



## FACULTY OF SCIENCE

### **200: Human and Chimp, only 4% different?**

#### Abstract:

Did you know that every human being has his/her own personal traits mapped out to the closest detail? Also known as DNA, Deoxyribonucleic acid, can dictate future habits, traits, and attributes, both physical and behavioral. Did you know that the human DNA map is only 4% different from that of a chimp's? And yet this 4% makes up the difference between an ape and a human! In this course, we will explore DNA through advanced hands-on labs and class discussions. You will be ready to surprise anyone with your knowledge of the growing field of Biochemistry.

*Instructor: Mihaela Fluerau*  
*Department: Biology/Biochemistry*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **201: Is There a Chemist in the Court?**

#### Abstract:

In this course, we will explore how chemistry can play a role in detective work. Find out, through discussion and lots of hands-on experiments, how chemists deal with the scientific, legal, and ethical aspects of social issues. Is an athlete on steroids? How can a chemist tell? Test a sample for food additives. A small mistake on a label can kill a person with allergies! Discover whether the "genuine Rembrandt" painting is a fraud. Finally, perform a DNA extraction. See how useful and fun Chemistry really is! Will your evidence stand up in court?

*Instructor: Erin McConnell*  
*Faculty Advisor: Prof. Maria Derosa*  
*Department: Biology*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **202: Way More Than Meets The Eye: What a microscope can see and a camera can capture: Digital Imaging of plant cellular organization.**

#### Abstract:

In this hands-on course, students will learn simple but effective techniques in tissue sectioning, staining and microscopy to examine the anatomy of various plant organs at the cellular level. Students will also use digital imaging microscopy to generate images/files of the work they have done and use them in preparing a digital presentation.

Instruction of techniques will be combined with demonstrations of how plant parts work and how the form of parts/structures, be it at the macro or microscopic level, have direct applications to function at the whole-organ and cellular level.

*Instructor: Claudia Buttera*  
*Department: Biology*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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### **203: The Brain: Delving into its mysteries.**

#### Abstract:

From how we move to how we connect to our environment, right down to how we feel when we listen to a favourite song, all this is possible because of our brain. We will begin to unravel the exciting world of the brain by looking at both the general structure of the brain right down to the cell signaling in neurons. Fun activities will be used to help understand how our central nervous system works. We will go back in history and discover how neuroscience came about and discuss new techniques that are being used in the field of neuroscience to understand brain diseases.

*Instructor: Rim Khazall & Harry MacKay*  
*Faculty Advisor: Prof. Alfonso Abizaid*  
*Department: Science/Neuroscience*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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### **204: Big Fun with Small Science!**

#### Abstract:

In this course we will learn about the wonders of nanotechnology! Nanotechnology is about making, measuring and manipulating very tiny things -- materials and devices a million times smaller than a millimetre! From eyeglass coatings to improved detergents, to genetic engineering and stronger construction materials, nanotechnology is all around us. In this workshop, you'll get a taste of what nanotechnology is all about, will get to prepare your own nanoparticles, make and test a nanosensor, and learn more about this cutting edge field.

*Instructor: Amanda Giamberardino*  
*Faculty Advisor: Prof. Maria DeRosa*  
*Department: Biology*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **205: Web Ninja**

#### Abstract:

We now live in a world where information is potentially unlimited. Data is cheap, but its meaning (information) is expensive. Where is data and its meaning? World Wide Web is the most important media to collect data and it's through web applications that we can understand the meaning of it. It is necessary for younger generation to understand this planet-wide media. They should learn about its past, to understand the present and find the future of it. This course is all about World Wide Web.

During this course, students become familiar with the history of World Wide Web, its importance and the tools they might need to investigate it. They will become familiar with basic concepts in computer networks, web applications and many important topics in cyber world such as security and privacy.

*Instructor: Abdolreza Shirvani*  
*Faculty Advisor: Prof. B. John Oommen*  
*Department: Computer Science*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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## **206: School of Rock! – An Introduction to Earth Science**

Abstract:

Ever wonder why the Earth has volcanic eruptions and earthquakes? Or how fossils are used to study the age of the Earth? Are you curious about how diamonds were found in the far north of Canada? Why are mineral deposits important to your everyday life? The answers to these questions are found through the study of earth science. We will use field trips, interactive lectures, and a wide variety of laboratory activities and experiments to help you understand and appreciate the complexities of planet Earth. The week will include a guided tour of the Talisman Energy Fossil Gallery at the Canadian Museum of Nature, and an outdoor field trip to Hogs Back Falls.

*Instructors: Beth Halfkenny and Earth Sciences Graduate Students*

*Faculty Advisor: Prof. Brian Cousens*

*Department: Earth Sciences*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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## **207: Natural Disaster Hollywood Blockbusters: Fact or Fiction?**

Abstract:

Ever wonder if we could have a sudden climate change that sends us into a new ice age? Or what would happen if the Earth's core stopped spinning? Can volcanoes create lakes of acid and melt metal boats? We will learn the basic processes, and present real-life case studies of natural disasters. Together, we will view and explore the science behind these natural disaster blockbusters. You may be shocked at what you learn!

