



Program Summary

Department: Physical Education and Human Performance

Report Preparer: Dr. David Harackiewicz

Program Name and Level: Exercise Science – Undergraduate – Report for Academic year Fall 2017 – Summer 2018

Program Assessment Question	Response
1) <u>URL:</u> Provide the URL where the learning outcomes (LO) can be viewed.	CCSU Department website
2) <u>Assessment Instruments:</u> Please list the source(s) of the data/evidence, other than GPA, that is/are used to assess the stated outcomes? (e.g., capstone course, portfolio review and scoring rubric, licensure examination, etc.)	<ul style="list-style-type: none"> • EXS 415 Practical Exam on Fitness Assessment (Table 1) • EXS 415 Program Design on Final Project (Table 3) • EXS 450 American College of Sports Medicine Certified Exercise Physiologist Examination (EP-C) or National Strength and Conditioning Association Certified Strength and Conditioning Specialist (CSCS) exam (Table 5 and 6) • EXS 470 Final Site Supervisor Evaluation (Table 7) • EXS 275 Group Workout Presentation (Table 8) • EXS 376 Clinical Case Study Project (Table 9) • EXS 470 Graduate Survey (Table 10)
3) <u>Interpretation:</u> Who interprets the evidence? (e.g., faculty, Admn. assistant, etc.)	EXS Program Coordinator
4) <u>Results:</u> Using this year's Findings, list: a. The conclusion(s) drawn b. The changes that were or will be made as a result of those conclusion(s)	<p>EXS 415 Practical Exam (Table 2)</p> <p>Conclusion: On the cardiorespiratory assessments students improved from an average of 4.2 in 2016-2017 to 4.4 in 2017-18. On body composition assessments students maintained an average of 4.2 and on musculoskeletal assessments improved from an average of 4.4 to 4.6. Students scored between good and excellent on their practical skills of administering the ACSM fitness tests and shown improvement from the previous year in both cardiorespiratory and musculoskeletal assessments.</p> <p>Changes: Practical skills and techniques have been emphasized in one lab class each week. In addition, students are encouraged to practice their skills outside of the regular classroom. Using online videos and demonstrations both during lecture and lab have added to the accuracy of students' testing skills and techniques. No changes needed at this time</p>

EXS 415 Program Design on Final Project (Table 4)

Conclusion:

Table 11: On their final project students' average score was a 2.9 in 2016-17 and this increased to a 3.0 in 2017-18. Students are maintaining a high level of competency in program design concepts and principles for a client in all aspects of fitness development.

Changes:

No changes necessary.

EXS 450 American College of Sports Medicine Certified Exercise Physiologist Examination (EP-C) or National Strength and Conditioning Association Certified Strength and Conditioning Specialist (CSCS) exam (Table 5 and 6)

Conclusion:

Our 2017-18 (N=40) pass rate on the ACSM Certified Exercise Physiologist (EP-C) exam was **80%** compared with **69%** from the previous year. This was an increase of **11%** as we exceeded the national pass rate which was **44%**(N=2,782). Based on these results, our students showed improvement in the conceptual understanding of the job task analyses (JTAs) related to the exercise physiology profession. Allowing our students to take this certification exam after all coursework has been completed and preparing them through our practicum seminar class using multiple resources (i.e. weekly quizzes, online PrepU, ACSM certification study guide, case studies, etc.) has helped us improve our pass rate on the EP-C. More specifically we reported the percent correct in each domain of the JTAs. In the Health and Fitness Assessment domain students correctly answered **77%** of the questions in 2016-17 and **71%** of the questions in 2017-18 which was a decrease of 6%. In the Exercise Prescription and Implementation category they answered **69%** of the questions in 2016-17 and **64%** of the questions in 2017-18 which was a decrease of 5%. In the Exercise Counseling and Behavior Strategies domain we saw an increase from **71%** correct in 2016-17 to **72%** in 2017-2018. The Legal/Professional domain saw a decrease in the percentage correct from **78%** in 2016-17 to 70% in 2017-18. Finally, the Management domain category saw a decrease in percent correct from **79%** in 2016 to **73%** in 2017-18. Our 2017-18 (N=8) pass rate on the NSCA Certified Strength and Conditioning Specialist Exam was **50%** for both sections (**50%** passed the scientific foundations section and **62.5%** passed the practical applied section). The national pass rate (N = 5,790) was **53%** for both sections (**66%** passed the scientific foundations section and **67%** passed the practical applied section). Since this was the first year of this option for students we scored lower than the national average by **3%**.

Changes

The exam changed in the middle of the year to place a higher percentage on the first two domains which will be reviewed more often in the EXS 450 seminar class. Students will be given more opportunities to review client cases and implement exercise programs using the ACSM FITT-VP principle.

