal descriptions of all exercises are complete and audio is clear and audible. Headset or Air Pods are used. Each exercise is properly demonstrated and more than one alternative modification is presented for older adults with more significant physical and cognitive impairment. Videos are professional looking including a background that allows older adults to clearly see the person demonstrating the exercise; links to YouTube are easily accessible and work correctly</p>

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