<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 9:00</td>
<td>REGISTRATION</td>
</tr>
<tr>
<td>9:00 – 9:30</td>
<td>OPENING</td>
</tr>
<tr>
<td></td>
<td>Welcome</td>
</tr>
<tr>
<td></td>
<td>Susan Yager, Faculty Director</td>
</tr>
<tr>
<td></td>
<td>University Honors Program</td>
</tr>
<tr>
<td></td>
<td>Recognition of National Scholarship Candidates</td>
</tr>
<tr>
<td></td>
<td>Dana Schumacher, Assistant Director for Scholarship &amp; Research</td>
</tr>
<tr>
<td></td>
<td>University Honors Program</td>
</tr>
<tr>
<td></td>
<td>Opening Remarks</td>
</tr>
<tr>
<td></td>
<td>Sarah Nusser, Vice President for Research</td>
</tr>
<tr>
<td></td>
<td>Iowa State University</td>
</tr>
<tr>
<td>9:30 – 10:45</td>
<td>PRESENTATION SESSION I</td>
</tr>
<tr>
<td>SESSION I.A</td>
<td>LAW &amp; PSYCHOLOGY</td>
</tr>
<tr>
<td>Room 3505</td>
<td>Moderator: Dirk Deam, Political Science</td>
</tr>
<tr>
<td>I.A.1</td>
<td>Concerns in the Interrogation Room: The Effects of Lengthy Questioning on Suggestibility</td>
</tr>
<tr>
<td>I.A.2</td>
<td>Self-regulatory Depletion in Interrogation Rooms</td>
</tr>
<tr>
<td>I.A.3</td>
<td>Suspects’ Custodial Rights: From Fostering the Right Against Self-Incrimination, To Miranda’s Ritual by Script</td>
</tr>
</tbody>
</table>
I.A.4  The Extension of the Sixth Amendment Right to Effective Assistance of Counsel  
David Fountain, Political Science (College of Liberal Arts & Sciences)  
Mentor: Kathleen Waggoner, Political Science

SESSION I.B  ANIMALS & DISEASE  
Room 3512  Moderator: Aileen Keating, Animal Science

I.B.1  Identification of Mutation(s) in the HIV-1 Gp41 Subunit Associated with Neutralization Resistance  
Miah Blomquist, Genetics and Microbiology (College of Agriculture & Life Sciences)  
Mentor: Michael Cho, Biomedical Sciences

I.B.2  Inactivation of the Caprine Arthritis-Encephalitis Virus Among Goat Populations by Colostrum  
Aaron Bohl, Biology and Political Science (College of Agriculture & Life Sciences)  
Mentor: Jessie Trujillo, Veterinary Microbiology & Preventive Medicine

I.B.3  Isolation and Characterization of a Canine Corneal Epithelial Cell Population  
Allison Ludwig, Animal Science (College of Agriculture & Life Sciences)  
Gil Ben-Shlomo, Veterinary Clinical Sciences

I.B.4  Preparing for the Emergence of White Nose Syndrome in Iowa  
Heather Sanders, Animal Ecology (College of Agriculture & Life Sciences)  
Mentor: Julie Blanchong, Natural Resource Ecology and Management

SESSION I.C  CLIMATE & THE ENVIRONMENT  
Room 3534  Moderator: William Simpkins, Geological & Atmospheric Sciences

I.C.1  Comparison of LiDAR 5m Resolution Digital Elevation Model (DEM) Derived Stream Flow Network to Ground-Truthed 5m Resolution DEM Stream Flow Network Data  
Casey Judge, Biology and Environmental Science (College of Agriculture & Life Sciences)  
Mentor: Steven Mickelson, Agricultural & Biosystems Engineering

I.C.2  Soil Moisture Dynamics: A Comparison of the SMOS Satellite to the South Fork In-Situ Soil Moisture Network  
Wesley Rondinelli, Meteorology (College of Liberal Arts & Sciences)  
Mentor: Brian Hornbuckle, Agronomy