More emphasis with additional resources we be placed on the preparation for the CSCS exam for our students. Students who select this exam will be given study guides, online learning tools and a sample exam to assist in their preparation for passing the exam.

We have also added the National Academy of Sports Medicine Certified Personal Trainer exam as option for students that have an interest in this field of study.

We now have three options for students on taking the national exam and they choose the option based on what will help them be successful in their chosen field. All exams are taken before they start their internship. This had given students more opportunities in their internship because they start the internship with a national certification.

EXS 470 Final Site Supervisor Evaluation (Table 7)

Conclusion:

Results from academic year 2017-18 (N=52) will be compared with academic year 2016-17 (N=41).

Our academic year consists of the Fall, Spring and Summer semesters since students also complete their Internship (EXS 470) in the summer.

EXS 470 Internship in Exercise Science Site Supervisor Student Evaluation

Link to (www.taskstream.com/ts/manager286/ExerciseScienceAssessmentReports) (Password: EXER) for more information on the data:

- We receive site supervisor evaluations at the completion of the student internship. Site Supervisors responded to questions in seven areas: (1) Skills and abilities, (2) Relationships with clients/patients, (3) Relationship with staff, (4) Relationship with supervisor, (5) Professional competencies, (6) Computer skills, and (7) Personal traits and attitudes. A Likert Scale with the following ratings were used: 5-Outstanding, 4-Highly Satisfactory, 3-Average, 2-Below Average, and 1-Not Satisfactory. In addition, the supervisor was asked to give a Professional Assessment on whether the student was a good candidate for employment. A 1 indicates that the student is a good candidate for employment, a 2 that the student needs more experience and a 3 that there is insufficient time to evaluate the student.
- Comparing academic year 2017-18 with 2016-17:
 - Total mean score in category A of Skills and Abilities was **4.76** (2017-18) compared with **4.74** (2016-17) indicating that our students maintain a high a high degree of skills and abilities in the various internship sites that were selected.

- Total mean score in category B of Relationships with Clients/Patients was **4.87** compared with **4.86** indicating that our students continue to interact well with their clients/patients.
- Total mean score in category C of Relationship with Staff was **4.89** compared with **4.90** indicating a good working relationship with other Part-time and Full-time staff members.
- Total mean score in category D of Relationship with Supervisor was **4.91** compared with **4.92** indicating that our students had excellent rapport with their supervisor and their ability to work under their potential boss.
- Total mean score in category E of Professional Competencies was **4.82** compared with **4.77** which indicates that the coursework and practical experiences they gained while attending school was very beneficial to their internship placement and the job tasks that they were assigned. This is an important category for our program because it reflects the sequencing of coursework that we provide and indicates that we are teaching the proper techniques and educational content important in the exercise science field.
- Total mean score in category F of Computer Skills was **5.00** compared with **4.85** indicating that our students have a very good knowledge of computer software such as Microsoft office or other related programs. This is to be expected as most students excel in this area based on their consistent use of computers as part of their daily lives.
- Total mean score in category G of Personal Traits and Attitudes was **4.84** compared with **4.81** indicating that our students have very good dispositions in the profession. They represent themselves and the university with high character and accountability.

The final question asks the Site Supervisor if the student will be (a) A good candidate for employment, (b) Needs more experience in a similar setting, or (c) Insufficient time to evaluate the internship student

- In 2017-18 **96%** of our students were rated as a good candidate for employment and **3.85%** our students were rated as needing more experience in a similar setting. In 2016-17 **93%** of our students were rated as a good candidate for employment while **7%** were rated as needing more experience. An improvement of 4% was seen in site supervisors rating our students as “good candidates for employment”. Based on the results of the last two years, our students are well-prepared for the field that they choose and would be good candidates for hire.

Site Supervisor Final Grade

- **69.2%** of the students received an A, **25%** received an A-, and **5.77%** received a B+ from their site supervisor at their site. Performance summary evaluations of our students by the site supervisor were very positive and complimentary. These summary statement by the site supervisor can be found on Taskstream.

