



# COLLEGE OF ARTS & SCIENCES

# UNDERGRADUATE SHOWCASE

Spring 2023

## PRESENTATIONS & PRESENTERS

*\*Indicates hybrid presentation = on site poster with presenter(s) participating online via zoom*

### Session 1 | 9:30 – 10:45 am

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#### An Examination of Analytical Thinking and Religiosity

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*Authors, Majors:*

**Sultan Alsubaiei, Psychology**

**Alexis McPhail, Psychology**

**Jett Weis, Psychology, Biology**

**Mallorie Crissler, Occupational Therapy**

*Faculty Advisor: Heather Terrell Course: PSYC 304*

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#### Attitudes Towards Muslim Americans Post- 9/11

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*Authors, Majors:*

**Bryn Anderson, Sociology, Criminal Justice Studies**

*Faculty Advisor: Daphne Pedersen Course: SOC 475*

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#### \*ACT/SAT Scores Affecting College University Acceptance

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[Online Presentation Link](#)

*Authors, Majors:*

**Colleen Buckingham, Communication**

**Isabella Sands, Political Science, Communication**

**Anthony DelGreco, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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#### Precarious Manhood?

---

*Authors, Majors:*

**Julie Dusek, Psychology, Pre-Dental**

**Erin Erikson, Psychology**

**Addie Winkler, Psychology**

**Ethan VanVleet, Psychology**

*Faculty Advisor: Heather Terrell Course: PSYC 304*

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## **Precarious Gender: Personal and Societal Perceptions of Masculinity and Femininity**

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*Authors, Majors:*

**Adelyn Emter, Psychology**

*Faculty Advisor: Heather Terrell, RaeAnn Anderson Course: HON 489*

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## **Literature Review of Pesticides and their Detection Methods**

---

*Authors, Majors:*

**Jack Erdahl, Chemistry**

*Faculty Advisor: Julia Zhao Course: CHEM 495*

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## **MUSIC EDUCATION: More Than Just "Do-Re-Mi" & "Uh-1-2-3"**

---

*Authors, Majors:*

**Alexandra Funk, Music Education**

**Katelyn Cermak, Music Education**

**Amber Sickler, Music Education**

**Thomas Anderson, Music Education**

*Faculty Advisor: Melanie Popejoy Course: MUSC 441*

---

## **The Polaroid Experience**

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*Authors, Majors:*

**Amanda Gorecki, Communication**

**Rebecca White,**

**Ryan Johnson-Roberts**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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## **An Examination of Gender Role Threat**

---

*Authors, Majors:*

**Sarah Hammond, Psychology**

**Allison Haiby, Psychology, Pre-Occupational Therapy**

**Rowdy Berger, Psychology, Pre-Medicine**

**Julie Briggs, Psychology**

*Faculty Advisor: Heather Terrell Course: PSYC 304*

---

## **The African Paradox: Reality of Dependency Amid Desire for Autonomy**

---

*Authors, Majors:*

**Amanda Higginbotham, Aeronautical Science, International Studies**

*Faculty Advisor: Paul Sum Course: HON 489*

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## **Height, Weight, Sex, and Perceived Workplace Respect**

---

*Authors, Majors:*

**Kyle Hogle, Sociology**

*Faculty Advisor: Daphne Pedersen Course: SOC 475*

---

## **Does Forensic Evidence Increase the Likelihood of Arrest and Conviction in Sexual Assault Cases?**

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*Authors, Majors:*

**Paige Johnson, Sociology, Criminal Justice Studies**

*Faculty Advisor: Daphne Pedersen Course: SOC 475*

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## **Assembling Table-Top Quantum-Photonics Experiments for Advanced Laboratory**

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*Authors, Majors:*

**Parker Johnson, Physics**

*Faculty Advisor: Kanishka Marasinghe*

---

## **Underage Drinking and Fake ID Use**

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*Authors, Majors:*

**Jayden Juran, Sociology, Criminal Justice Studies**

**Grace Jackson, Sociology, Philosophy, Criminal Justice Studies**

*Faculty Advisor: Daphne Pedersen Course: SOC 492*

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## **\*Brooks or Bust? Understanding Young Adults' Perceptions Towards Brooks Running**

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[Online Presentation Link](#)

*Authors, Majors:*

**Kinzley Knutson, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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## **Predicting Bike Maintenance for Grand Rides**

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*Authors, Majors:*

**Nolan Larson, Mathematics, Economics**

**Jacob Driscoll**

*Faculty Advisor: Ryan Zerr Course: MATH 415*

---

## **\*The Vaping Epidemic**

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[Online Presentation Link](#)

