

HS Course Descriptions – Flex ED Summer School 2024

Grade 10

ELA A10

Students will study plays, poetry, novels, and short stories while reflecting on themselves and the world around them. The course focuses on life challenges, decisions, and mystery in the past, present and beyond.

Materials Needed:

- The Hunger Games by Suzanne Collins (Novel)
- The Miracle Worker by William Gibson (Long Play)
- The Hunger Games (Film)
- The Boy Who Harnessed the Wind by William Kamkwamba (Non-Fiction Novel)

ELA B 10

Students will study plays, novels, short stories, and poems in a manner that reflects internally and externally to the world around them. The course focuses on justice, diversity, community, fairness, and the individual. **Materials Needed:**

- All Creatures Great and Small by James Herriot (Memoir)
- MacBeth by William Shakespeare (Long Play)
- Jurassic Park by Michael Crichton (Novel)
- Ender's Game by Orson Scott Card (Novel)
- A Raisin in the Sun by Lorraine Hansberry (Long Play)

Math Foundations & Pre-Calculus 10

Students will learn about different systems of measurement, the Pythagorean Theorem, how to calculate surface area and volume for different objects, about trigonometric ratios, and how to factor numbers and polynomials. They will also learn about radicals, exponents, relations, functions, linear functions, equations of linear functions, and systems of linear equations.

Photography 10

The purpose of Photography 10 is to provide students with opportunities to acquire knowledge and develop skills used in photography and to become familiar with career opportunities within the industry. In addition to becoming familiar with some famous photographers and photographs, students will have opportunities to do the following: — develop technical skills in the use of cameras —analyze and utilize the principles of composition and design —develop image manipulation skills to create aesthetically satisfying pictures, and — explore various occupations available in the ever-broadening field of photography.

Required equipment:

- A manual camera with P (Programmed), Tv (time value/shutter priority), Av (aperture value/aperture priority) settings
- Access to Photoshop or free editing software like GIMP is also required.
- A tripod and some DIY materials are recommended.
- A limited number of cameras are available to rent from the school.

Science 10

Science 10 will cover climate, ecosystems, chemical reactions, forces and motion, as well as a career exploration. Materials needed for the course are litmus paper (store bought or homemade), vinegar, baking soda, thermometer, measuring tape, and a stopwatch.

Wellness 10

This course helps students become aware of, assess, and balance the five dimensions of wellness including: physical, psychological, social, spiritual, and environmental. Emphasis is placed on becoming active, self-inquiry, community service, and how each dimension affects the others to create well-being.

Grade 11

ELA 20

ELA 20 explores personal identity and growth, covering themes like how our past shapes our present, the role of family in identity and belonging, how obstacles and challenges lead to personal growth, and life's inevitable passage of time through which we evolve and change. Students will study and reflect on these themes through novels, a play, short stories, and essays as they develop skills in creative writing, essay research and writing, and oral speaking through performances of their written work.

Prerequisites: ELA A10, ELA B10 **Materials Needed:**

- To Kill a Mockingbird by Harper Lee (novel)
- Someday by Drew Hayden Taylor (long play)
- Something for Joey by Richard Beck (novel)
- Keeper'n Me by Richard Wagamese (novel)
- I Am Hutterite by Mary-Ann Kirby (novel)

Environmental Science 20

Environmental Science 20 studies the impact humans have on the environment and how we can move towards a more sustainable future, both personally and collectively. Topics covered through the course are the atmosphere and its impact on human health, aquatic ecosystems, and terrestrial ecosystems. Students will conduct experiments, write lab reports, do independent research, and show their learning through visual presentations, as well as create a final project of their choice.

Prerequisite: Science 10

Materials Needed:

- **Filtration Mask Experiment:** ½ cup flour, household items to make a filtration mask (these will depend on the type of mask the student chooses to make based on the internet instructions they find)
- **Clean-up Simulation:** cooking oil and one from each list:
 1. Coffee filter, shirt, pantyhose, or other cloth
 2. Dish soap, laundry detergent, hand soap, or shampoo
 3. Sawdust, sand, or cat litter
- **Water Quality Testing:** water quality testing kit (can be purchased at a hardware store)
- **Ecosystem In a Jar:**
 - large glass jar with lid that seals tightly
 - pebbles or stones (enough to fill 1-2 inches of the jar)
 - ½ cup charcoal
 - potting soil (enough to cover your plants' roots)
 - one to three plants (depending on the size of your jar)

Financial Literacy 20

This course is an introduction to the basics of financial decision making, including information on earning, saving, spending, borrowing, sharing, investing, and protecting financial interests. It will help to prepare students for financial situations they may face as they move into the world of adulthood.

