

Augustana Showcase – April 18, 2024

LIST OF ABSTRACTS

(Oral followed by Poster – ALPHABETICALLY by name of class, and then first initial of first author)

ORAL PRESENTATIONS

Name	Presentation For	Title	Abstract (if applicable – not all courses have one)
AUART 490	Makenna Verma	Distortions of the Mental Body	Throughout the semester, I delved into the mind's capacity to distort conscious perception and awareness of the body, which I wanted to explore through a series of reflective works derived from my own personal encounters with these sensations. Focusing on internal reflection, I adopted a dual approach to the project: first, to examine the disconnection experienced between a 'hyper-aware' limb and the rest of the body, and second, to explore the mental distortion of the perceived weight or density of my limb(s). With such vivid sensations occurring within my body, I proposed a series of works rendered in oil paint, a medium that allows for greater artistic interplay between realism and the distortion of abstraction. My presentation aims to encapsulate the artistic process, starting from initial ideas and preliminary small paintings, all the way to the final series of works that focus on the mental distortions derived from my personal experiences.
AUBIO 219	Duaa Farooqui, Cassandra Kanters, Chad Nichol	Tropical beetle colouration: assessing colour patterns and mimicry	Tropic beetles – such as those originating from the Philippines – have a plethora of different colour combinations and patterns. A vast number of different species of beetles can be present on a specific island and thus, mimicry rings – both composed of Mullerian and Batesian mimicry – can form. Therefore, our research endeavours to specify certain colour patterns and contribute to predetermined mimicry rings by assigning specimens to them. In this study, insect specimens – largely originating from the Pachyrhynchus and Metapocyrtus genera – were cataloged, rehydrated via a hydration chamber, plated by pinning them in the Coleoptera standard position, and then photographed. In our study, we were able to specify common characteristics of a polka dot pattern among Coleoptera. In addition, using colour and pattern analysis, two types of patterns – one with spots and one with stripes – were analyzed from Philippine beetles and assigned into proposed mimicry rings. As only starting to engage in experimental biology, our research may be extended in a directed study in our third and fourth years.
AUBIO 319	Jinxuan Cui	Does habitat quality predict reproductive investment in a population of declining	Global environmental change is pushing species to the limits of their adaptability. Some of the most dramatic landscape changes are occurring in agricultural environments and many species occupying these ecosystems are now rapidly declining worldwide. Avian aerial insectivores feed primarily on

		tree swallows (<i>Tachycineta bicolor</i>) in Alberta?	<p>flying insects and are often associated with agricultural environments. They are also rapidly declining across North America. The reasons for their declines are not fully understood but deteriorating habitat quality on their breeding grounds is often cited as a main contributor of their continued decrease. Here, we present the result of a study we conducted in a population of tree swallows (<i>Tachycineta bicolor</i>) breeding across a natural-agricultural gradient in Central Alberta. While several studies have looked at the link between habitat quality and reproductive success in species breeding in agricultural environments, including tree swallows, most work have focused on reproductive success and not investment. Yet, investment, particularly during the early stages of reproduction, is well-known for having important effects on survival. The goal of our research was to test whether there is a link between habitat quality and early reproductive investment. To do so, we collected data on incubation behaviour of tree swallows nesting at two sites differing in their habitat quality: one site located in a natural area and a second site located in an agricultural area.</p>
AUBIO 319	Katie Bergen	Choosing the lesser of two weevils: mimicry in the weevil genus <i>Polycatus</i> .	<p>My directed study covers my work on the beginning stages of a study directed by Dr. Terzin focusing on participation in mimicry rings by weevils in the genus <i>Polycatus</i>. <i>Polycatus</i> is a small, understudied genus of subfamily Entiminae (short-snouted weevils) that is endemic to the Philippines. Despite receiving some much-needed attention in the last several years, it is typically overshadowed by fellow members of the Entiminae in studies of mimicry. This project aims to identify and describe weevil mimicry rings by comparing the patterns of species coloration and spatial distribution, specifically highlighting mimicry rings that include species within <i>Polycatus</i>. This topic builds on my previous volunteer work and the directed reading that I undertook in the Fall of 2023, which focused on the general dynamics of mimicry rings formed by weevils in the Philippine islands. I will be continuing work on this project in the 2024/25 academic year.</p>
AUBIO 419	Ayra McCarthy	Cryptic Comrades: Deciphering Mimicry Networks in Ukrainian Hemipteran Species	<p>Mimicry is an act performed by organisms for the purpose of resembling someone or something else, with the goal of deriving a fitness benefit from the shared appearance. A deliberate resemblance between two or more organisms in a community is known as a mimicry ring. Typically, mimicry depends on aposematic coloration that can be easily associated with an anti-predator response present in an individual. The benefit derived from this relationship prompts the development of mimicry rings, which are typically comprised of different kinds of mimicry. The coexistence of species within these mimicry rings underscores the adaptability and complexity of these survival tactics, which continue to be a subject of great interest for ecologists and researchers. While mimicry does exist in many species, it is most commonly observed in insect communities. This research, in particular, will focus on the order of insects, Hemiptera, more commonly known as true bugs and aims to investigate the existence of a potential mimicry ring in Europe.</p>

