

Exercise Science - MS - Exercise Science

Group 1: Cycle 1 - Fall 2017 - Summer 2019

Currently status is: Report Accepted

ASSESSMENT REPORT FOR Group 1: Cycle 1 - Fall 2017 - Summer 2019

Mission Statement

The mission of the MS Program in Exercise Science at the University of South Carolina is to promote the interest in and the understanding of behavioral, physiological, and cellular mechanisms of exercise and physical activity and their relationship to health and rehabilitation through classroom, clinical, and research activities.

Goal 1.

Master of Science students are expected to gain the required knowledge of research design and statistical procedures and to complete a project or thesis in agreement with their advisor on a topic in Exercise Science.

[curriculum map](#)

Curriculum

EXSC 798, 799; BIOS 700, 701

See curriculum map

Learning Outcome 1.

Master of Science students will evaluate scientific literature, create a research plan and analyze and interpret research results.

Measures and Criteria

Thesis students will compose an inclusive paper containing an introduction, purpose, methods, results and discussion to address one or more research questions and synthesize an interpretation based on the findings. The Thesis Committee will assess the paper for completeness, accuracy, and interpretation of findings. At least 90% of thesis students will satisfy the project/thesis demands.

Project students will complete three comprehensive exam questions in which they will evaluate scientific literature, create a research plan, and analyze interpret research results. At least 80% of project students will pass the question on the first attempt.

Methods

For thesis students, the student's Thesis Committee will assess the completed document for thoroughness, accuracy and interpretation of the research. At least two out of three committee members must approve the document and the student's oral defense of the document for the student to pass.

For project students, the Coordinator of Graduate Programs disseminates copies of the exams to two predetermined faculty members who will evaluate the questions for completeness and accuracy. Responses that are judged as incomplete and/or inaccurate will be given a rating of Fail (score = 1). Responses that are judged to have some minor issues with completeness and/or accuracy will be given a rating of Marginal (score = 2). Responses that are judged as both complete and accurate will be given a rating of Pass (score = 3). Responses that are judged to go above and beyond expected completeness and accuracy will be given a rating of Excellent (score = 4). Scores from the two raters will be summed and a score of 5 or better will be deemed as a passing score for each question. If the scores for any question differ by more than 2 points, a third reader will be requested to evaluate the answer and the 2 closest scores will be used. In order to pass the comprehensive exam, the student must pass all questions. Students who fail to obtain an overall score of 5 or better will be allowed a single attempt to rewrite the question(s) to obtain a score of 5 or better.

At the end of the spring semester, the EXSC MS Graduate Director will collect the data from the Coordinator of Graduate Programs, use the data to identify any weaknesses in the curriculum, and determine what changes, if any, need to be made to the curriculum.

Results

Number/percent of students who satisfied thesis criteria:

AY2017-18: 1 of 1 (100%)

AY2018-19: No students completed a thesis

Overall: 1 of 1 (100%)

Number/percent of project students who passed comp exam question on 1st attempt:

AY2017-18: 4 of 4 (100%)

AY2018-19: 2 of 3 (67%)

Overall: 6 of 7 (86%)

These criteria were met.

Use of Results

No changes to either the curriculum or the assessments are warranted at this time based on the assessment results.

Goal 2.

Master of Science students are expected to participate in classroom laboratory activities, clinical testing/evaluation programs, and research projects.

Curriculum

EXSC 742 or 743

Learning Outcome 1.

Master of Science students will demonstrate proficiency in laboratory-based assessments through written and practical evaluations.

Measures and Criteria

Students will write lab reports that explain the methodology, analyze the data, and evaluate the results for each laboratory exercise. All lab reports will be evaluated with a rubric (see attachment); a passing grade will be set at 70%. Students who receive a grade below 70% on a lab report will be permitted a single resubmission to attain this standard on up to 30% of their lab reports. At least 80% of students will receive a score of 70% or higher on all their lab reports on the first attempt.

[rubric for 742/743](#)

Methods

At the end of the spring semester, the EXSC MS Graduate Director will collect the data from the Coordinator of Graduate Programs or the primary instructor for EXSC 742 and 743. The Graduate Director will then use the data to identify any weaknesses in the curriculum, and meet with the faculty teaching courses in the curriculum determine what changes, if any, need to be made to the curriculum.

Results

Percent of students scoring at least 70% on lab reports in EXSC 742/743:

Term	# students	# ≥ 70%	% ≥ 70%
Fall 17 (EXSC 742)	6	6	100%
Spring 18 (EXSC 743)	4	4	100%
Fall 18 (EXSC 742)	4	4	100%
Spring 19 – N/A			
Overall	14	14	100%

This criterion was met.

Use of Results

No changes to either the curriculum or the assessments are warranted at this time based on the assessment results.

Goal 3.

