2018
Seven Eight Enrichment Days
(SEEDS) Course Descriptions
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**ACTing on World Issues**  
(Drama)

**Offered:** SEEDS 1 (May 16-18), SEEDS 2 (May 23-25), SEEDS 3 (May 30-June 1)

**Course Description**  
Interested in theatre arts? Concerned about what’s going on in the world around you? Wondering what the two have to do with one another? During this interactive course, you will learn about the amazing collision of performance arts with activism. Action theatre is used throughout the world to build community, effect social change, and develop social agency in youth. In this course, you will learn how theatre troupes connect with their audience and explore some of the effective, highly stylized techniques such as: tableaux, mime, improvisation, leveling, minimalism, docudrama, and multimedia uses. This course will culminate with the creation of a short action play, in which your contribution – either on-stage or in a supportive role – will play a key part.

**Instructor Biography**  
**Rebecca** is a new instructor for ESU. She has many years’ experience as a certified drama teacher, teaching both in Ontario and internationally. She also co-created an action theatre troupe that ran for a number of years in two schools. Rebecca is currently completing her PhD at the Faculty of Education at Queen’s University.

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**Chempletely Crazy for Chemistry!**  
(Chemistry)

**Offered:** SEEDS 1 (May 16-18), SEEDS 2 (May 23-25), SEEDS 3 (May 30-June 1)

**Course Description**  
Will chemistry drive you chempletely crazy? Let’s find out if you overreact! Become a chemist and see what amazing things chemistry has to offer. Through fun hands-on experiments, amusing demonstrations, and interesting discussions, you will be able to broaden your chemistry knowledge while working in a state-of-the-art university laboratory. Participate in fun games and activities, meet other chemists, and explore, learn, and discover the explosive world of chemistry!

**Instructor Biography**  
**Kate** is returning for her second year of instructing with ESU. She holds a background in modern chemistry with a focus on molecular structure, physical chemistry, thermodynamics, organic chemistry, analytical chemistry, inorganic chemistry, and computational chemistry.
## Discovering the Ancient World
(Classics)

**Offered:** *SEEDS 3* (May 30-June 1)

### Course Description
Would you like to learn about the famous Trojan Horse, or discover the wonders of ancient Egypt? Are you interested in becoming an archaeologist for a day and uncover the secrets of an ancient city in a mock excavation? Perhaps you would like to learn about ancient warfare, or the life of Roman gladiators, or would like to decipher ancient texts and learn the basics of Latin or ancient Greek? Although these people lived in the distant past, they still had their own scientific theories and medical practices, even though they seem strange to us today. There is so much to learn about the ancient past; come join us and explore the mysteries of the ancient civilizations!

### Instructor Biography
*Jade* – a first time instructor for ESU – is a graduate student in the Classics Department at Queen’s University. Her research interests focus on virtual archeology, including the creation of 3-D models of artifacts and architecture from Imperial Rome to Byzantium. She has also participated in archaeological fieldwork in Italy, Spain and Macedonia, and has taught Latin to local high school students.

## Engineering: Design and Prototypes
(Engineering)

**Offered:** *SEEDS 1* (May 16-18), *SEEDS 2* (May 23-25), *SEEDS 3* (May 30-June 1)

### Course Description
Have you ever wanted to design your own prototype? Thinking about engineering as a possible future career? In this course, you will learn about engineering and apply the engineering design process to create a solution to various problems. You will also learn about the different disciplines of Engineering offered by Queen’s University. Working in teams as professional engineers, you will apply the new knowledge and skills obtained to design and build a prototype to solve challenges. This course includes various tours through the engineering design spaces, research labs, and other buildings on campus where you will be able to interact with professional engineers in action.

### Instructor Biography
*Scott* has been coordinating courses for ESU since 2014 and is currently the Outreach Coordinator for Connections: Queen’s Faculty of Engineering and Applied Science Educational Outreach Program. He holds a Master’s degree specializing in Engineering Education with a thesis on high school students’ perception of engineering. Instructors for this course are specially selected and supervised by Scott.
Engineering: Makerspace Technology
(Engineering)

Offered: SEEDS 1 (May 16-18), SEEDS 2 (May 23-25)

Course Description
Are you interested in working with digital technologies such as 3D printers, lasers and 3D scanners? In this course, you will learn the process of making by designing, innovating, and building with tools and materials to produce shareable artifacts. You will also learn about digital technologies and how these technologies are used in engineering disciplines such as computer, electrical, and medical. Are you ready to explore how engineering and technology is linked to innovations of the future?

Instructor Biography
Scott has been coordinating courses for ESU since 2014 and is currently the Outreach Coordinator for Connections: Queen’s Faculty of Engineering and Applied Science Educational Outreach Program. He holds a Master’s degree specializing in Engineering Education with a thesis on high school students’ perception of engineering. Instructors for this course are specially selected and supervised by Scott.

