Institutional Effectiveness
2024-2025

Program: Exercise Science BS
College and Department: College of Education and Human Services, Exercise Science
Contact: Christy Killman
Mission:
The mission of the department of Exercise Science is to promote enhanced quality of life (wellness) and strengthen educational pursuits by creating, advancing, communicating, and applying knowledge and skills, through innovative preparation of scholars, researchers, educators, and professionals to meet the needs of a diverse society. (Directly linked to Tech Tomorrow Strategic Goal One – Education for Life; priority actions A, C, D & E. Also linked to Goal Two – Innovation in All We Do; priority actions B and C.)

Mission Brief: Be prepared for service to enhance the quality of life for a diverse society.

Vision: Prepare future professionals to be effective and engaged through clinical rich and evidenced-based programs.

Attach Curriculum Map (Educational Programs Only):
While each of the classes taught in the Exercise Science department meet/align with departmental and curricular goals, the ones displayed in the attached curriculum map are broad in their scope and not dedicated to any one concentration. The field experience classes and practicum classes (2 listings on the map) provide practical experiences for all students related to their chosen field or career path.

Attached Files: See Appendix 1

SLO1: Physical Fitness

Define Outcome:
Exercise Science majors will demonstrate health-enhancing levels of fitness by satisfying standardized criteria for muscular strength/muscular endurance, flexibility, cardiorespiratory endurance, leg power, grip strength and body mass while participating in the annual physical fitness assessment.

Assessment Methods:
Fitness Test once per academic year - The tool used in the administration of this fitness assessment is a nationally normed, proprietary assessment with demonstrated validity and reliability. Each student in Exercise Science must take the fitness test once per academic year - either on the fall rotation or spring rotation. Graduate assistants are test administrators who are supervised by a faculty member and are professionally trained bi-annually on proper test administration protocols for each of the test components. Undergraduate majors who are enrolled in 9 credit hours or more sign up for a section of the test through eagle online. Students enrolled must meet 4 times during the semester to satisfy the requirement set forth by the department.

Students complete the PAR-Q (physical activity readiness questionnaire), fill out their personal fit index and walk through demonstration of each test during the first meeting. The second meeting is for practice/questions and to collect body mass data from each student. The third meeting includes administration of all tests except cardiorespiratory endurance and flexibility, which are administered on the fourth and final day of testing. Each undergraduate student must meet minimum requirements on 5 of 6 different tests according to the health enhancing level of fitness criteria. If any student does not satisfy this requirement, the graduate assistant works with the student, providing information and support related to improvement in that area of fitness. Students have multiple opportunities to improve and satisfy the requirements. (Score sheet with national norms attached)

Attached Files: See Appendix 2

Criteria for Success (Thresholds for Assessment Methods):
Individuals are provided the criteria required for health-enhancing levels of fitness prior to taking the fitness test. As such, the fitness assessment criteria used reflects that level of performance for each of the 6 components being measured. There is also a demonstration of the proper way participate in each test given. Two sets of criteria (male and female) are utilized in assessing student fitness.

Health-enhancing levels of physical fitness scores for females:

- Bench press test using 35 lbs/16 reps to the beat of a metronome. {muscular strength/endurance}
- Sit and Reach, which tests flexibility, greater than or equal to 16-inch reach with legs straight.
- Leg Power is tested by vertical jump. Female passing score is 12 inches or higher.
- Grip Strength is measured by a grip dynamometer. Females should score at least 54kg per hand.
- 1.5 mile run measures cardiorespiratory endurance. Females should complete in 18 minutes,30 seconds or less.
- Body composition is measured by bioelectrical impedance which requires student height and weight. Females are good with 16-28% body fat.

Health-enhancing levels of physical fitness scores for males:

- Bench press - 80lbs/20 reps to the beat of a metronome. {muscular strength/endurance}
- Sit and reach - 13 inches minimum reach with legs straight {flexibility}
- Leg Power - 16 inches or more on vertical jump.
- Grip strength - 84kg per hand
- 1.5-mile run - 14 minutes or less
- Body Composition - 8-22%

Link to 'Tech Tomorrow' Strategic Plan:
1.A Experiential Learning,1.D High Impact Practices

Results and Analysis:
During the 2024-2025 academic year, 420 undergraduate Exercise Science majors completed the required physical fitness test. Results for a randomly selected sample of students [n=146; 79 fall 24/67 spring 25] were examined. When compared to national norms for this age group, the percentage of students in the sample group who satisfied the minimum requirement (or passed) 5 of the 6 tests with a health enhancing level of fitness was overall high. When compared to the sample group from the previous academic year, there were some noticeable differences that must be addressed moving forward. The table below outlines the results of the sample and compares to last year.

When compared to the previous academic year, results shifted dramatically in 2 of the 6 categories. The percentage of students who satisfied the minimum requirement of health enhancing the level of fitness in cardiorespiratory endurance dropped 33% from the previous year and the same measures for flexibility dropped 57%. To put that into perspective when considering the sample group, last year 129 met the minimum in cardio endurance and 117 in

flexibility and this year 85 students passed the cardio test and 37 passed the flexibility test. 126 passed muscular strength this year compared to 122 last year keeping the percentage at 86%. 96 students passed the grip strength test vs 99 last year with a decrease of 4%, Leg power was up 5% over last year with numbers being 119 vs 109. Finally, body composition this year was measured using the BMI formula and also using BEI (bio-electrical impedance) but students were scored only by their BEI score, which is much more accurate than BMI. BEI measures percent body fat. The percentage of students meeting the minimum requirements for health enhancing levels of fitness this year is 71% of the sample group vs 68% passing last year.

There are several things that could have impacted the numbers and percentages of passing scores. Gender is relevant when considering the sample groups and it's likely that this year there are more females than males in the sample group than last year. The single most significant factor that impacts results in 24-25 is the fact that Dr. Wynn programmed and trained the GAs intensely. He led and monitored each fitness testing session, there were more and smaller groups being tested each time, which leads to accuracy in test administration and score recording, to name a few.