Master of Science students are expected to gain the required knowledge of exercise physiology, physical activity, and motor skills acquisition and their relationships with health.

Curriculum

EXSC 780 or 781, 700, 710, and 731.

Learning Outcome 1.

Master of Science students will explain, analyze and evaluate physiological changes that occur during exercise and how environmental conditions influence these responses.

Measures and Criteria

Students will be assessed on a paper or final exam for EXSC 780 (Physiology of Exercise) or EXSC 781 (Physiology, Exercise, and Disease). This course is usually taken in the students' first year of the program. At least 80% of students are expected to achieve a grade of "B" or greater on the paper or final exam for EXSC 780 or 781.

Both thesis and project students will complete a comprehensive exam question in which they will explain, analyze and evaluate physiological changes that occur during exercise and how environmental conditions influence these responses. At least 80% of students will pass the question on the first attempt.

Methods

The comprehensive examination is conducted as a concluding portion of the student's program. The Coordinator of Graduate Programs disseminates copies of the exams to two predetermined faculty members who will evaluate the question for completeness and accuracy. Responses that are judged as incomplete and/or inaccurate will be given a rating of Fail (score = 1). Responses that are judged to have some minor issues with completeness and/or accuracy will be given a rating of Marginal (score = 2). Responses that are judged as both complete and accurate will be given a rating of Pass (score = 3). Responses that are judged to go above and beyond expected completeness and accuracy will be given a rating of Excellent (score = 4). Scores from the two raters will be summed and a score of 5 or better will be deemed as a passing score for each question. If the scores for any question differ by more than 2 points, a third reader will be requested to evaluate the answer and the 2 closest scores will be used. In order to pass the comprehensive exam, the student must pass all questions. Students who fail to obtain an overall score of 5 or better will be allowed a single attempt to rewrite the question(s) to obtain a score of 5 or better.

At the end of the spring semester, the EXSC MS Graduate Director will collect the data from the Coordinator of Graduate Programs and the Primary Instructors of EXSC 780 and 781. The Graduate Director will then use the aggregate results to identify any weaknesses in the curriculum, and determine what changes, if any, need to be made to the curriculum.

Results

Measure 1: Percent of students in EXSC 780/781 achieving a grade of B or better on their paper or exam:

Term	# students	# ≥ B	% ≥ B
Fall 17 (EXSC 780)	5	4	80%
Spring 18 (EXSC 781)	5	4	80%
Fall 18 (EXSC 780)	4	4	100%
Spring 19 (EXSC 781)	4	4	100%
Overall	18	16	89%

Measure 2: Percent of students passing associated questions on comp exam on first attempt:

AY2017-18: no students took the comp exam

AY2018-19: 1 of 4 (25%) passed.

Criterion for measure 1 was met. Criterion for measure 2 was not.

For measure 2, the three students who did not pass the comp exam on first attempt were slightly below

average for admission criteria to our program. They met the minimum requirements but had lower GPA and GRE scores compared to previous MS students. All three students had difficulty with the material. One student scored a “D” in EXSC 780, was placed on academic suspension, retook the course, and then did not pass that question on the comp exam. Another student did not have an undergraduate Exercise Physiology course. The third student struggled to explain physiological processes with faculty members. Two of the students took EXSC 780 which evaluates students based on a multiple-choice exam (i.e., students are not required to write about physiological processes).

Use of Results

Students who have an undergraduate degree in Exercise Science will take EXSC 781, which is a higher-level course that requires students to write and describe physiological processes, instead of EXSC 780. Students who have not taken an undergraduate course in Exercise Physiology will be required to take an undergraduate course in Exercise Physiology to correct the deficiency prior to taking EXSC 781.

We will also hold a session about the comp exam farther in advance of the comp exam so that students can start preparing for the exam earlier.

The MS Graduate Director and MS Admissions and Curriculum Committee will evaluate EXSC 780 to determine if it is meeting the needs of the MS students.

Learning Outcome 2.

Master of Science students will explain, analyze, and evaluate the relationships between physical activity, behavior, and health.

Measures and Criteria

Students will be assessed on their paper for EXSC 700 Physical Activity and Health: Epidemiology, Research, and Practice. This course is usually taken at the end of the students’ first year of the program. At least 80% of students are expected to achieve a grade of “B” or greater on the paper for EXSC 700.

Both thesis and project students will complete a comprehensive exam question in which they will explain, analyze and evaluate the relationships between physical activity, behavior, and health (content from EXSC 700 and EXSC 710). At least 80% of students will pass the question on the first attempt.