	<p>Changes: No changes needed.</p> <p>EXS 275 Group Workout Presentation Rubric is in development. Sample provided.</p> <p>EXS 376 Clinical Case Study Project Conclusion: Rubric was developed and implemented in AY 2015-16. In 2016-17 and 2017-18 results indicate that the majority of students' score either a 1 or a 2 on the case studies and only rarely are 3's seen. Changes: No changes needed</p> <p>EXS 470 Graduate Survey Conclusion: Student Evaluation of the Exercise Science Program (See Table 2 for average score on each question) At the completion of their internship, students completed a survey that asks thirteen questions about the quality of our program. The students respond to the first 8 questions using a 5 point Likert Scale with 1 being Strongly Disagree and 5 being Strongly Agree. Total Mean score in academic year 2017-18 was 4.58 compared to total mean score in academic year 2016-17 of 4.46. In addition students are asked five open-ended questions. Responses to these open-ended questions can be found on www.taskstream.com/ts/manager286/ExerciseScienceAssessmentReports (Password: EXER) Changes: No changes needed.</p>
5) Strengths: List ways in which your assessment process is working well.	<p>We focus on three areas of assessment in our exercise science undergraduate curriculum and this continues to be a strength of our assessment program.</p> <ol style="list-style-type: none"> (1) EXS 470 Internship in Exercise Science site supervisor student evaluations, (2) Student results of the national ACSM Exercise Physiologist certification (EP-C) or NSCA Certified Strength and Conditioning Specialist (CSCS). (3) Culminating student evaluation (graduate surveys) of our exercise science program, <p>Previous sections included how our assessment process is working for our site supervisor evaluations and national exam results. For our results from the student evaluations of our exercise science program</p>

	<p>you can see that our program assessment process is working to prepare students in various fields of study.</p> <ul style="list-style-type: none"> • Based on our results from the site supervisor evaluations and their performance summary, our students are performing well in all aspects of their internship experience. • Students have exceeded the national pass rate for the EP-C exam which indicates that they are meeting the competencies required by an exercise physiologist. • Based on our results from the graduate surveys, students have indicated a continued high degree of satisfaction with our program for the past two years.
<p>6. <u>Improvements</u>: List ways in which your assessment process needs to improve based on student data (a brief summary of changes to assessment plan can be reported here)</p>	<p>The previous assessments focusing on student performance will continue to be used in the 2018-2019 year in specific classes that relate to our learning outcomes. This will include an existing rubric that assesses student's practical skills of fitness testing, an existing rubric that evaluates student's exercise testing and exercise prescription of a client, a new rubric that addresses student's ability to evaluate case studies of special populations and a developing rubric that evaluates program design of performance fitness. We have also been using Taskstream as our database which will help in putting all students work and test results in one place. This includes the EP-C, CSCS and CPT national test results, site supervisor evaluations and internship site supervisor evaluations. We are also giving the students the option of taking the EP-C exam, CSCS exam or the National Academy of Sports Medicine Certified Personal Training (CPT) exam which is in line with students' interest in their field of study. The EXS 450 seminar class is preparing the students for the exam of their choice which is taken prior to the student starting their internship. The changes to our assessment plan is to include reporting the CPT results and grading the students on their student internship presentations.</p>

APPENDIX

Table 1 - EXS 415 Fitness Assessment and Exercise Prescription - Practical Exam – Cardio Fitness Assessment

Rubric Scores: 1=Poor, 2= Fair, 3= Average, 4= Good, 5= Excellent

Exercise & Grading Criteria	Score	Comments
<i>Resting Blood Pressure</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Resting Heart Rate</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Use of RPE Scale</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>YMCA Submaximal Bike Test Protocol</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Exercise Blood Pressure</i>		
Explained assessment's value for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	

EXS 415: Exercise Testing & Prescription - Practical Examination - Body Composition Assessment

Rubric Scores: 0=Missing, 1= Fair, 3= Average, 4= Good, 5= Excellent

Exercise & Grading Criteria	Score	Comments
<i>Skinfold Site Markings</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Skinfold Site Measurements</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Waist Circumference</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Height and Weight</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Bioelectrical Impedance Analysis</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	

EXS 415: Exercise Testing & Prescription - Practical Examination - Musculoskeletal Fitness Assessment

Rubric Scores: 1=Poor, 2= Fair, 3= Average, 4= Good, 5= Excellent

Exercise & Grading Criteria	Score	Comments
<i>Push-up</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Curl-up</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Handgrip dynamometer</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Sit and Reach Test</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	
<i>Functional Movement Screen</i>		
Explained assessment's value/reasons for the assessment	1 2 3 4 5	
Demonstrated and instructed clearly	1 2 3 4 5	
Positioned and cued client correctly	1 2 3 4 5	
Assessed with confidence and competence	1 2 3 4 5	

Table 2

EXS 415: Exercise Testing & Prescription - Practical Examination

<u>Fitness Assessment Category</u>	<u>Average Score (2017-2018) (N=56)</u>	<u>Average Score (2016-17) (N=55)</u>
Cardiorespiratory	4.3	4.2
Body Composition	4.4	4.2
Musculoskeletal	4.5	4.5