*Authors, Majors:*

**Austin Lehrer, Communication**

**Payton Christopherson, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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## **Historical Memory Battles Found within the Column of Strength Statue**

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*Authors, Majors:*

**Jennifer Long, History**

*Faculty Advisor: Cynthia Prescott, Nikki Berg Burin Course: HST 440*

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## Science Communication with College Students

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*Authors, Majors:*

**Anne Mitchell, Physics**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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## An Investigation of Gender and Parenthood in the Workplace

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*Authors, Majors:*

**Abigail Moe, Psychology**

**Amanda Fetzer, Psychology**

**Tristan McCoy, Psychology**

**Danielle Hakke, Psychology**

*Faculty Advisor: Heather Terrell Course: PSYC 304*

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## Electrochemical Detection of Nitroxoline

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*Authors, Majors:*

**Yuliet Monatukwa, Chemistry, Forensic Science**

*Faculty Advisor: Alena Kubatova Course: CHEM 495*

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## Well-being of Individuals Living in Retirement Communities

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*Authors, Majors:*

**Haley Neitzke, Sociology, Criminal Justice Studies**

*Course: SOC 475*

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## Early Release Programs

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*Authors, Majors:*

**Isabel Parton, Psychology, Criminal Justice Studies**

**Madison Williams, Criminal Justice Studies**

*Faculty Advisor: Adam Matz Course: CJ 401*

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## Intellectual Humility, Political Party, and Belief in Misinformation

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*Authors, Majors:*

**Nicholas Ramos, Sociology, English**

*Faculty Advisor: Daphne Pedersen Course: SOC 475*

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## \*Peloton

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### [Online Presentation Link](#)

*Authors, Majors:*

**Jordan Rust, Communication**

**Baylee Lewis,**

**Cora Okeson**

**Gigi Korsh**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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## **Title 42 and Southwest Border Expulsions**

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*Authors, Majors:*

**Alivia Sanchez, Criminal Justice Studies, Sociology**

*Course: SOC 475*

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## **An Examination of Fundamental Motives on Conformity**

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*Authors, Majors:*

**Hanna Sandberg, Psychology**

**Sydney Bjonfald, Psychology**

**Rafael Torres, Psychology**

**Emily DeBell, American Indian Studies, Psychology**

*Faculty Advisor: Heather Terrell Course: PSYC 304*

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## **Vocal Abuse and Prevention for Singers**

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*Authors, Majors:*

**Brynn Shirley, Communication Sciences and Disorders**

*Faculty Advisor: Jessica Foley, Rebecca Rozelle-Stone Course: HON 489*

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## **Analysis of Breakdown of Lignin Model Compounds using Pyrolysis Gas Chromatography Mass Spectrometry**

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*Authors, Majors:*

**Andrew Simons, Chemistry ACS**

*Faculty Advisor: Alena Kubatova Course: CHEM 495*

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## **The Effects of Social Media on Mental Health in Correlation to COVID-19**

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*Authors, Majors:*

**Sydney Smith, Communication**

**Taylor Kueppers, Communication**

**Mia Kowalski, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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## **Science Identity and Imposter Syndrome in STEM College Students**

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*Authors, Majors:*

**Alyssa Stutlien, Sociology, Women and Gender Studies**

*Faculty Advisor: Daphne Pedersen Course: SOC 492*

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## **Social Media Influencers: How College Students Perceive their Impact on Behavior, Mood, and Academics**

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*Authors, Majors:*

**Evan Whitford, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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**\*Tik Tok**

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[Online Presentation Link](#)

*Authors, Majors:*

**Seth Badolato, Communication**

*Course: COMM 410*

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**ND-ACES: Machine Learning for Cell Images**

---

*Authors, Majors:*

**Ian Bergerson, Physics**

**Aliakbar Sepehri**

*Faculty Advisor: Yen Lee Loh*

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**\*Pinterest's Current Age Demographic Leaves Room for Growth**

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[Online Presentation Link](#)

*Authors, Majors:*

**Kacie Borowicz, Communication, Visual Arts-Graphic Design**

**Ayda Goehring, Communication, Psychology minor**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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**Discovering a Woman's Will in Her 20s**

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*Authors, Majors:*

**McKenzie Christensen, Psychology**

*Faculty Advisor: Rebecca Rozelle-Stone Course: PHIL 360*

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**\*Spotify: Growing and Retaining Users Through Personalization**

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[Online Presentation Link](#)

*Authors, Majors:*

**Shannon Dutra, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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**The Feminist Snap**