*Sensitivity: Rated PG-13 for intense disaster related elements and brief strong language.*

*Instructors: S. Katie Ploeger*

*Faculty Advisor: Prof. Clair Samson*

*Department: Earth Sciences*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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## **208: Computer Science and Games: Just for GIRLS\*!**

**\* IMPORTANT - Registration is restricted to GIRLS only!**

Abstract:

Are you a girl that has ever wondered what computer science was all about, but has been too afraid to ask? Whether you are 'geeky' or the opposite, this is your chance to learn about computer science, and to see how it is involved in the design and development of video games. After taking a quick look at the state of the industry and how women are involved, we will cover such topics as game design, usability, graphics, and artificial intelligence. Best of all, you will get to work on making your own game to take home at the end of the week! Not to worry; you won't even need to write a single line of code if you don't want to!

*Instructor: Gail Carmichael*

*Faculty Advisor: Prof. David Mould*

*Department: Computer Science*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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## **209: The Recipe for Entertainment: Computer Science and Video Games**

**IMPORTANT - Registration is restricted to BOYS only!**

Abstract:

Ever wonder how those video games you love are made? This is your opportunity to learn about Computer Science through one of its most popular aspects: video games! We'll discuss topics such as

game design, graphics, artificial intelligence, the state of the industry, the history of games, and generally what makes games good! We are going in-depth to show you what is involved in the creation of video games. The best part of it all is that you will get to design and create your own video game to take home with you!

*Instructor: Oliver Crosby*

*Faculty Advisor: Prof. David Mould*

*Department: Computer Science*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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## **210: Teach Your Computer to Paint**

Abstract:

This is a course that can be taken by anyone with an interest in art or an interest in computers. In this course, we will learn how to make digital drawings, sculptures and paintings by programming within the 'processing' environment. 'Processing' is an interactive system especially created for digital artists -- artists can work inside it to get some computer help in making animations, graphics, and even artificial life. The course will cover some recent concepts in computer-generated art and will include lots of hands-on practice where participants can experiment with making their own computer art and animations.

*Instructor: Hua Li*

*Faculty Advisor: Prof. David Mould*

*Department: Computer Science*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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## **FACULTY OF ENGINEERING & DESIGN**

### **211: Be a Civil Engineer for one Week and Build your Mini House**

Abstract:

In this course, the student will be exposed to all civil engineering disciplines. Students will visit research labs and facilities. General steps for a mini house design will be explained in the class and for the last two days groups will be assigned for building different stages of a mini house that includes mixing and pouring concrete for the foundation, wood frames as well as roof and shingles.

*Instructor: M.A.Majeed*

*Department: Civil and Environmental Engineering Department*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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### **212: Creative Biomedical Engineering for a Better Future**

Abstract:

The world around us continues to grow and develop, and engineers must come up with innovative ideas that can adapt to these ever growing demands. Through the application of the concepts that you study in mathematics, biology, physics and chemistry, the scientists and engineers at Carleton University are designing fantastic technologies that improve the future! Come to Carleton to see some cool technologies like a muscular rehabilitation system that lets you play a game using your muscles! Some other cool gadgets include the Electronic Nose, the automated Smart Home, an assistive Robotic Exoskeleton and a robotic Guide Dog. Step into the world of creative biomedical engineering at Carleton University!

*Instructor: Nanis Farghal*

*Faculty Advisor: Prof. Adrian Chan*

*Department: Systems and Computer Engineering*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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### **213: Inside a Robot's Brain: Basics of Artificial Intelligence and Programming**

Abstract:

Have you ever wondered how robots think? Have you ever thought about how computer games work? Do you know how your Playstation, Xbox, or Wii games beat you almost every time? If you are interested in robots, games, and computers, then this course is for you. In this course we will start by learning the basics of algorithm design. We will then move to computer programming and basics of artificial intelligence. Students will then design and implement their very first computer game using simplified instructions.

*Instructor: S. Ali Etemad*

*Faculty Advisor: Dr. Ali Arya*

*Department: Systems and Computer Engineering*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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### **214: Design skills for the digital world of the 21st century!**

Abstract:

This mini-course will introduce students to the world of interactive media and design through hands-on tutorials using graphic and web design software, computer animation, video effects, and 3D visualization. Students will also have a chance to work inside our film and sound recording studios using green-screen and optical motion capture technologies to develop their own visual productions. This includes a visit to our Human Computer Interaction (HCI) technology laboratory.

*Instructor: Johnny El-Alam*

*Faculty Advisor: Dr. Anthony Whitehead*

*Department: School of Information Technology*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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### **215: Humans in Space! – Past, Present and Future**

Abstract:

What was the Space Race and how did it change our world? Who were the first man and first woman in space? What did astronauts leave on the moon? What critical things have Canadians done and what are we doing now for space? What is it like to live on the International Space Station today? How does one get to be an astronaut or a rocket scientist?

Come learn the answers to these questions and many more! Bring your own questions! In this course, we will learn some history, learn what is happening today and take a look to the future of human space flight. We will launch small rockets, design a moon base, explore your favourite space topic, and tour the Carleton Engineering labs. We will learn about the space explorers from various countries, and look especially at the important roles that Canadians have played and are still playing in space exploration.