I.C.3  Change in Heat Stress Days from Present to Future Climate  
Kayla Schuster, Meteorology (College of Liberal Arts & Sciences)  
Mentor: William Gutowski, Geological and Atmospheric Sciences

I.C.4  An Analysis of Changing Measurement Techniques on the Dew Point Record in Iowa  
Andrew Stern, Meteorology (College of Liberal Arts & Sciences)  
Mentor: Brian Hornbuckle, Agronomy
SESSION I.D  BIOLOGY & GENETICS
Room 3538  Moderator: JoAnne Powell-Coffman, Genetics, Development & Cell Biology

I.D.1  Using CRISPR-Cas9 to Create a Null Allele of Outsiders in D. Melanogaster
Jasmine Anderson, Genetics (College of Agriculture & Life Sciences)
Mentor: Clark Coffman, Genetics, Development & Cell Biology

I.D.2  Function of UCHL1 Gene in Neurons using TALEN-Mediated Mutagenesis
Mary Horton, Biology (College of Liberal Arts & Sciences)
Mentor: Jeffrey Trimarchi, Genetics, Development & Cell Biology

I.D.3  The Effects of Vibrational Cues on Physiological Development in Polistes fuscatus (paper wasps)
Kate Hunter, Animal Ecology and Biology (College of Agriculture & Life Sciences)
Mentor: Jennifer Jandt, Ecology, Evolution & Organismal Biology

I.D.4  The Role of Maternally Supplied Cell Death Components in Primordial Germ Cell Development of Drosophila melanogaster
Danielle Pohl, Biology (College of Liberal Arts & Sciences)
Mentor: Clark Coffman, Genetics, Development & Cell Biology

SESSION I.E  ENGINEERING & MEDICINE
Room 3558  Moderator: Kaitlin Bratlie, Materials Science & Engineering

I.E.1  Measuring Fracture Toughness of Agar Gel
Alex Avendano, Mechanical Engineering (College of Engineering)
Mentor: Pranav Shrotriya, Mechanical Engineering

I.E.2  Optimizing Stereoselective Aldehyde Alpha-Oxygenation
Justin Mikesell, Chemistry (College of Liberal Arts & Sciences)
Mentor: Jason Chen, Chemistry

I.E.3  In-Vivo Cartilage Scaffolds
Sullivan Stewart, Industrial Engineering (College of Engineering)
Mentor: Iris Rivero, Industrial & Manufacturing Systems Engineering

SESSION I.F  CHEMISTRY & CHEMICAL ENGINEERING
Room 3219  Moderator: Andrew Hillier, Chemical Engineering

Hannah Giang, Mathematics (College of Liberal Arts & Sciences)
Mentor: Wenyu Huang, Chemistry

I.F.2  Replacement of Petroleum-based Rubber with "Bio-rubber" from Vegetable Oils
Christopher Isely, Chemical Engineering (College of Engineering)
Mentor: Eric Cochran, Chemical & Biological Engineering
I.F.3 Using Negative Atmospheric Pressure Photoionization for Dopant Comparisons in Bio-oil Analysis
Kaitlin Heinen, Chemistry and Political Science (College of Liberal Arts & Sciences)
Mentor: Young-Jin Lee, Chemistry

10:45 – 11:00 Break & Refreshments, Pioneer Room

11:00 - 11:50 PRESENTATION SESSION II

SESSION II.A ARTICULATING HISTORY
Room 3505 Moderator: Pamela Riney-Kehrberg, History

II.A.1 Women of the United States and United Nations: Rhetorical Comparisons of Political Communications in International Politics
Kate Tindall, Journalism & Mass Communication and Political Science (College of Liberal Arts & Sciences)
Mentor: Valerie Hennings, Political Science

II.A.2 The English Sailor as Compared with the Landsman: Beliefs, Folklore & Religion, 1570-1625 and Beyond
Thomas Horton, History (College of Liberal Arts & Sciences)
Mentor: Paul Griffiths, History

II.A.3 The New Age: Exploring Creative Tensions Surrounding the Manhattan Project
Annamarie Bellegante, English (College of Liberal Arts & Sciences)
Mentor: Matt Foss, Music & Theatre

