

Western University
Friday, May 2, 2025

WORKSHOP CATALOGUE

Code	Title	Description	AM	PM	Coordinator/Presenters (Department) and Location
A01	AI in healthcare From ChatGPT to Blood Pressure by Video: Understanding LLMs and ML applications in Health	This workshop will introduce students to the basic terminology of AI/ML related to Healthcare, its successes and its challenges. Attendees will learn the importance of understanding the principles of bias in training healthcare AI Models. Attendees will have hands on opportunity to witness demonstrations for use cases such as Ambient scribe for taking notes during a mock patient encounter and experience use of the Nuralogix App (Anura) to take vitals by facial video. The session will close with attendees creating healthcare literacy prompts for Chatgpt/DeepSeek and through group discussion of outputs, develop basic knowledge and skill for prompt writing as related to Healthcare queries. Students will require access to their smart phone or lap top to access ChatGPT/DeepSeek functions which are free on-line resources.	20	20	Keith Thompson (Family Medicine) Arts and Humanities Building – 1B06
A02	Image Guided Interventions	In this workshop you will learn about medical imaging modalities, such as ultrasound, Magnetic Resonance Imaging, and X-Ray Computed Tomography, and how they are applied in modern medicine. You will also learn about how computers and tracking system (think GPS for surgery) can be used to help doctors perform surgeries. You will be playing with the state-of-the-art ultrasound machine and see first-hand how computer-assisted surgical technique works.	20	20	Elvis Chen (Engineering)
A03	Doing Research and Taking Action to Create Strong and Inclusive Neighborhoods	In this workshop participants will discuss how health professionals like occupational therapists can expand our practice to address community well-being. Workshop participants will explore methods of engaging with communities and building relationships, methods of conducting community-based research with community members, and approaches for making change and advocating for strong and inclusive neighbourhoods.	20		Carri Hand (Occupational Therapy) HSB 232
A04	Human Speech Production: Analyzing YOUR Voice	Learn how humans produce speech and what makes one vowel sound different from another. You will record your own voice and analyze your voice pitch and the characteristics of your own vowel sounds. The software we will use is freely available on the Internet, so you can explore more about sound later at home and school.	8	8	David Purcell (Speech Language Pathology) Elborn College, 1201 Western Road, room EC1555

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A05	Purification of Enhanced Green Fluorescent Protein	The jellyfish <i>Aequorea Victoria</i> can emit a fluorescent glow because of a protein it produces naturally called green fluorescent protein. Because of its fluorescent properties, this protein has become a powerful tool for studying movement of proteins within cells. In this workshop, students will use an affinity tag and column chromatography to purify a modified version of green fluorescent protein from a complex mixture of proteins in a cell extract.		25	Derek McLaughlin (Biochemistry) MSB 117
A06	Extraction of DNA: Getting the Instruction Manual Out	Biochemistry and Synthetic Biology involve the manipulation of genetic information contained in the DNA sequence of genes from different organisms. In order to create novel genes with new functions the DNA must first be extracted from an organism and purified. In this hands-on laboratory exercise students will use biochemical techniques to extract, purify, and analyze DNA from bacterial cultures. Some of the techniques used by students in the lab will include use of micropipettes, centrifugation, and UV spectrophotometry Integrated with various research tools. Participants will get hands-on experience by simulating the role of a research participant.	20		Brian Dempsey Anne Dempsey Elizabeth Connelly (Biochemistry) Medical Sciences Building 120
A07	Understanding the Human Brain and Advanced Research Technologies	In this workshop, you will have the unique opportunity to explore a variety of cutting-edge equipment used to investigate research questions related to the relationships between the physical and psychological. We will demonstrate how this equipment works and explain how it is utilized in applied research on clinical and non-clinical populations. As an example of demonstrations that may be available, you may participate in demonstrations that illustrate: 1) how we analyze gait in individuals with Parkinson's disease, 2) how to collect brain-related data, such as electroencephalogram (EEG) and/or functional Near-Infrared Spectroscopy (fNIRS), as well as 3) how virtual reality integrates with various research tools. Participants will get hands-on experience by simulating the role of a research participant.	20		Derek Quinlan (Centre for Brain and Mind) Western Interdisciplinary Research Building
A08	Pediatric Surgery: An Unbiased Talk about the Best Job in the World	In this workshop you will learn about what life as a pediatric surgeon is like. We will discuss how to become a surgeon, including details about medical training from university, medical school, residency and fellowship. We will discuss what the day-to-day of a pediatric surgeon is like, as well as how research and teaching are a big part of the job of an academic surgeon. We will review some interesting cases and learn about rare congenital defects that pediatric surgeons fix.	20	25	Natashia Seemann (Surgery) SSMD-MSB-148-Classroom