			<p>The proposed mimicry ring will be established using similarities between the physical characteristics of hemipteran insects, in addition to spatial and temporal overlaps throughout their geographic distribution. Currently, there is little literature addressing the existence of species mimicry rings in Europe; thus, this study uses specimens collected from regions within and proximate to Ukraine, and the results will contribute to the current niche field of literature.</p>
AUBIO 419	Lucille Wang	<p>The association between wildfire smoke and reproductive success in a declining population of tree swallows (<i>Tachycineta bicolor</i>) in Alberta</p>	<p>Human-induced climate change is one of the major threats facing the planet today. Extreme weather events are expected to become more common and severe as the climate crisis deepens. Wildfires are an example of such extreme weather events and they are increasingly difficult to ignore. In 2023, wildfires burned millions of hectares of forest and destroyed communities around the world, including several here in North America. While we are too familiar with the direct effects of wildfires (e.g., number of lives lost) we remain largely in the dark about their indirect effects. For example, we know close to nothing about how wildfire smoke affects fitness. Part of the problem stems from data shortages. Extreme weather events are typically rare and detecting their effects is difficult without a large historical dataset, which is often lacking for most species. Here we present the result of a study aimed at investigating the association between wildfire smoke and fitness in a population of tree swallows (<i>Tachycineta bicolor</i>) breeding in central Alberta. We gathered data on tree swallow fitness by measuring their reproductive success, which we extracted from a historical dataset collected from these birds over the past 10 years. Then, we linked these data to wildfire smoke indices collected from the same area over the same time. These results are part of broader research looking at how individuals cope with anthropogenic challenges.</p>
AUBIO 419	Makayla Clarke	<p>Methods on improving the quality of functioning of an undergraduate research lab</p>	<p>At Augustana, we are fortunate to have numerous opportunities for undergraduate students to gain research experience throughout the year. Several professors take on research students, who earn credits through a directed study. This presentation will reflect on the knowledge I acquired through my directed study and discuss ways to enhance the functioning of an undergraduate research lab. Through this course I dedicated a portion of my time to learning about the process of preparing, spreading and photographing tropical beetles and butterflies. This research facilitated my inquiry into the functioning of an undergraduate research studio as well as expanded my knowledge in the field of mimicry. Through extensive research into administrative requirements of research studios and biology laboratories, a new hazard assessment and studio inventory were designed and implemented, as well as outlining a protocol regarding specimen infestation. A large component of research studios is public relations. Along with improving the quality of functioning of the laboratory, a component of my study focused on increasing the visibility of research. I created assessment forms and interviewed current research students to identify areas for improvement and understand their current research projects. Additionally, I will provide a brief</p>

			overview of the website I developed to enhance the visibility of research and improve external relations for the research studio.
AUCHE 390	Emma Fraser	Effect of different teas on gold nanoparticle synthesis	
AUCSC 395	Anjola Aina	Parallelizing the Needleman-Wunsch Algorithm using OpenMP and OpenACC	This study explores parallelization strategies for the Needleman-Wunsch algorithm, a fundamental tool in bioinformatics for global DNA sequence alignment. With OpenMP directives, the algorithm is parallelized on the CPU, with a focus on handling data dependencies efficiently. Additionally, the potential of parallelization on the GPU using OpenACC is also discussed. The anti-diagonal approach is examined and compared for its effectiveness in improving runtime performance with the serial implementation of the algorithm. Through testing and analysis, this study finds a noticeable speedup is achieved between the serial implementation and parallel implementation. The study addresses some of the limitations that affected the research, such as lack of computational power, and a restriction on the maximum number of threads. The study concludes by highlighting the importance of parallelizing the Needleman-Wunsch algorithm, and the need to conduct more research and ultimately exploit the GPU to potentially parallelize the algorithm further, achieving an even greater speedup.
AUCSL 361	Rion Joshy, Angel Nwaka, Jessica Schultz, Brook-Lyn Sherbo, EmmaLiese Thomsen, Taylor Tizzard, Stanislav Vasyliuk	The Other Side of Learning: Observation and Application	Being a student mentor is a unique role within the Augustana experience that offers a new way to learn about yourself as a student, apply your own knowledge, and attend to diverse questions and learning styles. Mentorship offered us an informed opportunity to explore both sides of the classroom. As students ourselves, we understand diversity, and relatedly, that different learning approaches are crucial in fostering a deep understanding. The role reversal from student to mentor is surprising. It encourages a reevaluation of our own understanding of the learning process. It leads to questioning how we absorb information and how we participate in active learning. We learned alongside the students, but in a different capacity. This has opened our eyes to seeing learning beyond schooling to how we apply our own learning. We bolstered our confidence: it takes confidence to be responsible for information on which students will be assessed.
AUENG 401	Kailyn Hofman	The authority of Christina Mirabilis: Diagnosing the physiological ailments which catalyzed her relationship with Christ	Thomas de Cantimpré's Vita of Christina Mirabilis can be analyzed as a case study. By examining the mystic's life through a medical lens, it becomes clear that she displayed unique symptoms, indicative of at least one, but most likely a combination of many, endocrine disorders: a large prolactin-secreting pituitary tumor (a prolactinoma), primary hypothyroidism (likely as a byproduct of the pituitary tumor), and potential diabetes insipidus. However, an exclusively scientific lens is wrongly dismissive of the lifestyle Christina adopted in response to her illness. A solely clinical approach to her diagnosis not only overlooks the social stigma and isolation Christina faced as a result of her strange somatic afflictions and erratic behavior but also fails to account for the role her illness played in her relationship with God and the impact of

