

# Cecil College Academic Program Review



Exercise Science

June 2013

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Program Review  
Exercise Science  
Summer 2013



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### **Executive Summary**

In the spring of 2011, the Associate of Science in Exercise Science was approved by Faculty Affairs. This degree was created to build upon the Certificate in Personal Training/Fitness Manager that was first approved in 2008. Student feedback, adjunct faculty input and a growing number of 4 year schools with Bachelor degrees in Kinesiology and/or Exercise indicated that there was a portion of the student population that would be very interested in obtaining an Associate degree in this field.

The certificate program course work offered again in the spring 2011 and was revised and expanded during the summer of 2011. A limited number of courses in this discipline were offered during the 2011-2012 academic year. A full time faculty member in the discipline was hired in the fall of 2012. All courses associated with the Exercise Science/Personal Trainer/Fitness Manager programs of study were offered and a slight increase in student enrolment was noted in the academic year of 2012-2013.

Course assessment began to occur in the spring of 2013 related to the fall 2012 courses offered. All courses will have initial course assessment data by January of 2014. Initial data indicates that students are doing well, however the sample size is very small and very limited conclusions can be drawn from this limited pool of students.

The Exercise Science/Personal Trainer/Fitness manager has several areas of opportunity: the development of articulation agreements with four year institutions; increased clinical affiliation articulations; increased course offerings; and the opportunity for increased student enrollment are all viable opportunities for the discipline. The impact of the Physical Therapist Assistant program, planned for the 2014-2015 AY is unknown at this time, but could also be an opportunity for the Exercise Science program.

### ***Program Description***

The Exercise Science program consists of two options for students: Personal Trainer/Fitness Manager Certificate program and an Associate of Science in Exercise Science. The requirements for the personal trainer/fitness manager certificate are imbedded in the Associate degree program. The program descriptions are as follows:

**Personal Trainer/Fitness Manager:** This certificate program prepares individuals for entry into careers that involve the assessment, motivation, education and training of clients regarding their health and fitness needs. Successful completion of this program prepares students to entry level certification as a Personal Trainer. Students have the option to continue their studies and earn their Associate of Science in Exercise Science.

**Associate of Science in Exercise Science:** This program will prepare students to work in the exercise and rehabilitation fields. Students will complete introductory courses in the science of human movement such as physiological and functional adaptations to movement, exercise, fitness and wellness assessment, rehabilitation and nutrition. Successful completion prepares the student for their certification in personal training and to transfer to a bachelor's degree program in exercise science.

### ***Program History***

The Personal Trainer/Fitness Manager Certificate program was approved in summer of 2008. It was rarely offered and there was limited enrollment. Qualified faculty were difficult to recruit for this small certificate program and for several years, coursework was not offered related to lack of student interest and lack of qualified faculty.

In the spring of 2011, the personal trainer course was taught for the first time in several semesters by a certified personal trainer. The adjunct faculty member had a Bachelor's degree, several certifications as personal trainer, managed a fitness center, and supervised personal trainers. Based on feedback from this faculty member, the students and the recommendations of our Fitness and Wellness Coordinator, it was determined that one three credit course *Fundamentals of Personal Training*, was not adequate to ensure the student had the knowledge and skills to practice competently as a personal trainer. The curriculum and program was re-designed for the Personal Trainer/Fitness Manager Certificate program. An Associate of Science in Exercise Science was also developed.

Both programs received Maryland Higher Education Commission approval in the summer of 2011. Courses were taught by adjunct faculty. In the spring of 2012, faculty recruitment began for a full-time faculty member for the Exercise Science program. Daniel Roman, MS, CSCS, ACSM-HFS, NASM-CPT, PES joined Cecil College in the fall of 2012 in a lectureship position as the full-time faculty member for Exercise Science.