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A09	Human Anatomy: Structure, Function, and Clinical Applications	Join us for a deep dive into human anatomy, where students will learn about the human body through interactive activities and anatomical specimens and models! In this hands-on workshop, we'll explore the structure and function of various organ systems and how this anatomy relates to clinical applications in medicine and other fields.	20	20	Marie Tsai Hannah Traynor Lina Nasirkadir Amrutha Elanko (Anatomy and Cell Biology) Room 2005 in the Dental Sciences Building
A10	Physiotherapy: Exploring Different Areas of Practice	In this interactive workshop, you will have the chance to hear about what it is like to work in different areas of physiotherapy practice. You will also get the chance to experiment with performing a variety of common physiotherapy assessment and treatment techniques	20		Erin Miller Janelle Unger Tina Ziebart Laura Brunton (Physical Therapy) (Ronald D.) Schmeichel Entrepreneurship and Innovation Building, Room ?
A11	"Alzheimer's Disease: Seeing the World Through the Eyes of Someone with Dementia"	Join us for a Virtual Reality 2D Session, where you'll step into the world of Beatriz, a woman living with Alzheimer's disease. This interactive experience, also known as "empathy education," allows you to see the world through the eyes of someone with dementia. Through this session, you'll gain a deeper understanding of how the brain functions and the ways dementia affects it—helping you truly grasp what it's like to live with dementia.		25	Anita Looby Rebekah Lindsay Arts and Humanities Building 1B08
A12	The Physics of Medical Imaging	How can physics help us see into the human body to reveal structure and detect disease? This workshop will provide a glimpse into four types of medical imaging and the basic physical concepts behind these methods. It will include a presentation on magnetic resonance imaging (MRI) and functional MRI, including examples of current research and innovations, followed by hands-on activities to explore computed tomography (CT) and ultrasound.	20	20	Alexei Ouriadov Tamie Poepping Andrea Soddu (Medical Physics) PAB 100
A13	Medical Imaging	This workshop will take a case-based review of interesting clinical scenarios that will highlight the diverse and exciting world of Medical Imaging and the wide array of career choices that are available.	20	25	Narinder Paul (Medical Imaging) UH C3-170

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A14	A Hands-On Introduction to Ultrasound Imaging	In this interactive workshop organized by Western medical students who are also members of CALMS (Canadian Association of Latin Medical Students) you will have the opportunity to learn and directly practice point-of-care ultrasound (POCUS), a ultrasound medical imaging technique which is becoming more and more important in helping healthcare workers quickly diagnose and manage important conditions such as internal bleeding after a trauma, pregnancy complications, heart failure, fractured bones, appendicitis, and many more! It also allows you to visibly learn the human anatomy!	12	12	Andres Jimenez Christian Neira Agonh Marco Herrera Daniel Rocha Barros Fabiana Franco Kellen Maria Rueda (Medicine) Arts and Humanities 1B02
A15	Organ Donation and Transplantation	An introduction to organ donation and transplantation, we will begin by covering criteria for donation and the establishment of brain death as well as how organs are allocated, procured and transported to recipient operating rooms. The second part of the presentation focuses on the history and evolution of transplantation and the current transplant process.	15	15	Peter Barrett (Multi Organ Transplant) Arts and Humanities 1B04
A16	Biomechanics and Engineering: Understanding Injuries and Repair	In this workshop, you will visit Mechanical Engineering labs that study how the human body responds to loads that cause injuries (such as impacts during sport), how injuries change the way the body moves, and how we can evaluate biomedical interventions that try to address these injuries. You will visit researchers and graduate students who perform these experiments on real and synthetic tissues using state-of-the-art equipment. This visit will include live demonstrations - but don't worry, nobody will get hurt.		20	Ryan Willing Haoji Mao Emily Lalone (Biomedical Engineering) Thompson Engineering Building (TEB 306) and Spencer Engineering Building (SEB 8)
A17	National Centre for Audiology - Research in Acoustics and Audiology	Through demonstrations of the equipment and acoustic facilities within the National Centre of Audiology, students will learn about research in hearing, localization, and the profession of clinical Audiology." Presenters: Ewan Macpherson, PhD will discuss how we localize sounds and give a demonstration in the NCA's Anechoic Chamber. Students will also tour the Reverberation chamber with Paula Folkeard, AuD and talk about the effects of echo on hearing, especially for those with hearing loss. Students will learn about how hearing assistive technologies can help people to hear more easily in noise. Susan Scollie, PhD will demonstrate CARL, a simulation manikin that was developed at Western University and how it is used in teaching Audiology students here at Western and around the world	8	8	Paula Folkeard Ewan Macpherson Susan Scollie (Audiology) National Centre for Audiology - Western University Elborn College

