Kinesiology
Certificate and Diploma Programs

Program Outline

PROGRAM IMPLEMENTATION DATE: September 2012
OUTLINE EFFECTIVE DATE: September 2018
PROGRAM OUTLINE REVIEW DATE: March 2023

GENERAL PROGRAM DESCRIPTION:

The Kinesiology Certificate and Diploma programs are the ideal option if you enjoy learning about the science of the body and human movement or are pursuing a career as a fitness instructor, personal trainer, an athletic trainer or coach, a physical therapist, a practicing kinesiologist, sports psychology consultant or a teacher (further post-secondary education may be required). Students who complete two full years of study may transfer into third year studies at select post-secondary institutions in BC and Alberta. In addition, students have opportunities to receive additional industry required credentials within the various courses in the Kinesiology program.

Delivery:

The program is delivered face-to-face. Some courses may be offered in an online format.

Credentials:

Certificate and diploma students are required to maintain an average course grade of C- or better in all program courses.

Industry Credentials:

Students in the diploma program may have the opportunity to obtain industry certifications such as:

- Canadian Fitness Education Services (CFES) – Personal Trainer
- Canadian Society for Exercise Physiology (CSEP) – Certified Personal Trainer (CPT)
- Canadian Fitness Education Services – (CFES) Fitness Knowledge
- CFES Weight Training Instructor 1
- National Coaching Certification Program (NCCP) Modules

Program Design:

College of the Rockies Kinesiology Program offers a 1-year certificate and 2-year diploma.
**YEAR 1**

**Semester 1**
- KNES 152
- KNES 163
- KNES 190
- ENGL 100 or 101
- PSYC 101 or BIOL 101

**Semester 2**
- KNES 102
- KNES 103
- KNES 154 and 15X or Elective 100 or 200 level
- KNES 201
- PSYC 102 or BIOL 102

**YEAR 2**

**Semester 3**
- KNES 200
- KNES 204
- KNES 205
- KNES 206
- Elective 100 or 200 level

**Semester 4**
- KNES 203
- KNES 202
- KNES 210
- KNES 270 or Elective 100 or 200 level
- KNES 209

*Note*: Students wishing to attempt the external certification exams and become a Canadian Society of Exercise Physiology-Certified Personal Trainer (CSEP-CPT) must take KNES 154/KNES 15X and KNES 270 and complete the kinesiology diploma.

If a student’s goal is to get the diploma in *two consecutive years*, then they should follow the course sequences prescribed as presented above in each semester. There are no guarantees that a course will be available without schedule conflict if a student takes courses out of the prescribed order.

Only two performance courses (154 and 15X) may be counted towards the diploma.

Electives should be chosen according to further post-secondary requirements or career/personal interest. STATS 106 is highly recommended as an elective course if a student wishes to pursue a degree in Kinesiology or a related field.

Each elective must be a university transferable, 3 credit course.

**Hours for this program**: 1155 - 1335 hours

**COTR Credits**: 60 credits

**Typical Structure of Instructional Hours**:

<table>
<thead>
<tr>
<th>Instructional Activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Hours</td>
<td>840-870*</td>
</tr>
<tr>
<td>Seminars / Tutorials</td>
<td></td>
</tr>
<tr>
<td>Laboratory / Studio Hours</td>
<td>315-465*</td>
</tr>
<tr>
<td>Practicum / Field Experience Hours</td>
<td>*</td>
</tr>
<tr>
<td>Other Contact Hours</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1155-1335</td>
</tr>
</tbody>
</table>

**Practicum Hours (if applicable)**:

<table>
<thead>
<tr>
<th>Type of Practicum</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-the-job Experience</td>
<td>N/A</td>
</tr>
<tr>
<td>Formal Work Experience</td>
<td>N/A</td>
</tr>
<tr>
<td>Other</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>

* Exact hours vary according to elective courses chosen.
Course Program Author or Contact:
Jani Vogell, BSc, MKin, CEP

APPROVAL SIGNATURES:

Acting Department Head
Sandi Hill
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Acting Dean of Health and Human Services
Norma Sherret
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EDCO

Valid from: September 2018 – March 2023

PROGRAM PREREQUISITES AND TRANSFER CREDIT:

Academic Requirements

- Secondary school graduation or equivalent
- Minimum 65% in ENGL 090, ENGL 12, or equivalent
- MATH 080, Pre-Calculus 11, Foundations of Math 11, or equivalent
- BIOL 090 or Biol 12 or equivalent is required to take BIOL 101

Additional Information for Students

Students must submit a Physical Activity Readiness Questionnaire (PAR-Q), documenting medical clearance for participation in unrestricted physical activity or for participation in progressive physical activity with special limitations or exclusions. Any positive (YES) responses on the Par-Q will require the Par-Med X form to be completed by a physician.

Applicants are advised that students in this program engage in moderate to vigorous physical activity as part of their laboratory practice in a variety of courses. Students will act both as physical activity leaders and participants.