Table 3

EXS 415: Exercise Testing & Prescription – Final Project - Program Design

Student: _____

Client: _____

Evaluator: _____

Date: _____

Rubric Scores: 0=Missing, 1= Unacceptable, 2= Acceptable, 3= Exceeds

Exercise & Grading Criteria	Score	Comments
<i>Cardiorespiratory Program</i>		
Correct use of Frequency	0 1 2 3	
Correct use of Intensity	0 1 2 3	
Correct use of Time	0 1 2 3	
Correct use of Type	0 1 2 3	
Correct use of Progression	0 1 2 3	
<i>Muscular Fitness Program</i>		
Correct use of Frequency	0 1 2 3	
Correct use of Intensity	0 1 2 3	
Correct use of Time	0 1 2 3	
Correct use of Type	0 1 2 3	
Correct use of Progression	0 1 2 3	
<i>Flexibility Program</i>		
Correct use of Frequency	0 1 2 3	
Correct use of Intensity	0 1 2 3	
Correct use of Time	0 1 2 3	
Correct use of Type	0 1 2 3	
Correct use of Progression	0 1 2 3	
<i>Weight Management Program</i>		
Correct use of Frequency	0 1 2 3	
Correct use of Intensity	0 1 2 3	
Correct use of Time	0 1 2 3	
Correct use of Type	0 1 2 3	
Correct use of Progression	0 1 2 3	

Table 4

Program Design Final Project

<u>Program Design Components</u>	<u>Average Score (2017-2018) (N=56)</u>	<u>Average Score (2016-17) (N=55)</u>
Cardiorespiratory Fitness Program Design	2.9	2.8
Muscular Fitness Program Design	2.8	2.8
Flexibility Program Design	2.9	2.9
Weight Management Program Design	2.7	2.6

Table 5**ACSM Exercise Physiologist Certification (EP-C) - National and CCSU Pass Rates**

	National Pass Rates	CCSU Pass Rates	CCSU Ave Score
2012-13	59% (N=2307)	42% (N = 38)	546
2013-14	57% (N=1720)	80% (N = 30)	563
2014-15	43% (N=2752)	74% (N = 36)	578
2015-16	43% (N=3111)	72% (N=32)	562
2016-17	41% (N=3292)	69% (N=36)	578
2017-18	44% (N=2782)	80% (N=40)	584

National Strength and Conditioning – Certified Strength and Conditioning Specialist (CSCS) – National and CCSU Pass Rates

2017-18	53% (N=5790)	50% (N=8)	Practical Application = 73 Scientific Foundations = 69
---------	--------------	-----------	---

Table 6

ACSM Exercise Physiologist Certification Exam (Average Percent Correct)

<u>Section Analysis</u>	<u>2017-18 (N=39)*</u>	<u>2016-17 (N=36)</u>
Health and Fitness Assessment	71%	77%
Exercise Prescription and Implementation	64%	69%
Exercise Counseling and Behavioral Strategies	72%	71%
Legal/Professional	70%	78%
Management	73%	79%

NOTE:

***N = 39 BECAUSE ONE STUDENT DID NOT REPORT PERCENTAGES**

TABLE 7

INTERNSHIP SITE SUPERVISOR'S EVALUATION OF INTERNSHIP STUDENT

EXS 470 – INTERNSHIP IN EXERCISE SCIENCE

NAME OF INTERNSHIP STUDENT: _____

INTERNSHIP SITE: _____

INTERNSHIP SITE SUPERVISOR _____

APPRAISAL PERIOD: _____

POSITION OF INTERNSHIP SITE SUPERVISOR: _____

Please evaluate the internship student named above for each of the following competency areas that apply to the student. Indicate on the provided line, the appropriate number which indicates the level of proficiency/competency for the student.

All evaluations will be submitted online using this same form. Instructions will be emailed to you by Dr. Mel Horton, hortonm@ccsu.edu regarding evaluating the internship student using the online evaluation system.

In addition to this evaluation please write a Performance summary (Supervisor Letter) which is a narrative to elaborate on your evaluation of the internship student. This can be completed online.

PLEASE PRINT OUT THE COMPLETED ONLINE SUPERVISOR EVALUATION AND HAND TO THE INTERNSHIP STUDENT DURING THE EXIT INTERVIEW.

