COLLEGIATE PROGRAMMING

Collegiates provide specialized programming in a particular subject area, in order to provide students clearer pathways into post-secondary education and careers in their chosen field.

Lethbridge College, and its lineup of Dual Credit courses, are part of two unique Collegiates founded in 2023 with various Zone 6 school divisions.

PEAKS CAMPUS

PEAKS CAMPUS COLLEGIATE

Crownest Pass

The PEAKS Campus Collegiate enables students to embark on environmental science careers connected to educational pathways in the Southern Alberta economy and ecosystem, through an innovative partnership between Livingstone Range School Division, Lethbridge College and industry partners.

Eligibility:
While the PEAKS Campus Collegiate focuses on supporting students within the Livingstone Range School Division, courses are open to all Zone 6 Dual Credit partners.

Course Offerings:
- BIO1167 - Botany
- BIO1168 - Zoology
- BIO1172 - Ecology
- GEO1166 - Physical Geology
- LAW1150 - Environmental Law
- RRM1197 - Spatial Information Techniques
- RRM2252 - Water Resources
- RRM2253 - Soil Resources

Students participating in PEAKS courses have additional opportunities to engage in experiential learning, through specific labs hosted by college faculty at PEAKS facilities.

Facility:
The existing PEAKS Campus will undergo renovations Fall 2024 to expand programming opportunities. A custom, state-of-the-art mobile classroom currently in use also allows students to participate in labs anywhere across Southern Alberta.

Livingstone Range
SCHOOL DIVISION

PEAKS Collegiate Campus

ENVIRONMENT SCIENCE DUAL CREDIT PATHWAYS

DIPLOMA/DEGREE PATHWAY	YEAR 1	YEAR 2	YEAR 3 *Prerequisites needed or select from Year 1 or 2 courses*
Environmental Assessment and Restoration	• Botany • Zoology • Physical Geology • Ecology	• Plant Systematics • Spatial Information Techniques • Soil Resources	• Geographical Information Systems • Site Reclamation • Rangeland Management • Forest Management
Natural Resource Compliance		• Spatial Information Techniques • Introduction to Natural Resource Law	• Grasslands and Forest Resources • Fire Management • Park and Recreation Operations • Principles of Wildlife Biology
Renewable Resources Management		• Plant Systematics • Soil Resources • Water Resources • Spatial Information Techniques	• Principles of Wildlife Biology • Conservation Biology • Geographic Information Systems • Forest Management

Students select up to 2 courses per semester

Lethbridge College
DUAL CREDIT

IMPORTANT DATES

APPLICATION DEADLINES

Dual Credit courses are scheduled to run in both the fall and winter semesters.

Once approved to take a course by your school/school division, you will need to apply using the promo code they supply. The following deadlines allow our teams adequate time to prepare for your arrival.

In the event you are past the application deadline, please contact our team to discuss options.

Deadline	Date
Fall Semester Applications	June 14, 2024
Winter Semester Applications	Nov. 29, 2024

SEMESTERS

Dual Credit semesters are designed to fit within your high school schedule. As a result, the winter semester is slightly delayed, compared to the rest of the college.

Please review the following semester dates:

Semester	First Day	Last Day
Fall	Sept. 4, 2024	Dec. 6, 2024
Winter	Jan. 27, 2025	May 2, 2025

BIO1167 - BOTANY

Offered in the Fall + Winter semesters

Delivery Method: Online asynchronous + optional on-campus labs
Total Hours: 75
College Credits: 3
High School Credits: 5
Pre-Requisities: Grade 11/12
Materials Cost: $150 (approx.)

Course Description:
An introduction to plant evolution and diversity with a focus on angiosperms (flowering plants). Emphasis is on plant anatomy, physiology and the effects of abiotic and biotic factors on plant growth and development.

Course Outcomes:
1. Describe the functional and adaptive significance of plant cells, tissues and organs.
2. Illustrate the evolutionary origin and the major phylogenetic branches of plants.
3. Outline the mechanisms involved in the movement of water and organic matter in plants.
4. Describe biotic and abiotic factors that affect plant growth and development.
5. Compare and contrast the processes of photosynthesis and cellular respiration in plants.
6. Explain basic principles of genetics relating to plant propagation and survival.