			her illness on her clerical authority. Her endocrine disorder permits her to explore divinity through avenues not available to others. Christina embraces these then, unexplained symptoms as a form of adventitious imitatio christi which catalyzed Christina's connection with God and led her to seek solace in Christ's passion and her faith as a source of explanation, comfort and resonance, permitting her to ascend the confines placed on her authority as a woman.
AUENG 401	Katelynn Baska	Franciscan spirituality and iconography with relation to St. Angela of Folingo and Mary Magdalene	
AUHIS 261	Dakota Ekelund, Joanna Nicolas, Gabriel Osborne, Leah Peters, Winston Ross, Miranda Suteau	Canada's Abolishment of the Death Penalty: Canadians' Public Discourse	On July 14, 1976, the Canadian House of Commons passed Bill C-84 on a free vote and joined the number of growing nations abolishing the death penalty for all civilian crimes. The final House of Commons debate on capital punishment was held in 1987 with 148-127 votes against the return of the death sentence. Through an analysis of various newspapers, radio shows and television shows, we documented Canadians' discourse during 1960-1976. We first divided the country by provinces to gather our sources, then split the arguments by support of retention (maintaining the penalty) or abolition (removing the penalty). While some provinces strongly leaned into one argument, others were divided. By examining letters to newspaper editors, we captured the general public's opinion on capital punishment and the discourse surrounding its abolishment.
AUHIS 401	Bohdana Melnyk	Computing Through the Lens of Marxism-Leninism: How Cold-War Era Ideology Influenced IT Development of the Eastern Bloc	
AUHIS 401	Stanislav Vasyliuk	Forgotten in silence: Japan, Imperial Family, and the legacy of Tokyo Trials	
AUIDS 390	Mariana Castillo Arce	Max Praed and Harry Mann in Light Of The "Official" Account: Reporting Murders in Western Australia.	The abstract will be add later
AUMAT /PHY 480		Overall abstract: The theme of this session is Physics, Mathematics, Morality, and Madness. The titles of these team presentations are derived from the chapter titles of When We Cease to Understand the World, a novel of historical fiction based on the lives and work of well-known physicists and mathematicians, including Bohr, de Broglie, Einstein, Grothendieck, Haber, Heisenberg, Schrodinger, and Schwarzschild. This novel, short-listed for the 2021 International Booker Prize, and these presentations explore physical/mathematical ideas, the ethical issues they raise, and the emotional/mental turmoil they can cause their creators.	
AUMGT 399	Anjola Fadayomi	Augustana Software Tutorials: A viable tool for learning?	
AUPHY 491	Calliope French	Levitating oil with electricity: Measuring the quantized charge of an electron through oil particles	The Millikan Oil drop experiment is one that is infamous for its hours spent collecting data. In this presentation, I will explore some of the history and controversy around the oil drop experiment, and will present my findings on the elementary charge of an electron. It will go through the procedure, the

			data gathered, and perhaps some interesting visuals of the levitating drops as they fall up and down over time and with applied voltage.
AUPHY 491	Rida Ahmed	Measuring the speed of light: Foucault's method	The speed of light was measured using the Foucault method, noted for its precision over other historical approaches. The significance and history of this fundamental physical constant is described, including the measurement methodologies preceding the Foucault method. The Foucault method and the results of this experiment are described in detail.
AUPOL 401	Joanna Marris Nicolas	The Legend of the One Role You Never Play: A Gender Analysis on The Legend of Zelda	In "The Legend of Zelda" (1986-2023), Nintendo shifted from using harmful gender stereotypes to presenting female characters as well-rounded rather than an end-game trophy. Still, gender roles and stereotypes exist within this fictional world. My analysis is separated into two studies: (i) a literature review sorting genders and roles of primary characters by referencing official texts like the "Hyrule Historia" (2011) and "The Legend of Zelda Encyclopedia" (2018) and (ii) a cutscene analysis of how characters interact and with whom by studying the twenty main games. This research analyzes the series' progression of representation through qualitative analysis: are there more female characters than Princess Zelda, how are they portrayed, and what is their significance to the game's story? While the franchise's legend and narrative follow a female-centred mythology, men remain the protagonists, even in the 2023 version of Hyrule. Although "The Legend of Zelda" has adjusted its gender representation over the years, I argue it remains a male-dominated franchise.
AUPSY 499	Nicole Roy	Assessing Rural Values, Ideals, and Media Consumption	Popular media often portrays rural life and values as distinctly different from urban life. While some research has examined urban norms and values, very little research has examined whether there is a distinguishing pattern of norms, values, and morality present in rural dwellers. The sources of these presumed rural psychologies need more investigation. Using a theoretical approach to media cultivation, I conducted an exploratory study of rural norms, values, and morality. To determine if there is an underlying media basis to the depiction of typical rural morals and values, I first conducted an exploratory media content analysis of multiple movies and television shows to see how prominent media sources (e.g., popular television shows and films) portray the typical North American rural lifestyle. Next, I surveyed a sample of 80 rural and urban dwellers about their media use and places they frequent as well as questions assessing their morals and values to determine if media cultivated a common normative pattern of attitudes in rural residents. Results and implications of the survey results will be discussed.
AUPSY 499	Octavia Mashabane	Exploring Seizure Activity In Female Rats Across Phases of the Oestrus Cycle Following Intracerebral Haemorrhage	Stroke represents a significant global health concern, particularly impacting women due to their extended life expectancy and the detrimental effects of loss of oestrogen's post-menopause. Seizures are a common complication of intracerebral haemorrhage (ICH), or a bleed in the brain, affecting approximately one-third of ICH survivors. Sex disparities in seizure activity have been noted, with ovarian hormones such as estradiol (E2) being

