8:00    Addressing Hate in Rock Springs, Wyoming; Ian Fletcher
8:20    Eichmann, Arendt, and The Holocaust: Understanding Blame and Justice in Genocide; Alexander Allison
8:40    History of the Chesapeake and Ohio Canal; Peter Banzon
9:00    How Cohorts Diminish COVID-19 Transmission and Mental Health Issues on College Campuses: A Policy Recommendation for Universities; CeeJay Berg
9:20    Women in the Workforce; Shelby Heaster
9:40    Laramie Community Commerce Project; Katherine Swenson
10:20   Malcom Wallop K-12 Science Curriculum; Emma Meese and Taylen Sewell
10:40   Material Culture and Space in Medieval Childbirth: The Agency of Illuminated Manuscripts; Emma Comstock
11:00   Talking about Capitalism: An Analysis of the Failures of American Capitalism and the Narratives that Perpetuate the Falsehood of Success; Holly Wodahl
11:20   Queer Anxieties: Gender and Sexuality in 17th Century New England; Rebecca Lovell
11:40   Results and Recommendations from the University of Wyoming Student Food (In)Security Summit; Nicole Morshead

8:00    Artistic Exploration and Representation of Mental Health; Alannah Gee
8:20  Self Perceptions of Belonging Among Members of the UW Nordic Ski Team; Kailee Behunin
8:40  The Business of Capitalizing on Culture: Onsen Industry in Japan; Lillianna Mollett
9:00  The Transition Into Renewable Resources; Luke Taulbee
9:20  The Weaponization of Feminism as a Mental Illness; Stephanie Diamond
9:40  Victim race salience and phenotypicality in a police officer use-of-force incident: A mock grand jury study.; Isla Skinner
10:20 An Artistic Exploration of Mental Health; Brynja Stalcup
10:40 Analyzing Individual's Electrodermal Activity (EDA) Following In-Session Weighing Experiment; Chloe Nelson
11:00 Excusing Peremptory Challenges: a Critique of Modern Jury Selection; Jacob Lewis
11:20 Motherhood and Identity; Zoe Parks
11:40 One Nation Under God: The Rise of Political Leaders as Religious Icons; Allison Gross

CR 133

9:00  Instrumented Plus Maze for Neuroscience Research; Kathryn Arneson, Octavio Gonzalez Guerra Vazquez, Yazmin Montiel, Christian Morrison, Chad Muma, and Joana Olsen
9:30  The Cowboy Claw - A Lunar Reusable Surface Anchoring Device for NASA EVA Operations; Cameron Ball, Forrest Bucholz, Reese Romero, James Sheets, and Daniel Wenger
10:00 Alternator Conversion; Evan Lake, Bodi Morris, Robert Wenger, and Connor Wilkinson.
10:30 Hybrid Integration Senior Design Project; Louis Failoni, Chase Nickle, John T Peroulis, and Quinton Royle-Grimes
11:00 9H Modular Solar Design; William Baumchen, Thomas LaBuda, Jay Matter, Luke Norris, Jayden Riley, Mason Tomac, Zachary Woith, and Ryan Chan Yu Quan
11:30 Collegiate Wind Competition; Adam Balph, Eduardo Colin-Zarate, AJ Lewis, Brendan Phipps, Nar Trippel, and Mason Webelow.
1:30 Sustainable Greenhouse; Jacob Arment, Ithzel Felipe Castro, JT Herboldsheimer, Luke Jensen, Rylee Jones, Alex Kalan, Natasha Miller, and Quinn Newmark
2:00 Pulse Jet Engine Testbed for Unsteady Pressure Sensor Software Characterization; Spencer Bernard, Jacob Hays, Collin Jenkins, David Lemieux, Sean Mendick, Christian Smith, Bryce Stratton, and Donovan Whitehead
The Design and Development of a Cost-Effective Boundary Layer Rake; Keaton Bell, Tyler Clark, Elizabeth Erickson, Abigail Fearneyhough, Connor Heider, Tylen Redinger, and Benjamin Willis

CR 142

8:00 An Assessment of Mobile Applications Targeting Speech Sound Disorders and Accent Modification; Kathryn Sawyer
8:20 Storyteller; Evan Wambeke
8:40 Student Employee Turnover in Laramie, Wyoming; Cole Munari
9:00 Ghostwriting, Fame, and Queer Identity in New York City; Caitlyn Mlodzik
9:20 Intellectual & Physical Disability: A Comprehensive Analysis on Media Representation; Ashtyn Harmsen Grace Vigneri
9:40 em forgotten: Creating Interactive Fiction; Megan Cockett
10:20 Creating The Match: A Journey into Multi-genre Filmmaking; Riley Box
10:40 Literary Tastes; Shannon Fassler
11:00 Medieval Courtesy Books Versus Contemporary Christian Self-Help Books: Societal and Religious Constructs of Women Over Six Hundred Years; Amy Gabriel
11:20 Quitting Social Media: A Personal Experiment; Joenon Sulzen
11:40 Modern Contact Lenses and Ocular Health; Maccade Gerneau