Assessments:
- Lab Assignments
- Quizzes
- Lab Exams
- Final Exam

Required Equipment & Materials:
- Various textbooks

Transferability:
- *Required course for:* Natural Resource Compliance, Renewable Resource Management, Agriculture Sciences, Environmental Assessment and Restoration
- *External Transfer Equivalent at:* Concordia University of Edmonton, Medicine Hat College, University of Lethbridge

PEAKS CAMPUS

SOUTHERN ALBERTA COLLEGIATE INSTITUTE

This course is included in the lineup of PEAKS Campus Collegiate + Southern Alberta Collegiate Institute programming.

BIO1168 - ZOOLOGY

Offered in the Fall + Winter semesters

Delivery Method: Online asynchronous
Total Hours: 75
College Credits: 3
High School Credits: 5
Pre-Requisities: None
Materials Cost: $80 (approx.)

Course Description:
A study of the orders and major families of mammals and birds with an emphasis on evolutionary biology, ecology, distribution and behaviour.

Course Outcomes:
1. Explain the science of zoology.
2. Apply the scientific method.
3. Discuss the concept of evolution as a vector for change.
4. Apply zoological taxonomy to classify animals.
5. Explain the structural and functional adaptations of mammals and birds.
6. Discuss the digestive system adaptations across various trophic groups.
7. Discuss thermoregulatory adaptations.
8. Describe differing mammalian and avian reproductive strategies.
9. Discuss the evolution and adaptive radiation of the Aves.
10. Explain the various avian adaptations to flight.

Assessments:
- Assignments
- Quizzes
- Exams

Required Equipment & Materials:
- Various textbooks

Transferability:
- *Required course for:* Natural Resource Compliance, Renewable Resource Management, Environmental Assessment and Restoration
- *Approved Elective for:* General Arts and Science
- *External Transfer Equivalent at:* Athabasca University, Concordia University of Edmonton, The King's University, MacEwan University, Mount Royal University, University of Lethbridge, University of Regina

This course is included in the lineup of PEAKS Campus Collegiate programming.

BE READY.

BIO1172 - ECOLOGY

Offered in the Fall + Winter semesters

Delivery Method: Online asynchronous
Total Hours: 75
College Credits: 3
High School Credits: 5
Pre-Requisities: None
Materials Cost: $200 (approx.)

Course Description:
A study of the interrelationships between living organisms and their environment with an emphasis on elements of the physical world which shape and define ecosystems.

Course Outcomes:
1. Explain the development of ecology as a science and the importance of ecological relationships.
2. Analyze the role and importance of the physical environment in relation to the conditions for life.
3. Describe population ecology and summarize the mechanisms that affect population sizes.
4. Summarize the different types of interspecific and intraspecific interactions that occur.
5. Examine community ecology and the factors that influence it.
6. Describe ecosystem ecology and the processes involved.
7. Discuss foundational biogeography concepts with respect to terrestrial and aquatic ecosystems.

Course Assessments:
- Research Reports
- Quizzes
- Lab Assignments
- Exams
- Homework

Required Equipment & Materials:
- Various textbooks

Transferability:
- *Required course for:* Natural Resource Compliance, Renewable Resource Management, Environmental Assessment and Restoration
- *External Transfer Equivalent at:* Concordia University of Edmonton, Medicine Hat College, University of Lethbridge

PEAKS CAMPUS

This course is included in the lineup of PEAKS Campus Collegiate programming.

GEO1166 – PHYSICAL GEOLOGY

Offered in the Fall + Winter semesters

Delivery Method: Online asynchronous
Total Hours: 75
College Credits: 3
High School Credits: 5
Pre-Requisities: None
Materials Cost: $150 (approx.)

Course Description:
An introduction to the study of physical geology through the exploration of the dynamic forces that shape the Earth.

