

Student Learning Summary Form AY 2015-2016 6/14/2016

Degree Program: MA/MS Physical Education: Exercise Science

a. What learning outcomes did you assess this year?	b. What method(s) did you use to determine how well your students attained the outcome? In what course or other experience did the assessment occur?	c. What expectations did you establish for achievement of the outcome?	d. What were the actual results?	e. Who was responsible for collecting and analyzing the results? How were they shared with the department?
Develop research proposal	<u>PE601 Research Methods</u> Students had to complete and attain an 80% on their research proposal	90% of students earn an 80% on their research proposal	88.5% of students earned 80% on their research proposal Spring 2016	Dr. Finch reviewed proposal for technical writing and results were discussed within program faculty.
Demonstrate understanding of cardiovascular physiological responses to exercise and training	<u>PE 684 Cardiovascular Physiology</u> Students had to develop and present topical research paper/presentation and earn 80%	90% of students earn 80% on cardiovascular physiology research paper	Course not offered in spring 2016 semester	
Explain physiological responses to muscular force development and training	<u>PE683 Neuromuscular Physiology</u> Students complete 5 laboratory experiences demonstrating neuromechanical concepts and earn 80%	90% of students attained 80% or better on their neuromechanical labs.	100% of students earned 80% or better on their laboratory write-ups. Fall 2016	Dr. Finch and/or new neuromuscular faculty member will review laboratory explanations and project results discussed with faculty
Advanced strength training theory concepts	<u>PE576 Advanced Strength Training</u> Students develop seasonal resistance training program	80% of students earn 80% on training program.	Course not offered in Spring – Faculty sabbatical	Dr. Nesser when return from sabbatical leave
Anatomical musculature functions and kinetic analysis	<u>PE584 Applied Sport Biomechanics</u> Students conduct 5 laboratory experiments using kinetic measurement tools.	90% of students earn 80% on laboratory research techniques on muscle function.	Currently, elective course that was submitted for required strength training course that was not offered	Dr. Finch reviewed lab experiments and results discussed with program faculty.
Demonstrate effective motion analysis techniques	<u>PE685 Biomechanics of Sports Techniques</u> Conduct biomechanical research project on self-selected topic.	80% of students conduct independent sport analysis and earn 80% on project	89% of students earned 80% on biomechanical research project Fall 2015	Dr. Finch reviewed and evaluated research project and results were shared with program faculty.
Demonstrate video analysis techniques using Dartfish software	<u>PE585 Dartfish Technologist certification</u> Successfully complete 5 video analysis projects	100% of students successfully complete technologist video projects.	11/11 of students successfully completed video projects Summer 2016	Dr. Finch reviewed projects and all students' successfully passed requirements and Dartfish, Inc., will conduct final certification evaluation of projects on cloud in July 2016
Completion of culminating experiential learning	<u>PE602, 629, 699</u> Complete research project, thesis or internship.	100% second year masters students complete culminating experience requirement	4 of 6 second year masters students completed culminating experience requirement Fall'15 & Spring 2016	Dr. Finch and program research committee reviewed research projects and successful completion of these were published electronically. Need to get students started earlier on thesis proposals.
Demonstrate proper data collection techniques and statistical analysis	<u>PE 601 Research Methods</u> Students will collect data and statistical analyze and interpret the results.	80% of students will earn an 80% on the statistical workbook project.	Exceeded 88.5% of students earned 80% on the statistical workbook.	Dr. Finch and program research committee discussed the research projects and statistical analyses

**Department of Kinesiology, Recreation & Sport
MA/MS program Physical Education: Exercise Science specialization**

Part Two: Student Learning Assessment Summary

In 2015-16, the Exercise Science program completed direct assessments on five student learning outcomes, which included the development of a formal research proposal on an Exercise Science topic, perform appropriate statistical analyses on collected data, demonstrate understanding of factors influencing strength development through experiential laboratory exercises, demonstrate proper motion video analysis research techniques by the completion of a 2/3 dimensional motion analysis research project, and oral/written presentation of culminating experience via either an internship or independent research / thesis project. The Exercise Science faculty expectations are that their students achieve an 80% on their written projects.