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A18	A Journey to Discover Brain Health and Development	Join us for a journey to discover brain health and development where you will delve into the fascinating world of brain development using playdough, theory, and hands-on activities. This workshop takes an interdisciplinary family studies approach to examining how early brain and child development are linked to lifelong learning, health, and well-being. Through tactile and inquiry-based learning, you will participate in a small group activity to label brain parts and learn of the connections between sleep, nutrition, and child to adolescent brain health. Topics like these and more are explored further in the Family Studies and Human Development Program at the Faculty of Health Sciences, Western University in courses such as Human Growth and Development, Development in Adolescence and Emerging Adulthood, and Development in Adulthood and Aging.	20		Roula Hawa Grace Gillet (Food and Nutritional Sciences) FIMS and Nursing Building
A19	The Art and Science of Fueling Athletes	Fueling an athlete is not as easy as you think. There is a careful balance between meeting performance goals, and making sure an athlete is getting all the nutrition they need and not necessarily following the biggest trend. In this workshop, you will learn how sport nutritionists help athletes to achieve their goals and sample some snacks that fuel them for success!	20	20	Danielle Battram (Food and Nutrition) Academic Pavilion - 2013
A20	The Human Brain: Function and Dysfunction in Dementia	This workshop will offer the opportunity for students to share their knowledge about the human brain and dementia, provide basic concepts about dementia, exemplify lived experience of patients with dementia through case reports, promote interactive learning about cognitive testing, and discuss why there is increased need for professionals in the field because of our growing older population.		25	Carolina Silveira Isis So (Cognitive Neurology) Arts and Humanities 2B04
A21	MedReach Presents: Exploring Paths to Medicine & Suturing Workshop	Join us for an engaging workshop where you'll learn from medical students about the various paths you can take to pursue a career in medicine. You'll also get hands-on experience with suturing and have plenty of opportunities to ask questions about high school, undergrad, medical school, and beyond!	20		Merlin Thomas George Kim Adela Gottardi Rhidita Saha Taliya Rizvi (Medicine) Health Sciences Addition (HSA room at Western University)

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A22	Mix, Inject, Heal: Exploring the Science of Injectable Gels	In this hands-on workshop, you'll become a biomedical engineer for a day! You'll try to create an injectable hydrogel with two prepared liquid solutions, then test if it can actually be injected through a syringe—just like real researchers do when designing new medical treatments. Along the way, you'll learn how injectable hydrogels are used in medicine, from healing wounds to delivering drugs and easy-to-understand science behind it. Get ready to do experiments, solve problems, and discover the future of biomaterials!		20	Jiaqi Huang Yasmeen Shamiya Aishik Chakraborty Alap Zahid (Chemical and Biomedical Engineering) SEB 2032
A23	Shedding Light on the Brain: Exploring fNIRS Technology	Ever wondered how scientists can measure the brain while it's hard at work? Join us for an exciting workshop where you'll dive deep into the fascinating world of brain research! Discover how functional Near-Infrared Spectroscopy (fNIRS) uses light to uncover your brain's secrets in real-time. While the brain is what makes you who you are, there is still so much we don't know about it. This workshop will introduce you to new and innovative ways scientists are measuring brain activity.	15	15	Laura Gonzalez Matthew Kolisnyk Garima Gupta Jack de Jeu Evan Skorski Shreeram Patkar Western Interdisciplinary Research Building
A24	Perioperative Ultrasound Guided Nerve Blocks to Reduce the Societal Exposure of Opioids	The opioid crisis puts a real strain on our healthcare systems, highlighting the need for safer pain management strategies that truly make a difference. Ultrasound-guided nerve blocks not only provide excellent pain relief with fewer side effects, but they also help patients recover more smoothly by minimizing opioid-related complications like nausea and constipation. When patients have access to effective regional anesthesia, they often enjoy better mobility after surgery, quicker hospital stays, and overall improved outcomes. By widely adopting these nerve blocks, we have a wonderful opportunity to significantly reduce the number of opioid prescriptions, keeping our communities safer. This shift is so important in preventing short-term use after surgery from evolving into long-term dependence, which is a key issue in the opioid epidemic. As healthcare providers embrace ultrasound-guided nerve blocks within a comprehensive pain management approach, we can make great strides in tackling this public health challenge and enhance pain control during surgeries, leading to better results for our patients.	10		Yamini Subramani Mahesh Nagappa (Anesthesia and Perioperative Medicine) SEB 2032

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A25	Medical Simulation & Engineering: Exploring Diverse Healthcare Paths at CSTAR	Experience the cutting edge of healthcare innovation at CSTAR through immersive simulations and engineering demonstrations. You will practice basic laparoscopic techniques, explore pioneering medical devices, and learn how simulation specialists improve patient outcomes. Gain insights into the many academic routes leading to these in-demand fields—from technical research to hands-on clinical roles—and see how these diverse professionals refine healthcare solutions and improve patient care. This interactive workshop highlights the importance of teamwork and technological expertise in transforming patient care, offering a first-hand look at how emerging disciplines merge to shape tomorrow’s healthcare landscape.	20	20	Karen Siroen Scott Sumpter CSTAR @ University Hospital (8th floor)