RATING SCALE

- 5 - Outstanding, superior, corresponds to an academic grade of A, or A-
- 4 - Highly satisfactory, corresponds to an academic grade of B+, or B
- 3 - Average level of performance, corresponds to an academic grade of B-, or C+
- 2 - Adequate, below average, corresponds to an academic grade of C, or C-
- 1 - Not satisfactory, corresponds to an academic grade of D
- NA - Not applicable

A. SKILLS AND ABILITIES (WORK HABITS)

- 1. Plans and organizes work efficiently and systematically _____
- 2. Accomplishes assigned tasks with a minimum of supervision _____
- 3. Works consistently at a high rate, "quantity" factor _____
- 4. Works accurately and thoroughly, "quality" factor _____
- 5. Interpersonal skills, expresses self well orally _____
- 6. Writing skills, expresses self-well in writing _____

B. RELATIONSHIPS WITH CLIENTS/PATIENTS

- 1. Shows a genuine desire to be helpful _____
- 2. Accepts individual differences without prejudice _____
- 3. Gives adequate instructions and explanations _____
- 4. Encourages client/participant in the rehabilitation process _____

5. Ability to motivate clients/patients to achieve their desired goals _____

C. RELATIONSHIP WITH STAFF

1. Works well with professional colleagues _____

2. Works well with administrative support services staff _____

3. Participates appropriately and actively in staff meetings _____

D. RELATIONSHIP WITH SUPERVISOR

1. Exhibits a friendly, appropriate attitude _____

2. Acts professionally with the supervisor _____

3. Receives criticism and suggestions well _____

4. Accepts assignments willingly _____

E. PROFESSIONAL COMPETENCIES

1. Competent in administration of physical, health fitness assessments _____

2. Competent in writing exercise prescriptions _____

3. Competent in conducting group exercise classes _____

4. Competent in conducting a case study _____

5. Exhibits knowledge about aerobic exercise programs _____

6. Exhibits knowledge about resistance/weight training programs _____

7. Exhibits a professional attitude at all times _____

8. Adheres to personnel policies and regulations _____

F. COMPUTER SKILLS

1. Exhibits a knowledge of basic computer skills _____

2. Ability to utilize the software programs at your facility _____

G. PERSONAL TRAITS AND ATTITUDES

1. Exhibits leadership qualities _____

2. Is courteous, cordial, and considerate of people _____

3. Is reliable, dependable and trustworthy _____

4. Exhibits enthusiasm' for the field of health fitness/promotion _____

5. Adapts to emotional difficult situations well _____

H. PERFORMANCE SUMMARY (SUPERVISOR LETTER)

1. Please attach a typed written description of the performance of the internship student from your perspective.

I. PROFESSIONAL ASSESSMENT, PLEASE CHECK ONE

1. Student is a good candidate for employment _____

2. Student needs more experience in a similar setting _____

3. Insufficient time to evaluate the internship student _____

J. RECOMMENDED FINAL GRADE

Please circle one of the following grades

A A- B+ B B- C+ C C- D+ D D- F

INTERNSHIP SITE SUPERVISOR (SIGNATURE);

DATE: _____

INTERNSHIP STUDENT (SIGNATURE);

DATE: _____

Table 8**EXS 275 Group Workout Presentation (Individual Assessment Rubric)**

	1	2	3
Length of Workout	Very few exercises, little time spent performing exercises	Adequate flow of exercises/time spent, flow not matched to other groups.	Length appropriate, time spent exercising more than explaining. Good coordination across groups.
Exercise Corrections	No corrections or supervision given	corrected one or two students, no feedback to other group members	kept an eye on all group members, gave feedback when necessary
Difficulty adjustments (Regress/progress)	Demonstrated only one version of exercise without any modifications	Gave a modification for one or two exercises	gave modifications for all exercises
Motivation	Minimal presence, not loud or vocal to group,	Motivating to one or two students, did not excite entire group.	vocal, loud, clear, motivated all group members
Demonstrate technique	No visual demos. Only gave verbal instructions	Gave verbal and visual instructions but did not adequately demonstrate exercises so that it was clear to all members of group	Demonstrations included verbal/visual, very clear and easy to follow

Table 9

Clinical Exercise Physiology CASE STUDY Rubric

1: Demonstrates exceptional understanding of FITTVP for particular clinical population

2: Demonstrates satisfactory knowledge of FITTVP for particular clinical population

3: Demonstrates unsatisfactory knowledge of FITTVP for particular clinical population

F_20,2,0___ I_20,2,0___ T_21,1,0___ T_21,1,0___ V_20,1,1___ P_21,1,0___

1: Demonstrates exceptional understanding of medications for particular clinical population

2: Demonstrates satisfactory knowledge of medications for particular clinical population

3: Demonstrates unsatisfactory knowledge of medications for particular clinical population

Medications__14,7,1___

1: Demonstrates exceptional understanding of lifestyle factors for particular clinical population

2: Demonstrates satisfactory knowledge of lifestyle factors for particular clinical population

3: Demonstrates unsatisfactory knowledge of lifestyle factors for particular clinical population

Lifestyle Factors__17,4,0___

1: Demonstrates exceptional understanding of exercise adherence principles for particular clinical population

