

University of Alberta  
Thursday, November 2, 2023

## Workshop Catalogue

Code	Title	Description	AM	PM	Presenters (Department)
A01	<b><i>Nerves, Muscles and Brains: An introduction to the neuroscience of human movement</i></b>	This interactive workshop will provide a fun and informative introduction to how the nervous system controls human movement. Participants will get hands-on experience with "electromyography", a technique used to record muscle contractions, and they will see and hear the electrical activity their muscles produce when they contract. We will also use "functional electrical stimulation" to activate nerves in the arms or legs of an awake and conscious human to produce involuntary muscle contractions that can be used for rehabilitation or exercise. Finally, we will use "transcranial magnetic stimulation" to produce involuntary contractions in an awake and conscious human by stimulating the brain and activating the pathway that is used to produce voluntary movements, and we will demonstrate the "map" of our body in our brain that controls our movements.	24	24	Dr. David Collins Alex Ley (Faculty of Kinesiology, Sport, and Recreation)  4-219 Van Vliet Complex
A02	<b><i>Clinical Genetics: The interaction of our genetic make-up with health; solving the mystery</i></b>	In this workshop, you will get to learn the roles of a clinical genetic doctor, genetic counsellor and lab technologist. You will work through scenarios of rare genetic diagnosis in the media.	0	15	Dr. Shailly Jain (Medical Genetics)
A03	<b><i>The Art &amp; Science of Nursing: A commitment to excellence in patient centered care</i></b>	In this workshop, you will have the opportunity to work with state-of-the-art lab equipment and participate in hands on activities that simulate real nursing practice such as taking vital signs, conducting, vision assessments, and listening to heart and lung sounds. You will also learn about the nature of nursing practice in various settings and have an opportunity to interact with current nursing students and registered nurses..	0	16	Katherine Trepanier (Faculty of Nursing)  ECHA 1-240 Nursing Simulation Center
A04	<b><i>Augmented Renal Clearance</i></b>	We will explore "Augmented Renal Clearance" (ARC), a fascinating phenomenon where the kidneys exhibit enhanced filtering capabilities, affecting medication clearance. We will discuss its clinical implications, including suboptimal dosing and increased risk of adverse reactions. Understanding ARC is vital for optimizing treatment decisions, especially for critically ill patients. Join me to unravel the impact of ARC on patients' health and how healthcare professionals can adapt their strategies to ensure safe and effective medication management for those experiencing this unique renal phenomenon.	0	15	Maged Kharouba (Faculty of Pharmacy & Pharmaceutical Sciences)