## **Relationship to the College's Mission Statement and Strategic Plan**

### ***Cecil College Mission Statement***

"Cecil College is a comprehensive, open-admission, learner-centered institution. The College provides career, transfer, and continuing education coursework and programs that anticipate and meet the dynamic intellectual, cultural and economic development challenges of Cecil County and the surrounding region. Through support services and a technologically enriched learning environment, the College strives to empower each learner with skills, knowledge, and values needed for college preparation, transfer to four-year institutions, workforce entry or advancement, and personal enrichment. Further, Cecil College promotes an appreciation of cultural diversity, social responsibility, and academic excellence." *CC Strategic Plan 2010-15*

### ***Cecil College Strategic Plan***

The Strategic Plan focuses on four strategic initiatives:

1.     Emphasis on student completion
2.     Increasing opportunities for Bachelors and Higher Degree Programs in Cecil County
3.     Creating workforce opportunities related to federal government expansion, and
4.     Becoming a regional leader in incorporating innovative technology

Cecil College's exercise science and personal trainer program supports the mission of the College as well as the initiatives outlined in the Strategic Plan by providing education/training that prepares individuals for a wide range of opportunities in the growing field of health and wellness. According to the Bureau of Labor Statistics (2010-2011), "Jobs for fitness workers are expected to increase much faster than the average for all occupations. Fitness workers should have good opportunities because of continued job growth in health clubs, fitness facilities, and other settings.....employment of fitness workers is expected to increase 29 percent over the 2008-2018 decade.....". The Maryland Department of Labor, Licensing, and Regulation has projected 25% growth in jobs for fitness workers in Maryland through 2018.

Course work prepares students for their national certification as a personal trainer, through the National Academy of Sports Medicine (NASM) an industry standard that is usually required to work as a personal trainer. Additionally, the breadth and depth of the coursework in the Exercise Science program prepares student to work in the in-patient, out-patient or wellness field, increasing opportunities and options for employment, while fostering the development of knowledge, skills, and abilities that are essential for students to prepare for transfer to a Bachelor program in Exercise Science or Kinesiology.

### ***Faculty Profile***

Daniel Roman, MS, CSCS, ACSM-HFS, NASM-CPT, PES is the only full-time faculty member for the Exercise Science program and currently teaches all of the courses designated FWS. This was Daniel's first year as a faculty member, (a lectureship) and he did not have any committee responsibilities. Daniel did attend Division and department meetings as required.

### ***Program Curriculum***

#### **Associate of Exercise Science**

HEA 130 Healthful Living  
BUS 103 Introduction to Business  
BIO 203 Nutrition  
FWS 110 Fundamentals of Personal Training  
FWS 111 Fundamentals of Personal Training/Lab  
FWS 120 Fundamentals of Personal Training II  
FWS 121 Fundamentals of Personal Training/Lab II  
FWS 130 Essentials of Fitness Assessments  
ACT Activity Elective  
ARTS/HUM Arts and Humanities Elective  
BIO 101 or General Biology  
BIO 130 Principles of Biology  
BIO 111 or General Biology Lab  
BIO 131 Principles of Biology Lab  
BIO 208 Anatomy and Physiology I  
BIO 218 Anatomy and Physiology Lab I  
BIO 209 Anatomy and Physiology II  
BIO 219 Anatomy and Physiology Lab II  
EGL 101 Freshman Composition  
EGL 102 Composition and Literature  
SOC 101 Introduction to Sociology  
PSY 101 Introduction to Psychology  
MAT 121 Precalculus  
FWS 135 Physiology of Exercise  
FWS 180 Special Populations Fitness Prescription  
**Program electives (select 6 credits)**  
PED 135 First Aid and CPR  
PED 180 Introduction to Physical Education  
PED 282 Fundamentals of Sports Medicine  
HCD 120 Medical Terminology  
HCD 170 Ethical Issues in Health care

#### **Personal Trainer/Fitness Manager Certificate**

HEA 130 Healthful Living  
BUS 103 Introduction to Business  
BIO 203 Nutrition  
FWS 110 Fundamentals of Personal Training  
FWS 111 Fundamentals of Personal Training/Lab  
FWS 120 Fundamentals of Personal Training II  
FWS 121 Fundamentals of Personal Training/Lab II  
FWS 130 Essentials of Fitness Assessments

