

EXERCISE SCIENCE

Sylvania Campus
Health Technology Building (HT), Room 215
971-722-4210

pcc.edu/programs/exercise-science/

CAREER AND PROGRAM DESCRIPTION

As an exercise science professional you will be part of the preventive wellness team working in fitness clubs, wellness centers, public and private recreation facilities, personal training or sports studios, hospitals, senior living communities, or employee wellness programs. You may perform tasks such as developing and implementing safe and effective fitness programs, conducting fitness assessments, and instructing clients in appropriate sport, fitness, and wellness activities. Administrative duties for the exercise science professional may include business operations, marketing and health promotion, member retention, and sales. Portland Community College Exercise Science graduates have a background in basic anatomy and physiology, applied kinesiology, exercise physiology, sports nutrition, fitness assessment, and exercise prescription, as well as client motivation, behavior modification, and fitness promotion. The program is designed to correlate classroom and laboratory experience with practical experience in the community. Students who successfully complete the program are prepared to take national personal trainer certifying examinations given by the American College of Sports Medicine (ACSM), the National Strength and Conditioning Association (NSCA) or the American Council on Exercise (ACE).

Portland Community College Exercise Science graduates working in this field are known by a variety of titles, including but not limited to; personal trainer, exercise specialist, group exercise leader, fitness instructor, activity director, strength and conditioning trainer, and member services specialist. The Exercise Science program currently has an articulation agreement in place with Portland State University (PSU) for students who successfully complete the Exercise Science AAS degree. This agreement opens up the opportunity to transfer to PSU with Junior-status and complete a Bachelor's degree in Applied Health & Fitness within PSU's School of Public Health.

DEGREES AND CERTIFICATES OFFERED

ASSOCIATE OF APPLIED SCIENCE DEGREE

Exercise Science

LESS THAN ONE-YEAR: CAREER PATHWAY CERTIFICATE

Group Fitness Leader
Healthy Older Adult Fitness
Personal Trainer
Yoga Teacher

Academic Prerequisites

- IRW 115 or (WR 115 and RD 115) and MTH 20 or equivalent placement test scores.
- All Exercise Science programs are limited entry.

Academic Requirements

- All courses for the Exercise Science AAS and Career Pathway Certificates must be completed with a grade of "C" or "P" or better.
- A maximum of 9 of Pass/No Pass credits are allowed in the Exercise Science Career Pathway Certificates.
- First year winter term courses for the AAS degree and the Personal Trainer Career Pathway Certificate require MTH 58 or MTH 60 or higher and WR 121 with a "C" or "P" or better as

prerequisites. Please note that the PCC EXS AAS degree will require a C or P or better in MTH 58 or MTH 65 or higher.

Non-Academic Prerequisites

- Attend an Exercise Science information session. Check the Exercise Science website for dates and times of the sessions.
- Application and acceptance to PCC as a credit-seeking student.
- Complete the online Exercise Science program application. Check the Exercise Science website for application deadlines and access to the application. All prerequisites must be completed prior to submitting the Exercise Science program application.

Non-Academic Requirements

- Transcripts with previous coursework must be evaluated by student records.
- Meet with an Exercise Science Admissions Advisor prior to first term enrollment.
- Meet with the Exercise Science Advisor once per term.
- Applicants with disabilities are encouraged to contact Disability Services 971-722-4341.

EXERCISE SCIENCE AAS DEGREE

Minimum 90 credits. Students must also meet Associate Degree Comprehensive Requirements and Associate of Applied Science Requirements. Students must complete a total of four courses of General Education. In addition to required courses in the program of study, students must satisfy MTH 58/65 competency. Students should consult with program advisors for course planning.

