STUDENT RESEARCH DAY

Student Research Day Book of Abstracts and Artist Statements 2026

Abstracts and Artist Statements Guide

Listed by Department, then Student Last Name (Alphabetically)

Accounting and Finance		
Sonia Yusuf	Implementation of Data Analysis Strategies within Accounting Curriculums	Poster Presentation
Allied Health and Human Performance		
Aaron Bishop	The Effect of Perceived Distance on Reward Processing: An EEG Investigation	Poster Presentation
Belinda Breadmore, Alix Warnell & Bri Raposo	How Parent Speech Modelling Supports Children's Phonological Development	Poster Presentation
Bethany Piggott	Involuntary Substance Use Treatment: Understanding Impacts for Women and Gender Diverse People in Alberta	Poster Presentation
Anthropology, Economics, and Political Science		
Brandon Biglow	Stealth Climate Governance: How Cities Reframe Climate Action through Health, Economic, and Resilience Narratives	Oral Presentation
Brandon Biglow	Artificial Intelligence and the Teleological Crisis of Education: Performance, Formation, and the Fate of Learning	Oral Presentation
Morgan Brophy	Time in Protracted Conflict: The War in Afghanistan	Oral Presentation
Sofiia Budianska	Creative Qualitative Approaches to Migration Research	Oral Presentation
Rowan Elder	Considering the Implications of Animal Remains at Sandby Borg, Sweden	Poster Presentation
Trina Ellis	The Pros and Cons of Bi/Multilingualism: Language Ideologies among Past and Future Immersion Students in Edmonton, Alberta	Poster Presentation
Mateo Ferretti	Unequal Justice: Social Power and Gender in Law	Poster Presentation
Josh Gaudet	Philanthropic Power and Urban Climate Governance: The Rockefeller Foundation and the 100 Resilient Cities Network	Oral Presentation
Ethan Gladdish	Plato's Republic: Bk V and the Harmony of Word and Deed	Oral Presentation
Jennifer Hart	Quiet Erosion: Political Rhetoric's Effect on Public Servants	Oral Presentation
Kaz Haskins	Leaving an impression: The evolution, impacts, and legacies of relief printmaking	Creative Installation
Kaz Haskins	Global Ties: The role of diaspora communities in Transnational City Networks	Oral Presentation
Montana Jones	"It Calls Me" - An Understanding of The Camino De Santiago and its Modern Pilgrims	Oral Presentation
Jessica Montesa	Self-Expression in Fandom via Shipping	Oral Presentation
Aleace Moom	URBW 497- Panel Discussion; topics in urban health and wellbeing (policy and resiliency)	Oral Presentation

Arts and Cultural Management		
Gurneet Dhaliwal	Understanding Acculturation Stress: Cultural Adaption, Coping, and Mental Health in Immigrant Populations	Poster Presentation
Aidan MacDonald	What is social media's role in defining the current art world?	Oral Presentation
Biological Sciences		
Calista Adams	The effects of habitat selection and fence permeability on white-tailed deer (Odocoileus virginianus) crossings at EINP	Oral Presentation
Alex Agar	Evaluation of Cultivar Mixtures for Clubroot Management	Oral Presentation
Cesar Amador	State Influenza Vaccination Coverage vs. Influenza & Pneumonia Mortality in the United States (2015–2019): A State-Level Ecological Study Using CDC Secondary Data	Poster Presentation
Taylor Arnell	The MlaYZ system that Maintains Outer Membrane Lipid Asymmetry in Pseudomonas aeruginosa	Oral Presentation
Sydney Benoit	A Study on Primary Macronutrients in Soil and the Role of Eisenia fetida in Differing Dietary Treatments	Poster Presentation
Billie Bilodeau	Exploring Release Success in Rehabilitated Red Squirrels	Poster Presentation
Kaidy Cech	Interactions between Oribatid Mites (Oribatida) and Belowground Microplastics in Terrestrial Ecosystems	Oral Presentation
Cameron Deleeuw	Investigating Bacterial Mechanisms of Resistance to Carvacrol	Oral Presentation
Logan Gariepy	Standardization of qPCR of Verticillium Longisporum Microsclerotia in Soil	Oral Presentation
Herman Gill	Who Crosses and Who Cannot: Comparing Deer Crossings and Elk/Moose Near Crossings at Fence Gaps in Elk Island National Park	Oral Presentation
Jaynna Gogowich	Macrogenetic Analysis of the Galapagos Islands	Oral Presentation
Ayden Hogeveen	Habitat Composition and Fence Permeability: Understanding White-Tailed Deer Crossings in Elk Island National Park	Oral Presentation
Delaney Huhtala	The Mechanistic Mystery of Carvacrol: A Genomic Approach	Oral Presentation
Haley Irwin	Implementing a New System for Microsatellite Genotyping of Ostrich	Poster Presentation
Rylee Kager	Characterizing the Diversity of Pediococcus Present in Spontaneous Beer Fermentations	Oral Presentation
Monica Kucher	Activating the Cpx Stress Response Allows FtsH Deletion in E.coli	Oral Presentation
Kim Lewis	Characterization of a Conformational Change in an ATP-Binding DNA Aptamer	Oral Presentation
Jordan McDowell	Identifying Developmental Regulators of Goblet-like cells differentiation in the Zebrafish Intestine	Poster Presentation
Jayda Mitchell	Optimization of Plasmodiophora brassicae inoculum production	Poster Presentation

Matthew Moawad	Microbial Phenolic Acid Metabolism in Spontaneous Beer Samples	Oral Presentation
Ashton Myers	Characterizing Interferon-Enriched Cells in the Larval Zebrafish (Danio rerio) Intestinal Epithelium	Oral Presentation
Kimberley Obwatinya	Optimization of space for Plasmodiophora brassicae (clubroot) pathotyping	Oral Presentation
Hailey Packwood	The Effect of Hyperglycemia on EMT in Human Pancreatic Ductal Cells	Oral Presentation
Owen Paltzat	Qualitative Analysis of People's Attitudes and Views on Sharks	Oral Presentation
Shreenik Pawar	ITS DNA Sequencing to Identify Mycorrhizal Fungal Symbionts of Cypripedium passerinum	Oral Presentation
Steven Prescott	Application of DNA microsatellites to investigate the genetic diversity of Galeris Rotundifolia	Oral Presentation
Michaela Regimbald	Habitat Associations with Coyote Fence Crossing Patterns at Elk Island National Park, Alberta	Poster Presentation
Saniya Saeed	Developing 3D Organoids From Human Pancreatic Ductal Cells	Oral Presentation
Ashley Serunjogi	Development of microsatellite markers for Galearis rotundifolia	Oral Presentation
Tobin Steman	Developmental and Phenotypic Variation in Anxiolytic Drug Response Using a Zebrafish Model	Poster Presentation
Tristin Tanton	Identifying the diet of Franklin's ground squirrel using macro-fossil analysis	Oral Presentation
Daylen Towers	Assessing the Dietary Composition of Franklin's Ground Squirrels Using Non-invasive Metabarcoding	Oral Presentation
Morgan Warawa	Analysis of Mitochondrial DNA Diversity to Aid in the Conservation of Bull Trout in Western Canada	Oral Presentation
Christina Williams	Identification of the Nuclear Localization Signal of Flowering Locus C (FLC)	Oral Presentation
Child and Youth Care		
Katherine Luzanac	Perceptions and Correlates of Time-Out and Physical Punishment Procedures	Poster Presentation
Communication		
Alice Hategekimana	From AAVE to For You: A textual Analysis of AAVE-influenced Gen Z Slang on TikTok Advanced by Black Creators	Poster Presentation
Computer Science		
Mustafa Al-Hamadani	Reinforcement Learning–Based Clustered Multi-Application Charging Optimization for Underwater Wireless Sensor Networks	Poster Presentation
Sophie Barr	Smartphone-based Indoor Localization Using Wi-Fi RSSI Fingerprinting in Dynamic IoT Environments	Oral Presentation
Ryan Bernal & Benita Munung	Development and Pilot User Study of a VR Anatomy Visualization Application	Oral Presentation
Ryan Cabral & Vedant Prajapati	Analyzing Personal Spotify Data Trends	Oral Presentation
Joseph Foote	Understanding How The Brain Processes Music Using Machine Learning Techniques	Poster Presentation

Benji Lawrence	Spare factorization methods on high dimensional brain data from ALS patients	Poster Presentation
Matthew Meyer, Nico Lopez & Nahema Gutema	Live Demonstration and Presentation of GradeGuard Exam Deferral App	Project Display
Loveleen Singh	Development of a 3D Body Scanner for Healthcare Applications	Poster Presentation
Skylar Stromme	Recommender System using Temporal Collaborative Filtering	Oral Presentation
Vedsai Vangapandu	Heuristic Evaluation of SAAF: A Persuasive System for Environmental Civic Engagement in Saudi Arabia	Poster Presentation
Decision Sciences		
Avarey Frayn	Mapping the Specialized Ecosystems of AI-Driven Healthcare Research	Poster Presentation
Miranda Holba	Patterns of Noncompliance: Cross-industry analysis of Organizational Violations	Poster Presentation
Austin Kuhn	Rethinking Business Statistics Education in the Age of AI: Balancing Integrity, Critical Thinking, and Innovation	Poster Presentation
Andrew Numrich & Gavin McNutt	Integrating AI Agents into the Beer Distribution Game for Experiential Learning	Poster Presentation
Design		
Fran Annawi	Evoking Odile's World Into Gouache	Poster Presentation
Raquel Callele, Ella Jane Eresmas, Cadence Mutch & Kelsey Kendrick	DESN 445 Service Design: City of Edmonton Pet Licensing Re-Design	Oral Presentation
Stephanie Chan	Built out of P-L-A-N-E-T-S: A Typographic Album Cover	Poster Presentation
Taylor Davies	Alice in Wonderland in New Light Book Redesign	Project Display
David Gaina	Exploring abstract and layered visual metaphors in album cover design	Poster Presentation
Emma Gauthier	Exploring Narrative Through Experimental Type: Flowers for Algernon Book Design	Project Display
Gwendolyn Hunter	Book of the Year Brochure: "Plan Your Petition", 2025 TYPOGRAPHY II	Project Display
Kelsey Kendrick	Designing Online Education Modules for Youth Aging out of Care	Poster Presentation
Emrys Michael	Accessible Lab Manual Design: An Interdisciplinary Exploration of Accessibility and Universal Design in Biology Labs	Oral Presentation
Anika Molino	StoryWalk at MacEwan - How Visual Communications and Placemaking Welcomes Public to the University Campus	Oral Presentation
Danaca Neilson, Irene Nibi & David Gaina	Illuminating Modernism: The Canadian National Railways Sign and Mid-Century Design in Edmonton	Oral Presentation

Jasmeen Nona	Designing for Inclusion: Enhancing Design Studio Classrooms for Diverse Cognitive and Learning Needs through Universal and Neuro-Inclusive Design	Project Display
Danielle Pacholuk	Woman Album Cover Contest Submission	Poster Presentation
James Pincock & Hayden Carkner	Next Step Project: Co-Creating Life Skills for Youth	Poster Presentation
Harley Shymanski	The Redesign of the Book A Christmas Carol	Project Display
Jesse Squires	Speculative Construction Manual for Down Filled Jacket	Project Display
Amanda Stashkoa	The Wonderful Wizard of Oz: An Interpretation of a Classic Novel	Project Display
Mariia Suchko	Bottling a Story: A Narrative Wine Label Series Inspired by The Other Valley	Poster Presentation
Tabea Troppmann	The Small Steps Kit: The Role of Aesthetics in Climate Change Engagement Among Design Students	Poster Presentation
Tori Weston	On Poetry In General	Poster Presentation
Reyna Wiberg	Demonstrating Literature Themes Through Typographic Package Design	Project Display
Reyna Wiberg & Stephanie Chan	Hope/Full Design: A Visual Exploration of Hope	Project Display
Susanna Woudstra	Art, Grief, and Medicine: A Visual Journey	Project Display
Early Learning and Curriculum Studies		
Hannah Fink	How Does Toy Type Influence Parental Roles in Young Children's Play?	Oral Presentation
Mikoto Frank	How do Loose Parts Influence Symbolic Transformation in Parent-Child Play?	Oral Presentation
Mikoto Frank, Amber Gogan & Hannah Fink	Working as Research Assistants: Insights and Reflections	Oral Presentation
Caoilfionn Gardiner	Food Insecurity and the Loss of Traditional Food Systems Among Indigenous Families in Edmonton	Oral Presentation
Amber Gogan	Examining Relationships Between Children's Sex, Cognitive Development, Executive Functioning, & Home Learning Environment	Oral Presentation
Zachary Jickling	When Tired isn't Tired: Exploring Student Understanding of Fatigue Through a Workshop on Classroom Design	Oral Presentation
English		
Ashley Alton	"An Exceptional Scoundrel": Mikhail Bulgakov's Heart of a Dog and the Muzzled Subaltern	Oral Presentation
Avery Anselmo	Sue is You: Complex Mind-Body Relationship(s) in The Substance (2024)	Oral Presentation
Sarah Elliott	Narratives of Secrecy: Conspiracy Memoirs and the Limits of Interpretation	Oral Presentation
Jorja Evans	Weird and Wild Embodiments in Jeff Vandermeer's Southern Reach Series	Oral Presentation

Alexandra Gauthier	War on Robin: The Argument for Fan Authorship in 'Big Two' Superhero Comics	Oral Presentation
Benjamin Johns	Believing in Your Writing: The Genre Makeup of Wonderworks	Oral Presentation
Christian Lambert	Ambitionz Az a Writah: The Pluralized Lyrical Subject and the Mark of Criminality in 2Pac and Reginald Dwayne Betts	Oral Presentation
Evan Meeks & Jayden Tobert	International Research Opportunities: Attending the 2025 APL Conference in Frankfurt, Germany	Oral Presentation
Paige Reed	A Look Into the Narrative Archive: Audre Lorde and Carmen Maria Machado are Queering the Genre of Autobiographies	Oral Presentation
Tamara Tower	Healing and Education Through Holocaust Literature: How Storytelling Heals and Helps Bridge the Gap in Holocaust Education	Project Display
Brianna Van Lersberghe	Practically Perfect: Passing and Special Effects as Uncanny in John Carpenter's The Thing	Oral Presentation
Elliot West-Derpack	How Should I Care: The Pillars of Character Relationships	Oral Presentation
Humanities		
Isabelle Ashford	The Witch as Gendered Fear	Oral Presentation
Damien Camp	Impacts of Inland Fur Trading Posts on the Social Dynamics between Indigenous Groups of the Prairies	Oral Presentation
Steven Jewkes	Classical Athenian Citizenship - An Antisthenic Analysis	Poster Presentation
Steven Jewkes	The Protestant reformation of Early Modern British Communities	Oral Presentation
Soleil Laberge	In Hindsight..	Oral Presentation
Asher McColman	Does This Mean Anything to You? A Critique of Objectivism Through the Work of Mark Johnson and Suzanne Langer	Poster Presentation
Anastasia Morey	The Language of Witches and Domestic Disorder in Early Modern English Media	Oral Presentation
Spencer Paetz	Blueprinting Alberta's Eugenics Era: The domestic and international legal precursors to Alberta's 1928 Sexual Sterilization Act	Oral Presentation
Paige Reed	The False Dichotomy of Women in Archaic Lyric Poetry	Oral Presentation
Victoria Rosborough	Early Modern England and Forks	Poster Presentation
Interdisciplinary Dialogue		
Bethlehem Gebeyehu	Breaking hurdles: Examining communication, cultural and socio-economic barriers to sports participation among underserved youth	Poster Presentation
Ezra Richards	Perspectives of Disabled and Neurodiverse Undergraduate Students on Work-Integrated Learning: Success Factors, Barriers, and Best Practices	Oral Presentation
International Business, Marketing, Strategy, and Law		

Sebastian Matusewicz	Canada's National Innovation System: Mapping Key Actors	Poster Presentation
Suchi Shah	Role of Severity and Country of Origin Image on the Effect of A Firm's Supply Chain Position on Time to Recall	Oral Presentation
Mathematics and Statistics		
Morgan Brophy	An observational study on the accuracy of the Dexcom G7 continuous glucose monitor	Poster Presentation
Alison Charlesworth	Easy as 1-2-3: The 1-2-3 Conjecture for Polygonal Tilings	Oral Presentation
Shashwat Gujjar & Kevin Kothiya	The Canadian Brewhouse: Multilevel Analysis of Loyalty Engagement	Poster Presentation
Allan Huang	General Solution for the n-th Moment of Binomial Distribution	Oral Presentation
Osman Jime & Kevin Tran	Confirming Urban Heat Island Effects using Trained Urban and Rural Temperature Models	Oral Presentation
Hailey Komarnicki	Bayesian Inference versus Classical Techniques for Survival Analysis	Poster Presentation
Denaye Kurtz	Exploring Stochastic Simulation Frameworks Through Tournament Based Probability Modelling	Poster Presentation
Richard Lui	FunWeightClust and Alzheimer's	Oral Presentation
Ruskin Luitel	A Bayesian Beta-Binomial Model for Decision Behavior in a Radio Contest Using MCMC Methods	Poster Presentation
Nolan Oleny	On the equivalence of Operator-Theoretic and Module-Theoretic definitions of compact containment	Oral Presentation
Isaiah Zackus	Clustering Longitudinal Data with Missing Values Using Gaussian Mixture Models	Poster Presentation
Music		
Ijaz Janmohamed	Towards Anekāntavāda: Pedagogy in the Always-Already	Oral Presentation
Ijaz Janmohamed	Performing Anekāntavāda: Pedagogy in the Always-Already	Performance
Nursing		
Ashmeen Arneja	Cannabis Use During Pregnancy: Effects on Mother and Child	Poster Presentation
Cintya Hayashi & Megan McClymont	Identifying Competency Gaps to Support a Peer-Observation Tool for Clinical Nursing Education	Poster Presentation
Bhishmaa Jaunky, Alita Marko, Amel Bahobeshi & Batul Akbari	Tools and Strategies for Nurses engaging with Developmental Disabilities	Poster Presentation
Katherine Krukowski, Lauren Krips & Jocelyn Bay	The Interplay of the Opioid Crisis and Homelessness: Barriers to Healthcare and Harm Reduction	Oral Presentation
Mikhayla Leblanc	The Gender Gap in Being Believed: Women's Subjective Symptoms in Healthcare	Poster Presentation

Taij Mann	Evaluating Student Performance on AI-Generated Versus Instructor-Generated Anatomy Multiple-Choice Questions	Poster Presentation
Megan McClymont	Satisfaction and Usefulness of Chatbot in Nursing Education: Perceptions of Nursing Students and Faculty	Oral Presentation
Megan McClymont	Nurse's practice in Palliative and Hospice Care Across Canada: What We Know and What We Need to Learn	Poster Presentation
Megan McClymont & Cintya Hayashi	Peer Observation of Teaching in Nursing Education: A Scoping Review of the Literature	Poster Presentation
Kazi Nawme Nilema Mihila, Brooke Davidson & Jana Trisya Ventura	Understanding stressors during clinical placement and their impact on the well-being of MacEwan nursing students	Poster Presentation
Lena Nguyen	Interview Preparation for Canadian New Graduate Nurses	Poster Presentation
Lena Nguyen	Disempowerment and Identity Goals in Intellectual Disability: A Sibling's Perspective on Living with Chronicity	Poster Presentation
Lena Nguyen	The Hidden Patients: When children have chronic illness, what happens to their parent's health?	Oral Presentation
Yaana Patel, Iremide Esther Balogun, Oluebube Okata & Uche Molokwu	Effectiveness of Nurse-Led Self-Management Education on Glycemic Control in Adults with Type 2 Diabetes: A Modified Integrative Literature Review	Oral Presentation
Ahmad Shams	Screening Evaluating the Process of a Systematic Review Using Covidence	Oral Presentation
Estelle Steffener, Hallie Anderson & Abbey Harris	Working Against the Clock: Exploring the Impact of Night Shift Work on Nurses' Health and Well-being	Poster Presentation
Kiara Ukrainetz	Use of Immersive Learning Technologies in Nursing Education: A Literature Review With a Systematic Approach	Poster Presentation
Kiara Ukrainetz	Use of Immersive Learning Technologies in Nursing Education: A Literature Review With a Systematic Approach	Oral Presentation
Yiyao Wei & Priya John	How does opioid use during pregnancy impact neonatal and maternal health?	Poster Presentation
Organizational Behaviour, Human Resources Management, and Management		
Nkechinyere Irabor	Psychological Safety and the Willingness to Report Workplace Misconduct among Canada's Four Designated Groups: A Literature Review	Poster Presentation
Katelyn Kaiser	Designated Groups' Comparative Review of Wellbeing at Workplace	Oral Presentation
Bismeet Kaur	Worker and Workplace Experiences of Student Employees: A Literature Review	Poster Presentation

David Mares	Bridging the Expectations Gap: Graduate Preparedness for Organizational Change	Poster Presentation
Elizabeth Poirier	Workforce Density and Labor Efficiency in HealthCare: A Comparative Analysis of Canada and Europe, 2019–2024	Poster Presentation
Paralegal Studies		
Maddy Hebert	Usage Survey for Devon County Public Library	Poster Presentation
Physical Sciences		
Naima Abdalla	Smartphone-Based Colorimetric Sensors for Rapid Nutrient Detection in Agricultural Soils	Poster Presentation
Abraham Abdo	Peptide Structure-Activity Relationship: Antimicrobial Peptide (AMP) Design, Synthesis and Analysis	Poster Presentation
Mohamed Abdou	Investigating AI as a Tool in Physics Labs: Balancing Efficiency and expand Experimental Learning	Oral Presentation
Jade Akes	A Micro-contribution to a Macro-study of Giraffe Maar Lake Sediments through Petrographic Microscopy	Oral Presentation
Colby Bechthold	Livilo by PimaSENS Inc.: Rapid Colorimetric Detection of Urinary Biomarkers for Livestock Health Monitoring	Poster Presentation
Celina Anne Benuei	Using Redox Reaction to Quantify Vitamin C Content in Commercial Fruit Juice at Different Temperatures	Poster Presentation
Spencer Burden	Crystallization in supersaturated sucrose solutions: Food-safe inhibitors	Poster Presentation
Spencer Burden	Design and Synthesis of a Water-Soluble AMP Variant Using Fmoc-SPPS	Poster Presentation
Abdalla Elmanoufi	Analytical Chemistry Internship at Canmet NRCan	Poster Presentation
Orion Fahlman	The Relationship between Rock Mechanics and Sedimentary Fabric	Oral Presentation
Kaylee Grenier	Peptide Structure-Activity Relationship: Antimicrobial Peptide Design, Synthesis and Analysis	Poster Presentation
Arshpreet Kambo	The Effects of Diluted Bitumen and Crude Oil Leaks Occurring Above the Water Table: Chemistry Internship at CanmetENERGY	Poster Presentation
Jordan Messer	My CHEM 497 Experience - Fermentation Research and Development for Animal Probiotics at CanBiocin	Poster Presentation
Leanne Aira Paje	Low Amylase Honey	Poster Presentation
Krisha Patel	Student Lab Technician	Poster Presentation
Carleen Platero	Syn-depositional volcanogenic zircons and how to find them: A challenge for detrital zircon geochronology	Poster Presentation
Ria Puri	How does ionic strength influence the swelling equilibrium of sodium polyacrylate hydrogels?	Poster Presentation
Safiya Raza	CHEM 497: Internship at Edmonton Catholic School Division	Poster Presentation
Kieffter Salazar	Portable Colorimetric Sensors for Soil Nutrient Monitoring in Precision Agriculture	Poster Presentation
Cody Serben	Biodiversity of Frasnian Reef Builders within the Fairholme Carbonate Complex	Poster Presentation

Melissa Tiamzon & Marah Mahmoud	Synthesis and Characterization of Novel Polymers for Enhanced Membrane Gas-Separation Performance	Poster Presentation
Larissa-Mae Villanueva	Peptide Synthesis	Poster Presentation
Layal Zidan	Quantification and Polymer Identification of Microplastics in Wastewater Treatment Plant Samples	Oral Presentation
Psychology		
Mikayla Ames	Infrasound Levels at Reported Haunted Locations: An Environmental Measurement Study	Poster Presentation
Quinn Andreychuk	Virtually Stress-Free: Can a Digital Dog Improve Executive Functioning in Stressed University Students?	Poster Presentation
Lindsey Anhill	The Empty Booth and the Collective: How Social and Emotional Loneliness Shape Politics	Poster Presentation
Olad Ayodeji	Visually Guided Reaching in Patients with Spatial Neglect	Oral Presentation
Braedin Bauer	Evaluating the Efficacy of a Brief Implementation of the AIM Curriculum With Elementary School Students	Oral Presentation
Daniel Beljan	Exploring the Relationship Between Gambling and Materialism	Oral Presentation
Kaiden Blakley	Understanding Narcissists Self-Structure Using the Trifurcated Model of Narcissism	Oral Presentation
Tazveer Chauhan	Scientific Thinking	Poster Presentation
Kenzie Christensen	The Role of Motivational Climate, Perfectionism, and Grit in Dancers	Oral Presentation
John Coughlan	Frequency and Features of Inter-Sexual Mate Competition among Canadian Women	Poster Presentation
Tarah Coutard	Error and Reward Monitoring as an Integrated Learning System: Implications for Trait-Level OCD and Social Evaluation	Poster Presentation
Carson de Jong	Cognitive Biases in Music Evaluation: Effects of Perceived Versus Actual AI Generated Music on Listener Judgments	Poster Presentation
Nassreen Fayad	How do Culture and Sex Education relate to Consent Perceptions and Communication? A Cross-Cultural Student Survey	Oral Presentation
Jared Girard	Multisensory Feedback Shapes Reward Processing	Poster Presentation
Ahanavi Habib-Mohammed	Behavioral Effects of Acute Nepicastat Administration in Larval Zebrafish	Poster Presentation
Stacey-Jane Harris	The neurocognitive mechanisms of reward within a narrative context	Oral Presentation
Brooke Hart	Predictors of female inter-sexual mate competition	Poster Presentation
Ayesha Hashmi	Exploring Children's Recognition of Familiar and Cover Versions of Songs	Poster Presentation
Abbey Henderson-Tanguay	Love Under Pressure: Risk and Protective Pathways to Stress and Violence in Sexual Minority Relationships	Poster Presentation

Madie Hill	MAiD for Psychiatric Illness: An Exploration of Factors that Influence Acceptance or Rejection of this Procedure in Undergraduate Students	Poster Presentation
Katherine Hudec Hudec	Acceptance and Commitment Therapy for Athletes: Pilot Study	Poster Presentation
Travis Hutchinson	Sniff Around and Find Out	Oral Presentation
Syhdnnae Jans	An Examination of Implicit Theories of Worry and Generalized Anxiety Disorder	Oral Presentation
Sarah Johnson	What Factors Influence the Acceptance or Rejection of Advanced Requests for MAiD for Dementia?	Poster Presentation
Alexis Knee	No Time to Think: The Effect of Urgency in Reward-Driven Decision-making	Poster Presentation
Ashley Kutcher	The impact of long-term exposure to Perfluorooctanesulfonic acid (PFOS) on anxiety-like behaviour and boldness in adult zebrafish (Danio rerio)	Poster Presentation
Jenna Lafond	A Starter Guide to the Ethical and Effective Use of Punishment	Poster Presentation
Taylor LeBlanc	Growth Mindset, Goal Orientation, and Self-Regulated Learning as Predictors of Perceived Performance and Satisfaction in Adolescent Dancers	Oral Presentation
Isabelle Lee	Children's perception of mixed emotions in songs	Poster Presentation
Autumn Lega	Positioning the Light Triad on the Interpersonal Circumplex	Poster Presentation
Trinity Lepps	Left or Right? The Left Side of the Face's Effect on Emotional Perception and Processing	Poster Presentation
Alex Mattar	Evaluating the Behavioural Impact of the Opioid-Neurotensin Hybrid Peptide PK20 in Larval Zebrafish	Poster Presentation
William McCarty	Reddit Thematic Analysis of Police Officer Therapy Utilization Rates and Recommendations	Poster Presentation
William McCarty	Spatial Ability and Executive Function in Musicians	Oral Presentation
Emily McDermott	Do looks matter? No evidence of posture effects elicited by "modified" dog morphology	Poster Presentation
Sara Meadus	Implementation of an Error Correction Assessment Protocol	Oral Presentation
Madison Mrazik	Triangular Preference Test: A Novel Assay for Assessing Drug Preference in Larval Zebrafish (Danio rerio)	Oral Presentation
Ashton Myers	Behavioural Effects in Larval and Adult Zebrafish (Danio rerio) After 96-Hour Larval Exposure to Low-density Polyethylene, Polystyrene, Polyvinyl Chloride Plastic Leachates	Poster Presentation
Chloe Nelson	It's Complicated: Participant and Complainant Gender Variables Influence Sexual Assault Blame Attributions	Oral Presentation
Melissa Noort	Acceptance or Reinforcement? Investigating intervention components towards a varied and flexible food diet in ASD children ages 6-12	Poster Presentation
Delaney O'Brien-Ristau	The Impact of Choice on Students' Procrastination, Stress, and Confidence	Oral Presentation
Delaney O'Brien-Ristau	Function-Based Assessment and Individualized Interventions for Procrastination	Poster Presentation

Brady Ohler	Inhibitory Control in the North American Red Squirrel	Poster Presentation
Abby Oloriz	Behind Every Good Choice is a Bad Guess: A Simulation of Feedback-Based Learning	Poster Presentation
Abby Oloriz	The Fast and The Curious: Reward Responsiveness and Task Learnability Shape Neural Responses to Feedback	Oral Presentation
Olivia Piché	Female use of Sexual Coaxing and Coercion: Motivations, Sociosexuality, and Dark Traits	Oral Presentation
Alice Rainville	Individual Acoustic Variation and Acoustic Behaviour Responses of the American Pika (Ochotona princeps)	Oral Presentation
Aisha Randhawa	Attitudes Towards Sexual Consent in Conservative Muslim Communities	Poster Presentation
Kate Sabrowski	What Dementia-Related Behaviours are Most Stigmatized and What Influences these Stigmatizing Beliefs?	Poster Presentation
Oleg Savin	BPC-157 and its hybrid analogues on spontaneous swimming behaviour in larval zebrafish	Poster Presentation
Jack Simmons	Physiological Arousal in AI-Generated Image Detection	Poster Presentation
Aaliza Somani	Does Time Dictate Crime? Perceptions of Cyberstalking in Ex-Intimate Partner Contexts	Poster Presentation
Caleb Song & Katherine Zhu	A Comparative Analysis of Coercive Control Behaviors in Same-Sex and Opposite-Sex Intimate Partner Violence	Poster Presentation
Keira Streit	Examining Eye Gaze Avoidance in Individuals with High and Low Social Anxiety	Poster Presentation
Adam Szybunka-Ostopowich	Visual and tactile contributions to executive functioning in a 3-dimensional object sort task	Oral Presentation
Adam Szybunka-Ostopowich & Puja Suthar	TLDR: Posters people actually read	Poster Presentation
Claudia Tachuk	Desensitization and counter-conditioning of feedsticks for a grizzly bear (Ursus arctos horribilis)	Poster Presentation
Sebastian Toews	Throw a Lifeline: Exploring Social Rank Influence on Urgency-Dependent Alarm Calls in Animals	Poster Presentation
Sebastian Toews	Divine Intervention: Debunking Pseudoscience to Promote Scientific Skepticism	Oral Presentation
Andrea Toyad	To Cache or Not to Cache, That is the Question	Poster Presentation
Ela Trivino	The Effects of Urgency and Task Difficulty on Medical Decision-Making	Poster Presentation
Deyan Vulkov	Basic Education Can Improve AI-Generated Image Detection Ability	Oral Presentation
Kara Whitaker	The Window of the Soul: Ability to Detect AI-generated faces	Poster Presentation
Alexandria Wiwchar	Do individual differences in executive function impact our ability to inhibit simple vs. complex visuomotor responses?	Poster Presentation
Sonia Yusuf	Recognizing the Hand Behind the Writing, Quantified Through Psychophysical Methods	Poster Presentation

Lanna Zahreddine	Investigating the Behavioral Effects of Acute Xylazine Exposure in Zebrafish	Oral Presentation
Katherine Zhu & Caleb Song	A Comparative Analysis of Coercive Control Behaviours in Same-Sex and Opposite-Sex Intimate Partner Violence	Poster Presentation
Candice Zunti	We Don't Talk about B: Exploring Factors Affecting Internalized Biphobia, Mental Health, and Outness Among Bisexual Individuals	Oral Presentation
Public Safety and Justice Studies		
April Abarra	Meaningful Access to Education in Canadian Prisons	Poster Presentation
Social Work		
Mckenzie Croken	Virtual Reality Integration in Social Work Practice	Poster Presentation
Kianna Kwasnik, Keyarah Moyah, Alyssa Anderson, Emma Spencer, Susan Mackay & Clinton Bonise	Male Compass Club Toolkit	Poster Presentation
Kianna Kwasnik, Keyarah Moyah, Alyssa Anderson, Emma Spencer, Susan Mackay & Clinton Bonise	Sex, Sexuality, and Disability	Oral Presentation
Iman Nassar	Self-care and Wellness Practices of Helping Professionals in Context of War and Conflict: Western Worldview and African Worldview Lessons learnt from a Scoping Literature Review	Poster Presentation
Chiamaka Onu Nkire	Understanding Lived Experience Through Thematic Analysis in International Social Work	Oral Presentation
Vishakha Sunger, Makayla Araja, Jensyn Wallan, Amelia Alfred & Rylee Shewchuk	Pathways to Decolonizing Health Care	Project Display
Sociology		
Shikha Chand	Social Media Portrayals of Racism and Settler Colonialism	Oral Presentation
Grace El Tawil	Private Property: How Inequality Came to Be, Rousseau and Marx on Man-Made corruption	Oral Presentation
Hannah Galbraith, Jamie Clark, Liza Bielousova & Anhelina Khazaniuk	The Role of New Technologies: Interactions Between Police and Youth in Canada and Ukraine	Oral Presentation
Emily Geddes, Caitlann Kemp, Oleksandra	An Intercultural Analysis of Homelessness: A Comparative Study of Canada and Ukraine	Oral Presentation

Startseva & Sofia Sadova		
Amber Glover	Neoliberalism and Identity: Tradwives and the Feminine Self	Oral Presentation
Monserrat Zamora Hernandez	How Canadian Universities Frame Student Protest	Poster Presentation
Nikki Houde & Emily Nyal	How does the sexualization of young women in the media differ in Canada and Ukraine?	Oral Presentation
Umar Khilji	A Qualitative Content Analysis of Academic Integrity Policies in Alberta Universities: Constructing Misconduct and Institutional Authority	Poster Presentation
Angelica Koza	Discrepancies Between Media Representations of Crime	Poster Presentation
Achethec Lual & Mabel Aigbonohanm	Student Success- How GPA's impact student success	Poster Presentation
Shelby Lueken	Protection by Policy: Sexual Violence Policies Across Canadian Universities	Poster Presentation
Emily Martinak, Ariana Luis, Anastasiia Datsyshyn & Nika Zaiats	Street Art: A Comparison of Social Perspectives Among Young Adults in Canada and Ukraine	Oral Presentation
Sam Micka	Negotiating Noise: How Students Manage Noise and Construct Belonging on a Downtown Campus	Poster Presentation
Sam Micka	The Ear-and-Mind of Protest: Listening, Power, and Collective Resistance	Oral Presentation
Brady Newman	Mass media framing & bias: A portfolio study of mass media's role in shaping public perception	Poster Presentation
Kateryna Prus	Tattoo Surveillance in Context of Russo-Ukrainian War	Oral Presentation
Alyssa Rhodes	Beyond the Event: Climate Change as Cultural Trauma	Oral Presentation
Ezra Richards	Assets, Allies, Friends, and Family: Transgender and Nonbinary Representation in Youth-Rated Animated Television Post-2018	Oral Presentation
Micaela Serpe	Conspiracies and Fascist Politics in the United States	Oral Presentation
Jasmine Shillinglaw	Media Framing on Indigenous Men and Crime	Oral Presentation
Madeline Stoik	The Limitations of Accountability: Framing Institutional Responsibility in Canadian Undergraduate University Sexual Violence Policies	Poster Presentation
Mary Templado	The "Leaky Pipeline" and Inequality in Higher Education	Poster Presentation
Natasha Toronchuk, Anna Khabevych, Oleksandra Khilchevska & Alexa Yacyshyn	An International Study of University Students' Perceptions of Information Disorders and Their Formations of Trust in Online Media	Oral Presentation

Liana Weighill	Why The Bourgeoisie Loves Christianity	Oral Presentation
Matthew Zaborniak	I put in work, may have done a little dirt—the love and the respect that I will get is what it's worth": Street capital and the legitimization of status in graffiti culture	Oral Presentation
Studio Arts		
Berg Felsing	threads	Project Display
Carolina Gonzalez	Using Natural pigments For Dying textiles	Poster Presentation
Deanna Gronlund	Fundamentals of Ceramics	Creative Installation
Vitya Kachuk	A Sew-cialist Utopia: Constructivist Textiles for Revolutionary Russia	Poster Presentation
Phoebe Paul	A Clean Sheet	Creative Installation
Theatre		
Milo Ellis	Stage Machinery in Theory and in Practice: An Exploration of the Drop and Slide Trap Door	Project Display

Accounting and Finance

Implementation of Data Analysis Strategies within Accounting Curriculums

By: Sonia Yusuf

In the current time when data is critical in decision-making, the role of data analytics in accounting education has grown significantly. Educators should understand students' perspectives to align teaching strategies with learners' needs and industry trends. The primary objective of this workshop is to share the results of a recent survey conducted among undergraduate accounting students regarding their experiences and perceptions of a Data Analytics (DA) Applied to Accounting curriculums at MacEwan. The workshop aims to provide valuable insights to accounting educators, enabling them to improve their teaching strategiesto enhance the learning of DA. By incorporating student feedback, educators can develop courses that are not only more effective and engaging but also relevant, providing future accountants with the essential skills for success in a data-driven business world.

Faculty Mentor: Dr. Eloisa Perez

Poster Presentation

Allied Health and Human Performance

The Effect of Perceived Distance on Reward Processing: An EEG Investigation

By: Aaron Bishop

Feedback processing is fundamental to adaptive behaviour, enabling individuals to update their expectations and make better decisions based on the outcomes of their choices. Event-related potential (ERP) research has identified the reward positivity (RewP) as a reliable neural marker of feedback processing, reflecting positive prediction error signals when outcomes are better than expected. Recent evidence suggests that the perceptual salience of feedback stimuli can modulate RewP amplitude independently of reward value, such that stimuli occupying a larger portion of the visual field elicit stronger neural responses. Given that the retinal image can indicate physical proximity stimuli and that dopamine levels in the brain rise as animals approach reward locations, we investigated whether the perceived distance of a reward-associated stimulus could influence subsequent reward processing. Participants completed a forced-choice distance discrimination task in which stimuli were presented at near or far perceived distances, manipulated through physical size. An adaptive staircase procedure was used to maintain the task's consistency throughout the experiment. Feedback was delivered as an auditory tone, separate from the visual stimulus, allowing us to isolate the effect of perceived distance on reward processing. Contrary to our predictions, perceived stimulus distance did not significantly modulate RewP amplitude. These findings suggest that while the perceptual properties of feedback stimuli can shape reward-related neural responses, the perceived distance of a preceding stimulus may not be sufficient to influence downstream reward processing when feedback is delivered in a different sensory modality.

Faculty Mentor: Dr. Cameron Hassall

Poster Presentation

How Parent Speech Modelling Supports Children's Phonological Development

By: Belinda Breadmore, Alix Warnell & Bri Raposo

This study investigates how parents naturally modify their speech to support children's speech sound acquisition, and examines how these adaptations can inform Speech-Language Pathologists (SLPs) about children's speech production skills within a family-centered approach. Family-centered approaches have proven effective in identifying language disorders by estimating the child's speech intelligibility in context and how the parents' level of concern connects to their child's speech clarity. Evidence suggests that parents actively support speech and language development by shaping their own productions to highlight target forms during infancy using infant-directed speech, also known as "motherese". However, little is known about how parents continue to support phonological development after this period. One previous study has shown that parents modify fricative pronunciation to support their child's speech development, but structured caregiver speech modelling has not been systematically examined. This pilot study investigates how ten English-speaking parents of children aged three to six years old modify their speech to support underdeveloped speech sounds across phoneme groups and syllable structures. Preliminary results are promising, showing that even parents who are unable to name the underdeveloped phonemes demonstrate an understanding of their child's off-target pronunciations and modify their own speech to provide a clear model. This study represents a first step toward understanding the important role that parent modelling plays in children's speech sound development and how the parent–child feedback loop may inform more responsive assessment and intervention practices, possibly across languages.

Faculty Mentors: Dr. Eija Aalto, Danielle Curran-Cook & Tanya Paananen

Poster Presentation

Involuntary Substance Use Treatment: Understanding Impacts for Women and Gender Diverse People in Alberta

By: Bethany Piggott

In Alberta, involuntary (mandatory or compulsory) substance use treatment has emerged as a policy response to substance use despite limited and inconclusive evidence regarding its effectiveness in improving health or social outcomes. This shift raises ethical, clinical, and equity-related concerns, particularly for women and gender diverse people. They experience intersecting inequities related to gender-based violence, stigma, poverty, caregiving and parenting responsibilities, and systemic discrimination. Due to the enduring impacts of colonization and systemic racism, these risks are especially pronounced for First Nations, Inuit, and Métis women.

Involuntary substance use services may exacerbate existing inequities by limiting autonomy, increasing exposure to coercive systems, and disrupting caregiving and social roles. There is a need to synthesize evidence to inform ethically grounded and equity-responsive practice.

This project is conducting a rapid review of peer-reviewed and grey literature examining the impacts of involuntary or compulsory substance use treatment, with explicit attention to gendered and equity-related effects for women and gender diverse people. Guided by established rapid review methodology, we will systematically search academic databases and target grey literature sources, apply predefined inclusion and exclusion criteria, and conduct a structured narrative synthesis.

Preliminary findings will highlight documented health, social, and ethical impacts, as well as implications for nursing practice. Given that registered nurses and nurse practitioners have been identified in public policy documents as professionals eligible to apply for Compassionate Intervention Assessment Orders, it is critical to examine how this legislation aligns with nursing ethical standards, professional responsibilities, and commitments to equity and human rights.

Faculty Mentor: Dr. Ginger Sullivan

Poster Presentation

Anthropology, Economics, and Political Science

Stealth Climate Governance: How Cities Reframe Climate Action through Health, Economic, and Resilience Narratives

By: Brandon Biglow

Cities increasingly pursue climate goals through policies framed around public health, economic efficiency, and urban resilience rather than explicit climate action. This study examines how such reframing strategies influence the effectiveness of climate governance in cities participating in transnational municipal networks. It argues that these networks diffuse policy frames that make climate initiatives more politically feasible, enabling what can be described as “stealth climate governance,” where climate outcomes are achieved through non-climate policy domains. Using Calgary as a case example, the project explores how framing affects policy adoption, institutionalization, and durability in urban climate governance.

Faculty Mentor: Dr. Marielle Papin

Oral Presentation

Artificial Intelligence and the Teleological Crisis of Education: Performance, Formation, and the Fate of Learning

By: Brandon Biglow

Artificial intelligence has been widely portrayed as a threat to the future of education, even as the end of student learning itself. Yet this diagnosis misidentifies the real crisis. AI does not destroy education; it exposes a deeper disorder already embedded within contemporary institutions. The problem is not technological but teleological. Over decades, educational systems have increasingly defined learning through quantification, assessment, and the production of measurable outputs. Within such conditions, the use of AI becomes a rational response to institutional expectations rather than merely an act of academic dishonesty. Drawing on Plato, Augustine, Hans-Georg Gadamer, and Neil Postman, this paper argues that education in the human sciences cannot be reduced to procedural performance. Genuine learning involves the formation of judgment, the testing of assumptions, and participation in the pursuit of truth. These are transformative practices that cannot be automated without distortion. Technologies such as AI do not create this problem but intensify tendencies already present within educational systems that privilege efficiency, productivity, and visible achievement. The deeper issue is therefore one of orientation. Educational institutions inevitably shape what students come to value by rewarding particular forms of success. When performance becomes the primary measure of achievement, optimization follows naturally. Education ultimately depends on a prior commitment, a trust that truth and human formation possess intrinsic worth beyond what can be measured or engineered. AI makes this dependence unmistakable and forces institutions to confront whether they will organize themselves around formation or continue to privilege performance.