SESSION II.B PROFESSIONAL DEVELOPMENT
Room 3512 Accepted: Writing Personal Statements for Graduate or Professional School
Rachel Azima, Director, Writing & Media Center

SESSION II.C BIOLOGY & BIOCHEMISTRY
Room 3534 Moderator: David Oliver, Genetics, Development & Cell Biology

II.C.1 Transient Testing of Enzymes Designed for Genome Editing in Maize
Sarah Briggs, Biology (College of Liberal Arts & Sciences)
Mentor: Erica Unger-Wallace, Genetics, Development & Cell Biology

II.C.2 Does Alternative Transposition, a Potential Genome-restructuring Activity, Occur in Petunia?
Kaitlyn Gilbert, Biology (College of Agriculture & Life Sciences)
Mentor: Thomas Peterson, Genetics, Development & Cell Biology

II.C.3 Purification of Recombinant Xylosyltransferase XXT2 involved in Xyloglucan Biosynthesis
Zachary Young, Biochemistry (College of Liberal Arts & Sciences)
Mentor: Olga Zabotina, Biochemistry, Biophysics & Molecular Biology
SESSION II.D  MECHANICAL ENGINEERING
Room 3538  Moderator: Ted Heindel, Mechanical Engineering

II.D.1  Graph Based Automated Analysis for Plant Root Phenotyping
Nigel Lee, Mechanical Engineering (College of Engineering); Hsiang Sing Naik, Mechanical Engineering (College of Engineering)
Mentor: Baskar Ganapathysubramanian, Mechanical Engineering

II.D.2  Automated Phenotyping of Corn
Hsiang Sing Naik, Mechanical Engineering (College of Engineering); Nigel Lee, Mechanical Engineering (College of Engineering)
Mentor: Baskar Ganapathysubramanian, Mechanical Engineering

II.D.3  Fuel Tracer Laser-induced Fluorescence for Droplet Liquid-Vapor Visualization
Keisuke Sato, Physics and Mechanical Engineering (College of Liberal Arts & Sciences)
Mentor: Terrence Meyer, Mechanical Engineering

SESSION II.E  AEROSPACE ENGINEERING
Room 3558  Moderator: Jonathan Regele, Aerospace Engineering

II.E.1  Lagrangian Particle Tracking for Modeling of Multiphase Flows
Ryan Goetsch, Aerospace Engineering (College of Engineering)
Mentor: Jonathan Regele, Aerospace Engineering

II.E.2  L.A.S.E.R. (Light Aircraft Solar Extended Range)
Rohan Sharma, Aerospace Engineering and Physics (College of Engineering)
Mentor: Ambar Mitra, Aerospace Engineering

II.E.3  Computational Approach to Function Minimization and Optimization with Constraints
Rohan Sharma, Aerospace Engineering and Physics (College of Engineering)
Mentor: Ambar Mitra, Aerospace Engineering

SESSION II.F  BIOMEDICINE & THE EYE
Room 3219  Moderator: Jodi Sterle, Animal Science

II.F.1  Characterizing mRNA Expression in the Retinal Ganglion Cells of the Developing Chick Retina
Miranda Lee, Biology (College of Liberal Arts & Sciences)
Mentor: Jeffrey Trimarchi, Genetics, Development & Cell Biology

II.F.2  Measurement of Intraocular Pressures in Glaucomatous and Non-glaucomatous Kittens
Allison Ludwig, Animal Science (College of Agriculture & Life Sciences)
Mentor: Matthew Ellinwood, Animal Science; Gil Ben-Shlomo, Veterinary Clinical Sciences

II.F.3  Dogs as a Model for Mucopolysaccharidosis: Measuring Learning Ability
Alyssa Swan, Animal Science (College of Agriculture & Life Sciences)
Mentor: Matthew Ellinwood, Animal Science
II.F.4 Exploring Distinct Retinal Ganglion Cell Types at Single Cell Resolution
Terry Lund, Biology and Psychology (College of Agriculture & Life Sciences)
Mentor: Jeffrey Trimarchi, Genetics, Development & Cell Biology

