

### **LIBERAL EDUCATION 1000: Knowledge in Liberal Education:**

Introductory, multidisciplinary, and critical examination of knowledge, the foundation of a liberal education; broad integration of examples from Sciences, Social Sciences, Humanities, and Fine Arts. Discussion groups and labs teach basic skills (critical thinking, numeracy, oral and written communications, and research).

### **LIBERAL EDUCATION 1500: The First Year Experience: Mapping our Communities (SocSci)**

Introduction to the University as a physical, social, and academic space, and to membership in new academic communities. Includes introduction to the many resources available for student support on campus, the liberal education philosophy of the University of Lethbridge, a study of how a variety of academic disciplines map out their knowledge, and career and study skills.

### **LIBERAL EDUCATION 2000 Identity and Liberal Education**

Broad exploration of individual and group identities, key concepts in a liberal education; multidisciplinary and integrative perspective; examples from the Sciences, Social Sciences, Humanities, and Fine Arts. Discussion groups and labs teach higher level critical thinking, communication, and research skills.

### **LIBERAL EDUCATION 2100 Quantitative Reasoning (Sci)**

Number systems: historical development and current systems, types of numbers, operations on numbers and their properties, scientific notation, estimation; relationships between numbers: graphs and functions, rates of change, modelling; quantitative data: graphical and numerical description, inference production and evaluation. Applications and examples selected from a range of disciplines. Intended for students with little or no mathematics background.

### **LIBERAL EDUCATION 2200 Problems and Puzzles (Sci)**

Problems and puzzles across a wide range of disciplines, including word problems, logic puzzles, mathematical problems, and famous problems and puzzles in history. Strategies and techniques for solving problems, including Pólya's method of problem-solving and metacognitive theories.

### **LIBERAL EDUCATION 2400 (Hums)**

Interdisciplinary integrative introduction to great literature and thought in Western civilization from the ancient Greeks to the 1700s.

**LIBERAL EDUCATION 2850 Topics Course: Scientific Knowledge Across Disciplines (SCI)**

This course is an invitation to a historical overview of a quest which is as old as civilization itself. This course requires an active participation of students for the readings, text analyses, class discussions, and oral presentations. What is this thing called science? As will be seen, this question is much more difficult to answer than usually believed. Furthermore, is there only a single way to reach good scientific knowledge? And how can the different scientific approaches be explained across a wide variety of natural sciences?

**LIBERAL EDUCATION 3010 Liberal Education (Series)**

Critical examination of significant contemporary themes; multidisciplinary and integrative perspective; broad integration of Sciences, Social Sciences, Humanities, and Fine Arts. Content varies from year to year. Offerings may include, for example, Genocide, Progress, or Friendship and Family.

**LIBERAL EDUCATION 3100 History of Mathematics (Sci)**

A study of the major developments in mathematics from prehistory to the seventeenth century, especially the development of geometry and algebra over the centuries. Development of numbers and counting systems; early Egyptian, Babylonian, Greek, and Roman mathematics; the Arabic empire; expansion in the Middle Ages; the solution of the quartic; the invention of calculus.

**LIBERAL EDUCATION 3400 Great Literature and Thought Across Disciplines: The Long Conversation (Hums)**

Interdisciplinary integrative introduction to great literature and thought in Western civilization from the 1700s to modern times.

**LIBERAL EDUCATION 3600 (cross-listed with ARCHAEOLOGY 3600 Human Evolution) (Sci)**

Theories and major developments in the study of human evolution. Examination of hominid fossils and stone tools in order to understand human biological and cultural development. Contributions made by various disciplines to this research area are reviewed.

**LIBERAL EDUCATION 3850 Topics Courses**

**3850A – Natural versus Human Sciences (Hums/Sci)**

How come the human sciences are perceived to be lesser sciences when compared to the so-called hard sciences (physics)? This course is an invitation to inquire into this question. The answer lies in the historical development of the sciences since the Scientific Revolution in the 16th and 17th centuries. In search of their identity, the disciplines of the human/social sciences slowly extracted themselves in the 19th and 20th centuries from a mechanistic epistemological ideal unfit for the object they each study. This course will survey the complex and numerous similarities and differences that exist between the natural and human sciences across a wide

range of disciplines. In the background of this course lies the debate over what human nature is. This course is organized around a seminar-like concept requiring an active participation from students in class discussions and oral presentations.

3850B – Charles Darwin’s *On the Origin of Species* (1859) (Hums/Sci)

This course is an invitation to discover and read Charles Darwin's classic book *On the Origin of Species* (1859) which promotes the theory of evolution by natural selection. Darwin's ideas will be presented and analysed and their major scientific and philosophical components highlighted. The book will be placed in the historical context of the time, and the question of its current relevancy raised. Considering that Darwinism has been important across a wide variety of disciplines, this course should be of interest to students in the natural sciences, the social sciences, and the humanities. An active participation of students to class activities is expected.

### **LIBERAL EDUCATION 4000 Capstone Ideas in Liberal Education**

Senior seminar; critical examination and discussion of selected readings; synthetic integration across the disciplines in Sciences, Social Sciences, Humanities, and Fine Arts. Content varies from year to year.

### **LIBERAL EDUCATION 4850N Topics Course: Critical Approaches to Knowledge** (Hums/Sci)

The last decades have shown us that our view of science keeps changing as seen in three main successive yet overlapping intellectual movements: positivism, post-positivism, and postmodernism. In the process, not only was it realized that knowledge building is a complex business but also that an ever more critical view of science could lead to its very negation. Through numerous and selective readings – some of which are firsthand texts – the merits and limitations of each of these three main intellectual movements will be exposed, analysed, and debated. Examples will be taken from a broad range of scientific disciplines. This seminar requires an active participation of students for the readings, text analyses, and class discussions.