Exercise Science Degree Courses

Code	Title	Credits
FT 100	Emergency Response for Fitness Professionals	1
FT 101	Exploring Exercise Science Careers	3
FT 103	Nutrition for Exercise	3
FT 104	Fitness Assessment	3
FT 105	Exercise Prescription	3
FT 106	Analysis of Movement	3
FT 107	Exercise Physiology	3
FT 110	Injury Prevention & Management	2
FT 131	Structure & Function of the Human Body	4
FT 180	Exercise Science Internship Preparation	1
FT 201	Advanced Fitness Assessment and Prescription	3
FT 202	Fitness and Aging	3
FT 203	Fitness Promotion	3
FT 204	Advanced Exercise Physiology	3
FT 280	Exercise Science Internship I	4
or FT 280C	Exercise Science Professional Project II	
FT 280B	Exercise Science Internship II	4
or FT 280C	Exercise Science Professional Project II	
FT 280L	Exercise Science Leadership Experience	1
or FT 280P	Exercise Science Professional Project I	
FT 280T	Physical Activity Teaching Experience	1
or FT 280P	Exercise Science Professional Project I	
HE 295 & PE 295	Health and Fitness for Life and Health and Fitness for Life Lab	3
HUS 102	Mental Health First Aid: Adult	1
or HUS 106	Mental Health First Aid: Youth	
or HUS 107	Mental Health First Aid: Older Adult	
PE 181A	Beginning Weight Training	1

or PE 181B	Intermediate Weight Training	
or PE 181C	Advanced Weight Training	
PE 281	Professional Activities: Weight Training	2
Choose 3 of the following Professional Activities courses		6
PE 282A	Professional Activities: Group Fitness	
PE 282B	Professional Activities: Older Adult Fitness	
PE 283	Professional Activities: Mind-Body Disciplines	
PE 287	Professional Activities: Aquatics	
PE 288	Professional Activities: Team Sports Training	
Exercise Science Electives		17
General Education: 4 courses		
Total Credits		90

EXERCISE SCIENCE DEGREE ELECTIVES

Any approved PCC or transfer course.

LESS THAN ONE-YEAR: CAREER PATHWAY CERTIFICATE

- Group Fitness Leader (p. 2)
- Healthy Older Adult Fitness (p. 3)
- Personal Trainer (p. 3)
- Yoga Teacher (p. 3)

GROUP FITNESS LEADER CAREER PATHWAY CERTIFICATE

Minimum of 31 credits. Students must meet all certificate requirements. The Group Fitness Leader Certificate is a Career Pathway. All courses are contained in the Exercise Science AAS Degree.

Group Fitness Leader Certificate Courses

Code	Title	Credits
FT 100	Emergency Response for Fitness Professionals	1
FT 101	Exploring Exercise Science Careers	3
FT 110	Injury Prevention & Management	2
FT 131	Structure & Function of the Human Body	4
FT 180	Exercise Science Internship Preparation	1
FT 280	Exercise Science Internship I	4
or FT 280C	Exercise Science Professional Project II	
FT 280T	Physical Activity Teaching Experience	1
or FT 280P	Exercise Science Professional Project I	
HE 295 & PE 295	Health and Fitness for Life and Health and Fitness for Life Lab	3
HUS 102	Mental Health First Aid: Adult	1
or HUS 106	Mental Health First Aid: Youth	
or HUS 107	Mental Health First Aid: Older Adult	
PE 181A	Beginning Weight Training	1
or PE 181B	Intermediate Weight Training	
or PE 181C	Advanced Weight Training	
PE 281	Professional Activities: Weight Training	2
PE 282A	Professional Activities: Group Fitness	2
PE 287	Professional Activities: Aquatics	2
Choose 1 of the following Professional Activities courses		
PE 283	Professional Activities: Mind-Body Disciplines	2
or PE 288	Professional Activities: Team Sports Training	