### ***Program Educational Outcomes***

By the completion of the **Associate of Exercise Science** program, Cecil College Exercise Science graduates are prepared to:

1. Promote the health and fitness of clients by using and articulating their understanding of the National Academy of Sports Medicine, (NASM) guidelines for personal trainer's characteristics and by articulating the need to create environments that are healthy, respectful, supportive, and challenging for all clients.
2. Perform health and fitness assessments to ascertain starting points in healthy and special populations when beginning an exercise program.
3. Identify and explain the importance of appropriate training techniques and rationales as an important client management tool.
4. Identify and explain nutrition, health and safety practices and procedures appropriate for use when training clients.
5. Become a member of the health and fitness profession by exemplifying the ethical guidelines and other professional standards related to health and fitness practices as detailed by the NASM.

By the completion of the **Personal Trainer/Fitness Manager certificate** program, the Cecil College certificate graduates are prepared to:

1. Monitor individuals or groups of individuals during exercise tests, demonstrating the ability to perform exercise tests in accordance with National Standards, set forth by the National Academy of Sports Medicine (NASM).
2. Assess human performance related to characteristics of individuals from diverse populations
3. Implement exercise programs for apparently healthy individuals and individuals with leading chronic controlled disease
4. Provide a safe exercise environment for apparently healthy individuals and those with controlled disease.
5. Take the NASM-CPT exam.

### ***Statistical Data***

#### **Student Demographics**

Year	Gender			
	Male	% of total	Female	% of total
2007/2008	0	0%	3	100%
2008/2009	0	0%	3	100%
2009/2010	3	43%	4	57%
2010/2011	3	38%	5	63%
2011/2012	7	54%	6	46%

Year	Age									
	< 25 yrs	% of total	26-30 yrs	% of total	31-40 yrs	% of total	41-50 yrs	% of total	over 51 yrs	% of total
2007/2008	1	33%	1	33%	0	0%	1	33%	0	0%
2008/2009	0	0%	0	0%	2	67%	1	33%	0	0%
2009/2010	5	71%	0	0%	1	14%	1	14%	0	0%
2010/2011	7	88%	0	0%	1	13%	0	0%	0	0%
2011/2012	11	85%	0	0%	0	0%	2	15%	0	0%

#### **Degrees and enrollment status**

Year	Total Enrollment	Full-time	Part-time	degrees
2007/2008	3	0	3	0
2008/2009	6	0	6	0
2009/2010	6	0	6	0
2010/2011	7	2	5	0
2011/2012	13	6	7	0*

\*first two Associate of Exercise Science degrees were awarded at spring 2013 graduation

Since this is a new degree program, there is very little data collected to report on. There were no Pell recipients who earned the AS in Exercise Science, and no information available regarding continued enrollment from fall to spring and transfer. However, the data available indicates an increase in student enrollment from 3 (when only the certificate was available) to 13 students.

#### **General Education Objectives**

See attached table(Appendix A). Data is limited, as degree program has only been available since fall of 2011. First course with revised degree/certificate program ran in spring of 2012 with adjunct faculty. Full-time faculty hired in summer of 2012 and first course assessments completed in the spring of 2013.

#### **Program Evaluation Program Strengths and Weaknesses**

Again, since the Exercise Science and Personal Trainer/Fitness Manager programs are fairly new, it is difficult to conduct a detailed program analysis and program evaluation. However the Associate of Science in Exercise Science and Personal Trainer/Fitness Manager Certificate program have several easily identifiable strengths. Curriculum for this program was developed in close consultation with a Personal trainer who was current in the field and who hired and supervised personal trainers. This curriculum has since been reviewed and minor revisions have occurred to ensure the program not only meets industry standards, but also academic standards.

Student who successfully complete this program are eligible to sit for a national certification through NASM. This is a credential that is recognized in the industry and can facilitate employment.