Faculty Mentor: Dr. Chong Su Kim

Oral Presentation

Time in Protracted Conflict: The War in Afghanistan

By: Morgan Brophy

This project examines time and its influence on warfare in the American War in Afghanistan. In this project, I am using interview data to examine how the perception of time affected decision making during the war in Afghanistan as well as how time had significant impacts on missions, deployments, and objectives along the chain of command, and subsequent consequences or achievements. I will be comparing the military structure and operational procedures of western nations to the Taliban's organization of Afghan soldiers to analyze how different military organizations perceive time and how time can be advantageous or disadvantageous to operational effectiveness and mission success. The research begins with the aftermath of the 9/11 terrorist attack in the United States and the political decisions surrounding the retaliatory move to invade Afghanistan in retribution for the attack on American soil. Analyzing the timeline of political decision makers and the actions of the American military carrying out the objectives of president George W. Bush. As well as how the initial objectives expanded and changed through several presidencies. Ultimately resulting in American failure despite the American military being significantly more equipped with technologically advanced weaponry and seemingly plenty of time as the war spanned over two decades. This project therefore asks the question: How did time influence the American war in Afghanistan and how did the differences between Western forces and Afghan forces contribute to the war's overall failure?

Faculty Mentor: Dr Jeffrey Rice

Oral Presentation

Creative Qualitative Approaches to Migration Research

By: Sofiia Budianska

This presentation examines the use of creative, qualitative and participatory research methods in a community-engaged study of Ukrainian resettlement in Edmonton following Russia's full-scale invasion in February 2022. In response to the rapid implementation of Canada's Canada-Ukraine Authorization for Emergency Travel (CUAET) program and resulting gaps in formal settlement services, Ukrainian community organizations and diaspora networks mobilized informal support for newcomers. Our research emerged through collaboration with one such initiative, the Free Store for Ukrainian Newcomers, and was designed to document resettlement experiences while centering ethical, relational and community-embedded approaches.

This pilot study used multiple methods to understand first-hand resettlement experiences from different perspectives. We conducted focus groups with Edmontonian-Ukrainians, life history interviews and photovoice workshops with Ukrainian newcomers. These methods were selected based on participants' positionalities and gaps in qualitative research on newcomers, refugees and host communities. Overall, the methods were intentionally participatory and multilingual, allowing participants to shape their own narratives and express emotional complexity. Rather than portraying refugees as uniformly resilient or grateful, this approach foregrounded ambivalence, fear, frustration, hope and belonging as central dimensions of resettlement.

I argue that creative qualitative methods are not supplementary but essential in migration research, particularly in contexts of displacement. By treating creativity and participation as methodological resources, this work demonstrates how research can give back to communities involved while capturing lived experience more fully and producing knowledge that resonates across academic and community audiences. The presentation concludes by reflecting on the methodological implications of creative approaches for future migration research.

Faculty Mentor: Dr. Jennifer Long

Oral Presentation

Considering the Implications of Animal Remains at Sandby Borg, Sweden

By: Rowan Elder

In 2011, archaeologists discovered the 5th century ring fort of Sandby Borg on Öland, Sweden. Excavations found signs of interpersonal violence, with 30 individuals, many of whom showed signs of violent trauma. Furthermore, the attackers left behind many valuables, including animals. In this project, I will be going over the importance of considering the implications of leaving behind animals in the massacre

Faculty Mentor: Dr. Katie Biittner

Poster Presentation

The Pros and Cons of Bi/Multilingualism: Language Ideologies among Past and Future Immersion Students in Edmonton, Alberta

By: Trina Ellis

Qu'est-ce-que cette sentiment d'être bilingual mean? As an individual who completed French immersion schooling themselves and often struggled with others' definitions of bilingualism as well as the seeming hegemony of monolingual ideologies growing up in Western Canada, I sought to investigate this question for my Honours thesis research in Anthropology. This poster presents results gathered in 2025-2026, based upon interviews with twenty adult individuals from the Edmonton area who have been through a French (or other language immersion program) in their K-12 years, and/or were currently debating placing their own children within a language immersion program for some/all of their future schooling. Interviews explored their experiences in the programs and what they viewed as benefits and drawbacks of immersion/bilingual education now that they were on the other side of it, as well examining language ideologies they held around bi/multilingualism as a whole. For interviewees considering bilingual education for children, discussions of hopes and anxieties around immersion programs were also discussed.

The poster itself will cover the classification and analysis of the interviews, and include some narrative quotes from interviewees as well as visual presentations of patterns in similarities/differences of ideologies and experiences found in the collected data. I also include a discussion of research limitations as well as applied uses for the data presented here.

Faculty Mentor: Dr. Jenanne Ferguson

Poster Presentation

Unequal Justice: Social Power and Gender in Law

By: Mateo Ferretti

This project looks at how local and abroad legal systems can be better understood by examination through an anthropological and feminist lens. Laws are often presented as neutral rules that apply equally to all. However, people do not always experience the legal system in the same way. For example, social factors like gender, identity, and background, can influence one's individual experience within the legal system, and how their justice is experienced. The research done looks through these different perspectives to help understand unequal experiences in the legal system. Instead of having a focal point of just Canada, this project considers a broader scope of how social conditions shape the way laws are interpreted and applied around the globe. To explore this research topic, literature reviews are conducted that discuss law, gender, and inequality. Particular attention is given to understanding how power and social structures influence who benefits from legal systems and who faces barriers. Understanding these issues is important because legal systems play a major role in shaping people's lives. By examining

law as part of a larger social issue, this research encourages a more critical discussion about the actual fairness, equality, and justice experienced individually.

Faculty Mentor: Dr. Katie Biittner

Poster Presentation

Philanthropic Power and Urban Climate Governance: The Rockefeller Foundation and the 100 Resilient Cities Network

By: Josh Gaudet

This project examines the role of philanthropic funding in shaping climate governance within transnational urban networks by focusing on the relationship between the Rockefeller Foundation and the 100 Resilient Cities network, which ran from 2013 to 2019. The Rockefeller Foundation had founded and financially supported the network, which sought to help cities develop strategies to address urban resilience and climate-related risks.

Preliminary findings suggest that the Foundation exerted significant influence over the network's goals, governance structure, and methodologies. The Rockefeller Foundation funded the network, established its leadership, and played an integral role in designing governance tools such as the City Resilience Framework (CRF), which shaped how member cities developed their resilience strategies. Member cities were required to adhere to this framework, hire a Chief Resilience Officer in accordance with predetermined criteria, and produce resilience strategies aligned with the network's methodology.

Research also suggests that resilience was framed as a technical, management-based problem rather than a political or social concern. This framing had been reinforced by the network's reliance on consultancy services and its "Platform of Partners," composed primarily of private organizations in the Global North. As a result, resilience strategies – including those related to climate change – had been developed through technocratic tools and market-based partnerships.

By examining how philanthropic funding shaped the framing and governance of urban climate action, this project explores the implications of private influence in transnational municipal networks.

Faculty Mentor: Dr. Marielle Papin

Oral Presentation

Plato's Republic: Bk V and the Harmony of Word and Deed

By: Ethan Gladdish

Bk IV of Plato's Republic ends with a definition of justice given by Socrates: justice is minding the business of the soul. But at the beginning of Bk V, one of Socrates' interlocutors interjects, and Polemarchus claims Socrates is excluding something from the argument. The community of women and children has been left out. This first definition of justice is therefore incomplete;

otherwise, Polemarchus' interruption would not be necessary. I argue that what follows is Plato's exposition of what minding the business of the soul means, culminating in minding the business of the soul being the harmony of word and deed. I do this with a particular emphasis on Glaucon, as it is him who takes up the argument from Polemarchus. I argue that Glaucon is necessary for understanding the harmony of word and deed in Bk V, on the basis that it is his character in particular who's words and deeds are being accounted for here. The last part of my thesis is a discussion of the idea of the good and its role in the harmony of word and deed. I argue that the good is not some external measure that we apply to our situation at hand, rather it is that which makes the harmony of word and deed possible from within our situation and prevents us from degenerating into relativism.

Faculty Mentor: Dr. Gaelan Murphy

Oral Presentation

Quiet Erosion: Political Rhetoric's Effect on Public Servants

By: Jennifer Hart

In 2024, Canada's federal public service employed 367,772 individuals, yet only 66 percent of respondents to the Treasury Board of Canada Secretariat Public Service Employee Survey reported feeling valued at work, down from 72 percent in 2022. While public administration scholarship often focuses on institutional design and accountability, less attention has been paid to how sustained political rhetoric affects the morale and capacity of public servants. This paper introduces the concept of *quiet erosion* to describe the gradual weakening of institutional legitimacy, morale, and effectiveness caused by persistent negative political messaging.

Using Alberta's debate over replacing the Royal Canadian Mounted Police (RCMP) with a provincial police service as a case study, this research examines how rhetoric reshapes public service bargains, fragments accountability, and demotivates personnel. Drawing on Hood and Lodge's theory of public service bargains and Perry's theory of public service motivation, the study analyzes qualitative data from semi-structured interviews with Alberta-based RCMP public servants.

Findings identify four interrelated dynamics: delegitimization of professional identity, fragmentation of accountability across levels of government, systemic demotivation, and identity concealment as a coping strategy. Participants reported strong commitment to their work alongside declining morale and reluctance to publicly identify as RCMP or federal employees.

The paper argues that political rhetoric, even without formal structural reform, can degrade institutional capacity by undermining the psychological and social foundations of public service, posing broader risks to democratic governance.

Faculty Mentor: Dr. Brendan Boyd

Oral Presentation

Leaving an impression: The evolution, impacts, and legacies of relief printmaking

By: Kaz Haskins

Relief printmaking has left an impression worldwide for centuries. However, the hands that have created these works of art have gone unsung in the history books. Many names of draftspeople, carvers, and printers working together to produce one work of art using embodied skills and knowledge have been lost to time, along with the matrix they worked meticulously with – woodblocks. These culturally significant artifacts can tell us a richer story about those behind the artwork; mark-making, tool use, ink stains, and more can tell other stories that a finished print may otherwise not. While histories will commonly note the old “masters” of printmaking, more often than not it leaves out those who worked alongside them, or those who were barred from the art practice. This work will showcase both the people behind printmaking that have gone unsung, and how these representations (or lack thereof) have contributed to possibly skewed histories and misrepresentations of gender. The artwork will also showcase the print block as material culture, displaying mark-making, tool use, and unseen labour behind the piece.

Faculty Mentor: Dr. Katie Biittner

Creative Installation

Global Ties: The role of diaspora communities in Transnational City Networks

By: Kaz Haskins

Diaspora communities often retain strong ties to their country of origin, but how does this affect relations between nations? Through a literature review and a comparison case study of Mexico City and Arua, this presentation examines the relationships between diaspora communities and institutions, transnational city networks, and municipal migration policy.

Faculty Mentor: Dr. Marielle Papin

Oral Presentation

“It Calls Me” - An Understanding of The Camino De Santiago and its Modern Pilgrims

By: Montana Jones

This presentation is on an ethnographic study of contemporary participants on the Camino de Santiago. The Camino de Santiago, which translates to the Way of Saint James, is a network of pilgrimages in Spain that lead to the Cathedral of Santiago de Compostela. Over the last 10 years, there has been a 90% increase in pilgrims and this study sought to examine the reasons behind participation in this pilgrimage among people on the Northern Camino route in October of 2025. Interviews were conducted while walking 150 kms on the Camino del Norte to also gain a firsthand perspective of the pilgrimage experience to better understand the headspace of the pilgrims. The presentation also discusses the impacts of the increase in tourism on the small villages in Spain, focusing on the Galicia region. This pilgrimage dates back to the 9th century when pilgrims would walk to the cathedral in search of a way to reduce their time in purgatory.

Due to the historical context of the original routes, they tend to wind through small villages that were not built for the dramatic increase in participation. Understanding reasons for pilgrim motivation can also help us to better understand the dynamics of tourism in the region, and potentially sense solutions to mitigate issues arising due to overtourism on the Camino.

Faculty Mentor: Dr. Jenanne Ferguson

Oral Presentation

Self-Expression in Fandom via Shipping

By: Jessica Montesa

Fandom communities have long been a huge part of peoples' enjoyment of entertainment. By investing one's time and self into these media, those who engage in fandom have found outlets for the expression of their identities. This presentation focuses on independent research conducted on instances of 'shipping' the characters within said media—shipping being the act of wanting and/or imagining two or more characters to be in a romantic relationship with one another. Taking a discourse analysis approach informed by the anthropology of gender and sexuality, this project investigates why people 'ship' characters, and the underlying connections or resonances between the individual and the character(s) they ship. Through the observation and analysis of TikTok and YouTube videos and comments, as well as autoethnographic reflection as a fandom community member, I focused primarily on the 'Byler' ship (Will Byers x Mike Wheeler) from the television show Stranger Things to investigate what shipping can mean for fan identities. Considering previously researched fandom concepts like 'remixing', 'gatekeeping', and 'anti-fandom', I found that the investment of the fan's self is typically caused by their own connection with the ship, such as sharing the qualities of gender or sexuality with ship's characters. For queer ships like Byler, the act of 'shipping' Byler becomes a space for the recognition, exploration and expression of one's own gender or sexual identity for many fans.

Faculty Mentor: Dr. Jenanne Ferguson

Oral Presentation

URBW 497- Panel Discussion; topics in urban health and wellbeing (policy and resiliency)

By: Aleace Moom

This panel will be a collaboration with other students regarding global prespectives in Urban Wellness. My panel contribution will be regarding health policy and resiliency

Faculty Mentor: Dr. Marielle Papin

Oral Presentation

Arts and Cultural Management

Understanding Acculturation Stress: Cultural Adaption, Coping, and Mental Health in Immigrant Populations

By: Gurneet Dhaliwal

Acculturation stress refers to the psychological challenges immigrants experience when adapting to a new culture. Given that immigration is integral to Canada's economic framework, it is relevant that acculturation stress be studied for greater economic and social cohesion. This paper explores acculturation stress and its relationship to immigration integration and mental health through review of existing literature. The review examines key theories including Berry's Acculturation theory (1997), which describes four strategies of cultural adaption: assimilation, integration, separation, and marginalization. It also focuses on Lazarus and Folkman's Stress and Coping theory (1984), which explains how immigrants manage stress through different coping strategies and Beck Vulnerability model (1967), which shows that acculturation stress can lead to mental health challenges such as lower self-esteem and therefore a higher risk of depression, which in terms of immigrants is often caused by pressure of assimilation, language barriers, and discrimination. However, research also posits that coping strategies, family support, and having a strong culture indeed can help reduce these effects. Current research also presents several gaps, including limited diversity in study samples and a lack of research on labour policies, immigration restrictions and institutional discrimination's contribution to stress. Studying acculturation stress becomes all the more important because immigration continues to increase worldwide and affect both immigrants and the societies they decide to join. Further research therefore, needs to be done to better understand these issues and support immigrant well-being.

Faculty Mentor: Dr. Nimarta Mann

Poster Presentation

What is social media's role in defining the current art world?

By: Aidan MacDonald

One thing that was a given with the rise of social media is its polarising nature. Everyone seems to have a varying opinion, which often comes with a handful of nuances. For artists, this is no different. Many have successfully taken advantage of the opportunities social media offers, while others seem hesitant to make the transition. I've investigated the matter through credible academic sources, opinion pieces, as well as conducted surveys of a diverse group of artists online. Currently, I'm in the midst of ongoing research creation, in which I have created an art account on Instagram. I intend to explore the direct impacts of sharing art online. With the intention of curating content based on observing trends among artists. Currently my my hope is to point out the potential absurdity of what it entails to be a "successful" artist in this day and age. As I venture more down the rabbit hole, I understand that my findings may lead me to a different conclusion.

Faculty Mentor: Cindy Baker

Oral Presentation

Biological Sciences

The effects of habitat selection and fence permeability on white-tailed deer (Odocoileus virginianus) crossings at EINP

By: Calista Adams

Elk Island National Park is located 35 km East of Edmonton and is completely surrounded by a fence that hosts a large diversity of species. The fence is semipermeable through gaps that white-tailed deer and other animals use to pass through. I aim to evaluate how habitat type affects white-tailed deer movement rates across the fence by monitoring camera traps and assessing habitat associations. I hypothesize that white-tailed deer will have the highest crossing rates towards grassland habitats, and the highest crossings overall will occur during November due to the rut. I plan to use satellite imagery and camera images to identify and quantify white-tailed deer movement and to monitor crossing rates into and out of the park through the fence gaps, in relation to habitat types. Sampling images from 14 days in January, April, August, and November to accurately capture seasonal behaviour. These understandings enable informed decisions on the management of white-tailed deer and on the mitigation of EINP's fence in response to seasonal changes and disease prevention. Overall, this study provides a basis for recommendations on possible future fence modifications to increase connectivity and conservation within Elk Island National Park.

Faculty Mentor: Dr. Arthur Whiting

Oral Presentation

Evaluation of Cultivar Mixtures for Clubroot Management

By: Alex Agar

The soil-borne disease, Plasmodiophora brassicae Woronin, also known as clubroot disease, is one of the major threats facing canola cultivation today. Resistant monocrops have shown to be one of the most effective methods of overcoming clubroot disease. However, it has been shown that after three crop cycles, resistant monocrops select for highly virulent, resistance-breaking strains of clubroot, negating the effects of resistant monocrops. Cultivar mixtures which are composed of susceptible and resistant cultivars have potential to delay resistance breakdown. An experiment was conducted to assess the effect of cultivar mixtures on disease parameters, pathogen inoculum density, and pathogen population structure, to evaluate whether cultivar mixtures represent a viable strategy for extending the lifespan of resistant cultivars. After three cycles were ran, disease severity and resting spore density were measured. The proposed project aims to do statistical analysis for this study to determine if cultivar mixtures could be used to aid in control of disease management. Linear mixed models will be estimated using R

4.5.2. Repeated measures analysis will be conducted with the use of linear mixed models to assess the effect of cultivar mixtures on the pathogen inoculum density and disease severity. From the results, it will be determined if cultivar mixtures can be used to control clubroot disease.

Faculty Mentor: Dr. Andrea Botero-Ramirez

Oral Presentation

State Influenza Vaccination Coverage vs. Influenza & Pneumonia Mortality in the United States (2015–2019): A State-Level Ecological Study Using CDC Secondary Data

By: Cesar Amador

Seasonal influenza contributes to substantial morbidity and mortality each year, and U.S. influenza vaccination coverage varies widely across states. This ecological panel study will examine whether higher state-level influenza vaccination coverage is associated with lower influenza and pneumonia (P&I) mortality rates. Vaccination coverage (percent vaccinated) will be obtained from CDC FluVaxView state estimates, and P&I mortality will be measured as the age-adjusted death rate per 100,000 from CDC WONDER Underlying Cause of Death data for ICD-10 codes J09–J18. The unit of analysis will be the state-year (2015–2019; pre-COVID period). Analyses will include descriptive summaries and data visualization, followed by correlation analyses and multivariable regression models. The primary specification will use fixed-effects panel regression with state and year indicators and robust standard errors to control for unobserved time-invariant state characteristics and common annual shocks. Sensitivity analyses will assess robustness to alternative time windows and lagged vaccination coverage.

Findings will be interpreted as population-level associations rather than individual-level causal effects and will inform hypotheses regarding state-level factors associated with improved influenza-related outcomes.

Keywords: influenza vaccination; influenza and pneumonia mortality; ecological study; CDC FluVaxView; CDC WONDER

Faculty Mentor: John Fedoruk

Poster Presentation

The MlaYZ system that Maintains Outer Membrane Lipid Asymmetry in Pseudomonas aeruginosa

By: Taylor Arnell

The outer membrane (OM) of Gram-negative bacteria displays an asymmetric bilayer of glycerophospholipids (PLs) distributed in the inner leaflet and lipopolysaccharide (LPS) in the outer leaflet. Maintaining this lipid asymmetry is crucial to the cell's integrity and functionality as it provides a barrier against toxic environmental stressors such as antibiotics. How this lipid

asymmetry is maintained has primarily been investigated within Escherichia coli, resulting in a poor understanding of the mechanisms involved within other bacterial species. Consequently, this work investigates the opportunistic pathogen Pseudomonas aeruginosa. Previous research recently identified new Mla proteins, MlaY and MlaZ, that are thought to be involved in maintaining lipid asymmetry. More specifically, it is believed that MlaZ removes PLs from the outer leaflet and transfers them to MlaY to be degraded. However, how PLs are transferred from MlaZ to MlaY remains unknown. We hypothesize PLs are removed from the outer leaflet through direct protein-protein interaction between MlaZ and MlaY. Here, we used allelic exchange to genetically engineer the genome of P.aeruginosa through the use of suicide vectors, delivered by conjugation, to generate a strain such that the chromosome contains MlaZ tagged with the identifiable marker streptavidin. This will allow future work to detect streptavidin through western blot analysis to determine whether an interaction occurs between cysteine residues engineered in MlaY and MlaZ. Holistically, this research furthers the current understanding of how lipid asymmetry is maintained within P.aeruginosa to provide insight into our understanding of how the OM protects Gram-negative bacteria from antibiotics.

Faculty Mentor: Dr. Randi Guest

Oral Presentation

A Study on Primary Macronutrients in Soil and the Role of Eisenia fetida in Differing Dietary Treatments

By: Sydney Benoit

This study examined the effect of three diet treatments, specifically Home-Based Diet, Duff Diet, and Bedding-Only Diet, and the influences they had on the soil content over 33 days when composted with Eisenia fetida. Nutrient levels were measured using colorimetric soil test kits at Baseline (Day 0), before any restoration; Midpoint (Day 16); and the Endpoint of the study (Day 33). Repeated-measures ANOVA revealed a significant main effect of time for all nutrients ($p < 0.001$; Table 1), indicating a consistent increase in nutrient levels throughout the composting period. Significant main effects of diet were observed for nitrogen ($p < 0.001$), phosphorus ($p = 0.002$), and potassium ($p = 0.007$; Table 4), suggesting that the dietary treatments varied in their effectiveness in soil nutrient rehabilitation. Additionally, Time × Diet interactions were significant for all nutrients (N: $p < 0.001$; P: $p = 0.002$; K: $p = 0.017$; Table 3), indicating that nutrient deposition varied by dietary treatment across time. These findings demonstrate that E. fetida, along with its associated mesofauna and microbial communities, effectively restores nutrient-deficient soil across varying diets while promoting the decomposition of organic matter.

Keywords: vermicomposting, Eisenia fetida, soil nutrient rehabilitation, colorimetric test, organic waste

Faculty Mentor: Mathieu Chalifour

Poster Presentation

Exploring Release Success in Rehabilitated Red Squirrels

By: Billie Bilodeau

By examining the survival rates in rehabilitated red squirrels we hope to provide a better understanding of the effectiveness and relative success of wildlife rehabilitation, a key feature of many conservation efforts. This area of research is relatively understudied and very few rehabilitation centers know the success of released animals (Dubois 2003). Red squirrels are an ideal species to explore as they are easy to mark, locate, and follow to record natural behaviours. By providing rehabilitation centers with valuable data on survival rates we can aid them in justifying continued funding through public and government sources. In addition, the public provide a great deal of support in rehabilitation centers including volunteer's, wildlife rehabilitators, and financial support. By providing them with relative success rates of rehabilitated animals we can educate and ensure their trust in this difficult yet essential process.

Faculty Mentor: Dr. Shannon M. Digweed

Poster Presentation

Interactions between Oribatid Mites (Oribatida) and Belowground Microplastics in Terrestrial Ecosystems

By: Kaidy Cech

Microplastic pollution is widespread and increasing rapidly, yet impacts in terrestrial systems remain poorly understood. Oribatid mites (Oribatida) are abundant soil microarthropods and indicators of soil health, making them an ideal taxon for evaluating terrestrial microplastic impacts. Using a soil microcosm manipulative experiment, we investigated whether oribatids affect the redistribution of microplastics within the soil column and if microplastics impact oribatid species and/or communities. Sixty soil cores were taken from 10 plots (6 cores/plot) in a mature Populus tremuloides forest to establish 50 laboratory soil microcosms. The remaining 10 cores were processed within 24 h using modified Tullgren funnels to extract the invertebrate community at the time of sampling. Soil microcosms were randomly assigned to one of five treatments (n=10 per treatment): (1) intact invertebrate communities without added microplastics, (2) intact invertebrate communities with small (125-250 µm) microplastics added, (3) intact invertebrate communities with large (250-500 µm) microplastics added, (4) sterilized soil with small microplastics added, and (5) sterilized soil with large microplastics added. Microcosms were incubated at 10ºC and 70% humidity for 20 weeks, after which the invertebrate community was extracted at three evenly spaced soil depths. Microplastics were extracted from the same soil depths using a saltwater density separation. Adult oribatid mites (>300 µm) and microplastics were counted, and mites identified to species level. Results are preliminary and will be presented. This research will advance understanding of the interactions between oribatid mites and microplastics and will contribute to our understanding of microplastic transport through terrestrial environments.

Faculty Mentors: Dr. Leah Flaherty & Dr. Matthew Ross

Oral Presentation

Investigating Bacterial Mechanisms of Resistance to Carvacrol

By: Cameron Deleeuw

Carvacrol will be used in terms of an antibiotic, used to form resistant E.coli. The E.coli will be subject to DNA extraction and sequencing to observe genomic differences compared a sensitive strain for possible mechanisms that form Carvacrol and antibiotic resistance.

Faculty Mentors: Dr. Benjamin Bourrie & Dr. Randi Guest

Oral Presentation

Standardization of qPCR of Verticillium Longisporum Microsclerotia in Soil

By: Logan Gariepy

The development of methodology to isolate microsclerotia from soil and plant tissue samples, creation of a standard curve and testing of the efficiency and specificity of two primer sets against Verticillium Longisporum DNA via qPCR.

Faculty Mentor: Dr. Andrea Botero-Ramirez

Oral Presentation

Who Crosses and Who Cannot: Comparing Deer Crossings and Elk/Moose Near Crossings at Fence Gaps in Elk Island National Park

By: Herman Gill

This unique situation in EINP presents the opportunity to study fence permeability and its effects through exploring aspects of behavioural and movement ecology. Animal behaviour and movements are rarely random. Decisions are made by weighing risk, opportunity, and affected by constraints. As such, exploring how these ungulates respond to the fence and gaps within the fence provides a gateway into the opportunities, threats, or constraints they may be facing. In EINP, this study has access to data from 16 camera traps at locations of gaps in the fence. The pictures show animal movements along and around the fence, as well as through the fence. The goal is to track the movements or actions of select ungulates to see if there can be inferences drawn about the behaviour they display and what these behaviours may reflect. The question of interest is how moose and elk behave at fence gaps relative to deer crossings. From work that has already been done with the data, deer crossings are well documented. Given the fenced nature of the park, the overpopulation of ungulates within the park, and the intertwined nature of dependency of habitats on either side of the fence, the actions of ungulates at the fence is interesting to assess. If deer are moving because of foraging opportunities outside and population pressures inside, can a similar intent be detected in the elk and moose?

Faculty Mentor: Dr. Arthur Whiting

Oral Presentation

Macrogenetic Analysis of the Galapagos Islands

By: Jaynna Gogowich

In ecology, the use of standardized tools that can be applied consistently across different populations, geographic regions, and time scales is imperative for analyzing biodiversity. A proposed framework is integrating genetic essential biodiversity variables (EBV's), which comprise a set of standardized measures used to monitor and report biodiversity across all levels of biology, time, and geographic range. The goal of this project is to conduct a macrogenetic literature review of the studies carried out in the Galápagos Islands between the years 2021 to present; identify which genetic EBV's were assessed; what patterns are evident; and lastly evaluate the potential benefits and limitations associated with each variables use in these studies.

Faculty Mentor: Dr. Joshua Miller

Oral Presentation

Habitat Composition and Fence Permeability: Understanding White-Tailed Deer Crossings in Elk Island National Park

By: Ayden Hogeveen

Elk Island National Park (EINP) is the only fully enclosed national park in Canada. Home to a diversity of large ungulate species, the fence was installed to aid in the recovery of one of the last elk herds in Western Canada. Today, the density of some large ungulate populations (bison, elk, and deer) can have negative impacts on vegetation when they near the carrying capacity of the park, which can occur due to the favourable conditions for population growth and the restriction of dispersal resulting from the fence. However, areas of permeability, gaps in the park fence, do exist. These gaps can add connectivity for some large ungulates, like Odocoileus virginianus (white-tailed deer). I explored whether surrounding habitat composition impacted white-tailed deer crossing frequencies at these gaps in the EINP park fence using motion-activated camera traps. I observed a significant difference in where crossings occurred, and that presence of shrubland cover in areas of

fence permeability was associated with increased crossing frequencies. Understanding these dynamics can help park biologists and other stakeholders improve ecosystem health and connectivity while considering wildlife acceptance capacity.

Faculty Mentor: Dr. Arthur Whiting

Oral Presentation

The Mechanistic Mystery of Carvacrol: A Genomic Approach

By: Delaney Huhtala

The rise of antibiotic resistance is a worldwide concern as it poses a global risk to human health. Diseases caused by antibiotic resistant bacteria are difficult to treat, sometimes turning

previously easily treatable diseases deadly. The increase in antibiotic resistant bacteria has underscored the need for alternative antibiotic treatments. Carvacrol, a compound found in oregano essential oils, has been suggested as a natural alternative antibiotic due to its efficacy against both gram-positive and gram-negative bacteria. However, the mechanisms behind carvacrol's activity are poorly understood. MacEwan student Sahiba Pahwa conducted previous investigations into carvacrol activity, during which she generated a carvacrol-resistant strain of Bacillus subtilis. Originally, the goal of this study was to perform comparative whole genome sequencing of the resistant strain with the wild-type strain to determine the genetic basis of carvacrol resistance. When MIC testing determined the isolated B. subtilis strain to be carvacrol-susceptible, the focus of the study shifted to generation of carvacrol-resistant E. coli mutants to be further studied through whole genome sequencing.

Faculty Mentors: Dr. Randi Guest & Dr. Benjamin Bourrie

Oral Presentation

Implementing a New System for Microsatellite Genotyping of Ostrich

By: Haley Irwin

Pedigrees are used to monitor genetic diversity and inbreeding in livestock, helping to maintain population health, identify under-producers, and develop sustainable breeding practices. MacEwan University has partnered with an Alberta ostrich farm to assess parentage and build a pedigree of their 2024 chicks. Microsatellites, polymorphic molecular markers consisting of tandem repeats, are powerful in constructing pedigrees due to high variability between individuals, elucidating links between parent and offspring. Microsatellite genotypes can be established using multiplex PCR, amplifying several microsatellite loci in a single reaction using primers labelled with different colours, and fragment injection. Screening has identified a set of fourteen microsatellites organized into four multiplexes for genotyping the breeding population using a 3-colour system. However, technology and manufacturing changes have rendered the old system obsolete, necessitating the transition to a new 4-colour system. This project aimed to implement the new 4-dye system by reorganizing the microsatellites into three multiplexes, assessing allele call congruency between systems, and troubleshooting multiplex parameters to optimize amplification and analysis. We developed protocol documents and built upon the existing dataset, resulting in a dataset of 54 parent generation birds and 21 chicks, for use in the GENE 400 laboratory to assess parentage and genetic diversity. The parameters for two of three multiplexes have been optimized, serving as a foundation for continued troubleshooting. Implementing the new 4-dye system improves the efficiency of genotyping and contributes to continued partnership and opportunities for student learning.

Faculty Mentors: Dr. Joshua Miller & Victoria Bowles

Poster Presentation

Characterizing the Diversity of Pediococcus Present in Spontaneous Beer Fermentations

By: Rylee Kager

Spontaneous beer fermentation is driven by complex microbial community assembly processes that remain only partially understood, particularly with respect to lactic acid bacteria (LAB). Pediococcus spp. are among the most prominent LAB in spontaneous beer fermentations, where they significantly influence acidification, flavour development and fermentation stability. Despite their prevalence, strain-level diversity within Pediococcus and its functional consequences remain poorly characterized in the brewing literature. Through integrated phenotypic and genomic analyses, including RAPD-PCR, carbohydrate fermentation profiling, catalase production testing and exopolysaccharide (EPS) production assays, this project aims to characterize Pediococcus diversity within a spontaneously fermented beer and evaluate how strain-level variation may shape fermentation outcomes. By linking genetic and functional traits, this research seeks to improve understanding of the ecological role of Pediococcus in spontaneous beer fermentation systems.

Faculty Mentor: Dr. Benjamin Bourrie

Oral Presentation

Activating the Cpx Stress Response Allows FtsH Deletion in E.coli

By: Monica Kucher

Proteins essential for bacterial survival provide important insights into the cellular processes required for life and represent potential targets for antibiotic development. One such protein is FtsH, a membrane-associated protease in E.coli that plays a key role in maintaining cell integrity. For decades, it has been believed that loss of FtsH causes cell death due to excessive production of lipopolysaccharide (LPS), a major component of the bacterial outer membrane. However, recent findings from our lab challenge this view and suggest that cell death instead results from the accumulation of misfolded proteins within the cell.

This project investigates how E. coli can survive without FtsH under activated cellular stress responses. Specifically, I examined whether reducing the burden of large protein complexes in the inner membrane can compensate for the loss of FtsH. Using genetic approaches, I studied bacterial strains with defined mutations that lower lipopolysaccharide levels, activate stress responses, or remove major respiratory complexes. Growth behaviour under different conditions was used as a readout for cell survival.

The results support a model in which FtsH is essential not only for regulating membrane composition but also for managing protein quality control during cellular stress. These findings challenge long-standing assumptions about why FtsH is required and improve our understanding of how bacteria cope with internal damage. This work contributes to broader efforts to understand essential bacterial processes and may inform future strategies for antibiotic development.

Faculty Mentor: Dr. Randi Guest

Oral Presentation

Characterization of a Conformational Change in an ATP-Binding DNA Aptamer

By: Kim Lewis

Exploring the possibility of confirmational change in an ATP-binding DNA Aptamer using various visualization techniques.

Faculty Mentor: Dr. Nina Bernstein

Oral Presentation

Identifying Developmental Regulators of Goblet-like cells differentiation in the Zebrafish Intestine

By: Jordan McDowell

The intestinal epithelium serves as a critical interface between the body and the external environment, responding to food, bacteria, viruses, and other luminal factors while maintaining nutrient absorption and barrier protection. All epithelial cell types originate from intestinal stem cells (ISCs), which dynamically adjust epithelial composition in response to environmental conditions. Although ISCs are known to alter cell output following environmental challenges, the mechanisms by which environmental signals are sensed and communicated to stem cells remain incompletely understood.

Prior work in our lab has focused on identifying epithelial cell populations that may regulate ISC behaviour. Recent single-cell RNA sequencing analysis in zebrafish revealed a previously undescribed goblet-like cell population located in close proximity to ISCs. These cells are hypothesized to function as sensory “guardian” cells that detect environmental cues and influence stem cell differentiation.

Building on this foundation, the current study uses computational analysis in R (Seurat and Monocle3) to reconstruct developmental trajectories distinguishing progenitor populations from differentiated goblet-like cells. By analyzing gene expression dynamics along these trajectories, candidate genetic regulators of goblet-like cell development are being identified.

This work advances our broader goal of understanding how environmental information is integrated within the intestinal epithelium to guide stem cell differentiation. This summer, identified candidate regulators will be functionally tested through CRISPR-Cas9–mediated gene disruption in zebrafish, enabling investigation of how loss of goblet-like sensory cells affects epithelial development and ISC regulation.

Faculty Mentor: Dr. Reegan Willms

Poster Presentation

Optimization of Plasmodiophora brassicae inoculum production

By: Jayda Mitchell

Plasmodiophora brassicae Woronin, the causal agent of clubroot, is a major pathogen of canola and other species of the Brassicaceae family. As an obligate protozoan, it requires in planta multiplication for downstream applications. Although P. brassicae produces large number of resting spores, inoculum can be limiting, particularly when single spore isolates (SSI) are first obtained or for large scale host screening. Hence our objective was to optimize inoculum production. For that purpose, the universally susceptible host ECD05 (Brassica rapa var. pekinensis 'Granaat') was inoculated with 10^4 or 10^6 resting spores per plant, grown in three pot sizes (2.4", 4", 6"), and fertilized once or twice a week. Six weeks post-inoculation, disease severity, gall weight per plant, and resting spore density per gram of gall was conducted, and the disease severity index (DSI) was calculated. Both pot size and fertilization did not have an effect DSI at the higher inoculum level; however, at the lower inoculum level, DSI increased with larger pots and more frequent fertilization. Gall weight per plant in both inoculum densities was strongly influenced by both pot size and fertilization, with the largest galls in 6" pots fertilized twice a week. Notably, under these conditions, gall weight per plant was similar for both inoculum densities. Resting spore production was not affected by any of the treatments. These results indicate that P. brassicae inoculum production can be maximized, particularly when initial inoculum is limited (e.g., SSI), by using larger pots and fertilizing twice a week.

Faculty Mentor: Dr. Andrea Botero-Ramirez

Poster Presentation

Microbial Phenolic Acid Metabolism in Spontaneous Beer Samples

By: Matthew Moawad

This project aims to analyze the changing effect of early yeast on phenolic acids and their downstream metabolites during spontaneous beer fermentation. Examination of genera present in early spontaneous beer fermentation, such as Pichia and Saccharomyces, and how concentration, time, and yeast interactions affect certain phenolic acids, specifically ferulic acid and 4-Vinyl guaiacol. Specifically, this project aims to identify the nature of ferulic acid carboxylation and simulate early fermentation patterns in spontaneous beer. Analysis was conducted using colony plating and Minimum Inhibitory Concentration testing to determine optimal concentrations of Saccharomyces and Pichia strains. The yeast samples were also plated onto WLN agar after being suspended in malt broth at different time points to examine early yeast interactions and possible links to phenolic acid effects.

Faculty Mentor: Dr. Benjamin Bourrie

Oral Presentation

Characterizing Interferon-Enriched Cells in the Larval Zebrafish (Danio rerio) Intestinal Epithelium

By: Ashton Myers

Interferon (IFN) signaling is a key component of innate immune defense and has recently been shown to occur in spatially restricted subsets of intestinal epithelial cells in mammals. These

interferon-enriched epithelial cells (IFN-ECs) exhibit localized expression of interferon-stimulated genes (ISGs), allowing for immune protection while limiting systemic inflammation. Previous transcriptomic studies have identified IFN-responsive epithelial populations in the zebrafish (Danio rerio) intestine, however, the spatial organization of these cells within intact tissue has not been directly examined. In this independent study, fluorescence in situ hybridization will be used to visualize the expression of the ISG rsad2 in dissected intestines from 5 days post-fertilization zebrafish larvae. This approach will allow direct characterization of the abundance and spatial distribution of IFN-ECs under baseline microbial conditions. Additionally, larvae will be exposed to lipopolysaccharide or polyinosinic:polycytidylic acid to assess how bacterial and viral immune stimulation influences IFN-EC abundance and localization. This study aims to clarify whether spatially restricted epithelial IFN signaling is present in the zebrafish intestine.

Faculty Mentor: Dr. Reegan Willms

Oral Presentation

Optimization of space for Plasmodiophora brassicae (clubroot) pathotyping

By: Kimberley Obwatinya

No abstract available.

Faculty Mentor: Dr. Andrea Botero-Ramirez

Oral Presentation

The Effect of Hyperglycemia on EMT in Human Pancreatic Ductal Cells

By: Hailey Packwood

Type 2 diabetes mellitus (T2DM) is a metabolic condition associated with hyperglycemia and an increased risk of pancreatic ductal adenocarcinoma (PDAC). Hyperglycemia has been found to result in TGF-β activation, potentially promoting PDAC tumour invasiveness and metastasis through induction of EMT. This study will examine whether glucose levels alone are sufficient to shift EMT states in a PANC-1 cell line. PANC-1 cells will be cultured under hypoglycemic (2.5 mM), normoglycemic (5.5 mM), and hyperglycemic (25 mM) conditions. EMT markers CDH1 (epithelial) and VIM (mesenchymal), will be quantified using qPCR, along with PAI-1 as a measure of TGF-β activation. Average aggregate size and morphology will be

assessed via imaging and ImageJ analysis. Immunofluorescence for CDH1, VIM, PCNA will be used to provide insights into EMT status and TGF-β pathway activation at the protein level. We predict that hyperglycemia will accelerate EMT through activation of the TGF-β pathway, reflected by decreased CDH1, increased VIM, smaller average aggregates, elevated PAI-1, and increased proliferation. Hypoglycemia is expected to suppress EMT, while normoglycemic conditions should maintain EMT levels. These findings will clarify how glucose influences EMT in PDAC cells and may help inform future therapeutic strategies for metabolic regulation of tumour progression.

Faculty Mentor: Dr. Habib Rezanejad

Oral Presentation

Qualitative Analysis of People's Attitudes and Views on Sharks

By: Owen Paltzat

This study had the goal of determining the differences in views on sharks in the MacEwan student population, as well as determining whether there is an association between people's attitude towards sharks and their views on shark-related topics. This study used a survey (n=134) to gather the data. The study found that there was no evidence of association between attitude towards sharks, and views on them. There are two exceptions; owning a pet was associated with positive attitudes towards sharks and there was an association between positive attitudes towards sharks and blaming developed countries for the decline in shark populations.The results also showed differences in MacEwan students' views on sharks. This was determined with Chi-squared tests for between variable association, and Friedman's tests for within variable differences.

Faculty Mentor: Mathieu Chalifour

Oral Presentation

ITS DNA Sequencing to Identify Mycorrhizal Fungal Symbionts of Cypripedium passerinum

By: Shreenik Pawar

Orchid germination and survival depend on symbiotic associations with mycorrhizal fungi, which provide essential nutrients during initial and early development in exchange for photosynthates. Many terrestrial orchids exhibit high specificity toward their fungal partners, making accurate identification of these symbionts critical for ecological understanding and conservation planning. Cypripedium passerinum, a terrestrial lady's slipper orchid native to North-Western America, has not been extensively characterized at the molecular level with respect to its mycorrhizal associates. This project aims to identify fungal symbionts colonizing the roots of C. passerinum using internal transcribed spacer (ITS) DNA barcoding and long-read Oxford Nanopore sequencing. Multiple root-derived genomic DNA samples from 14 individuals from the Wagner Natural Area, west of the city of Edmonton, Alberta, were extracted and quantified, and fungal ITS regions were amplified by PCR using fungal-specific ITS primers. Amplification was confirmed by gel electrophoresis, and the successfully amplified products were purified before library preparation for sequencing. Following purification, amplicons will be barcoded and prepared for sequencing on the Oxford Nanopore MinION platform. Sequencing reads will be processed for quality, and taxonomic classification workflows will be applied to identify dominant fungal taxa associated with root tissues. This study will generate baseline data on the fungal symbionts of C. passerinum and provide information relevant to conservation strategies, habitat assessment, and potential ex situ propagation efforts.

Faculty Mentor: Dr. David McFadyen

Oral Presentation

Application of DNA microsatellites to investigate the genetic diversity of Galeris Rotundifolia

By: Steven Prescott

Orchids are the second largest family of flowering plants in the world. With the world having a constantly changing environment, the environment orchids live in change with it. We have partnered with Wagner Natural Area to do genetic testing on one of the orchids native to Alberta, Galearis rotundifolia, the round leaf orchid. The genetic testing done seeks to determine the genetic diversity of Galearis rotundifolia to help guide future conservation efforts.