*Instructor: Barbara Eade*

*Department: Mechanical & Aerospace Engineering*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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## **FACULTY OF PUBLIC AFFAIRS**

### **216: GOT LAW? An Introduction to Law and Sentencing**

Abstract:

Ever wonder what two things are needed to make something a crime? If someone vandalizes twenty cars in one night is the

punishment they receive going to be the same as if they vandalized only one car? What do sentencing judges look at before handing out punishment? What makes someone a youth offender? Ever wonder why 2 hockey players only get penalties when they fist fight on the ice and not jail time? What sort of law governs hockey players?

Who can you sue if you get hit with a hockey puck in the face at a game? Can you sue? What is the difference between Facebooking and Facebook Bullying? Is it against the law to post a photo of someone on Facebook without their permission? Can you be given a ticket if you don't wear a helmet on your bike? What are your rights at 13 and 18 years of age? Are they different?

In this mini course students will learn a basic introduction to Canadian law and the Canadian legal system and laws around sentencing. Topics will be relevant to the age group of the students and how law affects and shapes their daily lives. They will visit the Supreme Court of Canada and have open discussions about some of the more famous cases tried there. They will visit the Ottawa Court House and see where real life legal proceedings take place. They will speak with a peace officer who has worked for the Ottawa Police service for over 15 years and get a real life account of what it is like to be a youth offender. What happens? How do the police treat youth offenders? What laws govern the police? Got Law? The course you need moving forward into adulthood and perhaps a career in the Canadian judicial system!

*Instructor: Barbara Ann Vocisano*

*Faculty Advisor: Prof. Alan Hunt*

*Department: Law*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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### **217: People for Sale? Understanding and Challenging Modern Day Slavery**

Abstract:

You thought slavery was abolished more than 200 years ago? You were right. Yet there are about 27 million slaves in the world today. That's almost the population of Canada, living in situations of severe labour or sexual exploitation ... or both. Learn what it is like to be a slave in 2011, in Canada and around the world. Research the economic and social causes of trafficking in persons, a modern form of slavery. Become an international lawyer for a day and see what treaties say about modern slavery. Learn about the roles of law enforcement and social services in helping trafficked persons. And find out what you can do in your own community to stop human trafficking.

*Instructor: Christina Harrison Baird*

*Department: Law*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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### **218: Political Science at the Movies**

Abstract:

From the Cuban missile crisis to the war on terror, there are so many amazing movies that touch on the very same issues that political scientists study. Is it okay to torture people if we think they have information that could prevent a terrorist attack? Why did the United States invade Iraq in 2003? Was Canadian Prime Minister Pierre Trudeau right to invoke the *War Measures Act* during the October Crisis in the 1970s? Are corporations people? These are just some of the politically charged issues we will discuss in this course, with some help from a wide variety of groundbreaking documentaries, Hollywood blockbusters, and little-known independent, Canadian, and foreign films. Whether you simply love movies, or want to learn more about politics and the study of politics, you'll love this class!

MATURE CONTENT, specifically movies containing realistic violence, although always in a clear context that serves the interests of the course, possibly offensive language, and possibly brief nudity (though all movies shown in class will have an Ontario rating approving them for viewing by anyone 14 years of age or older; no movies with a more restrictive rating will be shown, out of consideration for the age of the students likely to take this class).

*Instructor: Matthew MacDonald*  
*Department: Political Science*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **219: Come and Explore Europe: A Backpacker's Guide**

Abstract:

Come and explore Europe! Discover the history, languages and diverse cultures of the 27 European Union (EU) Member States. Filled with colourful leading political figures, from Silvio Berlusconi to Angela Merkel, and leading celebrities such as David Beckham and Robert Pattinson, the EU is a fascinating part of the world to visit, study, and work in.

What is the background of the EU and why was it created? With the ongoing economic turmoil facing Europe today, how does this affect the EU and subsequently the world? How is the EU relevant for Canada? Learn about exciting opportunities of travelling and working inside Europe. We explore these topics in detail using the Internet, group and individual activities, and videos. Examine and experience Europe through its music, movies, and art. Learn about Carleton University's European activities and how you can become involved. Join us on this adventure through the EU!

*Instructor: Lauren Tognola*  
*Faculty Advisor: Prof. Joan DeBardeleben*  
*Department: European Studies*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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## **FACULTY OF ARTS AND SOCIAL SCIENCE**

### **220: "I'll see You on Facebook": What does it really mean to 'win friends and influence people'?**

Abstract:

What makes an interesting status update, a much viewed profile or a fun friend comparison application? With more than half a billion active users, Facebook is currently the most popular social networking site in the world. Building on Marshall McLuhan's phrase 'the medium is the message,' communications scholar Neil Postman pointed out "[O]ur languages are our media. Our media are our metaphors. Our metaphors create the content of our culture."