The Exercise Science has a close working relationship with the Director and staff of the Fitness and Wellness Center (FWC). The faculty member also works several hours a week in the FWC. This has been very beneficial for the Exercise Science program and FWC, providing a very qualified individual in the Center to assist in mentoring staff and providing feedback to clients, while also interacting with students. This has increased program/faculty visibility. Additionally, the Exercise Science program uses the FWC for classes and externship opportunities, so a faculty member well-informed regarding FWC processes and staff facilitates these interactions.

There is a full-time faculty, with multiple industry credentials, who was recently promoted from lectureship to assistant professor, which is also a program strength. This helps to ensure that students are not only taught by a content expert, but are also advised by an industry expert about the full range of opportunities in the field. This can assist with student recruitment.

While a full-time faculty member is a strength, only one full-time faculty member may become a weakness over time. If student enrollment continues to increase, then more sections of FWS courses will need to be offered and qualified adjunct faculty will need to be found and hired to teach these courses.

Again, over time, the need for more externship sites may become a program weakness. The current program has a limited number of practicum sites available for students in the last clinical course. Students who are participating in this program will be competing with Physical Therapist Assistant students for externship sites and this could create a shortage of practicum/clinical sites for this program.

Lastly, lack of articulation agreements is a program weakness. Students need to have the opportunity to continue their education towards a Bachelor's degree. While students can still go, the process is facilitated by articulation agreements. Again, this is a goal for the upcoming year.

### ***Program Opportunities***

An opportunity that is easily identified is the development of articulation agreements. This would create more career opportunities for students if an educational pathway was clearly identified.

The developing Physical Therapist Assistant (PTA) program provides several interesting opportunities for the Exercise Science program. The two pathways complement each other; PTA has a restorative/rehabilitation focus while Exercise Science has a health and wellness focus. This creates a variety of experiences for students and the opportunity to 'share' learning environments and classrooms. Currently being explored is a one credit course to introduce students to the Exercise Science/PTA opportunities in education and practice. Also, since many of the pre-requisite coursework is similar for both programs, students will be able to easily change from one program to the other to meet their needs.

### ***Adequacy of Available Technology/Facilities***

The Exercise Science and Personal Trainer programs have classes in the Physical Education building. All classes have access to Blackboard ® and audiovisual equipment for classroom instruction. Additionally, the Fitness and Wellness Center is located in the PE building facilitating access for students to all of the equipment is frequently used in the fitness and wellness industry for assessment and exercise prescription.

This past spring sphygmomanometers and stethoscopes were purchased for the Exercise Science program to facilitate student assessment of clients. The Exercise faculty will continue to monitor the program needs and make requests accordingly.

### ***Articulation Agreements***

Several affiliation agreements were established during the first year of the degree program. An academic partnership with the National Academy of Sports Medicine (NASM) was established facilitating access for the faculty member to current industry resources as well as preferred pricing for students who wanted to obtain their certification in personal training. Students also have access to review materials and practice exams at a reduced price.

Clinical affiliation agreements were also established with the YMCA in Elkton Maryland, Union Hospital Sleep Lab in Elkton, Maryland, and Nova Care Rehabilitation, in North East, Maryland. These agreements facilitated student learning, by increasing opportunities for student externships in exercise science during the last clinical/lab course. All three facilities provided opportunities similar to the work environment for exercise science/personal trainer graduates. Student feedback on these sites, although limited was positive. All three sites worked closely with the faculty member and are eager to have students return to them next spring.

Currently, there are no articulation agreements in place for students who graduate with an Associate of Science in Exercise Science. A goal for the faculty member for the upcoming academic year is to explore this option and identify possible educational articulation partners.

### ***Program Goals and Objectives***

Since this is a new degree program of study and had very limited enrollment for the certificate program, there is no prior program review and no prior program goals or objectives. The following goals and objectives have been established for the upcoming five years.