11:50 – 12:10 Break & Refreshments featuring FOCUS Artists

12:10 – 1:00 PRESENTATION SESSION III

SESSION III.A LIFE MATERIALS
Room 3505 Moderator: Harry (Jack) Horner, Genetics, Development & Cell Biology

III.A.1 Exploiting Phage Virulence to Combat Bacterial Diseases of Plants
Omer Mahmoud, Microbiology (College of Agriculture & Life Sciences)
Mentor: Rebecca Cademartiri, Materials Science & Engineering

III.A.2 Using Nonsense Suppression to Generate Pure Histone H3 with Homogenous Lysine Acetylation on Up to Four Select Residues for Use in Biochemical and Biophysical Assays
Isaac Young, Agricultural Biochemistry (College of Agriculture & Life Sciences)
Mentor: Michael Shogren-Knaak, Biochemistry, Biophysics & Molecular Biology

III.A.3 Non-Coding RNAs in Agrobacterium tumefaciens
Christopher Hernandez, Agronomy and Genetics (College of Agriculture & Life Sciences)
Mentor: Kan Wang, Agronomy

SESSION III.B PROFESSIONAL DEVELOPMENT: NSF GRADUATE RESEARCH FELLOWSHIPS
Room 3512
Mark Bryden, Mechanical Engineering; Chloe Dedic, Mechanical Engineering; and Alina Ott, Agronomy

SESSION III.C COMMUNICATION & PSYCHOLOGY
Room 3534 Moderator: Dawn Sweet, Psychology

III.C.1 Listen to My Body Talk: Gesture Type and Frequency as Markers of Depression
Rose Collins, Communication Studies (College of Liberal Arts & Sciences)
Mentor: Dawn Sweet, Psychology

III.C.2 Lying to the Ones We Love: Deception Strategies in Intimate Relationships
Jenny Jessen, Psychology (College of Liberal Arts & Sciences)
Mentor: Dawn Sweet, Psychology

III.C.3 The Use of Gesture During Truthful and Fabricated Accounts of a Self-Experience
Shinichi Kogi, Communication Studies and Psychology (College of Liberal Arts & Sciences);
Joel Hughes, Communication Studies (College of Liberal Arts & Sciences);
Steven Netcott, Communication Studies (College of Liberal Arts & Sciences)
Mentor: Dawn Sweet, Psychology
SESSION III.D THE CREATIVE MIND
Room 3538 Moderator: Eric Cooper, Psychology

III.D.1 3D Virtual Prototyping in Apparel Design
Hanna Hoch, Apparel, Merchandising, and Design and German (College of Human Sciences)
Mentor: Fatma Baytar, Apparel, Events & Hospitality Management

III.D.2 Distance Perception in Virtual Reality
William Hammel, Psychology (College of Liberal Arts & Sciences)
Mentor: Jonathan Kelly, Psychology

SESSION III.E ANIMALS & THE ENVIRONMENT
Room 3558 Moderator: Kevin Roe, Natural Resource Ecology Management

III.E.1 Genetic Diversity and Genetic Similarity Between Urban and Rural White-Tailed Deer Populations in Iowa
Whitney Briggs, Animal Ecology and Microbiology (College of Agriculture & Life Sciences)
Mentor: Julie Blanchong, Natural Resource Ecology and Management

III.E.2 Bridging the Forest Gap: An Experimental Evaluation of Bridges for New World Monkeys
Giselle Narvaez Rivera, Animal Ecology (College of Agriculture & Life Sciences)
Mentor: Stacy Lindshield, Anthropology

III.E.3 Understanding Interactions Between Butterflies and their Floral Resources in Iowa Grasslands
Toni Proescholdt, Biology (College of Agriculture & Life Sciences)
Mentor: Diane Debinski, Ecology, Evolution & Organismal Biology