Below is a table indicating these results and comparing this sample group to that of last year.

2024-2025 Physical Fitness Test Scores of Sample Group Compared to 2023-2024 Scores
24-25 Sample size N=146 [approximately 1/3 of the total number of completers]
23-24 Sample size N= 142 [approximately 1/3 of the total number of completers]

	'25 pass	'24 pass	'25 not pass	'24 not pass	'25 % pass	'24 % pass	'25 % not	'24 % not	Inc/Dec Pass
Cardio Endurance	85	129	61	13	58%	91%	42%	9%	↓44 Ss 33% ↓
Flexibility	37	117	108	25	25%	82%	75%	18%	↓80 Ss 57%↓
Muscular Strength	126	122	19	20	86%	86%	14%	14%	↑4 Ss Same

Grip Strength	96	99	49	43	66%	70%	34%	30%	↓3 Ss 4%↓
Leg Power	119	109	21	33	82%	77%	18%	23%	↑10 Ss 5%↑
Body Composition	103	96	42	46	71%	68%	29%	32%	↑7 Ss 3%↑

Attached Files: See Appendix 3

Use of Results to Improve Outcomes:
There was a total of 11 sections with average number of test takers per section at 38. There were 8 graduate assistants and Dr. Wynn administering the tests. Smaller groups, greater accountability, trained administrators proved to provide more accurate data in an organized and timely manner.

When looking back at data from previous years, we see that this year [24-25] exercise science students did not score as well on the cardiorespiratory endurance nor flexibility portions of the test but maintained close to the same percentage of successful testing on the other portions of the test. Using only the BEI results provided a more accurate picture of % of students who are underweight, overweight or obese. We still assert that exercise science students know the test is coming so they should prepare or better yet, have a regular exercise/fitness routine.

The PHED 1002 student manual was constructed and printed for students. Starting in fall 2024 and moving forward, students purchase the manual that can be used for all 4 years. The manual has definitions, explanations, national norms, detailed breakdown of how each test is administered and an informational section outlining and providing resources for the students to increase their scores on each test component. Student scores on each of the tests are documented in their personal manual and here they can have a running look at their own fitness levels, improvements and areas that need improvement over their time in the Exercise Science department. So far, it seems the manual (in its first year) is providing stability for students, and we anticipate finding better results in subsequent years using the manual.

SLO2: Knowledge and Understanding of Basic Research

Define Outcome:
Exercise Science students will demonstrate understanding of the basic methods of research by meeting outlined criteria from a teacher-created rubric on the final project (key assessment) in EXPW 4730 - Assessment in Exercise Science and by meeting the outlined criteria on the final project (key assessment) in EXPW 4900 - Research Methods.

Assessment Methods:
Study design, data collection, analysis and presentation project in EXPW 4730 - Assessment in Exercise Science. For the final key assessment in EXPW 4730, students must apply understanding of basic research concepts working in a small group to design a study, collect data, analyze data and present their projects to peers. All students are 'subjects' of all studies in this class, causing this project to be directly linked to activity of some sort, which causes students to apply knowledge from other courses in their study design and data collection. Class time is provided for data collection by each of the groups. The instructor created rubric provides guidance for students in preparing and presenting their research. Even though this is a group project, each student is scored individually according to their contribution to and presentation of the research (rubric attached).

In EXPW 4900 - Research Methods, students learn about basic research principles throughout the semester. This is measured at the end of the semester using a research design project. Students are provided detailed instructions, and the instructor sets up special times for students to confer about their project. Depending on the number of students in the class, this key assessment/project could be individual or small group.

Attached Files: See Appendices 4, 5, 6, 7, and 8

Criteria for Success (Thresholds for Assessment Methods):
In EXPW 4730, students are given the scoring rubric at the onset of the project. The rubric associated with the key assessment project is the guide to success for students. Each area of inclusion is provided with point values assigned. If students use the rubric as a guide, they are likely to perform well in demonstrating their knowledge and understanding of basic research concepts.

The professor goes over the expectations thoroughly in class. Students collaborate on the project from identifying to presenting, but each is scored individually. Students must find articles, collect data, have a solid title and introduction, describe the research method, present the results, address practical implications and conduct themselves in a professional manner while speaking and the visual (power point).

The maximum number of points on the rubric is 50. The usual grading scale is used in a modified form. For example, if 90-100 is an A, then 45 of 50 possible points is an A on this project, and so on.

In EXPW 4900, students are given the scoring rubric at the onset of the project. The rubric associated with the key assessment project is the guide to success for students. Each area of inclusion is provided with point values assigned. If students use the rubric as a guide, they are likely to perform well in demonstrating their knowledge and understanding of basic research concepts.

The professor goes over the expectations thoroughly in class. Students collaborate on the project from identifying to presenting, but each is scored individually. Students must find articles, collect data, have a solid title and introduction, describe the research method, present the results, address practical implications and conduct themselves in a professional manner while speaking and the visual (power point).

Link to 'Tech Tomorrow' Strategic Plan:
1.A Experiential Learning,2.B Research, Scholar, Intellect, and Creativity

Results and Analysis:
For the research objective, data from the key assessments in both EXPW 4730 – Assessment in Exercise Science and EXPW 4900 – Research Methods in Exercise Science were examined. In EXPW 4730, students are scored in 8 main areas on their individual contribution to the project. Results from the 2024-2025 academic year are presented and then compared to student overall grade in the course. There were 3 sections of the class taught – 2 in fall and 1 in spring. The total number of students in all sections was 56, but 2 students withdrew from the course before the project so there are 54 who completed the key assessment. Final grades in the course for all 54 students chart out as follows: A=23, B=19, C=9, D=1, F=2. While we have not made direct comparisons between the key assessment scores and final scores, there is a strong indication that the majority of students are performing above average (78%), which indicates above average understanding of research, while 17% indicate an average understanding, and 5% displaying overall low understanding of research in the course. While group projects may help low performers on the key assessment, quizzes and exams likely influence the 5% who made a D or F in the course.