Students may be required to travel to off-campus fitness and recreation facilities in the local area, and will require appropriate transportation. College of the Rockies students have access to free public transportation.
Flexible Assessment (FA):

Students seeking prior credit to any of the required courses for the certificate and diploma must refer to individual course outlines and follow the procedures outlined in the College Calendar.

Transfer Credit: For transfer information within British Columbia, Alberta and other institutions, please visit http://www.cotr.bc.ca/Transfer.

Students should also contact an Education Advisor at the institution where they want transfer credit.

Textbooks and Required Resources:

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

Please follow the Textbook and Required Resources on each course outline

Kinesiology Courses:

KNES 102: Introduction to Motor Skill Acquisition
This course is an introductory examination of motor skill acquisition, the variables which influence the learning and performance of motor skills, and the relationship between skill acquisition and growth and development. The course examines various fields for information that may help in the understanding of how motor skills are acquired.

KNES 103: Introduction to Biomechanics
In this course, students acquire knowledge of the mechanical, anatomical, and physiological aspects of human movement and performance, including the application of basic principles of physics and math to a quantitative analysis of human movement. Analysis focus on the development of forces within the body and their effect on initiating and controlling movement.

KNES 151: Performance Analysis of Basketball
This course provides the students with an understanding of the technical and tactical components and strategies that contribute to the effective performance of basketball. Students gain an understanding of developing curriculum and designing instruction for implementing a basketball program in the K-12 education system. Theoretical understanding is supplemented with active participation.

KNES 152: Active Health
This course introduces the principles of physical fitness, exercise, and human physiology as applied to exercise management and prescription. Relationships between physical activity, lifestyle choices, and health will be emphasized. Students develop knowledge and practical skills related to exercise methods, techniques, and fitness appraisal.
KNES 154: Performance Analysis of Weight Training
This course builds on knowledge and skills presented in KNES 152, and KNES 190 or KNES 200. This course includes theory and practice of fitness development through progressive resistance exercise. Students develop knowledge and skills in beginner and intermediate weight training programs and techniques. Course content is based on the Canadian Fitness Education Service (CFES) recognized for the Weight Training Instructor Course. Following completion, students have the opportunity to become a CFES Certified Weight Training Instructor.

KNES 155: Performance Analysis of Volleyball
This course can provide students with an understanding of the technical and tactical components and strategies that contribute to the effective performance of volleyball. Students can gain an understanding of developing curriculum and designing instruction for implementing a volleyball program in the K-12 education system. Theoretical understanding is supplemented with active participation. Students who successfully complete the course should fulfill the requirements for the NCCP Volleyball Level 1 Technical component.

KNES 156: Performance Analysis of Soccer
This course provides the students with an understanding of the technical and tactical components and strategies that contribute to the effective performance of soccer. Students can gain an understanding of developing curriculum and designing instruction for implementing a soccer program in the K-12 education system. Theoretical understanding is supplemented with active participation.

KNES 158: Performance Analysis of Dance
This performance course can provide students with an understanding of the components that contribute to an effective dance performance. Students can gain an understanding of developing curriculum and designing instruction for implementing a dance program in the K-12 education system. Theoretical understanding is supplemented with active participation.

KNES 159: Performance Analysis of Yoga
This course provides students with an understanding of the practice and philosophy of yoga and how yoga can be integrated into wellness programs for people of all ages and abilities. Students can develop a standard level of performance, an ability to analyze postures (asanas), and an enhanced understanding of yoga and flexibility concepts. Students also explore basic asanas, with an emphasis on anatomy to prevent injury, as well as breathing and relaxation techniques to aid in stress management. Theoretical understanding is supplemented with active participation.

KNES 163: Physical Literacy for Life
Physical literacy is the motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life. This course will cover the development and assessment of these components as well as their importance in physical literacy participation and health throughout the Lifespan. Students will have the opportunity to gain relevant industry certifications.

KNES 190: Basic Human Anatomy
This course introduces the student to basic human anatomy and physiology. The basic structure and function of various organ systems are discussed through a series of lectures and labs. Organ systems included in this course are skeletal, muscular, cardiovascular, respiratory, nervous, urinary and endocrine systems.
KNES 200: Introductory Human Anatomy and Physiology 1
An introduction to the structural and functional aspects of the human musculoskeletal, cardiovascular, and respiratory systems.

KNES 201: Leisure & Sport in Canadian Society
This course examines the organization and role of the sport, recreation, leisure, and fitness delivery systems in Canada as they relate to active health.

KNES 202: Physical Growth and Human Development
This course introduces characteristics of physical growth and motor development throughout the lifespan, with particular reference to the effects of physical activity on growth, development and health. Developmental differences in the motor ability of children is studied.