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A05	<b><i>Nutrition Assessment with Registered Dietitians</i></b>	<p>Participants will discuss a case study patient and learn how Registered Dietitians assess energy metabolism, body composition and dietary intake in client care. During the tour/experience you will see a variety of unique assessments at the Human Nutrition Research Unit (HNRU).</p> <ul style="list-style-type: none"> <li>♥ Energy metabolism: measuring how much energy (fuel) a client needs for good health.</li> <li>♥ Body composition: We look beyond body weight to measure important variables like muscle mass to see how this impacts health.</li> <li>♥ Dietary intake: Learn about the tools and practical strategies Registered Dietitians use to help clients maximize their food intake</li> </ul>	10	10	<p>Stephanie Ramage (Faculty of Agricultural, Life &amp; Environmental Sciences)</p> <p>2-004 Li Ka Shing Centre</p>
A06	<b><i>Hidden in Plain Sight: Medical histology of the brain</i></b>	<p>We will bring simple light microscopes to teach the fundamentals of microscopy through the lens of neuroscience. Using slides with brain tissue from various experimental species (as well as humans), across numerous types of histochemical stains, we will discuss the principles of how neuroscientists identify various brain cell types, and how simple techniques can allow us to identify the presence or absence of pathology in healthcare-oriented neuroscience research. Students will have the opportunity to stain and examine slides themselves using rapid contrast stains, such as toluidine blue, and will "diagnose" various pathologies, such as stroke. They will also gain hands-on experience with using a light microscope. Join us to discover the "hidden world of cells" driving cognition and behaviour, gain an appreciation for translational research, and learn the basics of histopathology!</p>	10	10	<p>Anna Kalisvaart Elmira Khiabani (Neuroscience and Mental Health Institute)</p>
A07	<b><i>The Development of the Brain</i></b>	<p>In this workshop students will use microscopes to directly observe brain development in fruit flies, one of the most widely used laboratory animals in the world. We have established breeds of flies have their body neurons labelled with green fluorescent protein (GFP). Students will have the opportunity to dissect the brains and observe them using advanced fluorescent microscopes.</p>	8	8	<p>Zain Patel Dr. Andrew Simmonds Dr. Qiumin Tan (Cell Biology)</p>
A08	<b><i>Rehabilitation Rounds: An introduction to the professions</i></b>	<p>Join us for tours and activities with the Departments of Physical Therapy, Occupational Therapy and Communication Sciences &amp; Disorders. Learn about what rehabilitation medical professionals do on a day-to-day basis.</p>	30	0	<p>Mark Hall Mary Roberts Andrea Ruelling Cori Schmitz Heidi Van Aerde (Faculty of Rehabilitation Medicine, Communication Sciences &amp; Disorders)</p> <p>Corbett Hall 1-105</p>

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A09	<b><i>The University Experience and Career Building: It's more than just class!</i></b>	In this workshop, you will learn about the many opportunities outside of your classroom that are available for you to take advantage of in university. We often think that we must know 'what we want to be when we grow up' right when we finish high school. But in reality, university can be a great place to continue to explore and build up your skills, knowledge, and passion for a future career that you may have not even heard about yet. We will discuss: <ul style="list-style-type: none"> <li>♥ What professors do when they aren't in class (research) and how you can get involved</li> <li>♥ How to balance a demanding course load while also engaging in career building activities</li> <li>♥ When and how to prepare for what comes after your undergraduate degree</li> </ul>	40	0	Emily Bonisteel Jordyn Cox Dr. Taniya Nagpal (Faculty of Kinesiology, Sport, and Recreation)
A10	<b><i>Cancer: The sneaky monster and our superhero secrets!</i></b>	Join this workshop to learn how researchers are actively working to get better treatments for cancer.	0	15	Mohammad Nasrullah (Faculty of Pharmacy & Pharmaceutical Sciences)
A11	<b><i>Eye Anatomy and Surgery</i></b>	In this workshop, we will give a brief presentation on the anatomy of the eye and what the field of ophthalmology entails. Students will learn about the physiology of the human eye, and we will discuss diseases that affect different parts of the eye. We will also showcase some interesting procedures and what the pathway looks like to become an eye surgeon.	20	20	Dr. Stephen Carrell Dr. Ojas Srivastava (Ophthalmology)
A12	<b><i>Med School 101: Intro to UAlberta Medicine and Clinical Skills</i></b>	So you want to be a doctor, but are not sure where to start? This workshop will overview the Doctor of Medicine program at the University of Alberta, as well as provide an introduction to clinical skills. Hear from first, second and third year students about their experiences in medical school, and learn the basics of suturing (operating surgical instruments) and the cardiopulmonary chest exam.	60	60	Abrar Alam Jessica Bennett Claudia Buffone Saleh Handoo Cam Hillier Marina Kirillovich Madeleine Kruth Weilin Qiu Sam Shang Jason Wang Jesse Wowk Michael Xie Cindy Zhang (Undergraduate Medical Education)
A13	<b><i>Intro to Kinesiology and Sports Injuries</i></b>	In this workshop you will learn about what a Kinesiologist is, and dive deeper into the pathway of sports injury and management. A practical component will include interacting with current Varsity Health Student Trainers as they demonstrate skills used on a regular basis in their volunteer roles.	0	16	Matt Yaworski (Faculty of Kinesiology, Sport, and Recreation)  1-218 Van Vliet Complex