Faculty Mentor: Dr. David McFadyen

Oral Presentation

Habitat Associations with Coyote Fence Crossing Patterns at Elk Island National Park, Alberta

By: Michaela Regimbald

This project examined coyote movement activity through the fence at Elk Island National Park during February 2024 - March 2025. This project contributed to the Fence Permeability Project guided by Dr. Arthur Whiting and the Friends of Elk Island Society (FEIS). The objectives were to examine if habitat associations exist within the movement of coyotes through the fence and to compare results with previous research to provide insight into fence permeability. Coyote activity data was collected through camera trail cameras, and habitat composition was analysed using a 0.25km2 area around each camera. Habitat associations were analyzed by examining abundance, crossing events, and directionality of crossings associated with habitat types. Data was analyzed using four General Linear Models as well as a Stepwise-AIC analysis. Results suggested that coyotes activity was highest at the fence near areas with agriculture, meadow, and open water, and low near wetland areas. Habitat associations found in this study reflect the coyotes natural habitat preferences. This indicates that the fence may not limit coyote activity by allowing the species to move across the fence within preferred habitats. Results may be applied to future wildlife management through the knowledge obtained around directionality and areas of high coyote activity.

Faculty Mentor: Dr. Arthur Whiting

Poster Presentation

Developing 3D Organoids From Human Pancreatic Ductal Cells

By: Saniya Saeed

Organoids are 3D cell structures that mimic cellular compositions and characteristics of tissues or organs. They are a powerful biological tool for comprehensively studying cells, precisely in the context of disease modelling, drug testing, therapeutic effects, and regenerative medicine

applications. Generating organoids using human pancreatic ductal cells aims to expand current knowledge on ductal cell characteristics, such as their growth and differentiation potential. Ductal cells are assumed to contain progenitor-like features which would support their development into insulin-producing beta-cells. This contributes to the advancements occurring in treatments for diabetes, specifically for beta-cell replacement therapy. The use of human pancreatic ductal cells provides greater insights on human ductal cell function and characterization, making this organoid model more clinically relevant to the field of diabetes research and regenerative medicine. The main objectives of this research project are to develop a functional organoid model to study the expression and maintenance of ductal cell characteristics, in order to assess their contribution to beta-cell regeneration.

Faculty Mentor: Dr. Habib Rezanejad

Oral Presentation

Development of microsatellite markers for Galearis rotundifolia

By: Ashley Serunjogi

We are currently experiencing a global biodiversity decline that has accelerated in the past 50 years. Different strategies have been put in place to combat biodiversity loss such as the development of the United Nations Sustainable Development Goals (SDGs) of which Goal 15 focuses on conservation of life on land and reducing biodiversity loss. Areas such as the Wagner Natural Area in Alberta focus on the conservation and protection of various plant species. The small, round-leafed orchid, Galearis rotundifolia, is one of the sixteen orchid species found in the Wagner Natural Area, and it is experiencing ecological pressure due to human activities throughout its range. A central element in an effective conservation strategy is an assessment of species genetic diversity. Here, I report on the development of 11 polymorphic microsatellite markers for the small round-leafed orchid, G. rotundifolia. These markers can be used to assess the genetic diversity of G. rotundifolia in the Wagner Natural Area and throughout its range. Knowledge of genetic diversity can inform conservation and management strategies.

Faculty Mentor: Dr. David McFadyen

Oral Presentation

Developmental and Phenotypic Variation in Anxiolytic Drug Response Using a Zebrafish Model

By: Tobin Steman

Zebrafish (Danio rerio) are a popular model organism for testing anxiety-reducing (anxiolytic) compounds. Here, behavioural effects of the 5-HT 1A agonist buspirone were examined in selectively bred low- (LAZ), moderate- (MAZ), and high-anxiety (HAZ) zebrafish in both larval and adult stages. Buspirone exposure was assessed in larvae at 5 days post-fertilization (150 μM, 30 minutes) through open field spontaneous swimming and dark (DSS), light (LSS), and tap startle stimuli (TSS) response tests. Adults were tested at 7 months old (10 and 100 mg/L, 10

minutes) using open-field (OF) and novel object approach (NOA) tests. Buspirone did not significantly affect larval distance moved during spontaneous swimming, suggesting no sedative effect. Immobility (freezing) was affected during both LSS and TSS, with buspirone reducing MAZ and HAZ freezing while increasing LAZ freezing. In the adult OF and NOA tests, locomotion and time spent highly mobile were the most reduced in HAZ fish at the low (10 mg/L) buspirone dose. In contrast, the high (100 mg/L) dose increased immobility and reduced locomotion in all groups, with HAZ most strongly affected. Adult MAZ treated with the high dose remained in centre zone with the novel object longer than with the low dose and compared to the high-dosed LAZ and HAZ. This study suggests that zebrafish with different behavioural profiles respond to pharmacological compounds with varying outcomes, with implications for success in changing ecosystems.

Faculty Mentors: Dr. Trevor Hamilton & Andréa Johnson

Poster Presentation

Identifying the diet of Franklin's ground squirrel using macro-fossil analysis

By: Tristin Tanton

Franklin’s ground squirrel (Polioctellus franklinii) is a North American rodent declining in the central Alberta region. This study utilized adapted techniques in macrofossil analysis to identify the diet of Franklin’s ground squirrel by looking through fecal matter of wild individuals. The study area covered the eastern portion of Wabamun Lake Provincial Park, where traps were set in suitable habitat with confirmed sightings throughout May to August of 2025. One to five fecal pellets were collected in vials, where each vial was analyzed as individual sample units for presence and frequency of identifiable or tentatively identifiable macrofossils. In 34 units, 15 distinct plant and invertebrate macrofossils with varying observation counts were found. Rubus idaeus seeds and Forimicidae spp. bodies were found to be the most observed macrofossils across all analyzed samples. Trends in the observations of different macrofossils suggest Franklin’s ground squirrel eats more invertebrates in May and June, compared to berries in July and August. In Alberta, Franklin’s ground squirrel’s critical habitat intactness is severely declining, due to anthropogenic activities, and habitat loss should be investigated as the driver of this species decline in future research. This analysis is minimally invasive to the species well-being and effectively reveals information on habitat and dietary requirements of Franklin’s ground squirrel which is contributionary to future reintroduction and protection plans.

Faculty Mentor: Dr. Jessica Haines

Oral Presentation

Assessing the Dietary Composition of Franklin’s Ground Squirrels Using Non-invasive Metabarcoding

By: Daylen Towers

Franklin's ground squirrels (Poliocitellus franklinii; FGS) primarily inhabit parkland and southern boreal habitats that are shaped by habitat fragmentation and land-use change. Naturalists in the

province have noted that this species' range seems to be declining, and in response we are working to better understand the habitat needs of FGS to help inform targeted conservation efforts in the future. As part of this project, we used metabarcoding to identify the plant-based diet of FGS using non-invasive fecal samples. Fecal samples were collected from 33 free-ranging individuals at Wabamun Lake Provincial Park in 2024. Plant DNA was amplified using four barcoding regions, sequenced on the Oxford Nanopore MinION platform, and taxonomic assignments were generated using custom bioinformatic workflows incorporating regionally curated reference databases. Dietary composition was compared across barcode markers and throughout the season to evaluate marker performance and to assess temporal patterns in plant consumption. Preliminary results indicate that FGS consume a diverse range of grasses, forbs and woody plants. Multilocus metabarcoding improved detection of plant taxa relative to any single-marker approach, highlighting the importance of marker choice when interpreting metabarcoding data. These findings provide baseline information on plant resource use by FGS and establish a methodological framework for integrating non-invasive dietary data into future assessments of habitat quality, landscape change, and wildlife management decision-making.

Faculty Mentor: Dr. Joshua Miller

Oral Presentation

Analysis of Mitochondrial DNA Diversity to Aid in the Conservation of Bull Trout in Western Canada

By: Morgan Warawa

As biodiversity continues to decline globally, there is a need for more effective conservation strategies which support long-term population resilience. Genetic diversity is a critical, yet often overlooked, aspect of conservation which provides insights into adaptive potential and how a population might be able to survive under environmental change. Consideration of genetic diversity is especially important for freshwater fishes, which often occur in geographically isolated populations with limited gene flow. One freshwater fish species of conservation concern in North America is bull trout (Salvelinus confluentus), which has experienced widespread population declines for decades. In this work, we analyzed the mitochondrial DNA (mtDNA) diversity of 58 bull trout samples from five locations across Western Canada. Haplotype and nucleotide diversity were low within populations, but higher when the populations were pooled. Haplotype network analysis further showed that most individuals shared one haplotype. When combined with reference sequences from a previous study, the majority of samples grouped within a previously identified haplotype, with three novel haplotypes identified. These results are consistent with previous nuclear and mtDNA studies which have shown that most variation occurs among bull trout populations and within population diversity is relatively low. Though the limited diversity observed may be a natural characteristic of these populations, it also may indicate a reduced adaptive potential and increased vulnerability to environmental change. Continued and expanded genetic monitoring of bull trout will be important to preserve the long-term resilience of this threatened freshwater fish species in the face of the ongoing biodiversity crisis.

Faculty Mentor: Dr. Joshua Miller

Oral Presentation

Identification of the Nuclear Localization Signal of Flowering Locus C (FLC)

By: Christina Williams

Transcription Factors are proteins that bind to DNA sequences in the nucleus to regulate gene expression. Proteins are synthesized in the cytoplasm. To be imported into the nucleus, transcription factors possess a short amino acid sequence called a nuclear localization signal. My honours research contributed to a project aimed at identifying the Nuclear Localization Signal of the plant (Arabidopsis thaliana) transcription factor Flowering Locus C (FLC), which is an important regulator of flowering time in the model plant Arabidopsis thaliana. This project uses

Green Fluorescent Protein (GFP) to observe the subcellular localization of FLC. Identifying the nuclear localization signal of FLC allows us to gain a better understanding of the protein's structure and function. I have isolated and characterized genetically modified Arabidopsis plants that express GFP, which serve as controls for this research showing non-nuclear localization. I am also working to create an FLC:GFP control line to visualize the typical nuclear localization of the FLC protein. Future students will continue this work by creating targeted mutations (amino acid changes) to the FLC protein to determine which are essential for its nuclear import.

Faculty Mentor: Dr. Melissa Hills

Oral Presentation

Child and Youth Care

Perceptions and Correlates of Time-Out and Physical Punishment Procedures

By: Katherine Luzanac

Time-out is a parenting strategy that involves temporarily isolating a child from a pleasant environment to decrease the occurrence of unwanted behaviour. Despite years of research supporting the efficacy and safety of time-out, an online movement has warned parents against its use. Some individuals have claimed that time out can negatively impact the relationship the child has with the parents, as well as possibly lead to children having worse mental health in the future. In response to this, a 2024 study evaluated students who had experienced time-out and found that, when properly implemented, time-out in childhood results in better mental health outcomes and improved emotional regulation. This study attempted to replicate these results to help counter misinformation regarding time-out. Additionally, this study also evaluated the use of physical punishment as a parenting strategy. While previous research has consistently shown that physical punishment like “spanking“ can result in negative mental health outcomes, one study found that almost 70% of individuals today report having experienced being spanked as a

child. This research aimed to evaluate students' perceptions of physical punishment and its association with psychological distress and emotional dysregulation. By evaluating both of these parenting strategies, we hope to understand how punishment in childhood is perceived by adult students and whether these experiences were inherently harmful.

Faculty Mentor: Dr. Russ Powell

Poster Presentation

Communication

From AAVE to For You: A textual Analysis of AAVE-influenced Gen Z Slang on TikTok Advanced by Black Creators

By: Alice Hategekimana

In the era of short-form video, TikTok has become more than an entertainment platform; it has emerged as a powerful force shaping contemporary language, particularly among Gen Z users. Among the key innovators are Black content creators who use AAVE (African American Vernacular English) and creative adaptations of slang, shaping in-group communication and influencing mainstream youth language. Phrases such as “no cap,” “slay,” and “periodt” have moved beyond TikTok’s short-form videos into everyday speech. However, their origins are often adopted without public acknowledgment. Despite this widespread circulation, scholars have yet to fully examine how digital platforms and cultural contexts intersect to drive language change. This paper addresses that gap through a textual analysis of Gen Z slang on TikTok, focusing on how these expressions derive from and evolve through AAVE as used by Black creators. By analyzing five TikTok videos featuring prominent slang usage, transcripts were examined to identify patterns and thematic functions. The findings demonstrate how AAVE-derived terms operate both as markers of community identity and as commodified elements of popular culture. In doing so, this study positions TikTok not only as a site of viral content but also as a catalyst for linguistic evolution.

Keywords: African American Vernacular English (AAVE), TikTok, Gen Z slang, Black digital creators, textual analysis, sociolinguistics

Faculty Mentor: Alvin Ntibinyane

Poster Presentation

Computer Science

Reinforcement Learning–Based Clustered Multi-Application Charging Optimization for Underwater Wireless Sensor Networks

By: Mustafa Al-Hamadani

I will be presenting research on how an autonomous underwater vehicle (AUV) can plan the most efficient route to recharge underwater wireless sensor networks, systems that are challenging to access and maintain due to the harsh underwater environment. This work focuses on optimizing the AUV's path to reduce travel time and energy use while ensuring sensors are recharged reliably, helping extend network lifetime and improve long-term underwater monitoring.

Faculty Mentor: Dr. Mohammed Elmorsy

Poster Presentation

Smartphone-based Indoor Localization Using Wi-Fi RSSI Fingerprinting in Dynamic IoT Environments

By: Sophie Barr

Indoor localization using WiFi fingerprinting is a cost-effective solution for GPS-denied environments. However, dynamic environmental conditions often degrade the reliability of static radio maps. This paper presents a practical smartphone-based localization system implemented for an indoor IoT environment. The proposed system employs a dual-stage approach.

First, it estimates the unknown physical locations of WiFi Access Points (APs) and derives log-distance path loss parameters (A, n) for each AP. Second, it utilizes a normalized k-Nearest Neighbor (k-NN) matching strategy in the signal space. Experimental results on a multi-floor dataset demonstrate that the system achieves high accuracy, evaluated through a circular error metric in pixel-to-meter converted space.

Faculty Mentors: Dr. Mahmoud Elsaadany & Dr. Shokry Shamseldin

Oral Presentation

Development and Pilot User Study of a VR Anatomy Visualization Application

By: Ryan Bernal & Benita Munung

Understanding and comprehending human anatomy is one of the most difficult tasks for many medical students. Traditional methods of learning through textbook diagrams and large human cadavers/models can be costly, inexpensive, and hard to connect theoretical concepts effectively, resulting in students unprepared for real-world scenarios. With the growing innovation in computer technologies like virtual reality (VR), newer ways of delivering learning material are being explored in many areas including medical fields. To evaluate the potential of VR, a study was conducted where seven participants tested Anaorthopedic VR, a developed VR app for this study to visualize and interact with human anatomy in the virtual space. Participants displayed a positive reception towards this application for its ease of use and potential in aiding learning, but data remains limited due to participants background heavily skewed into computer science than human anatomy. The results demonstrate the potential of VR for use in learning.

Faculty Mentor: Dr. Sam Qorbani

Oral Presentation

Analyzing Personal Spotify Data Trends

By: Ryan Cabral & Vedant Prajapati

Every year, Spotify gives its users "Spotify Wrapped", which is a breakdown of their personal listening trends. Users can also download their own data since they started using Spotify. We have created our own dashboard that allows users to view a more in-depth analysis of their data, providing deeper insights into the songs they like and the artists they adore.

Faculty Mentor: Dr. Indratmo Indratmo

Oral Presentation

Understanding How The Brain Processes Music Using Machine Learning Techniques

By: Joseph Foote

This research strives to find new insights for how we understand the way the brain processes music by applying machine learning techniques. The goal is to create a VAE (Variational Autoencoder) trained on EEG recordings gathered from participants as they attempted to recognize common songs. This should provide some useful insight as to which areas of the brain are active as well as determine if there is a neural build up towards recognizing music. The data for this research was provided by Dr. Cameron Hassall.

Faculty Mentor: Dr. Dana Cobzas

Poster Presentation

Spare factorization methods on high dimensional brain data from ALS patients

By: Benji Lawrence

Amyotrophic lateral sclerosis (ALS) is a heterogeneous neurodegenerative disease whose variable patterns of brain degeneration make patient stratification difficult. This project investigated whether nonnegative matrix factorization (NMF) and orthogonal projective NMF (OPNMF) could identify meaningful ALS-related structural patterns from neuroimaging data. Because real MRI data does not provide ground-truth subtype labels, the work first focused on validating these methods using synthetic three-dimensional torus data, where known spatial structure could be directly controlled and evaluated.

The project’s main success was the development of a synthetic testing framework and the demonstration that both NMF and OPNMF performed well on torus datasets containing localized “bump” patterns. The experiments were made progressively more challenging through the addition of noise, variation in radial thickness, and random secondary bumps. With appropriate regularization, both factorization approaches continued to achieve high accuracy, showing that the framework could recover interpretable spatial patterns even under greater complexity.

The project also clarified the main limitations and future directions. In particular, experiments based on correlated noise did not achieve similarly strong results, indicating that these methods were more effective for localized structural changes than for diffuse patterns. Although ALS subclassification was not completed within the project period, important groundwork was established: cortical thickness data was successfully extracted from the CALSNIC dataset, initial MRI testing had begun, and the validated synthetic pipeline provided a strong foundation for continued work toward real-data analysis and eventual ALS subcategorization.

Faculty Mentors: Dr. Dana Cobzas & Dr. Chris Ramsey

Poster Presentation

Live Demonstration and Presentation of GradeGuard Exam Deferral App

By: Matthew Meyer, Nico Lopez & Nahema Gutema

Over the Fall 2025 semester, our team worked under the guidance of Dr. Mahmoud Elsaadany to develop GradeGuard: an exam deferral application that aims to streamline the process of deferring exams for both students and faculty.

Our presentation aims to display the full Software Development Life Cycle (SDLC) behind the project, from initial ideation and requirements gathering to sprint planning, version control, and developing software with Agile methodology. We will be discussing the challenges we encountered during development, and our teams solutions to real-world practical problems.

Attendees will have the opportunity to view an interactive live demonstration of the final GradeGuard product, showcasing the various features and the process through which they were designed, tested, and implemented by the team.

Our project demonstrates how the use of collaborative, process-driven development can produce meaningful software solutions, and we hope that our experience offers insight to students and faculty interested in software engineering.

Faculty Mentor: Dr. Mahmoud Elsaadany

Project Display

Development of a 3D Body Scanner for Healthcare Applications

By: Loveleen Singh

Healthcare systems are under increasing strain from an aging population and limited access to medical professionals. One proposed approach to alleviate this strain is through the use of semi- or fully autonomous Robotic systems, such as an autonomous medical pod (or auto-doc) that can scan a patient, collect non-intrusive data, provide a diagnosis, and provide treatments. The first step to realizing such a device is to reliably scan a patient, which ultimately determines the patient's position and captures surface geometry.

This project focused on designing and developing a static body scanning system. The system uses multiple depth cameras to capture point data and generate a 3D representation of a patient's body. Calibration and point cloud registration techniques were used to align data from multiple sensors into a common coordinate frame. The scanner records the patient's body surface and generates a detailed 3D point cloud, enabling the determination of body position within the structure.

Faculty Mentor: Dr. Jeffrey Davis

Poster Presentation

Recommender System using Temporal Collaborative Filtering

By: Skylar Stromme

In the modern world, the amount of content on the internet is growing exponentially. This media explosion has made it nearly impossible to filter content. The introduction of recommender systems has dramatically improved access to the content people seek.

Recommender systems have two primary approaches for finding a recommendations content filtering and collaborative filtering which focus on the items and users respectively. Most algorithms focus on collaborative filtering

Our research method builds upon collaborative filtering and utilizes clustering based on time to give temporarily relevant recommendations from similar users.

Faculty Mentors: Dr. Nesrine Abbas & Dr. Mohamad El-Hajj

Oral Presentation

Heuristic Evaluation of SAAF: A Persuasive System for Environmental Civic Engagement in Saudi Arabia

By: Vedsai Vangapandu

Abstract—Environmental sustainability has become a cornerstone of national strategic planning, yet individual participation in waste management remains a significant behavioral challenge. This paper evaluates SAAF, a mobile application designed to foster pro-environmental behavior in Saudi Arabian parks using the Persuasive Systems Design (PSD) framework. We conducted a heuristic evaluation with five expert (N=5) users to assess the perceived persuasiveness, clarity, and trust of eight distinct system features. Quantitative analysis using one-sample t-tests revealed that Self-Monitoring and Verified Points were significantly persuasive ($p < 0.005$), while traditional competitive leaderboards were found to be less effective. Qualitative findings suggest a strong cultural preference for collaborative social support over individual competition, reflecting the collectivist nature of the Saudi population. These results provide critical insights for developers and policymakers into how persuasive technologies can be culturally tuned to support the Saudi Green Initiative and Vision 2030 sustainability targets.

Faculty Mentor: Dr. Chinenye Ndulue

Poster Presentation

Decision Sciences

Mapping the Specialized Ecosystems of AI-Driven Healthcare Research

By: Avarey Frayn

Artificial intelligence (AI) is changing how we approach healthcare, but the field has grown so rapidly that we need to understand its structure. This study evaluates research trends where artificial intelligence, digital health, and data-driven methods intersect in the health sciences. Over 8,800 research documents published between 2010 and 2026 were collected from the Scopus database using three groups of search terms representing AI technologies, digital health concepts, and analytical methods. The results showed that publications came from many different fields, including Medicine (4,950), Computer Science (2,967), and Biochemistry (2,010). Using VOSviewer software to map how research topics connect to each other, our analysis revealed four distinct research clusters: the first focuses on computational methods and clinical intelligence systems; the second deals with digital health systems and their use in real clinical practice; the third centers on medical imaging and computer vision; the fourth is precision oncology and genomic medicine. Each cluster reflects a different research community, uses different types of data, and addresses different clinical needs, yet no cluster is isolated. Common foundations and conceptual links connect them, a notion demonstrating that AI in healthcare has started to mature into specialized areas while maintaining integration across domains.Understanding these four pillars will help researchers, clinicians, and policymakers see where their fields are heading and where collaborative opportunities exist. As these interconnected research ecosystems continue to develop, they will influence early diagnosis, treatment safety, post-surgery recovery, and the overall quality of patient–provider interactions and care.

Faculty Mentor: Dr. Alireza Aslani

Poster Presentation

Patterns of Noncompliance: Cross-industry analysis of Organizational Violations

By: Miranda Holba

An exploratory analysis of organizational violations across various industries and jurisdictions. By comparing US organizations across all jurisdictions, we explore tendencies and patterns of violations, as well as offence probabilities and impact severity.

Faculty Mentors: Dr. Arka Mukherjee & Dr. Parminder Kang

Poster Presentation

Rethinking Business Statistics Education in the Age of AI: Balancing Integrity, Critical Thinking, and Innovation

By: Austin Kuhn

The purpose of this research is to explore how AI is changing the way business statistics is learned and taught within universities. Ideally, we would like to find out how universities can utilize Generative AI to facilitate deeper learning rather than replacing it. We used a survey questionnaire to collect data from business students related to their use of AI tools such as ChatGPT. This data was cleaned and used to perform exploratory data analysis involving bar charts, heatmaps, scatterplots, etc. to determine relationships between our independent variables and improvement of overall learning performance of students due to Generative AI use. In the future we plan to perform various types of regression analysis. We have found that as the overall frequency of AI use per week increases, the average length of AI sessions tends to increase, as does the average overall learning performance of the students. We also found that of the multiple aspects of overall learning performance having course activities directly involving Generative AI seems to be the most positively impactful. There were noticeable differences between students under and over 21 years old regarding utilizing AI to learn and its effectiveness. Students tend to use AI for many different purposes with the 3 most common being: content explanation, brainstorming, and creating study questions. These findings show promoting frequent AI use habits by involving AI in course activities can improve learning outcomes for students when things such as age and purpose are considered by instructors.

Faculty Mentors: Dr. Arka Mukherjee, Dr. Subhadip Ghosh & Dr Rohit Jindal

Poster Presentation

Integrating AI Agents into the Beer Distribution Game for Experiential Learning

By: Andrew Numrich & Gavin McNutt

The Beer Distribution Game is a well-established experiential learning tool for teaching supply chain dynamics, coordination challenges, and the bullwhip effect. As artificial intelligence becomes increasingly embedded in operational decision-making, there is growing pedagogical value in exposing students to AI-driven agents alongside human decision-makers. This study presents an educational simulation framework in which AI agents and human participants compete within the Beer Distribution Game under identical information structures, delays, and cost functions.

The framework supports human-only, AI-only, and mixed humanâ€“AI supply chains, enabling students to directly observe differences in ordering behavior, coordination, and system dynamics. AI agents are implemented using adaptive decision policies and integrated seamlessly into classroom gameplay. Learning outcomes are evaluated through standard performance metrics, reflective exercises, and structured debrief discussions. The proposed approach enhances experiential learning by fostering critical thinking about human decision biases, algorithmic decision-making, and the role of AI in modern supply chain management education.

Faculty Mentor: Dr. Shervin Espahbod

Poster Presentation

Design

Evoking Odile's World Into Gouache

By: Fran Annawi

The goal of this design is to recreate Odile's universe through Gouache. The idea for this design draws on the book "The Other Valley" by Scott Alexander Howard, referencing paintings to embody Odile's memories. The paintings appear when Odile wants to repress her past, often in the background like a loud subconsciousness. Odile describes these paintings with words such as "unlabeled," "askewed," and "vague," which allude to how memories behave.

This project, as a Gouache packaging, explores Odile's past trauma of losing Edme, which she tries to repress throughout the story. The way Gouache oxidizes, gradually losing saturation, visualizes the loss of summer colors in Odile's life from her youth to her adulthood.

Faculty Mentor: Constanza Pacher

Poster Presentation

DESN 445 Service Design: City of Edmonton Pet Licensing Re-Design

By: Raquel Callele, Ella Jane Eresmas, Cadence Mutch & Kelsey Kendrick

As a collaborative work, the class of DESN 445 Service Design, worked along side City of Edmonton's Animal Care and Control Centre to find creative solutions to their Pet Licensing Service. Split into two phases in the semester, students applied research methods to understand their users and start proposing possible solutions. Presented main findings to community partners and based off of these findings, re design areas of the Pet Licensing Service to create better accessibility, identify the friction that prevents them from reaching their users and create a fundamental understanding of this bylaw to be marketed to the general public.

Faculty Mentor: Dr. Isabelle Sperano

Oral Presentation

Built out of P-L-A-N-E-T-S: A Typographic Album Cover

By: Stephanie Chan

This is a typographic album for Allan Gilliland’s reimagining of The Planets, performed by The River City Big Band. The music on this album conjurors images of large cities like New York or

Chicago. To emulate the city, the typeface of the album title was used to build the city. The letters were flipped, rotated, and stacked on top of each other until buildings were formed. No particular city's skyline was referenced so that the view could imagine that it was in their city.

Art Deco traditionally used luxurious and exotic materials, and its colour scheme was often black and dark colours, with gold and silver accents. Breaking away from traditional Art Deco colours, various shades of teal was used to create a brighter and happier feel. The gold textures were created by hand and when combined with different shades of teal gives the album system a rich and luxurious feel.

The album system includes patterns are found in the city, and uses the bright teal and gold to represent the richness and luxurious feel.

Faculty Mentor: Constanza Pacher

Poster Presentation

Alice in Wonderland in New Light Book Redesign

By: Taylor Davies

This version of Alice is designed for people who feel out of place in the world around them. The book is printed in black and white, like many other versions, to embrace the differences within ourselves.

The cover is neither feminine nor masculine, allowing the audience to embrace themselves for who they are. The puzzle pieces in the illustrations symbolize the knowledge Alice still has to learn during her time in Wonderland. The illustrations are done to imitate woodblock printing, creating a handmade feel for a modern printed book. There are no illustrations of Alice. By not creating an image for this character, the reader can imagine themselves going through these strange adventures.

Faculty Mentor: Constanza Pacher

Project Display

Exploring abstract and layered visual metaphors in album cover design

By: David Gaina

This project presents a conceptual album package designed to visually interpret a jazz reimagining of an existing musical work. Inspired by the sense that the original compositions and their jazz interpretations exist in parallel artistic worlds, the design explores the idea of an alternate universe where each musical movement becomes a distinct planetary environment. These planets are paired with globally recognized jazz cities—Mars as New York, Venus as Paris, Mercury as Tokyo, Jupiter as New Orleans, Saturn as London, Uranus as Berlin, and Neptune as Prague—each representing unique atmospheres of sound, culture, and improvisation.

Earth functions differently within this structure. Rather than appearing as one of the movements, it encompasses the entire system. Earth appears as the central point that contains and connects these cities, grounding the cosmic metaphor in a recognizable world.

The visual language uses colour, texture, and spatial composition to reflect the relationship between the original works and their jazz reinterpretation. If the original compositions are imagined as a black-and-white framework, the jazz arrangements introduce colour that spreads through the system like ink across a map of stars.

Typography reinforces the album's thematic dichotomy: a classic, elegant title contrasts with modern supporting text, reflecting the dialogue between tradition and reinterpretation present in jazz.

Ultimately, the project investigates how graphic design can expand the conceptual world of music, shaping the listener's experience beyond sound by transforming the album package into an immersive visual universe.

Faculty Mentor: Constanza Pacher

Poster Presentation

Exploring Narrative Through Experimental Type: Flowers for Algernon Book Design

By: Emma Gauthier

The typefaces represent Charlie's internal state as he progresses through the narrative, providing a visual of his journey from his messy, uneven thinking to when he has learned enough to present his reports more cleanly.

The strikethroughs show Charlie slowly beginning to learn, followed by the inclusion of proper page numbers and, soon after, folios, with the eventual removal of these typical book elements reflecting Charlie's rapid drop in IQ. Following Charlie's tragic end, the final few pages return to messy handwriting, underscoring a decline in coherence as he reverts and ends up in a worse position than when he started.

The wobbly baseline of the text highlighting Charlie's distorted feelings becomes unstable, creating a sense of unease in the reader. The parts of the text about his struggle with memory are blacked out, as if redacted from his mind, and provide a visual representation of the gaps in his memory.

The dusted yellow on the cover gives it a sickly tone and makes the audience feel that something isn't quite right. The cover portrait is viewable from a distance, but as the audience looks closer, details become messy and the identity harder to discern, reflecting the themes of identity loss.

Faculty Mentor: Constanza Pacher

Project Display

Book of the Year Brochure: "Plan Your Petition", 2025 TYPOGRAPHY II

By: Gwendolyn Hunter

The government in the Other Valley, the Conseil, is a controlling and powerful ruler that acts in the best interest of all. Curious about how a government such as the Conseil would brand itself, the concept for a “Plan Your Petition” brochure was born.

The brochure invites the reader to read with a gentle and professional cover of the town, with the address and operational hours on the back. Immediately upon opening the brochure, the reader gets confronted with a compelling warning using the Conseil slogan, “Interference means Disappearance,” which includes an excerpt from the book describing the valleys getting erased like a wave rolling over. Using that imagery, the second page of warning shows a house fragmented with wave strokes flowing through it. Unfolding the brochure again reveals checklists that indicate whether the reader is eligible and guides them through the process clearly, with iconography accompanying specific points. Lastly, an official petition slip gets revealed, where the reader can fill in the questions and submit it to the Conseil.

Using beige and a deep teal creates a dissonance of tenderness and ruthlessness, with the light yellow welcoming the reader to information, showing care and remorse for their situation. Whereas the blue is bold and confronting, warning the reader of the consequences of interfering with the timeline. The type acts in the same way with coldness and kindness mixing. This battle of caring and confronting embodies the Conseil’s sole purpose of preservation above all.

Faculty Mentor: Constanza Pacher

Project Display

Designing Online Education Modules for Youth Aging out of Care

By: Kelsey Kendrick

Youth aging out of government care face disproportionate challenges, this project addresses the critical gap in accessible, peer-informed educational resources for youth aging out of government care.

Faculty Mentor: Dr. Isabelle Sperano

Poster Presentation

Accessible Lab Manual Design: An Interdisciplinary Exploration of Accessibility and Universal Design in Biology Labs

By: Emrys Michael

Existing biology labs are dense, technical, text-based documents that perpetuate learning barriers for many students. Through the creation of visuals to assist students' navigation of lab protocol and a redesigned document template using universal design standards, these labs were introduced to students in the 2025-2026 academic year. Students were then asked, through a survey, about their barriers to biology labs, as well as their experiences and attitudes

toward them. Lastly, survey participants were asked about the effectiveness and overall impact of the redesigned labs' design elements, such as visuals, font, font size, spacing, margins, and the use of a pale grey background. A majority of survey participants preferred the visuals and formatting, with many particularly enjoying the grey paper used for the redesigned labs. Seventy-five per cent of responses recommended the design be implemented in other biology lab manuals, and thirteen per cent recommended that it be implemented with some adjustments.

Faculty Mentors: Alexandria Keays & Dr. Melissa Hills

Oral Presentation

StoryWalk at MacEwan - How Visual Communications and Placemaking Welcomes Public to the University Campus

By: Anika Molino

The StoryWalk at MacEwan University in Edmonton is a permanent, free, all-season, interactive installation that promotes early literacy and physical activity by displaying pages of a children's book across 18 stations, both indoors and outdoors. Since launching in June 2024, over 1,200 children and adults have visited MacEwan for StoryWalk. We collaborate with local organizations and daycares, such as Alder Academy and the Newcomer Centre, introducing them to diverse children's stories and other activities offered on MacEwan's campus.

This presentation introduces StoryWalk at MacEwan and highlights our model of introducing young children, adults, and families to our university campus through immersive storytelling. Beyond our technical work, the presentation will also walk through how we design each story, prepare to share it with our community, and highlight the importance of visual communication and placemaking in StoryWalk. Through the designed materials, such as the story panels and postcards, visitors can navigate and situate themselves within the campus by interacting with them. Interactions with the designed materials allow visitors to connect with the university environment around them and encourage openness to future opportunities for themselves and their families.

Faculty Mentor: Dr. Ozlem Cankaya

Oral Presentation

Illuminating Modernism: The Canadian National Railways Sign and Mid-Century Design in Edmonton

By: Danaca Neilson, Irene Nibi & David Gaina

Our presentation traces the genealogy of a Canadian National Railways (CNR) neon sign as a significant artifact in Edmonton's mid-century design history, now displayed at the Edmonton Neon Sign Museum. The sign reflects a shift in Canadian visual identity, technological growth,

and the professionalization of graphic design in the postwar period. Our research, which was finalized as a vodcast recorded on location in Edmonton, places the sign within the 1950s context of rapid urban growth, railway expansion, and industrial modernization. It also situates the historic sign in direct dialogue with the contemporary CN logo by proximity. Recording in-situ made this contrast both analytical and sensory: the preserved neon artifact and its modern counterpart occupy the same urban space; our vodcast captures that proximity through sound and observation.

Through this juxtaposition, our research connects the material qualities of neon signage; hand-bent glass tubing glowing in chemical red. With the rise of modern corporate identity systems. We examine the relationship between the sign's typography and Allan Fleming's 1960 redesign, often called the "CN Worm," which translated national identity into a streamlined, legible symbol of motion and connectivity. With its modernist typography, modular geometry, and durable craftsmanship, the sign reflects a broader visual language of progress.

By tracing the evolution from neon to LED reproductions, our project highlights how preservation reframes corporate artifacts as heritage objects. Ultimately, it shows how a single illuminated sign can reveal connections between craft, modernism, branding, and collective memory while situating Edmonton within Canada's broader design history.

Faculty Mentor: Danijela Zutic

Oral Presentation

Designing for Inclusion: Enhancing Design Studio Classrooms for Diverse Cognitive and Learning Needs through Universal and Neuro-Inclusive Design

By: Jasmeen Nona

This project presents a proposed redesign of MacEwan's studio classrooms through the lens of neuro-inclusive and universal design. The outcome will me a recommendation publication that visualizes alternative spatial configurations that respond to diverse sensory, cognitive, and social needs of students that are often overlooked in traditional studio environments.

Through floor plans, spatial scenarios, and visual renderings, the work demonstrates how the design of studio classrooms can reshape the experience of studio learning.

Rather than presenting a single solution, the project proposes a set of adaptable design strategies intended to support a wider range of learners. By centering neurodiversity in the design process, the work invites viewers to reconsider how educational spaces influence participation, comfort, and creative engagement.

Faculty Mentor: Wayne Williams

Project Display

Woman Album Cover Contest Submission

By: Danielle Pacholuk

Within my Typography 1 Class, we were given the opportunity to create an album cover and enter it into a competition for Allan Gilliland's upcoming big band jazz album "The Planets", a reimagining of an album of the same name by Gustav Holst. While listening to the demo samples given, I found myself imagining many different creative directions.

Based on the interview we had in class, Allan had mentioned imagining the album being played within a famous club that would house Big Band Jazz - like in New York City or a French speakesy! Delving deeper into this idea of where the album could be played, more ideas came forth of what intimately this setting would contain. Furthermore, the concept of a beautiful mysterious woman came to mind. With this in mind, this concept was chosen in order to play off the French Art Deco movement which highlights the female form and luxury art deco.

She's sitting in the club, listening intently, and patrons are unsure who she is and where she came from. The idea of The Planets itself being reimagined in a new form adds onto the timelessness of the original album, and the creation of the album cover really leaned into making something that had a classic feel to it but still will remain timeless for years to come.

Even though my design was not chosen to be on the final cover, I am still very proud of my work and am happy to show it off.

Faculty Mentor: Constanza Pacher

Poster Presentation

Next Step Project: Co-Creating Life Skills for Youth

By: James Pincock & Hayden Carkner

The Next Step Project: Co-Creating Life Skills for Youth brings together a multi-disciplinary team of design researchers, social workers, and active design participants to co-create content addressing critical gaps in life skills support for young people transitioning out of government care in Alberta.

Faculty Mentors: Dr. Isabelle Sperano & Jenn Danko

Poster Presentation

The Redesign of the Book A Christmas Carol

By: Harley Shymanski

The book A Christmas Carol was chosen for a redesign, with a more experimental approach. The design decisions in this book were intended to convey the idea of a ghost haunting the pages. The ghost throughout the story grew stronger and slowly appeared more and more on the pages, eventually taking over and breaking them apart. The type throughout each page, as the "ghost" appears, is displayed in a grey tint, behind the original type, to suggest the ghost seeping into the pages, starting at the inside and outside edges, then moving into the centre.

Closer to the end of the story, the decision to do overlapping pull quotes was to give the idea that the ghost is speaking to us, in another sense, taking over the page, and by the end, the type starts to separate to represent the ghost taking over. The typefaces used were LTC Caslon for the title and headers, and Ten Old Style for the body type; both give the impression of the time period, around 1843, and add the right amount of character. The book cover was made to look more modern and elegant, with a border finishing it off and drawing the eye to the type used for the title. The colour blue was used to convey the idea of winter during Christmas, but also a more “sad” colour to match the ghostly essence of the book on the inside, where the inside pages were done in a traditional yet experimental way.

Faculty Mentor: Constanza Pacher

Project Display

Speculative Construction Manual for Down Filled Jacket

By: Jesse Squires

With this project, I aimed to combine two things I’m passionate about: working with textiles and educating others about the benefits of slow fashion. I wholeheartedly believe I delivered on one of those things; the other (the education aspect) was not fully realized due to time constraints and the scope this project took on. Ideally it would include text from research I had begun on the social impact of fast fashion, the misconceptions people have of where their clothing comes from, how much it actually costs to create textile goods (with labour included, sorry to all the clickbait articles that only account for cost of materials), and also how hand-craftsmanship is disproportionally valued when performed by westerners vs. those in garment producing nations. The length of this booklet would further highlight the amount of work that goes into these products, showing the amount of labour the “consumer” of this kit would have to invest to receive the desired outcome. With all the could’ve-been’s mentioned, and while I’m still speaking candidly, I’d like to address another standout in this project quickly; the “dedication” to my mom, who owned and ran Kluane Mountaineering for over 40 years, cutting, sewing and filling every jacket both by herself and by hand. She’s taught me everything I know about sewing, pattern design and textile production, and practising it myself brings me closer to her while also growing my appreciation for all those who work in this trade.

Faculty Mentor: Sherece Burma

Project Display

The Wonderful Wizard of Oz: An Interpretation of a Classic Novel

By: Amanda Stashkoa

The Wonderful Wizard of Oz by L. Frank Baum was written in 1900 about a young girl who got swept away to a magical land and has to find her way back home. I decided to use the idea of quilting as Dorothy is raised on a farm and quilting is a homey hobby, which also relates to the idea of “there’s no place like home.” This idea is shown throughout the inside content with patches as the chapter titles.

The imagery for the cover is the gingham pattern of Dorothy's dress and symbols for each character. The blue gingham is for Dorothy's dress, the green is for the Emerald City, and the yellow is for the yellow brick road. The shoe is for Dorothy, the medal for courage and the Cowardly Lion, the rose for a heart, love and the Tinman, and the lightbulb for a brain, intelligence and the Scarecrow. For the layout of the cover I did a patchwork to give it a cozy and handmade feel. For the inside content, I used a manuscript grid with appropriate margins for the printing process.

The type I chose for the title was a vector called Embroidered Fabric that I then turned into a typeface and traced over to make it look stitched. The body typeface is Essay text as it has good readability for long pieces of text. On the spine of the cover, Futura is used to give readability to the title and author.

Faculty Mentor: Constanza Pacher

Project Display

Bottling a Story: A Narrative Wine Label Series Inspired by The Other Valley

By: Mariia Suchko

FOR THE VERDIER FAMILY'S WINE LINE, each bottle becomes a small portrait of a family member — Joelle and her parents, Lois and Hélène — translated through the character of the Savoie region, whose mountain light and steep vineyards mirror the world of the novel. Each wine picks up a different emotional thread: the steadiness of the father, the quiet strength of the mother, the restless brightness of the daughter. Together, the three bottles form one shared story about heritage, memory, and strong family connection.

Faculty Mentor: Constanza Pacher

Poster Presentation

The Small Steps Kit: The Role of Aesthetics in Climate Change Engagement Among Design Students

By: Tabea Troppmann

While climate change has been recognized as a critical issue, public attitudes continue to be disconnected from the immediacy of the problem. This disconnect can also be seen among young designers, whose professional roles offer an unique opportunity to impact future industry/production practices and motivate social change.

Design thinking can be applied to climate communication to create emotionally accessible experiences and increase meaningful engagement within the climate dialogue. Specifically, I am studying how design solutions can employ aesthetics to create embodied, personally resonant experiences that empathetically connect design students to their surrounding landscapes and thus the wider climate change context.

This research project utilizes co-design workshops, interviews and content analysis to identify effective strategies in climate communication. I analyze this data using affinity diagrams and a coding analysis to discern overarching patterns across data collection methods. Based on this analysis I conclude that an activity kit would be the ideal method to deliver an embodied experience that bridges design practice and climate change dialogue. Using my research conclusions I create a conceptual framework to guide the development of the kit. Specifically, all activities must have an optimistic tone and be a physical, tangible experience. Each activity must also fall into one of four categories: emotional connection, community building, accessible actions and imaginative experiences.The final 'Small Steps Kit' prototype provides a novel approach to climate change communication, demonstrating how aesthetically centered design can aid users in approaching emotionally inaccessible topics and create meaningful, impactful experiences.

Faculty Mentor: Dr. Adolfo Ruiz

Poster Presentation

On Poetry In General

By: Tori Weston

This expressive book design uses text from William Hazlitt's 1818 essay, "On Poetry in General." This text attempts to embody the human experience of poetry, how we interpret it, apply it, and respond to it in our everyday lives. The main message of this essay is the importance of poetry and why it remains central to

our everyday lives.

The prose copy uses the typeface Zenon throughout, as the letterforms are condensed and robust. All the characters are slightly tilted, giving the letterforms a flowing, organic feel. In an effort to complement Zenon without overpowering it, the headers and footers are composed of Richmond text, providing a more subtle level of secondary hierarchy.

The margins are reasonably large, leaving plenty of space for text without losing any legibility at column length or type size. The overlapping text uses the sans-serif typeface FranklinGothic to provide ample visual contrast and depth in the harsh, bold black type. FranklinGothic is robust, clean, and slightly condensed, conveying smooth power with simple authority, ensuring high readability and a substantial overall impact.

The cover uses the white box to represent a 'window' into the essay's expressive world; it serves as a transition into the text's context, introduced by a short sentence.

Overall, there is a strong contrast between the intentions behind prose and the implications behind poetry. This expressive book design demonstrates a balance between orchestrating words and meanings through prose while still leaving the poetry untouched, open to interpretation as it already is.

