



KNES-110 – Foundations of Exercise and Physical Fitness

Health and Human Services

Effective Term & Year: Fall 2022

Course Outline Review Date: 2025-03-01

Program Area: Health

Description:

This course introduces students to the foundations of physical fitness, exercise, and human physiology as applied to exercise management, prescription, and their relationship to a healthy lifestyle. The focus will be on the components of fitness and basic training principles; including, theory and practice of fitness development through progressive resistance exercise, aerobic fitness, and flexibility. We will explore these components through both traditional fitness methods and current trends in the industry. A portion of the course content is based on the Canadian Fitness Education Service (CFES) Weight Training Instructor Course. Following completion, students may have the opportunity to become a CFES Certified Weight Training Instructor.

Program Information:

This is a required course in the Kinesiology Certificate and Diploma Program and may be used as an elective for students in other disciplines.

Delivery Methods: On-campus (Face-to-Face)

Credit Type: College of the Rockies Credits

Credits: 3

Course type/s: Sciences, Social Sciences, Lab Sciences

Instructional Activity and Hours:

Activity

Hours

Classroom, Directed Studies or Online Instruction	30
Seminar/Tutorials	
Laboratory/Studio	30
Practicum/Field Experience	
Co-op/Work Experience	
Other	
Total	60

Course Requisites:

- Complete 1 of the following
 - Earned a minimum grade of C- (55%) in at least 1 of the following:
 - **KNES190** – Basic Human Anatomy (3)
 - **KNES200** – Functional Anatomy & Physiology 1 (3)
 - Or instructor permission for those who have a National Fitness Leadership Alliance affiliated Fitness Knowledge course.

Flexible Assessment: Yes

In some cases students may be able to apply for recognition of prior learning outside the classroom. This flexible assessment process provides equivalent course credit. It is a rigorous process that may include external evaluation, worksite assessment, demonstration, standardized test, self-assessment, interview, products/portfolio, and challenge exam, or other measures as appropriate. Tuition fees apply. Contact an education advisor for more information.

Course Transfer Credit:

For information about receiving transfer credit for courses taken at either British Columbia or Alberta institutions, please see <https://www.bctransferguide.ca/> or <https://transferalberta.alberta.ca> . For more transfer credit information, please visit <https://www.cotr.bc.ca/Transfer>

All requests for course transfer credit from institutions in British Columbia or elsewhere should go to the College of the Rockies Enrolment Services office.

Textbook Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

CFES Personal Trainer Course Resource Manual, 2nd Edition, National Library of Canada.

Canadian Fitness Education Services Ltd. ISBN 978-0-9868197-0-4

Please see the instructor's syllabus or check COTR's online text calculator <https://textbook.cotr.bc.ca/> for a complete list of the currently required textbooks.

Learning Outcomes:

Upon the successful completion of this course, students will be able to:

- describe the integral relationship between physical activity, fitness and health;
 - demonstrate appropriate use of terminology associated with physical activity, fitness and exercise;
 - participate in and evaluate the results of a variety of fitness tests and undertake a training program to improve performance;
 - design, implement and evaluate training programs for all components of health related fitness (including proper warm-up and post workout cool-down techniques);
 - calculate percent body fat from various body composition assessment methods;
 - define and compare the different energy systems of the body;
 - use a variety of resistance equipment and various training methods and techniques;
 - demonstrate an understanding the biomechanics of force production and physiological responses to weight training;
 - analyze movement and identify correct positioning and safe vs. unsafe exercise techniques and exercises;
 - instruct exercises effectively, including demonstration, description and corrective feedback;
 - design personalized programs using SMART goals and the F.I.T.T. principle to meet various individual's goals, fitness levels and lifestyles;
 - identify specific characteristics of adult learners and demonstrate appropriate leadership for this audience;
 - provide healthy eating recommendations to clients based on Canada's Food Guide;
 - provide health screening of individuals prior to exercise; and
 - articulate the identified scope of practice and demonstrate the need to refer to other professionals.
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Course Topics:

- **Introduction to Physical Activity, Fitness and Behaviour Change**
 - Differences Between Physical Activity, Exercise and Fitness
 - Behaviour Change and Barriers to Exercise/Physical Activity
 - Goal Setting (SMART goals)
 - Fitness Evaluation: Self Testing
 - General Principles of Exercise for Health and Fitness
- **Fitness Component Overview**

- Health-Related components of fitness (Aerobic Endurance, Flexibility, Muscular Strength/Endurance, Body Composition)
- Performance Related Components of Fitness (Speed, Agility, Balance, Coordination)
- **Exercise Prescription Principles**
 - I.T.T. Principle
 - Exercise Prescription Principles: Cardiorespiratory Endurance
 - Exercise Prescription Principles: Muscular Strength and Endurance
 - Exercise Prescription Principles: Flexibility
 - Exercise Prescription Principles: Body Composition
 - Exercise Prescription Principles: Performance
- **Resistance Training**
 - performance principles
 - stabilization during exercise
 - exercises for each muscle group
 - proper exercise technique and spotting technique
- **Nutrition, Weight Management, and Physical Activity**
 - Nutrition, Health and Physical Activity
 - Body Composition Components and Measurements
- **Exercise Instruction**
 - Adult learners
 - Participant – centered Teaching
 - Demonstration, Description, Performance, and Correction/feedback
- **Exercise Safety**
 - high risk exercises
 - exercise modification
 - maintaining a safe environment
- **Program Planning and Exercise Prescription**
 - consent and liability release
 - workout components (warm-up, exercise, cool-down)
 - health screening
 - client consultation
 - program monitoring and adherence
 - client-specific exercise prescription
- **Professional Profile**
 - Written, verbal and non-verbal communication
- **Current Fitness Trends**
 - Topics may include high intensity interval training (HIIT), kettlebell training, Cross-fit, tabata, yoga etc.

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

Evaluation and Assessments

Assessment Type: On-Campus (face-to-face)

Assessment Type	% of Total Grade
Assignments	55%
Midterms	20%
Final Exam	25%
Total	100%

Grade Scheme

A+	A	A-	B+	B	B-	C+	C	C-	D	F
>=90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	<50

Evaluation Notes: A grade of “D” grants credit, but may not be sufficient as a prerequisite for sequential courses.

Exam Attendance:

Students must attend all scheduled exams at the appointed time and place. Instructors may approve an alternate exam to accommodate an illness or personal crisis. Department heads will consider other written requests. Any student who misses a scheduled exam without prior approval will receive a “0” on the exam.

Academic Policies:

College of the Rockies policies related to courses can be found at <https://cotr.bc.ca/about-us/college-policies/> and include the following:

- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Conduct (plagiarism, other cheating, behavioral misconduct)
- Policy 2.5.8 Academic Performance
- Policy 2.5.3 Grade Appeal
- Policy 2.4.9 Student Concerns Re Faculty

Course Changes:

The College of the Rockies updates course outlines regularly to meet changing educational, employment and marketing needs. The instructor will notify students in writing of any updates to this outline during the semester. The instructor reserves the right to revise, add or delete material while meeting the learning outcomes of this course outline.