Calgary Board of Education

LORD BEAVERBROOK

Advanced Placement 2022-2023

LORD BEAVERBROOK HIGH SCHOOL
ANNO 1968 DOMINI

'Everything To The Best Of One's Ability'

Advanced Placement courses offer students at Lord Beaverbrook High Shool academic rigor, challenge, and opportunity. In our AP courses, students engage in learning activities which promote critical thinking skills, and problem solving, while working alongside like-minded peers. Classroom learning activities allow students the opportunity to extend learning (broad exploration of grade level outcomes) and accelerate learning (exposure to learning outcomes in the next grade level). By choosing the AP program at Lord Beaverbrook, students give themselves a head start in preparation for post-secondary education. It is our hope that you will choose to enroll your child in the AP Program at Lord Beaverbrook. We look forward to the opportunity to learn and work together.

Darrin Whitbread

Principal

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WHAT IS AP?

Advanced Placement is an international program that provides students the opportunities to pursue university level studies in high school. The AP program is meant to stimulate and challenge students beyond the regular, mandated, Alberta high school curriculum. Successful completion of AP exams permits students to obtain preferential admission and, as well, possible transfer credits for first year courses at over 4000 colleges and universities around the world, including well known universities across Canada, such as: UBC, UVIC, U of C, MRU, U of A, U of L, U of S, U of R, U of M, U of Western Ontario, U of T, McGill University, St. Francis Xavier, Mount Allison University, Memorial University of Newfoundland.

WHO SHOULD TAKE AP?

Students who enjoy academic challenges, who work hard, and who have a strong desire to enter university prepared to meet greater demands. AP courses are designed for students who have a passion and interest in any of the subject areas in which our AP courses are offered. Students who choose not to take E-AP in grade ten may apply for late entry to E-AP in grade eleven or twelve (course dependent), with a teacher recommendation in those subjects they wish to take at the AP level. Students may also be required to make up some material during the summer between grades ten and eleven, or eleven and twelve.

WHAT ARE THE BENEFITS OF AP?

High School

• Challenging and exciting classroom environments with peers who are like-minded and highly motivated

• Classroom environments that allow for greater interaction between students and teachers (particularly when compared to university classroom environments)

• Exploring course content in greater depth and using a wider variety of methods than is other-wise possible

• Exploring a broader range of course content than can be made available in the regular program

University

• Significantly more flexibility with first-year course selections and an easier path to a minor degree

• Possibility of earning university transfer credits while still in high school, which can translate into tuition savings, reduced time to complete degrees, or a lightening of first year course loads