Faculty Mentor: Constanza Pacher

Poster Presentation

Demonstrating Literature Themes Through Typographic Package Design

By: Reyna Wiberg

The Other Valley by Scott Alexander Howard explores love, grief, and time in an innovative and novel way. Since wine is a prevalent drink throughout The Other Valley and time travel is a central theme, this set of three wines transports the consumer to the past, present, and future, with each bottle representing a distinct time period. These fictional wines are meant to be enjoyed by readers as they read the book.

The brand “saveurs du fois”, meaning Flavours of the Time. A mixture of a modern sans-serif typeface and a more traditional italic serif for the wordmark demonstrates the blending of time periods. The set features a blue-and-red colour scheme inspired by 3D glasses. Each bottle symbolizes a different "dimension" or time period, with blue for the past, red for the future, and the combination for the present day.

Faculty Mentor: Constanza Pacher

Project Display

Hope/Full Design: A Visual Exploration of Hope

By: Reyna Wiberg & Stephanie Chan

We live in seemingly dark times. The Hope/Full Design: A Visual Exploration of Hope project uses our visual communication skills to advocate for the social good that still exists in this world. Our goal was to engage our audience in a different type of reading by having them focus on hopeful, positive messages we found in songs, plays, articles, and stories. Our aim was not only to provide positive messages but also to prompt our audience to make meaningful changes in their lives and those around them.

We focused on hope, kindness, joy, generosity, peace, courage, and love as essential agents for social good. To convey these very human emotions, we defied the template, the conventions, and AI solutions, and challenged ourselves to experiment with original presentations of text using both analog and digital typographic devices, while using typography and language as the main design elements.

This collaborative design enterprise extends beyond the classroom in the form of a book, spreading positive messages and seeking to make a difference, one reader at a time.

Faculty Mentor: Constanza Pacher

Project Display

Art, Grief, and Medicine: A Visual Journey

By: Susanna Woudstra

This project explores the interconnection between my experience of receiving a medical diagnosis and the role that art, as a form of emotional exploration and expression, can serve to benefit me in my healing journey. The project aims to show how art can serve as a means of catharsis, self-understanding, and emotional connection, fostering empathy. An artist's book is the culmination of this project, as it explores tactile art and design-making practices as a method of visual storytelling.

Faculty Mentor: Constanza Pacher

Project Display

Early Learning and Curriculum Studies

How Does Toy Type Influence Parental Roles in Young Children's Play?

By: Hannah Fink

There is growing interest in enriching children's play with everyday materials not typically considered toys (e.g., cardboard, sticks, beads), known as loose parts. Researchers have explored the developmental benefits of playing with versatile play materials (e.g., blocks, LEGO, sand) individually; however, despite recommendations by researchers and policymakers, limited research has explored how children play with loose parts alongside their parents. Using a between-subjects experimental design, we investigated parental roles during play interactions and levels of play engagement in 76 parent–child dyads (child Mage = 4.64, SD = 0.85) randomly assigned to either a loose parts play or puzzle condition. Children's cognitive development and executive functioning were assessed using the Wechsler Preschool and Primary Scale of Intelligence and the Head-Toes-Knees-Shoulders task. Parents completed a questionnaire on the home learning environment. Play lasted significantly longer with loose parts than with puzzles, but overall, parent and child engagement were similar. Parents acted as "co-players" (parents enter play as equal partners) with loose parts, and as "stage managers" (parents help organize materials or suggest scripts) with puzzles. Linear regressions analyzed predictors of children's play engagement. In the loose parts condition, the uninvolved and stage manager roles negatively predicted engagement; in the puzzle condition, the director role (parent directs actions and assigns roles) negatively predicted engagement. Parent–child dyads spent more time playing with loose parts, influenced by children's cognitive abilities, regardless of the toy type. As such, to enhance play engagement, efforts should focus on material types and supporting parents in responsive roles.

Faculty Mentor: Dr. Ozlem Cankaya

Oral Presentation

How do Loose Parts Influence Symbolic Transformation in Parent-Child Play?

By: Mikoto Frank

This study investigates how parents and children play with everyday materials compared to traditional toys. Symbolic transformation—the process of representing objects, actions, and ideas beyond their literal forms—is a key theme of early cognitive development and linked to children's later academic achievement. Children also transform everyday materials into meaningful elements of their play. Termed loose parts, these materials are valued in early childhood education for fostering children's creativity and problem-solving, yet empirical evidence examining their impact on symbolic transformation remains limited.

Using a between-subjects design, we examined 76 parent–child dyads aged 3-6 years (M = 4.64, SD =0.85) assigned to either a loose parts or traditional puzzle condition. Children's cognitive abilities were assessed using standardized measures of intelligence and executive functioning, and parents completed a questionnaire evaluating the home learning environment. Play sessions were video-recorded and are currently being coded using established observational frameworks to analyze object use and symbolic transformation.

Based on our preliminary qualitative exploration, we anticipate that children playing with loose parts will exhibit higher levels of symbolic transformation than those using puzzles. Loose parts appear to challenge children cognitively by requiring them to create meaning rather than following objective functions. Additionally, we hypothesize that children with stronger executive functioning will exhibit longer, more complex episodes of symbolic play, particularly in the loose parts condition. Further, parental involvement is expected to support this process by facilitating planning, negotiation, and narrative development.

These findings will demonstrate how material affordances influence children's symbolic transformation during play, and provide educators and parents with evidence to strengthen curriculum design through thoughtful material selection and responsive interactions.

Faculty Mentor: Dr. Ozlem Cankaya

Oral Presentation

Working as Research Assistants: Insights and Reflections

By: Mikoto Frank, Amber Gogan & Hannah Fink

This panel explores the experiences of research assistants (RAs) in learning the research process and developing research skills as a team. Four panellists, currently working together as RAs on two large-scale research projects and one community initiative, will share their perspectives on supporting and coordinating research activities.

Panellists will discuss the practical and intellectual challenges of research assistantship, including data collection, methodological procedures, data management, and task prioritization across multiple projects. Additionally, they will discuss the collaborative nature of their work, highlighting the role of teamwork and problem-solving in progressing research initiatives.

Beyond technical work, panellists will reflect on their professional and personal growth as a result of working alongside fellow RAs, community organizations, and a faculty mentor. As

undergraduate students in early learning, psychology, and design, they will also consider how their RA work has influenced their coursework and academic development.

This session will spotlight the role of RAship in advancing research while developing research skills, offer personal insights into day-to-day responsibilities, learning curves, and the rewards of working in research, and will be beneficial for undergraduate students interested in gaining research experience.

Faculty Mentor: Dr. Ozlem Cankaya

Oral Presentation

Food Insecurity and the Loss of Traditional Food Systems Among Indigenous Families in Edmonton

By: Caoilfionn Gardiner

Food insecurity is a growing concern for many Indigenous families with young children in Edmonton. While food insecurity is often framed as an issue related to income or access to food, for Indigenous communities it is closely connected to the historical disruption of traditional food systems and ongoing colonial structures. This literature review examines how the loss of traditional food practices has contributed to food insecurity among Indigenous families and explores the role early childhood educators can play in supporting families and children affected by this issue. A key focus is understanding how colonial histories, socioeconomic inequalities, and barriers to culturally relevant foods shape the experiences of Indigenous families raising young children in urban contexts. This analysis also considers how community organizations support families through culturally grounded programming that restores traditional knowledge and strengthens community connections. The review highlights that food insecurity affects not only children's nutrition but also family well-being, cultural identity, and participation in early learning environments. As a settler and early childhood educator, I approach this literature review as a learning opportunity to critically examine issues affecting young children and families while reflecting on responsibilities connected to truth and reconciliation. These findings suggest that addressing food insecurity requires culturally responsive and community-based approaches. Early childhood educators can contribute by advocating for equitable policies, building relationships with families, and creating learning environments that support belonging and holistic well being.

Faculty Mentor: Dr. Ozlem Cankaya

Oral Presentation

Examining Relationships Between Children's Sex, Cognitive Development, Executive Functioning, & Home Learning Environment

By: Amber Gogan

Executive function (EF) refers to cognitive processes that support goal-directed behaviour, including inhibitory control, working memory, and cognitive flexibility. These abilities are closely

linked to early learning and cognitive development. One common measure of EF in early childhood is the Head–Toes-Knees-Shoulders Task (HTKS) task, which requires children to remember rules and inhibit dominant responses. Although EF has been associated with general cognitive ability, less is known about how it relates to specific domains of intelligence or whether sex differences are present in early childhood.

This study examined sex differences in executive and cognitive functioning and explored associations between EF, cognitive abilities, and aspects of the home environment. Participants included 70 children aged 3–6 years. Children completed the Wechsler Preschool and Primary Scale of Intelligence–Fourth Edition (WPPSI-IV) and the HTKS task, while parents completed questionnaires about the home learning environment.

Exploratory factor analysis identified four home environment factors: home literacy activities, play-based learning, practical home numeracy activities, and parental STEM attitudes. Spearman's partial correlations showed that EF is robustly tied to general cognitive ability as measured by the WPPSI-IV indices, with the exception of working memory ($\rho = 0.187$, $p = 0.127$). Hierarchical regression analyses indicated that age and full-scale IQ explained approximately 43% of the variance, while sex was not a significant predictor. These findings suggest that EF in early childhood is closely related to cognitive abilities. The home environment factors did not contribute significantly to the model but may moderate the relationship between cognitive ability and executive functioning.

Faculty Mentor: Dr. Ozlem Cankaya

Oral Presentation

When Tired isn't Tired: Exploring Student Understanding of Fatigue Through a Workshop on Classroom Design

By: Zachary Jickling

Fatigue is a complex experience that spans physical, cognitive and social-emotional dimensions (Rohatyn et al., 2025). Among adolescents, fatigue has been linked with irregular school attendance and reduced social and recreational engagement, which negatively impacts academic performance and social development (Higson-Sweeney et al., 2023). Yet, little is known about how well students understand its complexity beyond simply feeling tired. Studies have found that educational workshops and science presentations enhance student engagement and correct misconceptions about scientific topics (Kompella et al., 2020), which suggests that similar educational approaches may be effective in improving students' understanding of fatigue. This possibility guided the research question of the present study.

This study analyzed data collected from a workshop developed for the Shad Canada Futures Day program for Grade 10 and 11 students in Edmonton. A group of participating students attended a presentation on fatigue and its classroom implications, where they engaged in an interactive activity to develop possible fatigue-reduction strategies through classroom design. Students were additionally asked to complete pre- and post-workshop questionnaires. Responses from the pre- and post-workshop questionnaires were compared to assess changes

in students' knowledge and perceptions of classroom fatigue. Results suggested that students appeared to make the distinction between fatigue and tiredness more strongly following the session. In addition, students appeared more confident in recognizing that classroom practices and environments are conducive to fatigue reduction, or conversely, exacerbation. These findings may help inform how learning environments are structured to better support the management and regulation of fatigue in educational settings.

Faculty Mentors: Dr. Natalia Rohatyn-Martin, Evlin Glyson, Jerry Gan & Sydney Dickner

Oral Presentation

English

"An Exceptional Scoundrel": Mikhail Bulgakov's Heart of a Dog and the Muzzled Subaltern

By: Ashley Alton

This presentation approaches Mikhail Bulgakov's 1925 novella Heart of a Dog through the lens of Gayatri Spivak's essay "Can the Subaltern Speak." Drawing on J. Maggio's research on a muzzled subaltern existing below the surface in Bulgakov's "Soviet Frankenstein" text, I analyze the manner in which the shape-shifting realities of lost identities surface in Heart of a Dog as a dog and a criminal are merged into one body. From mongrel to man, and back again, the progeny of the Soviet Frankenstein in Bulgakov's novella mirrors the harsh political climate of Soviet Russia, as identity and othering crack the landscape of his life wide open.

Faculty Mentor: Dr. Lana Krys

Oral Presentation

Sue is You: Complex Mind-Body Relationship(s) in The Substance (2024)

By: Avery Anselmo

In my thesis I will analyze Coralie Fargeat's 2024 film The Substance to discuss themes of embodiment through Posthuman theory. Current scholarship primarily analyzes embodiment in the film through the relationship between fame culture, aging, and feminine bodies. I intend to shift away from readings of cultural analyses to focus on the film's protagonists, Elisabeth/Sue's, complex mind-body relationship. I will employ Donna Haraway's concept of the Cyborg and Anne Marie Balsamo's work on technologized gendered bodies to contextualize Elisabeth/Sue's biotechnological embodiment. Specifically, I intend to focus on how Fargeat introduces biotechnological duplication to visually and contextually convey Elisabeth/Sue's mind-body relationship as a simultaneous state of physical severance and mental unification.

Faculty Mentor: Dr. David Hollingshead

Oral Presentation

Narratives of Secrecy: Conspiracy Memoirs and the Limits of Interpretation

By: Sarah Elliott

My paper develops a critical framework for interpreting mind-control memoirs as culturally significant narratives rather than literal testimony. Integrating legal, literary, and cultural theory, I argue that these texts function as metaphorical structures for negotiating systemic uncertainty, while becoming ethically and epistemologically hazardous when construed as factual accounts.

Faculty Mentor: Dr. Sarah Copland

Oral Presentation

Weird and Wild Embodiments in Jeff Vandermeer's Southern Reach Series

By: Jorja Evans

Jeff Vandermeer's Southern Reach follows multiple characters as they become increasingly aware of their environment and are immersed into Area X, a stretch of land on the southeastern coast of the United States which has mysteriously transformed into a pristine wilderness devoid of human inhabitants. As characters enter Area X, or Area X enters them, they are transformed, mimicked, and consumed to the point where they are no longer human, but something else entirely. Their identity is erased and remade into something strange and alien: a "moaning creature in the reeds" (Annihilation 163), a "body flickering and stitching it's way into existence" (Acceptance 193), a "plant blossoming in your mind" (Acceptance 270). Vandermeer's novels devalue the human subject in favour of a new, wild embodiment that recognizes our ecological enmeshment; Area X acts as a space of creation and bewilderment, a space where the effects of the Anthropocene are wiped clean and humanity is absorbed into the environment. Throughout the novels, characters have deeply embodied reactions to Area X; whether it be a growing "brightness", the insistent feeling of "something in your eye" (Authority 227), or a sliver from a mysterious plant (Acceptance 25), the characters experiences are embodied ones.

Faculty Mentor: Dr. Daniel Martin

Oral Presentation

War on Robin: The Argument for Fan Authorship in 'Big Two' Superhero Comics

By: Alexandra Gauthier

Scholarship on comic books as a form has expanded in recent years, but scholars have failed thus far to consider the impact of the structure of the comics industry on the narratives therein. Using the example of the death-by-vote of second Robin Jason Todd in 1989, this paper argues that fans have been given a level of influence over comic narrative that is unseen in other forms. Monthly comics require fans to seek out each new issue, and a sudden drop in sales, combined with feedback from letters columns, gave editors steady feedback. If fans do not like a storyline, they may communicate their distaste through boycotts and letter campaigns. In the case of

Robin, these tactics escalated into a 10-year “war” against the character waged by readers and writers that resulted in the death of the first child sidekick. The oral history constructed by Joe Grunenwald and contemporary sales figures prove both an understanding of and subservience to the desires of fans, with the reasoning that fans will not buy what they do not want to read. Economic leverage makes readers essentially another creative force in comics.

Faculty Mentor: Dr. Mike Perschon

Oral Presentation

Believing in Your Writing: The Genre Makeup of Wonderworks

By: Benjamin Johns

I often remember telling my sister about the scholarship I was reading on genre, its connection to language, the theories surrounding it, and how we, as communities of practice, actively shape it. After a few minutes of me proselytizing my theories and ideas, she simply told me to “Shut up!” To avoid making my sister look like a monster, most of my ramblings were done at her rather than with her, so I do not believe her response was unwarranted. However, the reason I care about her response, aside from the fact that I value her opinion, is that she is a well-established Indigenous fiction writer. So her opinion matters to me in more ways than one. But her response made me wonder why my interest in genre has always been a point of contention between us. I believe this stems from something Daniel Heath Justice discusses in his book Why Indigenous Literatures Matter, where he argues for a new genre of Indigenous fiction called Wonderworks, a genre that “remind[s] us that other worlds exist” (153). So I can see why my sister has her misgivings about my theories; they come from a very Westernized idea of knowing. And as an Indigenous writer myself, I agree with much of what Justice argues in his book; however, Justice's definition is predicated on the writer believing in the other worlds they write about. What happens if, like me, you write about your culture but don't believe in those other worlds?

Faculty Mentor: Dr. Michael Brisbois

Oral Presentation

Ambitionz Az a Writah: The Pluralized Lyrical Subject and the Mark of Criminality in 2Pac and Reginald Dwayne Betts

By: Christian Lambert

This essay blends traditional academic writing and anti-carceral writing practices to engage with the poetry and hip-hop of Tupac Shakur and Reginald Dwayne Betts, two artists who spent time in prison yet could not escape their criminal status after release. As such, both artists represent incarceration not as a discrete, time-bound event, but as an expansive, enduring condition. In their lyrics, prison exceeds the physical confines of the cell, becoming a social, psychological, and historical structure. Connecting Shakur and Betts is the interplay among three intertwined identities: their given names (Tupac Shakur and Reginald Dwayne Betts), the personas they assumed during incarceration (Makaveli and Shahid), and the label imposed by the state—

felon. These layered identities reveal that the carceral system produces subjectivity, marking individuals as criminals long after their release. Shakur and Betts complicate the notion of the Lyric "I" in isolation, demonstrating a pluralized Lyrical subject and individualized multiplicity. In this essay, I address Bett's poems, "Ghazal," and "In California," and Shakur's "Ambitionz Az a Ridah" and "Trapped" to interrogate the mark of criminality in relation to John Stuart Mill's carceral definitions of poetry, which impose the mark of criminality onto the poetic body. For Betts and Shakur, there is no after prison and more insidiously, there is no before prison; from birth and perhaps from conception, both artists have been marked as criminals.

Faculty Mentor: Dr. Sara Grewal

Oral Presentation

International Research Opportunities: Attending the 2025 APL Conference in Frankfurt, Germany

By: Evan Meeks & Jayden Tobert

This presentation provides a brief overview of our experience attending and helping to facilitate the 2025 conference of the Association for Philosophy and Literature in Frankfurt, Germany. We will outline the purpose and scope of the conference, and describe our role in attending as well as supporting the event's organization and operations.

We will use this opportunity to reflect on what it meant to participate in an international academic setting as students. The presentation will focus on how this experience contributed to our understanding of scholarly exchange, conference structure, and professional engagement within the fields of English, Philosophy, and Literature.

Faculty Mentor: Dr. Alain Beauclair

Oral Presentation

A Look Into the Narrative Archive: Audre Lorde and Carmen Maria Machado are Queering the Genre of Autobiographies

By: Paige Reed

My thesis looks at two lesbian women's stories: Audre Lorde's biomythography, Zami: A New Spelling of My Name, and Carmen Maria Machado's memoir In The Dream House. I will be building on theorists such as Butler, Cixous, and Beauviour to question the world of queer and feminine theory, and how writers challenge the expected norms around narratives. This thesis questions if they can exist outside of the normative, when our understanding of 'Other' is built by the concept of an opposition? I will explore gender, race and sexuality within this paper and how each author took their story and manipulated genre to provide a unique space for their stories to exist.

Faculty Mentor: Dr. Kathryn Holland

Oral Presentation

Healing and Education Through Holocaust Literature: How Storytelling Heals and Helps Bridge the Gap in Holocaust Education

By: Tamara Tower

Using a creative representation reflecting scholarly analysis to inspire connection, empathy, and curiosity, I examine the important role played by literature in understanding the scope and impact of the Holocaust.

"The German's were successful." A sentence spoken by the daughter of a Holocaust Survivor, Goldie Morgentaler, that echoes in my head. There were Jewish survivors of the Holocaust, but the survivors were not the same Jewish community that existed prior. An entire culture was obliterated. Then I heard from Dr. Melanie Carina Schmoll and her book Hatred of Jews – A Failure of Holocaust Education? that 15-year-olds in Germany have never heard the term Holocaust. How could this be? My own Holocaust Education came into question. I discovered that my own knowledge originated in childhood from literature like the Diary of Anne Franke, The Boy in the Striped Pajamas, Schindler's List and more.

Now in University, once again immersed in literature from the Holocaust, from survivor Chava Rosenfarb's "Edgia's Revenge" to various memoirs published by the Azrieli Foundation, I find myself ignited with curiosity and passion to research and share my findings. Through a carefully curated and visually gripping creative scholarly display featuring interactive and multimedia concepts and an accompanying research paper, I will convey how storytelling through Holocaust literature is not only a means of individual and collective healing, but as a method of learning through connection and empathy that goes beyond history books and helps bridges the gap in Holocaust education.

Faculty Mentor: Dr. Regan Lipes

Project Display

Practically Perfect: Passing and Special Effects as Uncanny in John Carpenter's The Thing

By: Brianna Van Lersberghe

This paper examines director John Carpenter's 1982 film The Thing and its employment of body horror as that which is uncannily disruptive to filmic verity and in its relation to traditional American passing narratives. While overtly synthetic practical effects in film often estrange its audience from the verisimilitude of the storyworld, the ostentatious gore in The Thing comes full circle and invokes unironic horror by exposing its simulated artifice. The Thing as monstrous Other is unnerving in its ability to pass as human insofar as it seems to be so obviously "fake" and unconvincing until, suddenly, it is a perfect imitation of and indistinguishable from its host. Such dissolution of boundaries reflects the film's efficacy in transforming what is seen as the The Thing's greatest weakness (in realism) into its greatest strength by tapping into the audience's latent fear of the unreal(istic).

Faculty Mentor: Dr. Joshua Toth

Oral Presentation

How Should I Care: The Pillars of Character Relationships

By: Elliot West-Derpack

I propose that for a long form, character driven narrative to succeed, the story must rest on the following three pillars of character relationships:

Character to Character

Character to Self

Character to Audience.

I've spent the last few years creating this model as an editing and prompting model for creative writers. Now, I intend to use it as an analytical lens, examining both the form and content of Suzanne Collins's first book in The Hunger Games trilogy.

Faculty Mentor: Dr. Mike Perschon

Oral Presentation

Humanities

The Witch as Gendered Fear

By: Isabelle Ashford

The English Reformation removed Catholic safeguards in place that protected people from fears of death, and guaranteed salvation in the afterlife. Removing these safeguards created a religious anxiety that was all-encompassing, and forced people to seek out tangible defenses against Satan and his demonic forces. One of these defenses was hunting witches. While witchcraft itself was gender neutral, it still took on dualistic cultural ideas about gender that forced women into a unique position that made them susceptible to witchcraft accusations. Protestant patriarchal ideals reinforced some cultural constructions, and removed others that safeguarded women, creating a gender imbalance that resulted in the over-representation of women in the witch hunts of the Early Modern Era.

Faculty Mentor: Dr. Rob Falconer

Oral Presentation

Impacts of Inland Fur Trading Posts on the Social Dynamics between Indigenous Groups of the Prairies

By: Damien Camp

In the year 1774, the Hudson's Bay Company (HBC) founded the Cumberland House in what is today Saskatchewan. This marked a shift in the strategy of the HBC, which had not built a post in the interior since Henley House in 1743. A policy that older research has called "Frozen at the Bay." This new post, as well as later additions, allowed for the HBC to trade with Indigenous groups that previously only had access to HBC goods through Indigenous middlemen, traders who would spend the year trading HBC goods that they received through trading at the HBC posts along Hudson's Bay, to Indigenous groups of the interior for their furs to bring back to the HBC posts, alongside other resources such as horses. The creation of these new inland posts cut out the Indigenous traders, requiring them to adapt to the new style of trade, ultimately changing the relationships they held with the interior groups. This presentation will, in particular, examine the navigation of this trade among Nêhiyawak (Plain Cree) traders and their relationships and interactions with the Niitsitapi (Blackfoot Confederacy), the Atsina (Gros Ventre), and the Mandan before and after the introduction of HBC Interior posts.

Faculty Mentor: Dr. Robert Irwin

Oral Presentation

Classical Athenian Citizenship - An Antisthenic Analysis

By: Steven Jewkes

While the laws of Solon and Pericles codified stricter legal requirements for citizenship in the Classical period, earlier periods in Athens saw a much more open attitude towards "outsiders" - refugees, such as the Gephyraioi fleeing Boeotia were granted limited Athenian citizenship, non-Athenians who could provide economically or militarily for the polis, and marriages to foreign women were not uncommon. This paper performed an analysis of Classical Athenian citizenship through an Antisthenic lens, comparing ideas and laws surrounding citizenship to Antisthenes' viewpoint on what a citizen should be. While none of his own works survive, his philosophy and ideals survive in quotations, anecdotes, and stories in works such as Xenophon's Symposium and those of Diogenes Laertius.

Using these resources, as well as similar arguments made by Lysias in the same period, it argues that Antisthenes would have classified many in Athens as citizens who would not, traditionally, be considered or eligible as such - anyone who worked hard, educated themselves, and applied the concepts of justice, virtue, and goodness to their everyday lives; in essence, a much more performance-based form of citizenship. Thus, the typical citizens of Athens, who were granted their citizenship merely by birth rather than their work for and participation in the polis, would have found much less favor in his definition of citizenship than metics, since metics lived and worked harder than many citizens, and even fought and died for a polis they had limited status in.

Faculty Mentor: Dr. Jessica Romney

Poster Presentation

The Protestant reformation of Early Modern British Communities

By: Steven Jewkes

This paper examined some of the communities and contexts in which witchcraft trials took place and argues that it was the Protestant Reformation and its ideas surrounding governance, hierarchy, social bonds, and the woman's place in both the household and society that had a much more direct impact on the accusations of witchcraft, the intensity and number of trials, and the social dynamics of these communities long after the witchcraft trials ended. While the changing social dynamics drove the witchcraft accusations, the witchcraft accusations were merely a relatively temporary vehicle for relieving the tensions caused by the changing social dynamics that the Reformation put forth, as other litigation surrounding newly defined social relationships carried on well past the official end of the witchcraft trials.

Faculty Mentor: Dr. Rob Falconer

Oral Presentation

In Hindsight..

By: Soleil Laberge

This explication examines the viability of authentic human freedom within a patriarchal structure through Simone de Beauvoir's existential and feminist frameworks in The Second Sex. Beauvoir states that freedom requires reciprocal recognition between subjects and one's ongoing transcendence of facticity. After situating her argument on its own terms, I extend her analysis into contemporary gender politics, arguing that identities prescribed by a hierarchy deform the subjectivity of both sexes. Finally, I interrogate whether her commitment to the principle that "existence precedes essence" can sustain a stable metaphysical gender binary, or if such a clean division proves to be an artifact of the hierarchy she sought to reform.

Faculty Mentor: Dr. Alain Beauclair

Oral Presentation

Does This Mean Anything to You? A Critique of Objectivism Through the Work of Mark Johnson and Suzanne Langer

By: Asher McColman

The claim that 'truth must be objective' is not only a popular sentiment among the average person, but has often been asserted in science and philosophy. While we may agree or disagree on matters of taste about our favourite sports team, food, or type of car, these are 'subjective' discussions, aren't they? This essay will examine the work of two philosophers who have challenged this prevailing view.

First, we will examine Suzanne Langer's work, Philosophy in a New Key: A Study in the Symbolism of Reason, Rite, and Art (1951), to see how she trades truth for symbolism, subverting Objectivist views by highlighting the constructive role of abstractive seeing. Next, we

will tackle Mark Johnson's book The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason (1990), focusing on his concept of image schemata and their role in the metaphorical extension of meaning. After exploring these two works, we will see how these philosophers seem to have a similar goal—showing the importance of a richer account of meaning than Objectivism can offer—and yet how their approaches highlight different aspects of this shared goal. Contrary to Adrienne Chaplin, who claims that Johnson is influenced by but regresses from Langer (p. 5), I will argue that the two philosophers have complementary approaches, which, in combination, form a cohesive and persuasive argument for a broader account of meaning.

Faculty Mentor: Dr. Alain Beauclair

Poster Presentation

The Language of Witches and Domestic Disorder in Early Modern English Media

By: Anastasia Morey

Authors and artists often use stereotypes and tropes in order to describe their characters and situate them in a context that the readers and audience will recognize. Just like authors today, the written works in the early modern era that told stories about witches employed specific words and linguistic associations to portray their characters. In a world where order was exceedingly important, examining how witches were described in relation to this order is crucial. This presentation will analyze three plays and four witchcraft treatises and pamphlets ranging from the late-sixteenth to mid-seventeenth century which were written about witches in England. Through this analysis, I aim to answer the question: to what extent did the language used in popular media characterize witches in relation to the breakdown of traditional domestic order? By examining descriptions of witches in both narration and characters' speech, this presentation will investigate this question from a social history perspective, focusing specifically on the social implications of language. I intend to argue that the words, phrases, and linguistic associations utilized by early modern authors to describe women witch characters depict witches as a threat to order in the domestic sphere through their lack of traditional femininity, apostasy, and manipulation of elements of domestic life for evil.

Faculty Mentor: Dr. Rob Falconer

Oral Presentation

Blueprinting Alberta's Eugenics Era: The domestic and international legal precursors to Alberta's 1928 Sexual Sterilization Act

By: Spencer Paetz

This paper explores the legal architecture of Alberta's 1928 Sexual Sterilization Act by tracing the flow through Eugenic-based legislation and policy from within Alberta, Canadian Federal government, Britian, and the United States. The research explores Alberta's own precursor

legislation which laid the groundwork for legislating the identification and institutionalization of targeted populations (which in this case were those labeled as “Mentally Deficient”). Further, it examines how Canada’s constitution and federal policies on immigration enabled and motivated Alberta’s implementation of it’s Sterilization Act as a ‘stop-gap’ to eliminate populations of undesirable immigrant groups deemed as “Mentally Deficient.” Lastly, it demonstrates how British statutes established the initial framework for identification and institutionalization of targeted populations while American state laws, particularly in Virginia, California, and Indiana provided the legal structure for sterilization.

Faculty Mentor: Dr. Caroline Lieffers

Oral Presentation

The False Dichotomy of Women in Archaic Lyric Poetry

By: Paige Reed

Does lyric poetry depict women as integral to the polis while having their own autonomous ideal civic identity, or is there only an ideal female citizen in relationship to their role in a patrilineal society? Is there cause to believe both statements are correct? Religion was deeply entwined in the ancient Greek poleis, and Greek literature depicted the ideal citizens in various forums, such as ritual, civic, and familial. However, the poets' focus is typically on male citizens and masculine identity, bypassing female identity. This paper will review archaic lyric poets such as Semonides, Alcaues, and Tyrtaeus, and how they chose to portray women's identities. It will then address how through these male poets, women are presented as necessary objects for marriage and male desire. I will argue that although many male poets in lyric emphasize that women's function is predominantly related to their role in ensuring the longevity of the oikos and patrilineal inheritance, disregarding their autonomy, women in archaic lyric are also portrayed as integral to the polis and civic identities. I will argue this while examining poets such as Praxilla, and Sappho, who depict religious rituals in their poetry, to suggest that women's civic identity was not only related to their role in the patrilineal society but also to their own autonomous existence.

Faculty Mentor: Dr. Jessica Romney

Oral Presentation

Early Modern England and Forks

By: Victoria Rosborough

As it stands in 15th century England, dinning etiquette is at a low. Families eat with there hands, sharp knives and spoons regardless of social class. As the tides of Christianity are changing during the protestant reformation, meal decorum is moving with it. What set in motion this shift of manners? The introduction of the fork to England in 1608.

Reminiscent of the devil’s pitchfork, the eating utensil upon its arrival was seen to be against God. Many shunned the fork for being unnatural and impractical due to common usage hands

while eating. Although many believed the fork to be illogical, wealthy women began to adopt sucket forks into use. This recast the fork as an effeminate tool, gaining popularity amongst women. Wielding a small spoon on one end and a small fork on the other. This allowed for easy extraction of sticky sweets from small jars. Wealthy and noble men began to understand that the usage of forks would separate the rick and the poor, enforcing the class divides of England. The purchase of personal forks for dinning became popular, leading the charge on new and “proper” ways of eating. By the 1700s the fork had made its debut all over western countries, shaping eating practices and cultures. The shift of ideologies regarding the fork, highlights the social evolution of early modern England. The fundamental implementation of the fork into the assortment of eating utensils lays the groundwork for hygiene, manners and pleasure in the dining room.

Faculty Mentor: Autumn Reinhardt Simpson

Poster Presentation

Interdisciplinary Dialogue

Breaking hurdles: Examining communication, cultural and socio-economic barriers to sports participation among underserved youth

By: Bethlehem Gebeyehu

This research examines the barriers that low-income, refugee, and underserved youth face in accessing organized sport in Canada, as well as how participation supports social integration, resilience, and long-term well-being. Although sport is widely recognized as a protective factor against challenges linked to Adverse Childhood Experiences (ACEs), youth from marginalized households remain significantly less likely to participate. Questions persist about how financial, logistical, cultural, and informational barriers limit equitable access.

A mixed-methods approach was used. The quantitative component involved an anonymous survey of youth, parents, caregivers, coaches, and community members, collecting open and closed-ended responses on barriers and experiences with sport. The qualitative component included semi-structured interviews, document analysis, and autoethnographic reflection. Together, these methods provided statistical insight alongside lived experiences of sport access.

Survey findings identified affordability and transportation as the most consistent barriers. Respondents noted that limited program information reduced awareness, while language and cultural factors created additional challenges. Despite these obstacles, participants emphasized the positive role of sport in fostering confidence, resilience, belonging, and educational aspirations.

This study contributes to scholarship on sport, communication, and equity by centering the voices of underserved communities and addressing gaps in available data on the barriers facing low-income and refugee youth. While recent Canadian policy initiatives signal a growing commitment to inclusion and equity in sport, systematic evidence on how these barriers are

experienced at the community level remains limited. This research offers insight into the structural and social conditions shaping youth sport participation and the supports needed to improve access.

Faculty Mentor: Vivian Giang

Poster Presentation

Perspectives of Disabled and Neurodiverse Undergraduate Students on Work-Integrated Learning: Success Factors, Barriers, and Best Practices

By: Ezra Richards

This research aims to identify supports and barriers for disabled and neurodiverse undergraduate students in Work-Integrated Learning (WIL) at MacEwan University and the University of Calgary. This work is being supported by a research grant through Co-operative Education and Work-Integrated Learning Canada (CEWIL Canada), Canada's lead organization for developing WIL programs for post-secondary students. Research Ethics Approval was obtained at both MacEwan University and the U of C, and in keeping with "Nothing about us without us," a prominent disability-rights slogan, both student co-investigators on this project are disabled and/or neurodiverse. A survey was sent to just over 2000 students on October 7th, 2025, to which 122 students responded. Interview participants were recruited through an email-sharing field in the survey, and eight students were interviewed through November and December 2025. So far, students have highlighted a need for clear expectations and guidelines in their WIL programs, consistent communication and feedback from university staff and partner organizations, and interpersonal support from instructors, peers, and mentors and supervisors. Students find success and fulfillment when these things are present in their WIL programs, and find barriers and challenges when they are not. Initial analysis of the survey results has been completed, and interview data is still being collected. We aim to complete this research by Fall 2026, and through this project, we will develop recommendations for best practices to support disabled and neurodiverse students in WIL programs.

Faculty Mentors: Dr. Melissa Hills & Kealey Dube

Oral Presentation

International Business, Marketing, Strategy, and Law

Canada's National Innovation System: Mapping Key Actors

By: Sebastian Matusewicz

This project aims to address a knowledge gap in Canada's innovation system. As Canada continues to face economic pressures related to tariffs, declining exports, and trade dependence on the United States. The 2025 federal budget highlights a need for greater economic resilience, sovereignty, and innovation. Canada currently lacks a comprehensive

inventory of the leading organizational actors that constitute its NIS, making it significantly more difficult to study system performance, design effective policies, and foster cross-sector collaboration.

Using a framework built on Lundvall's (1992) theory that innovation emerges through multi-organizational cooperation, and Niosi's (2000) "broad" view of NIS, this research will investigate the question: Who are the organizational actors in Canada's National Innovation System, and who leads them?

Data collection will be done through literature review, analysis of federal and provincial innovation databases, and examination of membership lists and directories of research centers, technology transfer offices, incubators, accelerators, industry associations, chambers of commerce, and corporate registries. We will also utilize publicly available information from websites, directories, and LinkedIn. While snowball sampling will be used to identify additional actors and confirmation emails and phone calls will be used to verify contact information.

The project aims to produce a database of over 2,000 NIS organizations with verified leadership contacts, a refined list of approximately 500 priority actors for deeper study, and a classification system organized by level of government, type, sector, and role in innovation.

This research serves as the foundation for the SSHRC Insight Development Grant proposal.

Faculty Mentors: Dr. Carlos Freire-Gibb & Dr. Yang Hoong

Poster Presentation

Role of Severity and Country of Origin Image on the Effect of A Firm's Supply Chain Position on Time to Recall

By: Suchi Shah

This study examines how Hazard Severity and the perceived image of a product's Country of Origin moderate the relationship between a firm's position in the Supply Chain and the time taken to issue a product recall in the US toy industry. Drawing on the Behavioural Theory of the firm and Attribution Theory, it is proposed that firms further upstream in the supply chain (e.g., manufacturers) will recall products more slowly than downstream firms (e.g., retailers), but that this relationship is influenced by the severity of the hazard and the perceived quality image of the sourcing country. Based on data from the US Consumer Product Safety Commission (CPSC) and external sources, such as the Global Competitiveness Report, an Ordinary Least Squares Regression analysis will be conducted to test the hypothesis of moderation effects. The findings are expected to contribute to crisis management and supply chain literature by highlighting the strategic role of external attribution and crisis context in recall timing decisions. Managerial and regulatory implications are also discussed.

Keywords: product recall, time to recall, supply chain position, hazard severity, country of origin image, crisis management, toy industry

Faculty Mentor: Dr. Etayankara Muralidharan

Oral Presentation

Mathematics and Statistics

An observational study on the accuracy of the Dexcom G7 continuous glucose monitor

By: Morgan Brophy

Diabetes is one of the most common health conditions in Canada with 3.8 million individuals experiencing the effects of diabetes. Diabetes is a health condition that can reduce your life span due to the severe health complications that arise from the condition. Therefore, it is essential that blood glucose levels in diabetics are monitored continuously and accurately. Therefore, the objective of this study is to test the accuracy and reliability of the latest continuous

glucose monitor in Canada the Dexcom G7. This is an observational study conducted on a Type 1 diabetic, which involves 1 participant, a female who I live with using a Dexcom G7. 3 runs of this experiment will be conducted, collecting data measures 5x a day. Once upon waking, after breakfast, after dinner, after an evening snack, and finally before sleeping at night. These

measures are taken over the 10 day lifespan of the Dexcom G7 and are compared to the results of the blood glucose meter, which measurements will be taken in conjunction with the data collected from the CGM monitor.

Faculty Mentor: John Fedoruk

Poster Presentation

Easy as 1-2-3: The 1-2-3 Conjecture for Polygonal Tilings

By: Alison Charlesworth

The 1-2-3 conjecture states that for every finite, connected graph with at least three vertices, edges can be assigned a weight of 1, 2, or 3 such that the sum of the weights at each vertex is distinct from all neighbouring vertices. In this talk we will explore solutions to the 1-2-3 problem on infinite polygonal tilings. The goal is to find finite patterns that when repeated solve the infinite problem.

Faculty Mentors: Dr. Chris Ramsey & Dr. Nicolae Strungaru

Oral Presentation

The Canadian Brewhouse: Multilevel Analysis of Loyalty Engagement

By: Shashwat Gujjar & Kevin Kothiya

This study analyzes two years of customer and store-level data from The Canadian Brewhouse to identify the factors driving loyalty program engagement, store performance, and marketing

event effectiveness. Using multivariate statistical techniques-including principal component analysis, clustering, factor analysis, logistic regression, MANOVA, and mixed-effects modeling-customers were segmented into five distinct groups, high- and low-performing locations were characterized, and the impact of recurring marketing events on spending and visit frequency was evaluated. Results reveal substantial heterogeneity in customer behavior, with high-engagement customers contributing disproportionately

to revenue, and top-performing stores achieving superior outcomes through both broad participation and higher per-customer spending. Marketing events were found to significantly increase spending and slightly boost visits, with recurring high-impact promotions generating the largest gains. These findings provide actionable insights to optimize loyalty strategies, enhance store-level engagement, and design effective marketing initiatives to strengthen overall customer retention and brand loyalty.

Keywords: Loyalty Program, Customer Segmentation, Multivariate Analysis, PCA, Factor Analysis, MANOVA, Marketing Event Impact

Faculty Mentor: Dr. Wanhua Su

Poster Presentation

General Solution for the n-th Moment of Binomial Distribution

By: Allan Huang

This research is on the general solution for the n-th moment of binomial distribution. We first use the brute force method by taking the 4th derivative of moment generating function; then we find the pattern in the first 4 moments, and propose a general solution for the problem. Finally we will use induction to prove this general solution.

Faculty Mentor: Dr. Cristina Anton

Oral Presentation

Confirming Urban Heat Island Effects using Trained Urban and Rural Temperature Models

By: Osman Jime & Kevin Tran

The heat island effect refers to the phenomenon of urban areas exhibiting significantly higher temperatures than those of surrounding rural areas, creating an "island" of heat. This temperature difference arises from numerous factors, such as the reduced airflow due to the densely populated buildings and the existence of low-albedo surface materials such as asphalt and concrete, absorbing and retaining solar radiation more efficiently than natural surfaces found in rural areas. The objective of this study is to evaluate whether the magnitude of the heat island effect is proportional to the degree of urbanization under similar climate conditions. The Urban heat island effect (UHI) was confirmed by comparing average temperatures of rural and urban regions. However, models trained on specific urban/rural regions were not accurate enough to assess UHI effects via cross prediction. Our assessment of the source of this

inaccuracy suggests that UHI effects may behave differently in regions with extreme snowfall. In such cases models may need to be separately trained for each season.

Faculty Mentor: Dr. Wanhua Su

Oral Presentation

Bayesian Inference versus Classical Techniques for Survival Analysis

By: Hailey Komarnicki

This study aims to compare Bayesian inference and classical techniques for survival analysis using clinical cancer research as an applicable example. Accurate survival prediction is vital for prognoses and treatment strategies, but the traditional methods often rely on rigid assumptions that may not capture the complexity of the data. Bayesian methods often provide a more flexible probabilistic approach, better equipped for handling complex survival data with small sample sizes or heavy censoring. This research uses three cancer datasets, Lung, Melanoma, and Ovarian, to evaluate both the Bayesian and classical methods. Classical models, including Cox proportional hazards and parametric distributions, will be assessed using AIC, BIC, and the Concordance index. The Bayesian models, using various baseline hazards, will be evaluated using WAIC, LOO, and DIC. Ultimately, the Cox PH model performed the best with the lowest AIC value out of the three models for each dataset. Issues were identified in the lack of universal metrics, making direct comparisons difficult. However, the models, excluding melanoma, continued to show similar patterns in the hazard of death. We could conclude that while the classical methods in this analysis outperformed the Bayesian, the complex models could still provide useful information for convoluted data. The importance of choosing an appropriate approach tailored to the data is highlighted.

Faculty Mentor: Mathieu Chalifour

Poster Presentation

Exploring Stochastic Simulation Frameworks Through Tournament Based Probability Modelling

By: Denaye Kurtz

This project aims to explore the application and comparative performance of stochastic simulation methods. We will look specifically at Monte Carlo simulation and Bayesian estimation approaches in modelling uncertainty and variability in tournament outcomes. Through the use of the 2025 March Madness basketball tournament as a case study, we aim to evaluate which stochastic methods are most effective for modelling complex probabilistic systems involving dependent and hierarchical structures. The primary objective of this project is to design, implement, and compare these algorithms using the R programming language. Both models use logistic regression based on win probabilities derived from team seed differences, point differentials, and win–loss records. The methods are compared by examining their estimated probabilities of reaching successive tournament stages across 10,000 simulated brackets. Model behaviour is assessed in terms of probability concentration, variability across simulations,

and sensitivity to performance metrics. Results show that while both approaches consistently identify the same top-performing teams, the Bayesian simulator produces substantially more concentrated outcome distributions due to its uncertainty structure, whereas the Monte Carlo model yields more moderate and dispersed probabilities. This project will actively demonstrate how stochastic methods can be adapted and optimized for probabilistic forecasting in real-world situations.