2: Demonstrates satisfactory knowledge of exercise adherence principles for particular clinical population

3: Demonstrates unsatisfactory knowledge of exercise adherence principles for particular clinical population

Exercise Adherence Principles__15,5,1___

Table 10

(Student final evaluation of the exercise science program)

Likert Scale for first 8 questions:

5 = Strongly agree

4 = Agree

3 = Somewhat agree

2 = Disagree

1 = Strongly Disagree

Average score for each question presented below

<u>Questions</u>	<u>2017-18(N=43)</u>	<u>2016-17(N=42)</u>
1. The coursework portion adequately prepared me for my present position.	4.44	4.38
2. The clinical/practical portion adequately prepared me for my present position.	4.60	4.55
3. The program adequately prepared me for the certification exam.	4.21	3.90
4. Program faculty were available for assistance.	4.72	4.67
5. Program faculty were sensitive to student needs, and treated students equally and with respect.	4.67	4.48
6. Program faculty were supportive of the students, and provided constructive evaluations.	4.67	4.60
7. Program officials were competent, knowledgeable, and well-prepared for instruction.		
Questions and independent thinking were encouraged.	4.70	4.57
8. Program policies and procedures were clearly defined and enforced.	4.60	4.57
9. What do you feel were the strengths of the program? (open-ended)		
10. What do you feel were the weaknesses of the program? (open-ended)		
11. If you could make changes in the program, what would you change? (open-ended)		
12. What portions of the program would you keep, and why? (open-ended)		
13. Overall comments about your education. (open-ended)		
Total:	4.58	4.46

40 students from the 2017-218 academic year (Fall-Summer)

Responses to 5 open-ended questions from the graduate survey

(Responses condensed with number in parenthesis representing number of students with similar responses)

Strengths:

Professors and Quality of Teaching, strong communication with faculty, support from faculty (25)

Diversity of the curriculum and Quality of the classes – Class design and progression (20)

Practicum and Internship (10)

400 Level classes, detail to prepare us for EP-C (6)

EXS 450 EP-C Prep course (4)

Ability to get certified at end of degree (2)

Program takes pride on what we learn and push us to be best professionals we can be (2)

Apply information from lecture to lab – Practical application (2)

Professionalism

Amount of detail in each class

Hands on, group activities

Involvement in ACSM and conferences

Being able to work independently

Research methods class and EXS 216

Small class sizes

One student response on strengths:

Our program is one of the more established programs in the state of Connecticut. We have a great reputation, which all begins with the faculty. CCSU has a tremendous faculty that are committed to teaching and have worked to perfect their craft. The curriculum is always changing with the times, as science never stops. The program has set itself apart from other programs because of what is required from the students. CCSU students have many opportunities to learn and grow professionally that you would not receive at other institutions. Personally, it all boils down to the closeness of the faculty and student relationship at CCSU. I always felt that my teachers cared about me and truly wanted me to succeed. Further, I knew they had my best interest in mind and would turn me away if my intentions were good. This relationship that has been built between faculty and student really facilitated me to begin working in research early, which helped me explore where my future was headed

The faculty at CCSU must be commended for their commitment to the students, semester after semester. It is quite unbelievable that we are still able to raise the bar year after year. The overall strength in the program resides in the curriculum and how it is executed. It becomes clear to students that you can get what you want out of this program, if it be personal training, physical therapy, or a doctoral degree, all of these things are possible because of the atmosphere that has been built and sustained here at CCSU. In my opinion we have one of the best programs in the state and the faculty and administration deserve all the credit.

Weaknesses:

Amount of hands-on or clinical work (4)

Need stronger anatomy and physiology education – learn muscles and muscle actions early in program – cadaver (4)

275 and 376 were similar class (2)

Length and requirements to graduate in 4 years (2)

More classes in strength and conditioning – periodization (2)

Small ex phys lab

EP-C exam prep

Take EP-C earlier

EP-C cert

More nutrition classes

Mostly sports performance based

215 and 325 should be made electives based on student interest

325 should go into more detail about legalities and management

Lack of preparation for certain careers

Ensure students who want to pursue graduate programs can meet their pre-reqs through the major instead of through electives

More exercise prescription using METS and blood pressures

More exercise prescription in reference to cardiac rehab

Advising for class registration

Separate program for those going into different fields

Class selections – not enough sections of same class

Grades based only on 3 exams and 1 final – have labs, homework assignments etc.