			<p>epileptogenic.. Although rodents are commonly utilised to study ICH and the influence of female sex hormones on seizures, investigations into the role of ovarian hormones on seizure susceptibility following ICH remain scarce. Therefore, this study aimed to identify if seizure activity post-ICH would be impacted by the phase of the reproductive (estrous) cycle in female rats. We employed vaginal cytology to track phases of the estrus cycle and compared seizure incidence and characteristics among rats categorised into low (n=3) and high E2 groups (n=3) following an ICH induced by injecting a bacterial enzyme (collagenase) that breaks down blood vessels in the brain of rats. Continuous monitoring of electroencephalographic (EEG) activity via telemetry probes was conducted for 5 days post-stroke, and neurological assessment was done to determine any influence of seizure activity on outcome. Seizures were observed in all rats within the high E2 group between 16 and 89 hours post-stroke, with durations ranging from 6 to 56 seconds, predominantly observed contralaterally. Seizure activity occurred in 2/3 of rats within the low E2 group between 9 and 88 hours post-stroke, with durations spanning 5 to 42 seconds, primarily contralateral in nature. The phase in which rats had the most seizures was during the high E2 phase. We found no significant difference in lesion volume or neurological scores between groups ($p>0.76$). This pilot study may suggest that post-ICH seizures are more predominant during periods of High E2. Further research needs to be done to validate our results. Our findings hold potential implications for enhancing post-stroke care and addressing sex-specific concerns, thereby advancing our understanding of post-stroke complications, particularly in women. Furthermore, there exists potential for female sex hormones to serve as biomarkers for post-ICH seizures, warranting further investigation.</p>
AUPSY 499	Rowan Corry	How strong are sexual health norms? A comparison of 2 years of undergraduate sexual health perceptions	<p>Undergraduate students' views of sexual health are often shaped by the opinions and beliefs of those around them. Yet, little research has examined if sexual health norms are strong and consistent across different cohorts of students. To address this gap, in the present study, I will directly compare the responses of two different cohorts of first-year students at Augustana to determine if there are any significant differences in sexual health knowledge, behaviours, attitudes, and perceived norms. If sexual health norms are strong and tightly regulated, there should generally be little difference in key variables between the two cohorts. A pattern of many significant differences between the two groups would indicate the existence of more loosely regulated norms that reflect the unique perspectives of each separate cohort. The results of this comparison and its implications for understanding the nature of sexual health norms will be discussed.</p>
AUREL 263	Gurmehar Kaur Bajwa	From borders to belonging: navigating identity, culture, and home in a globalized world	<p>In "From Borders to Belonging: Navigating Identity, Culture, and Home in a Globalized World," I dive into the heart of finding where I belong in a world that's constantly changing. It's a personal journey that starts with my family's history, marked by the India-Pakistan partition, and stretches into my own</p>

			experiences of growing up in India and moving to Canada. This isn't just about history or migration; it's about the personal quest for identity amidst the vast landscapes of tradition and modernity. As I trace my roots back to Amritsar and forward to my life in Canada, I confront the challenges of feeling like an outsider and the journey to embrace my heritage and future simultaneously. This presentation is an open invitation to explore what 'home' truly means when you're standing at the crossroads of cultures, history, and personal growth.
AUSSC 400	Jessica Andreas	Perceptions of Sexual Health Education in Alberta	
AUSSC 400	Nate Goetz	Why so extreme? A critical examination of academic literature on the internet and Canadian right-wing extremism.	This interdisciplinary study examines how scholars study the internet's role in the rise of right-wing extremism in Canada. Thirty academic articles found on the University of Alberta library search engine from 2020 to the present were analyzed using a grounded theory coding approach (Urquhart, 2019). 2020 was chosen as a benchmark as COVID-19 led to more people using social media and extremism being spread online. Most of the articles are social media content analyses that label people and their posts as "extremist" by association with the post's page rather than what the individual says. Scholars also use an inconsistent definition of what right-wing extremism is, which can lead scholars to label moderate views as extremist. While extremist communication online has been well-researched, scholars have failed to talk to extremists and gain a deeper understanding of their beliefs. I argue that more ethnographic research must be done to get a better understanding of why people fall victim to extremist views and that according to labelling theory (Becker, 1963), labelling people as right-wing extremists may cause them to be more extreme.
RA presentation	Jocelyn, Kublik	The Significance of Body Size in the Wildlife Trade: A Comparative Analysis in Mammals	The trade in wildlife is a prominent cause of biodiversity loss in the Anthropocene. Extensive research has been conducted to understand how certain desirable species traits may contribute to their tradability. As large-bodied species are also often highly traded, one of the most researched desirable trait is body size. Yet, body size is a term that surprisingly lacks consistency in the literature, often used as a "catch-all" in place of body mass and body condition. These terms are, however, not synonyms, and using them as such may lead to inappropriate conclusions. Here, we test the assumption of synonymy between body mass and body condition as applied to the mammal trade.
RA Presentation	Kari White	A study on invertebrate abundance as a measure of food availability for the declining tree swallow (<i>Tachycineta bicolor</i>)	Avian aerial insectivores are a guild of birds facing a large widespread population decline whose population is impacted by increases in human activity and agriculture. This group consists of birds who feed on invertebrate prey while in flight. Studying the abundance of invertebrates in both agriculturally intense and natural environments is therefore very important in understanding the food conditions aerial insectivores are facing. In agricultural intensive settings, pesticides and a lack of wild vegetation for pollinators can

			<p>both result in a decreased abundance of invertebrates, while pesticides may also have secondary effects on aerial insectivores who consume insects that have been exposed to pesticides. Agricultural land conversion is not the only issue facing invertebrate populations, the global decline of insects is likely also due to a myriad of other factors affecting their natural habitat such as deforestation and urbanization. This study aimed to determine the extent to which the drastic decline facing tree swallow populations is due to a decrease in abundance of their food source, insects. A decrease in the population of flies within the suborder nematocera is especially notable because these flies provide tree swallows and other aerial insectivores with fatty acids that are crucial for the breeding success of aerial insectivores such as the tree swallow.</p>
Student research	Halden Nicolajsen	Reproducing the Calotype process: insights and opportunities.	<p>Amidst a growing divide between the arts and sciences, this project has connected art history with chemistry. This project started when I took a history of photography course which covered the invention of the calotype, one of the first photographic processes. Among the course materials, there were many examples of historical photograph, but not a calotype among them due to their rarity. Because of my experience in film photography, I expressed my interest to my professor in making one myself. I was put in touch with a chemistry professor and lab technician, and after 20 hours of work, I had produced a calotype. This research has provided me with valuable insights into the calotype process, created a connection between the arts and sciences, and has opened a window to future interdisciplinary research.</p>

POSTER PRESENTATIONS – Only listed for those that provided an abstract

Name	Presentation For	Title	Abstract (if applicable – not all courses have one)
AUBIO 112	Class Abstract	Class overview	In the AUBIO 112 lab, student teams designed and conducted experiments that tested the response of pillbugs (<i>Armadillidium vulgare</i>) to biologically relevant stimuli. This year, students explored the following stimuli: light intensity, light colour, temperature, moisture, habitat substrate, and vibrations. Come by the poster session to hear what the 17 student teams found out about pillbug response to stimuli!
AUBIO 419	Kyle Bergquist, Berenda Helmus	Comparing Soil pH of Well Pads and Reference Sites	As part of the Ecological Recovery Lab here at Augustana, this study aims to determine the effects that well pads have on the pH of soils. To be specific, this study will compare the soil pH of reclaimed well sites with adjacent reference sites to help determine the effectiveness of oil well reclamation and provide findings to better the reclamation process in the future.