Faculty Mentor: Mathieu Chalifour

Poster Presentation

FunWeightClust and Alzheimer's

By: Richard Lui

FunWeightClust is a clustering algorithm that uses statistics to classify functional data. We used the FunWeightClust algorithm to cluster electricity demand data to determine if electricity demand in the morning can predict evening usage. We also used FunWeightClust on Fractional Anisotropy scores from various types of brain scans, along with an assortment of cognitive scores to classify if a patient had Alzheimer's disease.

Faculty Mentors: Dr. Cristina Anton & Dr. Calin Anton

Oral Presentation

A Bayesian Beta-Binomial Model for Decision Behavior in a Radio Contest Using MCMC Methods

By: Ruskin Luitel

This study applies a Bayesian Beta-Binomial framework to model decision-making behavior in the “Cash-Hole” radio contest, where contestants must choose between a guaranteed monetary reward and entry into a larger jackpot draw. Each contestant’s decision is modeled as a Bernoulli trial with unknown probability p of selecting the guaranteed reward. A Binomial likelihood combined with a Beta prior yields a closed-form posterior distribution for p. To validate the theoretical posterior, a Metropolis-Hastings random-walk algorithm is implemented in R. The model is then extended using a Gibbs sampler to estimate the joint posterior distribution of the decision probability p and the number of contestants taking the guaranteed payout K. Among candidate priors, the Beta(5,10) distribution provides the best fit based on posterior log-probability. Posterior estimates indicate that approximately one-third of contestants choose the guaranteed reward, resulting in an expected value of $E[K] \approx 40$ out of 120 participants. Under these conditions, the estimated probability of winning the jackpot is approximately 1.3%. These results demonstrate how Bayesian inference and Markov Chain Monte Carlo methods can be used to model decision uncertainty and predict outcomes in real-world choice scenarios.

Faculty Mentor: Mathieu Chalifour

Poster Presentation

On the equivalence of Operator-Theoretic and Module-Theoretic definitions of compact containment

By: Nolan Oleny

Recently several distinct definitions of compact containment have emerged. In this presentation we discuss the relationship between these characterizations, specifically focusing on the operator-theoretic and module-theoretic definitions, with our explanation beginning from the foundations.

Faculty Mentor: Dr. Cristian Ivanescu

Oral Presentation

Clustering Longitudinal Data with Missing Values Using Gaussian Mixture Models

By: Isaiah Zackus

Longitudinal data is made up of repeated measurements collected over time and frequently arises in many real-world datasets. The presence of missing observations creates a challenge in analyzing such data, complicating statistical modeling and parameter estimation. This holds especially true for cluster analysis, the goal of which is to identify homogenous subpopulations within datasets with unknown group labels. This project investigates ways to cluster longitudinal data with incomplete measurements using Gaussian mixture models. Such models are routinely used in cluster analysis as they utilize probability distributions for finding groupings and can be flexible for modeling. Parameter estimation for these models is performed using an Expectation-Maximization (EM) algorithm that iteratively estimates latent group memberships and model parameters. The EM algorithm can be extended to handle missing data by finding conditional expectations for the unobserved values given the observed data. Longitudinal data in particular has a time dependence between measurements which can be captured by modeling the covariance structure using the modified Cholesky decomposition. This approach uses a sequence of regression relationships and innovation variances to represent the covariance matrix, which preserves the ordering of time points. By adapting the EM algorithm to handle missing values with this covariance parameterization, the proposed approach allows the clustering of longitudinal data when observations are incomplete.

Faculty Mentors: Dr. Brian Franczak & Dr. Cristina Anton

Poster Presentation

Music

Towards Anekāntavāda: Pedagogy in the Always-Already

By: Ijaz Janmohamed

This synthesis research-creation project comprises field notes, performances, and autotheory to look towards ideating a music pedagogy that employs anekāntavāda (multiplicity of viewpoints).

The concept of anekāntavāda is central to exploring how the “other” is approached in the conservatory-style setting—a setting historically resistant to radical pedagogical transformation. Based on critical pedagogy, ethnomusicology, music history, postcolonial studies, and research-creation, I explore how one-sidedness and prescription in music pedagogy is felt and performed, and how undergraduate music pedagogy is always-already integrated with real-world musicking, and should be implemented with great care. Here, research-creation can help define actions and inactions within institutional pedagogies against the “other.” Autoethnography and autotheory are the primary qualitative measures used to evaluate current practices. Using improvised performance as a tool of approaching multiplicity, I ask: how can multiplicity of viewpoints assist music pedagogy, music teachers, and learners ascribe to intellectual equality and grounded ontologies that transgress coloniality and one-sidedness in their artistic praxes?

Faculty Mentor: Dr. Michael B. Macdonald

Oral Presentation

Performing Anekāntavāda: Pedagogy in the Always-Already

By: Ijaz Janmohamed

This synthesis project of field notes, performance, and autotheory, reveals my desire to practice “othered” music in the institution. Practical techniques among Asian, Islamic, and Black American musical traditions are explored in a performance setting while internalizing Anekāntavāda (multiplicity of viewpoints). I argue that anekāntavāda is central to finding a pedagogy that honours diverse musical orientations which become overshadowed by conservatory-focused notions of craft and mastery, which is always-already real or hyperreal. This performance of live improvised music will present the processes and techniques explored in theoretical findings.

Faculty Mentor: Dr. Michael B. Macdonald

Performance

Nursing

Cannabis Use During Pregnancy: Effects on Mother and Child

By: Ashmeen Arneja

Background:

Cannabis use during pregnancy and breastfeeding has increased since legalization. Many individuals view cannabis as natural or low risk and use it to manage nausea, stress, sleep issues, pain, or mental-health concerns. However, THC crosses the placenta and enters breast milk, raising concerns about fetal and infant neurodevelopment.

Aim:

To examine factors influencing cannabis use during pregnancy or breastfeeding and summarize current evidence on maternal and infant outcomes.

Methods:

A literature review was conducted using CINAHL, PubMed, and Google Scholar. Search terms included “maternal cannabis use,” “prenatal cannabis,” “breastfeeding AND cannabis,” and “pregnancy AND THC.” Limiters were English, 2019–2025, peer-reviewed research. Ten studies were included, representing systematic reviews, surveys, qualitative studies, cohort analyses, and mechanistic research.

Results:

Findings show that decisions about cannabis use are shaped by peer experiences, perceived safety, and fear of judgment, emphasizing the need for supportive counselling. Evidence indicates modern cannabis products contain higher THC concentrations, increasing exposure risks. Prenatal or breastfeeding cannabis use is associated with low birth weight, smaller head circumference, cognitive and behavioural challenges, and possible long-term vulnerability to substance use. Individuals with adverse childhood experiences may have higher cannabis use rates, suggesting underlying psychosocial needs. Cannabis also passes into breast milk and may alter its nutritional and immune-related components.

Implications for Nursing Practice:

Nurses play a key role in providing nonjudgmental, evidence-based education, screening, and harm-reduction support. Strengthened public health messaging, along with further research on dose, frequency, and potency, is needed to guide pregnant and breastfeeding individuals.

Faculty Mentor: Hanneke Croxen

Poster Presentation

Identifying Competency Gaps to Support a Peer-Observation Tool for Clinical Nursing Education

By: Cintya Hayashi & Megan McClymont

Nursing education requires educators to develop diverse competencies in both classroom and clinical settings. While peer-observation and similar strategies support educators’ growth in theoretical teaching, clinical teaching demands distinct competencies and potentially different development tools. This study examined the alignment between the Canadian Association of Schools of Nursing (CASN) clinical instructor competencies and the nurse educator core competencies defined by the World Health Organization (WHO). The analysis forms part of a broader project to design a peer-observation tool aimed at enhancing clinical teaching practice in nursing education. The WHO outlines eight domains with 53 sub-competencies, while CASN defines six domains with 59 indicators. A crosswalk analysis identified three WHO sub-competencies not reflected in the CASN framework. The first gap involves the integration of technology in teaching, as CASN primarily emphasizes traditional instruction without explicit

reference to eHealth or eLearning tools. The second gap refers to scholarly engagement, with CASN focusing on instructor-faculty exchanging practical instructional tips rather than on research and publication. While these two areas may be less central to clinical instruction, the third gap—feedback and performance evaluation—represents a key developmental opportunity. CASN promotes feedback exchange between instructors and students but does not address peer-based evaluation among clinical educators. The absence of structured peer feedback in CASN competencies brings an important argument supporting the creation of a peer-observation tool to foster reflective teaching practice and collaborative professional development in clinical nursing education.

Faculty Mentor: Dr. Fernanda dos Santos Nogueira de Goes, Danielle Curran-Cook & Tanya Paananen

Poster Presentation

Tools and Strategies for Nurses engaging with Developmental Disabilities

By: Bhishmaa Jaunky, Alita Marko, Amel Bahobeshi & Batul Akbari

Developmental disabilities begin early in life and affect how an individual moves, thinks, communicates, or behaves throughout their life. Individuals with developmental disabilities often experience major health disparities, such as delayed diagnoses, limited access to preventive care, and many unmet healthcare needs. Furthermore, many healthcare providers often do not feel adequately trained or prepared to care for this population. Recognizing these ongoing concerns, this research investigates how disability is interpreted across medical, social, cultural, and caregiver perspectives. Cultural beliefs shape how families understand disability and influence whether they seek medical care, with stigma or spiritual interpretations sometimes delaying treatment. Caregivers also face emotional strain, difficulty navigating services, and burnout, emphasizing the need for strong, consistent collaboration between nurses and families. Providing nurses with tools and strategies when caring for those with developmental disabilities can help reduce longstanding disparities and promote more equitable, patient-centred care.

Faculty Mentors: Lisa McKendrick-Calder

Poster Presentation

The Interplay of the Opioid Crisis and Homelessness: Barriers to Healthcare and Harm Reduction

By: Katherine Krukowski, Lauren Krips & Jocelyn Bay

Health outcomes of the homeless population are shaped by many intersecting factors, which include opioid use, access to health care, and harm-reduction services. This literature review aims to explore the current opioid epidemic and its influence on healthcare access and harm-reduction within the homeless population while focusing on the role of nursing and public health systems within these inequities. Data were collected from CINAHL, PubMed, and MEDLINE, and qualitative and quantitative studies published from 2015 onwards were examined for their information on homelessness and opioid use. Exclusion criteria of opinion-based articles,

secondary sources, and systematic reviews were applied. Six articles were selected that focused on healthcare access, harm-reduction strategies, nursing perspectives/ stigma, and community-based interventions. Findings revealed that structural barriers were major factors in decreased harm-reduction services and access to healthcare. Homelessness was associated with increased hospital use, overdose risk, and mortality. Nurse-led community interventions and harm reduction strategies were shown to reduce drug use. Research shows that nursing care plays a critical role in advocacy and health outcomes of homeless individuals with opioid use disorder. With this in mind, future research should explore the role of nurses in integrating recovery models in practice.

Faculty Mentor: Dr. Janet Kemei

Oral Presentation

The Gender Gap in Being Believed: Women's Subjective Symptoms in Healthcare

By: Mikhayla Leblanc

Women reporting chronic pelvic pain and other subjective symptoms suggestive of endometriosis frequently encounter delays in diagnosis or dismissal of their concerns within healthcare settings. Emerging literature suggests that gendered assumptions within healthcare, combined with the historical underrepresentation of women in clinical trials and research, may influence how clinicians interpret and respond to women's reports of pain. The purpose of our review is to examine existing evidence on women’s experiences when reporting subjective symptoms related to potential endometriosis in primary care settings. Specifically, this review will explore how healthcare providers attend to, validate, or dismiss these concerns and how these interactions shape women’s perceived satisfaction with care.

It is hypothesized that women reporting subjective symptoms are likely to experience dismissal or minimization of their concerns, contributing to decreased satisfaction with healthcare experiences. Endometriosis and its relationship to pain will serve as the central example illustrating how primary care inadequately addresses female-specific subjective symptoms.

We will conduct a structured search of MEDLINE, CINAHL Plus, and the Public Health Database to identify peer-reviewed studies of various designs. Our review will synthesize evidence from patient-reported experiences on credibility, diagnostic delay, and satisfaction with care, situating these findings within the broader literature on gender bias and the historical underrepresentation of women in clinical research. By examining these factors, this review aims to better understand how systemic and clinical practices may contribute to disparities in the recognition and management of women’s health concerns.

Faculty Mentor: Dr. Ginger Sullivan

Poster Presentation

Evaluating Student Performance on AI-Generated Versus Instructor-Generated Anatomy Multiple-Choice Questions

By: Taij Mann

Purpose: Evaluate student performance on AI-generated versus instructor-generated anatomy multiple-choice test questions.

Background: AI is becoming a prominent tool for students to learn and create, but its use as a testing tool for instructors has yet to be determined. AI may be able to reduce instructor workload by creating questions which incorporate elements of Bloom's taxonomy and improve student understanding of test questions. Students may also benefit from more accessible, higher validity practice question banks.

Method: After gaining REB approval, nursing and non-nursing students enrolled in an anatomy course for healthcare professionals were tested using both AI-generated and instructor-generated test questions on two midterms and a final exam. The students' performance was tracked across two course sections. Initial results were collected, and analysis is ongoing.

Expected implications: AI-generated questions are expected to yield mixed results, depending on their context. The results will guide instructors' evaluation planning and students' exam preparation.

Faculty Mentor: Dr. Raj Narnaware

Poster Presentation

Satisfaction and Usefulness of Chatbot in Nursing Education: Perceptions of Nursing Students and Faculty

By: Megan McClymont

This presentation reports findings on perceptions of chatbot satisfaction and usefulness in nursing education from a broader quantitative study examining the beliefs, attitudes, and expectations of nursing students and faculty regarding the use of chatbots in nursing education. The study was conducted at the Faculty of Nursing at MacEwan University. It involved administering validated English versions of previously developed questionnaires designed to assess perceptions of chatbot integration in higher education.

The focus of this presentation is on perceptions of chatbot satisfaction and usefulness in nursing education by nursing students and faculty members and the statistical comparisons of these characteristics across respondent groups. Survey data were compiled and analyzed using SPSS software. Descriptive statistics were used to summarize key demographic variables, including age, gender, and educational background. Comparative analyses were conducted to identify differences in perceptions between nursing students and faculty, as well as within each group. The questions are: Have you used chatbots for your learning process or for researching information in your professional area? Have you used chatbots to learn or research information on other subjects? What is your opinion on the usefulness of a chatbot in

helping your learning in your area of education? What is your level of satisfaction with the responses provided by a chatbot in regard to questions about your area of education?

These findings provide important contextual insight into interpreting broader research on perceptions of chatbot use and contribute to discussions on the integration of artificial intelligence technologies in nursing education.

Faculty Mentor: Dr. Emilene Reisdorfer

Oral Presentation

Nurse's practice in Palliative and Hospice Care Across Canada: What We Know and What We Need to Learn

By: Megan McClymont

Palliative and hospice care approaches are increasingly integrated across diverse clinical settings and delivered by health professionals to support patients from the onset of chronic illness through the end of life. Throughout this care trajectory, nurses play a central role in ensuring comfort, dignity, and holistic support for patients and their families. However, the delivery of palliative and hospice services varies across Canadian provinces and territories, influencing nurses' roles, responsibilities, and working conditions. Despite nurses' essential contributions, the Canadian literature on nursing practice in palliative and hospice care has not been comprehensively mapped. This scoping review aims to provide a comprehensive understanding of the nursing practice in palliative and hospice care in the Canadian literature. Following the methodology of the Joanna Briggs Institute (JBI) for scoping reviews, a search was conducted across nine databases, including MEDLINE, CINAHL, Academic Search Complete, PsycINFO, EMCARE, Web of Science, Scopus, EBM Reviews, ProQuest Dissertations, and Theses Global, as well as grey literature sources, including Canadian government and provincial reports. Four independent reviewers screened titles and abstracts and extracted data using a standardized form. A preliminary search conducted on October 2, 2025, followed by a full search on October 20, 2025, yielded 7913 English and French records imported into Covidence for screening. Findings will summarize nurses ' roles, responsibilities, and contributions in Canadian palliative and hospice care, identify gaps, and inform future research priorities. Results will be reported according to the PRISMA Extension for Scoping Reviews guidelines. Expected completion of the review is June 2026.

Faculty Mentor: Dr. Meiriele Tavares Araujo

Poster Presentation

Peer Observation of Teaching in Nursing Education: A Scoping Review of the Literature

By: Megan McClymont & Cintya Hayashi

Peer Observation of Teaching (POT) has become an important strategy in higher education for improving teaching quality, encouraging reflective practice, and supporting faculty professional development. In this approach, instructors observe one another's teaching and provide

constructive feedback to foster continuous improvement. Historically, POT has been used in lecture-based settings; its application in nursing education, particularly in laboratory and clinical learning environments, remains less well understood. Nursing education often involves hands-on skill development, clinical reasoning, and real-world practice, which may require different observation tools and approaches. The purpose of this scoping review is to explore the existing literature on POT in nursing education and identify key areas and gaps in its effectiveness. A systematic search was conducted in CINAHL, MEDLINE, Education Research Complete, and Health Source Nursing for peer-reviewed articles published between 2014 and December 2024. Search terms included combinations of peer observation, professional peer review, faculty, clinical educator, professor, college teachers, nurse, nurses, nursing, and nursing education. The search identified 181 records, of which eight met the inclusion criteria. Thematic analysis revealed several key areas, including vulnerability and reflective practice, evidence-informed approaches to teaching improvement, the importance of trained and experienced observers, the role of POT in advancing teaching practice and collaboration, and the value of clear and constructive feedback. Findings suggest that well-implemented POT frameworks can strengthen teaching practices and enhance student learning, while underscoring the need for further research on POT in nursing education's laboratory and clinical teaching environments. Results will be shown through a poster presentation.

Faculty Mentor: Dr. Fernanda dos Santos

Poster Presentation

Understanding stressors during clinical placement and their impact on the well-being of MacEwan nursing students

By: Kazi Nawme Nilema Mihila, Brooke Davidson & Jana Trisya Ventura

The American Psychological Association defines stress as “the physiological or psychological response to internal or external stressors.” Research indicates that stress is a significant factor in health outcomes, affecting individuals both physically and psychologically, and contributing to poor clinical outcomes. Clinical practice is an integral part of nursing education. According to the College of Registered Nurses of Alberta (CRNA) and Alberta Health Services (AHS), nursing students complete a minimum of 950 hours of clinical practice in Alberta, 600 hours by third year and 350 hours in preceptorship. Clinical practice can place significant stress on nursing students, with reported stress levels ranging from moderate to severe. Studies have shown that nursing students experience higher stress levels than students in other healthcare programs and university students in general. To explore potential stressors and their impact, semi-structured interviews were conducted with MacEwan nursing students who had completed their clinical placements. This presentation introduces preliminary findings from these interviews, focusing on students’ placement experiences and their impact on overall well-being.

Faculty Mentors: Dr. Emilene Reisdorfer & Dr. Morgan Wadams

Poster Presentation

Interview Preparation for Canadian New Graduate Nurses

By: Lena Nguyen

Canada faces a projected shortage of 117,000 nurses by 2030, yet nursing education dedicates as little as one day to preparing graduates for the interview process – the very gateway to professional practice. This paradox raises a critical question: if interviews determine where new graduates begin their careers, why does their preparation remain an afterthought?

Grounded in Duchscher's (2009) Transition Shock Theory and synthesising Canadian and international nursing research from 2019 to 2025, this analysis reframes the job interview as the first manifestation of transition shock rather than a mere administrative step. Interviews require graduates to confidently articulate clinical reasoning, professional values, and practice readiness – precisely the areas where uncertainty runs deepest during the initial shift from student to registered nurse. The problem? The challenge is not only practical but developmental: graduates are asked to perform a professional identity that is still actively forming.

What are the repercussions? Drawing from Canadian literature, Hallaran et al. (2022) found that inadequate preparation accounted for 45% of new graduates leaving their initial jobs within months of employment. Additionally, Metersky et al. (2024) noted that graduates are caught between enduring toxic work environments and leaving the field entirely, partly because of poor job fit resulting from a one-sided interview process that fails to educate graduates on evaluating prospective employers.

Recommendations span three timelines: immediate peer-led mock interviews using the STAR technique; medium-term curriculum integration that embeds professional communication across all program years; and long-term standardised competency frameworks. Interview preparation is not supplementary to clinical education – it is foundational to workforce sustainability, ethical hiring, and the formation of professional identity itself.

Faculty Mentor: Dr. Meiriele Tavares Araujo

Poster Presentation

Disempowerment and Identity Goals in Intellectual Disability: A Sibling’s Perspective on Living with Chronicity

By: Lena Nguyen

Intellectual disability constitutes a chronic condition with lifelong implications for autonomy, self-determination, and identity formation. Existing literature on disempowerment, particularly Tse et al.'s (2025) concept analysis, focuses on adult-onset conditions and professional-patient dynamics, leaving largely unexamined how family systems become primary agents of identity foreclosure. Drawing on my role as an older sibling, this observation examines how protective familial discouragement systematically constrains identity-linked goal pursuit in Thomas (pseudonym), a 23-year-old man with moderate intellectual disability, whose aspirations for

university, work, and independent living have been consistently framed as unattainable by those closest to him.

Grounded in Tse et al.'s (2025) disempowerment framework, Charmaz's (1995) identity adaptation theory, and the Ontario Human Rights Commission's (2016) principles of dignity and autonomy, the argument is this: Thomas's disempowerment originates not from intellectual disability itself, but from the sustained deprivation of opportunities to pursue developmentally appropriate identity goals. Additionally, his behavioural responses, such as attempts to remove his gastrostomy tube and verbal assertions of normalcy, are reframed not as pathological symptoms, but as active resistance and identity reclamation.

Findings extend current disempowerment literature by positioning the family, rather than the healthcare system, as the primary disempowering environment. Additionally, this account implicates the author as an occasional agent of the same disempowerment, because honest advocacy requires naming one's own participation in the patterns one critiques. Implications for nursing practice include reconceptualising behavioural outbursts as communicative acts, integrating siblings as clinical informants, and recognising how well-intentioned protection can paradoxically violate the very dignity and autonomy, it seeks to preserve.

Faculty Mentor: Lisa McKendrick-Calder

Poster Presentation

The Hidden Patients: When children have chronic illness, what happens to their parent's health?

By: Lena Nguyen

Approximately 25% of Canadian children live with a chronic condition, yet their parent caregivers remain invisible within a healthcare system that recognises only the child as the patient. This presentation argues that parent caregivers of children with chronic illness constitute hidden patients whose biological, behavioural, and socioeconomic deterioration demands recognition within routine clinical encounters. Utilising Barr et al.'s (2003) Expanded Chronic Care Model, which positions the family unit, rather than the individual, as the locus of care across porous clinical-community boundaries, this work synthesises current evidence to demonstrate that caregiving-related health decline is not incidental but predictable and preventable.

Biologically, chronic caregiving stress dysregulates the HPA axis, leading to elevated cortisol levels and systemic inflammation (Mountcastle et al., 2023). On the other hand, according to Gallagher & Bennet (2021), the resultant allostatic load reliably forecasts illness and disability. Expanding on this idea, Khan et al. (2025) indicate that modifications to the HPA axis could be transmitted across multiple generations. Behaviourally, parents' roles as caregivers involve sacrificing their health while maintaining near-perfect medication adherence for their children (Cohn et al., 2020). As a result, this creates a cascade of chronic diseases that remain untreated or hidden. Systemically, Canadian health policy does not recognise caregivers as patients, rendering their deterioration invisible in both funding and practice.

Through case-based application, this presentation demonstrates that nurses are uniquely positioned to disrupt this trajectory through brief validated screening tools, trauma-informed relational practice, and advocacy for two-generation care models that treat parent and child as an interconnected unit.

Faculty Mentor: Lisa McKendrick-Calder

Oral Presentation

Effectiveness of Nurse-Led Self-Management Education on Glycemic Control in Adults with Type 2 Diabetes: A Modified Integrative Literature Review

By: Yaana Patel, Iremide Esther Balogun, Oluebube Okata & Uche Molokwu

The global prevalence of type 2 diabetes is rising rapidly, increasing the burden of chronic disease management in the healthcare system. Because individuals with type 2 diabetes spend most of their time managing their condition in community rather than in hospitals, effective self-management is essential for optimal glycemic control and preventing complications. Nurses play a central role in providing patient education and promoting self-care behaviours. Despite the increasing use of nurse-led education programs, the overall effectiveness of such interventions on glycemic control remains an important area of research. This modified integrative literature review investigated whether nurse-led self-management education improves glycemic control in adults with Type 2 diabetes. Seven primary peer-reviewed studies within last 10 years were included. Randomized controlled trials conducted in community hospitals, outpatient clinics, and digital platforms accounted for majority of the chosen studies. Interventions included technology-based programs, individualized counselling, supportive follow-up and structured group education. Overall, the results showed that nurse-led self-management education enhanced self-care behaviours, including blood glucose monitoring, medication adherence, physical activity, and foot care. Improvements in self-efficacy were also commonly reported. While hemoglobin A1c reductions were generally small, several studies found statistically significant short-term improvements in glycemic control. However, several nurse-led self-management education interventions had diminishing effects at follow-up, indicating that continuous reinforcement may be required to sustain long-term behavioural change. These results suggest the critical role nurses play in providing organized, patient-centred diabetes education. It is recommended to continue designing long-term, culturally sensitive nurse-led interventions to improve sustained glycemic control across diverse populations.

Faculty Mentor: Dr. Fernanda dos Santos

Oral Presentation

Screening Evaluating the Process of a Systematic Review Using Covidence

By: Ahmad Shams

A systematic review is a structured method of analyzing and synthesizing existing research to draw evidence-based conclusions on a defined topic. Systematic reviews require a rigorous screening process to identify relevant studies and establish a reliable evidence base. The

screening stage provides the research team with an indication of current findings in the field. These reviews rely heavily on titles and abstracts to assess the applicability of each previously published study that may hold significance to the research project. Managing and screening large volumes of literature can place time constraints on the research project. Organizing relevant literature from unrelated papers can quickly become complex, especially when reviews involve thousands of articles. The objective of this project was to apply a structured systematic review using the Covidence platform and evaluate the effectiveness in organizing and screening academic literature. Covidence was used to manage citations, track reviewer decisions, and streamline the screening process. The findings demonstrated that Covidence significantly improves the efficiency and organization of the screening process, particularly when handling large amounts of data. It enhances decision-making consistency and reduces the time required for study selection. The Covidence tool provides reviewers with a progress summary of their work and allows researchers to track their work. However, limitations remain in interpreting unclear abstracts and ensuring accurate inclusion decisions. Overall, this project highlights the benefits and challenges of digital tools like Covidence in systematic review and emphasizes the importance of clear criteria and critical evaluation during the screening process.

Faculty Mentor: Dr. Mehri Karimi-Dehkordi

Oral Presentation

Working Against the Clock: Exploring the Impact of Night Shift Work on Nurses' Health and Well-being

By: Estelle Steffener, Hallie Anderson & Abbey Harris

As the delivery of continuous patient care remains essential to health care systems, working throughout the night, in shifts, is a common practice in nursing. The disruption to one's natural sleep patterns that accompanies night shift work has the potential to alter the body's circadian rhythm, the internal biological clock that regulates sleep-wake cycles, hormone production and other physiological processes. Our modified literature review aimed to examine the influence of night shift on nurses' health and wellbeing, describing the implications of night shifts on nurses and exploring the relationship between night shift work and health outcomes. After applying inclusion and exclusion criteria, eight primary research articles published from 2016-2025 were retrieved from MEDLINE and CINAHL databases. Our results uncovered various implications for nurses working night shifts, including significant alterations in sleep, hormonal and stress responses, and suboptimal metabolic patterns. Factors such as consecutive night shifts and the number of night shifts worked influenced outcomes. These alterations manifested as physical symptoms and psychological illness, further creating a predisposition to chronic diseases. The review's results outline the need to better support our nursing staff. Future research may build on this review to better understand the negative effects and propose solutions, ensuring findings can be applied to larger populations and causal relationships can be inferred.

Faculty Mentor: Dr. Fernanda Dos Santos

Poster Presentation

Use of Immersive Learning Technologies in Nursing Education: A Literature Review With a Systematic Approach

By: Kiara Ukrainetz

Background:

Anatomy and physiology are foundational yet challenging courses in undergraduate nursing education, often resulting in limited knowledge retention and reduced applicability to clinical practice. Advances in technology have facilitated the integration of immersive learning modalities including Virtual Reality (VR), Mixed Reality (MR), Augmented Reality (AR), and virtual simulation into health education.

Objective:

This review aims to examine the current use and effectiveness of immersive learning in nursing and medical education, particularly in anatomy and physiology, and to explore the transferability of methods from medical education into nursing education.

Methods:

A systematic search of North American studies published between 2020 and 2025 was conducted. Fifteen studies meeting inclusion criteria, randomized controlled trials, quasi-experimental designs, and qualitative studies, were analyzed for outcomes related to engagement, knowledge retention, skill development, and barriers to implementation.

Results:

Immersive learning technologies were found to enhance student engagement, improve knowledge retention, and support skill acquisition. However, adoption in nursing anatomy and physiology courses remains limited compared to medical education. Reported barriers include high costs, faculty training requirements, and challenges with curricular integration.

Conclusions:

Immersive learning has the potential to bridge gaps in foundational nursing education by enhancing learning outcomes and student engagement without compromising students' academic success. Expanded implementation and research within nursing programs are needed to optimize its effectiveness and to overcome existing barriers.

Faculty Mentor: Dr. Raj Narnaware

Poster Presentation

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Faculty Mentor: Dr. Raj Narnaware

Oral Presentation

How does opioid use during pregnancy impact neonatal and maternal health?

By: Yiyao Wei & Priya John

Opioid use during pregnancy is associated with significant risks for both maternal and neonatal health and continues to be a growing concern within Canadian healthcare systems. This poster examines the impact of prenatal opioid exposure through a focused review of peer-reviewed literature addressing maternal outcomes, neonatal health indicators, and barriers to effective care. Databases including CINAHL, PubMed, and ProQuest Public Health were used to identify evidence related to opioid use disorder, neonatal abstinence syndrome (NAS), and pregnancy-related complications. Findings indicate increased rates of preterm birth, low birth weight, neonatal abstinence syndrome, NICU admission, and infant mortality among opioid-exposed

infants, alongside elevated maternal morbidity influenced by mental health challenges, stigma, and social instability. The poster highlights the importance of medication for opioid use disorder (MOUD), particularly buprenorphine, and emphasizes trauma-informed, non-judgmental prenatal care as key strategies to improve outcomes. Implications for nursing practice and future research are discussed to support safer, more equitable care for opioid-exposed maternal–infant dyads.

Faculty Mentor: Hanneke Croxen

Poster Presentation

Organizational Behaviour, Human Resources Management, and Management

Psychological Safety and the Willingness to Report Workplace Misconduct among Canada's Four Designated Groups: A Literature Review

By: Nkechinyere Irabor

Workplace misconduct, including harassment, discrimination, and other violations of organizational policies, remains a persistent issue across many organizations. Although formal complaint and reporting mechanisms are often in place to maintain compliance with legislation, employees may still hesitate to report workplace misconduct, particularly those from the four designated groups identified under Canada's Employment Equity Act (women, Indigenous peoples, persons with disabilities, and visible minorities). One factor that may influence employees' willingness to report concerns is psychological safety, defined as the shared belief that individuals can speak up without fear of negative consequences.

This literature review will examine existing research on psychological safety and employee reporting behaviour within the Canadian workplace context, with particular attention to the experiences of the four designated groups. Drawing on studies in organizational behaviour and employee relations, the review will explore how factors such as fear of retaliation, leadership behaviour, organizational culture, and trust in complaint procedures influence employees' decisions to report workplace concerns. Existing research suggests that employees are more likely to report misconduct in environments where psychological safety is present and where organizations demonstrate transparency and support for employee voice.

By synthesizing findings from the literature, this review will identify recommendations for improving organizational complaint and reporting processes, with implications for employee wellbeing and engagement.

Faculty Mentor: Dr. Nimarta Mann

Poster Presentation

Designated Groups' Comparative Review of Wellbeing at Workplace

By: Katelyn Kaiser

Affective organizational commitment happens when an organization's purpose and values hold resonance with an individual, predicting pro-social behaviour and successful performance outcomes. Well documented barriers exist to equitable hiring of Canada's four designated groups; however, once hired within an organization, what job resources are in place to ensure wellbeing and foster better organizational outcomes? Through a systematic literature review, this study aims to identify the job resources that create conditions of wellbeing and predictors of organizational outcomes. Wellbeing is more than an aspirational nicety, literature indicates that those with high wellbeing have better physical health, are more cooperative, and likely perform better at the workplace; meaning wellbeing is foundational to an organization's performance outcomes which in turn shapes the economic health of a nation. This study identifies gaps in the current research that seeks to indicate leadership and workplace resources needed for an organization's success at attracting and retaining diverse talent throughout each level of an organization, whilst maintaining worker wellbeing.

Faculty Mentor: Dr. Nimarta Mann

Oral Presentation

Worker and Workplace Experiences of Student Employees: A Literature Review

By: Bismeet Kaur

International student employees represent a growing and underexplored segment of the Canadian workforce, as they must navigate academic pressures, paid employment, and the challenges of cross-cultural adaptation all at once. Despite their increasing presence in Canadian workplaces and contribution to the economy, limited research has looked at how their experiences with organizational support and inclusion initiatives impact them as employees. This literature review brings together theoretical and empirical research across different theories in an attempt to understand International Student Employees' workplace experience more objectively. This review highlights the challenges, and opportunities for all student employees and explores the unique aspects specific to international student employees.

Faculty Mentor: Dr. Nimarta Mann

Poster Presentation

Bridging the Expectations Gap: Graduate Preparedness for Organizational Change

By: David Mares

Organizations today operate in environments where change is constant. Graduates may not fully consider how they will face organizational change as soon as they enter the workforce. Research already shows a gap between what students believe makes them prepared for work and what employers actually expect from them. For example, Cheang and Yamashita (2023) found that employers strongly prioritize soft skills like communication and initiative, while Yong and Lin (2023) found that graduates tend to overestimate their abilities in these areas. This project addresses the expectations gap among Generation Z students and employers and compares it with findings from earlier generations. Drawing on Career Construction Theory

(CCT) (Savickas, 2005, 2013; Kvasková et al., 2023), it focuses on preparing students through the dimension of career adaptability and the psychological resources that help them navigate change-oriented workplaces. Using a mixed-methods design, the study will involve conducting interviews followed by a survey of senior undergraduate students to assess their perceived preparedness for organizational change in the workplace. Organizational members, primarily employers, will also be invited to complete a survey to identify their expectations regarding new graduates' soft skills and their responses to organizational change. By comparing students and employers' perspectives, this project aims to identify any gaps in expectations, and ways to reduce them for graduates, to help university administrators and professors better prepare undergraduates for workplaces undergoing organizational change.

Faculty Mentor: Dr. Theresa A. Chika-James

Poster Presentation

Workforce Density and Labor Efficiency in HealthCare: A Comparative Analysis of Canada and Europe, 2019–2024

By: Elizabeth Poirier

Healthcare workforce availability has become an important issue for healthcare systems worldwide. As population numbers continue to rise, so does the demand for healthcare services. However, the supply of physicians and nurses available to care for the population has not increased at the same rate, making it difficult for healthcare systems to keep up with this growing demand and impacting the effectiveness of patient care delivery. The discrepancies between workforce density and patient care may also be hindered by factors such as staff workload, access to internal and external healthcare support, and ineffective reporting systems. In recent years, both Canadian and European healthcare workers have been at the forefront, managing the increasing pressures of trying to accommodate and treat patients in a saturated workforce. This raises the question of how staffing levels affect the efficiency of healthcare systems.

Using research published between 2019 and 2024, this literature review will explore how differences in Canadian and European physician and nurse density related to workforce efficiency and patient outcomes. This paper will examine common themes found in the literature comparing workforce challenges across the two regions and identify areas where further research may be needed.

Faculty Mentor: Dr. Nimarta Mann

Poster Presentation

Paralegal Studies

Usage Survey for Devon County Public Library

By: Maddy Hebert

No abstract available.

Faculty Mentor: Ashley Stasiewich

Poster Presentation

Physical Sciences

Smartphone-Based Colorimetric Sensors for Rapid Nutrient Detection in Agricultural Soils

By: Naima Abdalla

During this research internship, I worked as a Research Assistant developing a smartphone-based colorimetric sensor system for the rapid detection of boron, sulfur, and potassium in agricultural soils and plant samples. The goal of this project was to create a portable, low-cost, and user-friendly tool that enables farmers to monitor soil nutrients in real time and support precision fertilization.

The sensor system relies on simple colorimetric reactions that produce visible colour changes measurable with a smartphone camera. My responsibilities included preparing calibration standards, processing soil samples, optimizing reagent concentrations, testing colour development, and performing calibration and validation of the sensor responses.

The research was conducted under the supervision of Dr. Mugo in the Department of Chemistry at the University of Alberta from May to August 2025. By integrating accessible chemistry with smartphone imaging technology, this work contributes to the development of rapid, field-deployable diagnostic tools that can improve nutrient management, reduce excessive fertilizer use, and promote more sustainable agricultural practices.

Faculty Mentors: Dr. Samuel Mugo & Dr. Mohammed Elmorsy

Poster Presentation

Peptide Structure-Activity Relationship: Antimicrobial Peptide (AMP) Design, Synthesis and Analysis

By: Abraham Abdo

Antimicrobial peptides (AMPs) are short amino acid sequences that disrupt bacterial membranes and are being studied as potential alternatives to conventional antibiotics. Cancrin is a naturally occurring antimicrobial peptide found in salt-water amphibians that is effective against gram-negative bacteria. However, it is unclear how small changes in Cancrin's amino acids sequence affect its three-dimensional (3D) structure and subsequent activity. Here we have a modified sequence of the naturally occurring peptide, Cancrin, to examine how targeted

changes in primary sequence influence molecular structure and resulting biological activity. The peptide chain was redesigned to adjust overall charge and balance hydrophobic residues with hydrophilic to create an amphipathic helix. Adjusting the length of the peptide allowed us to use Solid-Phase Peptide Synthesis (SPPS). Two-dimensional nuclear magnetic resonance (2D NMR) spectroscopy was used to determine the 3D structure of the peptide. By linking rational sequence modification with structural analysis, this work contributes to understanding how primary structure governs peptides conformation and supports informed design of future AMPs.

Faculty Mentor: Dr. Kaitlyn Towle-Straub

Poster Presentation

Investigating AI as a Tool in Physics Labs: Balancing Efficiency and expand Experimental Learning

By: Mohamed Abdou

In this project, I will investigate the influence of AI tools, specifically ChatGPT, Gemini, and Claude, on completing laboratory tasks in introductory and senior physics labs. My primary objective is to evaluate how these AI platforms could be used by students in designing experiments and analyzing data. A critical target of this study is to examine whether AI could be used to circumvent the learning of essential experimental skills, such as equipment troubleshooting and independent procedure planning, acting as a tool for completing assignments with less effort and stress. Ultimately, I plan to present evidence-based recommendations on how to integrate AI into physics laboratories in a way that is valuable and aligned with course learning outcomes.

Faculty Mentor: Dr. Logan Sibley

Oral Presentation

A Micro-contribution to a Macro-study of Giraffe Maar Lake Sediments through Petrographic Microscopy

By: Jade Akes

Kimberlites are intrusive volcanic rocks that deposit rapidly in a highly eruptive manner creating vertical pipes or diatremes. The expulsion of the carbonate rich, ultra-mafic magma can cause a crater formation, or a Maar, at the uppermost portion of the pipe. In some cases, these craters can turn into maar lakes which have anoxic conditions in the lowermost portions of the water column leading to exemplary preservation of organic sedimentary material and fossils within the stratigraphic layers, respectively. This level of preservation can give great paleoenvironmental insight into the climate, environment and/or notable events, relative to their depositional position within the stratigraphic column. From the lacustrine and peat portions of the Giraffe pipe, in the Lac De Gras kimberlite field, 15 thin sections were manufactured for sediment profiles located at core depths ranging from 104.58 m - 162.41 m and a vertical equivalent depth of 76.48 m - 118.78 m, respectively. For this study, these thin sections were systematically analyzed and photographed, in transmitted and reflected light, using a petrographic microscope with an Infinity

analyzer camera and program. Preliminary results have revealed that there are minerals such as calcite present, which can be dated later on, the potential presence of olivine fragments and an indicator mineral for anoxic conditions, vivianite. Organics are present in all of the slides with a few potential pollen spores to be later identified. Transitions between light and dark laminae have also been noted, indicating variable amounts of organic matter.

Faculty Mentor: Dr. Serhiy Buryak

Oral Presentation

Livilo by PimaSENS Inc.: Rapid Colorimetric Detection of Urinary Biomarkers for Livestock Health Monitoring

By: Colby Bechthold

Biomarkers in animal urine provide essential insight into metabolic status, disease progression, and overall livestock health. However, conventional laboratory analysis is often slow, costly, and inaccessible to farmers who require rapid, on-site decision-making. Livilo, developed by PimaSENS Inc., addresses this gap through colorimetric test kits paired with the PimaSpec Mini, a compact spectrophotometer designed for field-ready biomarker quantification. The device measures absorbance at selected wavelengths and applies calibration curves to determine concentrations of key biomarkers. Reaction mixtures were developed through literature-guided optimization to ensure safe handling, simple procedures, and reliable colorimetric responses. Detection kits for glucose, ketone bodies, and urea are currently being integrated into veterinary and agricultural workflows. Similar to the Agrilo platform, Livilo operates through a developed app that organizes results and supports data-driven health management. By combining low-cost reagents with a portable analytical device, the PimaSpec Mini offers a faster and more affordable alternative to laboratory testing, enabling farmers to obtain accurate biomarker measurements within minutes. Overall, this system aims to improve livestock health monitoring by providing accessible, rapid, and reliable colorimetric analysis directly at the point of need.

Faculty Mentor: Dr. Samuel Mugo

Poster Presentation

Using Redox Reaction to Quantify Vitamin C Content in Commercial Fruit Juice at Different Temperatures

By: Celina Anne Benuei

Ascorbic acid, commonly known as Vitamin C has associated many functions including regulating reactive oxidative and nitrogen species which can lead to neurodegenerative disorders such as depression and learning disabilities. Many factors such as pH, temperature, light, storage duration affect the rate of Vitamin C degradation. Results from past research shows that longer storage time, higher temperatures increases the rate of degradation of Vitamin C in many fresh fruits and commercial bought juices. This study will examine how

Vitamin C concentration is affected by different temperatures. Higher temperatures should show a lower concentration compared to lower temperatures according to published research papers.

Faculty Mentor: Dr. Ahsin Bughio

Poster Presentation

Crystallization in supersaturated sucrose solutions: Food-safe inhibitors

By: Spencer Burden

The individual, curved, and potential interactive effects of pH, corn syrup %, and glycerol % on sucrose crystallization in a supersaturated solution were investigated under average storage conditions (~21 °C, 7 days). The concentration of sweet solids (%SS) remained constant across the trials at 72.5%, and the three factors were adjusted according to a coded face-centered central composite design (FCCCD). Regression analysis gave a significant quadratic model ($p < 0.001$, adj $R^2 \approx 0.74$) with significance limited to pH (linear and quadratic) and glycerol content (linear), while corn syrup and all interaction terms showed no statistically significant effect. This result helps explain trends in both minimizing and maximizing crystallization in supersaturated sucrose solutions. A response curve was generated from the resulting regression equation showing theoretical maximum and minimum values.