Communication with professors and lack of one on one time to discuss topics of confusion

Taking 400 level at the same time was difficult

Classes that did not have a definitive place in the field such as leadership in group exercise and theories of strength and conditioning – not necessary as a whole class

Amount of work

No wiggle room to take courses required by graduate programs

In-depth weekly reports

No structural anatomy class

Not taking research methods class earlier – need to expose students earlier to research

Writing research papers using APA format but not having a class to teach it

Duration of internship too long

Not enough classes that deal with assessment and treatment of injuries

Intro and Foundations course was the same and redundant

Care and Treatment should be the same no matter who is teaching it

If you could make changes to the program what would you change?

Less internship hours (10)

More classes on resistance training (4)

Combine 2 strength and conditioning classes into one as they are the same course (2)

Add a class about Laws in exercise science and litigation (2)

More in-depth guidance in early stages of advising (2)

Better study guide for the EP-C exam

Better admission process into the EXS program

Combine practicum and internship or only require internship

Getting paid for the internship

Have students take the EP-C exam sooner

More nutrition classes

Add class that satisfy PT prereqs

Emphasize sooner how important it is to take classes in a specific order with prereqs

More classes in special pops and stress management

Accommodate student pursuing different careers and certifications

Have elective course in individual subdiscipline

Hands-on practical exams in certain classes rather than just test

Take out the Management course

Make Taskstream more user friendly

Have Skype interview halfway thru internship on how it is going and what the student has learned

More in-depth anatomy class on muscle origins, insertions and body movements for student going into PT

Have class that teaches APA format before Research and Pharm class

Emphasize evidence-based learning in the classes

Add class that deal with treatment of injuries

What portions of the program would you keep and why?

Practicum and Internship (11)

Diversity and quality of the curriculum (18) – Keep the same

Professors (4)

All classes with labs and hands-on component (2)

Going to an ACSM conference (2)

Internship portfolio presentations but make a requirement for intro class

Alternate assignment for not passing EP-C

Job shadow requirement in 311 class

EP-C exam

Fitness education classes

Being in the same cohort of students throughout the program

Professional program process

311, 408, 409 and 415

All 400 level classes

Keep structure of EXS 215, 408, 411, 311, 207, 211, 201, 212, 415 because they integrated practical experience and clinical experience

113, 215, 411, 311, 415

Overall Comments about your Education:

I will say that I am satisfied with my education at CCSU. I will admit that i slacked off the first 2 years but I believe that is mainly because of gen eds. Once I started to get hands on and into more of the major classes, my grades and interest in the field started to go up tremendously. The amount of time given for assignments was enough in my opinion, but getting lazy was easy for me to do .

Overall I would just like to note how much my experience at Central has meant to me. Although there were times when it was overwhelming, I always felt that all of my professors genuinely believed in us and wanted us to be successful after our time at Central. I think that this environment is a huge part of my success at Central. I always felt comfortable asking my professors for help or advice and truly respected each professors success in the field. It was inspiring to me to see how involved and successful our faculty was in the field and it made me want to succeed more and try harder to learn the material. I also always felt challenged throughout my time here. I felt that all of my professors truly cared about us being successful in the future and wanted us to take the material seriously and challenged us for our own benefit. I think that this program is a special one because of how small it is and how much time we spend with each other over 4 years. I feel lucky to have been a part of this program and truly feel as though I got the most out of my education in the exercise science program.

I thoroughly enjoyed my four years as an exercise science student at CCSU. I really loved all of our teachers and other class mates. I certainly learned a lot but believe that I probably chose the wrong major. I do not know if I can see myself working in this field for a

career. I am interested in the physical therapy field but I could have just gone to a community college to get a PTA degree. All in all though I have nothing bad to say about the actually program itself, it is very well run and put together!

I am very pleased with the program and I feel like I got the best education here. I could not have asked for a better experience here at CCSU All of the professors truly care about the students and our education.

Overall, I felt that my education was great. Over the past few years I've really grown as a student and slowly but surely exposed to the professional world in a way that was not too overwhelming. I think this program does a great job at helping students become integrated into a professional environment. The amount of preparation was really helpful and I personally didn't feel at any point that I wasn't ready to be working in the professional world.

Overall, i am satisfied that i finished, however i wish i would have stuck with BMS as opposed to EXS. I just wish that when i talked to my advisors they didnt try to see me as a number in their program but as a student looking to get the best out of his education.

I believe that my education from the exercise science program at CCSU was great and prepared me for future education as well as prepared me for future jobs.

My time at CCSu as an exercise science student has been invaluable. I can take these skills and knowledge anywhere with me and I would stand out more from other students from other undergrad exercise science programs. I credit to all the professors that have helped me along the way.

My overall feedback to CCSU Exercise Science program is that it is a developmental environment, and it can only get better from here. , My overall feedback to CCSU Exercise Science program is that it is a developmental environment, and it can only get better from here.