CR 207

8:00 Analyzing Crop Loss with Multitemporal Landsat 8 Images; Jordan Jochems
8:20 Landsat Images for Monitoring the Effectiveness of Invasive Management; Traylin Bruegger
8:40 Mapping Moisture Stress in a Wyoming Pasture with Landsat Images; Cody Green
9:00 Monitoring Vegetation Growth in a Disturbed Rangeland with Sentinel-2 Images; Shelby Stith
9:20 New fossil material from an Eocene Bridger Formation site (Wyoming): Depositional environment and taphonomic interpretations; Austin Shaffer
9:40  Wyoming Through New Eyes: A Podcast Considering Travel Via Multiple Perspectives; Taylor Kennah and Carolanne Walls
10:00  Business Model for Plant-Based Food Truck; Irja Sandvik
10:20  Gold and Gray; Anna Hupp
10:40  #SocialMedia - The New Universal Language; Taylor Myers
11:00  Human-Animal Relations in the Arctic; Makayla Kocher
11:20  Detecting Cars in Bad Weather Using Thermal Imagery; Brady Wagstaff

CR 209

8:00  Honors Capstone: Pulse Jet Engine; Collin Jenkins
8:20  Acylation of Proteins as a Distinct Method for Labeling; Joe Ault
8:40  Geotechnical Considerations for Design of Stormwater Runoff System; Hannah Reiter
9:00  Metallicity History of the Universe as the Function of Metal Dominated Absorption Features of Quasars; Agnesh Pandey
9:20  Pepper's Playhouse: A Residential Design; Shianne Shaver
9:40  Design and Utilization of a Microturbine at the Laramie WWTP; Adam Russell
10:20  The Final Blackout; Abigail Blesi
10:40  Reaction Kinetics of Municipal Wastewater Treatment with Temperature Effects; Katelin Scheuerman
11:00  The MP3 Smart Shuffler Honors Presentation; Eric Van Wig
11:20  Ethylene Synthesis by Genetically Modified Rhodococcus opacus PD630 on Synthetic Human Urine; Alexandria Williams

CR 214

8:00  A Potential Role of the Immune System in the Regulation of Brain Growth; Mercedes Cassidy
8:20  A Retrospective Study of the Influence of Climatic Variables on Hemorrhagic disease in North America; Riley Rux
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<th>Time</th>
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<tr>
<td>8:40</td>
<td><strong>Accessibility in Dentistry</strong>; Victoria Weier</td>
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<td>9:00</td>
<td><strong>Aquaporin-4 Channel Expression in Hypothalamic Regions: Assessing a Potential Intersection Between Glymphatic Clearance and Circadian Rhythmicity</strong>; Hannah Rhymes</td>
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<td>9:20</td>
<td><strong>Assessing the Implementation of a Behavioral Health Integration Model in a Rural, Nurse-Led Primary Care Clinic: Insights Gained and Recommendations for the Future</strong>; Bailey Shafar</td>
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<td><strong>Characterization of cellular pathological signatures in a mouse model of Alzheimer's Disease</strong>; Allison Dodds</td>
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<td><strong>Circadian Disruption is a Real Pain</strong>; Taylor Haddock</td>
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<td><strong>Clostridium difficile: A Difficult Diagnosis Made Possible by Real-Time PCR</strong>; Karen Bauman</td>
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<td>11:00</td>
<td><strong>Determining optimal sampling method for Mycoplasma bovis detection in American bison (Bison bison)</strong>; Erin Schwalbe</td>
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<td><strong>Determining the role of morphology in reproductive isolation between two related subspecies</strong>; Sydnie Fossberg</td>
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<td><strong>Effects of water content on bumble bee heat tolerance</strong>; Rachel Sucharski</td>
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<td><strong>A Family of Intrinsically Disordered Proteins Provide Protection to Biomolecules by Changing Structure During Desiccation</strong>; Vincent Nicholson</td>
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<td><strong>Acclimation to moderate altitude induces physiological adaptations in mice</strong>; Aedian O’Connor</td>
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<td><strong>Bioengineering of Light Controlled Proteins</strong>; Caleb Price</td>
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<td><strong>biotyping pasteurellaceae sp. isolates from nasal samples of domestic sheep</strong>; Luis Paredes</td>
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<td><strong>Continuing Education Needs of Speech-Language Pathologists Regarding Children with Cleft Lip/Palate Across Areas of Varying Population Density</strong>; Katelan Rogers</td>
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<td>10:00</td>
<td><strong>Efficient quantitation of airborne viruses using water-soluble collection pads: Water-soluble collection pads improve and simplify air monitoring compared to cotton</strong>; Mikkael Chick</td>
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<td>10:20</td>
<td><strong>Exercise During the Juvenile Period Protects Against Cardiac Dysfunction Later in Life</strong>; Megan Borders</td>
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CR 219