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*Authors, Majors:*

**Grace Jackson, Philosophy, Sociology, Criminal Justice Studies**

*Faculty Advisor: Lucian Stone Course: PHIL 331*

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**Survey for Exoplanet Detection and Light Curve Analysis**

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*Authors, Majors:*

**Parker Johnson, Physics**

*Faculty Advisor: Tim Young*

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## **Leptin Regulation and Metabolism: Putting the Focus on ADHD**

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*Authors, Majors:*

**Carter Krenelka, Biology**

**Blessing Okosun, Biology Grad**

*Faculty Advisor: Diane Darland Course: BIOL 492*

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## **Seasonal Changes in Resting Metabolism of UND Students**

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*Authors, Majors:*

**Samantha Krogfoss, Biology, Physical Therapy**

*Faculty Advisor: Tristan Darland Course: BIOL 492*

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## **Bridging the Gap Between Criminal Justice and Mental Health Care**

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*Authors, Majors:*

**Samantha Ledahl, Criminal Justice Studies**

**Jayden Juran, Criminal Justice Studies, Sociology**

*Course: CJ 401 and HON 489*

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## **Learning to Take up Space; Sports in Relation to Women's Self-Confidence Through Motion**

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*Authors, Majors:*

**Madilyn Lee, Pre-Law Philosophy**

*Faculty Advisor: Rebecca Rozelle-Stone Course: PHIL 360HON*

---

## **A Literary Review of Aza-BODIPY and its Biological Applications**

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*Authors, Majors:*

**Becker Lindner, Chemistry - Biochemistry**

*Faculty Advisor: Binglin Sui Course: CHEM 495*

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## **Women's Subjectivity at Stake: How Medical Technologies Alienate During Pregnancy**

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*Authors, Majors:*

**Abigail Mayer, Psychology**

*Faculty Advisor: Rebecca Rozelle-Stone Course: PHIL 360*

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## **Police Speed Radars: The Impact on Public Safety and Police Practice**

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*Authors, Majors:*

**Nicole Mismash, Forensic Science, Criminal Justice**

**Tyenne Crotty, Criminal Justice Studies**

*Faculty Advisor: Adam Matz Course: CJ 401*

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## **A New Type of Court: Domestic Violence Court**

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*Authors, Majors:*

**Amber Peterson, Criminal Justice, Psychology**

**James Strand, Criminal Justice Studies**

*Faculty Advisor: Adam Matz Course: CJ 401*

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## **Slfn12 Expression Increases From 1st To 2nd Trimester Of Gestation But Then Decreases With One-Carbon Metabolite Diet In Cow Mammary Tissue**

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*Authors, Majors:*

**Odele Rajpathy, Biology, Nursing**

*Faculty Advisor: Emilie E. Vomhof-DeKrey, Marc D. Basson*

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## **Patterns in Macroinvertebrate Communities between Seasonal and Semi-permanent Wetlands**

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*Authors, Majors:*

**Gaddum Reddy, Fisheries and Wildlife Biology**

**Siri Bien, Kinesiology**

*Faculty Advisor: Mark Kaemingk*

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## **Turning Point for Undergraduate Mathematics Majors**

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*Authors, Majors:*

**Olivia Rike-Norman, Mathematics, Secondary Education**

*Faculty Advisor: Ryan Zerr*

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## **Gut Dysbiosis in BLG-Sensitized Mice: Implications for Neurodegeneration and the Role of Akkermansia muciniphila**

---

*Authors, Majors:*

**Evan Sczepanski, Chemistry**

*Faculty Advisor: Kumi Nagamoto-Combs, Geetika Verma Course: CHEM 495*

---

## **Hi-Tech Shunt**

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*Authors, Majors:*

**Elisabeth Starosta, Biomedical Engineering**

**Yitzi Devor, Biomedical Engineering**

**Braylyn St. Aubin, Biomedical Engineering**

**Abdolrahim Zandi, Biomedical Engineering PhD**

*Course: BME 181*

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## **Biological Necessity or Socialized Difference? : Analyzing the Gendered Space of Men and Women**

---

*Authors, Majors:*

**Hailey Thiessen, Nursing**

*Faculty Advisor: Rebecca Rozelle-Stone Course: PHIL 360*

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## **Estimation of Postmortem Interval Using Decomposed Swine Carcasses**

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*Authors, Majors:*

**Mackenzie Tveit, Forensic Science**

*Faculty Advisor: Lavinia Iancu, Rebecca Rozelle-Stone Course: HON 489*

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## Understanding Vaccine Knowledge and Behaviors of UND students