<b><i>Goal(s)</i></b>	<b><i>Timetable for Completion</i></b>	<b><i>Required Resources</i></b>	<b><i>Obstacles to Completion</i></b>
Articulation agreements for bachelor degrees in	12-18 months	Time; available and willing articulation	Willing 4 year partners

field of exercise science/kinesiology.		partners	
Increased number of externship sites.	12-18 months	Time; available and willing externship partner sites.	Externship partners
Increase enrollment in degree program by 25 % within two years.	16-24 months	Time; Collaboration with Marketing department; collaboration with Advising	Availability of employment within field of study; Marketing; Articulation agreements
Increased course offerings in Exercise Science.	24-36 months	Time; survey of students r/t interest in topics; survey of employers and other stakeholders r/t need(s) in field.	Time required of FT faculty member; students to fill courses; relevancy of courses to articulation agreements; relevancy of courses to employment.

### ***Recommendations***

The Exercise Science and Personal Trainer/Manager certificate is in its infancy and will require time to become established. Based on the anecdotal student comments/interest and the increases in student enrollment over the last year, it appears likely that the program will be successful and continue to grow. Established articulation agreements with four year institutions (providing a career ladder); increasing the number of externship sites (allowing students to have externship sites relevant to their particular area of interest; and increasing course offerings within the degree (again, allowing students to choose areas of study of particular interest), will all contribute to the success of the degree program. Additionally, the development of the Physical Therapist Assistant (PTA) program will complement the Exercise Science and Personal trainer programs. The focus of the PTA is often rehabilitation and or return to wellness, while the Exercise Science program is primarily focused on maintenance of wellness or improvement in health. Both programs have similar pre-requisite courses. Offering both programs will facilitate students changing their program of study as needed, while not having to 'start over' in a program of study. Additionally, there may be some unique opportunities for the programs to work together and/or to provide interdisciplinary education between the programs of study.

At this point, the Exercise Science/Personal Trainer program should continue to be supported in its efforts for growth. While the faculty and facilities are adequate currently to meet program needs, this should be monitored to ensure that as the program grows we are able to continue to meet students' needs. The impact of PTA on Exercise Science/Personal Trainer is something to also monitor and will not become apparent for several years.





General Education Objectives related to Associate of Science in Exercise Science degree program

Program Outcomes	Student Learning Outcomes	Direct/Indirect Assessment Measure	Population	Reporting/Use
<b>A. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in critical and creative thinking skills and problem-solving strategies.</b>	<ol style="list-style-type: none"> <li>Students will identify, categorize and distinguish among elements of ideas, concepts, theories and/or practical approaches to standard problems.</li> <li>Students will analyze, evaluate, and/or criticize various academic disciplines and/or regional/national/global issues.</li> </ol>	<ol style="list-style-type: none"> <li>Written Assignments</li> <li>Tests/quizzes</li> <li>Final Exams</li> </ol>	Students in all FWS 110, FWS 111, and FWS 130 courses	<p>FWS 110: grades on written assignment: A-73%; B-27%</p> <p>FWS 111: grades on written assignments: A-73%; B-18%; F-9%</p> <p>FWS 130: grades on written assignments: A-100%</p>
<b>B. Students who complete the College's General Education Core Requirements will demonstrate College-level competency in writing.</b>	<ol style="list-style-type: none"> <li>Students will demonstrate accurate and effective explanatory writing skills.</li> <li>Students will locate, collect and organize evidence on an assigned research topic.</li> </ol>	<ol style="list-style-type: none"> <li>Written Assignments</li> <li>Tests/quizzes</li> <li>Final Exams.</li> </ol>	Students in all FWS 110, FWS 111, and FWS 130 courses.	<p>FWS 110: grades on written assignment: A-73%; B-27%</p> <p>FWS 111: grades on written assignments: A-73%; B-18%; F-9%</p> <p>FWS 130: grades on written assignments: A-100%</p>
<b>C. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in oral communications.</b>	<ol style="list-style-type: none"> <li>Students will demonstrate effective public speaking skills.</li> <li>Students will demonstrate an ability to evaluate their own public speaking skills.</li> </ol>	<ol style="list-style-type: none"> <li>Written Assignments</li> <li>Tests/quizzes</li> <li>Final Exams</li> </ol>	Students in all FWS 110, FWS 111, and FWS 130 courses.	Students complete assignments and projects, presenting exercises or concepts to classmates-to be assessment in future course assessments.
<b>D. Students who complete the College's General Education Core</b>	<ol style="list-style-type: none"> <li>Students will demonstrate understanding of mathematical principles and methods.</li> </ol>	<ol style="list-style-type: none"> <li>Written Assignments</li> <li>Tests/quizzes</li> </ol>	Students in all FWS 110, FWS 111,	FWS 110: grades on exam: A-27%; B-18%; C-37%; D-0%; F-18%.