1:00 – 1:10 Break & Refreshments, Pioneer Room

1:10 – 2:00 PRESENTATION SESSION IV

SESSION IV.A PSYCHOLOGY
Room 3505 Moderator: Carolyn Cutrona, Psychology

IV.A.1 Examining Correlates of Research Participant’s Attitudes and Ethicality Ratings of Deception Studies
Alexander Bennett, Psychology (College of Liberal Arts & Sciences)
Mentor: Norman Scott, Psychology

IV.A.2 Beliefs about Emotional Expression
Lexia Bishop, Psychology (College of Liberal Arts & Sciences); Ali Marino, Psychology (College of Liberal Arts & Sciences); Leslie Dooley, Psychology (College of Liberal Arts & Sciences)
Mentor: Meifen Wei, Psychology

IV.A.3 Harsh Parenting as a Predictor of Physical, Verbal and Relational Aggression in Children
Russell Jackson, Psychology (College of Liberal Arts & Sciences)
Mentor: Craig Anderson, Psychology
SESSION IV.B  PROFESSIONAL DEVELOPMENT  
Room 3512  Spread the Word: Presenting Your Research at Conferences  
*Rachel Azima*, Director, Writing & Media Center

SESSION IV.C  MATERIALS ENGINEERING  
Room 3534  Moderator: *Kristen Constant*, Materials Science & Engineering

**IV.C.1 The Characterization of BECy-PES Polymer Blends**  
*Ryan Hall*, Materials Engineering (College of Engineering)  
Mentor: *Samy Madbouly*, Materials Science & Engineering

**IV.C.2 Investigation of Spray-Coated Silver-Microparticle Electrodes for Ionic Electroactive Polymer Actuators**  
*Catherine Meis*, Materials Engineering (College of Engineering)  
Mentor: *Reza Montazami*, Mechanical Engineering

**IV.C.3 Macrophase Separation Using Block Copolymer Blends**  
*Rachel Philiph*, Materials Engineering (College of Engineering)  
Mentor: *Karl Berggren*, Massachusetts Institute of Technology

SESSION IV.D  MICROBIOLOGY  
Room 3538  Moderator: *F. Chris Minion*, Veterinary Microbiology & Preventive Medicine

**IV.D.1 Immune Activation Components from Raw Milk and Colostrum**  
*Christopher Hinojo*, Microbiology (College of Agriculture & Life Sciences)  
Mentor: *Joan Cunnick*, Animal Science

**IV.D.2 Development of a Novel System for Recombineering in *Mycoplasma***  
*Clair Mitzelfeldt*, Microbiology and Genetics (College of Agriculture & Life Sciences)  
Mentor: *Andrew Petersen*, Veterinary Microbiology & Preventive Medicine

**IV.D.3 Developing the CRISPR Interference System to Understand Bacterial Gene Function**  
*Megan Weems*, Microbiology (College of Agriculture & Life Sciences)  
Mentor: *Gregory Phillips*, Veterinary Microbiology & Preventive Medicine

SESSION IV.E  DESIGNING THE ENVIRONMENT  
Room 3558  Moderator: *Mimi Wagner*, Landscape Architecture

**IV.E.1 Energy Efficient Dehumidification by Solar Driven Desiccant Systems**  
*Ryan Everly*, Mechanical Engineering (College of Engineering); *Esdras Murillo*, Electrical Engineering (College of Engineering)  
Mentor: *Ulrike Passe*, Architecture

**IV.E.2 Plastic Recycling in Ghana**  
*Brenda Klutzke*, Mechanical Engineering (College of Engineering); *Kellen O'Brien*, Materials Engineering (College of Engineering); *Zane Pennock*, Civil Engineering (College of Engineering)  
Mentor: *Chris Martin*, Integrated Studio Arts
IV.E.3  A Little Dreamer Art Installation: Paper Airplanes and Sustainability
Qiyi Li, Landscape Architecture and Environmental Studies (College of Design)
Mentor: Michael Martin, Landscape Architecture