Group Fitness Leader Electives	2
Total Credits	31

GROUP FITNESS LEADER ELECTIVES

Code	Title	Credits
FT 280P	Exercise Science Professional Project I	1
PE 120A	Ballet I	1
PE 120B	Ballet I	1
PE 120C	Ballet II	1
PE 120D	Ballet II	1
PE 120E	Ballet III	1
PE 120F	Ballet III	1
PE 121A	Modern Dance I	1
PE 121B	Modern Dance I	1
PE 121C	Modern Dance II	1
PE 121D	Modern Dance II	1
PE 121E	Modern Dance III	1
PE 121F	Modern Dance III	1
PE 124	World Dance	1
PE 142A	Zumba Fitness I	1
PE 142B	Zumba Fitness II	1
PE 143A	Aquatic Exercise I	1
PE 143B	Aquatic Exercise II	1
PE 143C	Aquatic Exercise III	1
PE 162G	Cardio Conditioning	1
PE 162O	Core Fitness	1
PE 181D	Interval Training I	1
PE 181E	Interval Training II	1
PE 181M	Boot Camp II	1
PE 182A	Beginning Group Fitness	1
PE 182B	Intermediate Group Fitness	1
PE 182F	Boot Camp I	1
PE 182G	Tai Chi II	1
PE 182I	Power Yoga	1
PE 182J	Gentle Yoga	1
PE 182K	Yoga I	1
PE 182L	Yoga II	1
PE 182P	Pilates I	1
PE 182R	Fitness for Back Health	1
PE 182S	Tai Chi I	1
PE 182U	Pilates II	1
PE 182Y	Indoor Cycling	1
PE 185U	U-JAM Dance Fitness I	1
PE 185V	U-JAM Dance Fitness II	1
PE 186D	Ballroom Dance	1
PE 186F	Jazz Dance I	1
PE 186G	Jazz Dance II	1
PE 186H	Jazz Dance III	1
PE 186K	Tap Dance I	1
PE 186M	Tap Dance II	1
PE 186R	Hip Hop	1
PE 186S	Hip Hop II	1
PE 186Z	Conditioning for Dance	1
PE 187Z	Barre Fitness	1

HEALTHY OLDER ADULT FITNESS CAREER PATHWAY CERTIFICATE

Minimum of 30 credits. Students must meet all certificate requirements. The Healthy Older Adult Fitness Certificate is a Career Pathway. All courses are contained in the Exercise Science AAS Degree.

Healthy Older Adult Fitness Certificate Courses

Code	Title	Credits
FT 100	Emergency Response for Fitness Professionals	1
FT 110	Injury Prevention & Management	2
FT 131	Structure & Function of the Human Body	4
FT 180	Exercise Science Internship Preparation	1
FT 202	Fitness and Aging	3
FT 280	Exercise Science Internship I	4
or FT 280C	Exercise Science Professional Project II	
GRN 165	Basic Activity Director Training	2
or PE 287	Professional Activities: Aquatics	
HE 295 & PE 295	Health and Fitness for Life and Health and Fitness for Life Lab	3
HUS 102	Mental Health First Aid: Adult	1
or HUS 106	Mental Health First Aid: Youth	
or HUS 107	Mental Health First Aid: Older Adult	
PE 181A	Beginning Weight Training	1
or PE 181B	Intermediate Weight Training	
or PE 181C	Advanced Weight Training	
PE 281	Professional Activities: Weight Training	2
PE 282B	Professional Activities: Older Adult Fitness	2
SOC 223	Sociology of the Life Course	4
or SOC 231	Sociology of Healthy Aging	
Total Credits		30

PERSONAL TRAINER CAREER PATHWAY CERTIFICATE

Minimum 41 credits. Students must meet all certificate requirements. The Personal Trainer Certificate is a Career Pathway. All courses are contained in the Exercise Science AAS Degree.