EXPW 4730: ASSESSMENT IN EXERCISE SCIENCE

FALL 2024/SPRING 2025 KEY ASSESSMENT PROJECT DATA

Rubric Item	24-25 [N=54] Mean on 3.0	23-24 [N=72] (for comparison)	Improvement or Digression
Article	2.73	2.77	↓.04
Data Collection	2.60	2.51	↑.09
Title/Intro	2.65	2.67	↓.02
Methods	2.40	2.31	↑.09
Results	2.24	2.03	↑.21
Conclusion	2.42	2.48	↓.06
Aesthetics	2.77	2.71	↑.06
APA	2.58	2.59	↓.01
Overall	2.53	2.51	↑.02

Here we see that in half the items, the mean was slightly higher when compared to last year, and in half slightly lower. The overall comparison is positive, though slight, indicating improvement in student learning/understanding of simple research. Overall, the mean scores are high across the board which can be contributed to detailed instructions and students understanding the processes of conducting research. One class has only 9 students, so those did the project individually while the other 2 classes were partnered for the assessment.

This table indicates that overall students performed better on the key assessment project than in years past, even though the mean *article, title/intro, conclusion and APA* scores are slightly lower than last year (indicated in green). Scores in all other areas are equal to or higher than the previous year and the overall rating of key assessment projects is at an all-time high in the 3-year comparison (indicated in blue).

When looking at overall grades in the classes, where quizzes, class participation, and exam grades are included in scoring the picture paints a bit differently as indicated below. Even so, 94% of students indicate average or above if the grade C is average. Overall, student assessments and overall course grades indicate learning related to assessment and research in this course.

EXPW 4730 – Assessment in Exercise Science

Grade Distribution Fall 2024 and Spring 2025

	Fall 2024 [N=32]	Spring 2025 [N=20]	% of total # students
A	10	12	42%
B	15	4	37%
C	6	2	15%
D	1	0	2%
F	0	2	4%

Class sizes were smaller during 24-25 which could have a positive influence on student performance on the projects. Students are encouraged to get feedback at different intervals in the project process from the instructor, which can have a positive impact on the final score on the projects. Factors such as attendance, general interest in the subject, and abilities to work well in a group also impact student scores, grades and understanding in this course.

EXPW 4900 – Research Methods in Exercise Science is the highest-level research course exercise science majors take in the undergraduate program and is usually taken in their final semester before graduation. The course syllabus presents the same objectives for both semesters, yet the key assessment changed from fall to spring, thus both projects and rubrics are presented here. Numbers presented vary from enrollment due to various circumstances beyond the control of the instructor.

During the 2024-2025 academic year there were 3 sections of this course with a total of 57 students who completed the course. During the fall semester, 22 students participated in the research proposal project (key assessment) which is the research proposal presentation. In the spring semester 35 students in 2 different sections

completed the same key assessment but also completed a literature synthesis project. Data for these assessments are presented below.

Research Proposal Presentation Fall 24 N=22			Research Proposal Presentation Spring 25 N=35			Literature Synthesis Spring 25 N=35		
#	Grade	%	#	Grade	%	#	Grade	%
17	A	77%	24	A	69%	13	A	37%
5	B	23%	9	B	26%	7	B	20%
			2	C	5%	7	C	20%
						6	D	17%
						2	F	6%

When looking at the research proposal as a means of assessing student understanding of research method, we note that 72% of the students made an A on the assessment and 25% scored B, and approximately 3% earned an average score – all indications of understanding research at average or above. When adding the literature synthesis assessment, students levels of understanding drop with 77% scoring average or above. Even with grades of D and F for some students on the literature synthesis, there is still a strong indication of understanding of basic research principles.

Research Proposal comparison to previous academic year.

Grade	2024-25 [N= 57]	%	2023-24 [N=54]	%
A	**41**	**72%**	10	19%
B	**14**	**25%**	20	37%
C	**2**	**4%**	12	22%
D	--		9	17%
F	--		3	5%

When comparing student scores on the research proposal key assessment between academic years, it's hopeful to see that this year 100% of the students made a C or better on the assessment, indicating average or above levels of understanding as opposed to 78% from the previous year. Because the literature synthesis only came into play during the spring 2025 semester there are no comparisons for this assessment piece at this time.

There is a strong indication that changes made by both professors to increase learning and provide confidence for students in research have provided needed supports for student learning, which is outlined by the high mean scores, percentages and grades the exercise science students produce.

Attached Files: See Appendix 9

Use of Results to Improve Outcomes:
There is a strong indication that changes made by both professors to increase learning and provide confidence for students in research have provided needed supports for student learning, which is outlined by the high mean scores, percentages and grades the exercise science students produce. No actions are needed for this outcome at this time.

SLO3: Knowledge of the Field

Define Outcome:

Exercise Science majors will demonstrate knowledge in the field by answering correctly 80% or more of identified concept questions on the final exam in EXPW 3410 - Motor Development and EXPW 3170 - Motor Learning. Motor Development and Motor Learning are foundational courses with theories and concepts that directly link to learning in all concentrations within exercise science. Motor development is the progression of a child's ability to control and coordinate their body's movements, including both gross and fine motor skills. It encompasses the development of large muscle groups, which allows for activities like walking, jumping, and throwing, as well as the precise coordination of smaller muscles needed for tasks like writing and drawing. Motor learning is the process of acquiring and improving motor skills through practice and experience, resulting in a relatively permanent change in the ability to perform a skill. This change in ability is not a temporary performance change, but rather a lasting improvement in skill proficiency.