Name	Presentation For	Title	Abstract (if applicable – not all courses have one)
AUIDS 301	Ayra McCarthy, Tanner Manz, Lane Kirk, Ashley LaValley, Emma Gullackson	Improving Drought Preparedness and Resilancy in the city of Camrose	<p>To gain insights into the significant climate vulnerabilities that could affect the residents of Camrose, the City of Camrose undertook a comprehensive Climate Vulnerability and Risk Assessment (CVRA) in 2022, supported by funding from the Municipal Climate Change Action Centre. This assessment highlighted extended heat waves as the foremost risk, followed by prolonged drought, high winds, hailstorms, and escalating cooling and heating expenses. By pinpointing these critical climate risks, the CVRA provided valuable guidance for the City of Camrose to proactively address and manage these challenges, safeguarding both the local economy and community.</p> <p>Over the past 14 weeks, our team of five students has collaborated closely with Dr. Greg King and the City of Camrose’s Department of Community Development to craft a deliverable focused on short-term strategies to bolster resilience against drought. Our deliverable encompasses extensive research and various solutions aimed at mitigating the adverse effects of drought on the community. The deliverable we are developing has a specific focus on making changes to improve the cities existing drought policy in addition to developing an action plan to be implemented during periods of drought.</p> <p>At the upcoming Augustana Showcase, attendees will have the opportunity to witness the key recommendations our group proposes for enhancing the city's climate resilience and readiness in the face of drought.</p> <p>At the Augustana Showcase you will be able to observe the major actions our group suggests the city enact to improve their climate resilience and preparedness to drought.</p> <p>We look forward to discussion with students, staff, faculty and community members around our final project</p>

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AUIDS 301	Brigette Bouma, Eylul Evren, Carter Kovac, Miranda Suteau, Ethan Yodogawa	Battling mother nature: a series of how-to guides	<p>To develop an understanding of the largest climate vulnerabilities and risks that could impact the citizens of Camrose, the City of Camrose completed a Climate Vulnerability and Risk Assessment (CVRA) with funding from the Municipal Climate Change Action Centre in 2022. This report identified the highest climate risks as extended heat waves, followed by prolonged drought, high wind, hail, and increased cooling and heating costs. The CVRA identified specific actions that the City of Camrose should begin to implement to address and manage these high priority climate change risks affecting the local economy and community.</p> <p>Over the past 14 weeks, ten student teams from AUIDS 301 with Dr. Greg King worked directly with the City of Camrose’s Department of Community Development to develop deliverables that addressed short-term actions to build resilience in the face of climate change. Students in the course gained a greater understanding of the role and impacts of climate resiliency in society, and the scientific, human and social responses to these resiliency challenges.</p> <p>Our team focused on better preparing Camrose citizens in the face of extreme weather events that are becoming more frequent due to climate change. We look forward to discussing what our project means to us and what we hope it brings to Camrose!</p>

Name	Presentation For	Title	Abstract (if applicable – not all courses have one)
AUIDS 301	Connor Batog, NavjotSingh Juneja, Taylor Roberts, Andrew Thomas, Ryan Wyzykoski	Water conservation education	<p>To develop an understanding of the largest climate vulnerabilities and risks that could impact the citizens of Camrose, the City of Camrose completed a Climate Vulnerability and Risk Assessment (CVRA) with funding from the Municipal Climate Change Action Centre in 2022. This report identified the highest climate risks as extended heat waves, followed by prolonged drought, high wind, hail, and increased cooling and heating costs. The CVRA identified specific actions that the City of Camrose should begin to implement to address and manage these high priority climate change risks affecting the local economy and community.</p> <p>Over the past 14 weeks, ten student teams from AUIDS 301 with Dr. Greg King worked directly with the City of Camrose’s Department of Community Development to develop deliverables that addressed short-term actions to build resilience in the face of climate change. Students in the course gained a greater understanding of the role and impacts of climate resiliency in society, and the scientific, human and social responses to these resiliency challenges.</p> <p>The Augustana Showcase will preview posters from these teams, including our project, which discusses drought risk and water supply, helping small businesses and homeowners conserve water, ensuring communication with vulnerable populations in Camrose, and developing content to ensure citizens of Camrose are prepared for extreme water shortages.</p> <p>Our team focused on providing the residents of Camrose with drought mitigation and adaptation strategies that had minimal economic and social downsides. Educating the public was an incredibly successful method of water conservation we found in our research, which guided our efforts. We pursued this goal by creating a series of four informative articles to be published in print and online. These articles allowed us to explain drought, water policy, conservation methods, and even emergency measures to the general public of Camrose.</p> <p>We look forward to discussion with students, staff, faculty and community members about our topic, and other related themes during the conference!</p>
AUIDS 301	Hailey Anderson, Michelle Duarte Cuartas, Jocelyn Kublik, Anushil Raj, Thomas Receveur	Tornado communications plans for vulnerable populations in Camrose	<p>Extreme weather events, particularly tornadoes and windstorms, pose significant risks to vulnerable populations, including the elderly, individuals with disabilities, the unhoused, and low-income households. ??Vulnerable groups often lack access to resources necessary for emergency preparedness, exacerbating their susceptibility to adverse outcomes during such events. This project aims to enhance communication and preparedness efforts for severe weather events in Camrose, where a sizable portion of the population falls into these vulnerable categories. With guidance from the city’s Climate Vulnerability and Risk Assessment Report, the project includes creating an accessible emergency shelter map as well as an emergency preparedness kit video to help prepare and guide citizens in the event of an emergency. Through these initiatives, we hope to</p>