In this fun course we will explore the theoretical roots of social networking sites such as Facebook and Twitter and examine how information exchanges that take place through 'texting', micro-blogging and image sharing are changing how we think, act and communicate with others. Other areas of interest include: how do conversations take place through status updates? Are Facebook friendships based on genuine understanding, or are we more driven to make friendships based on a need for recognition? Which applications, games and quizzes are the most popular and why? What were some of the historical reactions to elements such as Newsfeed and implications on self disclosure and privacy? Students will be asked to apply theoretical material taught in the lectures in fun group projects which they will present at the end of the course. As a special treat, this course will feature a 'mystery' guest speaker.

*Instructors: Devjani Sen*  
*Faculty Advisor: Brian Tansley*  
*Department: Psychology*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **221: Picture This! The Secret Language of Images**

Abstract:

A picture may say a thousand words, but do you understand the language they speak? Images have a language of their own and when understood, can reveal coded information. In this course we will examine a number of images in order to learn the language of pictures and then work to decode their meanings. What can art tell us about historical events? Do images always tell the truth? How do advertisements influence what we buy and ultimately who we are? In this interactive environment, we will consider historical art, propaganda campaigns and contemporary media images and their multiple ciphered meanings. When you finish this course, you will have the ability to interpret the thousand words a picture says and understand the large number of images we encounter every day.

*Instructor: Brittney Anne Bos*  
*Faculty Advisor: Patricia Gentile*  
*Department: Psychology*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **222: The F---word: Exploring Feminism in Society**

Abstract:

Patriarchy got you down? Needing a little liberation in your life? If you have ever wondered what it takes to be a kick-ass feminist this course is for you! In this course we will discuss different feminist points of view so you can figure out what kind of feminist you want to be. We will also look at how women and girls are portrayed in film, music and advertising to explore how this affects our self-image, relationships with others and role in society. Think girls are no good at math? Think again! This and other gender myths will be presented and debunked. Come on girls *and* boys (you only need one X chromosome to get in) let's get our empowerment on!

*Instructor: Andrea Thompson*  
*Faculty Advisor: Dr. Connie Kristiansen*  
*Department: Psychology*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **223: Heritage 101: Did you know that buildings need doctors too?**

Abstract:

Have you noticed that some part of the Parliament Buildings is always covered up? Do you ever wonder what goes on behind those tarps? Did you know there used to be houses, a castle, a church and even a cemetery in the Coliseum? Have you ever seen a modern building built on top of an old church? In this course we will look at what built heritage is and how it is conserved today. Looking at virtual models of ancient buildings and pictures of what is left today we will then discuss why conservation is important. We will also look at videos for a look at how buildings are restored. After this course, you will never look at an old building the same way again!

*Instructor: Cristina Ureche-Trifu*  
*Faculty Sponsor: Victoria Angel*  
*Department: Canadian Studies*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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**224: *Vampires –from Nosferatu to Count Chocola***

Abstract:

In cultural studies, scary monsters from Dracula to Twilight, have scared and delighted audiences for centuries. What scares teenagers today? Why do we like these films? This course will begin with a brief look at the original Vampires—silent films with creatures that glide about with pale skin and control the afterlife. We will do creative writing activities, where you can write your own scary films. We will create scary plots and characters, and discover our own inner talents at directing, acting, and designing the scariest stories ever. We will learn about what made people scared in the 1900's. How do you scare an audience in a silent film? We will look critically at different eras of "gothic" films, and examine notions like capitalism, monsters, heroes, good, evil, underworlds, and fear. This course will challenge the way you watch cinema, and make you think about how real life is related to art!

*Instructor: Jessica Woodman*  
*Faculty Advisor: Dr. Brian Johnson*  
*Department: Canadian Studies*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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**225: *I Love Rock n Roll: Introducing a Popular Music Genre***

Abstract:

Rock music is a popular genre with a long history. In this course we ask: What is rock? Where did it come from? How has it changed? We begin by unpacking the cultural and musical contexts in which early rock music emerged. Then subsequent changes in rock sound and style are highlighted, with particular attention paid to the punk, alternative, and indie rock genres. Tracing the cultural emergence and evolution of rock will involve: listening to songs; examining lyrics and writings about rock; and watching and critiquing the various media (e.g. television shows, Hollywood film, and music videos) that shaped and informed the popularity of rock. Developing these critical strategies will change the way you think about popular music!

*Instructor: Michael Audette-Longo*  
*Faculty Advisor: Prof. Paul Théberge*  
*Department: Literature, Art and Culture*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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**226: *So You Think You Know Popular Music?***

Abstract:

In this introduction to musicology, students will learn about many lesser-known aspects of popular music, including its history and evolution. How is music political? How does music shape and define culture? What are the connections between music and constructions of gender and sexuality? These are some of the questions we will consider.

Expect a highly interactive course where students will discover different ways of listening to, and talking about, music. We will explore a variety of genres and styles including blues, rock and roll, hip hop and many more. Course highlights include stimulating listening examples, music video analyses and hands-on musical experiences, including drum circles. You don't need to play an instrument; all you need is an interest in music. Open to everyone!