Course Outcomes:
1. Identify 15 common minerals in hand specimen using physical properties and field tests.
2. Identify 15 common rocks in hand specimen using physical properties and field tests.
3. Describe the origins, compositions and morphologies of common landforms from volcanism, intrusive igneous activity, karst, mass wasting, streams, glaciers and wind.
4. Identify the common landforms in topographic maps, bedrock geology maps, surficial geology maps, aerial photographs and in the field.
5. Identify and describe varied types of geologic structures of joints, faults and folds in lab and field settings.
6. Describe the origin, nature and hazardous effects of earthquakes.
7. Describe and explain the parts of the earth's interior and the basic tenets of the theory of plate tectonics, including the types of plate boundaries, their motions and their consequences.

Assessments:
- Lab/Field Trip Assignments
- Quizzes
- Exams

Required Equipment & Materials:
- Rocks and minerals kit

Transferability:
- *Required course for:* Natural Resource Compliance, Renewable Resource Management, Environmental Assessment and Restoration
- *External Transfer Equivalent at*: Athabasca University, King's University, MacEwan University, Medicine Hat College, University of Lethbridge, University of Regina

PEAKS CAMPUS

This course is included in the lineup of PEAKS Campus Collegiate programming.

LAW1150 - ENVIRONMENTAL LAW

Offered in the Fall semester

Delivery Method: Online asynchronous
Total Hours: 45
College Credits: 3
Suggested CTS Courses: LGS2030, ENS1040, ENS2040, ENS2050, ENS3050
Pre-Requisities: None
Materials Cost: $110 (approx.)

Course Description:
An introduction to the sources of Canadian environmental law and legal frameworks relevant to Canadian and global environmental issues. Emphasis will be placed on applicable federal and provincial acts and legislation designed to protect the environment or provide regulatory frameworks for land use planning and mitigation.

Course Outcomes:
1. Be conversant with environmental law issues, both Canadian and global.
2. Analyze applicable environmental legislation at the provincial and federal level.
3. Describe legal principles specific to environmental law.
4. Know the difference between the application of environmental statutes, regulations and guidelines.
5. Develop an appreciation of the impact of technology, economics, politics and social/cultural differences related to the creation and enforcement of environmental law.
6. Recognize the realm of areas environmental law impacts.
7. Interpret historical case law related to the environment.
8. Identify the concepts related to aboriginal environmental law.

Assessments:
- Assignments
- Presentations
- Exams

Required Equipment & Materials:
- Textbook

Transferability:
- *Required course for:* Renewable Resource Management, Environmental Assessment and Restoration,
- *External Transfer Equivalent at*: No transfer opportunities offered at this time.

PEAKS CAMPUS

This course is included in the lineup of PEAKS Campus Collegiate programming.

RRM1197 - SPATIAL INFORMATION TECHNIQUES

Offered in the Fall + Winter semesters

Delivery Method: Online asynchronous
Total Hours: 75
College Credits: 3
Suggested CTS Courses: FOR1050, FOR2060, WLD1060
Pre-Requisities: None
Materials Cost: $175 (approx.)

Course Description:
An introductory, skills-based approach to reading, interpreting and measuring various forms of spatial information. Emphasis is placed on the interpretation, measurement and analysis of topographic maps and aerial and satellite imagery.

Course Outcomes:
1. Describe common properties and features of maps, aerial photographs and imagery.
2. Calculate various measurements of distance, direction, height, area and volume using appropriate scales on maps, aerial photographs and imagery.
3. Determine map and ground locations using spatial coordinate systems such as Geographic Coordinate Systems (GCS), Universal Transverse Mercator (UTM), and Alberta Township System (ATS).
4. Create profiles of various topographic features.
5. Demonstrate navigation skills with standard field equipment.
6. Derive measurements from elevation data.
7. Describe common remote sensing techniques.

Assessments:
- Projects
- Lab Assignments
- Exams

Required Equipment & Materials:
- Various Textbooks
- Compass

Transferability:
- *Required course for:* Environmental Assessment and Restoration, Natural Resource Compliance, Renewable Resource Management
- *External Transfer Equivalent at*: No transfer opportunities available at this time.

PEAKS CAMPUS

This course is included in the lineup of PEAKS Campus Collegiate programming.

RRM2252 - WATER RESOURCES

Offered in the Fall + Winter semesters

Delivery Method: Online asynchronous
Total Hours: 75
College Credits: 3
Suggested CTS Courses: ENS2120, ENS3120, FOR1050
Pre-Requisities: None
Materials Cost: None

Course Description:
An applied approach to the introduction of hydrology, streamflow mechanics and hydrometric survey techniques. Emphasis is on hydrological data collection and analysis.