From Epic Heroines to Roller Coaster Plots: How to Write the Stories You Wish You Had Read
(Literature, Creative Writing)

Offered: SEEDS 1 (May 16-18), SEEDS 2 (May 23-25), SEEDS 3 (May 30-June 1)

Course Description
Do you aspire to write original stories that take readers to exciting new worlds or help them discover valuable life lessons? Do you dream of writing the next Hunger Games, Percy Jackson, or Harry Potter? This course shows you the secrets to creating great stories, including how to find and develop story ideas, create memorable characters, build an emotional roller coaster of a plot, design a story world, and write your adventure with flair.

Instructor Biography
Glen has been a freelance writer since 1999 and has been instructing for ESU since 2013. He is the author of the award-winning middle-grade novel, Dancing on the Inside and currently teaches creative writing at St. Lawrence College.
### Human Anatomy: Get to Know Your Insides
*(Biology, Anatomy)*

**Offered:** *SEEDS 1* (May 16-18), *SEEDS 2* (May 23-25), *SEEDS 3* (May 30-June 1)

**Course Description**
Have you ever wondered how many bones are in your body? Or what muscles help you speak, eat and kick a ball? This course will help you understand all this and more about the human body and how your own body systems work. Through hands-on activities and a visit to the Anatomy Lab, you will learn about your brain, the musculoskeletal system, how your heart works to circulate blood throughout your body, and the path of food from your mouth all the way out! You will also explore injuries and what happens when our systems fail to function properly and diseases develop. This course uses real bones and organ models during activities and culminates with an animal organ dissection lab.

**Instructor Biography**
Michelle is joining the ESU team for the first time. She is currently completing her Master’s degree in Anatomical Science at Queen’s University and assists in teaching undergraduate Anatomy courses at Queen’s. She previously received her Bachelor in Health Studies degree from McMaster University.

Amanda is also joining us for her first time instructing for ESU. She is currently completing her Master’s degree in Anatomical Science at Queen’s University. While completing her undergraduate degree in Biomedical Sciences at the University of Guelph, Amanda also facilitated many anatomy outreach sessions to high school students, paramedics, firefighters, and post-graduate students.

### Kinesiology: Physical Activity and Sport
*(Kinesiology, Health Studies)*

**Offered:** *SEEDS 1* (May 16-18), *SEEDS 2* (May 23-25)

**Course Description**
Do you have a passion for sports and exercise? Do you wonder how professional athletes like Sidney Crosby or Serena Williams perform at such a high level? In this course, you will explore the human body and how it moves when you exercise. You will also get to experience hands-on activities in various labs in the Queen’s Kinesiology department, such as human physiology exercise testing and sport psychology video observation and nutrition programs. From eating healthy, developing exercise routines, or finding the right coach, this course will teach you concepts and skills to keep you physically active during your lifetime.

**Instructor Biography**
Madison is a first time instructor for ESU and is currently completing her Masters in Kinesiology at Queen’s University. In addition to working in multiple kinesiology labs at Queen’s (including cardiovascular, physiology, sport psychology and muscle physiology), Madison has also assisted with instructing undergraduate kinesiology courses.
Pathology: From DNA to Forensics
(Biology, Pathology)

Offered: SEEDS 1 (May 16-18), SEEDS 2 (May 23-25), SEEDS 3 (May 30-June 1)

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. In other labs, you will learn forensics skills such as fingerprinting, and handwriting analysis. Are you ready to solve the case?

Instructor Biography
Dr. Bowman is in her eighth year as course coordinator 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.

Personal Injury Crash Course: From Hockey Fights to Medical Mistakes
(Law, Tort Law)

Offered: SEEDS 1 (May 16-18), SEEDS 2 (May 23-25), SEEDS 3 (May 30-June 1)

Course Description
When does bumping elbows become battery? When does a joke become infliction of emotional harm? Doctors are humans and make mistakes - when are those mistakes actionable? Where is Tort law headed? These are some of the questions you will be able to answer at the end of the course. Join this class to learn about intentional torts (such as assault & battery), negligence/medical negligence and the possibilities for the future. Equipped with this new set of knowledge, you will then learn advocacy skills and put it all together during a mock trial.