Provided below are the assessment results of the student learning outcomes:

- Outcome 1:** Students will articulate their understanding of research in the health /fitness setting through writing a research proposal. 88.5% of all students in PE601 Research /Statistical Methods earned an 80% or better on their research proposal.
- Outcome 2:** Students will demonstrate and understanding of physiological responses to muscular force development and resistance training, the effects of endurance, strength, and power training on muscle function, central and peripheral neuromuscular fatigue, the effects of overtraining on muscle soreness/injury, adaptations to reduced use of muscle function, flexibility, arousal, and warm-up on muscular performance, the effects of gender and aging on muscular force production, and the maximization of muscular performance. 100% of all students in PE684 Neuromuscular Physiology earned an 80% or better on their neuromuscular laboratory research experiments.
- Outcome 3:** Students will demonstrate proper qualitative and quantitative motion analysis techniques while evaluating self-selected human movements. They will demonstrate correct videographic motion analysis techniques by developing and completing a 2/3D video motion analysis project and their results will be presented in an oral and written format to their colleagues. 89% of the students in PE685 Biomechanics of Sports Techniques' class achieved an 80% or better on their written and oral biomechanical research project.
- Outcome 4:** Students will demonstrate effective applied theory and research techniques in Exercise Science through the completion of a culminating experience that may include either an Exercise Science internship in the field or the execution and completion of a research project. 7/9 of the Exercise Science graduate students have completed their culminating experience requirement and 2 of 9 students are scheduled to finish their master's thesis research during this summer semester.
- Outcome 5:** Students will demonstrate proper data collection and statistical analysis techniques for 5 research topics/projects. 100% of the students in PE601 Research Methods earned an 80% of better on their statistical workbook project.

In 2016-2017, the department will adding 2 new tenure track faculty members which should help provide timely scheduling of required classes. The PE688 Exercise Testing in Exercise Science will be moved from a required course to an elective course offering because of needed critical number of graduate students for the second cardiovascular physiology class. The program faculty will consider the classification of the PE584 Applied Biomechanics and PE585 Data Processing in Sport Science-Dartfish Certification classes as required Exercise Science specialization courses in order to provide an integrated Exercise Science program with a balance between the exercise physiological effects and biomechanical coursework. This will solidify and strengthen the programmatic commitment to provide Dartfish certified technologists to the US Olympic Training Center sports as delineated in the recently approved memorandum of understanding. Also, this will further strengthen the ISU Exercise Science program's unique designation from Dartfish Corporation, as only the second university in the US to be able to offer the DCT certification training.

Student Learning Summary Report Rubric :: Office of Assessment & Accreditation :: Indiana State University

Degree Program: MS in Physical Education/Exercise Science Date: 8.8.16

	Level 0 - Undeveloped	Level 1 - Developing	Level 2 - Mature	Level 3 - Exemplary
1. Student Learning Outcomes	<input type="checkbox"/> No outcomes are identified.	<input checked="" type="checkbox"/> Outcomes were identified. <input checked="" type="checkbox"/> Some of the outcomes are specific and measurable. <input checked="" type="checkbox"/> Some of the outcomes are student-centered. <input type="checkbox"/> A Curriculum Map was provided.	<input type="checkbox"/> Outcomes are specific, measurable, student-centered program outcomes. <input checked="" type="checkbox"/> Outcomes at least indirectly support Foundational Studies Learning Outcomes or the Graduate Learning Goals. <input checked="" type="checkbox"/> The Curriculum Map identifies where/to what extent each outcome is addressed. <input type="checkbox"/> At least one outcome was assessed in this cycle.	<input type="checkbox"/> Outcomes are specific, measurable, student-centered program outcomes that span multiple learning domains. <input type="checkbox"/> Outcomes directly integrate with Foundational Studies Learning Outcomes or the Graduate Learning Goals. <input type="checkbox"/> Outcomes reflect the most important results of program completion (as established by an accreditor or other professional organization). <input type="checkbox"/> Learning outcomes are consistent across different modes of delivery (face-to-face and online.) <input type="checkbox"/> Outcomes are regularly reviewed (and revised, if necessary) by the faculty and other stakeholders. <input type="checkbox"/> The Curriculum Map identifies where/to what extent each outcome is addressed and offers evidence that students have sufficient opportunity to master the