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*Authors, Majors:*

**Claire Wagner, Public Health, Pre-Professional Health**

*Faculty Advisor: Tanis Walch Course: HON 489*

## Session 3 | 12:30 – 1:45 pm

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### Monuments and History

---

*Authors, Majors:*

**Angela Beach, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

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### Small Mammal Occurrence as an Attractant that Increases Risk of Raptors Colliding with Aircraft at the Grand Forks Air Force Base in North Dakota

---

*Authors, Majors:*

**Levin Brandt, Fisheries and Wildlife Biology**

**Jacob Knutsen, Fisheries and Wildlife Biology**

**Hunter Beckert**

**Javier Lenzi**

*Faculty Advisor: Susan Felege*

---

### How Marketing and Media Has Affected Hunting

---

*Authors, Majors:*

**Jonathan Dolbec, Business Marketing**

*Faculty Advisor: Brandon McAlexander*

---

### Differential Palmitoylation Between the Drosophila Dopamine Transporter and its Mammalian Homologs

---

*Authors, Majors:*

**Evan Halvorson, Biology Professional Health Sciences, Pre-medicine**

*Faculty Advisor: James Foster Course: UND MARC U-STAR Research Program*

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### Investigation of SiO<sub>2</sub> Thin Film Resistance and Capacitance using X-ray Photoelectron Spectroscopy

---

*Authors, Majors:*

**Thomas Iken, Physics, Mathematics**

**Carlos Munoz, graduate student**

*Faculty Advisor: Nuri Oncel*

---

### The Relationship Between Student Involvement and Academic Success: Archival Research in Student Involvement Trends and Academic Outcomes at the University of North Dakota

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*Authors, Majors:*

**Anna Lambertz, Psychology**

*Faculty Advisor: Heather Terrell Course: PSYC 489, HON 489*

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## Impact of Quagga Mussels on the Great Lakes Ecosystem

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*Authors, Majors:*

**Alex Lehto, Environmental Studies**

*Faculty Advisor: Douglas Munski Course: GEOG 362*

---

## Analysis of the Rockford Area Violence Elimination Network Program

---

*Authors, Majors:*

**Daniel Papp, Criminal Justice**

**Connor Narlock, Criminal Justice Studies**

*Faculty Advisor: Adam Matz Course: CJ 401*

---

## Does Heavy Drinking Modify the Association Between Screening for Cancer and Use of E-cigarettes? Results from a 2016, 2018 and 2020 National Level Study

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*Authors, Majors:*

**Odele Rajpathy, Biology, Nursing**

*Faculty Advisor: Cristina Oancea*

## Session 4 | 2:00 – 3:15 pm

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## Police Body-Worn Cameras

---

*Authors, Majors:*

**Cayden Ackerman, Criminal Justice**

**Lilly Christen, Psychology, Criminal Justice Studies**

*Course: CJ 401*

---

## Powering the Future: Hydroelectricity in Manitoba

---

*Authors, Majors:*

**Ethan Ball, Environmental Studies**

*Faculty Advisor: Gregory Vandeberg Course: GEOG 454*

---

## \*Childhood Obesity

---

[Online Presentation Link](#)

*Authors, Majors:*

**Elijah Beach, Communication**

**Madison Moore, Communication**

*Course: COMM 410*

---

## The Importance of Indigenous Ecological Knowledge to Land Management in the Pacific North West

---

*Authors, Majors:*

**Kathreen Carroll, Environmental Studies, Political Science**

*Course: GEOG 454*

---

## **Sustainable Soil Management in North Dakota**

---

*Authors, Majors:*

**Pierce Cooper , Environmental Studies**

*Course: GEOG 454*

---

## **\*Military Recruitment Crisis**

---

[Online Presentation Link](#)

*Authors, Majors:*

**Anna Corley, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

---

## **Grand Rides Bike Rentals: An Improved System**

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*Authors, Majors:*

**Jacob Denault, Mathematics**

**Justin Sivertson, Mechanical Engineering**

**Robert Chance, Geology**

*Faculty Advisor: Ryan Zerr Course: MATH 415*

---

## **Sociopaths Have Formed Social Media**

---

*Authors, Majors:*

**Alexandra Drews-Carter, Philosophy**

*Faculty Advisor: Lucian Stone Course: PHIL 331*

---

## **How Fertilizers are Affecting Lakes in Minnesota**

---

*Authors, Majors:*

**Camryn Ess, Environmental Studies**

*Course: GEOG 454*

---

## **Hot Spots Policing**

---

*Authors, Majors:*

**Reeve Froseth, Criminal Justice**

**Josey Olson, Criminal Justice Studies, Forensic Science**

*Faculty Advisor: Adam Matz Course: CJ 401*

---

## **Wind Energy in Minnesota**

---

*Authors, Majors:*

**Nicholas Gulden, Geography**

*Course: GEOG 454*

---

## **Mindfulness in the Classroom: Assessing the Impact of a Brief Intervention on Awareness, Concentration, Stress, and Academic Resilience**