The objectives for EXPW 3410 - Motor Development, as outlined in the course syllabus are

Demonstrate knowledge of the developmental process throughout the lifespan.

Discuss the interaction of cognitive and motor development throughout the lifespan.

Characterize prenatal developmental concerns.

Discern the components of fundamental movement patterns.

Measure children for appropriate growth and development traits.

Define health-related fitness and its effect on physiological performance.

Objectives for EXPW 3170 - Motor Learning include

• *Describe the theoretical approaches that drive motor control and learning research.*

• *Describe and explain the principles and processes underlying skilled performance.*

• *Illustrate the ways in which the human motor system supports the acquisition and retention of complex movement skills.*

• *Demonstrate how instructional situations can be varied in order to better achieve maximum performance and retention of taught skills.*

Assessment Methods:
Questions on the final exams in both the identified courses are directly linked to the learning objectives presented above and outlined in course syllabi.

EXPW 3410 and EXPW 3710 include foundational concepts that most classes in Exercise Science depend/build heavily on. These courses have key concepts, ideas or theories that are monumental to understanding development and learning related to motor skills, and mature, efficient movement. On the exams in both courses, the key components (directly related to the course objectives) are assessed along with other relevant information for each course. 12-15 questions on the exams are dedicated to these key components. Students are expected to answer identified questions with 80% or higher accuracy to indicate mastery. (Key questions for both courses and student objectives are attached)

Instructors use Scantron answer sheets, therefore there is nice data related to each test question, but for purposes of this exercise, we look only at the questions identified as being directly linked to one or more of the course objectives. There are at least 2 questions per objective on the exams in each of the courses.

Criteria for Success (Thresholds for Assessment Methods):

Students will demonstrate their knowledge of the field by answering key identified questions on exams in Motor Development and Motor Learning classes with 80% accuracy.

The expectation is for students to score as well as they can on the exams. Here, 12-15 questions have been identified as benchmarks of understanding for key important concepts in the field of exercise science. The questions are linked to specific learning objectives with the metric of 80% or higher correct answer rate set as the minimum standard.

Link to 'Tech Tomorrow' Strategic Plan:
1.A Experiential Learning,1.D High Impact Practices,2.B Research, Scholar, Intellect, and Creativity

Results and Analysis:

EXPW 3410 – Motor Development
Distribution of Correct Answer Percentages by Objective
2024-2025

N=99	Question 1		Question 2		Question 3		Objective Mastered?
Objective 1	91%	N=90	84%	N=83			Y
Objective 2	73%	N=72	59%	N=58			N
Objective 3	63%	N=62	85%	N=84	79%	N=78	N
Objective 4	89%	N=88	80%	N=79			Y
Objective 5	78%	N=77	72%	N=71	81%	N=80	N
Objective 6	81%	N=80	88%	N=87			Y

The above table indicates that students reached mastery level percentages (80% or higher) on 3 of the 6 objectives overall, but indications of mastery at this level on 2 additional questions (question 2/objective 3 and question 3/objective 5) as indicated in blue. If considering 70% = C and indicates 'average', then this group of students are close to reaching the objectives of the course. (indicated by green). Only 2 questions present student score percentages far below the average or mastery level with 63% and 59% of students answering the questions correctly.

The chart below shows the number of students who answered each identified question linked to the learning objectives for the course correctly. Only objective 3 and 5 have 3 questions, while the others have 2 each. Considering we would like for each bar to be at the 80 mark (or above) on Objective 2 falls short of student mastery for this learning objective. Question 1 for Objective 3 and Question 2 for Objective 5 fall short of the mastery level for these objectives.

N=99 / Correct Answers per Question/Objective
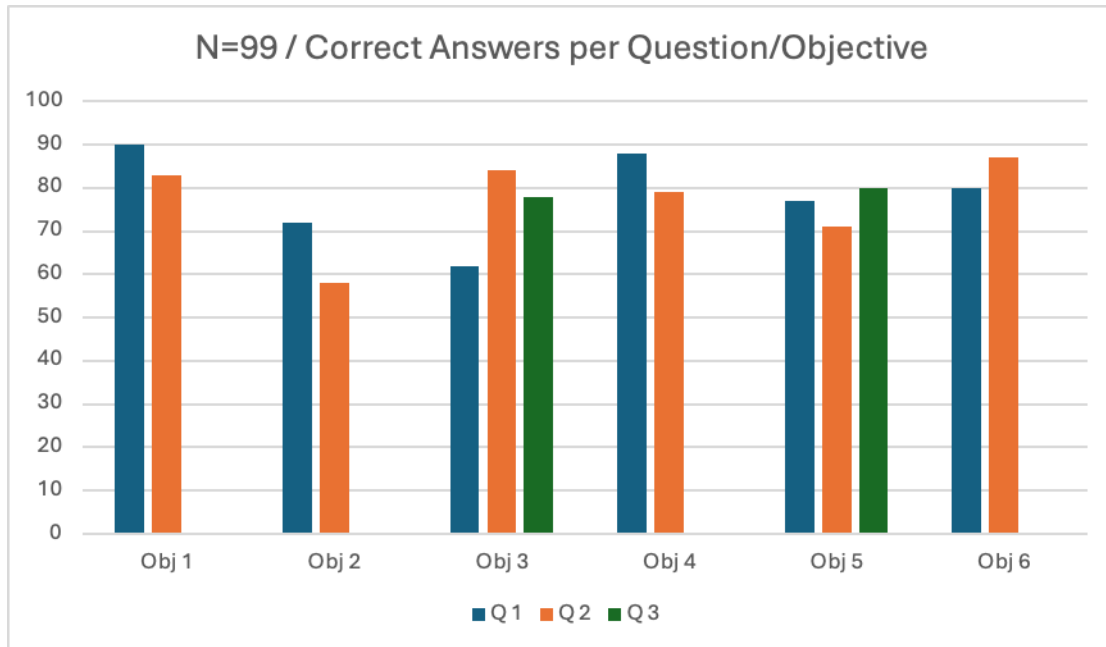
These data indicate that more time/attention needs to be spent on teaching/learning for objectives 2, 3 and 5. Student attendance and levels of participation in class are two factors that are outside control of the instructor and could have an impact on learning of this material. Overall, student mastery is at or above the goal set in the department.