				<p>associated learning outcomes.</p> <p><input type="checkbox"/> Two or more outcomes were assessed in this cycle.</p>
<p>2. Measures & Performance Goals</p>	<p><input type="checkbox"/> No measures are provided.</p> <p><input type="checkbox"/> No goals for student performance are identified.</p>	<p><input type="checkbox"/> Measures are provided, but some are vague and/or do not clearly assess the associated outcomes.</p> <p><input type="checkbox"/> Measures are primarily indirect.</p> <p><input type="checkbox"/> Measures include course and/or assignment grades, but there is no evidence that grades are calibrated to the outcomes.</p> <p><input type="checkbox"/> Performance goals are identified, but they are unclear or inappropriate.</p>	<p><input checked="" type="checkbox"/> At least one direct measure was provided for each outcome.</p> <p><input checked="" type="checkbox"/> Some information is provided to suggest that measures are appropriate to the outcomes being assessed.</p> <p><input type="checkbox"/> Measures include course and/or assignment grades, and general information is provided to indicate that grades are calibrated to the outcomes.</p> <p><input checked="" type="checkbox"/> Clear and appropriate standards for performance are identified. Most are.</p> <p><input type="checkbox"/> Mechanisms (rubrics, checklists, criterion-referenced exams, etc.) were provided.</p>	<p><input type="checkbox"/> Multiple measures were provided, and a majority are direct.</p> <p><input type="checkbox"/> Detailed information is provided to show that measures are appropriate to the outcomes being assessed.</p> <p><input type="checkbox"/> Measures include course and/or assignment grades, and specific evidence is provided to demonstrate that grades are calibrated to the outcomes.</p> <p><input type="checkbox"/> Clear and appropriate standards for performance are identified and justified.</p> <p><input type="checkbox"/> If students are required to pass a certification or licensure exam to practice in the field, this was included as a measure.</p> <p><input checked="" type="checkbox"/> Measures assess some high impact practices (internships, capstone course projects, undergraduate research, etc.)</p> <p><input type="checkbox"/> Some measures allow performance to be gauged over time, not just in a single course.</p> <p><input type="checkbox"/> Mechanisms (rubrics, checklists, criterion-referenced</p>

				<p>exams, etc.) were provided that demonstrate that the measure provides clear evidence of what students know/can do.</p> <p><input type="checkbox"/> If a measure is used to assess more than one outcome, a clear explanation is offered to substantiate how this is effective.</p>
<p>3. Results</p>	<p><input type="checkbox"/> No data are being collected.</p> <p><input type="checkbox"/> No information is provided about the data collection process.</p> <p><input type="checkbox"/> No results are provided.</p> <p><input type="checkbox"/> Students are meeting few of the performance standards set for them.</p>	<p><input type="checkbox"/> Some data are being collected.</p> <p><input type="checkbox"/> Some data are being analyzed.</p> <p><input type="checkbox"/> Some results are provided.</p> <p><input type="checkbox"/> Insufficient information is offered to demonstrate that data collection, analysis, and interpretation processes are valid.</p> <p><input type="checkbox"/> Students are achieving some of the performance standards expected of them.</p>	<p><input checked="" type="checkbox"/> Data are being collected and analyzed.</p> <p><input checked="" type="checkbox"/> Results are provided.</p> <p><input checked="" type="checkbox"/> Some information is offered to demonstrate that data collection, analysis, and interpretation processes are valid and meaningful.</p> <p><input checked="" type="checkbox"/> Students generally are achieving the performance standards expected of them.</p>	<p><input type="checkbox"/> Clear, specific, and complete details about data collection, analysis, and interpretation of results are provided to demonstrate the validity and usefulness of the assessment process.</p> <p><input type="checkbox"/> Students generally are achieving the performance standards expected of them and demonstrate continuous improvement on standards they have yet to achieve/achieve less well.</p> <p><input type="checkbox"/> If students are required to pass a certification or licensure exam to practice in the field, the pass rate meets the established benchmark.</p>
<p>4. Engagement & Improvement</p>	<p><input type="checkbox"/> No one is assigned responsibility for assessing individual measures.</p> <p><input type="checkbox"/> Assessment primarily is the responsibility of the program chair.</p>	<p><input checked="" type="checkbox"/> The same faculty member is responsible for collecting and analyzing most/all assessment results.</p> <p><input type="checkbox"/> It is not clear that results are shared with the faculty as a whole on a regular basis.</p>	<p><input type="checkbox"/> Multiple faculty members are engaged in collecting and analyzing results.</p> <p><input checked="" type="checkbox"/> Results regularly are shared with the faculty.</p> <p><input checked="" type="checkbox"/> The faculty regularly</p>	<p><input type="checkbox"/> All program faculty members are engaged in collecting and analyzing results.</p> <p><input type="checkbox"/> Faculty regularly and specifically reflect on students' recent achievement of</p>