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			empower vulnerable populations with the knowledge and resources necessary to mitigate risks and ensure their safety during extreme weather events.
AUIDS 301	Joel Smith, Robbie Taylor, Morgan Cooper	Outdoor events are heating up	<p>To develop an understanding of the largest climate vulnerabilities and risks that could impact the citizens of Camrose, the City of Camrose completed a Climate Vulnerability and Risk Assessment (CVRA) with funding from the Municipal Climate Change Action Centre in 2022. This report identified the highest climate risks as extended heat waves, followed by prolonged drought, high wind, hail, and increased cooling and heating costs. The CVRA identified specific actions that the City of Camrose should begin to implement to address and manage these high priority climate change risks affecting the local economy and community.</p> <p>Over the past 14 weeks, ten student teams from AUIDS 301 with Dr. Greg King worked directly with the City of Camrose's Department of Community Development to develop deliverables that addressed short-term actions to build resilience in the face of climate change. Students in the course gained a greater understanding of the role and impacts of climate resiliency in society, and the scientific, human and social responses to these resiliency challenges.</p> <p>At the Augustana Showcase you will be able to view posters that detail the final projects from all ten teams, including projects that discuss: drought risk and water supply, wildfire and wildfire smoke responses, selection of vegetation species, helping event organizers adapt to changing extremes, ensuring communication with vulnerable populations in Camrose, and developing content to ensure citizens of Camrose are prepared for extreme weather events.</p> <p>We look forward to discussion with students, staff, faculty and community members around our final projects!</p>

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AUIDS 301	Kayli Beaton, Katie Bergen, McKinley Crosby, India Michaylow, Sasha Stewart	Branching out: Harnessing nature to combat climate change	<p>To develop an understanding of the largest climate vulnerabilities and risks that could impact the citizens of Camrose, the City of Camrose completed a Climate Vulnerability and Risk Assessment (CVRA) with funding from the Municipal Climate Change Action Centre in 2022. This report identified the highest climate risks as extended heat waves, followed by prolonged drought, high wind, hail, and increased cooling and heating costs. The CVRA identified specific actions that the City of Camrose should begin to implement to address and manage these high priority climate change risks affecting the local economy and community.</p> <p>Over the past 14 weeks, ten student teams from AUIDS 301 with Dr. Greg King worked directly with the City of Camrose’s Department of Community Development to develop deliverables that addressed short-term actions to build resilience in the face of climate change. Students in the course gained a greater understanding of the role and impacts of climate resiliency in society, and the scientific, human and social responses to these resiliency challenges.</p> <p>At the Augustana Showcase you will be able to view posters that detail the final projects from all ten teams, including projects that discuss: drought risk and water supply, wildfire and wildfire smoke responses, selection of vegetation species, helping event organizers adapt to changing extremes, ensuring communication with vulnerable populations in Camrose, and developing content to ensure citizens of Camrose are prepared for extreme weather events.</p> <p>We look forward to discussion with students, staff, faculty and community members around our final projects!</p>
AUIDS 301	Kyra Fraser, Natalia Friesen, Ridge Rinkel, Jack Smilski, Brianna Winiandy-Munch	Igniting Change: Building Wildfire Resilience in Camrose	<p>In response to the urgent need for proactive measures against escalating wildfire risks exacerbated by climate change, the City of Camrose initiated a comprehensive Climate Vulnerability and Risk Assessment (CVRA) in 2022, supported by the Municipal Climate Change Action Centre. The assessment identified wildfires as a critical threat to the community, underscoring the necessity for effective pre-incident planning to safeguard lives and infrastructure.</p>

Name	Presentation For	Title	Abstract (if applicable – not all courses have one)
AUIDS 301	Marissa Degenstein, Kailyn Hofman, Leah Peters, Michelle Turgeon	Camrose Climate Outreach Information Network (C-COIN)	To develop an understanding of the largest climate vulnerabilities and risks that could impact the citizens of Camrose, the City of Camrose completed a Climate Vulnerability and Risk Assessment (CVRA) with funding from the Municipal Climate Change Action Centre in 2022. The CVRA identified specific actions that the City of Camrose should begin to implement to address and manage these high-priority climate change risks affecting the local economy and community. Over the past 14 weeks, our team from AUIDS 301 with Dr. Greg King worked directly with the City of Camrose’s Department of Community Development to develop a communication framework (demonstrated through a detailed index and a visual roadmap) designed to improve the dissemination of climate change risk information related to extreme weather events in Camrose, with a focus on prominent, local vulnerable populations (seniors and older adults, children, low-income persons, persons with disabilities, and persons with chronic medical conditions). Addressing Community and Local Economy Action 5 of the Camrose Climate Vulnerability and Risk Assessment, the framework aims to enhance communication between the City and organizations serving vulnerable demographics by identifying primary points of contact for distributing climate policy and risk/response information. The proposed framework facilitates the dissemination of climate response and risk information to relevant human services organizations, primarily through Interagency. This approach streamlines communication, enabling effective responses to climate events within vulnerable populations. By establishing a centralized network, the framework addresses the absence of formal climatic response communication procedures and strengthens resilience to climate change among vulnerable groups.
AUIDS 301	Nate Goetz, Denzel Kalmoni, Grayson Kuhne, Kennedy Richardson, Kabir Wirk	Wildfire Smoke Response Plan for the City of Camrose	Over the past 14 weeks, our team for AUIDS 301 with Dr. Greg King worked directly with the City of Camrose’s Department of Community Development to develop deliverables that addressed short-term actions to build resilience in the face of climate change. We gained a greater understanding of the role and impacts of climate resiliency in society, and the scientific, human and social responses to these resiliency challenges. Our poster will display our work throughout the semester, showing the effects of wildfire smoke on the community. This poster will also display infographics which we have created for the city of Camrose which look at the AQHI, protecting outdoor workers, staying safe outdoors, health effects, and staying safe indoors.