Program Outcomes	Student Learning Outcomes	Direct/Indirect Assessment Measure	Population	Reporting/Use
<b>Requirements will demonstrate college-level competency in quantitative analysis.</b>	2. Students will demonstrate the ability to perform accurate calculations and symbolic operations.	c. Final Exams	and FWS 130 courses	FWS 111: grades on written assignment: A-91%; F-9% FWS 130: grades on quiz: A-33%; B-33%; C-33%
<b>E. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in computer literacy and in the ability to work productively with information technology.</b>	1. Students will demonstrate the ability to determine or calculate the solution to a problem through the use of computer technology. 2. Students will demonstrate the ability to make effective use of writing-related computer technology.	a. Written Assignments b. Tests/quizzes c. Final Exams	Students in all FWS 110, FWS 111, and FWS 130 courses	Students complete assignments using technology, calculating various health measurements(daily caloric intake, BMR, lifting calculations, etc.); to be assessed in future course assessments.
<b>F. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in awareness of ethics, cultural diversity, artistic expression, health-and-wellness issues, and the physical and social environment.</b>	1. Students will demonstrate an awareness of ethical behavior. 2. Students will demonstrate an understanding of and appreciation for cultural diversity. 3. Students will demonstrate understanding of and appreciation for artistic expression. 4. Students will demonstrate understanding of and appreciation for health-and-wellness issues. 5. Students will demonstrate understanding of and appreciation for the physical and social environment.	a. Written Assignments b. Tests/quizzes c. Final Exams	Students in all FWS 110, FWS 111, and FWS 130 courses	FWS 110: grades on written assignment: A-73%; B-27%  FWS 111: grades on written assignments: A-91%; F-9%  FWS 130: grades on written assignments: A-33%; B-33%; C-33%

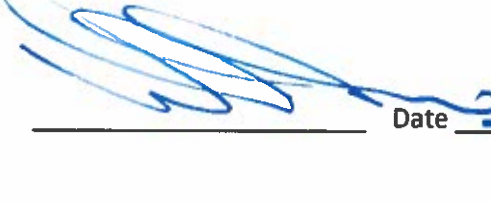
Program Outcomes	Student Learning Outcomes	Direct/Indirect Assessment Measure	Population	Reporting/Use
<i>G. Students who complete the College's General Education Core Requirements will demonstrate college-level competency in information literacy including finding, evaluating, and using information effectively.</i>	1. Students will identify, categorize, and evaluate multiple information resources. 2. Students will cite multiple information resources in various course assignments.	a. Written Assignments b. Tests/quizzes c. Final Exams	Students in all FWS 110, FWS 111, and FWS 130 courses	FWS 110: grades on written assignment: A-73%; B-27%  FWS 111: grades on written assignments: A-91%; F-9%  FWS 130: grades on written assignments: A-33%; B-33%; C-33%



## Approvals

Signature of Division Chair  Date 9/12/2013

Signature of the Chair of the  Date 2/5/2014  
Academic Affairs Committee

Signature of the Dean of  Date 2-6-2014  
Academic Programs

Signature of the Chief  Date 2/6/14  
Academic Officer

# Appendix A