• Preferential admission to many top universities in North America


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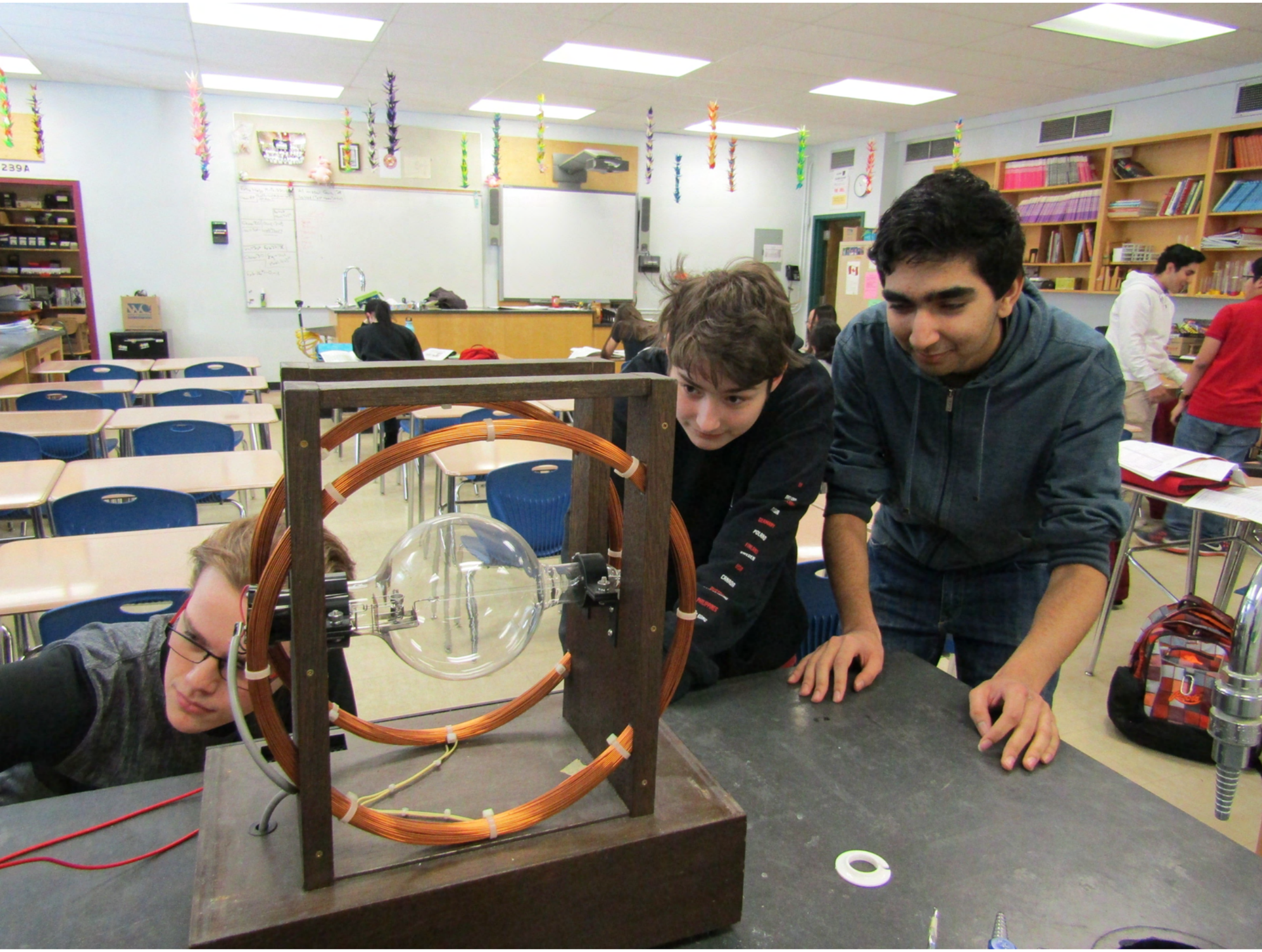
Course Selection Pathway

AP Courses Offered LBHS

GRADE 10	GRADE 11	GRADE 12
Science 10 E-AP	Biology 20/30/35 AP** May be taken in either grade 11 or 12…recommended for Grade 11	
	Chemistry 20/30/35 AP** May be taken in either grade 11 or 12…recommended for Grade 12	
	Physics 20 E-AP (Physics 1)	Physics 30/35 AP (Physics 2)
Mathematics 10C E-AP (Calculus)	Math 20-1 E-AP	Math 30-1 E-AP/Math 31 AP**
English 10-1 E-AP (English Literature and Composition)	English 20-1 E-AP	English 30-1/English Literature and Composition 35 AP***
Social Studies 10-1 E-AP (European History)	Social Studies 20-1 E-AP	Social 30-1/European History 35
Art 10 E-AP Studio Art (Drawing, 2-D or 3-D)	Art 20 E-AP	Art 30/Art 35 AP
Computer Science A Introductory	Computer Science A Intermediate E-AP	Computer Science A Advanced AP

*Timetable is subject to change due to student interest and/or enrolment
**This is offered as a full year course from September to June
***English 30-1 taken in first semester followed by English Literature 35 AP as a term course in second semester
****E-AP (Early AP) are the courses that students enroll in prior to the AP Course



SCIENCE 10

This course covers the same material as a standard Science 10 course, however, additional material has been added to multiple units to help prepare students for future AP Science courses. Within the Chemistry unit students will learn stoichiometry, within the Physics unit students will learn several kinematics equations, and within Biology students will delve more deeply into active transport and unicellular organisms, and will learn about prokaryotes and eukaryotes.

BIOLOGY 20/30/35

At Lord Beaverbrook High School, we offer Biology 20/30/35 as a full year course. This allows for concepts to be linked together according to the four Big Ideas outlined in the AP curriculum. Students will cover the standard Biology 20 and 30 curriculums, writing those exams in January and June respectively, while also earning 3 credits in Biology 35. The four Big Ideas (1) Evolution, (2) Biological Systems, (3) Living Systems, and (4) Biological system interactions, will be incorporated into the course throughout the year. Students will also have the opportunity to participate in inquiry based AP labs, which will have similarities to University level laboratory experiences.