Name	Presentation For	Title	Abstract (if applicable – not all courses have one)
AUIDS 301	Nick Breugom, Kayla Benson, Takes Cal, Tyson Parker, Elul Levin	Greening the Grey: Camrose Naturalization Project	<p>To increase our understanding of the greatest threats climate change poses to Camrose, our group reviewed the Camrose Climate Vulnerability and Risk Assessment (CVRA) that was developed with funding from the Municipal Climate Change Action Centre in 2022. This report identified the highest climate risks as extended heat waves, followed by prolonged drought, high wind, hail, and increased cooling and heating costs. The CVRA identified specific actions that the City of Camrose should begin to implement to address and manage these high priority climate change risks affecting the local economy and community. Our group aimed to provide additional actions that could be taken to help mitigate the effects of climate change over a long time period.</p> <p>Over the past 14 weeks, us students from AUIDS 301 with Dr. Greg King worked directly with the City of Camrose’s Department of Community Development to develop a website that addresses the need for improved use of native flora in order to help combat the negative impacts climate change poses. Through this project, our group developed a greater understanding of the role citizens play in our ecosystems resiliency, as well as how changes in our actions can help our ecosystem thrive.</p> <p>At the Augustana Showcase we will present a poster presentation about how climate change impacts our local community, and how naturalization can aid in creating a better, more vibrant city. We will challenge the current opinions surrounding naturalization and shed light on the benefits it poses to both our ecosystem and the citizens of Camrose.</p>
AUIDS 401	Addison Komarnisky, Joanna Marrisse Nicolas, Nicole Roy, Artur Vakula	The Taste of Camrose: Community Farmer's Market	<p>The Advanced Integration Project (AUIDS 401) aims to promote community collaboration and improve the understanding of multiculturalism found throughout Camrose. Our team proposes to construct a food festival event (Taste of Camrose) in historical downtown to showcase food and other products from local Camrose businesses and build a positive and safe environment for people to gather and share their cultures. Additionally, live entertainment will further display the city’s various cultures and communities through their stage performances. Overall, the Taste of Camrose intends to bring community together to have fun and experience the city’s diversity.</p>
AUIDS 401	Artur Vereshchynskyi, Karolina Vakula, Iris Netesina, Viktoriia Martseliuk	Infographic of enhancing social connection through historical tour around Ukrainian diaspora places in the Camrose area	<p>We will be presenting an Infographic on Ukrainian culture and history tour. We submitted a Grant application to create an event that will bring the Ukrainian community and everyone interested in Ukrainian culture in Camrose together. This infographic shows the schedule, locations, and entertainment of the event. We will talk broadly about all aspects of the event that will be beneficial for the community and Camrose. Also, we are going to mention all important details about the organization of the intervention.</p>

Name	Presentation For	Title	Abstract (if applicable – not all courses have one)
AUIDS 401	Boris Kuljanin, Adrian Lam, Sarah Nagel, Marc Parma	Adult life made simple	Our project looks to combat isolation and build life skills within teens and young adults living away from their caregivers for the first time. To do this, we have designed a series of workshops that discuss important topics for people living alone: Cooking, Money Management and Budgeting, Social and Employment Skills, and Advice for Incoming University Students. Our workshops are scheduled to occur three times per year over the course of four weeks, with each topic gaining focus for one week. We plan to balance in-person demonstrations that occur once per topic with online resources that can be accessed at any time. We hope that this workshop improves the process of learning life skills for young people in the Camrose area, and that our teachings can help decrease any feelings of social isolation remaining after the COVID-19 pandemic.
AUIDS 401	Brittany Determan, Shaelynn Graumann, Em Kuhn, Keira Slusarczyk, Brooklyn Swain	After the bump	Navigating the journey of parenthood can be an overwhelming endeavor filled with many highs and lows. Recent research suggests that somewhere between 7 and 80?percent of women experience some form of postpartum distress, from the more common 'blues' to depression (Machado et al.). As part of AUIDS 401, we were tasked with creating a program that would promote social connectedness, inclusion and well-being of residents in the Camrose. Our proposed intervention, After the Bump, is a community-focused program that is aimed towards providing support to new parents as they transition into this new stage of their life. Through the organization of monthly events, the program would provide various opportunities for new parents to meet, interact, and learn various parenting skills, all while developing a sense of belonging. In addition, group members would be added to a private Facebook group, where they could anonymously share their struggles, seek advice, and stay updated about our programs upcoming events. New members would also be eligible to receive a welcome-basket filled with essential items for their newborns – a small gesture to make them feel valued and supported.
AUIDS 401	Brooklynn Bouillon, Grace Ginther, Aleya Lotzien, Macy McDonald, Makenna Verma	Cook with Camrose: Residential Edition	This project is based on a grant proposal aiming to address loneliness in Camrose through community connection. Our initiative hopes to bring many generations and cultural groups together through the practice of cooking, allowing residents to learn life skills and create community bonds. The class will run once per month and will be based around recreating a recipe provided by a community member, focusing on diversity and cultural learning. Our budget includes space for 15-20 participants, kitchen rentals, grocery purchases, advertising costs, and hiring costs for two part-time positions to run the program, for a total of \$19 700.00 for a year of run time.