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A14	<b><i>What Do Pharmacists Do? (Hint: it's more than counting pills)</i></b>	The scope of pharmacists' practice has evolved to include a lot more than just counting pills! Did you know that pharmacists also manage chronic medical conditions, administer drugs by injection, work in hospitals, and even prescribe medications? Join some practicing pharmacists for a fun and interactive session that will involve a tour of the Faculty of Pharmacy and Pharmaceutical Sciences lab spaces, practice giving injections (don't worry, not on real people!), and a "race to fill the prescription" complete with prizes for the winners!	20	0	Lisa Tate (Faculty of Pharmacy & Pharmaceutical Sciences)  MSB 1-15
A15	<b><i>Artificial Intelligence in Dentistry</i></b>	During this workshop, our focus will be on exploring the various applications of AI in the field of dentistry. In one segment of the workshop, students will have the chance to brainstorm, drawing from their personal experiences within dental settings, to conceive innovative ways AI could enhance operations within a dental office. Following this creative exercise, we will delve into a comprehensive overview of AI's real-world applications in dentistry. At the end, we will have a hands-on activity where we can work with an AI model that has been trained for dentistry purposes to see how it can be helpful.	5	5	Rojin Adabdokht (Dentistry)
A16	<b><i>So You Want to Know About Medical Laboratory Science (MLS)?</i></b>	In this workshop you will learn about the Medical Laboratory Science program. You will also have the opportunity to observe and practice basic laboratory skills used in the profession. Please come to the workshop with any questions you may have and be ready to participate!	12	0	Richen Basig Christina Lau Roberta Martindale (Laboratory Medicine & Pathology)
A17	<b><i>Radiation Therapy 101</i></b>	An introduction to this specialized health care profession where compassionate care meets cutting-edge technology. Learn about the profession of radiation therapy, participate in a mock treatment and discover your pathway to becoming a student in the University of Alberta's Radiation Therapy program.	15	0	Leslie Wutzke (Oncology)  Cancer Care Institute 0937
A18	<b><i>A Microbiology Escape Room</i></b>	You've received a phone call - a doctor needs your help. Their patient may have Ebola (a kind of viral hemorrhagic fever) and public health must be informed to keep the population safe, as well.  The first challenge: How can we get everyone safely out of the potentially Ebola virus-exposed areas in this hospital? Work together as a team to safely remove all Personal Protective Equipment (PPE) that may be contaminated, without accidentally (and invisibly!) contaminating the area and your colleagues in the process. The winning team will have the least UV-reactive (visible) goo.  An interactive way to learn about the importance and challenges of clinical & public health microbiology.	0	30	Mathew Diggie Natalie Marshall (Laboratory Medicine & Pathology)

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A19	<b><i>Airway Management</i></b>	Ever wondered how a person can have surgery, not feel a thing, and wake up feeling great? It's not magic, it's the art and science of anesthesia! Join us in our high-tech simulated Operating Room, where you can learn more about our field of medicine and get hands-on experiences with some of the coolest tools and technology we use to get air in and out of your lungs!	15	0	Lisa Cruywels Dr. Liban Mohamed Dr. Brigitta Riley (Anesthesiology and Pain Medicine)  HSERC Immersive Lab (309)
A20	<b><i>Hip Replacement Surgery</i></b>	In this workshop you will learn about hip replacements and will get to perform replacements on saw bone models.	10	0	Dr. Ed Masson (Orthopedic Surgery)
A21	<b><i>Admitting a Trauma to Intensive Care Unit</i></b>	The ICU needs help to admit and stabilize a trauma patient. Set up equipment, prioritize care activities and learn how the team communicates in buzzing hive of activity.	9	9	Ellen Reil (Critical Care Medicine)