CHEMISTRY 20/30/35

At Lord Beaverbrook High School, we offer Chemistry 20/30/35 as a full year course. This allows for concepts to be linked together according to the six Big Ideas outlined in the AP curriculum. Students will cover the standard Chemistry 20 and 30 curriculums, writing those exams in January and June respectively, while also earning 3 credits in Chemistry 35. The six Big Ideas (1) Chemical elements are fundamental building blocks, (2) Intermolecular forces, (3) Changes in matter involve the rearrangement of electrons or atoms, (4) Rates of reactions, (5) Thermodynamics, and (6) Equilibrium, will be incorporated into the course throughout the year.

PHYSICS 20

This course will include the comprehensive Alberta Physics 20 curriculum (with Physics 1 AP Exam in May), and will also incorporate the seven Big Ideas outlined in the AP curriculum. This will introduce students to concepts that are covered in a first semester University Physics course. The seven Big Ideas which are introduced in Physics 20 are: (1) Objects and systems have mass and charge, (2) Fields existing in space can be used to explain interactions, (3) Interactions can be described by forces,(4) Interactions can result in changes in systems, (5) Conservation laws, (6) Waves, and (7) Quantum mechanics. The focus of the AP curriculum in the Physics 1 course is on kinematics, dynamics, circular motion, harmonic motion, impulse, momentum, conservation of energy, torque, and rotational kinematics. Students will have the opportunity to participate in inquiry based AP labs, which have similarities to University level labs.

PHYSICS 30/35

This course will include the comprehensive Alberta Physics 30 curriculum (with Physics 1 AP Exam in May), and will continue to build upon the seven Big Ideas introduced in Physics 20 AP and which are outlined in the AP curriculum. This course is an equivalent to a second semester Physics University level course. The seven Big Ideas will focus on thermodynamics, fluid statics, electrostatics, DC and RC circuits, magnetism and electromagnetic induction, geometric and physical optics, quantum, atomic and nuclear physics. Students will also have the opportunity to participate in inquiry based AP labs, which will have similarities to University level labs.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SCIENCE
CENTRE

CALCULUS AB

Students will take Math 10 E-AP, Math 20 E-AP, Math 30 E-AP, followed by AP Calculus. As part of Math 10 E-AP students will cover the entire standard Math 10-C curriculum but will be introduced to operations with radicals, sine and cosine laws within trigonometry, and will complete the grade 11 unit of rational expressions. Within Math 20 E-AP they will cover the standard Math 20-1 curriculum, be introduced to radian measures within trigonometry, and complete the grade 12 unit of Transformations. Having completed a unit of Math 30 in Math 20, students are able to rapidly cover Math 30 curriculum and begin Calculus in Semester one. Students taking Calculus AP will cover the standard calculus curriculum, but will also cover the concepts outlined in the AP curriculum. They will cover three major topics as part of AP: (1) Functions, Graphs, and Limits, (2) Derivatives, and (3) Integrals. Following the completion of this course students will be able to write the Calculus exam at Lord Beaverbrook to obtain credit in Math 31, and they will be able to write the AP Calculus AB exam in May to potentially earn credit for a first year university Calculus course


Large f(x) = 2
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ENGLISH LITERATURE AND COMPOSITION

AP English Literature and Composition engages students in the critical analysis of imaginative literature. Students will deepen their understanding of the ways writers use language to provide both meaning and pleasure for the reader. During class discussions and written tasks, they will consider a work’s structure, style and themes, as well literary elements such as the use of figurative language, imagery, symbolism and tone. Students will personalize their learning by reading works from several genres and periods, thereby broadening their ability to understand the importance of the social and historical milieu in the text.


Literature
Literature
Robert DiYanni

EUROPEAN HISTORY

Students participating in AP European History, will have the opportunity to learn about the history of Europe from 1405-present, over and above what is mandated by Alberta curriculum in Social Studies for grades ten, eleven, and twelve. Over the three courses (E- AP 10-1, E-AP 20-1 and 30-1 AP), students will work on creating a time-line, which will cover 500 years of European history. As part of Social 10 E-AP students will focus on historical thinking skills, and the Short Answer Question (SAQ) required for the AP exam. In Social 20 E-AP students will continue to work on what they did in the previous course and also begin to look at how to write the Long Essay Question (LEQ). In Social 30-1 AP students will finish off the timeline which they began in grade 10, they will also focus on Document Based Questions (DBQ) and Advanced Placement style multiple choice questions.