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AUIDS 401	Claire Bevan-Stewart, Makayla Clarke, Berenda Helmus, Racquel Lussier, Kari White	Human of Camrose: A Community Project	In an effort to combat social isolation and encourage community engagement in a small community we have created “Humans of Camrose.” This project involves the creation of a published book of stories and photographs of individuals throughout Camrose. Stories will be submitted by members of the community and uploaded to a blog-style website. The organization of a world cafe and a wrap-up reading party would allow us to kick start this project and present the final product. Having the published book distributed within several public spaces in Camrose will allow us to share these stories with members of the community and promote new connections and relationships.
AUIDS 401	Jhecelle Borile, Jinxuan Cui, Airah Taguiwalo, Lucille Wang	Taste the World Together	"Taste the World Together" is an innovative project proposal that aims to strengthen community relationships and celebrate cultural diversity through monthly culinary activities led by local experts. This initiative follows and aligns with the goals of the Cultivating Community Connections Grants by fostering cross-cultural friendships and creating a welcoming space for regular social interaction to avert loneliness, isolation, and disconnectedness, which are essential to the grant. Participants can learn to prepare authentic dishes, share stories and traditions, and dine with fellow members, hoping to encourage them to build meaningful friendships. The project aligns with the grant's objectives and initiates a sensible approach to building strong community bonds through culinary exploration.
AUIDS 401	Kyle Bergquist, Owen Lamb, Arsenii Litus, Jordan Mish, Alex Russell	Unity in Play: Implementation of Designated Outdoor Activity Areas to Combat Isolation Post-Pandemic in Camrose, Alberta	This project aims to address the recent surge in isolation and loneliness brought about by an increased dependence on technology for socialization which has been further accentuated by the recent COVID-19 pandemic. The proposed solution is to implement activity areas within the already-present infrastructure of the walking paths along Mirror Lake and in Jubilee Park in Camrose, Alberta. These activity areas will feature oversized versions of popular multiplayer games such as Chess and Jenga as a way to promote outdoor activities with peers and potential new friends.

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AUIDS 401	Lauren Fox, Robbie Nanuan, Hannah Taplin, Marcus Uitvlugt, Amber Wolfe	Golden hours: senior drop-in	<p>Our team will present the solution for the challenge of increased isolation and loneliness within the senior population of the Camrose area. The program developed, Golden Hours: Senior Drop-In, will provide various activities along with a lunch, starting at 10:00 AM and ending at 1:00 PM, every Tuesday and Thursday. The location of this program is the Rotary Youth Centre, which is wheelchair accessible with washroom facilities. A paid, part-time activities director with appropriate qualifications will be hired to prepare for and coordinate the planned activities. The activities director will also be responsible for cooking the soup served with lunches, and ensuring all the supplies for each activity are available. Seniors will be aware of this program through advertising in Camrose's primary newspaper, The Camrose Booster. The days and timing of this program coincide with the schedule of the Camrose Community Bus, allowing seniors to have a reliable and safe option for arriving to and leaving the Rotary Youth Centre. The anticipated short-term outcomes of this program are to provide seniors with nutritious meals, and a location for them to socialize with their peers. The anticipated long-term outcomes of this program are to ensure seniors acquire the necessary skills to care for themselves, and to improve their mental health by allowing them to create long-lasting friendships within the community.</p>
AUIDS 401	Lexi Brantner, Stefanie Phillips, Cailey Slobodian, Laura Toutant, and August Ross	Cats for Community Connection	<p>The use of pet therapy in both communal and university settings has become a new phenomenon in tackling the mental health challenges of society. Our project Cats for Community Connection intends to integrate a form of pet therapy on campus as a new resource for tackling mental health challenges such as isolation and loneliness often seen in both post-secondary students and society as a whole. This project intends to thoroughly prepare a project proposal to host a pop-up cat café held at Augustana once a semester as a new way to combat these issues of isolation for Augustana students and Camrose residents. Students often leave childhood pets at home when they come to university and communal citizens may be unable to house a pet due to living circumstances. Our cat café will host cats from the Camrose & Area Animal Shelter Society (CAASS), thus working to improve the mental health of its attendees and helping the CAASS cats find their forever homes. By opening the cat café, we hope to strengthen the sense of community between Camrose and its student population. Furthermore, by including the CAASS and supporting local businesses, we intend to utilize the assets already in Camrose and increase the CAASS's capacity to accommodate more shelter animals.</p>

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AUIDS 401	Sydney Abel, Wetsat Bako, Cailyn Katchur, Greysen Tilleman, Tori Van Bavel	Seniors for seniors: The amazing race Camrose	Our project for the Cultivating Community Connections grant application, titled “The Amazing Race: Camrose”, aims to address the prevalent issue of loneliness, particularly among the elderly residents of Camrose. Inspired by the popular television show, our project will organize an event where seniors and community members will engage in a city-wide adventure, participating in diverse activities suitable for all ages. Throughout the journey, participants will explore Camrose, visiting key spots that showcase its hidden treasures and support its local businesses. Our aim is to foster a stronger sense of community among Camrosians, acquaint them with the array of services available in Camrose, and diminish feelings of isolation across all demographics.
AUIDS 401	Yousif Ismail; Angelina Lau; Jemma Lauder; Joanne Varghese	Community inclusiveness of Jubilee Park	The proposal for our project is to expand on the existing infrastructure in Jubilee Park to create an inclusive environment for members of the community to come together. The park is strategically located at the heart of Camrose, with easy access for local residents of all ages as well as University students. We plan on incorporating 5 new assets which include a communal public space of gathering to draw people together, a community garden, a piano, lending library and memorial plaques, either standalone or incorporated into the benches, to commemorate members of the community no longer with us. Each of these will be composed of multiple components. For example, the community garden will include flower beds and/or commemorative saplings planted in honor of loved ones. This proposal is a multifaceted approach, incorporating several endeavors to foster a sense of community amongst residents of Camrose.
AUIDS 401	Meredith Jevne, Michaela Jevne, Nicole Griffiths, Ashley Neth, Olya Klepacheva	Rose City Globetrotters	This project considers the ways in which Camrose community connections are cultivated and the importance of social connectedness. Our grant considers local businesses to be the backbone of the community. As such, we propose reinstating the town event of “being a tourist in your own town,” incorporating these local businesses into fun events where the public can participate. By including by-monthly pre-planned events focusing on a central theme (eg. coffeehouse hopping, restaurant jaunt, or arts and crafts), our group plans to maximize the exposure of local businesses and what they have to offer with community members, strengthening the ties of supporting local.