Key words: HFCS, sucrose, supersaturation, crystallization, glycerol, humectant, central-composite-design

Faculty Mentor: John Fedoruk

Poster Presentation

Design and Synthesis of a Water-Soluble AMP Variant Using Fmoc-SPPS

By: Spencer Burden

With the emergence of drug resistance to conventional antibiotics, the interest in antimicrobial peptides (AMPs) has increased as a possible solution. Cancrin, a peptide isolated from a salt-water sea-amphibian, is active against selective gram-positive and gram-negative bacteria. With a goal of increasing its antimicrobial activity, a novel peptide was designed. Guided by literature-supported structure-activity relationships (net-charge, amphipathicity) targeted amino acid substitutions were made to increase the net-charge and fine-tune the amphipathic faces. The resulting primary sequence was GSKLPYKQLHKDVRFVPRG, which was synthesised through Fmoc solid-phase peptide synthesis (SPPS). Structural confirmation was assessed via NMR, which was followed by biological testing to compare the modified peptide activity to the activity of cancrin. This work links AMP design to experimental evaluation and synthetic techniques within an undergraduate research setting.

Faculty Mentor: Dr. Kaitlyn Towle-Straub

Poster Presentation

Analytical Chemistry Internship at Canmet NRCan

By: Abdalla Elmanoufi

This research focuses on the extraction of PAH's, (phenyl aromatic hydro carcinogen). These hydrocarbons are carcinogenic, for both humans and aquatic life. The aim of this study is extract these PAH's from both environmental and biological matrices

Faculty Mentor: Dr. Ahsin Bughio

Poster Presentation

The Relationship between Rock Mechanics and Sedimentary Fabric

By: Orion Fahlman

Rock hardness is inherently linked to sedimentary fabric (e.g. grain size, mineralogy, degree of cementation, ect). Within this study, we collected data of microfacies hardness from subsurface core samples of the Montney Formation and compare them to sedimentary fabric to create a better understanding of how these properties are influenced by geological characteristics. By using a Equotip Piccolo Bambino Micro hardness tool with a 3mm diameter impact area, with an approximate spacing of 5cm per test site, we gathered the hardness data of the rock cores from the Montney Formation and identify the facies associated with each data point. The overall facies hardness does vary relative to the composition of the section of core, with a large portion being mostly homogeneous material with minimal variance; the more stratified and heterogeneous material being either softer or harder in comparison. The finer grain silt on average was harder than the rest of the sections of the cores, although the coarse grain silt had a much larger variance of hardness. Overall the variance of hardness was mostly minimal, but does create a useful proxy of how the rock in the Montney Formation will behave during fracking processes associated with oil and gas operations.

Faculty Mentor: Dr. Carolyn Furlong

Oral Presentation

Peptide Structure-Activity Relationship: Antimicrobial Peptide Design, Synthesis and Analysis

By: Kaylee Grenier

With the rise in antibiotic resistance infections, alternative drug therapies like antimicrobial peptides (AMPs) have become of increasing interest. AMPs are amino acid sequences of shorter lengths, with properties that allow the disruption of bacterial membranes. Cancrin is an antimicrobial peptide with the following sequence of GSAQPYKQLHKVVNWDPYG, it is taken from the granular glands in the skin of the amphibian R. cancrivora. This antimicrobial peptide has proven effective against gram-negative and gram-positive bacteria. However, there is a lack of knowledge about the impact of three-dimensional changes to the peptide structure and its resulting biological activity. In this research, we have specifically modified the primary sequence of Cancrin to examine the changes and effectiveness in its antimicrobial activity. Through

targeted amino acid substitutions, specific characteristics such as amphipathicity, hydrophobicity, secondary structure, and net charge were modified. Solid-Phase Peptide Synthesis was used to synthesize the modified peptide and it was characterized using two-dimensional nuclear magnetic resonance to determine the three-dimensional structure. In determining the biological activity of the peptide, biological testing will be done. This work will be a contribution to further understanding the effects that modifications have on antimicrobial peptides and their activity.

Faculty Mentor: Dr. Kaitlyn Towle-Straub

Poster Presentation

The Effects of Diluted Bitumen and Crude Oil Leaks Occurring Above the Water Table: Chemistry Internship at CanmetENERGY

By: Arshpreet Kambo

Canada's bitumen production has increased in recent years and needs to be transported hundreds to thousands of kilometres across Canada, as well as internationally, prompting the development of several pipeline projects. A primary concern, however, is the potential of oil spills during transport to groundwater or surface water. CanmetENERGY, a research and development centre, explores the potential impacts of diluted bitumen leaks occurring above the water table on groundwater.

As part of the Chemistry Internship Practicum (CHEM 497) from January to April 2026, I gained hands-on experience as an Analytical Services Assistant at CanmetENERGY. My role involved assisting scientists and the analytical team in conducting an experiment to simulate an aquifer being contaminated by an oil leak. I assisted in setting up the materials and conditions for the experiment, as well as collecting and analyzing samples. Additionally, I developed technical skills such as calibrating and troubleshooting lab instruments, preparing standards and samples for analysis, learning new instruments, and maintaining good documentation practices.

This experience also strengthened my professional skills including time management, problem solving, communication, and organization. Working in an analytical lab environment provided exposure to industry standards and practices, allowing me to connect academic concepts to real world experimentation. Shadowing and collaborating with professionals in the field further enhanced my understanding of the critical role of analytical chemistry in the oil and renewable energy industry.

Faculty Mentor: Dr. Ahsin Bughio

Poster Presentation

My CHEM 497 Experience - Fermentation Research and Development for Animal Probiotics at CanBiocin

By: Jordan Messer

My presentation will cover my internship experience with CanBiocin as part of my CHEM 497 course during the Winter Semester. The poster would give insight into what CanBiocin does and what my role as a Student Laboratory Technician entailed. CanBiocin is an Edmonton based company that specializes in the production of species-specific probiotics for pets and livestock, and operates business-to-business providing these probiotic products to pet food/supplement producers. During my time with CanBiocin, I was integrated into their in-house fermentation workflow which involved several important microbiology techniques (serial dilutions, sample plating/streaking, inoculations, aseptic technique) and assisting with the upkeep of a professional laboratory (material preparation and proper clean lab practices). I have, essentially alone (minimal supervision), performed their entire in-house fermentation process from inoculating the bacteria strain, optimizing the growth conditions of the bacteria in larger and larges volumes, to finally harvesting the product as a slurry and freeze-drying to prepare for it to be turned into a powder. My poster will give insight into how my lab skills and practices have developed while working under in a professional lab environment, what new skills i've learned and improved during the few months I was there, how it's linked to my previous education experience and how this experience will aid in shaping my future.

Faculty Mentor: Dr. Ahsin Bughio

Poster Presentation

Low Amylase Honey

By: Leanne Aira Paje

Amylase is a digestive enzyme that breaks down complex starches into simple sugars. In honey, these enzymes come from bees that gets puts into nectar. The presence of these enzymes is a key indication of honey freshness and quality. Amylase degrades over time when exposed to high heat, but its hydroxymethylfurfural (HMF) content increases, which is an indicator of honey quality affected by poor storage and overexposure to heat. A sample of honey is acquired and sent to an accredited lab for analysis. Analytical methods such as HPLC and spectrophotometers are used to determine the contents of analytes in the honey sample. The target numbers for the amylase and HMF levels are specified by the customer and based on CFIA guidelines on honey, <12 DN (amylase activity) and <40mg/kg HMF content. Heating the sample at approximately 40-50°C, decreased the amylase content of the naturally low amylase honey within the customer’s specifications, while successfully maintaining a large margin away from the HMF content limit. Since HMF can increase due to poor storage practice, the acquired HMF data will be extrapolated to estimate the ideal storage period of the honey, in which HMF will be less than 40 mg/kg.

Faculty Mentor: Dr. Ahsin Bughio

Poster Presentation

Student Lab Technician

By: Krisha Patel

I am doing my Chem 497 internship at CanBiocin, where I support probiotic R&D and QC workflows. My work includes media preparation, serial dilutions, plating/enumeration, and tracking stability/viability trends using GLP-style documentation. I will highlight key tasks, skills gained, and how these processes support consistent, contamination-controlled lab operations.

Faculty Mentor: Dr. Ahsin Bughio

Poster Presentation

Syn-depositional volcanogenic zircons and how to find them: A challenge for detrital zircon geochronology

By: Carleen Platero

Uranium-lead (U-Pb) zircon geochronology is widely used to determine the timing of volcanic eruptions and sediment deposition. However, in many sedimentary systems discrete ash layers are absent, meaning researchers rely on detrital zircon geochronology to estimate depositional ages. This approach assumes that volcanism and sedimentation occur simultaneously and that zircons derived from volcanic eruptions are preserved and recovered in sediments. In practice, syn-depositional volcanic zircons are often rare or absent in detrital datasets, which can cause depositional ages to appear older than the true timing of sediment accumulation.

This study investigates whether grain size and morphology contribute to the reduced recovery of syn-depositional zircons. Zircon grains were recovered from the ~6.83 Ma Grubstake tephra and from associated sediments of the Grubstake Formation in Southern Alaska. Grains were separated using standard mineral separation techniques and imaged using scanning electron microscopy (SEM). Morphological parameters, including Feret diameter, minimum Feret diameter, circularity, and roundness, were quantified using ImageJ.

Results show that most zircons are fine-grained (~30-70 μm) and moderately equant, characteristics typical of volcanogenic zircons. However, detrital zircon age spectra contain only a small number of Miocene grains close to the known eruption age. These results suggest that the small size of volcanic zircons makes them more susceptible to loss during mineral separation, reducing their recovery in detrital zircon datasets. Understanding these recovery biases is important for improving interpretations of depositional ages in sedimentary basins.

Faculty Mentor: Dr. Serhiy Buryak

Poster Presentation

How does ionic strength influence the swelling equilibrium of sodium polyacrylate hydrogels?

By: Ria Puri

Sodium Polyacrylate is a super absorbent polymer that is widely used in commercial applications, such as diapers, spill control and agriculture, to absorb and hold large amounts of water. Sodium polyacrylate forms a hydrogel network when exposed to water and water is held

between the cross-links of the polymer through osmatic pressure and repulsion of negative charged carboxylate groups on the solid polymer backbone. The swelling of sodium polyacrylate is directly influenced by the chemical environment of the surrounding solution, most importantly, the ionic strength of the solution.

The purpose of this research was to investigate how ionic strength affects the swelling equilibrium of sodium polyacrylate hydrogel. Controlled swelling tests were run in which a known weight of sodium polyacrylate was placed into water with different types of sodium chloride. The volume of liquid absorbed by the sodium polyacrylate was measured at each point during the controlled test, until swelling was complete. A further assessment of the gel was made with respect to texture, water holding ability and structural integrity of the gel, as well as the physical appearance of the hydrogel.

Faculty Mentor: Dr. Ahsin Bughio

Poster Presentation

CHEM 497: Internship at Edmonton Catholic School Division

By: Safiya Raza

I was placed as a Lab Assistant at St Joseph's Catholic High School under the supervision of their lab technician, Amrit Birdy. I assisted in setting up many of the labs, including equipment, preparing large volumes of solutions, and maintaining the lab by refilling and restocking for student use.

Faculty Mentor: Dr. Ahsin Bugiho

Poster Presentation

Portable Colorimetric Sensors for Soil Nutrient Monitoring in Precision Agriculture

By: Kieffter Salazar

Soil nutrient monitoring is essential for maintaining soil health and crop productivity. Key nutrients, including nitrogen, phosphorus, and potassium, are required for proper plant growth, and insufficient or excessive use can negatively affect the crop's health. Conventional soil nutrient analysis relies on laboratory-based analytical techniques that are often processed with specialized equipment and can be time-consuming and unsuitable for rapid field testing. Precision agriculture technologies aim to address this limitation by providing faster on-site monitoring for soil conditions. As part of the Chemistry Internship Practicum (CHEM 497), I conducted my internship at PimaSens Inc. under the supervision of Dr. Samuel Mugo and Dr. Mohammed Elmorsy from January to April 2026. PimaSens Inc. focuses on advanced sensor technologies that deliver real-time insights for health and agriculture monitoring. During the internship, my responsibilities included the production and calibration of a portable colorimetric Agrilo sensor system for detecting key agricultural nutrients in soil and water. I also assisted in the production and calibration of the PimaSpec Mini, a portable colorimetric analyzer that measures the RGB values of a chemical solution and converts the data into quantitative results

through a mobile app. This internship strengthened my technical and professional skills while demonstrating how analytical chemistry principles can be applied to real-world agricultural and environmental challenges.

Faculty Mentor: Dr. Samuel Mugo

Poster Presentation

Biodiversity of Frasnian Reef Builders within the Fairholme Carbonate Complex

By: Cody Serben

Late Devonian reef systems were complex and ecologically diverse environments and can be found within outcrops in the Rocky Mountains. The Kananaskis region, in particular, has limited documentation of the fossil assemblage from Frasnian-aged reefs and therefore it is necessary to examine fossils of that area to gain a larger understanding of the biodiversity of the time. This lack of literature limits our ability to effectively reconstruct the biodiversity that was once present in Frasnian reefs. This study examines the Cairn Formation within Kananaskis Country as well as more minor references to the overlying Southesk and Alexo formations to understand how the ecological diversity changed over time. Equivalent strata such as the Swan Hills or Leduc formations are used as analogs to help predict a more complete assemblage of the Cairn Formation. Existing literature is examined and synthesized together to address this problem and fill in the knowledge gaps. Stromatoporoids such as Amphipora dominated Devonian reef systems as the primary reef builders at the time. This lasted up until the end of the Devonian period. The fossil assemblages from these environments include tabulate corals, bulbous and pancake stromatoporoids, crinoids, articulate brachiopods, rugose corals, ostracods and gastropods. The advent of the Kellwasser event likely led to the extinction of much of the reef biota at the end of the Frasnian Stage. Together, this research provides a clearer and more comprehensive understanding of the likely biodiversity of strata found within the Kananaskis locality.

Faculty Mentor: Dr. Carolyn Furlong

Poster Presentation

Synthesis and Characterization of Novel Polymers for Enhanced Membrane Gas-Separation Performance

By: Melissa Tiamzon & Marah Mahmoud

Membrane-based gas separation has emerged as a critical technology for industrial applications, including carbon capture and natural gas purification. However, developing materials that balance high permeability with strong selectivity remains a significant challenge. This project, conducted at the NRC Nanotechnology Research Centre, focuses on the synthesis of novel polymers through specialized polymerization techniques to create next-generation separation membranes. By tailoring the polymer architecture during the synthesis phase, we aimed to optimize the membrane's structural integrity and diffusive properties. Initial results

suggest that these new polymeric frameworks offer a promising route toward more durable and selective gas-separation media.

Faculty Mentor: Dr. Ahsin Bughio

Poster Presentation

Peptide Synthesis

By: Larissa-Mae Villanueva

Antimicrobial resistance (AMR) is an increasing global health concern that can directly cause or contribute to mortality worldwide. Antimicrobials describe medicines used to prevent and treat bacterial infections. Antimicrobial peptides (AMPs) is a relatively new and promising class of therapeutic agents because they interact with and disrupt bacterial cell membranes, which reduces the likelihood of resistance development. AMPs can be synthetically designed and synthesized based on naturally occurring peptides. One such peptide, cancrin, derived from the skin secretions of the crab-eating frog Rana cancrivora is a 19-amino-acid sequence, GSAQPYKQLHKVVNWDPYG. This peptide served as the template for the design of our synthetic AMP. Although cancrin exhibits moderate antimicrobial activity, the specific structural features that enhance their activity are not fully defined. In this study, solid-phase peptide synthesis (SPPS) was used to modify the parent peptide by altering charge, hydrophobicity, α-helical structure, and peptide length to investigate how to increase antimicrobial activity. A 19-amino-acid peptide (GWKRLAKKLHKALQRLWRP) was successfully synthesized. Structural characterization was performed using two-dimensional NMR spectroscopy (TOCSY and NOESY), and antimicrobial activity was evaluated through biological assays. These analyses enabled full characterization of the synthetic peptide and allowed comparison of its structural and functional properties with the parent peptide, cancrin.

Faculty Mentor: Dr. Kaitlyn Towle-Straub

Poster Presentation

Quantification and Polymer Identification of Microplastics in Wastewater Treatment Plant Samples

By: Layal Zidan

Microplastics are emerging environmental contaminants that are widely detected in aquatic systems and wastewater treatment plants (WWTPs). Although WWTPs are designed to remove conventional pollutants, they can act as both sinks and pathways for microplastics entering natural environments. This study aims to quantify microplastics present in wastewater treatment plant samples and identify the polymer types that compose them. Water and collected samples from different stages of the treatment process were analyzed to determine microplastic abundance and composition. Samples were processed through filtration and separation techniques to isolate suspected microplastic particles. The particles were then examined using spectroscopic analysis to determine their polymer composition. The results provide insight into the types and quantities of microplastics present within the treatment system and evaluate the

effectiveness of wastewater treatment processes in removing these contaminants. Understanding the distribution and polymer composition of microplastics in WWTPs contributes to a broader understanding of their environmental fate and can inform future strategies for reducing microplastic pollution in aquatic ecosystems.

Faculty Mentor: Dr. Matthew Ross

Oral Presentation

Psychology

Infrasound Levels at Reported Haunted Locations: An Environmental Measurement Study

By: Mikayla Ames

We examined how infrasound levels relate to places with a reportedly haunted reputation. We visited different locations and measured infrasound levels at each. We expected to find high levels of infrasound at each location. In particular, they should be higher in places with more reported experiences. We found infrasound at each location, but it does not appear to be significant enough to conclude that haunted locations exhibit strong correlations with high infrasound levels. This research is important because it provides logical explanations for paranormal experiences.

Faculty Mentor: Dr. Rodney Schmaltz

Poster Presentation

Virtually Stress-Free: Can a Digital Dog Improve Executive Functioning in Stressed University Students?

By: Quinn Andreychuk

Stress among Canadian university students has reached concerning levels. A 2019 national survey found that over 69% reported significant anxiety and 52% reported symptoms of depression. Chronic stress can worsen anxiety and depression by impairing executive function (EF), the cognitive system that controls goal-directed behaviour. EF comprises three core abilities: working memory (the capacity to hold and manipulate information), inhibitory control (the ability to resist distractions and maintain focus), and cognitive flexibility (the ability to switch between tasks), all of which are important for academic performance. One novel way to mitigate acute stress in students is through animal visitation programs (AVPs), where participants interact with a trained companion animal, typically a dog or cat. However, several barriers limit access to these programs, including animal allergies, safety concerns, and program costs. This study will use a novel virtual reality (VR) AVP in which university students interact with a simulated dog in a controlled digital environment. We predict that this VR AVP will produce significant stress reduction, like that observed in traditional AVPs, and will also positively affect

executive functioning. Participants will complete a baseline assessment of stress and executive functioning. They will then complete a math task designed to induce stress before engaging in either a 15-minute VR AVP session or a control task, followed by a second assessment of stress and EF. If the results support our predictions, this study will provide proof of concept for the development and use of VR AVP interactions to reduce stress and improve EF.

Faculty Mentor: Dr. Eric Legge

Poster Presentation

The Empty Booth and the Collective: How Social and Emotional Loneliness Shape Politics

By: Lindsey Anhill

Loneliness has increasingly become an area of social concern, but its relationship to political outcomes remains poorly understood. Researchers have identified distinct subtypes of loneliness that reflect different social deficits which may connect to political life differently. Political engagement itself is also multidimensional, including political participation and party support. Examining specific dimensions of loneliness may reveal relationships that composite measures obscure. Emotional loneliness, characterized by a lack of intimate bonds such as a partner or child, may increase vulnerability to populist radical right messaging. Studies of groups such as incels and Islamic extremists indicate a lack of intimate connection creates a need for ingroup belonging. In contrast, social loneliness, rooted in a lack of broader social networks such as friends and community ties, may erode the sense of civic duty that underlies voter participation. This is consistent with findings that ostracism reduces political engagement and that broader conceptions of loneliness predict weaker duty to voting norms. I hypothesize that emotional loneliness will show a stronger association with populist radical right support, while social loneliness will show a stronger association with lower voter participation. To test this, I will use Wave 17 (2025) of the LISS Panel, a nationally representative Dutch sample (N=5,581). The dataset includes emotional and social loneliness subscales from the de Jong Gierveld scale. I will test these hypotheses with regression analyses to determine if emotional and social loneliness uniquely predict vote choice including populist radical right support and voting participation.

Faculty Mentor: Dr. Craig Blatz

Poster Presentation

Visually Guided Reaching in Patients with Spatial Neglect

By: Olad Ayodeji

Damage to the right temporo-parietal cortex often results in spatial neglect (SN) – a disorder in which patients have difficulty attending to, and initiating movements towards, objects on their contralesional (left) side. Although patients with SN are slower to initiate leftward movements, there is considerable debate regarding the degree to which SN is associated with deficits in the execution of visually guided reaches. In the current study, we analyzed data from 146 right

hemisphere stroke patients with (SN+ =34) and without (SN- =112) SN. All patients completed clinical measures of cognitive and motor function, as well as a visually guided reaching task in which they had to reach to one of eight target locations arranged in a circle around a central start position. Our results indicated that, compared to healthy older adults (n=204), both SN+ and SN- were slower to initiate leftward compared to rightward reaches; however, this effect was significantly larger in SN+. In addition, both SN+ and SN- demonstrated significantly longer movement times, lower peak velocities, larger initial direction errors, and more corrective movements compared to controls, regardless of target location. Importantly, each of these effects was significantly larger in SN+ compared to SN- and could not be explained by differences in lesion volume or visual field defects. Overall, our findings reveal that SN+ (and to a lesser degree, SN-) is associated with a lateralized impairment in initiating leftward movements, as well as non-lateralized deficits in both the programming and online control of visually guided reaches.

Faculty Mentor: Dr. Chris Striemer

Oral Presentation

Evaluating the Efficacy of a Brief Implementation of the AIM Curriculum With Elementary School Students

By: Braedin Bauer

The present study investigates the efficacy of a shortened version of the Accept-Identify-Move (AIM) curriculum: an evidence-based curriculum designed to help children develop social and emotional coping skills. The goal of AIM is to increase children's psychological flexibility, which can be defined as one's capacity for being in contact with the present and acting on long-term goals rather than short-term urges. The curriculum utilizes acceptance and commitment therapy, mindfulness, and the science of applied behaviour analysis to support children's social and emotional development, aligning their thoughts, emotions, and behaviours with their goals and values. The researchers attempt to provide support for the AIM curriculum and its use in classrooms by studying its effectiveness using a small sample of Canadian elementary school students who have not been clinically diagnosed with any psychological disorders. Participants' levels of mindfulness and psychological flexibility were measured pre- and post-intervention to investigate the impact of the AIM curriculum on developing these factors. The study also involved recording behaviours chosen based on the participants' identified school-related goals that they felt were getting in the way of achieving those goals. Researchers facilitated a selection of lessons from the AIM curriculum in the classroom over the course of 11 weeks.

Faculty Mentors: Miranda Macauley & Dr. Sean Rogers

Oral Presentation

Exploring the Relationship Between Gambling and Materialism

By: Daniel Beljan

Gambling, like other maladaptive activities, carries the potential of developing into a compulsive and problematic behaviour, with far reaching and overt negative impacts to an individual's life. Materialism, described by the American Psychological Association as a system of values that defines the extent to which material goods and possessions define personal worth and achievement, carrying a similar potential. The aim of the research was to explore the possible relationship between gambling and materialism. This was done by first using materialism scales to identify the level of an individual's materialism. A Jeopardy!-like trivia game was then played where participants earned points, which could then be wagered to attempt to win the game. The percentage of points the participant was willing to wager was then compared with their scores on the materialism scales. A positive correlation was hypothesized to exist where participants with higher materialism scores would wager a higher percentage of their total points. While the data did not provide statistically significant evidence to support this hypothesis the general trend of the data suggests further research is needed. Among the subscales of the two materialism scales utilized, non-generosity did stand out as it was positively correlated, statistically significant relation with the participants percentage of wagered points. Gambling in Canada in the last five years has seen changes that have made it more accessible and enticing. However, it is not only gambling itself that requires research, rather it is also the personality aspects, such as materialism, that also require increased study.

Faculty Mentor: Dr. David Watson

Oral Presentation

Understanding Narcissists Self-Structure Using the Trifurcated Model of Narcissism

By: Kaiden Blakley

Narcissists' self-content (i.e., qualities and traits) is well understood, such that narcissism can be divided into three facets. Agentic extraversion includes leadership, high self-esteem, and assertiveness. Narcissism neuroticism represents low self-esteem, emotional dysregulation, and shame. Antagonism, the shared component, entails arrogance, callousness, and deceitfulness. How these narcissistic facets relate to self-structure (i.e., organization of self-views) remains unclear and may provide insight into the beliefs narcissists hold about themselves. In the current research, we examined individuals' self-concept clarity (SCC; confidence, stability, and consistency in self-views) and self-concept differentiation (SCD; variability in self-views across roles) to examine their self-structure. In Study 1 (N = 394), we explored the self-structure of individuals higher (vs. lower) across the narcissism facets, and in Study 2 (N = 210), we explored whether authenticity explains these associations. We found that agentic extraversion relates to more consistent and clearly defined beliefs about oneself. Narcissism neuroticism and antagonism relate to varying personality traits across roles, where narcissism neuroticism signifies less clear and consistent beliefs about oneself. Our results also suggested that authenticity mediates the relation between narcissism neuroticism and SCC. In Study 3 (N = 312), we explored whether narcissism could predict responses to high (vs. low) SCC feedback, and in Study 4 (N = 340), whether SCC feedback could predict narcissistic facets. None of our results were significant. Understanding the structure of narcissistic personality traits provides

additional information regarding how individuals high in narcissism see themselves, which may provide insight into their maladjustment and interpersonal conflicts.

Faculty Mentor: Dr. Miranda Giacomin

Oral Presentation

Scientific Thinking

By: Tazveer Chauhan

In the context of rising misinformation and pseudoscience, fostering scientific scepticism in secondary education is increasingly important. This project focused on finding effective strategies for teaching evidence-based thinking in high school. Across the literature, effective approaches emphasize engaging students in real-world problem solving, explicit evaluation of evidence and sources, iterative model testing and revision, and structured argumentation. This instructional framework aimed at developing students' capacity to critically evaluate claims, resist misinformation, and participate in scientific thinking.

Faculty Mentor: Dr. Rodney Schmaltz

Poster Presentation

The Role of Motivational Climate, Perfectionism, and Grit in Dancers

By: Kenzie Christensen

Although dance is a popular extracurricular activity among children and adolescents, little research has examined factors that contribute to dance success. We examined three potential predictors of dance skill: 1) the perceived motivational climate, typically created by instructors, where a task-involved motivational climate focuses on self-improvement, learning, and task-mastery, and an ego-involved motivational climate places emphasis on competition, social comparison, and unacceptability of mistakes, 2) adaptive perfectionism, conceptualized as setting high goals, working hard, and holding oneself to a high standard (compared to maladaptive perfectionism, which involves excessive concerns over mistakes which often lead to low self-worth), and 3) grit, which involves passion and perseverance for long-term goals. We hypothesized that a task-involved motivational climate will be associated with both adaptive perfectionism and grit amongst teen dancers, which will in turn be associated with their skill levels. These predictors have been studied in-depth individually and as they apply to academic and sports performance, but less commonly in the field of dance. To answer our research question, adolescent ballet, hip-hop, and contemporary dancers completed questionnaires on the perceived motivational climate of their dance studio, adaptive and maladaptive perfectionism, and grit. To measure skill, dancers had the option of submitting a video of themselves performing a researcher-selected dance routine. Expert raters will then score the dancers' performance using an established rubric. This study will contribute to existing literature on the predictors of dance skill and has the potential to help dancers improve their performance.

Faculty Mentors: Dr. Kathleen Corrigall & Dr. Tara Vongpaisal

Oral Presentation

Frequency and Features of Inter-Sexual Mate Competition among Canadian Women

By: John Coughlan

When navigating the dating market, Humans enact a variety of behaviours and tactics to enhance their appeal and attract high value mates. Successfully gaining or maintaining the affections of attractive sexual or romantic partners may be foiled by rivals who are engaging in their own competitive efforts. Intra-sexual competition–where individuals of the same sex compete with one another for opposite sex partners has been the primary focus of scientific inquiry in competitive mating behaviour. However, the real-world dating market includes plenty of non-heterosexual individuals and behaviours, meaning the opportunity for inter-sexual mate competition arises. Competitive interaction may then occur between the sexes for common target mates. For example, a bisexual woman may reasonably worry about other women she must outcompete in the “mating market”, but her sexual attractions (to women) may lead her to compete with men as well. Sexual orientation diversity probably creates many instances of intersexual mate competition but the topic remains largely unexplored in a North American context where as many as 20% of females report non-heterosexual attractions. The current study seeks to fill this gap and has two primary goals. The first is to estimate the inter-sexual mate competition between non-heterosexual females and male rivals in a Canadian undergraduate population and the second is to qualitatively document the behavioural tactics that characterize such events based on participants’ descriptive narratives.

Faculty Mentor: Dr. Scott Semenyna

Poster Presentation

Error and Reward Monitoring as an Integrated Learning System: Implications for Trait-Level OCD and Social Evaluation

By: Tarah Coutard

Cognitive neuroscience often investigates two event-related potentials (ERPs) related to internal and external reward processing: the error-related negativity (ERN) and the feedback-related negativity (FRN). Despite compelling evidence suggesting their integration into a broader reinforcement learning system, including their shared generation in the anterior cingulate cortex (ACC), research investigating these components in tandem remains relatively sparse. We propose a partial replication of previous work on these signals with the goal of further investigating the relationship between ERN and FRN responses during motivated behaviour. Participants will complete a modified Eriksen Flanker task while their electroencephalogram (EEG) is recorded. In addition, the proposed study will measure obsessive-compulsive traits in a non-clinical population to examine potential associations between ERN amplitude and obsessive-compulsive symptomatology, given strong clinical evidence linking Obsessive-Compulsive Disorder with altered performance monitoring. Moreover, to examine the role of social evaluation in learning and performance monitoring, participants will complete half of the trials while being observed by a silent researcher and half without observation. We expect to

replicate earlier work showing a negative deflection in the ongoing EEG following error responses. We also predict a moderate association between ERN amplitude and obsessive-compulsive traits. Finally, we predict that observation by a researcher will modulate their neural responses, increasing ERN activity and reducing FRN activity to reflect a shift from external to internal reward processing.

Faculty Mentor: Dr. Cameron Hassall

Poster Presentation

Cognitive Biases in Music Evaluation: Effects of Perceived Versus Actual AI Generated Music on Listener Judgments

By: Carson de Jong

People are increasingly encountering music generated or assisted by artificial intelligence (AI), raising questions and

concerns about whether listeners judge AI made music differently from human made music, even when the audio is almost identical. Prior research shows that listeners like music less and rate it lower in quality, emotion, and engagement when they believe it was generated by AI rather than a human, despite hearing identical performances (Ansani et al., 2025). Related work on visual art finds that simply labeling artwork as AI made reduces the perceived skill, value, and artistic status of the work (Horton et al., 2023), and that AI labeled artworks are consistently judged as less creative than identical pieces labeled as human made (Millet et al., 2023). At the same time, studies comparing AI generated and human made music suggest that listeners often struggle to reliably distinguish between them based on sound alone, instead relying on cues like vocal quality and perceived authenticity when making judgments (Figueiredo et al., 2025). Building on this work, this study uses a between-subjects design manipulating both the actual source of a song (human vs. AI made) and the indicated source (told human vs. told AI) to test how beliefs about whether it is AI generated or not shape evaluations of musical quality and emotional impact, as well as their relation to broader attitudes toward AI in creative industries.

Faculty Mentor: Dr. Rodney Schmaltz

Poster Presentation

How do Culture and Sex Education relate to Consent Perceptions and Communication? A Cross-Cultural Student Survey

By: Nassreen Fayad

Sexual consent is essential for healthy relationships and respectful interactions, yet it is often misunderstood. As university campuses become increasingly multicultural, differences in cultural upbringing and sex education exposure may shape how students interpret and communicate sexual consent. The current study examines how cultural background and level of sex education influence perceptions of sexual consent, communication styles, and rape myth endorsement between international and domestic post-secondary students. Participants

completed a survey that collected data on their demographics, level of sex education, communication styles (i.e. verbal vs. nonverbal), and rape myth endorsement. Further, participants were asked to evaluate consent in four sexual encounter scenarios varying in contextual factors such as intoxication, power dynamics, casual encounters, and same sex interactions. We predicted that international students from ethnic backgrounds with traditionally low engagement in sex education and knowledge will rely more on nonverbal cues and endorse rape myths at higher rates than domestic students. Understanding these differences may help inform culturally sensitive consent education programs and reduce miscommunication in diverse post-secondary settings.

Faculty Mentor: Dr. Aimee Skye

Oral Presentation

Multisensory Feedback Shapes Reward Processing

By: Jared Girard

Real-world stimuli typically involve multiple sensory modalities (e.g., auditory and visual). While unimodal sensory modalities have been extensively studied in reward processing, little is known about multisensory modalities. This study investigated how different feedback modalities (auditory, visual, and audiovisual) affect the reward positivity (RewP), a brain response related to reward processing measured using EEG (electroencephalography). Participants completed three versions of a two-choice task (the “doors” task). Reward feedback associated with each condition was either solely auditory, solely visual, or both auditory and visual. Findings indicated that combined audiovisual feedback elicited an earlier reward-related neural response than either unimodal conditions. Audiovisual feedback was also associated with faster response times. These results suggest that early multi-sensory integration may be important when processing naturalistic reward stimuli.

Faculty Mentor: Dr. Cameron Hassall

Poster Presentation

Behavioral Effects of Acute Nepicastat Administration in Larval Zebrafish

By: Ahanavi Habib-Mohammed

The zebrafish (Danio rerio) model is widely accepted as a high-throughput system to examine pharmacological compounds. Larval zebrafish are appropriate for this kind of testing because of high fecundity and rapid development of larvae, and motion tracking systems allowing for simultaneous behavioural testing in 24- or 96-well plates. In this study we investigated the effects of an acute administration of Nepicastat - a selective dopamine b-hydroxylase inhibitor with potential applications in substance abuse and cardiovascular diseases- at concentrations: 250 nM, 500 nM, 1000 nM, 10 µM, 50 µM and100µM. We tested 5-day old larval zebrafish locomotion and startle responses using Ethovision XT motion-tracking software and the Daniovision testing chamber. In the spontaneous swimming test, we found that Nepicastat at 500nM increased time spent in the centre zone compared to control larvae. Larvae treated with

lower doses (250 and 500nM) showed increased time spent in the center zone than larvae treated with higher doses i.e 10, 50 and 200µM. NEP at higher doses also significantly increased the locomotive startle response to the light stimulus test when compared to control larvae. Overall, Nepicastat can stimulate locomotion and elicit stronger startle response to light in larval zebrafish.

Faculty Mentor: Dr. Trevor Hamilton

Poster Presentation

The neurocognitive mechanisms of reward within a narrative context

By: Stacey-Jane Harris

Narrative Structure is notable for improving memory; however, its impact on reward processing is unknown, as previous studies have not incorporated narrative elements. This study explores how narrative influences reward processing, using electroencephalography (EEG) to measure the reward positivity (RewP), a neural measure of reward processing. In the 'narrative' condition, participants encounter items within a story, decide to engage with an item, and receive randomized reward feedback. In the 'non-narrative' condition, participants made similar decisions but without the broader context of a narrative. In a final memory test, participants made old/new judgments about the previously encountered items. We predict participants to have an enhanced RewP during narrative trials over non-narrative trials. We also predict an enhanced memory for items encountered during narrative trials, as found in previous studies. This study aims to deepen our understanding of the practical implications of narrative and how it influences reward processing.

Faculty Mentor: Dr. Cameron Hassall

Oral Presentation

Predictors of female inter-sexual mate competition

By: Brooke Hart

According to Darwin's sexual selection theory, mate competition is intra-sexual in nature, meaning that it occurs between members of the same sex for a target mate of the opposite sex. However, approximately 15-20% of the female population in Canada is same sex attracted, with mostly heterosexual and bisexual females being most common. This means that bisexual females might compete intra-sexually with other females for mates, but also against males, which would be inter-sexual mate competition. The predictors of female intra-sexual mate competition are well-researched, but it is unknown if they also relate in the same way to inter-sexual mate competition scenarios. We aim to replicate well-researched predictors of female intra-sexual mate competition, such as sociosexuality, self-perceived mate value, and the Dark Triad personality traits of narcissism, psychopathy, and Machiavellianism, to determine if they also predict females' inter-sexual mate competition behaviours. Female undergraduates at MacEwan will fill out an online survey comprised of standardized scales measuring each proposed predictor and rate their willingness to use a range of intra- and inter-sexual mate

competition tactics. Based on previous mate competition research, it is predicted that females scoring higher in sociosexuality, perceived mate-value, and Dark Triad traits will endorse more intra- and inter-sexual mate competition tactics.

Faculty Mentor: Dr. Scott Semenyna

Poster Presentation

Exploring Children's Recognition of Familiar and Cover Versions of Songs

By: Ayesha Hashmi

It is a common experience to have a feeling of familiarity without the ability to identify a previously experienced item or event–a phenomenon known as recognition without identification (RWI). This sense of familiarity depends on the degree to which features of an item or experience match stored memory traces; a better match yields a stronger feeling of familiarity.

While recognition of familiar items has been studied in other domains, far less is known about musical memory.

The goal of the project is to study the memory basis of familiar songs in children, specifically examining listeners' memory of melodic contour and whether familiarity is affected by certain musical features or performance characteristics.

I will design a recognition task comparing listeners' abilities to recognize different versions of familiar songs: (a) original melody-only, (b) inverted contour, (c) computer-synthesized instrumental, and (d) cover versions.

I hypothesize that differences in familiarity ratings between the original and the inverse version would indicate contour as a feature of song memory. I predict that the original, instrumental, and cover versions will have better identification rates than the inverted versions. I will also examine how familiarity ratings correspond to recognition performance. Higher familiarity ratings without accurate identification would indicate some degree of recognition memory for song features.

By identifying musical features salient for recognition, the study offers insights into the cognitive mechanisms underlying musical memory development in children, informing educational strategies and therapy by identifying elements of songs that are most effective for learning, memory, and music enjoyment.

Faculty Mentor: Dr. Tara Vongpaisal

Poster Presentation

Love Under Pressure: Risk and Protective Pathways to Stress and Violence in Sexual Minority Relationships

By: Abbey Henderson-Tanguay

Lesbian, Gay and Bisexual (LGB) individuals experience stress in ways that are distinct from general life stress. The particular stressors that impact sexual minorities can include prejudice-

related external events like violence and discrimination, and internal processes like identity concealment, expectations of rejection, and internalized homophobia. Experiences of minority stress are associated with adverse mental health outcomes, including substance use disorders, affective disorders and suicidality. Additionally, LGB individuals experience sexual violence at disproportionately higher rates than their heterosexual counterparts. Although prior research has examined associations between minority stress, relationship satisfaction, and emotional intimacy, little work has investigated risk factors associated with both minority stress and Intimate Partner Violence (IPV).

The present study aims to address specific risk and protective factors that impact an individual's level of minority stress, and in turn, IPV victimization and perpetration. Using validated self-report measures, we examine adaptive/maladaptive coping, trait anxiety and high/low exposure to positive LGB messaging as factors contributing to an individual's level of minority stress. We will then test direct and indirect pathways linking minority stress to IPV victimization and perpetration to identify relational mechanisms underlying minority stress and relationship violence.

Faculty Mentors: Dr. Kristine Peace & Dr. Laura Offrey

Poster Presentation

MAiD for Psychiatric Illness: An Exploration of Factors that Influence Acceptance or Rejection of this Procedure in Undergraduate Students

By: Madie Hill

Medical Assistance in Dying (MAiD) became legal in Canada in 2016 for those suffering from grievous and untreatable medical conditions. Currently, Canada is working to expand its MAiD program to include Canadians with untreatable mental illness (MAiD-MI). Several countries have already legalized MAiD-MI, including Belgium, Luxembourg, the Netherlands, and Switzerland (van Veen et al., 2022). Within several of these countries, applications for MAiD-MI have been increasing, especially among younger populations (Kiverstein et al., 2025; Schweren et al., 2025). Because Canada has not yet legalized MAiD-MI, few studies have sought to understand the factors that influence Canadian undergraduates' acceptance or rejection of this procedure.

This study examines undergraduate attitudes toward MAiD-MI and the factors influencing acceptance or rejection. Participants will read three vignettes describing individuals with depression, borderline personality disorder, or anorexia nervosa, with each having a young adult and middle-aged adult condition. After each vignette, participants will indicate whether they approve or reject MAiD-MI for that scenario. Participants will also complete demographic measures and questionnaires assessing knowledge of and attitudes toward MAiD, mental illness stigma, religiosity, political orientation, their personal experience with mental illness, and symptoms of depression and anxiety.

We hypothesize that higher levels of anxiety and depression symptoms, lower religiosity, liberal political orientation, and higher stigma will be associated with greater acceptance of MAiD-MI.

We further predict greater acceptance among participants with personal exposure to mental illness, and for middle-aged adults. Because this is an exploratory study, it is not clear which disorders will be accepted or rejected.

Faculty Mentor: Dr. Lori Harper

Poster Presentation

Acceptance and Commitment Therapy for Athletes: Pilot Study

By: Katherine Hudec Hudec

This study will work with athletes who have experienced an injury and may be struggling with stress, anxiety, or changes in their sense of self. The goal is to help athletes build skills to handle difficult thoughts and feelings while focusing on what matters most, and to explore how they can grow through adversity. Participants will take part in a 4-6 week program using Acceptance and Commitment Therapy (ACT), which includes exercises on mindfulness, accepting emotions, clarifying values, and taking meaningful action. We expect that participants will become better at coping with challenges post-injury and experience personal growth through the program.

Faculty Mentor: Miranda Macauley

Poster Presentation

Sniff Around and Find Out

By: Travis Hutchinson

Off-leash dog parks are common across urban Canada, yet opinions about their safety remain divided. Despite their popularity, few studies have examined naturalistic dog-to-dog greetings in real-world settings. We systematically observed 154 greeting interactions in Edmonton parks to replicate and extend prior observational findings (Ward, 2020). In addition, we evaluated shake-off behaviours at the end of greeting interactions in response to conflicting common knowledge regarding their proposed stress-reducing function, building on recent empirical work that questioned this assumption (Bryce et al., 2024). Consistent with Ward (2020), most dogs began greetings in a neutral posture, and dogs that initiated interactions in high or low postures typically shifted to neutral by the end of the encounter, indicating a significant move toward stabilization. Shake-off behaviours were rare and showed no association with body posture, aligning with Bryce et al. (2024). Overall, our findings replicate and strengthen previous research by suggesting that off-leash greetings often function as brief, de-escalating exchanges when dogs retain freedom of movement, while also challenging traditional interpretations that shake-offs reliably signal stress.

Faculty Mentor: Dr. Lynne Honey

Oral Presentation

An Examination of Implicit Theories of Worry and Generalized Anxiety Disorder

By: Syhdnnae Jans

Implicit theories, also known as growth vs fixed mindsets, refer to individuals' beliefs about whether personal attributes are malleable or fixed. Growth mindsets reflect the belief that attributes can change, whereas fixed mindsets reflect the belief that attributes are unchangeable. Although implicit theories have been studied in intelligence and personality, no prior research has examined these beliefs in worry and generalized anxiety disorder (GAD). The present thesis investigated implicit theories of worry and their associations with worry severity, GAD symptoms, anxiety-related dysfunctional beliefs, and treatment perceptions across two studies with undergraduate students. Study 1 examined state implicit theories of worry and tested whether a brief psychoeducational intervention could encourage growth mindsets regarding worry and perceptions of treatment. It was hypothesized that higher levels of worry and GAD symptoms would be associated with stronger fixed beliefs about worry and lower interest in treatment. Exposure to psychoeducational material about GAD was expected to promote growth-oriented beliefs and increase perceived treatment effectiveness and interest in treatment. Study 2 examined trait implicit theories of worry and associations with worry severity, GAD symptoms, and anxiety-related dysfunctional beliefs. Stronger fixed beliefs about worry were expected to be associated with greater worry severity, higher GAD symptoms, stronger dysfunctional beliefs, and lower confidence in treatment effectiveness. Together, these studies aim to clarify how beliefs about the malleability of worry relate to GAD and perceptions of treatment.

Faculty Mentors: Dr. Alexander Penney & Dr. Michele Moscicki

Oral Presentation

What Factors Influence the Acceptance or Rejection of Advanced Requests for MAiD for Dementia?