---

*Authors, Majors:*

**Kaitlin Hazel , Psychology**

*Faculty Advisor: Alison Kelly*

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---

## **Positives vs. Negatives of Coal on Navajo lands.**

---

*Authors, Majors:*

**Lilly Hinton, Entrepreneurship**

*Faculty Advisor: Gregory Vandeberg Course: GEOG 454*

---

## **\*Vaping and the Use of E-cigarettes in Young Adults**

---

[Online Presentation Link](#)

*Authors, Majors:*

**Caitlyn Inman, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

---

## **Restoring Creeks and Streams Using Man-Made Beaver Dams**

---

*Authors, Majors:*

**Reese Jensen, Environmental Studies**

*Faculty Advisor: Gregory Vandeberg Course: GEOG 454*

---

## **Focal Adhesion Patterns in Neural Crest Cell Differentiation**

---

*Authors, Majors:*

**Anna Lambertz, Psychology**

*Faculty Advisor: Amanda Haage*

---

## **The Ku Klux Klan's Influence on Public Education in the 1920s**

---

*Authors, Majors:*

**Sofia Lisell, History, Secondary Education**

*Faculty Advisor: Eric Burin, Cynthia Prescott Course: HIST 440*

---

## **Study of UND's Influence on Water Pollution in the Coulee**

---

*Authors, Majors:*

**Julia Mcgee, Environmental Studies**

*Faculty Advisor: Gregory Vandeberg Course: GEOG 454*

---

## **Impacts of Climate Change on Local Waterways**

---

*Authors, Majors:*

**Madelyn Meyer, Commercial Aviation**

*Faculty Advisor: Gregory Vandeberg Course: GEOG 454*

---

## **\*Understanding Ads on Twitch.tv**

---

[Online Presentation Link](#)

*Authors, Majors:*

**Marcus Schweisthal, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

---

## **Epigenetic Regulation of Macrophage Polarization: A Review**

---

*Authors, Majors:*

**Mya Shorter, Chemistry**

*Faculty Advisor: Sergei Nechaev Course: CHEM 495*

---

## **Cubist Calligraphy**

---

*Authors, Majors:*

**Rafael Stan, Fine Arts**

*Faculty Advisor: Nicole Derenne Course: HON 260*

---

## **The Revolutionary Power of Boredom**

---

*Authors, Majors:*

**Kira Symington, Philosophy, English**

*Course: PHIL 331*

---

## **Coming of Age Journey with Health Insurance**

---

*Authors, Majors:*

**Kayla Teigen, Medical Laboratory Science**

*Faculty Advisor: Amy Kiehmeyer Course: HON 489*

---

## **How Does TikTok Affect the Beauty Industry through Influencers, Virality, and Cancel Culture?**

---

*Authors, Majors:*

**Chelsea Timmerman, Communication, Environmental Studies**

**Peyton Helt, Communication, Marketing**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

---

## **History in the Shadows**

---

*Authors, Majors:*

**Siri Ullery, History**

**Katlyn Olson, History, Political Science**

*Faculty Advisor: Nikki Berg Burin*

---

## **The Relationship between Nutrients and Water Quality**

---

*Authors, Majors:*

**Jaiden Underdahl, Environmental Studies**

*Course: GEOG 454*

---

## **Can Soil Salinity be Estimated through Soil pH**

---

*Authors, Majors:*

**Mitchel Wangler, Environmental Geoscience**

*Course: GEOG 454*

---

---

## Family Drug Treatment Courts

---

*Authors, Majors:*

**Alexis Wanner, Criminal Justice**

**Kaeley Glenn, Criminal Justice Studies, Psychology**

*Faculty Advisor: Adam Matz Course: CJ 401*

---

## The Vaping Epidemic

---

*Authors, Majors:*

**Greg Wyche, Communication, Psychology**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

---

## \*Impact of Social Media on the Youth

---

[Online Presentation Link](#)

*Authors, Majors:*

**Mahmoud Younis, Communication**

**Kaan Avci, Communication**

*Faculty Advisor: Joonghwa Lee Course: COMM 410*

**Thank you for supporting undergraduate research at UND!**