*Instructor: Keith McCuaig*  
*Faculty Advisor: Dr. Anna Hoefnagels*  
*Department: Arts and Culture*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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**227: *A Picture's Worth a Thousand Words: understanding the images around us.***

Abstract:

From celebrity gossip magazines to Facebook profiles, images not only surround us constantly, but affect the ways we encounter the world and perceive of ourselves. While we are all used to glancing at such images without giving them any thought, they have been constructed and placed around us for specific reasons. This course will help students become active observers of the images that surround them by teaching them about the art historical traditions that popular images draw on. Topics will include gender and identity, cultural and racial stereotyping, the construction of celebrity, and the use of documentary photography in news media, among others.

*Instructor: Sheena Ellison*  
*Faculty Advisor: Ruth Phillips*  
*Department: Art History*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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**228: *Understanding Representations of Jews and Muslims in Popular Film and Television***

Abstract:

How are Jews and Muslims presented in popular television and film today? What are the misconceptions and gaps being presented through these popular images? How do these representations affect the way one understands different religious traditions? This course aims to explore common misconceptions/assumptions about these religious groups through popular depictions in film and television and how these representations can be understood. By examining clips, students can begin to uncover how certain stereotypes are formulated about religious groups and what impact these portrayals can have on society as a whole (or how these images are imprinted in the minds of a popular audience). The uncovering of particular stereotypes and biases will empower audiences to have an increased awareness of what they are viewing and thus, understand how it shapes viewers' perceptions.

*Instructor: Jacqueline Shabsove and Jessica Gonzalez*  
*Faculty Advisor: Dr. Deidre Butler*  
*Department: Humanities*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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**229: *The Philosopher's Stone: What Harry Potter, Clark Kent, Buffy, and Captain Kirk Can Teach Us about Philosophy***

Abstract:

The movies and shows that entertain us can reveal a number of life's most interesting and challenging questions. In this mini-course, we will watch a few of our favourite characters as they encounter situations and dilemmas relevant to the most enduring philosophical questions. What can we know? What is morality? What is a mind? Our goal will be to acquaint ourselves with several key philosophical theories, to think about the way we think, and to learn to spot these important concepts as we encounter them for ourselves. Join us for a week as we explore the philosophical themes that appear in the everyday lives of our favourite characters, and in our own.

*Instructor: Mary Renaud*  
*Faculty Advisor: Annie Larivée*  
*Department: Philosophy*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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### **230: Ethics of Eating**

Abstract:

Food is more than a substance that we consume, as it affects our sense of self and colors our social interactions. Food deserves thoughtful consideration. Should we eat local, organic, or industrially produced food? Should we eat meat or should we live as vegetarians? Where and how should our food be produced? The media bombards us with contradictory messages with regard to food. Our job, as responsible citizens, is to sort through these messages and make educated decisions regarding our own health and safety. What kinds of food choices and decisions are we responsible for? Can we be held ethically responsible for our own food choices? These themes will be explored through discussion of documentaries, media articles, and personal experiences.

*Instructor: Sarah Hoffman*  
*Faculty Advisor: Vida Panitch*  
*Department: Philosophy*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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### **231: Watch Your Brain Work!**

Abstract:

Linguists and other cognitive scientists measure brain waves and use the data they collect to unlock the mysteries of the human mind. In this course you will too. How does your brain process language? How does your brain tell a dog's bark from the sounds in your name? How does it respond to a friend's smile or frown? These are some of the questions you will investigate using state-of-the-art brain-wave measuring techniques developed by Neuro/Bio psychologists. Through laboratory activities, collecting and analyzing data, students will learn about the mind and the brain while developing the skills needed to set up their own mini brain-wave experiment. This hands-on course requires students' active participation. It also serves as an introduction to Linguistics and Cognitive Science.

*Instructor: Kathy Van Benthem, Sarah Cebulski, Liz Christie, Deirdre Kelly, and Prof. Masako Hirotoni*  
*Faculty Sponsor: Prof. Masako Hirotoni*  
*Department: Linguistics & Language Studies, & Institute of Cognitive Science*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **232: Bippity-Boppity-What? Jumping Down the Rabbit Hole of Classic Disney Movies**

Abstract:

Ever wonder where the classic Disney cartoon movies came from? Want to know the history of stories like *Beauty and the Beast*, *Cinderella* and *Sleeping Beauty*? This course examines Disney movies, their histories, and the influence of folk tales in contemporary Western culture. We will explore the origins of the internationally popular Disney Princess phenomenon, and look at their original folk tales and contrast this with how they are portrayed in the films.

Were Cinderella's step- sisters really that bad? Are step- mothers always evil witches? Why do animated animals talk? Come and find out as we explore the origins of your favourite characters and their tales!

*Instructor: Sarah Spear*  
*Faculty Advisor: Prof. Anne Trepanier*  
*Department: Canadian Studies*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **233: Beyond "good" grammar: Language made unborring**

Abstract:

Do the Inuit really have 200 words for snow? Can a language go extinct? Why do people have accents? Does a person's language affect how they see the world? R U ZZZ of EVRE1 saying that kids 2DAY can't spell?

In this mini-course we will look at language as it exists outside of your grammar textbook and discover how quirky it really is. We will debunk common language myths (Are some languages really better than others?), examine the assumptions our society has about language (Who says girl-talk is just gossip?), look at how and why words change their meanings over time (How can something be both awesome and wicked? Cool and hot?), and discover why text-speak is not an abomination of the English language.