Health Science 20

Health Science 20 explores the origins of Western medicine and compares it with traditional medicine, asking students to consider how both approaches can be combined to provide holistic healthcare. Other topics include medical ethics, the human body, and nutrition; as well, students will complete an in-depth study on a disease of their choosing.

Prerequisite: Science 10

Life Transitions 20

In Life Transitions 20, you will learn about life transitions, personal self-knowledge, relationships, time management, career self-knowledge, life balance, and much more. You will set goals and make Action Plans to achieve your goals. You will need to have at least one person who can be your mentor for your action plans.

Math Foundations 20

Students will learn about inductive and deductive reasoning, properties of angles and triangles, trigonometry, statistical reasoning, systems of linear inequalities, quadratic functions (parabolas), and proportional reasoning. Problem solving and analyzing puzzles and games is a concept that is distributed throughout the course. Students will also research and create a presentation on a topic of interest to them that incorporates primary and secondary data and makes use of methods of data analyses.

Prerequisite: Math Foundations & Pre-Calculus 10

Photography 20

The purpose of Photography 20 is to provide students with opportunities to build upon their understandings and accomplishments from Photography 10. Students will increase their technical expertise and will add photographs to their portfolios that exhibit a more competent awareness of composition, lighting, setting, and planning. **Prerequisite:**

Photography 10 **Required equipment:**

- A manual camera with P (Programmed), Tv (time value/shutter priority), and Av (aperture value/aperture priority) settings is required.
- A subscription to Photoshop (fee to be paid by the students) is required.
- A tripod and some DIY materials are recommended.
- A limited number of cameras are available to rent from the school.

Physical Science 20

Physical Science 20 will cover heat, chemistry basics, waves, a career study, as well as a student directed project.

Prerequisite: Science 10

Materials Needed: food coloring, powdered drink mix, 5% iodine, laundry starch, and 500mg vitamin C tablets.

Psychology 20

This course is based on Social Psychology and helps students how their social world influences their views and feelings about themselves. It also introduces students to research methods, and major theoretical perspectives in Social Psychology.

Grade 12

Biology 30

Biology 30 will cover evolution, taxonomy, cells, genetics, biotechnologies, as well as a student directed project.

Prerequisite: Health Science 20 or Environmental Science 20

Materials Needed: Foldscope or microscope, toothpicks, onion, methylene blue, iodine, if using a microscope – glass slides and slide covers, yeast, sugar, and a ruler/meter stick. **THIS COURSE REQUIRES A DEPARTMENTAL EXAM.**

Date and Time: Wednesday, August 7, 2024 from 1:00 - 3:30 p.m.

Chemistry 30

Chemistry 30 will cover chemical bonds and materials, chemical equilibria, electrochemistry, as well as a student directed project.

Prerequisite: Physical Science 20

Materials Needed: salt, sugar, magnifying glass or microscope, thermometer, scale, and litmus paper (store bought or homemade).

THIS COURSE REQUIRES A DEPARTMENTAL EXAM

Date and Time: Friday, August 9, 2024 from 1:00 - 3:30 p.m.

ELA A30

The goal of ELA A30 is to help students understand and appreciate language, and to use it confidently and competently in a variety of situations for learning, communication, work, life, and personal satisfaction. The course involves themes focusing upon Canadian literature and society and the Canadian experience, using various contemporary and traditional grade-appropriate texts in a variety of forms (oral, print, and other media) from First Nations, Métis, and other cultures. **Prerequisite:**

ELA 20 Materials Needed:

- The Secret Lives of Sergeant John Wilson by Lois Simmie (non-fiction)
- Billy Bishop Goes to War by John MacLachlan Gray and Eric Peterson (play)
- The Stone Angel by Margaret Laurence (novel)
- Tamarind Mem by Anita Rau (novel)