8:00  Identification of Novel Protein and Cellular Pathway Interactions with Abnormal Spindle.; Micah Conner
8:20  Influence of RFamide Related Peptide 3 (RFRP-3) on ovarian cancer cells (SKOV-3 cell line); Bridger Sparks
8:40  More Than Meets the Eye: Microplastic Accumulation in the Mountainous Snowpack of Wyoming; Anne Dalton
9:00  Myxobacteria Antagonism: Different Behaviors in Different Situations; Jack Govaerts
9:40  Orientation and Graft Effect on Sciatic Nerve Regeneration in the Rat Model; Abigail Brady
10:00 Preclinical Studies on Sexual Dimorphism in Mouse Models of Human Brain Disorders; Ashleigh McManus
10:20 Adverse Cardiopulmonary Effects of Propylene Glycol and Vegetable Glycerin from E-Cigarette Vapor; Brandon Phillips
10:40 Fluid Intake and Prevalence of Nocturia in Geriatric Populations; Tara Kortlever

CR 222

8:00  Identifying Gram positive rods from equine uterine samples; Magdalen Ringley
8:20  Developing cold-chain independent storage methods for key biologics; Maxwell Packebush
8:40  Isolation of Imperial Valley Virus and Sapphire II Virus in Aragas cooleyi from Imperial Valley, California through Cloning; Josie Pomrenke
9:00  My long and winding road to pursuing my medical degree; Bailee Wistisen
9:20  Understanding the role of iron in nutritional immunity during Toxoplasma gondii infection; Sai Kit Ng
9:40  Role of Diet in Development and Recovery from Spinal Cord Injury in Zebrafish Larvae; Emily Purifoy
10:20 Role of the Visual Arts in Conservation Research; John Edwards
### CR 310

**8:00**  **Aerobic Membrane Bioreactor in a Wastewater Treatment Plant**; Shannon Bendtsen, Marie Doherty, Courtney Rainbolt, Adam Russell, and Katelin Scheuerman

**8:30**  **Brews with Drew & Crew**; Jacob Heil, Marco Machado, Megan Pachniak, Drew Rone, and Alexandria Williams

**9:00**  **Green Hydrogen Production**; Hunter Hasskamp, Grace Leahy, Kiana Lotvedt, Declan McDonald, and Grady Parrish

**9:30**  **LFP Recycling Plant**; Andrew Anderson, Christopher Consoliver, Aaron Emmert, Lucas Mead, and Joseph Reinicke

**10:00**  **Mobile GMP Facility Design for mRNA Vaccine Manufacturing and Distribution**; Riley Boltz, Gareth Flowers, Jessica Hawki, Payton Peterson and Deana Sadrieva

### CR 314

**8:00**  **Automatic Solving of Real Jigsaw Puzzles with Computer Vision and Genetic Algorithms**; Duncan Caruthers, Jeffrey Michaelis, James Wheelock, and Colin Woods

**8:30**  **ASAR**; Tim Bourque, James Hoffman, James Lucid, and Samuel Riggs, Andrew Fuller

**9:00**  **C.A.T: Behavioral Biometrics to Perform Continuous Authentication**; Simon Beer, Trent Brown, Colten Gaines, and Jessa Gegax

**9:30**  **Automated Theorem Provers in Mathematics and Computer Science**; A. Stone Olguin

**10:00**  **ChronoNet**; Matthew Baker, Jarek Brown, Jason Fantl, Jacob Hendricks, and Parker Spires

**10:30**  **Fridge Stalker: An Inventory Management App**; Umar Balogun Mohammed, Tanner Selvig, Yun Chi Leong, and Zebulon Swope
11:00  Mapping Future Human Trafficking Vulnerabilities; William Brant, Carly Hutson, Teaghen Sweckard, and Nathaniel Whitham

11:30  QuiT: Sobriety Mobile Application; Dawson Butts, Collin Jensen, Isaiah Kiefer, and Colton Roach

12:00  The MP3 Smart Shuffler; William Frost, Mariah Moore, Letitia Pinter, and Eric Van Wig

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**EERB 251**

8:00  Temperature Monitored Drug Delivery Device; Sarah Swanson

8:30  Sustainable Energy Greenhouse; Rebecca Miller, Nick Nelson, and James Way

9:00  Electrical Pressure Gauge; Marcus Garcia

9:30  9H Lithium-Ion Battery Recycling; Brenden Lapp, Samara Ordahl, and Landon Walker

10:15  Automated Solar Panel Cleaner; David Freeman

10:45  Buddy Bot; Camryn Lanctot

11:15  Space Throttle and Flight Stick; Benjamin Skelley

11:45  Mini Fertigation System Based on Peristaltic pump; Siang Xue

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**EERB 255**

8:00  Detecting Cars in Bad Weather Using Thermal Imagery; Oreoluwa Babatunde, Christian Bitzas, and Brady Wagstaff

8:30  Athlete Movement Tracker; Corban Boyd, Michael Gehred, and Trevor Williams

9:00  Automatic Coffee Roaster; Trevor Evenson and Matthew Springsteen

9:30  AuraLock: Facial Recognition Door Lock; Dillon McCardell and Erin Stanfill

10:15  Guitar Buddy; William Gorman

10:45  Toad Data Collection Device; Cody Hume

11:15  Augmented Reality for Umpires; Samuel Bayles

11:45  9H solar ranch; Tanner Abbott, Bryce Reher, and Nico Shober