EXPW 3170 - Motor Learning had a total of 114 students in 4 sections during the 2024-2025 academic year. The same assessment process was used for this course as the 3410 course. Questions on the final exam were written to assess student mastery on questions directly linked to the learning objectives for the course.

Motor Learning Percent Mastery
By Objective and Exam Question
2024-2025
N=114

	Q1	Q2	Q3	Q4	Q5	Mean
Objective 1	84	79	38	-	-	67
Objective 2	96	100	96	70	78	88
Objective 3	78	63	-	-	-	71
Objective 4	96	85	73	77	95	85

When looking at the percentage of students who show mastery of the course objectives in Motor Learning (indicated in blue) we see that objective 3 *(ways that the human motor system supports acquisition and retention of complex movement skills)* is the one that needs the most attention to assist students in learning and mastering this objective. Potentially if there were more questions on the exam related to this objective, students might have a better chance at reaching the 80% threshold, being that the mean is 71. For question 3 of objective 1 and question 2 of objective 3, it is possible that the question is unclear. Because there are varied numbers of questions for each objective, it is relevant to look at the mean percentage for each objective. Straight out students meet the expectation on objectives 2 and 4 and objective 3 is within the 'C' is average range with 71% mastery.

Potentially questions 1, 2 and 3 for objective 2 and questions 1 and 5 for objective 4 are too obvious or easy since 95 to 100% of the students got those questions correct. Objective 1 is about theoretical approaches and research, which tends to present problems for students who are typically second semester sophomores or juniors in this course. Overall, students are learning the basic principles of motor learning in the course at an average or mastery level.

The chart below helps to visualize percentage of correct answers for each question as relates to course objectives. Any question below 50% correct answer rate should be reviewed for clarity and understanding. If question 3 for objective 1 were to be thrown out, the percentage mean would increase significantly from 67 to 81. Since this question is a true false question, with a 38% pass rate, it is clear that students do not know this material, rather are guessing.

% Correct Answers Per Question/Objective
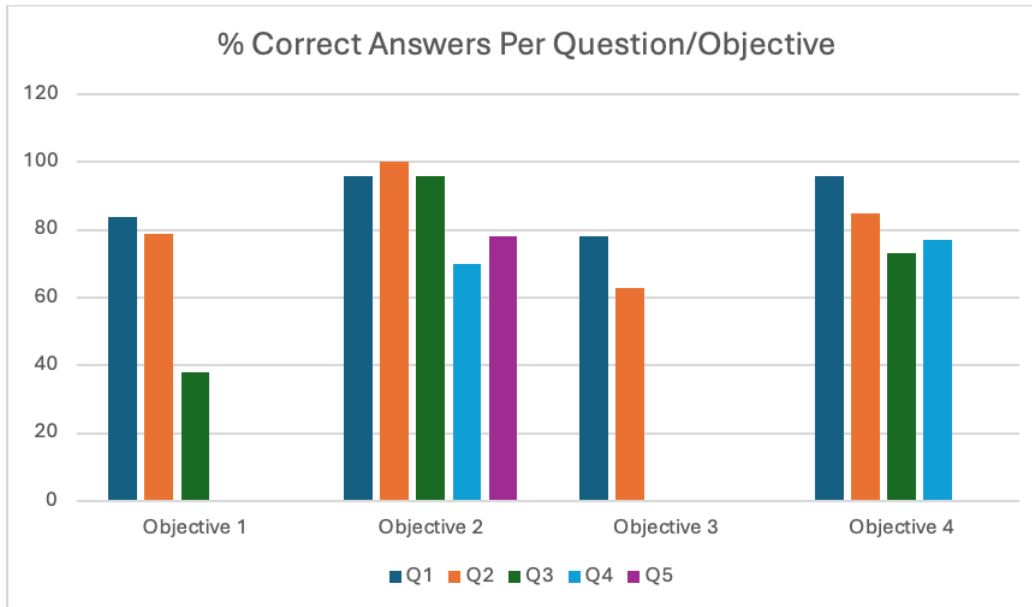
Use of Results to Improve Outcomes:

These results indicate that more time and attention need to be spent on teaching/learning of Objectives 2, 3 and 5 to ensure student mastery of the learning objectives. The instructors will, moving forward, be encouraged to make this a priority to align scores and learning with the other objectives for the EXPW 3410 course.

In the EXPW 3170 course, correct answer results and percentages are generally high, indicating student mastery of the material and course objectives. These current results will be used to improve student outcomes by critiquing each question to ensure it is presented in a way that students can understand. Question 3 for objective 1 will be reworked and attention will be given during class instruction to ensure students are retaining this information.

Summative Evaluation:

In the 3 areas included in this report Fitness, Research and Knowledge of the Field, overall, students are learning and retaining information as expected in each. The focus for fitness scores to increase in cardio endurance and flexibility will be addressed by encouraging students to work in these 2 fitness areas before fitness assessment protocols begin. We can accomplish this by meeting students on the first day of class and giving time to 'practice' before actually participating in the assessment battery. Academic areas of content knowledge and research seem solid with a few adjustments to be made by the instructors to ensure students are retaining information and able to understand the questioning on the exams. While faculty always try to reach all the students it is impossible to control attendance, interest, motivation and class participation.

Assessment Plan Changes:

There are no assessment changes planned at this time.