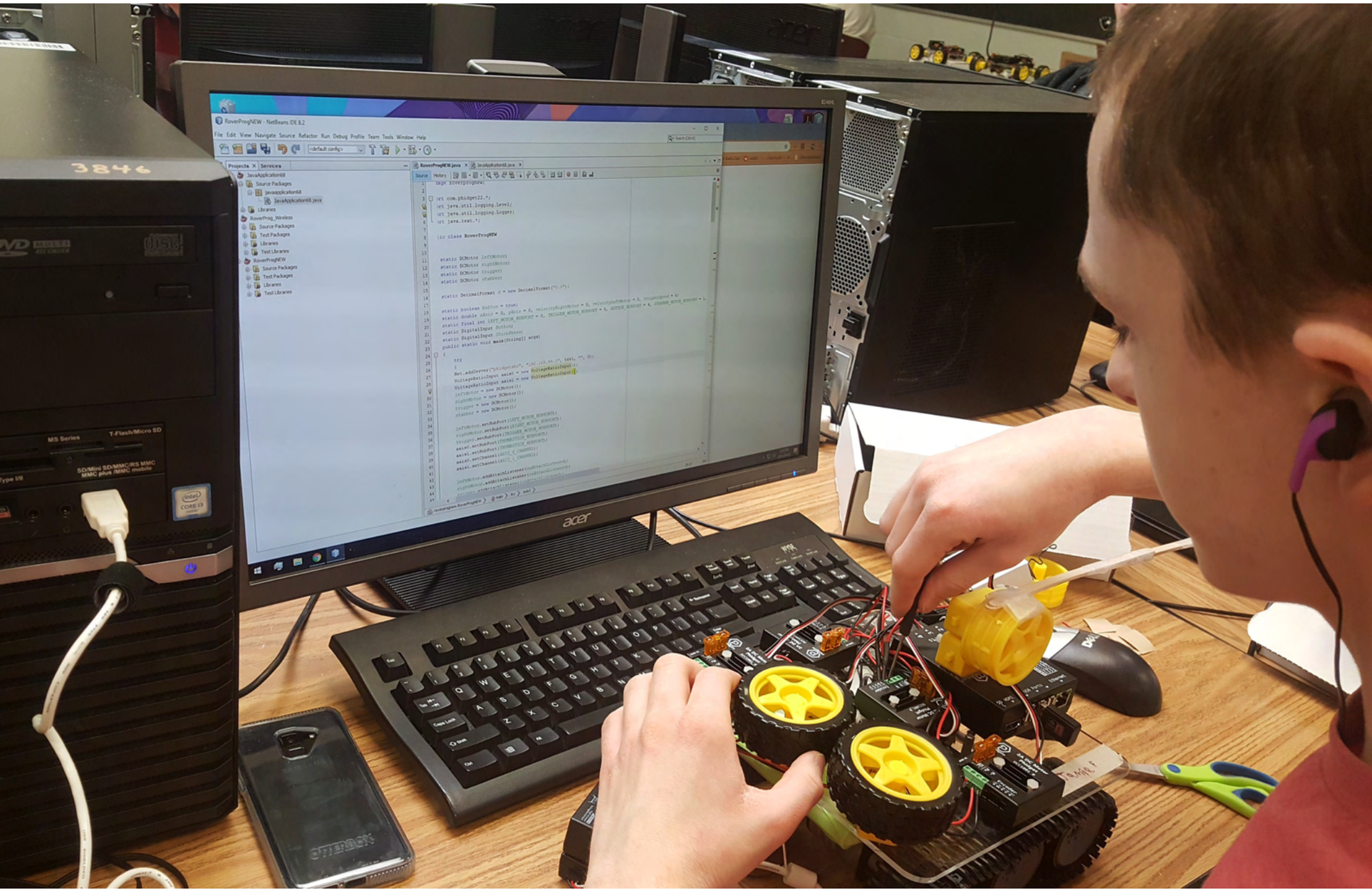
STUDIO ART

As a participant in the Studio Art AP program, students will have the opportunity to create a portfolio of college/university level work. Students have the option to choose between two different types of portfolios, they may either choose to submit a Drawing or a 2-D Design Portfolio. Students will work on preparing the material for these portfolios over their three years at LBHS, but will mainly submit pieces from their grade 11 or 12 years.

In preparing a 2-D or Drawing Portfolio, students will create works in a variety of media including paint, graphite, charcoal, print and mixed media. These works will be analyzed by the AP College Board using strict guidelines as well as the elements and principles of visual art. Students will be expected to submit a body of work comprising of 15 pieces that reflect a personal visual inquiry which is submitted digitally and 5 additional pieces of their best work to be submitted physically.