By: Sarah Johnson

Medical Assistance in Dying (MAiD) became legal in 2016 in Canada for those suffering a grievous and incurable medical condition. An advanced request for MAiD is a document that allows individuals to request MAiD in advance, before losing their capacity to make decisions (Espericueta, 2025). In Canada, these requests are currently only legal in Quebec for those with neurocognitive disorders. We want to understand what factors influence undergraduates' acceptance or rejection of advanced requests for MAiD for dementia. Participants will be given three vignettes of individuals in different stages of dementia who have each made an advanced request for MAiD. They will be asked if they approve or disapprove the request. Questionnaires regarding personality characteristics, ageist beliefs, knowledge of dementia, stigma towards dementia, religious beliefs, and personal demographics will be administered to determine if there is a relationship between these variables and students' acceptance/rejection of the advanced request for MAiD. We hypothesize that advanced requests for MAiD will be more accepted in the situation where a person is bed ridded and can no longer communicate. Because the research is exploratory, we are unclear what factors will influence participants

decisions, but we suspect that those who have a stronger religious affiliation will be more rejecting of an advanced request for MAiD.

Faculty Mentors: Dr. Lori Harper & Dr. Russ Powell

Poster Presentation

No Time to Think: The Effect of Urgency in Reward-Driven Decision-making

By: Alexis Knee

Human decision-making is often described as rational and deliberate, yet everyday behaviour suggests the brain did not receive the memo. In many situations, decisions are made not slowly and carefully, but automatically under conditions of urgency. From a neuroscience perspective, urgency may influence how reward signals guide attention and decision-making. Reward learning assigns motivational value to stimuli that predict desirable outcomes. In other words, stimuli associated with reward tend to capture attention and automatically guide behaviour. This could be a problem if, for example, previously rewarded responses continue to be made despite the presence of better options. Furthermore, previous work suggests that urgency can reduce our ability to make rational, deliberate decisions. This raises an important question: Does urgency disrupt reward-driven attention and learning? In this study, we will examine how urgency influences neural reward processing using electroencephalography (EEG). Participants will complete a “two-armed bandit” task in which they repeatedly choose between two coloured squares that are associated with probabilistic rewards. The task will incorporate both urgent (time-limited) and non-urgent (time-unlimited) trials. EEG will be recorded throughout the task to examine reward-related neural responses, with a focus on the Reward Positivity (RewP), an event-related potential associated with neural sensitivity to reward feedback. We predict that urgency will modulate reward processing and influence attentional dynamics during decision-making, shifting participants from a rational and deliberate strategy towards less optimal automatic behaviour.

Faculty Mentor: Dr. Cameron Hassall

Poster Presentation

The impact of long-term exposure to Perfluorooctanesulfonic acid (PFOS) on anxiety-like behaviour and boldness in adult zebrafish (Danio rerio)

By: Ashley Kutcher

Perfluorooctanesulfonic acid (PFOS) is an environmental contaminant with toxic properties that are resistant to breakdown, leading to bioaccumulation in aquatic life, humans, and the environment. PFOS can produce toxic effects in zebrafish, such as altered immune system-related intestinal functions, altered gene expression and increased energy expenditure. However, the impact on complex behaviours such as boldness and anxiety-like behaviour is unknown. A previous study investigated PFOS’s effect on behaviour, In the previous study adult zebrafish were exposed to either 0, 0.1, or 1.0 mg/L of PFOS for 40 days and used motion-tracking software to assess locomotion, anxiety-like behaviour, and boldness. Testing was

conducted after 20- and 40-days with individual testing in an open field arena, novel approach test and novel tank dive test. Where a significant decrease in anxiety-like behaviour was observed with 40-days of PFOS exposure at 1.0 mg/L, with no differences in locomotion or approach to the novel object. The previous study suggests that PFOS exposure influences anxiety-like behaviour but not exploratory activity or locomotion. The current study aims to replicate the results of the previous study, adding water sample collection and analysis. In the current study adult zebrafish are exposed to 0, 0.1, or 1.0 mg/L of PFOS for 40 days. Water samples will be taken and examined for PFOS concentrations on days 1, 20, and 40. Anxiety-like behaviour and locomotion will be assessed on days 20 and 40 using an open field test. Data collection is ongoing, and the day 20 exposure results will be presented.

Faculty Mentor: Dr. Trevor Hamilton

Poster Presentation

A Starter Guide to the Ethical and Effective Use of Punishment

By: Jenna Lafond

As parents, it can be difficult to learn how to effectively discipline your child, with many people offering different, even contradictory advice. Some recent articles, which are widely propagated over the internet, even challenge the ethics of using any punishment. Parents and other caregivers need to know the truth about punishment, and which arguments against the use of punishment are based on misinformation. In this poster, we will discuss the most common myths about punishment and the reality behind them. We will also present 6 basic principles for the proper use of punishment that will benefit and not harm one's child.

Faculty Mentor: Dr. Russ Powell

Poster Presentation

Growth Mindset, Goal Orientation, and Self-Regulated Learning as Predictors of Perceived Performance and Satisfaction in Adolescent Dancers

By: Taylor LeBlanc

Dance requires sustained practice, technical precision, and the ability to adapt to frequent evaluation, yet little research has examined the psychological factors that support performance experiences in adolescent dancers. Drawing on growth mindset theory, achievement goal theory, and self-regulated learning (SRL), the present study investigated whether these constructs predict skill, perceived performance, and satisfaction. Participants (N = 30; ages 13–19) were recruited from dance studios in the Edmonton area. In Part 1, participants completed an online survey assessing fixed and growth mindset beliefs, 3×2 achievement goal orientation, SRL processes, and performance-related outcomes. In Part 2, a subset of participants submitted dance videos for expert-rated skill assessment; however, objective skill could not be analyzed due to insufficient data, and data collection is ongoing.

Contrary to hypotheses, growth mindset, achievement goal orientation, and SRL were not significantly associated with perceived performance or satisfaction. However, theoretically consistent relationships emerged among predictor variables: fixed mindset beliefs were negatively associated with SRL, incremental beliefs positively predicted self-referenced goal adoption, and SRL was negatively associated with other-referenced goal orientation. These findings align with theoretical models linking implicit beliefs, motivational orientations, and self-regulatory behaviour. Null primary findings are likely attributable to insufficient statistical power, as the achieved sample represented approximately one-fifth of the required size. This study is among the first to examine these constructs simultaneously in an adolescent dance context and represents the first application of the 3×2 achievement goal framework in this population.

Faculty Mentors: Dr. Kathleen Corrigall & Dr. Michele Moscicki

Oral Presentation

Children's perception of mixed emotions in songs

By: Isabelle Lee

The complexity of emotions is at the core of many human experiences. Emotions with opposite valence (or mood) can often be felt simultaneously. For instance, bittersweetness is often characterized as a blend of happiness and sadness. While most research has studied the perception of mixed emotions in language, less attention has been given to emotion perception in music, particularly among children. Emotions in music can be conveyed through the patterning of musical features, such as key and tempo. This study will examine whether musical features that convey opposing emotional valences lead children to perceive mixed emotions. Familiar pop songs will be selected based on musical features that are congruent with happy emotions (major key, fast tempo) and sad emotions (minor key, slow tempo). Alternative instrumental versions with incongruent combinations of musical key and tempo will be created to alter the valence of emotions in the original songs. Children ages 4-12 years will listen to song excerpts and rate the level of happiness and sadness using a Likert-type scale. Consistent with the emotion conveyed by congruent musical features, I predict that happy songs will receive high happy ratings and low sad ratings, while sad songs will receive low happy ratings and high sad ratings. In contrast, incongruent musical combinations may produce intermediate ratings reflecting mixed valence or ratings that sway unilaterally towards the emotion conveyed by either tempo or key. The findings will contribute to our understanding of how musical cues convey emotion and how this is affected by age.

Faculty Mentor: Dr. Tara Vongpaisal

Poster Presentation

Positioning the Light Triad on the Interpersonal Circumplex

By: Autumn Lega

People who score high on the Light Triad (faith in humanity, humanism, and kantianism) are believed to have the ideal traits that make up the "everyday saint." These traits are often seen in

people who get along with others, are friendly, and are submissive. The current study tests this assumption by placing the Light Triad traits on the interpersonal circumplex. The interpersonal circumplex is a model for assessing interpersonal motives, with 2 dimensions: agency and communion. In the current research, we sought to determine the overall placement of faith in humanity, humanism, and kantianism on levels of agency and communion. Using self report assessments (N = 375), we found that faith in humanity and kantianism were positively correlated to communion but uncorrelated to agency (friendly-neutral), and humanism was positively correlated with both communion and agency (friendly-dominant). These findings suggest that although individuals high in Light Triad traits are often assumed to be strongly oriented toward communion ("getting along"), this does not fully capture their profile. There is not a uniformly negative relationship with agency, as some agentic tendencies ("getting ahead") are still present.

Faculty Mentor: Dr. Miranda Giacomin

Poster Presentation

Left or Right? The Left Side of the Face's Effect on Emotional Perception and Processing

By: Trinity Lepps

This study focuses on the left-cheek bias for emotion perception, in which observers perceive the left side of the face as more emotionally expressive. However, the existing literature on the left-cheek bias primarily focuses on neutral and happy facial expressions and adult participants, with little research including children. These gaps in the literature limit our understanding of whether this bias generalizes to other emotions and age groups. This study aims to address these gaps by examining whether the left-cheek bias for emotion perception persists in children aged 3 to 9 and across a broader range of emotions, such as anger, sadness, and fear. We hypothesize that participants will continue to identify the left side of the face as more emotionally expressive. In addition, prior research suggests that the left side of the face remains more emotionally expressive even when only featural information is available (Low & Lindell, 2016). We hypothesize participants will intuitively focus more on the featural information of the left side of the face than on configural information from the face as a whole, which will be examined using an eye tracker. We will test both children and adults to allow for a developmental comparison. This research will advance the literature on the development of emotional perception and may inform future interventions for children who have difficulty recognizing emotions.

Faculty Mentor: Dr. Anna Krasotkina

Poster Presentation

Evaluating the Behavioural Impact of the Opioid-Neurotensin Hybrid Peptide PK20 in Larval Zebrafish

By: Alex Mattar

PK20 is a synthetic hybride peptide that targets both opioid and neurotensin receptors and has previously been shown to produce analgesic effects in mammalian models. However, its influence on behaviour has not been thoroughly investigated. This study evaluated the acute, dose-dependent behavioural effects of PK20 in five-day-old larval zebrafish (Danio rerio). Larvae were exposed to PK20 in two experiments using concentrations ranging from 0.5 to 100 μM. Behavioural responses were measured using automated locomotion tracking and startle-response assays. Exposure to lower concentrations (1-10 μM) resulted in little to no measurable behavioural alteration. In contrast, higher concentrations (15–100 μM) led to significant decreases in spontaneous movement and greater periods of immobility. Startle-response testing demonstrated both stimulus-specific and dose-dependent effects, including shifts in spatial movement patterns at higher doses and altered locomotor reactions. These findings suggest that acute exposure to PK20 produces clear dose-dependent behavioural effects in larval zebrafish, reinforcing zebrafish as a model organism for investigating the behavioural pharmacology of PK20.

Faculty Mentor: Dr. Trevor Hamilton

Poster Presentation

Reddit Thematic Analysis of Police Officer Therapy Utilization Rates and Recommendations

By: William McCarty

It is common knowledge that law enforcement personnel, specifically police officers, face a variety of occupational stressors in their profession. Research has shown that active and passive coping mechanisms are used for dealing with said stressors. To assess the effectiveness of both strategies, investigations have predominately relied on metanalyses of academic literature and databases. There is a noticeable gap of reports that analyze first-hand social media accounts from police officers on the different coping mechanisms they use to manage wellbeing.

In this study, we thematically analyzed original Reddit posts within policing centered social media groups. This was done to further investigate which coping strategies these law enforcement personnel used. A special emphasis was placed on accounts of therapy utilization and any subsequent recommendations made by officers in pursuing such services. From our analysis we found that officers used many different active and passive coping methods, including therapy, to deal with occupational stressors related to their profession. The implications of both types of mechanisms are discussed in this article. Further, the usage of therapy and its recommendation by officers is also further noted.

Faculty Mentor: Dr. William Schultz

Poster Presentation

Spatial Ability and Executive Function in Musicians

By: William McCarty

Previous research shows links between guitar proficiency and motor skill acquisition, musical training and executive functioning, and spatial ability and skill proficiencies such as chess. What is uncertain, is whether musical proficiency is also related to spatial ability and if this can provide an avenue for maintaining cognitive health.

This study investigated this relationship as well as the possible mediating influence of executive function. This was done by assessing various cognitive and spatial abilities of guitar and piano players across high and low levels of proficiency. These assessments included spatial discrete judgement tasks designed to measure spatial ability in both general and music-centered contexts. As well, other well regarded assessments of executive functioning were administered.

These assessments were evaluated for indicators of spatial ability whilst considering a baseline level of musical proficiency and to determine if a mediating relationship with executive functions exists.

The results show that musical proficiency and spatial ability share a positive correlation; especially when controlling for executive function. This study highlights the spatial and cognitive abilities unique to guitar and piano players. Ultimately, our results may provide evidence for the role of musical expertise in the development and maintenance of cognitive health.

Faculty Mentors: Dr. Eric Legge & Dr. Kathleen Corrigall

Oral Presentation

Do looks matter? No evidence of posture effects elicited by “modified” dog morphology

By: Emily McDermott

Scant research has been done on effects of modified morphology of the domestic dog on their greeting behaviour. Dog guardians, though, may be concerned their dogs are at risk in social situations due to breed-specific conformation. In addition to risks associated with pain and medical complications, some researchers have suggested modified morphology may result in flawed communication (e.g., Bennett & Perini 2003; Siniscalchi et al 2018), but few explicit tests have been conducted. Results from direct tests using brachycephalic dogs as stimuli are equivocal (Canori et al 2025), as are results for communication among dogs with various cues of paedomorphosis (Aucott, 2013). Although studies demonstrate the communicative potential of tail movement (e.g., Siniscalchi et al 2013) it has not yet been conclusively demonstrated that partial or total removal of the tail prevents appropriate communication among dogs. We analysed 154 off-leash dog greetings between unique dyads using methods derived from Ward (2020). Video recordings of encounters in public dog parks were coded for dog posture (low, neutral, high) at onset and offset of the greeting. We also documented whether play or aggression followed the greeting, and whether either dog showed evidence of surgically modified tails or ears, or brachycephalic faces. We conducted Chi square tests to determine whether “modified” dogs were more likely than “non-modified” dogs to experience greetings that included non-neutral body postures, or concluded in aggression. We found no evidence to support the hypothesis that “modified” dogs elicit more negative reactions from other dogs in an off-leash environment.

Faculty Mentor: Dr. Lynne Honey

Poster Presentation

Implementation of an Error Correction Assessment Protocol

By: Sara Meadus

Discrete Trial Teaching (DTT) is a well-established, evidence-based method commonly used to teach individuals diagnosed with Autism Spectrum Disorder (ASD), often leading to significant improvements in learning outcomes. Within DTT, various feedback strategies are employed to teach new skills, one of which is error correction. Error correction is used when a child responds incorrectly (e.g., saying “red” when the colour is actually green), and numerous error correction procedures have been studied to determine which is most effective. However, findings often vary across studies, with some strategies proving more effective for certain individuals. In practice, many practitioners rely on the error correction procedure they are most familiar with or have had success with in the past. While this approach may work for some clients, it may not always be the optimal choice for every learner, potentially leading to wasted time and inefficiency in skill acquisition. To address this challenge, I propose implementing a quick pre-assessment of error correction procedures prior to developing a teaching plan. This pre-assessment would allow practitioners to identify the most effective error correction strategy for each learner, reducing the need for trial-and-error during program implementation. In this study, I will examine four error correction procedures to create a pre-assessment protocol that enhances the selection process, accelerates skill acquisition, and improves the overall efficiency of individualized program planning and implementation.

Faculty Mentor: Miranda Macauley & Dr. Sean Rogers

Oral Presentation

Triangular Preference Test: A Novel Assay for Assessing Drug Preference in Larval Zebrafish (Danio rerio)

By: Madison Mrazik

Larval zebrafish (Danio rerio) are becoming a popular model organism for studying the impact of pharmacological and toxicological substances. Their rapid reproduction cycle allows for high-throughput testing from embryo to larval stages with locomotion and location preference demonstrated as early as 5 days post-fertilization (5dpf). In adult zebrafish, a place preference test can be used to determine whether a compound of interest is aversive or appetitive. To date, only one study has examined preferences in larval zebrafish by observing locomotion in three linear wells connected by two channels. In this study, we developed a place preference test consisting of three wells in a triangular orientation that are connected by three channels which allows the larvae two choices at all times. First, we tested a control group to ensure the larvae moved through the channels. Next, we tested the effects of ethanol and acetic acid with the three wells containing embryo media (control), a low dose (ethanol: 0.25% or acetic: 0.031%), or a high dose (ethanol: 1%, or acetic: 0.125%). In each test, we examined duration of

time spent in each zone (control, low, high) as well as locomotive variables including distance moved, high mobility and immobility (freezing). Results will be discussed.

Faculty Mentor: Dr. Trevor Hamilton

Oral Presentation

Behavioural Effects in Larval and Adult Zebrafish (Danio rerio) After 96-Hour Larval Exposure to Low-density Polyethylene, Polystyrene, Polyvinyl Chloride Plastic Leachates

By: Ashton Myers

Plastic waste in aquatic ecosystems degrades into chemical leachates that pose significant toxicological risks. This study investigates the behavioral effects of larval exposure to low-density polyethylene (LDPE), polystyrene (PS), and polyvinyl chloride (PVC) leachates in zebrafish (Danio rerio). Using a dose-dependent design, embryos (1 dpf) were exposed to leachate concentrations (0%, 5%, 15%, and 25% v/v) for 96 hours. Behavioral phenotypes were assessed at two life stages: larval (5 dpf) and adult (90 dpf). Larval testing utilized DanioVision and EthoVision XT software to measure spontaneous locomotion, thigmotaxis (anxiety-like behavior), and responses to dark, light, and mechanical startle stimuli. To assess long-term impacts, a separate cohort was reared to adulthood and evaluated via Open Field and Novel Object Approach tests to measure swimming velocity, immobility, and zone preference. We hypothesize that chronic larval exposure will produce dose-dependent increases in anxiety-like behaviors and disruptions to locomotor activity and startle responses across both life stages compared to controls. By linking early-life chemical exposure to persistent behavioral trajectories, this research clarifies the ecological risks of plastic pollution and offers insights into potential human health implications due to the genetic conservation between zebrafish and humans.

Faculty Mentor: Dr. Trevor Hamilton

Poster Presentation

It’s Complicated: Participant and Complainant Gender Variables Influence Sexual Assault Blame Attributions

By: Chloe Nelson

Sexual assault (SA) is form of gender-based violence, and growing evidence suggests disproportionately higher rates of victimization among gender diverse individuals (particularly transgender women and men). This has implications for victim blaming (VB), yet existing research focuses primarily on cisgender women assaulted by cisgender men. Those that have addressed transgender SA victims have revealed inconsistent patterns and methodological challenges (e.g., cismen perpetrators, stranger SA, and conflation of gender & sex). To address these limitations, the current study examined blame attributions (BA) within the context of an acquaintance SA case, with varied presentation of complainant gender identity (CT: cisgender/transgender; MW: man/woman) and attribution (GA: masculine/feminine). Participant gender identity and sexual orientation also were examined given their impact on VB and legal

decisions. Participants (N = 503) completed demographic & attitudinal measures, were randomly assigned to one of eight SA case conditions, and completed a case judgment questionnaire containing ratings of complainant, defendant, incident, and legal outcome variables associated with the case (dependent variables). While we predicted that depicting complainants as transgender would result in greater VB overall, there were limited effects in this regard. However, these did interact with participant gender to influence VB. In fact, our prediction that participant gender would influence VB was supported across dependent measures; cismen participants were highest in VB while ciswomen were lowest. Our findings show that complainant and participant gender jointly influence VB, although the former may be most salient, which has implications for SA victims' experiences throughout the legal system.

Faculty Mentor: Dr. Kristine Peace

Oral Presentation

Acceptance or Reinforcement? Investigating intervention components towards a varied and flexible food diet in ASD children ages 6-12

By: Melissa Noort

Acceptance and Commitment Therapy (ACT) is a mindfulness-based therapy that combines principles from Relational Frame Theory (RFT) to focus on promoting acceptance of the relationship between the person, thoughts, and feelings (Hayes, 1994). The general conceptualization of mindfulness is that it encourages the person to be present and grounded, nonjudgmental, and flexible with their cognitive functions (Fletcher & Hayes, 2005). In 2014, Kennedy et al. investigated ACT and ACT with a reinforcement contingency, in a small sample of preschoolers who exhibited food selectivity. The intervention was effective in increasing the children approaching and tasting the food, and was even more effective with reinforcement. Working with children displaying eating disorders, avoidant/restrictive food intake disorders, and food selectivity is also high in children with ASD (Kinter et al., 2023; Peterson et al., 2019). While there has been substantial evidence in using behaviour-analytic interventions to increase independent acceptance of consuming healthy foods in children with ASD (Peterson et al., 2019), there is lack of evidence regarding the use of ACT in children with ASD who exhibit food selectivity. In the present study, I will be conceptually replicating the study of Kennedy et al., (2014), in implementing the same 4 mindfulness-based activities in a sample of children ages 6-12 who are diagnosed with ASD and experience food selectivity to increase acceptance of non-preferred food items. I will be comparing the effectiveness of a simple reinforcement contingency and a combination of reinforcement contingency with ACT principles in increasing consumption of healthy food options.

Faculty Mentors: Miranda Macauley & Dr. Russ Powell

Poster Presentation

The Impact of Choice on Students' Procrastination, Stress, and Confidence

By: Delaney O'Brien-Ristau

Research on Self-Determination Theory and Universal Design for Learning has shown that autonomy is necessary to foster student motivation and engagement. Motivation and engagement have been linked to increased confidence and reduced procrastination and stress in academic environments. Autonomy can be supported by providing students with many opportunities for choice within their courses (e.g., assignment topics, modality, and deadlines). The present study investigated the relationship between offering students choices in their university coursework and their levels of academic confidence, procrastination, and stress. A sample of 297 university students were asked to rank the courses they were currently enrolled in based on flexibility. Participants then responded to a series of questionnaires assessing course choices, confidence, procrastination, and stress. Participants first completed the questionnaires thinking about their least flexible course and then completed the same set of questionnaires thinking about their most flexible course. Results showed that students tended to procrastinate less, experience less stress, and feel more confident in higher-flexibility courses compared to lower-flexibility courses. Perceived flexibility was the main predictor of these outcomes, whereas the actual number of choices was not a significant predictor. The present study highlights the valuable influence of flexible learning environments on students' procrastination, stress, and confidence, which may ultimately support their learning and well-being.

Faculty Mentors: Dr. Michele Moscicki & Dr. Sean Rogers

Oral Presentation

Function-Based Assessment and Individualized Interventions for Procrastination

By: Delaney O'Brien-Ristau

Procrastination is highly prevalent among university students. However, the literature lacks a clear definition and understanding of procrastination itself, its underlying processes, and effective ways to address it. One theory of understanding procrastination categorizes it as a behavioural delay. Therefore, it may be beneficial to examine procrastination from a behavioural-analytic perspective. A functional behaviour assessment (FBA) is a common procedure utilized in behavioural-analytic research to determine the function, or what drives an individual's behaviour. The FBA is then used to inform an individual's invention plan. The current study aims to address procrastination at the individual level by conducting an FBA and developing an individualized behavioural plan to reduce procrastination. Three undergraduate students were recruited for this study. The FBA phase involved a procrastination questionnaire, goal setting, and the creation of a study plan. Participants were instructed to complete an ABC self-report form, in which they report their behaviour (working or procrastinating on a task), what happened immediately before the behaviour (the antecedent), and what happened immediately after the behaviour (the consequence). Participants submitted their form after ten contingencies. An individualized intervention was developed based on the hypothesized function of procrastination derived from the participants' questionnaires and ABC self-report forms.

Faculty Mentor: Miranda Macauley

Poster Presentation

Inhibitory Control in the North American Red Squirrel

By: Brady Ohler

The detour task is commonly used in comparative cognition to explore abilities related to motor self-regulation, inhibitory control, social learning, and route planning. These tasks generally involve presenting individuals with a situation in which the direct route to a goal is blocked and a detour must be made to obtain it. Our study explores the use of a locomotor detour task in the North American red squirrel, in a field setting. Each individual was presented with a detour apparatus that required a locomotion detour around a clear barrier in order to obtain a valued reward. Results indicate that squirrels can successfully navigate the task within the allowed time period and random apparatus orientation. Thus, our preliminary results may suggest that red squirrels may have motor-self control in a foraging related task and thus require further exploration with other detour and motor-control related tasks.

Faculty Mentor: Dr. Shannon M. Digweed

Poster Presentation

Behind Every Good Choice is a Bad Guess: A Simulation of Feedback-Based Learning

By: Abby Oloriz

Learning begins with a mistake: but what happens when there is nothing to learn? In two-choice reward tasks, individuals repeatedly select between options that can lead to either reward or loss. When contingencies are learnable, expectations gradually align with underlying probabilities. However, when feedback is random, no stable expectation can form. This raises a key question: does task learnability alter the computational signals that underlie reward processing? Learning theories propose that behaviour updates through prediction error, the difference between expected and actual outcomes. Larger prediction errors reflect greater surprise and drive updating. This independent study developed a laboratory tutorial in Octave to simulate behaviour in learnable and unlearnable versions of a two-choice task using the Rescorla-Wagner learning equation. Overall reward frequency was held constant while manipulating whether outcome contingencies could be learned, allowing simulated behaviour to serve as a computational model for interpreting human performance in the same task. Simulations revealed that prediction errors remained larger and more variable when feedback was random. These findings suggest that unpredictability may amplify computational surprise signals, even when structured learning is possible. By formulizing how value representations evolve across trials, this work provides a computational framework for interpreting behavioural adaptation and its relationship to neural markers of reward processing measured with electroencephalography.

Faculty Mentor: Dr. Cameron Hassall

Poster Presentation

The Fast and The Curious: Reward Responsiveness and Task Learnability Shape Neural Responses to Feedback

By: Abby Oloriz

Can the brain be trained by a coin flip? In many tasks designed to measure reward processing, outcomes are essentially coin flips, preventing participants from learning which choice leads to better results. Reward feedback typically guides behaviour, yet these tasks intentionally remove opportunities to form action-outcome expectations for methodological reasons. To test whether learnability alters reward-related brain activity, we recorded electroencephalography (EEG) while participants completed both a standard unlearnable two-choice task (50/50 reward probability) and a modified learnable version in which one choice was more likely to produce reward. Participants also completed BIS/BAS scales to assess individual differences in reward responsiveness. We hypothesized that participants would report greater motivation during learnable blocks, exhibit enhanced reward processing when feedback supported learning, and that this neural effect would vary with BAS score. Participants reported greater motivation and engagement in the learnable condition; however, reward processing did not differ between conditions. Furthermore, BAS scores were not directly correlated with reward processing. Exploratory analyses indicated that, among participants who used an optimal learning strategy, lower BAS scores were associated with enhanced reward processing in the learnable condition. This suggests that learnability may influence reward processing in low reward-responsive individuals. These findings contribute to ongoing discussions about how task structure shapes reward processing in both basic and clinical research.

Faculty Mentor: Dr. Cameron Hassall

Oral Presentation

Female use of Sexual Coaxing and Coercion: Motivations, Sociosexuality, and Dark Traits

By: Olivia Piché

The Dark Tetrad (DT) describes four intercorrelated traits: sub-clinical narcissism, sub-clinical psychopathy, Machiavellianism, and everyday sadism. DT traits frequently lead to manipulative and self-serving behaviours in social contexts, including sexual and romantic ones to acquire and maintain mates. DT traits correlate positively with preferring casual sexual interactions (sociosexuality), and utilizing sexually deceptive behaviour, such as coaxing and coercion. Sex differences in DT traits are generally moderate, with males scoring higher than females, and ample literature demonstrates that DT traits correlate with male tendencies to use sexual coaxing and coercion. Our pre-registered study took seriously the less frequently recognized possibility that female DT traits are related to using these same strategies. In a large female undergraduate sample (n = 1,162), we measured DT traits, sociosexuality, and willingness to use sexual coaxing and coercion to acquire and retain sexual or romantic partners. In both mate acquisition and retention contexts, Machiavellianism and narcissism were the strongest predictors of utilizing sexual coaxing, and psychopathy was the strongest predictor of utilizing sexual coercion. Exploratory analysis showed that females were significantly more willing to utilize sexual coaxing in mate retention contexts, compared to mate acquisition. Results show

that females are capable of using sexual coaxing, and occasionally coercion, to obtain or defend romantic or sexual partners, and that DT traits are related to these behavioural tendencies.

Faculty Mentor: Dr. Scott Semenyna

Oral Presentation

Individual Acoustic Variation and Acoustic Behaviour Responses of the American Pika (Ochotona princeps)

By: Alice Rainville

Acoustic communication is a valuable way for animals to engage in conspecific social interactions due to its low-energy cost and long-distance transmission. Individual identity characteristics in conspecific calls can be used to discriminate between neighbours and more threatening strangers, which influences the assessment and subsequent behaviour of perceivers to that call. This is generally observed as higher aggression to stranger versus neighbour calls. The communication system of the American pika (Ochotona princeps) is surprisingly diverse for a solitary non-aggressive lagomorph. Most commonly, they produce a single short squeak with intense frequency in the summer months. This call hypothetically facilitates recognition of conspecifics and territorial protection. Based on our analysis of calls from multiple individuals, individual identity characteristics are present in this call. We also conducted playback experiments with conspecific stranger, heterospecific non-predator, and predator calls to better understand behaviour and acoustic pattern responses. While the pika attended to both conspecific and predator calls, they were only vocally responsive to a specific predator call. While this suggests that the American pika can recognize each other based on their unique call, a perceiver's assessment and response to the single squeak may be influenced by environmental contexts beyond recognition of strangers.

Faculty Mentor: Dr. Shannon Digweed

Oral Presentation

Attitudes Towards Sexual Consent in Conservative Muslim Communities

By: Aisha Randhawa

This study looks to examine how levels of religiosity and sexual health education relate to attitudes towards sexual consent and rape-supportive beliefs in conservative Muslim communities. While more exposure to sexual health education has been associated with greater adherence to positive beliefs about consent and fewer harmful beliefs, there is relatively no empirical research that assesses how these interactions fare in sexually conservative cultures. Research within Muslim populations demonstrates hesitancy among parents and educators in having sexual health conversations with their children due to fear of conflicts with religious beliefs. Using surveys distributed across Mosque and university populations, the data gathered will help uncover how these variables correlate with one another in a population that is significantly underrepresented in empirical research. The findings will help better understand the

relationship between sexual health education and consent attitudes in religious groups and could be applied to culturally appropriate programming and sexual health curricula.

Faculty Mentors: Dr. Carissa Augustyn & Dr. Sandy Jung

Poster Presentation

What Dementia-Related Behaviours are Most Stigmatized and What Influences these Stigmatizing Beliefs?

By: Kate Sabrowski

A significant challenge faced by persons with dementia (PwD) is stigmatization, particularly public stigma (stigma displayed by others), which negatively affects self-esteem, quality of life, and overall well-being (Alzheimer's Disease International, 2019; Goodwin, 1963; Harper et al., 2019; Kim et al., 2022). The present study aims to provide information about the characteristics of people most likely to stigmatize PwD, and which dementia-related behaviors are most likely to be stigmatized. This will provide crucial information for the creation of stigma reduction techniques. Data are being collected from university students at a Canadian university, and participants will read vignettes of a woman displaying eight dementia-related behaviours and rate how distressing each behaviour is on a four-point Likert-type scale. Participants also report information about their age, sex-at-birth, gender, socioeconomic, volunteer and employment, pet ownership, and marital statuses. Correlational analyses will be used to examine relationships between gender, familiarity with dementia, ageism, empathy, personality, religiosity, and stigmatization of dementia. ANOVAs will be conducted to assess differences in distress across the eight dementia-related behaviours, and t-tests to assess sex-at-birth differences. We hypothesize that behaviours related to aggression and poor hygiene will be rated as more distressing than behaviors related to poor memory and confusion, and that males will hold more stigmatizing beliefs than females. We also predict that higher empathy, greater religiosity, greater knowledge and familiarity of dementia, and lower ageism will be associated with lower levels of stigma.

Faculty Mentors: Dr. Lori Harper & Dr. Russ Powell

Poster Presentation

BPC-157 and its hybrid analogues on spontaneous swimming behaviour in larval zebrafish

By: Oleg Savin

Peptides such as Body Protective Compound 157 (BPC-157), a pentadecapeptide, have been of particular interest to researchers because of their potential capacity for therapeutic outcomes. The literature suggests that BPC-157 can assist in recovery following musculoskeletal injuries, it has anti-inflammatory properties, and can minimize the symptoms of traumatic brain injury. Most studies have examined the effects of BPC-157 on musculoskeletal recovery, and only a few studies have conducted behavioural tests, in rats. Zebrafish (Danio rerio) are an emerging animal model due to the rapid development, ease of breeding, high throughput, and reliability of

behavioural tests. This study utilized larval zebrafish (5 days post fertilization) with the goal of examining three compounds, BPC-157 along with two hybrid analogues CIARA-1 and CIARA-2 (100 nM, 1 μM, and 10 μM), in parallel testing. The compounds were analyzed to gauge how they affect basic locomotion and arena place preference. Motion tracking software (DanioVision) was used to acquire and quantify the distance that each fish travelled, the time spent near the outer wall of the arena (thigmotaxis), as well as the duration of being in a high mobility state in an open field test. The data demonstrates a significant effect on distance moved and high mobility duration only present in the CIARA-1 treatment group, whereas BPC-157 and CIARA-2 showed no significant effect on behaviour. These findings suggest that minimal structural modification to the parent compound, BPC-157, can significantly alter its behavioral effects.

Faculty Mentor: Dr. Trevor Hamilton

Poster Presentation

Physiological Arousal in AI-Generated Image Detection

By: Jack Simmons

Previous studies have shown that direct gaze affects nervous system arousal depending on the “realness” of the visual stimuli. This “realness” can be expressed as the mode of visual stimuli, whether it be a photograph, video, or “real face”. Previous studies in our lab have suggested that people are about 80% accurate at detecting AI-generated visual stimuli. A follow-up eye tracking study revealed that people are attending more to facial information to influence their decision. In this study, we will examine the physiological response from galvanic skin response and heart rate monitoring to see if there is an arousal difference between direct and averted gaze in AI generated and authentic facial stimuli. One potential confound is that general authenticity in photos creates a differing response, so visual stimuli without faces will also be presented. Participants will be presented with visual stimuli that are either AI-generated or authentic and will be asked about their decision regarding the origin of the stimuli, as well as their level of confidence in their decision. We hypothesize that there will be a greater GSR and HR response to direct gaze than to averted gaze, as well as a greater response to faces than to scenes. Lastly, we hypothesize that the response to authentic faces with direct gaze will be the greatest out of all conditions.

Faculty Mentor: Dr. Michelle Jarick

Poster Presentation

Does Time Dictate Crime? Perceptions of Cyberstalking in Ex-Intimate Partner Contexts

By: Aaliza Somani

Research on perceptions of cyberstalking frequently evaluate behaviours across stranger, acquaintance, and ex-intimate partner scenarios, however police-reported data indicates that ex-intimate stalking comprises about 40% of cases. That said, research has not addressed how cyberstalking behaviours are interpreted at varying times following the end of a relationship. Given that the recognition of stalking is challenging, especially in the face of stalking myths and

attitudes, the present study was designed to address how different types of cyberstalking behaviours (communication-based v. social-media based) are interpreted as a function of labelling ("stalking" v. "online") and whether this varies across time periods following the end of an intimate relationship (immediately, 1 month, 6 months, and 1 year). Undergraduate participants will be shown a vignette that varies according to the conditions above, and asked to provide ratings on the Stalking Outcome Scale (SOS), including variables such as perceptions of normality, severity, fear and criminality. Participants will also complete various attitudinal measures (e.g., Stalking Myth Endorsement, Stalking Related Attitudes Scale, Perceptions of Stalking Scale, and Relational Entitlement). We anticipate that as the length of time since the end of an intimate relationship increases, perceptions of severity will intensify, and perceptions of how "normal" or acceptable the behaviours are will decrease. This study will add to our understanding of the ex-intimate partner dynamic, and how cyberstalking behaviors are interpreted in different contexts, therefore understanding recognition and reporting decisions, which impacts how justice systems respond.

Faculty Mentor: Dr. Kristine Peace

Poster Presentation

A Comparative Analysis of Coercive Control Behaviors in Same-Sex and Opposite-Sex Intimate Partner Violence

By: Caleb Song & Katherine Zhu

The existing literature suggests that, within same-sex intimate relationships, there may be specific internal and external factors, which play an important role when there is intimate partner violence (IPV) and coercively controlling (CC) behaviours. For example, specific factors that correlate with same-sex IPV include minority stress, psychological stress such as PTSD, social discrimination, and alcohol abuse. It is important to better understand the presence of CC among same-sex relationships where there has been IPV. The present study examines CC behaviours present in 3 groups of IPV perpetrators: Perpetration in a same-sex relationship with a woman, in a heterosexual relationship with a woman, and in a heterosexual relationship with a man. The current study extrapolates data from the CELIA IPV project, where a sample of perpetrators in a same-sex relationship were identified, and matched to two heterosexual IPV groups, producing a final sample of 30. All statistical analyses were conducted using SPSS. Our results did not demonstrate statistically significant differences across multiple CC variables, except for two variables, physical threat with an object and threats to harm/hit the victim. Future research involving a larger sample size may address current limitations.

Faculty Mentor: Dr. Sandy Jung

Poster Presentation

Examining Eye Gaze Avoidance in Individuals with High and Low Social Anxiety

By: Keira Streit

Previous research has demonstrated that those with social anxiety exhibit gaze avoidance, particularly avoidance of direct eye contact. This tendency of those high in social anxiety seem to contradict those with low social anxiety, who tend to exhibit an attentional automatic bias toward the eyes of others. The present study will investigate gaze avoidance patterns and their relationship with emotional facial expressions in individuals with high and low social anxiety. The first part of the experiment replicates Kingstone et al. (2012), using eye-tracking to assess fixation patterns while participants are instructed to avoid looking at either the eyes or the mouth of static faces. Their findings suggest that individuals exhibit an automatic bias to look at the eyes when instructed not to. We aim to extend this research to those with high social anxiety who might be better able to avoid looking at the eyes. Here, we will introduce two additional conditions: (1) gaze direction (i.e., direct may be harder to avoid than averted) and (2) emotional expression (i.e., angry might be harder to avoid than happy). Given evidence that socially anxious individuals display hypervigilance followed by avoidance of negative faces, we hypothesize that angry faces, particularly with direct gaze, will be easier for individuals with high social anxiety to avoid the eye region; while it might be harder for low socially anxious individuals to avoid the eyes. Overall, our work will aim to extend current research on social attention to those with social anxiety.

Faculty Mentor: Dr. Michelle Jarick

Poster Presentation

Visual and tactile contributions to executive functioning in a 3-dimensional object sort task

By: Adam Szybunka-Ostopowich

In the standard version of the Dimensional Change Card Sort (DCCS), children's executive functioning is assessed by the ability to sort picture cards according to one sorting rule (colour) and then switching to a new rule (shape). The standard version assesses participant executive functions according to their sorting accuracy only. In previous work, we demonstrated that a three-dimensional version of the DCCS enabled 3-year children to switch rules more flexibly than the standard 2-dimensional card version. In the present study, we examined the three-dimensional advantage more closely by varying the availability of object features in a task where adult participants sorted objects in the free field (visual and tactile) and behind a visual occlusion barrier (tactile only). We also explored whether timing could be a more sensitive measure than accuracy in capturing executive functioning performance under different modality conditions. The three-dimensional polyhedrons to be sorted varied in shape (simple and complex) and texture (smooth and rough). While adult participants achieved perfect accuracy in switching their sorting behaviour on demand in both shape and modality conditions, their response times indicate that greater cognitive effort was required to do so in the sorting of complex shapes with only tactile cues available. Our findings shed further insight into the perceptual basis of executive functioning and highlight the importance of using timing to better characterize behavioural performance and age-related change in executive functioning.

Faculty Mentor: Dr. Tara Vongpaisal

Oral Presentation

TLDR: Posters people actually read

By: Adam Szybunka-Ostopowich & Puja Suthar

Research posters are one of the most commonly employed methods for disseminating research findings, which has increasingly driven investigation into improved poster designs for effective science communication. Nonetheless, many presenters continue to format their posters according to outdated standards and templates, thereby limiting their ability to communicate their contributions to science and knowledge. Substandard poster design plays a meaningful role in upholding the poor attendance rates and the ongoing stigma around poster presentations compared to oral presentations. In this interactive research presentation, we contrast two unique poster designs (traditional and modern), to display the impacts of layout and formatting on science communication in a poster presentation. Attendees of the conference can participate in our research in real time by completing a short survey about our poster presentation.

Faculty Mentor: Dr. Rodney Schmaltz

Poster Presentation

Desensitization and counter-conditioning of feedsticks for a grizzly bear (Ursus arctos horribilis)

By: Claudia Tachuk

Classical and operant conditioning are used to train captive animals to conduct routine health procedures without the risks of anesthesia. Training sessions provide mental enrichment for captive animals and can strengthen trusting relationships between animals and their keepers. The proposed research will document desensitization and counter-conditioning procedures with Billy, a grizzly bear who came to a wildlife park with an evident fear of sticks. Billy's fear has reduced options for ongoing training because "feedsticks" are generally used to deliver food reinforcers during protected-contact training sessions. Initial habituation to the trainer will be followed by classical conditioning to establish a marker (a clicker or other auditory signal) for the reinforcement of operant behaviours. Once a marker is established, further classical conditioning will associate sticks with the delivery of food and other approved reinforcers. Sticks will be moved closer to the location of food delivery, upon evidence that Billy can relax at each stage. Operant conditioning will then be used to reinforce any of Billy's behaviours that indicate movement toward a stick, with the ultimate goal of Billy accepting a food reward from the end of a feedstick. We predict that this behaviour will generalize across feedstick size, shape and color, and different trainers. Implications from this study are important for the care and rehabilitation of captive animals. Single-subject designs are valuable for documenting how interventions are applied across different species, environments, and stress responses.

Faculty Mentor: Dr. Lynne Honey

Poster Presentation

Throw a Lifeline: Exploring Social Rank Influence on Urgency-Dependent Alarm Calls in Animals

By: Sebastian Toews

Research on alarm calling in animals have focused on the referential contexts for both signalers and receivers, with a subset focus on social factors that influence the actions of urgency-dependent antipredator behaviours. The current literature investigated if research has examined a relationship between rank-order systems in social species and urgency contexts embedded in alarm calls. Specifically, the review explored themes suggested that higher-ranked social members are understood to have stronger urgency encoded in their alarm calls for receivers to respond quicker to antipredator signals. The collection of studies indicated that social rank had an influence on the motivation to both emit an alarm call and respond to alarm calls. There were three themes created: (1) lower-ranked and isolated social members emitted louder, more frequent alarm calls, (2) alarm calls produced by callers with characteristics associated with higher ranked social members, such as boldness and reliability, resulted in more immediate and appropriate antipredator behaviours, and (3) heterospecific species have different call structures and antipredator behaviours, even in the same environment, indicating strong social factors that influence threat assessments. After exploring research on alarm calling, urgency, and social factors, the paper suggests that future research should investigate how receivers would respond to an identical alarm call from both a higher and lower-ranked social conspecific member.