Personal Trainer Certificate Courses

Code	Title	Credits
FT 100	Emergency Response for Fitness Professionals	1
FT 101	Exploring Exercise Science Careers	3
FT 103	Nutrition for Exercise	3
FT 104	Fitness Assessment	3
FT 105	Exercise Prescription	3
FT 106	Analysis of Movement	3
FT 107	Exercise Physiology	3
FT 110	Injury Prevention & Management	2
FT 131	Structure & Function of the Human Body	4
FT 180	Exercise Science Internship Preparation	1
FT 280	Exercise Science Internship I	4
or FT 280C	Exercise Science Professional Project II	
HE 295 & PE 295	Health and Fitness for Life and Health and Fitness for Life Lab	3
HUS 102	Mental Health First Aid: Adult	1
or HUS 106	Mental Health First Aid: Youth	
or HUS 107	Mental Health First Aid: Older Adult	

PE 181A	Beginning Weight Training	1
or PE 181B	Intermediate Weight Training	
or PE 181C	Advanced Weight Training	
PE 281	Professional Activities: Weight Training	2
Choose 2 of the following Professional Activities courses		4
PE 282A	Professional Activities: Group Fitness	
PE 282B	Professional Activities: Older Adult Fitness	
PE 283	Professional Activities: Mind-Body Disciplines	
PE 287	Professional Activities: Aquatics	
PE 288	Professional Activities: Team Sports Training	
Total Credits		41

YOGA TEACHER LESS THAN ONE-YEAR CAREER PATHWAY CERTIFICATE

Minimum 12 credits. Students must meet all certificate requirements. The Yoga Teacher Certificate is a Career Pathway. All courses are contained in the Exercise Science AAS Degree.

Yoga Teacher Certificate Courses

Code	Title	Credits
FT 100	Emergency Response for Fitness Professionals	1
FT 120	Foundations of Yoga Instruction	3
FT 121	Advanced Yoga Instruction	3
FT 280Y	Yoga Teacher Practicum	1
or FT 280P	Exercise Science Professional Project I	
HUS 102	Mental Health First Aid: Adult	1
or HUS 106	Mental Health First Aid: Youth	
or HUS 107	Mental Health First Aid: Older Adult	
PE 283	Professional Activities: Mind-Body Disciplines	2
PE 182K	Yoga I	1
or PE 182L	Yoga II	
or PE 182J	Gentle Yoga	
or PE 182I	Power Yoga	
Total Credits		12

FT 100. Emergency Response for Fitness Professionals. 1 Credit.

Covers emergency response related to injuries and illnesses in an exercise and fitness environment. Upon satisfactory completion of the requirements individuals will be eligible for first responder certifications (i.e. CPR, AED, First Aid, etc.). Prerequisite: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement.

FT 101. Exploring Exercise Science Careers. 3 Credits.

Explores careers in the exercise science and fitness industry. Provides an overview of the concepts, skills, and methodology required to become an effective instructor of fitness and movement. Provides an opportunity to gain practical experience investigating the role of an exercise professional in fitness clubs, community-based wellness centers, and other locations. Prerequisite: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available.

FT 103. Nutrition for Exercise. 3 Credits.

Explores basic principles of nutrition with an emphasis on applications to fitness, weight management and athletic performance. Prerequisites: FT 131, MTH 58 or MTH 60, WR 121 or equivalent placement, and (HE 295 and PE 295) or HPE 295. Audit available.

FT 104. Fitness Assessment. 3 Credits.

Introduces fitness testing for apparently healthy populations. Covers cardiovascular fitness, muscular strength and endurance, flexibility, and body composition in both individual and group assessments. Prerequisites: FT 131, MTH 58 or MTH 60, WR 121 or equivalent placement, and (HE 295 and PE 295) or HPE 295. Audit available.

FT 105. Exercise Prescription. 3 Credits.

Introduces individual and group exercise plan development and progression for cardiorespiratory fitness, muscular fitness, flexibility, body composition, balance, and sport performance. Prerequisites: FT 104. Audit available.

FT 106. Analysis of Movement. 3 Credits.