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Appendix 1: Exercise Science BS Curriculum Map

Exercise Science B.S. Degree Program

Course	Title	Goals/Learning Outcomes		
		Physical Fitness	Research Skills	Knowledge of the field
EXPW 1022	Introduction to Exercise Science		X	
EXPW 3032	Exercise Prescription		X	X
EXPW 3410	Motor Development		X	X
EXPW 3170	Applied Motor Learning		X	X
EXPW 4032	Training for Performance	X	X	X
EXPW 4420	Kinesiology	X	X	X
EXPW 4730	Assessment in Exercise Science		X	X
EXPW 4810/4820/4830	Field Experience			X
EXPW 4751/4752/4845	Physical Education Practicum			X
EXPW 4900	Research Methods		X	
EXPW 4991	Independent Study		X	
PHED 1002	Physical Fitness Test	X		

Appendix 2: Department of Exercise Science Fitness Test Score Sheet

Department of Exercise Science

Fitness Assessment Record

Name & T# _____

Concentration _____ PHED 1002 section _____

Test	Criteria	Score	Initialed By	Pass/Fail (P or F)
YMCA Bench Press Test	M-80lbs/20 reps F-35lbs/16 reps			
Sit & Reach	M-≥ 13 in F-≥ 16 in			
Leg Power	M-≥ 16 in F-≥ 12 in			
Grip Strength	M- 84kg F- 54kg			
Body Composition (BMI & BF%)	M&F< 25 M: 8-22% F: 16-28%			
1.5 Mile Run	M- 14:00 or less F- 18:30 or less			

Date & Time of Test Administration _____

Appendix 3: Table Comparison Fitness Test Scores Sample

2024-2025 Physical Fitness Test Scores of Sample Group Compared to 2023-2024 Scores

24-25 Sample size N=146 [approximately 1/3 of the total number of completers]

23-24 Sample size N= 142 [approximately 1/3 of the total number of completers]

	'25 pass	'24 pass	'25 not pass	'24 not pass	'25 % pass	'24 % pass	'25 % not	'24 % not	Inc/Dec Pass
Cardio Endurance	85	129	61	13	58%	91%	42%	9%	↓44 Ss 33%↓
Flexibility	37	117	108	25	25%	82%	75%	18%	↓80 Ss 57%↓
Muscular Strength	126	122	19	20	86%	86%	14%	14%	↑4 Ss Same
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Leg Power	119	109	21	33	82%	77%	18%	23%	↑10 Ss 5%↑
Body Composition	103	96	42	46	71%	68%	29%	32%	↑7 Ss 3%↑

Appendix 4: EXPW 4730 Presentation Scoring Rubric

EXPW 4730 – Presentation Scoring Rubric

Articles – 6 points

_____ Submit professional articles: 2 peer reviewed; 1 reliability of instrument(s)
_____ Submit articles on topic

Data Collection – 6 points

_____ Provide sufficient practice/war-up for testing
_____ Administer tests correctly
_____ Minimize measurement error

Title/Introduction – 8 points

_____ Correct research question written as title
_____ Establish need for study
_____ Describe what should be expected based on previous articles
_____ State accurate purpose of the study

Methods – 12 points

_____ Describe participants
_____ Report instruments
_____ Report reliability/validity evidence of instruments
_____ Describe procedures accurately (reproducible)
_____ Identify correct analysis
_____ Ensure methods match purpose

Results – 6 points

_____ Report results specific to analysis
_____ Report results that match purpose
_____ Provide graph

Conclusion – 6 points

_____ Discuss practical implications of results
_____ Report similarities or dissimilarities to other articles
_____ Report errors in data collection

Aesthetics – 6 points

_____ Present professional power point (appearance)
_____ Present solid oral presentation

APA – 6 points

_____ APA format followed on citations in text
_____ APA format followed on references

Appendix 5: EXPW 4900 Research Proposal Presentation Assignment

Research Proposal Presentation Assignment

Develop and present a research proposal presentation. The topic presented shall be determined by you and your assigned team members from a list of pre-determined research study options that will be provided to you by the instructor. A topic cannot be duplicated, so once your group determines its topic you must inform the instructor who will then either record your selection or let you know that your selected topic has already been taken, in which case you must select another topic, etc.

Following are some examples of potential studies that may or may not be on the list of potential study options provided to you for selection: *Benefits of Resistance Training for Reducing Negative Impacts of Aging; The Effect of Exercise on the Gut Microbiome; The Effect of Bike Commuting on Insulin Sensitivity; The Effect of Increased Physical Activity on Lower Back Pain; The Relationship Between Physical Literacy and Quality of Life Among University Students; The Impact of a Ketogenic Diet and Glucose Control for People with Type 2 Diabetes; The Impact of Exercise on Metabolic Disorders such as Diabetes; The Acute Impact of Caffeine Supplementation on Athletic Peak Performance; The Relationship Between Rest Time and Concussion Recovery; The Impact of Nutrition on Muscle Recovery After Exercise; The Effects of Altitude on Athletic Performance; The Impact of Sleep on Exercise Performance and Recovery; The Impact of High-Intensity Interval Training (HIIT) on Cardiovascular Health; The Effects of Different Types of Exercise on Bone Health and Density; The Effects of Different Types of Exercise on Mental Health; The Influence of Exercise on Bone Health and Prevention of Osteoporosis; The effects of Exercise on Sleep Quality and Duration; The Effects of Different Diets on body Composition and Fitness; The Impact of Hydration Status on Exercise Performance; Exploring the Motivational Factors Influencing Exercise Adherence; The Impact of Exercise on Improving Body Image and Self-Esteem; Investigating the Psychological Effects of Team Sports Participation; The Influence of Exercise on Cognitive and Academic Performance in Students; The Influence of Footwear on Biomechanics and Injury Risk in Athletes; Investigating the Mechanics of Plyometric Training and its Impact on Power Development; The Impact of Sports Specialization on Injury Risk and Long-Term Athlete Development; Comparing the Effectiveness of Laboratory-Based and Field-Based Fitness Assessments; The Relationship Between Flexibility and its Relationship with Injury Risk; Evaluating the Psychometric Properties of Self-Report Physical Activity Questionnaires; Exploring the Benefits of High-Intensity Interval Training (HIIT) in Various Populations; Investigating the Efficacy of Exercise Programs for Older Adults in Improving Functional Capacity; The Impact of Concussion on Future Athletic Performance; The Effects of Exercise on Pregnancy Outcomes and Maternal Health; The Role of Exercise in Managing Symptoms and Improving Quality of Life in Cancer Patients; Examining the Socioeconomic Factors Influencing Physical Activity Levels in Different Populations; Investigating the Impact of Physical Activity Interventions on Population Health Outcomes; Investigating the Effects of Wearable Technology on Exercise Motivation and Behavior Change; The Impact of Social Media and Online Platforms on Exercise Motivation and Support; and The Role of Genomics in Understanding Individual Responses to Exercise.*