SESSION IV.F  MARKETS & ECONOMIES
Room 3219  Moderator: Peter Orazem, Economics
IV.F.1  Housing Markets in College Towns: The Case of Ames, Iowa
Molly Carpenter, Community and Regional Planning (College of Design)
Mentor: Monica Haddad, Community & Regional Planning
IV.F.2  2008 Stock Market Collapse: A Financial Institution Perspective
Will Pickerig, Finance (College of Business)
Mentor: Shoba Premkumar, Finance
IV.F.3  Can We Feed the World?: Food Production, Input Prices, Trade Restrictions and Technological Change, 1961-2010
Janet Horsager, Economics and Music (College of Liberal Arts & Sciences)
Mentor: Peter Orazem, Economics

2:00 – 2:10  Break & Refreshments, Pioneer Room

2:10 – 3:30  PRESENTATION SESSION V

SESSION V.A  IDENTITY, POLICY & POLITICS
Room 3505  Moderator: Dave Peterson, Political Science
V.A.1  Women and the Welfare Rights Movement
Madeline Becker, Political Science and History (College of Liberal Arts & Sciences)
Mentor: Jana Byars, History
V.A.2  American National Identification: Does it Predict Prejudice?
Alexandra Goldina, Advertising (College of Liberal Arts & Sciences); Clara Lager, Psychology (College of Liberal Arts & Sciences); Brittany Berrier, Psychology ((College of Liberal Arts & Sciences); Xiaoyun Zhang, Sociology ((College of Liberal Arts & Sciences)
Mentor: Sarah Prot, Psychology
V.A.3  Bias Toward the Wrongfully Convicted
Andrew Pierce, Psychology (College of Liberal Arts & Sciences); Jonathon DePorter, Psychology (College of Liberal Arts & Sciences)
Mentor: Laura Smalarz, Psychology
V.A.4  Balancing the Board: An Analysis of the Implementation and Implications of Iowa’s Gender Balance Legislation for Appointed Boards and Commissions
Morgan Todd, Political Science (College of Liberal Arts & Sciences)
Mentor: Valerie Hennings, Political Science
SESSION V.B  KINESIOLOGY
Room 3512  Moderator: Tim Derrick, Kinesiology

V.B.1  The Effects of Sensory Shoes on Balance in Young Children
Tillie Loeffelholz, Kinesiology (College of Human Sciences)
Mentor: Timothy Derrick, Kinesiology

V.B.2  Stress Responses to Exercise in Lungs of Mice
Joseph Sevcik, Kinesiology & Health (College of Human Sciences)
Mentor: Dr. Marian Kohut, Kinesiology

V.B.3  Effect of Stationary and Moving Defenders on the Biomechanics of the Cutting Movement
David Harper, Kinesiology (College of Human Sciences)
Mentor: Jason Gillette, Kinesiology

SESSION V.C  ART & DESIGN
Room 3534  Moderator: Mikesch Muecke, Architecture

V.C.1  Graphic Novels: Creation of "The Bloody Man"
Taylor Buckley, Graphic Design and English (College of Design)
Mentor: Charles Richards, Integrated Studio Arts

V.C.2  Equine in Motion
Elyse Titus, Integrated Studio Arts (College of Design)
Mentor: Joe Muench, Integrated Studio Arts

V.C.3  Architecture of Esposizione Universale Roma: Reassessing Fascism’s Contribution to the Success of Modern Rome
Albert Li, Interior Design (College of Design)
Mentor: Diane Al Shihabi, Interior Design

V.C.4  Inaccurate Restorations: Charles Mackintosh's Sauchiehall St. Willow Tea-Rooms
Ontario Caudill, Interior Design (College of Design)
Mentor: Diane Al Shihabi, Interior Design

SESSION V.D  DIET & HEALTH
Room 3538  Moderator: Ruth MacDonald, Food Science & Human Nutrition

V.D.1  Resistant Starch and Type 2 Diabetes
Kelly Grapentine, Dietetics (College of Human Sciences)
Mentor: Matthew Rowling and Gar Yee Koh, Food Science & Human Nutrition