Faculty Mentor: Dr. Shannon Digweed

Poster Presentation

Divine Intervention: Debunking Pseudoscience to Promote Scientific Skepticism

By: Sebastian Toews

Efforts to combat pseudoscience typically rely on classroom-based interventions, with limited research examining brief, interactive debunking activities. This study implemented a short intervention designed to engage students in actively refuting a pseudoscientific claim by promoting rational skepticism of epistemically unwarranted beliefs. Participants first completed a validated self-report measure assessing perceived critical thinking skills, then watched a video debunking the divination claim associated with dowsing rods. Following the video, participants were randomly assigned to one of two conditions: (1) a dowsing task where participants engaged in debunking the divination claim by identifying the influence of the ideomotor response, or (2) a no-intervention control condition. Afterward, participants completed a validated questionnaire measuring pseudoscientific beliefs. Although endorsement levels of pseudoscientific beliefs were low across both groups, an independent-samples t-test indicated no significant differences in pseudoscientific beliefs between conditions. Exploratory analyses reported that, although critical thinking evaluations were high amongst both conditions, critical thinking was not a predictor to pseudoscientific beliefs. Prior familiarity to dowsing was associated with higher pseudoscientific beliefs, though this effect did not reach conventional levels of statistical significance ($B = -0.220$, $p = .083$). Although the intervention did not reduce

beliefs beyond the video alone, the findings highlight potential limitations for brief debunking interventions in samples already low in pseudoscientific beliefs.

Faculty Mentor: Dr. Rodney Schmaltz

Oral Presentation

To Cache or Not to Cache, That is the Question

By: Andrea Toyad

Our research will expand previous research on inhibitory control in the North American Red Squirrel (Tamiasciurus hudsonicus). We will investigate inhibitory control through a food selectivity task and post-selectivity (caching) behavior. The selectivity task will explore the selection of a preferred food item (shelled and unshelled peanuts) in order to understand how inhibiting immediate caloric intake may show a level of self control. Both inhabitation of an immediate caloric intake the resulting delay in gratification by caching the food choice, will allow us to provide further evidence that red squirrels can restrict innate feeding responses. Thus, we predict that squirrels will practice inhibition on a prepotent behavior to immediately consume the food, and we predict that squirrels will cache the food further exhibiting a delay of gratification like behaviour. These observations will contribute to existing literature on animal inhibitory control, self control (delay of gratification) and cognitive decisions.

Faculty Mentor: Dr. Shannon Digweed

Poster Presentation

The Effects of Urgency and Task Difficulty on Medical Decision-Making

By: Ela Trivino

Evidence accumulation is the process of gathering information over time until a threshold is reached, triggering a decision. Most research in the field has been restricted to highly controlled laboratory tasks, leaving the relevance of evidence accumulation in real-world settings, such as medical diagnosis, unclear and understudied. The current study aims to fill this gap by investigating decision-making in a medical diagnosis task and assessing how urgency and the strength of available evidence affect the rate of evidence accumulation. We plan to record electroencephalography (EEG) while participants, with prior module training, perform diagnostic classifications of diabetic retinopathy from retinal fundus images, with manipulations in time pressure and task difficulty. We will utilize the centro-parietal positivity (CPP), an EEG signal that encodes evidence accumulation towards a decision in real-time. Based on previous literature, we predict steeper CPP slopes in urgent conditions and during easier diagnoses (i.e., faster evidence accumulation, facilitating rapid responses). If we identify a CPP, it will confirm the presence of evidence accumulation in medical decision-making, with implications for both real-world diagnoses and medical education.

Faculty Mentor: Dr. Cameron Hassall

Poster Presentation

Basic Education Can Improve AI-Generated Image Detection Ability

By: Deyan Vulkov

The recent spread of highly photorealistic images created by artificial intelligence (AI) depicting high-profile figures in scandalous scenarios threatens efforts to curb the spread of fake news on the internet. AI-generated images often possess artefacts which can be exploited to train individuals in detecting these images. This experiment assessed accuracy in identifying AI-generated images across four categories: People, Animals, Objects, and Places. We also tested the effectiveness of both explicit and implicit educational paradigms to improve performance. Consistent with previous findings, we found that accuracy in images involving human faces was the highest across all conditions, and was unaffected by training. Animals and Objects showed the greatest improvement from either educational intervention, while performance in the Places category only improved with implicit training. With potential implications of these images going undetected ranging from geopolitical threat to personal defamation, these findings illustrate the importance of improving performance in AI-generated image identification.

Faculty Mentor: Dr. Michelle Jarick

Oral Presentation

The Window of the Soul: Ability to Detect AI-generated faces

By: Kara Whitaker

The use of artificial intelligence (AI) has become more widespread as technology develops. Previous work in our lab has shown that humans are better at detecting AI-generated faces than other categories, such as place, objects, and animals. The purpose of our study was to examine whether eye gaze is a significant feature of the face to aid detection. Currently, we are unsure of the extent to which AI-generated faces are able to imitate authentic gaze. To that end, we asked participants whether faces were AI-generated for images in three gaze conditions: direct gaze, averted gaze, or no gaze. Due to our expertise with face and gaze perception, we predicted that participants will be more accurate at detecting faces with direct gaze due to the lack of authenticity in the eyes in artificially generated images. These findings may suggest that AI-generated faces lack a soul or deeper meaning behind them that might allow for ease of human detection.

Faculty Mentor: Dr. Michelle Jarick

Poster Presentation

Do individual differences in executive function impact our ability to inhibit simple vs. complex visuomotor responses?

By: Alexandria Wiwchar

Executive functions (EFs) are core cognitive abilities that allow individuals to regulate behaviour in response to changing task demands. A key component of EF is response inhibition – the ability to suppress actions that are inappropriate in a given context. Traditionally, response inhibition has been studied using the stop-signal task (SST) which requires participants to respond quickly to a “Go” signal, but inhibit their response when a “Stop” signal appears. By measuring responses on Go and Stop trials, researchers can estimate the stop-signal reaction time (SSRT), which is the time required to successfully inhibit a response. However, classic SSTs only examine the inhibition of simple button press responses. In the proposed study, we will compare performance between a classic SST and a visuomotor SST that requires participants to make a rapid reach to a target (“Go”). However, if the target suddenly jumps to a new position, the participant must inhibit their initial movement (“Stop”), and reach to the new target location. By measuring responses on Go and Stop (i.e. jump) trials, we hope to measure the stop-signal movement time (SSMT). If the same cognitive and neural mechanisms are involved in inhibiting both simple and complex visuomotor responses, then there should be a correlation between SSRT and SSMT. Furthermore, we predict that longer SSRTs and SSMTs should be associated with poorer scores on clinically validated self-report measures of EF. These results could have important implications for how response inhibition is measured in both healthy adults as well as clinical populations.

Faculty Mentor: Dr. Chris Striemer

Poster Presentation

Recognizing the Hand Behind the Writing, Quantified Through Psychophysical Methods

By: Sonia Yusuf

Handwriting is a highly variable perceptual stimulus, with each individual producing distinctive motor patterns that create unique visuals. While previous research has primarily examined handwriting recognition in the context of reading and letter identification, less work has explored how precisely humans can perceive and differentiate handwriting authorship. The present study develops a novel paradigm to evaluate sensitivity to handwriting variation using psychophysical methods. Our approach is based on the concept of a multidimensional handwriting space, analogous to the theoretical framework of face space. In this model, handwriting styles vary along multiple perceptual dimensions relative to a central prototype. To construct this space, handwritten word samples from multiple authors (n = 40) are combined using a morphing program to generate stimuli centered on an average handwriting prototype. Individual handwriting identities are represented as trajectories that vary in distance from this prototype, with greater distances reflecting greater stylistic uniqueness.Using these stimuli, we will evaluate how much geometric variation in handwriting is required for participants to reliably identify the author of a sample. By systematically manipulating similarity between handwriting stimuli, this paradigm aims to quantify perceptual sensitivity to authorship differences. Ultimately, this work seeks to establish a generalizable psychophysical method for measuring handwriting perception and to provide insight into how humans perceive and distinguish individual variation in written forms.

Faculty Mentor: Dr. Nicole Anderson

Poster Presentation

Investigating the Behavioral Effects of Acute Xylazine Exposure in Zebrafish

By: Lanna Zahreddine

Xylazine is a veterinary sedative that has recently emerged as a common adulterant in illicit opioid supplies, including fentanyl and heroin. It has been linked to higher overdose rates and serious health complications. Unlike opioids, xylazine is not reversed by naloxone, which makes overdoses involving this drug more difficult to treat. Despite its growing detection in cases of polysubstance use, the behavioral effects of xylazine and its potential contribution to addictive processes remain poorly understood.

This study examined the behavioral effects of acute xylazine exposure in zebrafish (Danio rerio), a widely used model organism in neurobehavioral research. A pilot study was initially conducted with larval zebrafish to examine locomotor changes across a range of xylazine concentrations. These experiments helped guide the dose selection for the adult behavioral assays. Adult zebrafish were then exposed to xylazine for 10 minutes at concentrations of 200 μM, 400 μM, or 800 μM. Following exposure, fish were tested in the open field test (OFT) and the novel object approach (NOA) test to measure exploratory and anxiety-related behavior. Locomotor activity and object interaction were analyzed to determine whether xylazine produces anxiolytic or anxiogenic effects that could be relevant to mechanisms involved in addiction.

Overall, this work provides insight into how xylazine alters behavior and may contribute to a better understanding of its role in polysubstance drug use and overdose.

Faculty Mentor: Dr. Trevor Hamilton

Oral Presentation

A Comparative Analysis of Coercive Control Behaviours in Same-Sex and Opposite-Sex Intimate Partner Violence

By: Katherine Zhu & Caleb Song

The existing literature suggests that, within same-sex intimate relationships, there may be specific internal and external factors, which play an important role when there is intimate partner violence (IPV) and coercively controlling (CC) behaviours. For example, specific factors that correlate with same-sex IPV include minority stress, psychological stress such as PTSD, social discrimination, and alcohol abuse. It is important to better understand the presence of CC among same-sex relationships where there has been IPV. The present study examines CC behaviours present in 3 groups of IPV perpetrators: Perpetration in a same-sex relationship with a woman, in a heterosexual relationship with a woman, and in a heterosexual relationship with a man. The current study extrapolates data from the CELIA IPV project, where a sample of perpetrators in a same-sex relationship were identified, and matched to two heterosexual IPV groups, producing a final sample of 30. All statistical analyses were conducted using SPSS. Our

results did not demonstrate statistically significant differences across multiple CC variables, except for two variables, physical threat with an object and threats to harm/hit the victim. Future research involving a larger sample size may address current limitations.

Faculty Mentor: Dr. Sandy Jung

Poster Presentation

We Don't Talk about B: Exploring Factors Affecting Internalized Biphobia, Mental Health, and Outness Among Bisexual Individuals

By: Candice Zunti

Bisexual individuals experience specific stereotypes, prejudice, and discrimination from both the heterosexual and LGBTQIA2+ communities. Biphobia stems from societies structured by heteronormativity and mononormativity; these standards can cause individuals, regardless of their orientation, to internalize discriminatory and stigmatizing attitudes, resulting in internalized biphobia. This study examined potential protective (identity affirmation, relationship style, social support, and exposure to sexual minorities) and risk factors (anti-bisexual experiences, relationship style, and identity erasure) that either reduce or contribute to the adverse effects of internalized biphobia. A sample of 254 participants who self-identified as bisexual completed demographic questionnaires and validated self-report measures assessing internalized biphobia, outness, protective and risk factors, and mental health outcomes, including the GAD-7, BDI-II, and substance use measures. Key findings highlighted identity affirmation as the strongest protective factor, demonstrating a significant negative association with internalized biphobia, whereas anti-bisexual experiences were positively associated with higher levels of internalized biphobia. Internalized biphobia was significantly associated with increased depressive symptoms, though no relationship with anxiety or substance use was found. These results underscore the importance of fostering affirming environments, increasing bisexual visibility, and developing targeted interventions to support the mental health and well-being of bisexual individuals. Implications and future directions are discussed.

Faculty Mentor: Dr. Laura Offrey

Oral Presentation

Public Safety and Justice Studies

Meaningful Access to Education in Canadian Prisons

By: April Abarra

The poster and 3D printed display classroom will outline a research project that explored the types of educational opportunities currently available within Canadian carceral institutions. The study aimed to identify which post-secondary institutions provide access to prison education programs, the subjects taught, and the variety of modalities that are offered.

We first conducted an online search using Google with five key terms combined with the names of Canadian universities and colleges. Second, we searched the five key terms on each university or college website. When a potential program, initiative, or story about education in prison was found, we recorded the website containing the information. The record of websites created a database for analysis. We revisited each website to determine the modality, type of program, subjects taught, costs to students, and other relevant information. This information was analysed using simple descriptive statistics.

Findings suggest that there are very few opportunities to study with post-secondary institutions in Canadian prisons. As a result, completing a full degree while incarcerated would take a considerable amount of time, even for those able to pay full tuition through distance learning.

Faculty Mentor: Nicole Patrie

Poster Presentation

Social Work

Virtual Reality Integration in Social Work Practice

By: Mckenzie Croken

Taking a look at implementing VR into Introductory social work classes to simulate real life experience that they may see out in field.

Faculty Mentors: Kealey Dube & Danielle Larouque

Poster Presentation

Male Compass Club Toolkit

By: Kianna Kwasnik, Keyarah Moyah, Alyssa Anderson, Emma Spencer, Susan Mackay & Clinton Bonise

For young males, a boys' club that prioritizes media, emotional intelligence, and healthy relationships provides considerable benefits as they grow. These organizations create a safe space where boys can express themselves authentically, build confidence, and develop skills that promote well-being. In the context of healthy relationships, boys learn to communicate respectfully, establish boundaries, show empathy, and discover constructive ways to resolve conflicts. They also engage in discussions about preventing bullying and negative behaviours, as well as how to cultivate supportive relationships. Through participation in media discussions, boys can critically analyze stereotypes, masculinity, and the messages they encounter in video games, films, and social media. This engagement allows them to challenge unrealistic expectations and foster more positive views of themselves and others. Developing emotional skills equips boys to understand, articulate, and manage their emotions without feeling ashamed or pressured to conform to a 'tough' persona.

Faculty Mentor: Kealey Dube

Poster Presentation

Sex, Sexuality, and Disability

By: Kianna Kwasnik, Keyarah Moyah, Alyssa Anderson, Emma Spencer, Susan Mackay & Clinton Bonise

Our presentation discusses the issues of sex, sexuality, and disability, why it is important for social work practice, and what changes can be done to best support people with disability's agency, autonomy, and sexual preferences.

Faculty Mentor: Dr. Hellen Gateri

Oral Presentation

Self-care and Wellness Practices of Helping Professionals in Context of War and Conflict: Western Worldview and African Worldview Lessons learnt from a Scoping Literature Review

By: Iman Nassar

The poster draws from a field-based study focusing on the self-care and wellness practices of helping professionals in the context of the insecurity crisis in Burkina Faso. Using scoping literature review as a literature review methodology, our poster showcases our first-hand findings on Western and African Worldviews' conceptualizations of self-care and wellness. It highlights how in Western literature, self-care and wellness are conceptualized as practices that remain in the domain of the individual, whereas African literature emphasizes the importance of cultural, communal, spiritual, and relational aspects of self-care and wellness. It examines how the practices apply to helping professionals working in a distress context, specifically in Burkina Faso, where exposure to constant stress, insecurity, and social services provision to internally displaced people heightens the need for sustainable self-care and wellness strategies that foster resilience. It concludes that meaningful self-care and wellness frameworks must move beyond dominant Western worldviews and intentionally incorporate culturally centered approaches to support African helping professionals working in conflict settings.

Faculty Mentor: Dr. Valerie Ouedraogo

Poster Presentation

Understanding Lived Experience Through Thematic Analysis in International Social Work

By: Chiamaka Onu Nkire

In this paper presentation, I explore my experiential learning through qualitative analysis in an international social work study examining student exchange experiences between Canada and Germany (Ouedraogo & Wedler, 2019). My contribution centred on engaging with Braun and Clarke's (2006) six-phase thematic analysis process, which involves familiarizing oneself with

the data, generating codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Working closely with interview transcripts allowed me to see how lived experience becomes a source of knowledge in qualitative inquiry, where meaning is shaped through context, interpretation, and reflexive engagement (Barrell, 2020). This analytical experience deepened my awareness of ethical responsibility in representing participants' narratives and highlighted how my cultural and educational background influences interpretation. It also strengthened my understanding of international social work as a field shaped by globalization, cross-cultural exchange, and experiential forms of learning. This presentation synthesizes how participating in thematic analysis supported my academic development and expanded my understanding of knowledge construction in international social work practice and education.

Faculty Mentor: Dr. Valerie Ouedraogo

Oral Presentation

Pathways to Decolonizing Health Care

By: Vishakha Sunger, Makayla Araja, Jensyn Wallan, Amelia Alfred & Rylee Shewchuk

This project responds to a current gap in culturally responsive health services within the campus clinic, Macewan University Health Clinic, where Indigenous cultural practices such as smudging are not presently offered as part of care. Guided by principles of cultural humility, relational practice, and anti-oppressive social work, our group worked to explore ways in which traditional healing practices could be meaningfully integrated into the clinic. Through consultation, research, and advocacy, the project aims to support the inclusion of smudging as a voluntary, culturally relevant wellness practice for Indigenous students accessing health services in campus.

Faculty Mentor: Kealey Dube

Project Display

Sociology

Social Media Portrayals of Racism and Settler Colonialism

By: Shikha Chand

This project aims to discuss the importance of media framing when viewing 'news' on social media accounts, as their posts often contain stereotypes and are structured to allow users to comment on their personal opinions underneath the post. Relating specifically to Canada, individuals who are racialized as Indigenous are often used in social media posts and 'news' accounts involving situations with verbal or physical conflicts. There are many concerns related to recording individuals in public and posting those recordings online without their consent, which highlight that virtual and physical spheres are not separate at all, and that what

individuals choose to post of themselves online can no longer be controlled if filmed without their knowledge or consent. Capturing a moment of an individual's behaviour without grasping the entire context enables commenters to share their racist and settler-colonial ideals online, with the 'news' post becoming a form of 'proof' for their stereotypes about Indigenous peoples and groups. For this project, I will specifically be looking at posts from the social media account Yegwave, viewing their 'news' posts on both Instagram and X, as well as the comment sections on these platforms, highlighting the racist and settler-colonial discourses under posts that discuss Indigenous individuals or groups, including individuals who are racialized as Indigenous by commenters.

Faculty Mentor: Dr. Kalyani Thurairajah

Oral Presentation

Private Property: How Inequality Came to Be, Rousseau and Marx on Man-Made corruption

By: Grace El Tawil

This paper considers Karl Marx and Jean-Jacques Rousseau's critiques on corruption and inequality in society. Focusing on Rousseau's work from a moral and social perspective served as a base for Marx, who developed Rousseau's theories into a systematic and economical manner. Upon identifying key societal issues such as social division, human alienation, and false morality that all serve to sustain inequality, Rousseau through his Discourse on the Origins of Inequality depicts how a natural, independent world turned corrupt through privatization of land. Inspired by this, Marx elaborates this work within the context of the economy between the ruling class and the working class through his Philosophical Manuscripts of 1844 as well as his work alongside Friedrich Engels' in the Manifesto of the Communist Party [1848]. A comparative dialogue between Rousseau and Marx highlights the depth of these issues. This paper follows the argument on why Rousseau's early critique of private property sheds light on Marx's concern with the structural factors that sustain inequality and calls attention to the continued relevance of their ideas in contemporary society.

Faculty Mentor: Dr. Annaliese Pope

Oral Presentation

The Role of New Technologies: Interactions Between Police and Youth in Canada and Ukraine

By: Hannah Galbraith, Jamie Clark, Liza Bielousova & Anhelina Khazaniuk

This research presentation examines police and youth interactions among individuals aged 15–24 in the context of technology and the digital world, drawing on a comparative analysis of Canada and Ukraine. Social media and digital platforms can shape these interactions in both positive and negative ways, ultimately impacting how youth perceive police authority and legitimacy. Police employ tools such as body-worn cameras and social media to promote accountability and build rapport with youth, with the broader goal of altering their mindsets and

behaviours away from deviance. However, as emerging technologies such as artificial intelligence become increasingly integrated into both policing and youth culture, police need to be able to adapt to new potential threats. This research argues that old policing strategies require ongoing revision to remain effective amid rapid social and technological change and challenge police methods by analyzing whether technology is being used for social control beyond the scope of their police role.

Faculty Mentor: Dr. Michael Gulayets

Oral Presentation

An Intercultural Analysis of Homelessness: A Comparative Study of Canada and Ukraine

By: Emily Geddes, Caitlann Kemp, Oleksandra Startseva & Sofia Sadova

Homelessness is a complex social issue that varies across cultural and national contexts. This study explores how homelessness differs in Canada and Ukraine,, with a particular focus on the role disability plays in homelessness. Recognizing that disability includes both visible conditions (such as physical impairments) and invisible conditions (including mental health and cognitive challenges), this research examines how these factors intersect with experiences of homelessness.

Using a literature-based approach, the study analyzes how homelessness is defined, experienced, and addressed in each country. It pays special attention to the influence of cultural norms, government policies, and social support systems, particularly in relation to disability and access to care. The research also considers how homelessness can both contribute to and be exacerbated by physical and mental health conditions.

By comparing these contexts, this project identifies key similarities and differences in the structural and social factors shaping homelessness. Ultimately, the study highlights the importance of cultural context in understanding homelessness and emphasizes the need for more inclusive approaches that address both visible and invisible disabilities within social welfare systems.

Faculty Mentor: Dr. Michael Gulayets

Oral Presentation

Neoliberalism and Identity: Tradwives and the Feminine Self

By: Amber Glover

By using qualitative data gathered from videos on the social media platform TikTok, this study performs content analysis on the data gathered to investigate how the individual nature of neoliberal capitalism impacts how tradwives create their traditionally feminine self. In doing so, this study analyzes the tradwives' portrayal and communication of femininity and individualization through text, audio, and visual data collected. Overall, the findings suggest that tradwives largely define their femininity in relation to men as a rejection of neoliberal pressures.

Faculty Mentor: Dr. Annaliese Pope

Oral Presentation

How Canadian Universities Frame Student Protest

By: Monserrat Zamora Hernandez

Student protests play a crucial role in social movements, with universities serving as important sites of civil resistance and political engagement. Through protest, students build solidarity with the broader political world and can influence public policy. At the same time, universities operate within a neoliberal context that emphasizes risk assessment and institutional neutrality. This creates a tension between the university as a space for critical thinking and its function as a regulated, corporate institution. This project will examine how Canadian universities frame student protest within official student conduct policies. Rather than focusing on protest events or administrative responses, this study investigates how institutional power functions through policy language to define the boundaries of legitimate activism. Drawing on scholarship on protest, neoliberal governance, and managerial technologies, this research will explore how concepts such as safety, civility, neutrality, and disruption are embedded in conduct documents. These concepts may work to depoliticize activism by permitting protest only if it remains neutral. Using qualitative content analysis, I will examine student conduct policies from six Canadian universities. Institutions will be selected through criterion sampling and quota sampling to ensure regional representation across Canada. A coding frame will be developed to systematically identify themes, patterns, and limits placed on student political expression. By analyzing how protest is framed in policy, this project will address a gap in existing literature and contribute to understanding how universities shape the conditions under which student activism becomes legitimate or subject to discipline.

Faculty Mentor: Dr. Kalyani Thurairajah

Poster Presentation

How does the sexualization of young women in the media differ in Canada and Ukraine?

By: Nikki Houde & Emily Nyal

This study compares how the sexualization of young women in the media differs in Canada and Ukraine. The study strives to identify how the industrialization of sexuality, including advertising, influencer culture, and commercial sexual industries, shapes how young women negotiate and interpret these representations in their lived experiences. This study demonstrates, from a sociological feminist perspective, that sexualization is shaped by local context rather than by global forces alone, and the media is a mechanism through which female sexual norms are constructed. The presentation will include a look at global media and youth culture, sexualization in the media, as well as sexualization of young women in media from a Canadian perspective and a Ukrainian perspective.

Faculty Mentor: Dr. Michael Gulayets

Oral Presentation

A Qualitative Content Analysis of Academic Integrity Policies in Alberta Universities: Constructing Misconduct and Institutional Authority

By: Umar Khilji

This project uses Qualitative Content Analysis to examine how academic integrity policies at publicly funded, degree-granting Alberta universities define student misconduct and assign responsibility. Treating institutional policies as primary sociological data, the study asks: How do academic integrity policies at Alberta universities construct student misconduct and responsibility?

Drawing on scholarship on audit culture and academic capitalism, the project situates academic integrity governance within broader institutional pressures around reputation, risk management and legitimacy. A purposive sample of five Alberta institutions' publicly accessible policy documents will be collected from official governance portals and analyzed through a two-pass coding strategy: (1) deductive coding using five core policy elements (access, approach, responsibility, detail, support) and (2) inductive coding to identify recurring patterns in how authority is legitimized through policy language. Analytic memos will support transparency and interpretive rigor.

Because the data are publicly available documents with no human participants, REB approval and consent are not required. Overall, the study aims to clarify how universities' policy architectures frame misconduct as an individual failure versus a structurally shaped issue and what this reveals about institutional power, student support and accountability in Alberta's higher-education landscape.

Faculty Mentor: Dr. Kalyani Thurairajah

Poster Presentation

Discrepencies Between Media Representations of Crime

By: Angelica Koza

The media has been the primary source of news and events worldwide since the emergence of technology, particularly in crime reporting. Crime is glorified in the media, serving as "entertainment" for many to see what the world looks like. However, whether the media is as objective as it claims to be in reporting on crime and sharing information remains questionable. When the media reports on crime, it shapes how we perceive the world, and through selective reporting, the media can reinforce or encourage stereotypes about marginalized groups. This study analyzes crime discourses and portrayals in media using peer-reviewed articles and tweets. This paper finds that the media is a covert, biased source in its crime reporting. This finding paves the way for future research to determine whether there is a direct link between the media and its role in creating and reinforcing biases against marginalized groups within individuals.

Faculty Mentor: Zara Zaidi

Poster Presentation

Student Success- How GPA's impact student success

By: Achethec Lual & Mabel Aigbonohanm

We discuss the importance of student success through looking at the different factors that play into overall performance, in which their fate relies upon the ability to achieve good gpa results

Faculty Mentor: Dr. Kalyani Thurairajah

Poster Presentation

Protection by Policy: Sexual Violence Policies Across Canadian Universities

By: Shelby Lueken

This research poster will be examining five universities across five provinces in Canada. Comparing three provinces mandating their universities to protect their female students from sexual violence through policies, to two provinces that do not have sexual violence policies mandates. The provinces were randomly selected from the criteria of having provincial mandates policies towards the protection of sexual violence and provinces that lack the mandate. The university that was selected from each of these provinces was the province's flagship public university. The findings from this content analysis comparison of university policies ideally will reflect differences in prevention and response within universities that are held accountable by each individual province.

Faculty Mentor: Dr. Kalyani Thurairajah

Poster Presentation

Street Art: A Comparison of Social Perspectives Among Young Adults in Canada and Ukraine

By: Emily Martinak, Ariana Luis, Anastasiia Datsyshyn & Nika Zaiats

This research project examines how street art frames young adults' perspectives on contemporary social issues in Canada and Ukraine. The project aims to gain a comprehensive understanding of the field, from historical to existing views. In doing so, a gap emerged in the existing data, indicating that few sources examine the role street art plays in shaping young adults' social perspectives on contemporary societal stressors. To address this, our methodologies focus on qualitative data collection from a select group of students participating in this field school course, from Canada and Ukraine. The project aims to open new interpretations of the role street art plays in shaping perspectives among young adults.

Faculty Mentor: Dr. Michael Gulayets

Oral Presentation

Negotiating Noise: How Students Manage Noise and Construct Belonging on a Downtown Campus

By: Sam Micka

Urban university campuses generate complex and unpredictable soundscapes that shape students' academic experience and emotional regulation. This grounded theory study explores how students at a downtown university actively manage and interpret noise in both outdoor and indoor environments, and what role strategies such as headphone use and spatial movement play in shaping their experiences of concentration, comfort, and belonging. Data was gathered through naturalistic, non-participant observations conducted outdoors on and surrounding campus, and qualitative surveys collected through Qualtrics. Findings demonstrate that students continuously negotiate sound through embodied responses, technological tools, spatial relocation, and collective attunement. Noise was experienced not as a neutral background but as an intrusive sensory force requiring ongoing labour. Students formed temporary micro-communities through shared reactions to noise disruptions and relied heavily on headphones to create personalized sound bubbles. Negotiating noise emerged as a situated, relational, and inequitable process shaped by resource access, sensory sensitivity, and academic pressure. Implications highlight the need for sensory equity, acoustic design planning, and institutional attention to sound as a component of accessibility in higher education.

Keywords: soundscapes, grounded theory, sensory negotiation, campus noise, urban university, embodiment

Faculty Mentor: Dr. Kalyani Thurairajah

Poster Presentation

The Ear-and-Mind of Protest: Listening, Power, and Collective Resistance

By: Sam Micka

When people think about protest, they often picture what it looks like—crowds in the street, signs, or clashes with police. This presentation argues that protest is just as much about what we hear. Chants, drumbeats, music, and even moments of silence play a powerful role in how people come together, express emotion, and challenge authority. Sound doesn't just support protest—it helps create it.

This talk introduces an Ear-and-Mind approach, which asks us to understand protest by listening rather than only looking. Unlike sight, sound is immersive and unavoidable. It moves through bodies, pulls people into shared rhythm, and makes collective feeling possible. Listening changes how we experience space, power, and one another.

Using examples from Black Lives Matter, LGBTQ+ Pride, and Indigenous land defense movements, this presentation shows how sound helps build solidarity in different ways. In Black Lives Matter protests, chants and shared silence turn grief and anger into collective strength. At Pride, loud music and celebration become a way to claim space and resist shame. In

Indigenous land defense movements, drumming and song are not just protest tools but expressions of culture, responsibility, and connection to land.

Across these movements, sound raises an important question: who gets to be heard, and who is ignored? This presentation argues that listening itself is political. To understand protest—and social change more broadly—we need to pay attention not only to what we see, but to what people are sounding, feeling, and asking us to hear.

Faculty Mentor: Dr. Annaliese Pope

Oral Presentation

Mass media framing & bias: A portfolio study of mass media's role in shaping public perception

By: Brady Newman

This portfolio presentation is designed to showcase the practical and engaging applications of Sociology, and is optimized for consumption by first-year/SOCI 100 students. After defining several key terms, I look at mass media through three sociological lenses: theory (social constructionism, linguistic relativity, etc.), the news (Alberta Teacher's Association strike), and my own life (self-evolution regarding my perception of homelessness).

Faculty Mentor: Dr. Diane Symbaluk

Poster Presentation

Tattoo Surveillance in Context of Russo-Ukrainian War

By: Kateryna Prus

In this work, I analyze the real-life experiences of tattoo surveillance of Ukrainian civilians and soldiers in the Russian captivity, filtration camps, and on occupied territories. I start by introducing the roots of the filtration practices, surveillance, and social sorting during the repatriation of Soviet citizens in WWII, linking it to Chechen wars, and, finally, Russian full-scale invasion of Ukraine. I distinguish the core underlying purpose of the filtration – determine one's loyalty to the power by interpreting their identity and, as a result, deciding for their fate. At the same time, I draw attention to the development and establishment of Russian prisoners' tattoo culture, all of which have different meanings, reflecting on the owner's identity, criminal history, and social status in prison. I argue that the Russian tattoo-meaning system is applied on Ukrainians in the filtration camps as well as in Russian captivity. For my data set, I applied systematic purposive sampling, collecting fragments of the interview with civilians and POWs, as well as news media articles and reports of human rights organizations, which discuss tattoo surveillance. In the analysis, I highlight a couple of recurring themes from the data set: prioritization of tattoos as primary source of one's identity narrative; extensive knowledge and importance of Nazi tattoos; and difference in treatment, based on tattoos. In conclusion, I suggest that tattoos are an important means of communication for Russians, which becomes an important variable in their interpretation of reality.

Faculty Mentor: Dr. William Schultz

Oral Presentation

Beyond the Event: Climate Change as Cultural Trauma

By: Alyssa Rhodes

This thesis argues that climate change constitutes a form of cultural trauma. Rather than appearing as a singular catastrophic event, it emerges as a prolonged, relational, and ontologically disruptive condition. Unlike traditional trauma frameworks grounded in discrete events, climate change unfolds through slow violence, cumulative ecological harm, and ongoing instability that resist narrative closure. Drawing on cultural trauma theory, environmental sociology, disaster sociology, and Anthropocene scholarship, this research examines how climate change destabilizes dominant assumptions about human mastery, separation from nature, and the Earth's passivity.

Central to this analysis is the role of narrative in constructing, mediating, and contesting climate trauma. Using qualitative narrative analysis, the thesis examines how cultural objects frame responsibility, temporality, and agency, with particular attention to how the Earth is characterized as passive, vulnerable, reactive, or active. These narratives are analyzed through moral framing, temporal orientation, and narrative resolution to assess how meaning is stabilized, denied, or left unresolved.

By placing cultural trauma theory in dialogue with disaster sociology and other theories of cultural violence, this project highlights the limits of event-based and human-centred models of crisis. It reframes climate change as a relational cultural trauma involving both human and Earth systems, showing how narrative shapes collective responses and ethical orientations in the Anthropocene.

Faculty Mentor: Dr. Jeffrey Stepnisky

Oral Presentation

Assets, Allies, Friends, and Family: Transgender and Nonbinary Representation in Youth-Rated Animated Television Post-2018

By: Ezra Richards

Amid the rise of anti-transgender legislation in North America, especially against transgender minors, it is crucial to investigate what discourses about trans people are currently circulating in the media, and what messages they send to both trans and non-trans people. The bulk of trans representation on TV over the last few decades has centred tragic narratives over joyful ones, and reified the gender binary more than challenged it. Even if trans representation is present, it has been one-dimensional, stereotypical, and ultimately harmful to trans people. In this study, I used critical discourse analysis to examine recurring transgender and nonbinary characters in recent youth-rated animated television shows available on Netflix and Disney+. Compared to previous trans representation focusing on tragedy and deficit, the characters within my study

were portrayed in significantly positive lights. They were confident in themselves, capable when solving problems and facing down enemies, and fully integrated into their various social groups. Across all the target characters' narratives, love, joy, and support took precedence over rejection, tragedy, and suffering. Positive and holistic trans and nonbinary representation should continue to be included across all forms of media, but especially youth-rated media. Through such representation, trans youth may foster and find joy in their queerness, and audiences may be driven to combat the ever-growing anti-trans moral panic.

Faculty Mentor: Dr. Tami Bereska

Oral Presentation

Conspiracies and Fascist Politics in the United States

By: Micaela Serpe

Through the ideas brought forth in Jason Stanley's book, "How Fascism Works", I have examined various fascist tactics through the lens of the Trump administration. I largely focused on the role of conspiracy theories in Trump's rise to power. I found that conspiracy theories worked in tandem with other fascist political tactics, including law and order, anti intellectualism, and sexual anxiety. For this presentation, I will focus on the role that sexual anxiety, the mythic past, and conspiracies play in fascist politics. I will use conspiracies surrounding Hillary Clinton as an example of how these concepts work together when fascism is rising.

Faculty Mentor: Dr. Susan Raine

Oral Presentation

Media Framing on Indigenous Men and Crime

By: Jasmine Shillinglaw

Within Canada, there are high rates of discrimination reported against Indigenous people and an over-representation of Indigenous men in incarceration, particularly in Alberta and Saskatchewan. Media portrayal shapes society's perception of various racialized groups, which is important for awareness and mobilization to dismantle colonial structures. Thus, examining how Indigenous men are portrayed in the media regarding crime could be significant in identifying possible types of racism and policy implementation. Utilizing Critical Discourse Analysis (CDA), this study analyzed news articles by major news media outlets; the findings revealed more subtle, indirect associations of violent crime, gang-related crime, and drugs with Indigenous men.

Faculty Mentor: Dr. Kalyani Thurairajah

Oral Presentation

The Limitations of Accountability: Framing Institutional Responsibility in Canadian Undergraduate University Sexual Violence Policies

By: Madeline Stoik

This research explores the ways institutional responsibility is framed through sexual violence policies at primarily undergraduate Canadian universities. A content analysis was conducted on five top-ranked primarily undergraduate Canadian universities for 2026 that appeared in Maclean's magazine (2025). The five sexual violence policies were analyzed for a framework determining institutional responsibility. Three prominent themes developed, including operational and formal language, proactive/preventive measures, and support measures. Findings included that primarily undergraduate Canadian universities developed sexual violence policies that limited responsibility, and instead framed policies with a perception of the institutional responsibility. This research supports previous findings on sexual violence policies from universities being conditional and overly structural in the framing of institutional responsibility.

Faculty Mentor: Dr. Kalyani Thurairajah

Poster Presentation

The “Leaky Pipeline” and Inequality in Higher Education

By: Mary Templado

Although women now outnumber men in Canadian undergraduate programs, their advancements and representation in graduate programs such as postdoctoral sharply decline compared to men. This “leaky pipeline” in academia is also not a uniform gendered issue, as people who are racialized as not white also face combined effects of systemic racism, sexism and other structural barriers in academia. The policy analysis will examine how the UofA’s Access, Community, and Belonging (ABC) Strategic Plan 2025 and the policies and procedures listed under the Faculty of Graduate & Postdoctoral Studies fail to properly address this phenomenon and that a new intersectional policy that explicitly emphasizes accountability and systemic reform is needed.

Faculty Mentor: Dr. Kalyani Thurairajah

Poster Presentation

An International Study of University Students' Perceptions of Information Disorders and Their Formations of Trust in Online Media

By: Natasha Toronchuk, Anna Khabevych, Oleksandra Khilchevska & Alexa Yacyshyn

This is a collaborative research project conducted by students from Ukrainian Catholic University in Lviv and MacEwan University in Edmonton that explores the relationship between information disorders and trust in various online media platforms and applications. The growth of online news sites and social media has enabled information to spread at an incredibly rapid rate. This has the benefit of giving people increased control over staying connected and informed about news, events, and information from within their personal social circles to across

the globe. However, this also means that misinformation, disinformation, malinformation, and propaganda (collectively known as information disorders) have become increasingly prevalent in the news and information people consume. Using qualitative research methods, this study examines how university students' perceptions of the different information disorders across various forms of online media affect their trust in these media sites and applications, and the effects this has on their ability to stay informed about current events. This presentation will cover the initial stages of the research project that have been completed, including the literature review, thesis question, and methodology, as well as an overview of the data collection and analysis that will happen over the next two months.

Faculty Mentor: Dr. Michael Gulayets

Oral Presentation

Why The Bourgeoisie Loves Christianity

By: Liana Weighill

Karl Marx describes religion as “the opium of the people” and explains the role religion plays in numbing awareness of inequality under capitalism. This paper argues that Christianity perpetuates a false consciousness which sustains capitalism. Religion has normalized suffering, obedience, and hierarchy. Throughout this paper, I explain how much of this is due to Christianity and how Christianity discourages revolutionary politics by framing it as immoral. I use the contemporary example of the US to show how Christianity has reinforced capitalism. This paper encourages people to break free of false consciousness so that systemic change can occur and lead to a more equitable society.

Faculty Mentor: Dr. Annaliese Pope

Oral Presentation

I put in work, may have done a little dirt—the love and the respect that I will get is what it’s worth”: Street capital and the legitimization of status in graffiti culture

By: Matthew Zaborniak

This study examines how status and legitimacy are produced within graffiti-writing culture, challenging dominant portrayals of graffiti as mere deviance or vandalism. Drawing on semi-ethnographic methods, including participant observation and ten in-depth interviews with graffiti-writers in Western Canada, the research explores how reputation is achieved. Framed through Bourdieu’s theory of capital, Sandberg’s concept of street capital, and symbolic-interactionism, the study conceptualizes graffiti-writing as a structured social field governed by internally defined norms, values, and hierarchies. Findings reveal that status emerges through a patterned, interactional process consisting of five key mechanisms, identifying that street capital is not simply earned through individual skill or risk-taking, but is collectively produced and validated through ongoing social interaction. Reputation functions as the primary currency of the field, transforming embodied practice into symbolic status. By identifying this process, the study contributes to cultural criminology and street culture scholarship, demonstrating how legitimacy

and hierarchy are constructed in informal, illicit social worlds through shared meaning, performance, and peer recognition.

Faculty Mentor: Dr. William Schultz

Oral Presentation

Studio Arts

threads

By: Berg Felsing

Threads is an art piece that focuses on the issues of ethical consumerism, consumer culture and habits, the systems and faults of capitalism, the influence and affect consumerism has on us and our culture, as well as diy and punk ideals that fight against these problems. The piece itself is a jacket reflecting on advertisements, subliminal messages and control through our spending, fast fashion, and wasteful modern practices, as well as diy and punk fashion. The piece considers this through the images on the jacket, the materials and methods used to make it, the branding and imagery of it, as well as it's features and design.

Faculty Mentor: Cindy Baker

Project Display

Using Natural pigments For Dying textiles

By: Carolina Gonzalez

This project of using natural textile dyes and hand dyeing methods was inspired by an interest in caring for the environment and dyeing with natural pigments using traditional methods.

Carolina is a multidisciplinary artist originally from Mexico. She is in her third year of the BFA Studio Arts program at MacEwan University. She received funding from the Student Undergraduate Research Fund from the Faculty of Fine Arts and Communications for the purpose of developing this project.

Faculty Mentor: Kerri-Lynn Reeves

Poster Presentation

Fundamentals of Ceramics

By: Deanna Gronlund

My goal with this project was to broaden my practical and theoretical skill and knowledge in ceramics by taking a pottery class. In taking a pottery class I benefited from the guidance of a knowledgable experienced ceramist instructor in a full working studio space in community with other artists.

Alongside the practical skill building in a studio I dived into researching the history of ceramic craft.

Faculty Mentor: Kerri-Lynn Reeves

Creative Installation

A Sew-cialist Utopia: Constructivist Textiles for Revolutionary Russia

By: Vitya Kachuk

Following the 1917 October Revolution, the Bolshevik government committed itself to modernizing pre-industrial Russia. Although the Bolsheviks had practical reasons for advancing Russia's industrial base, it was of great ideological importance to support the proletariat responsible for maintaining factories and other industrial infrastructure. Central to this project was the belief that art must be accessible to and understood by all members of the working class. Within these ideological bounds, Russian Constructivist artists and theorists developed the concept of the "artist-productivist," rejecting the individualist model of the artist-craftsman in favour of collective factory production. Collaboration between artists and factory workers was integral to the movement's desire to produce high-quality utilitarian objects for the socialist collective. The purpose of this presentation is to explore the concepts that shaped Constructivist principles, and how their textile art functioned as ideological instruments designed to encourage a socialist utopia.

Faculty Mentor: Dr. Robin McDonald

Poster Presentation

A Clean Sheet

By: Phoebe Paul

How does our perception of our morality affect how we create? Through engaging with academic papers, artistic references, and personal experiences, this research-based multimedia artwork project looks to engage with concepts of morality and explore impacts on art creation as a means to also examine the larger political and social ideologies we engage with. Artistic work often forefronts social change; this research based arts project will provide visual engagement for the audience to reflect on their personhood and perceptions, hopefully providing a space to consider one's own impact with regards to specific themes questioning common assumptions of institutional academia, Fine Arts practices, and social issues.

Faculty Mentor: Cindy Baker

Creative Installation

Theatre

Stage Machinery in Theory and in Practice: An Exploration of the Drop and Slide Trap Door

By: Milo Ellis

My project is to design and develop a drop-and-slide trap door, which operates similarly to a car sunroof mechanism, with a lift that fits within the MacEwan University Triffo Theatre trap room, the space directly under the stage of the theatre. For feasibility reasons, the project will focus on the technical and practical aspects of creating this system rather than a full-scale construction. The project would result in a working scale model of a drop-and-slide trap.

My objectives include researching existing trap-door mechanisms and theatre safety standards to inform the creation of detailed drafts and construction drawings that clearly illustrate how the trap door would be built, assembled, and integrated into the existing theatre space. Another objective is to develop a detailed cost estimate for building and installing the trap door with the Triffo. Finally, I will build a motorized scale model of the trap door with motion control and associated safety protocols, to serve as a proof-of-concept. This working model will demonstrate how the mechanism operates and help validate the proposed design's feasibility, safety, and effectiveness. Ultimately, I hope to demystify the machine's operation and theoretical construction; much of my stagecraft education is spent discussing theoretical systems that we do not have the opportunity to experience firsthand.

Faculty Mentor: Scott Spidell

Project Display