Methods

The comprehensive examination is conducted as a concluding portion of the student’s program. The Coordinator of Graduate Programs disseminates copies of the exams to two predetermined faculty members who will evaluate the question for completeness and accuracy. Responses that are judged as incomplete and/or inaccurate will be given a rating of Fail (score = 1). Responses that are judged to have some minor issues with completeness and/or accuracy will be given a rating of Marginal (score = 2). Responses that are judged as both complete and accurate will be given a rating of Pass (score = 3). Responses that are judged to go above and beyond expected completeness and accuracy will be given a rating of Excellent (score = 4). Scores from the two raters will be summed and a score of 5 or better will be deemed as a passing score for each question. If the scores for any question differ by more than 2 points, a third reader will be requested to evaluate the answer and the 2 closest scores will be used. In order to pass the comprehensive exam, the student must pass all questions. Students who fail to obtain an overall score of 5 or better will be allowed a single attempt to rewrite the question(s) to obtain a score of 5 or better.

At the end of the spring semester, the EXSC MS Graduate Director will collect the data from the Coordinator of Graduate Programs and the Primary Instructor of EXSC 700. The Graduate Director will then use the aggregate results to identify any weaknesses in the curriculum, and determine what changes, if any, need to be made to the curriculum.

Results

Measure 1: Percent of students taking EXSC 700 who achieved a B or better on their paper.

Spring 2018: 100%

Spring 2019: 100%

Measure 2: Percent of students passing associated questions on the comp exam on their first attempt.

AY2017-18: no students took the comp exam

AY2018-19: 2 of 4 (50%)

Criterion for measure 1 was met. Criterion for measure 2 was not.

For measure 2, the two students who did not pass on the first attempt had difficulty with the material in EXSC 700. While they scored a B or better on their paper, they had difficulty with the exams and did not seek help outside of class. In addition, the two students who did not pass the comp exam on first attempt were slightly below average for admission criteria to our program. They met the minimum requirements but had lower GPA and GRE scores compared to previous MS students. In addition, the topic of the course is specialized and it was inconsistent with their career goals.

Use of Results

For students who are below average on admission criteria, the committee will consider offering conditional admittance for the first semester and students must obtain a B or better in first semester coursework prior to being fully admitted. In addition, the committee is considering a revision to the MS curriculum which would make this course an elective instead of a required course for all students. That change would allow students to select electives to meet their professional interests

Learning Outcome 3.

Master of Science students will explain, analyze, and evaluate the relationships between biomechanical and neural factors that influence learning and performance of motor skills in healthy and disabled populations.

Measures and Criteria

Students will be assessed on their paper or final exam for EXSC 731 Mechanisms of Motor Skill Acquisition. This course is usually taken in the middle of the program. At least 80% of students are expected to achieve a grade of "B" or greater on the paper or final exam for EXSC 731.

Both thesis and project students will complete a comprehensive exam question in which they will explain, analyze and evaluate the relationships between biomechanical and neural factors that influence learning and performance of motor skills in healthy and disabled populations. At least 80% of students will pass the question on the first attempt.

Methods

The comprehensive examination is conducted as a concluding portion of the student's program. The Coordinator of Graduate Programs disseminates copies of the exams to two predetermined faculty members who will evaluate the question for completeness and accuracy. Responses that are judged as incomplete and/or inaccurate will be given a rating of Fail (score = 1). Responses that are judged to have some minor issues with completeness and/or accuracy will be given a rating of Marginal (score = 2). Responses that are judged as both complete and accurate will be given a rating of Pass (score = 3). Responses that are judged to go above and beyond expected completeness and accuracy will be given a rating of Excellent (score = 4). Scores from the two raters will be summed and a score of 5 or better will be deemed as a passing score for each question. If the scores for any question differ by more than 2 points, a third reader will be requested to evaluate the answer and the 2 closest scores will be used. In order to pass the comprehensive exam, the student must pass all questions. Students who fail to obtain an overall score of 5 or better will be allowed a single attempt to rewrite the question(s) to obtain a score of 5 or better.

At the end of the spring semester, the EXSC MS Graduate Director will collect the data from the Coordinator of Graduate Programs and the Primary Instructor of EXSC 731. The Graduate Director will then use the aggregate results to identify any weaknesses in the curriculum, and determine what changes, if any, need to be made to the curriculum.

Results

Measure 1: Percent of students taking EXSC 731 who achieved a B or better on the paper or final exam.

Fall 2017: 1 of 1 (100%)

Fall 2018: 5 of 5 (100%)

Overall: 6 of 6 (100%)

Measure 2: Percent of students passing the associated question on the first attempt.

AY2017-18: no students took the comp exam

AY2018-19: no questions were included on the comp exam to measure this learning outcome.

The criterion for measure 1 was met.

Use of Results

EXSC 731 is a very small part of the curriculum. The curriculum committee decided that it was not useful to include a question on the comprehensive exam specifically related to this course.

No other changes to either the curriculum or the assessments are warranted at this time based on the assessment results.