ELA B30

The goal of ELA B30 is to help students understand and appreciate language, and to use it confidently and competently in a variety of situations for learning, communication, work, life, and personal satisfaction. The course involves themes focusing upon human concerns in a global society, using various contemporary and traditional grade-appropriate texts in a variety of forms (oral, print, and other media) to provide a global perspective. **Prerequisite:** ELA 20 **Materials Needed:**

- Hamlet by William Shakespeare (play)
- Death of a Salesman by Arthur Miller (play)
- Wouldn't Take Nothing for My Journey Now by Maya Angelou (non-fiction essays)
- Nectar in a Sieve by Kamala Markandaya (novel)

Financial Literacy 30

This course is a more in-depth look into the world of personal finance. It covers topics such as home ownership; debt management, including bankruptcy; purchasing and leasing property including vehicles; and planning for the future (e.g., retirement planning), all of which contribute to strong lifelong financial wellbeing.

Food Studies 30

Food Studies 30 is all about practical and essential understanding of food and nutrition. Students will engage in the importance of making healthy food choice to promote the well-being of individuals and families through written and practical components.

Life Transitions 30

In Life Transitions 30, you will learn about life roles, health self-care, conflict in relationships, money management, career planning, independent living, parenting, and searching for a job. You will set goals and make Action Plans to achieve your goals. You will need to have at least one person who can be your mentor for your action plans.

Photography 30

The purpose of Photography 30 is to provide students with opportunities to build upon their understandings and accomplishments from Photography 20. In addition to learning about the history of photography through a study of art movements and significant photographers and photographs, students will increase their technical expertise and will add photographs to their portfolios that exhibit a more competent awareness of composition, lighting, setting, and planning. **Prerequisite:** Photography 20 **Materials Needed:**

- A camera with M (manual), Tv (time value/shutter priority), and Av (aperture value/aperture priority settings).
- Access to Adobe Photoshop and Lightroom (fee to be paid by the student).
- Tripod and some DIY materials
- A limited number of cameras and tripods are available to rent from the school.

Physics 30

Physics 30 explores modern physics; forces and motion; Conservation Laws; electric, magnetic, and gravitational fields, as well as a student-directed study of their choosing. Physics 30 requires critical thinking and problem-solving skills as students work through theoretical and hands-on inquiry. **Prerequisite:** Physical Science 20

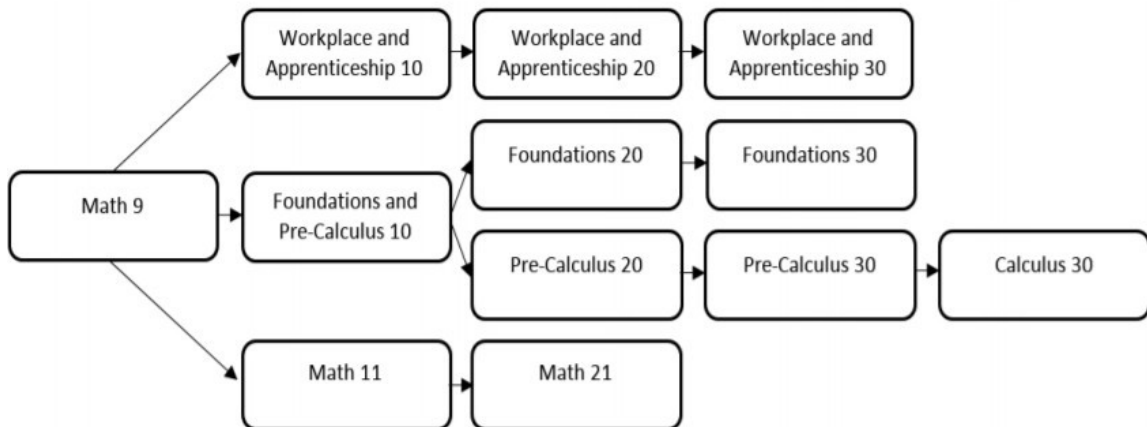
THIS COURSE REQUIRES A DEPARTMENTAL EXAM.

Date and time: Thursday, August 8, 2024 from 1:00 - 3:30 p.m.

Psychology 30

This course is based on Developmental Psychology, and helps students understand how and why humans develop as they do. It also investigates the stages of development from infancy through childhood, adolescence, adulthood, and old age.

MATHEMATICS



Science Pathways Framework