COMPUTER SCIENCE A

Explore concepts like Artificial Intelligence and Numerical Bias while building games in Computer Science 10! Enhance computational thinking skills using JAVA in Computer Science 20 and Computer Science 30, where students will create projects using complex data structures and algorithms. In this pathway, students learn how to design a program, develop algorithms, write, test and debug code. This program helps students enhance their critical thinking skills and apply logical thinking. Students are not required to have any prior knowledge to be successful in this program.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University Transfer Equivalency Chart

Students should research the specific university(ies) which they are interested in, as transfer credit varies by faculty. Please note these are the current university transfer equivalencies; these may change as you progress through High School and may also require a minimum score on the AP exam.

University Transfer Equivalency Chart

Students should research the specific University(ies) which they are interested in, as transfer credit varies by faculty.

Advanced Placement Courses	**University of Calgary**	**Mount Royal University**	**University of Alberta**
AP Studio Art: Drawing AP Studio Art: 2-D Portfolio AP Studio Art: 3-D Portfolio	Art 241/243 Art 231 Art 233	UNSP 1XXX(3)	Art 140 (3) ART 134 (3) & DES 135 (3) ART 134 (3) & DES 135 (3)
Biology	Biology 243	BIOL 1202 (3)	BIOL 107 (3)
Calculus AB	Mathematics 265	MATH 2251 (3) or MATH 1200 (3)	MATH 114(3)
Chemistry	Chemistry 201/203 (6) or 209 (3) Schulich School of Engineering	CHEM 1201/1202 (6)	Special Assessment examination in CHEM 101 (3) [or CHEM 103 (4.3) for (Engineering) only]
Computer Science A	Computer Science 217)	COMP 1615 (3)	CMPUT 174 (3)
English Literature and Composition	Half Course Junior English +	ENGL 1XXX (3)	ENGL 100 (3) [or 100-level complementary studies elective (3)]
Physics 1	Half course Junior Physics		PHYS 124 (3) (must take Physics 1 & 2 to qualify)
Physics 2	Half course Junior Physics		PHYS 124 (3) (must take Physics 1 & 2 to qualify)
European History	History 201	HIS 1101 (3)	HIST 100 level (6) (not to take HIST 111 or 112)

Please note these are the current university equivalencies and may change at the discretion of the post-secondary institute.

University Transfer Equivalency Chart

Students should research the specific university(ies) which they are interested in, as transfer credit varies by faculty. Please note these are the current university transfer equivalencies; these may change as you progress through High School and may also require a minimum score on the AP exam.

Advanced Placement Courses	**University of Lethbridge**	**University of British Columbia – Vancouver Campus**	**University of Victoria**
AP Studio Art: Drawing AP Studio Art: 2-D Portfolio AP Studio Art: 3-D Portfolio	ART 2031 (3) Fdn. Studio (Drawing & Image) ART 2xxx (3) Unspecidied (2000 level) Art 2032 (3) Fdn. Studio (Object & Space)	Visa 180 (3) VISA 1st-year level (3) VISA 180 (3)	UVIC ART 1XX (3) UVIC ART 1XX (1.5) UVIC ART 1XX (1.5), ART 100 Level (1.5)
Biology	BIOL 1010 (3)	BIOL 1st-year level (6) with exemption from BIOL 111, BIOL 121 and BIOL 140	UVIC BIOL 184 (1.5) & UVIC BIOL 186 (1.5)
Calculus AB	MATH 1560 (3) and MATH 2560 (3)	MATH 100 (3)	UVIC MATH 100 (1.5)
Chemistry	CHEM 1000 (3) and CHEM 2000 (3)	CHEM 121 (4) [Students entering the BASc program will be granted exemption from CHEM 154]	UVIC CHEM 101 (1.5) and 102 (1.5)
English Literature and Composition	ENGL 1XXX (3) Unspecified (1000 level)	ENGL 112 (3) & ENGL 1st-year (9) If AP Lit and AP Lang	UVIC ENGL 146 (1.5) and UVIC ENG 147 (1.5)
Computer Science A	CPSC 1620 (3)	CPSC 1st year(3)	UVIC CSC 110 (1.5)
Physics 1 Physics 2	PHYS 1XXX (3) Unspecified		Physics 1 or 2 = UVIC PHYS 102A (1.5) & UVIC PHYS 102 B (1.5)
European History	HIST 1000 (3)	HIST 1st year (6)220 (6)	UVIC HSTR 240A (1.5) & UVIC HSTR 240B (1.5)

If you would like more information on the AP program at LBHS please contact:

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