Course Outcomes:
1. Describe water scarcity issues and introduce water management strategies to address that issue.
2. Describe the hydrological cycle categorized into its input, output and storage components.
3. Delineate a watershed from a topographic map and interpret the runoff potential using various physical properties and runoff indices.
4. Conduct a comparative hydrograph analysis and interpret from it the influence of land use practices on runoff.
5. Apply multiple open channel flow equations to determine how channel geometry impacts its ability to convey water.
6. Manually measure and calibrate Manning equation parameters by conducting a field survey and using industry standard software.
7. Describe the fundamental components of the streamflow measurement process using various types of hydrometric equipment.
8. Compute channel discharge from hydrometric measurements obtained by various measurement methods.
9. Describe the methodology employed to measure discharge under numerous conditions.
10. Derive and apply a rating curve function to calculate discharge.

Assessments:
- Assignments
- Exams

Required Equipment & Materials:
- None

Transferability:
- *Required course for:* Environmental Assessment and Restoration, Renewable Resource Management
- *External Transfer Equivalent at*: No transfer opportunities available at this time.

This course is included in the lineup of PEAKS Campus Collegiate programming.

BE READY.

RRM2253 - SOIL RESOURCES

Offered in the Fall + Winter semesters

Delivery Method: Online asynchronous
Total Hours: 75
College Credits: 3
Suggested CTS Courses: AGR1050, AGR2120, AGR3120
Pre-Requisities: None
Materials Cost: $100 (approx.)

Course Description:
This course covers the factors controlling formation, classification and fundamental properties of soils in Western Canada. Emphasis is on field and laboratory skills.

Course Outcomes:
1. Demonstrate field and laboratory skills in collecting and preserving soil samples.
2. Define the soil forming processes and explain how they influence the inherent properties and productivity potential of soils.
3. Define soil physical, chemical, and biological properties and demonstrate their relationship to management, conservation, and reclamation.
4. Classify soil according to The Canadian System of Soil Classification.
5. Apply the concepts of the Canadian System of Soil Classification to interpret soil maps and surveys for the purpose of soil management, conservation, and reclamation.
6. Demonstrate laboratory skills in analyzing fundamental soil properties and recording and reporting laboratory data.
7. Perform basic calculations of laboratory data related to soil properties and interpret the results for the purpose of determining soil productivity.

Assessments:
- Field Studies
- Quizzes
- Projects
- Exams

Required Equipment & Materials:
- Textbook

Transferability:
- *Required course for:* Environmental Assessment and Restoration, Renewable Resource Management
- *External Transfer Equivalent at*: No transfer opportunities available at this time.

PEAKS CAMPUS

This course is included in the lineup of PEAKS Campus Collegiate programming.

Lethbridge College
DUAL CREDIT

SUPPORTS

Lethbridge College has a variety of supports and services to help guide you to success. Success is not only the responsibility of the student, but rather a shared responsibility between the student, the instructor and the school.

Here is the list of departments available to make sure that you have the support you need to succeed.

CAREER + ACADEMIC ADVISING

Provides information on:
- How Dual Credit courses can help you complete a program
- Possible program options and future career paths
- Academic expectations and grading scales
- Lethbridge College policies and procedures

Contact: **advisor@lethbridgecollege.ca** • **403.320.3366**

LEARNING CAFÉ

Here to help with:
- Time management
- Personal management
- Studying efficiently
- Bridging knowledge gaps
- Written assignments
- Test-taking skills

Contact: **learningcafe@lethbridgecollege.ca** • **403.382.6952**

ACCESSIBILITY SERVICES

Available to discuss:
- Disability advising
- Requests for academic accommodations
- Disability-related history and potential challenges
- Additional supports

Contact: **accessibilityservices@lethbridgecollege.ca** • **403.320.3202 Ext. 5400**

BUCHANAN LIBRARY

Ready to assist with:
- Research materials required for class assignments
- Quiet places to work on class projects
- Access to online databases

Contact: **buchananlibrary@lethbridgecollege.ca** • **403.320.3352**