*Instructor: Erin Bidlake*  
*Department: Linguistics and Language Studies*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **234: Write by the River – Explore, reading, writing, travel, & life.**

Abstract:

Part writing workshop, part creative inquiry into the possibilities of living, this course will take place in a window lined room beside water, and occasionally, on the banks of the lovely Rideau river. Together we will learn skills to help you read and write poetry, short stories, novels, personal essays, articles, blogs, musical lyrics, travel, humour and memoir writing. Students will view a thought provoking film, and write fun, stimulating writing exercises designed to unlock their great ideas and jumpstart their creative thinking. You will write a postcard story, and in groups of three write 3 chapter mini novels. Shared in-class writing will be discussed and any previously written pieces you wish to bring along will also receive feedback and encouragement. You can look forward to a guest writer, homemade chocolate chip cookies, and other pleasant surprises.

*Instructor: Richard Taylor*  
*Department: English*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **235: Movies and Turning Points**

Abstract:

There are many critical moments in a person's life that may change one's social standpoints and alter one's previous destination in life. The 'turning point' has always been a recurring topic in cinema. The portrayal of turning points in films helps us not only to identify these challenging moments in one's life but also to explore the social and psychological conditions that constitute these turns. In this course, we will examine a range of films that deal with characters and the turning points in their lives during the progression of the film's plot.

*\*Although none of the selected films contains strong adult themes and/or explicitly sexual or violent imagery, still from some angles they might potentially be controversial. Students who take film related courses should be able to take a critical distance from what is shown. If this poses a problem, you need to talk to the instructor before taking the course.*

*Instructor: Mohsen Nasrin*  
*Faculty Advisor: Prof. Andre Loiselle*  
*Department: Art and Culture*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **236: Let's design a language**

Abstract:

In this course we will make up our own language from scratch. To do that, we will first need to learn about linguistics, the science of language. We will investigate the range of diversity across human languages in both their sounds and their grammatical structure, using a variety of audiovisual materials from the languages of the world. During the first half of each day we will learn some aspect of linguistics, while during the second half we will apply what we learned to construct a plausible language of our own. The course will give students a hands-on introduction to linguistics, providing them with the basic knowledge of the subdomains of the field: phonetics, phonology, morphology, syntax, and semantics.

*Instructor: Lev Blumenfeld*  
*Department: Linguistics and Language Studies*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **237: How Can Psychology Catch a Criminal?**

Abstract:

What makes a person commit a crime? How do the police catch a criminal? Why do eyewitnesses make mistakes? This course will introduce students to the fascinating world of forensic psychology. A variety of topics will be explored throughout the week including police investigations, eyewitness identification, criminal profiling, and jury decision-making. Students will learn about these topics through activities, discussions, videos, and lectures.

*Audience: There is a possibility for mature subject matter given that this course will be discussing criminal acts that may involve violence.*

*Instructors: Julie Dempsey*  
*Faculty Advisor: Prof. Joanna Pozzulo*  
*Department: Psychology*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **238: The Age of Heroes: Understanding Comic Books in Society**

Abstract:

From the Yellow Kid to DC's New 52, from WW II propaganda to The Avengers movie, the last 100 years has been the century of the comic book. This mini-course will study the rise of this unique collaborative art form, its struggles with censorship and other challenges, and how it connects with each generation of readers. The aesthetics of comics will be examined through the Golden, Silver, Bronze, and Modern Age, and the influences of Underground Comix, manga, independent publishers, and increasingly sophisticated readers. We'll look at the best examples of the genre, and create our own comic together in class!

*Instructors: Miles Tittle*  
*Department: English*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **239: "The L337 Pen: Narrative and Plot Constructs in Video Games"**

Abstract:

This course will examine narrative and plot constructs in role-playing games (RPG's), and how this form of interactive media is developed. We will address the impact that various levels of storyline complexity have on the success or failure to deliver a positive gaming experience. Writing workshops throughout the week will produce

character sketches, dialogue scenes, plot construction, and game-world geography, archeology, mythology and history. Our week will include discussion, debate, gameplay and media presentations focused on games, movies, and novels such as Tolkien's Lord of the Rings. On the final day, the students, in groups, will present an outline for their own game using their newfound knowledge and insight. The games examined, such as the *Final Fantasy* series, will have age-appropriate ratings.

*Audience: All material (games, movies, & possibly documentaries) will carry an appropriate rating for the age group.*

*Instructor: Erica Leighton*  
*Faculty Advisor: Prof. Brian Greenspan*  
*Department: English*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **240: "Stop them damn pictures:" Political Cartooning as a Catalyst for Social Change**

Abstract:

This course will introduce students to the history of sequential art through examples from international political cartooning. By working with primary documents, students will develop tools for critically reading images. Activities will include mini-lectures, hands on activities (including visual analysis worksheets), short readings, guest speakers a (tentative) field trip, and group discussions to encourage students to think critically about political cartoons and social change. Based on their independent interests, students will develop political cartoons on international, federal, provincial and municipal issues, as well as a politician (or two) of their choice, with the goal of publication in appropriate newspapers. Though creativity and collaboration are required for this class, drawing skills are not. Students are encouraged to bring political cartoons to discuss during the week.