Examines human motion in physical activity and sports and the integration of anatomy and biomechanics. Explores the anatomical movements involved in a wide variety of motor and balance tasks, postural stability exercises, and exercise program design. Prerequisite: FT 131, MTH 58 or MTH 60, and WR 121 or equivalent placement. Audit available.

FT 107. Exercise Physiology. 3 Credits.

Investigates physiological mechanisms responsible for adaptations to acute and chronic exercise in the metabolic, endocrine, pulmonary, cardiovascular, and neuromuscular systems. Prerequisite: FT 131, MTH 58 or MTH 60, and WR 121 or equivalent placement. Audit available.

FT 110. Injury Prevention & Management. 2 Credits.

Covers prevention and management of acute and chronic injuries in a fitness setting. Emphasizes preventing injuries by reducing risks for injury or illness, creating safe environments, and recognizing signs and symptoms of injury or illness. Explores alternative exercises for clients and participants who have a current illness or injury. Prerequisites: FT 131. Audit available.

FT 120. Foundations of Yoga Instruction. 3 Credits.

Explores the foundational skills and techniques involved in Hatha Yoga instruction. Emphasizes pranayama and the main categories of asana. Covers alignment, adjustments, modifications and teaching methods. Prerequisite: Department approval required, and (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Prerequisite/concurrent: PE 283, and (PE 182K, PE 182L, PE 182J, or PE 182I). Audit available.

FT 121. Advanced Yoga Instruction. 3 Credits.

Focuses on mastery of Hatha Yoga instructional skills, building upon foundational knowledge and techniques. Explores advanced asana, pranayama, meditation, and philosophy. Prerequisite: FT 120. Audit available.

FT 131. Structure & Function of the Human Body. 4 Credits.

Presents basic principles of anatomy, physiology, and exercise science. Introduces terminology, concepts, basic chemistry, cell structure and function, tissues, metabolism and the cardiovascular, respiratory, skeletal, muscular, nervous, endocrine, lymphatic and urinary systems. Prerequisites: Department approval required, and (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Prerequisite/concurrent: PE 181A or PE 181B or PE 181C. Audit available.

FT 180. Exercise Science Internship Preparation. 1 Credit.

Covers essential skills for internship site procurement. Focuses on company research, interviewing techniques, and resume and cover letter generation. Prerequisite: FT 131.

FT 201. Advanced Fitness Assessment and Prescription. 3 Credits.

Explores the needs and abilities of individuals outside of ACSM's guidelines for apparently healthy populations. Focuses on modification of movement, exercise, equipment, and assessments for these individuals and groups. Includes advanced testing procedures, modification of assessments, and modified exercise programming for these individuals and groups. Prerequisite: FT 105. Audit available.

FT 202. Fitness and Aging. 3 Credits.

Explores physiological aspects of aging as applied to fitness and exercise. Prerequisites: FT 131, (HE 295 and PE 295) or (HPE 295), or instructor approval. Audit available.

FT 203. Fitness Promotion. 3 Credits.

Covers skills that promote healthy and fit lifestyles for individuals and groups in a variety of fitness disciplines. Introduces skills to promote success in the job market. Prerequisite: FT 280 or instructor approval. Audit available.

FT 204. Advanced Exercise Physiology. 3 Credits.

Introduces concepts of environmental conditions, advanced training adaptations, and clinical exercise physiology. Includes additional time in the lab setting learning metabolic and ECG stress testing. Prerequisite: FT 104 and FT 107. Audit available.

FT 280. Exercise Science Internship I. 4 Credits.

Provides required internship experience for Exercise Science Certificate students. Includes development and implementation of fitness and wellness programming in both individual and group settings for general populations. Site paperwork and requirements (applicant screening, FERPA, Title IX, etc.) must be completed prior to registration. Prerequisite: FT 180, and Department approval required.

FT 280B. Exercise Science Internship II. 4 Credits.

