## Applied Psychology
**August 9-13 | Grade 8-12**

**Course Description**
Psychology asks “Why do people behave the ways they do?” and applied psychology asks “how can we use our understanding of human behaviour in the real world?” Applied psychology is an interdisciplinary field that informs advertising, business management, counselling, education, politics, product development, social change, and more. In this course, you’ll learn how to study human behaviour and — in true applied psychology fashion — put your knowledge into practice by producing a project on a topic that interests you. In true applied psychology fashion, this course will also be structured in alignment with research that asks “what kinds of class environments and teaching methods promote student engagement and learning?”

**Instructor Biography**
*Carli* is a certified teacher and current career coach with Queen’s University. She has completed a Bachelor of Arts majoring in Psychology at Queen’s before completing her Bachelor of Education and then going on to her Master of Science in Applied Psychology. She has worked for ESU as a student supervisor and is able to relate to all students in elementary, middle, high school and university through her experience and education.

## Computer Science: Web Programming
**August 9-13 | Grade 8-12**

**Course Description**
Are you looking to expand your knowledge of technology and take your coding skill to the next level? In this course, you will get hands-on experience building your first website. You will learn how to create a website from scratch using HTML and CSS by getting familiar with the fundamental elements of web development. By the end of this course, you will be familiar with the complete website development process. You will also learn how to make your site live and accessible online. If you are considering a possible future in computer science or if you are just curious about the coding world, then this is the course for you!

**Instructor Biography**
*Maram* is a PhD student in the School of Computing at Queen’s University. Her research interests focus on Machine Learning, Natural Language Processing, and Software Engineering. A former teacher, Maram has taught computer related courses to undergraduate students. She also has six years of work experience in the software development field. Maram is excited to introduce you to the world of programming.
First Peoples: Introduction to Canadian Indigenous Studies
August 9-13 | Grade 8-12

Course Description
Through a Sociology and anthropological lens, First Peoples: an intro to Canadian Indigenous Studies will explore Canadian First Nation peoples, colonization and modern culture and other relevant issues in Canadian Indigenous studies. Students will learn the general focus of Cultural Anthropology as an academic pursuit and its impact on our society today through the experiences of Indigenous Peoples in Canada.

Who are Canada’s First Nation peoples? What is their history? Explore pre-contact, colonization, modern culture, and other relevant issues through a Sociology and anthropological lens. Using expert lectures, discussions, and activities, students will learn the beyond school curriculum and focus of Cultural Anthropology as an academic pursuit and explore its impact on our society today.

Instructor Biography
Emilee is currently a Masters of Education student at Queen’s University and a member of the Algonquin First Nation. She specializes in the socio-anthropological study of human health and education with an emphasis on Canadian Indigenous Peoples. She is especially interested in the intersection of traditional and Western medicine for Indigenous children.

Lights, Camera, ACTING!
August 9-13 | Grade 8-12

Course Description
Do you love to Perform? Were you born to Act? Join me for an exciting week to explore the fundamentals of acting, techniques, theatre vocabulary, meet great acting teachers and learn from impactful performances. Through games, exercises, readings, reflections, video and discussions, we will dive into the world of acting! Memorize your lines and prepare for your monologue, when you're done this Introduction to Acting course, you will be so ready for your next audition!

Instructor Biography
Melissa M is part of the faculty of the DAN School of Music and Theatre at Queen’s University. She is an actor, singer, musician, musical director, composer, lyricist and playwright, as well as a passionate educator and fun-maker. She has had the pleasure of performing all across Canada as well as internationally, and has written musicals and shows that have been played all over the world. Melissa is just the most excited to teach acting to young people!
**Grade 8 – 9**

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### Intro to Ontario High School Math  
**August 9-13 | Grade 8-12**

**Course Description**
Join other students with their eyes set on their future achievement in mathematics in Intro to Ontario High School Math! This course is designed for advanced grade 7s and grade 8 students who want a glimpse of the math they will be working on in High School. Students will be learn how to re-arrange equations to isolate and solve for variables, how to graph tables of values and interpret what they and calculate slopes and to write equations of lines. Join Ontario Teacher Candidate Corina as they guide students through some of the most critical elements of high school Mathematics.

**Instructor Biography**
Corina is a teacher candidate of the Concurrent Education Program at Queen’s University on track to teach high school Math and Physics. She is super passionate about mathematics and loves to work out and be active. Fun Fact: When she was in high school she competed in the Ontario Summer Games in Badminton! Corina is extremely excited to launch this course, and can’t wait to meet all the students looking to explore what awaits them on their high school math journey!

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### Pathology: From DNA to Forensics  
**August 9-13 | Grade 8-9**

**Course Description**
Do you dream of becoming a Crime Scene Investigator? Want to investigate a mock crime scene? Then this course is for you! You will learn about the human body, diseases, DNA, and genetics through hands-on activities including: a genetics testing lab, dragon genetics lab, blood typing (with simulated blood), and examining plastinated specimens. You will also learn forensics skills such as fingerprinting, and handwriting analysis. Are you ready to solve the case?

**Instructor Biography**
Dr. Mackenzie Bowman has been coordinating ESU courses since 2010, and holds a PhD in Pathology and Molecular Medicine. She is currently a Senior Scientist in the Clinical and Molecular Hemostasis Research Group at Queen’s University. Instructors for this course are specially selected and supervised by Dr. Bowman.
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| **Pathology and Molecular Medicine**  
*August 9-13 | Grade 10-12* |

**Course Description**
Have you ever wanted to solve your own diagnostic case or learn how to find your blood type? If yes, then this is the course for you! This course will provide you with a thorough introduction to the field of Pathology – the study of diseases and the structural and functional changes they cause. You will interact with graduate students, professors, and doctors as you learn about genetics, cancer, neuropathology, and even have the opportunity to discuss education and career options.

**Instructor Biography**
Dr. Mackenzie Bowman has been coordinating ESU courses since 2010, and holds a PhD in Pathology and Molecular Medicine. She is currently a Senior Scientist in the Clinical and Molecular Hemostasis Research Group at Queen’s University. Instructors for this course are specially selected and supervised by Dr. Bowman.

| **Theories of our World: Mathematics and Physics**  
*August 9-13 | Grade 10-12* |

**Course Description**
Join us and explore Mathematics and Physics! You will monitor and collect data, hypothesize, theorize, and perform mathematical modelling to describe what happened in our experiments. Using analytical techniques and computer modelling students will share their results. We will work to understand the structure of a problem, and then use mathematical tools to prove that a strategy is the optimal solution.

**Instructor Biography**
Chelsea is currently a PhD student in the Physics and Engineering Department at Queen’s. She is incredibly passionate about exploration, innovation and imagination in the math classroom.