*Instructor: Amanda Murphy*  
*Faculty Advisor: Prof. Andre Loiselle, Director*  
*Department: Canadian Studies*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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### **241: Gangsters, Geeks and Gamers: Here Come The Youth!**

Abstract:

"Don't visit that website!" "Leave your backpack at the counter!" "Stop Texting!" Do you ever hear these phrases? Do they make you feel like you are treated differently because of your age? Adolescence has long been seen as distinct phase in the development process, and in this course we explore the culture and sub-cultures associated with 'youth'. We will look at the symbolism youth attach to clothing, music, and technology, and how these same symbols are interpreted by members of the dominant culture. Through engaging activities such as creating a "culture blog", exploring the media's portrayal of youth in film, television and news, and creating your own "youth magazine", we will try to understand the social construction of youth as a category.

*Instructor: Lyndsay Gray*  
*Faculty Advisor: Prof. Neil Gerlach*  
*Department: Sociology*  
*Grades 8-11, Ontario/Sec. 2-5 Québec*  
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**242: Bird's eye on the Tiger's Den: Backpacking through South Asian Culture and Society**

**Abstract:**

Where is South Asia? Have you ever heard of the world's largest mangrove forest - the Sundarbans or the stories of the man-eating Royal Bengal Tiger or the cultural traditions derived from the highest mountain ridge – the Himalayans? Have you ever wondered how ancient South Asian civilizations (Ajanta-Ellora, Mohenjo-Daro, Harappa, etc.) view the origin of the universe?

This mini-course will explore how contemporary South Asian culture is deeply rooted in the elements in ancient history, folk and village culture and still continues to shape politics and society. It offers an introduction to history, politics, language, identity, social mobility and religious traditions in contemporary South Asia. Students will engage in discussions to learn what is meant by "South Asian Uniqueness" and how we understand South Asian ethnicity, nationalism, territoriality, food, dress, popular culture, etc. through music, film, literature and Himalayan traditions.

*Instructor: Hossain Rabbi*

*Faculty Advisor: Professor Blair Rutherford*

*Department: Anthropology*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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**243: Adventures in Mathematics and Statistics**

**Abstract:**

This course will explore a variety of mathematical and statistical activities. Our sessions will involve a selection of activities such as: constructing geometric objects, showing  $1 + 1 = 10$ , mathematics of the ancient world, designing your own casino games for a "casino afternoon" and calculating your expected winnings, mathematics of the Rubik's cube, problem solving, the nature of infinity, paradoxes in mathematics and statistics, probability and statistics and how these can be used to confuse an unwary public.

*Instructor: Ann Woodside*

*Department: Department of Mathematics*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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**244: Dinosaurs! (Need we say more?)**

**Abstract:**

Before the 19th century, dinosaur bones were thought to be from dragons, ogres or even giant victims of Noah's flood! But now that paleontologists know better the evidence seems even stranger than any legend or fairy tale. Dinosaurs have always fascinated us, whether through museum exhibits or Hollywood blockbuster films, but how much do we really know about these great beasts? Why were T-Rex's arms so small and what were Stegosauruses back plates really for? In this course, you'll learn about some of the greatest dinosaur mysteries and the newest discoveries in the field while completing in-class workshops and even travelling to the Canadian Museum of Nature to see incredible fossils for yourself!

*Instructor: Amanda Kijewski*

*Faculty Advisor: Prof. Audra Diptee*

*Department: History*

*Grades 8-11, Ontario/Sec. 3-5 Québec*

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**245: Exploring the Ethnographic Film: An Introduction to Visual Anthropology**

**Abstract:**

What are ethnographic films and how are they different from other kinds of documentaries? This course will explore how anthropologists and ethnographers use ethnographic films to record certain aspects of the cultures they study in a visual format. In this course students will watch films made in the Arctic, Africa, China and other parts of the world and develop an understanding of different kinds of ethnographic films and how they have evolved over the past century. Many of these films focus on ritualistic or symbolic aspects of indigenous people's lives. At the end of this course students will have the opportunity to propose and storyboard their own ethnographic film.

*Instructor: Alana Conway*

*Faculty Advisor: Blair Rutherford*

*Department: Anthropology*

*Grades 8-11, Ontario/Sec. 3-5 Québec*

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**246: Zombies ate my Neighbours: zombies and interpretations of apocalypse**

**Abstract:**

Zombies have invaded popular culture. Once merely the subjects of horror films, zombies now feature on television, in video-games and, with the rise of 'zombie walks', as spectacle in cities. Has this popularity changed the relationship of the zombie to apocalyptic scenarios? How do our current relations to government, strategies of disease control and conceptions of race and class inform the internal cultural narrative of the zombie film? This course interrogates these questions by using social theory to examine cultural and socio economic narratives in a number of zombie films, ranging from Night of the Living Dead (1968) to Dawn of the Dead (2004). The course finishes with students staging their own zombie walk in downtown Ottawa. Films may contain violence and coarse language.