Provides required second internship experience for Exercise Science Degree students. Includes development and implementation of fitness and wellness programming in both individual and group settings for site-specific demographics (i.e. children, competitive athletes, those with special needs). Site paperwork and requirements (applicant screening, FERPA, Title IX, etc.) must be completed prior to registration. Prerequisites: FT 280, and Department approval required.

FT 280C. Exercise Science Professional Project II. 4 Credits.

Provides in-depth experience synthesizing, integrating, and applying professional skills and knowledge acquired during the Exercise Science program of study. A written learning contract which is specific to this course and mutually agreed upon by the student and instructor must be completed prior to registration. Prerequisites: Instructor permission, and (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement.

FT 280L. Exercise Science Leadership Experience. 1 Credit.

Explores leadership in exercise science, including pedagogical concepts, student mentoring, program marketing and outreach, and/or workshop development. Requirement: Complete FERPA and Title IX trainings prior to registration. Prerequisites: Instructor permission. Prerequisite/concurrent: FT 180.

FT 280P. Exercise Science Professional Project I. 1 Credit.

Provides basic experience synthesizing, integrating, and applying professional skills and knowledge acquired during the Exercise Science program of study. A written learning contract which is specific to this course and mutually agreed upon by the student and instructor must be completed prior to registration. Prerequisite: Instructor Permission, and (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available.

FT 280T. Physical Activity Teaching Experience. 1 Credit.

Explores principles of teaching pedagogy in a physical education class, including lesson plan development, safety, exercise selection, and group instruction. Requirement: Complete FERPA and Title IX trainings prior to registration. Prerequisite: Instructor permission. Prerequisite/concurrent: FT 180.

FT 280Y. Yoga Teacher Practicum. 1 Credit.

Provides required practicum experience for completion of the yoga teacher sequence of courses. Site paperwork and requirements (applicant screening, FERPA, Title IX, etc.) must be completed prior to registration. Prerequisite: Department approval required. Prerequisite/concurrent: FT 121.

PE 281. Professional Activities: Weight Training. 2 Credits.

Provides students with the skills, knowledge, and abilities to describe and safely demonstrate a progression of resistance training exercises for all major muscle groups designed to improve muscular fitness. Emphasizes identifying and utilizing training principles for enhanced muscular fitness and proper technique on a wide variety of resistance training exercises. Prerequisite: PE 181A, 181B, or 181C; and FT 131 or instructor approval. Audit available.

PE 282A. Professional Activities: Group Fitness. 2 Credits.

Explores fitness instruction and leadership for group fitness classes. Covers components of group fitness classes, styles of group exercise, and teaching methods. Prerequisites: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available.

PE 282B. Professional Activities: Older Adult Fitness. 2 Credits.

Explores fitness instruction and leadership for older adult populations. Provides tools and information needed to design fitness training programs for healthy older individuals and groups. Explores the wide range of abilities and needs in individuals within older population groups and provides appropriate exercise program modifications when necessary through observation, participation, and community-based learning activities. Prerequisite: FT 202. Audit available.

PE 283. Professional Activities: Mind-Body Disciplines. 2 Credits.

Explores fitness instruction and leadership in selected modalities within the mind-body disciplines. Examines key principles of the mind-body disciplines and integrates them into a conventional exercise setting. Prerequisites: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available.

PE 287. Professional Activities: Aquatics. 2 Credits.

Explores fitness instruction and leadership in the field of aquatics. Incorporates principles of hydrodynamics and exercise to achieve total fitness. Prerequisites: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available.

PE 288. Professional Activities: Team Sports Training. 2 Credits.

Explores fitness instruction and leadership in team sports. Covers components of coaching team sports and skill-related physical fitness such as: progressions and techniques of practice format, sport specific drills, plyometrics, and speed-agility-quickness coaching strategy and methodology. Prerequisites: (WR 115 and RD 115) or IRW 115 and MTH 20 or equivalent placement. Audit available.