The organization of the material for the presentation shall be determined by you and your team. However, all presentations should follow a standard format that includes:
(1) Introduction: What is the presentation about and why is this relevant?
(2) Body: The bulk of the presentation and the main points relevant to the topic supported by the most up-to-date research articles from peer-reviewed scientific scholarly journal articles. You can also use your textbook as a reference, but this is not part of the required minimum of five references from peer-reviewed scientific scholarly journals. Do not use websites or magazines as references. You might consider asking the campus librarian to help you find peer-reviewed scientific scholarly journal articles relevant to your presentation topic if you are having trouble locating them yourself. Each student must have their own section of the presentation to proffer, and each section must cover different material. There MUST NOT be a review of the entire presentation by any group member.
(3) References. Include a list of all references used in the presentation. The reference list must be in correct APA format.

What format should we use to present? Microsoft PowerPoint should be used for your presentation slide deck. Please research proper etiquette for PowerPoint presentations regarding font type, size, number of lines per slide, background, images, video, and consistency. The entire presentation should have a consistent theme regarding color, font, etc.

What information should I include? It is your role to determine the most pertinent and relevant information for the presentation. However, you should include, at a minimum, the following items:
(1) Introduction. What is the need for the study?
(2) Synthesis of literature reviewed. A minimum of five references from peer-reviewed scientific scholarly journals is required.
(3) Research questions. A minimum of two applicable research questions are required.
(4) Proposed research methodology, design, and variables.
(5) Proposed sampling approach.
(6) Proposed data analysis techniques.
(7) Study limitations and delimitations.
(8) Ethical considerations.
(9) Significance to the field of study.
(10) References in APA format.

Additional Requirements:
- You will also be required to provide the instructor with a PDF of your presentation slide deck at least 24 hours prior to your presentation.
- The first slide should include the name of the proposed study and the researchers' names.
- Use relevant images to make the slides more interesting. Only use images that provide greater clarity or specific and technical information.
- Videos may be used to add richness to your presentation. However, no used video can exceed 30-seconds and only two videos will be allowed for the entire presentation.

Assignment Grading:
The assignment will be graded using both individual and group scoring categories.
Approximately 75% of your score on this assignment will be from individual scoring items and
25% will be from group scoring items. A successful presentation requires a collaborative
effort, and this is expected at the undergraduate level. Please refer to the *Research Proposal
Presentation Grading Rubric* located in iLearn for specific details.

Presentation Length:
The presentation must be 20–25 minutes and no longer. Each group member is expected to
contribute an equal amount of time. There should be no significant overlap in the material for
each presenter. Therefore, it is critical the group develop an outline for your presentation to
ensure each section of the presentation covers different material from each group member.

Presentation Attire:
This is a professional presentation, and you should dress accordingly. For the in-person
sections of this course (EXPW 4900-001), all presentations will be presented in-person.

How do I get 100% for my portion of the presentation? Reading directly from the PPT slides
shows a complete lack of preparation and understanding of the material presented and will
result in an automatic 50% reduction in points. Notecards or any type of device (e.g., phone,
iPad) cannot be used during the presentation. You are expected to understand and rehearse
your material, so the slides are only used to guide your section of the presentation and to
provide the audience with a better understanding of the material presented. Please refer to the
grading rubric in iLearn.

*Note: This assignment is one of only two course assignments that you will also be required
to submit to tk20 in addition to iLearn. In addition to uploading a PDF of your presentation
slide deck to iLearn at least 24 hours prior to your presentation, you will also be required to
upload a copy to tk20.*

Appendix 6: EXPW 4900 Research Design Rubric

EXPW 4900: Research Designs Rubric			
This rubric is designed to make clear the grading process for the Research Designs assignment. Your work will be evaluated by the below criteria in order to provide specific feedback and to help guide your development as a researcher.	Complete & Accurate, Full Credit (100%)	Needs Improvement (Varies%)	Not Provided (0%)
Research Design (8.0 Points)			
1 Select an article not previously used in this class (yes/no)			
2 Discuss the article problem statement / issue being studied (1.0)			
3 Discuss study participants and selection process used (1.0)			
4 Discuss test tools / instruments used in the study (0.5)			
5 Discuss study limitations and delimitations (0.8)			
6 Discuss study design / procedures used (1.0)			
7 Discuss data analysis techiques (0.8)			
8 Discuss study results / findings & implications (1.2)			
9 Provide at least one correct APA citation for a direct quote, or correctly paraphrase (APA) a statement, from the article (0.5)			
10 Paragraph is organized, clear, and purposeful; independent thinking is evident; punctuation, grammar, spelling, and mechanics are appropriate (0.6)			
11 Provide a complete/accurate APA article reference (0.6)			

Research Designs Assignment

From the list provided below, select one research design and/or statistical procedure and provide a detailed review (in paragraph form) of a peer-reviewed research study that exemplifies your selected design/procedure. Your selected article must be for an experimental or quasi-experimental study (meta-analyses or qualitative studies will not be accepted for this assignment). Additionally, your selected article cannot be an article that you have previously reported on in this class (if an article is duplicated it will not be scored). Include and discuss the study's problem statement / issue being studied, study participants and participant selection process, test tools and instruments, study limitations and delimitations, data analysis techniques, and study results/findings. Provide a proper and accurate APA article reference at the end of the article review. You are also expected to include at least one appropriate and accurate APA in-text citation (direct quote or paraphrasing) in your article review. See the Research Designs Rubric provided in iLearn for detailed information about how this assignment will be scored. Submit the assignment in a *Word document* and upload it in the appropriate assignment folder in iLearn.