*Instructor: Aaron Henry*

*Faculty Advisor: Prof. Justin Paulson*

*Department: Sociology and Anthropology*

*Grades 8-11, Ontario/Sec. 2-5 Québec*

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**247: Sugar and Spice but Not Always Nice: Understanding the Social World of Girls**

**IMPORTANT - Registration is restricted to GIRLS only!**

**Abstract:**

Have you ever wondered why girls who were your best friends last week are suddenly excluding you from their plans and telling malicious, hurtful rumours about you? Together we will examine this phenomenon called "social aggression" within the broader context of the dynamics of girls' social groups. We will discuss the role and forms aggression can take in girls' friendships and explore possible explanations for why aggression is kept underground in girls' groups. We will look at bullying and emotional abuse within close friendships. Our goal will be to generate effective strategies for dealing with conflict in close relationships and to explore ideas for enjoying friendships without fear or dread of what tomorrow might hold.

*Instructor: Tina Daniels*

*Department: Psychology*

*Grades 8-11, Ontario/Sec. 3-5 Québec*

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### **248: *The Anthropology of Science Fiction***

Abstract:

What do Star Trek, Twilight, Lord of the Rings and Zombieland have in common? Science fiction writers often use their writings as social commentaries on our own society. They offer an exploration of social issues such as racism, stereotypes, identities and other questions explored by social science. The anthropology of science fiction often presents ideas so bizarre and unusual that readers can explore issues in social sciences from a weird and wonderful world. This course will have fun exploring current issues in culture by examining science fiction, fantasy and horror from an anthropological perspective. We will also be participating in an Archaeological dig of an alien landing site!

*Instructor: Rodney Nelson*  
*Department: Canadian Studies and Anthropology*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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### **249: *Monster Mash: The History of the Horror Film***

Abstract:

Horror films are among the most popular kinds of movies today. But where did they come from? Why have they struck such a chord with audiences – just what is so appealing about being scared? This class explores the history of horror movies from the beginning, touching on its major archetypes like the vampire, werewolf, ghost, mad scientist, Frankenstein's monster and King Kong. It will introduce some of the key critical approaches to the horror film, and students will have the opportunity to propose their own horror movies. We will have a guest appearance from Matthew Brulotte, editor of several horror films. Note: screening selections will avoid highly bloody and sexual material, but there will be fright imagery.

*Instructor: Murray Leeder*  
*Department: Film Studies*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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### **250: *Teenage Rampage! A Brief History of the Teenpic***

Abstract:

Teens are constantly blamed for the “dumbing-down” of contemporary multiplex movies. Since the 1950s, the argument goes, commercial filmmaking has been designed to cater to the singular tastes of its largest movie-going audience: teenagers. The history of this “juvenilization” of the movies has brought us rock ‘n’ roll teen pics, dangerous youth films, monster flicks, beach party movies, teen sex comedies, slasher films, superhero movies and the rise of the summer blockbuster.

Decade by decade, this course will consider the cultural history of the teen film market and the representations of youth in these “teenpics” while challenging the criticism that these are simply “juvenile” movies by looking at teen films, from *Rebel without a Cause* to *Babylon*, that explore and illustrate the complexity and accountability of the adolescent experience.

*Instructor: Nick Shaw*  
*Faculty Advisor: Prof. Zuzana Pick*  
*Department: Film Studies*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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### **251: *Feed the World! – From Bololand to Band Aid***

Abstract:

Rock stars, royalty, super models and politicians spring on to our televisions and computers to plead for donations when a natural disaster strikes. Have these images ever inspired you to consider working or volunteering for a foreign aid agency? Or, have you ever wondered what happens behind the scenes when aid organizations scramble to help those in need? In this course we will consider film, music and other media to look at how groups like Doctors Without Borders, the Red Cross, Oxfam and others, gain support and deliver aid around the world. With the help of discussions in class, a field trip and guest speakers, we are going to look at Canadian and international efforts, both past and present.

*Instructor: Will Tait*  
*Faculty Advisor: Dr. Dominique Marshall*  
*Department: History*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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### **252: *Texpectations***

Abstract:

The course, Texpectations, will be about language in or of the new media: blogging, twitter, YouTube, Facebook, and texting. The course will first show the importance of language and how it can be studied in connection to new media. We will consider questions like: is texting ruining English? Or, have the new media expanded the function of language in building relationships? How do new media facilitate new linguistic expressions of identity? How do new media harness or constrain language change?

*Instructor: Jaffer Sheyholislami*  
*Department: School of Linguistics and Language Studies*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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### **253: *Introduction to American Sign Language: Breaking the Sound Barrier***

Abstract:

Has anyone ever shown you anger, boredom, or flirtatious interest with just a look and a small movement? We use a lot of body language to get messages across. You might be surprised to learn that you already have many of the skills needed to start communicating in American Sign Language, but imagine how much more you could express! In this course you'll take some of the skills you already have and discover how to transfer them into learning ASL. The course will focus on basic sign skills, learning about Deaf culture and the Deaf community, and dispelling misconceptions about Sign Language. Explore a language that requires you to communicate using your hands, face, and body. Challenge the way you think about language and communication.

*Instructor: Jon Kidd*  
*Department: School of Linguistics and Language Studies*  
*Grades 8-11, Ontario/Sec. 3-5 Québec*  
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