Instructor Biography
Kathryn is joining us once again as an instructor. She earned her Law Degree at Queen’s University while focusing on students’ rights in education, mental health law, and tort reform.
Programming Puzzles: Coding and Computer Wizardry
(Computer Science, Programming)

Offered: SEEDS 1 (May 16-18), SEEDS 2 (May 23-25), SEEDS 3 (May 30-June 1)

Course Description
Become a computer whiz by learning how a computer “thinks” and how to think like a computer! You will explore important concepts in computer science and use them to solve challenging problems, build useful programs, create entertaining animations, and develop interactive games to play with your classmates and share with your friends. Through hands-on activities that put the power of computers at your fingertips, you will discover how a computer encodes, organizes, and remembers information and how your commands are processed and transformed into what we see on a screen. Once you understand how a computer works, you can make it work for you!

Instructor Biography
Daisy is returning for her second year instructing for ESU. She has a background from Queen’s University School of Computing and has previously helped to develop content for and teach the Google igniteCS @ Queen’s University program – a coding camp for high school students.

Psychology 101: What’s In Your Mind?
(Psychology)

Offered: SEEDS 1 (May 16-18), SEEDS 2 (May 23-25)

Course Description
Do you wonder why a certain smell reminds you of familiar memories? Or why you dream during sleep? Join this course to explore all the wonders of the world of psychology! You will learn about the different parts of the brain and how each part plays an important role in what humans do. You will also conduct hands-on experiments, play interactive games, and use technology. Come and hone your skills as psychologists-in-the-making!

Instructor Biography
Brittany – a new addition to the ESU team – completed her Bachelor’s Degree in Psychology and Sociology at Queen’s University. She is currently assisting with instructing undergraduate courses at Queen’s.
Top of the Charts: Writing the Next Big Hit
(Music, Songwriting)

Offered: SEEDS 1 (May 16-18), SEEDS 2 (May 23-25), SEEDS 3 (May 30-June 1)

Course Description
Want to be the next Ed Sheeran or Taylor Swift? Have you ever heard a song and wondered "where did the idea for that song come from?" This course offers three days of immersion in the songwriting process. We will explore rhythm, melody, and lyric writing in a fast-paced and fun environment. No previous experience is necessary. Get ready to engage in a collaborative, open, and supportive experience where we take flashes of inspiration and turn them into singable "earworms".

Instructor Biography
Jon – returning for his second year instructing for ESU – is a graduate of the Queen’s University Artist in the Community Education Program and has thirteen years’ experience as a guitar instructor and songwriter. As a songwriter, Jon’s song “Someone Thinks of You” has won the American Songwriter magazine lyric contest. As a singer, he has shared shows with the great Canadian artists Fred Eaglesmith, David Francey, Leahy, and Tom Wilson (Blackie and the Rodeo Kings).

You Can’t Be smART Without ART!
(Visual Art, Fine Art)

Offered: SEEDS 1 (May 16-18), SEEDS 2 (May 23-25)

Course Description
Find your inner artistic genius with this crash course in fine art! Over three days, you will be immersed in the world of artistic expression, learning both theory and skills from the minds and hands of artists and technicians. Inside the studios of the Queen’s University Fine Art program, you will have the opportunity to develop your own masterpieces in printmaking, acrylic painting, and modern sculpture. To get your creative juices flowing, you will also visit two art galleries on the Queen’s campus to find inspiration from the works of students, local artists, and even famous painters like Rembrandt. It’s time to create more than doodles in your notebook! Who knows, maybe you’ll be the next Michelangelo, Picasso, or Warhol!

Instructor Biography
Stéfy is returning for her second year instructing for ESU. She has a Masters of Art in Cultural Studies from Queen’s University and is a Kingston, Ontario based artist. Stéfy has recently exhibited work at the Centre for Indigenous Research-Creation, Modern Fuel, Tett Centre for Creativity and Learning, OCAD University, WKP Kennedy Gallery and White Water Gallery in North Bay, and the Isabel Bader Centre for the Performing Arts.
Zootopia: Animal Lives, Bodies and Behaviour
(Zoology, Biology)

Offered: SEEDS 1 (May 16-18), SEEDS 2 (May 23-25), SEEDS 3 (May 30-June 1)

Course Description
Do you love animals? Do you dream of becoming a vet, zookeeper, or biologist? If yes, then this is the course for you! You will learn all about the lives of animals, including what they eat, how they love, and what they look like – both inside and out! You’ll have the chance to learn scientific skills including how to investigate the way their bodies work, and make a hypothesis about their lifestyle or evolution. Through studying different animals, from the proud lion to the howling monkey to the scuttling beetle, you will learn about animal conservation and well-being. What can we do to protect animals and make their lives better and how we can save endangered species are just a few of the questions you will answer. Come and explore the wonderful world of animals – and maybe even meet some along the way!

Instructor Biography
Siobhan is a first time instructor for ESU. She holds a Bachelor’s degree in Zoology and English and a Master’s degree in English Literature and Film Studies from the University of Guelph. She is currently completing her PhD in Environmental Studies at Queen’s University.