Selection list: Correlation; *t*-test for independent samples; *t*-test for dependent samples; ANOVA; ANCOVA; Multiple Regression.

Notes:
- *This assignment is one of only two course assignments that you will also be required to submit to tk20 in addition to iLearn.*
- *You are allowed, but not required, to use AI resources as a tool for this assignment. When using AI resources for this assignment, it is important to ensure academic integrity; subsequently, you must openly disclose any AI-generated material you utilize and provide proper attribution. This includes in-text citations, quotations, and references. To indicate the use of a Generative AI resource, you should include the following statement in each article review in which you use ChatGPT (or any other AI chatbot) as a resource: "The author(s) acknowledge the utilization of [Generative AI Tool Name], a language model developed by [Generative AI Tool Provider], in the preparation of this assignment. The [Generative AI Tool Name] was employed in the following manner(s) within this assignment [e.g., brainstorming, grammatical correction, citation, specific section of the assignment]." Proper citation guidelines can be found on Tennessee Tech's CITL website.*

Appendix 8: EXPW 4900 Research Proposal Presentation Rubric

Class Research Proposal Presentation Grading Rubric (100 pts); Page 1 of 2

Group member names:_____

Topic:_____

Category	Scoring Criteria	Score
Organization	**Individual:** A minimum of four slides and maximum of seven slides per presenter (8 pts)	
	Individual: A minimum 24-font with no more than 6 lines of text per slide *(5 pts)*.	
	Individual: Adequate presentation time, +/- 10% of Group time / # presenters. *(Yes = 6 pts; No = 0 pts)*	
	Group: Overall length of presentation is between 20–25 minutes *(4 pts)*	
	Group: References are listed in correct APA format and a minimum of five peer-reviewed journal articles are listed. Non-academic sources such as websites or magazines intended to represent one of the five articles will result in 0 points. *(10 pts)*	
Content	**Individual:** The material specifically addresses the main presentation topic, and the presenter stays on topic during the presentation. *Most of the time (10), often (7), sometimes (4), rarely (0–3)*	
	Individual: Presentation section contains accurate, evidence-based information. *No errors (8), 1 or 2 errors (6), 3 errors (4), >3 errors (0-3)*	
	Individual: Visual aids (images) are well prepared, informative, and effective. *(5 pts)*	
	Individual: Depth of content covers the key areas for the section presented. *All the time (10), Most of time (8), Sometimes (6), rarely (0–4)*	
	Group: Visual aids (videos) are well prepared, informative, and effective. Videos are scientific and from credible sources (i.e., researchers/professors/ academics). Groups members who use videos presentation times were appropriately extended to account for video. *(3 pts)*	
	Group: There is significant overlap of the material between sections. *Rarely (8), sometimes (6), often (4), most of the time (0–3)*	
Presentation	**Individual:** Did presenter continually read directly from the slides? *Rarely (8), sometimes (6), often (4), most of the time (0-3)*	
Professionalism	**Individual:** Professional attire *(6 pts)*	
	Individual: Professional presentation skills (i.e. information presented clearly and effectively) *(4 pts)*	
Team Member Evaluation	**Individual:** Average score from team member participation rubric *(5 pts)*	

Class Research Proposal Presentation Grading Rubric (100 pts); Page 2 of 2		
Item	Yes/No	Rubric Score Muliplier
Introduction. What is the need for the study?		0.1
Synthesis of literature reviewed (five journals minimum)		0.1
Research questions (two questions minimum)		0.1
Proposed research methodology, design, and variables		0.1
Proposed sampling approach		0.1
Proposed data analysis techniques.		0.1
Study limitations and delimitations.		0.1
Ethical considerations.		0.1
Significance to the field of study.		0.1
References in APA format.		0.1
All Items Addressed? (Bonus Multiplier)		0.03
* Total Multiplier:		
Rubric Score from Page 1:		
** Final Project Grade:		

* Maximum potential multiplier = 1.03

** Final Project Grade = (Rubric Score) x (Total Multiplier)

** Total score will be recorded in grade book. The maximum potential Total Score 100.

*** Example Calculation #1: Total Muliplier = 1.03; Rubric Score = 94; Total Score = 1.03 x 94 = 97

*** Example #2: Total Muliplier = 0.80; Rubric Score = 94; Total Score = 0.80 x 94 = 75

*** Example #3: Total Muliplier = 1.03; Rubric Score = 99; Total Score = 1.03 x 99 = 100 (max score)

Appendix 9: EXPW 4730 Key Assessment Data

EXPW 4730 Key Assessment Data

Fall 2024- Spring 2025

3 sections N=56

Rubric Item	Mean on 3.0 scale	23-24 mean for comparison [N=72]	Improvement or Digression
1. Article	2.73	2.77	↓.04
2. Data Collection	2.60	2.51	↑.09
3. Title/Introduction	2.65	2.67	↓.02
4. Methods	2.40	2.31	↑.09
5. Results	2.24	2.03	↑.21
6. Conclusion	2.42	2.48	↓.06
7. Aesthetics	2.77	2.71	↑.06
8. APA	2.58	2.59	↓.01
Overall	2.53	2.51	↑.02