KNES 203: Introduction to Athletic Injuries
This course is an introduction to the recognition, prevention and treatment of injuries associated with sport and exercise. It is offered in a modular format including sports first aid, athletic taping and advanced issues in athletic injuries and practical application. Completion of all components, in addition to a standard first aid and current CPR level, may result in recognition by the Sports Medicine Council of BC’s "Sports Aid Training Certificate".

KNES 204: Psychology of Sport and Exercise
This course provides insight into the theories, subject matter, and recent research concerning the cognitive processes and emotional states that regulate and influence performance in sports, exercise, and other physical activity. An examination of aggression, cohesion, self-talk, motivation, and mental training as they relate to human performance will be conducted.

KNES 205: Nutrition
This course investigates factors involved in food choices and healthy living, the function of nutrients, distribution of nutrients in the diet, metabolism, and dietary requirements. Students gain theoretical knowledge and practical skills that allow them to make evidence based decisions about healthy food choices and dietary habits. Nutrition for active lifestyles and exercise, weight management, disease prevention, considerations along the lifespan, and current trends and issues are covered.

KNES 206: Introduction to Exercise Physiology
Introduction to acute and chronic effects of exercise on the human body. It further looks at the basic concepts of cardiovascular, respiratory, muscular, and neuromuscular responses to physical activity.

KNES 209: Research and Inquiry in Kinesiology and Health
This course introduces students to research methods and design related to the areas of kinesiology, health and wellness. Focus is on understanding the scientific method, interpretation and evaluation of research literature and issues related to research practices. Students will explore current research topics and develop their critical thinking skills to promote their understanding of quality research activities.

KNES 210: Introductory Human Anatomy & Physiology 2
A continuation of KNES 200, this course is designed to allow the student to explore the anatomical and physiological details of the nervous, endocrine, digestive, excretory, immune, and reproductive systems. Emphasis is placed on the integrated homeostatic balance of the body and its relationship to physical activity.
KNES 270: Exercise Testing & Prescription
This course helps to develop theoretical knowledge and practical skills in fitness and lifestyle appraisal and exercise prescription. Students should acquire the skills to administer various assessment protocols including those of the Canadian Society for Exercise Physiology – Physical Activity Training for Health (CSEP-PATH). Personalized exercise prescription for various populations following industry standards is emphasized. Students may have the opportunity to become a recognized Certified Personal Trainer (CPT) through CSEP.

BIOL 101: Introduction to Biology I
An introduction to the structure and function of organisms with particular reference to molecular, biochemical and physiological aspects of the living world. Designed for students seeking a degree or diploma in a field of science or technology, BIOL 101, with BIOL 102 lays the foundations on which the higher-level courses in Biology are based. It is also suitable as an elective course for general interest or arts students.

BIOL 102: Introduction to Biology II
BIOL 102 is an introduction to organismic and population biology with emphasis on reproduction, genetics, developmental biology, evolution, diversity, and ecology.

ENGL 100: English Composition
English 100 focuses on composition for academic purposes and develops a student’s ability to write clearly and effectively. Students also learn the fundamentals of critical thinking, persuasive writing techniques (including rhetorical appeals and devices), scholarly research, and academic reading.

ENGL 101: Introduction to Poetry & Drama
An introduction to the critical reading of literature through the study & analysis of poetry and drama across historical periods from Shakespeare to twenty-first century poets and dramatists.

PSYC 101: Introduction to Psychology I
This course provides an introduction to the history, principles, and methods of psychology. Topics may include the brain and behavior, sensation and perception, learning and memory, thinking and language, and states of consciousness.

PSYC 102: Introduction to Psychology 2
This course is a continuation of PSYC 101. Topics may include development across the lifespan, intelligence, motivation, emotion, stress and health, personality, psychological disorders, therapy, and social behaviour.

STAT 106: Statistics
This course introduces the fundamental ideas of statistics and can be applied to any discipline. Topics include: collection, description, and presentation of data; calculating central tendency and dispersion; probability and statistical inference; hypothesis testing (means, proportions, variances, one and two samples); correlation and regression; decision making and sampling, Goodness of Fit Tests, and Contingency Tables.
EVALUATION AND ASSESSMENT:

See each individual course outline.

EXAM POLICY:

Students must attend all required scheduled exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled exam without approval will be given a grade of “0” for the exam.

COURSE GRADE:

Course grades are assigned as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>A+</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark (Percent)</td>
<td>≥ 90</td>
<td>89-85</td>
<td>84-80</td>
<td>79-76</td>
<td>75-72</td>
<td>71-68</td>
<td>67-64</td>
<td>63-60</td>
<td>59-55</td>
<td>54-50</td>
<td>&lt; 50</td>
</tr>
</tbody>
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A grade of "D" grants credit, but may not be sufficient as a prerequisite for sequential courses.

ACADEMIC POLICIES:

See www.cotr.bc.ca/policies for general college policies related to course activities, including grade appeals, cheating and plagiarism.

PROGRAM CHANGES:

Information contained in program outlines is correct at the time of publication. Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment and marketing needs. The instructor endeavours to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.