At the beginning of my college career I lacked purpose and I was unsure of what i wanted to in terms of my studies. When I joined the EXS program my sophomore year I regained that sense of purpose and knew that this was the field for me. Each of my professors were terrific professionals and some of the most knowledgeable individuals I have ever met. I have had a terrific undergraduate career and it is largely in part due to a challenging yet rewarding undergraduate degree program. I am thankful to the staff for making the EXS program what it is today.

I wish I started with Exercise Science rather than Athletic training. Most of my professors were all awesome teachers and awesome people. My internship at Chapter 126 was very rewarding too, even if I did not get a job with them.

I thought my education was great. The staff was great and I learned a lot from every class I was a part of.

I am happy with the amount of effort that went into each class to help educate me!

It was fantastic. Thank you!

I thoroughly enjoyed my experience here at CCSU and I greatly appreciate all the professors pushing the students to strive to be the very best they can be and not giving up on any of them. Thank you.

THANK YOU SO MUCH FOR MY EDUCATION!!!! CCSU is just the foundation and for that, I will never forget my time and everything that I have learned here!

It was great, and took longer than I had hoped.

I just want to say thank-you to all of the EXS faculty. They were incredibly understanding and patient with me during difficult and uncertain times, provided me with the opportunity for self-growth, and never made me feel as though I was incompetent among my peers. I worked incredibly hard to get this degree, and though my maturity and passion for the coursework didn't appear later into my career at CCSU, I wouldn't have gotten this far if it wasn't for the support and encouragement from the EXS faculty. I was diagnosed with ADHD halfway through my studies and it helped provide some clarity in regards to my difficulty with the course work. Through that realization I was able to find resources and strategies that would help me be successful in my classes. This is why my performance and attention improved as semesters progressed, though of course there were bumps here and there. It took me longer than most people, but regardless I got to graduation and that's all that matters. The self-growth I experienced as a person and as a professional was substantial over these last 6 years, the person I am today is confident going into "the real world." So thank you for the patience and encouragement along the way!

I had a great experience at CCSU! I had great guidance from professors who truly wanted to see their students succeed, which was an amazing motivation.

I believe that my education well-prepared and educated me for a position in the field, although I do not feel prepared for grad school for I still have to complete a full semester of pre-requisites before applying to school which held me back yet another year.

I truly enjoyed my time at Central and cannot say enough good things about the faculty I was able to learn from. I feel as though the teaching set me up for success upon graduation, and the majority of the classes gave me the knowledge and insight into the field that I need going forward. I will miss Central, and look forward to representing it in my Masters program.

I was pleasantly surprised with the passion and drive that the Exercise Science Program provided for me through the last 4 years at CCSU. I grew to love the school, the program, the faculty and my peers. I hope that I was able to give back to this program as much as it has given me.

I have truly valued my education at CCSU, more than I ever thought I would. Upon entering the program, I planned to work in strength and conditioning and to go through the motions, so I can become a personal trainer and a CSCS. One thing I did not do is do through the motions, I learned early on that I can change my life through this educational experience with some help from the faculty members. Thank you for your continued support, each of you have changed my life in one way or another. GO BLUE DEVILS!!

I believe EXS students should be given their own area to study in. This program calls for hours upon hours of studying, papers, and projects. Many of which the students in the same classes would take up half of the 2nd floor library and study together. This would be distracting to other students studying but there was nowhere else for us to go.

I am leaving CCSU proud alumni of the Exercise Science program.

CCSU has helped foster my passion for Exercise is Medicine and I cannot wait to apply my knowledge in my future endeavors.

Overall I had an amazing experience at CCSU and feel my education has prepared me for my future endeavors as a professional.

I am very satisfied with my education and I think I will be able to find a job in the field and maybe even pursue more certifications.

Although i did not get the GPA I hoped for just from my own slackness, the university did a good job in teaching the subject materials and now I still have all the important information needed to be a great athlete.

I am very happy with the education that I received from CCSU. We left that program with a vast amount of knowledge and understanding of the subjects we were taught. The professors were always there to answer questions, help us understand the material, or just to be a listening ear.

I feel like a completely different person today then I was when I decided to start this program. My goal from the beginning was to just graduate and move on with my life. But along the way I fell in love with the journey and loved learning from every professor. Each of them had a different way of teaching but they all were able to get through to their students. I think the program is amazing and it will continue to grow because of the leaders that the professors are.

Overall I feel that the Exercise Science program at CCSU has gone above and beyond in preparing me for future endeavors in the Exercise Science field. The faculty did an excellent job breaking down the material and teaching it in a variety of ways to appeal to each person's preferred learning style. Additionally, faculty members were always available and willing to answer questions. I am so happy to have been a part of this program over the last four years, and I cannot wait to represent CCSU as a professional going forward.