	<input type="checkbox"/> No improvements (planned or actual) are identified. <input type="checkbox"/> No reflection is offered about previous results or plans.	<input type="checkbox"/> Plans for improvement are provided, but they are not clear and/or do not clearly connect to the results. <input checked="" type="checkbox"/> Little reflection is offered about previous results or plans.	engages in meaningful discussions about the results of assessment. <input checked="" type="checkbox"/> These discussions lead to the development of specific, relevant plans for improvement. <input type="checkbox"/> Improvements in student learning have occurred as the result of assessment.	performance standards and implement plans to adjust activities, performance goals, outcomes, etc. according to established timelines. <input type="checkbox"/> Faculty and other important stakeholders reflect on the history and impact of previous plans, actions, and results, and participate in the development of recommendations for improvement. <input type="checkbox"/> Continuous improvement in student learning occurs as the result of assessment. <input type="checkbox"/> Outcomes and results are easily accessible to stakeholders on/from the program website. <input type="checkbox"/> Assessment is integrated with teaching and learning.
Overall Rating	<input type="checkbox"/> Level 0 - Undeveloped	<input checked="" type="checkbox"/> Level 1 - Developing	<input type="checkbox"/> Level 2 - Mature	<input type="checkbox"/> Level 3 - Exemplary

COMMENTS

Strengths, Concerns, Recommendations for Improvement

1. Learning Outcomes

The Student Learning Summary Report identified nine learning outcomes (though only six were assessed during this cycle). Some are not written as outcomes (4, 5, 8), but they easily could be (for example, “Apply advanced strength training concepts....”) Also, the first one really is a method, not an outcome, so why not combine it with 9, which is too narrow? You’d end up with something like “Conduct an original research project...” You might also be able to join outcome 2 with these, since it also focuses on a research project.

2. Measures & Performance Goals

Nine discrete, direct measures are used to assess the outcomes, and they include high-impact practices as part of students’ culminating experience. How do you determine that students meet the expectations you established—do you use rubrics, checklists, etc.? Performance standards appear to be appropriate except for item 7 (what is successful completion?) and 8 (which needs to spell out expectations for each project, which I assume entails more than simple completion.) In Part Two, you provide some additional information about what the measures for outcomes 2 and 3 entail. Please include this level of detail for all measures (preferably in Part One).

3. Results

Results were provided for six of the nine measures. N’s were not provided in several cases, but the numerical summaries show that students met expectations for four outcomes. The results would be more meaningful if information were provided about the kind and level of knowledge and skills that the benchmarks represent. What specific knowledge and skills do students possess? Which ones do they need to work on?

4. Engagement & Improvement

A single faculty member was responsible for collecting all assessment data this cycle and discussing them (when? How regularly?) with the program faculty. Does the summary presented in Part Two reflect conversations with all faculty? In your next report, focus this section on specifically analyzing the results you collected, examining the impact of previous changes, and identifying new plans for improvements in student learning, particularly in regard to outcomes whose benchmarks students did not meet. Is there evidence that student learning continuously improves?

Thank you-- I look forward to learning more about your assessment program in next year’s report!