V.D.2  Promoting Awareness of Food Assistance and Nutrition for Iowans age 50+
Ann Heuer, Dietetics (College of Human Sciences)
Mentor: Sarah Francis, Food Science & Human Nutrition
V.D.3 The Use of Resistant Starch in Colorectal Cancer Prevention
Kylie Thompson, Dietetics (College of Human Sciences); Dana Pralle, Dietetics (College of Human Sciences); Reed Faldet, Kinesiology & Health (College of Human Sciences); Kacey Klemesrud, Animal Science (College of Agriculture & Life Sciences)
Mentor: Diane Birt, Food Science & Human Nutrition

V.D.4 Dietary Resistant Starch Attenuates Hyperglycemia, Weight Loss, and Methyl Group Imbalance in Type 1 Diabetic Rats
Kelsey Upah, Dietetics (College of Agriculture & Life Sciences)
Mentor: Kevin Schalinske and Alysse Anderegg, Food Science & Human Nutrition

SESSION V.E ANIMAL SCIENCE & GENETICS
Room 3558 Moderator: Donald Beitz, Animal Science

V.E.1 Lipopolysaccharide Induces Pro-Inflammatory Gene Expression in Adult Male Chickens from Diverse Genetic Lines
Kelsey Casebere, Dairy Science (College of Agriculture & Life Sciences)
Mentor: Sue Lamont, Animal Science

V.E.2 Chloroethylaziridine-Induced Xenobiotic Metabolism Gene Expression in the Mouse Lung
Mackenzie Dickson, Dairy Science (College of Agriculture & Life Sciences)
Mentor: Aileen Keating, Animal Science

V.E.3 Targeted Deletion of Zebrafish IncRNAis18 with TALENs
Crystal Jones, Genetics (College of Agriculture & Life Sciences)
Mentor: Maura McGrail, Genetics, Development & Cell Biology

SESSION V.F ENGINEERING & THE ENVIRONMENT
Room 3219 Moderator: Simon LaFlamme, Civil, Construction & Environmental Engineering

V.F.1 Economic Haul Radius as Affected by Diesel Fuel Cost
Andrew Reynolds, Construction Engineering (College of Engineering)
Mentor: Douglas Gransberg, Civil, Construction & Environmental Engineering

V.F.2 Biomass Fast Pyrolysis
Jianqiu Huang, Mechanical Engineering (College of Engineering)
Mentor: Shankar Subramaniam, Mechanical Engineering

V.F.3 Heated Transportation Infrastructure: Prevention of Ice Formation on Paved Surfaces
William Cord, Civil Engineering (College of Engineering)
Mentor: Halil Ceylan, Civil, Construction & Environmental Engineering

3:30 – 5:00 POSTER PRESENTATION
Gallery, Memorial Union

P.1 Improvement to the Air Management Practices Tool (AMPAT)
John Harlow, Chemical Engineering (College of Engineering)
Mentor: Jacek Koziel, Agricultural & Biosystems Engineering
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Author(s)</th>
<th>Department(s)</th>
<th>Mentor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Gilt Approachability to a Human When Selected for Feed Efficiency</td>
<td>Johanna Sholar, Animal Science and Music</td>
<td>College of Agriculture &amp; Life Sciences</td>
<td>Anna Butters-Johnson, Animal Science</td>
</tr>
<tr>
<td>3</td>
<td>Coffee Ceremony and Cultural Identity: An Interview with Ethiopian Women</td>
<td>Ashley Arnold, Anthropology</td>
<td>College of Liberal Arts &amp; Sciences</td>
<td>Yalem Teshome, Anthropology</td>
</tr>
<tr>
<td>4</td>
<td>Annual Energy Consumption In A Community Lab and Analysis of the Electricity Energy Flow</td>
<td>Esdras Murillo, Electrical Engineering</td>
<td>College of Design</td>
<td>Ulrike Passe, Architecture</td>
</tr>
<tr>
<td>5</td>
<td>3D Random Weld Generator for X-Ray Simulation</td>
<td>Nicholas Cosentino, Aerospace Engineering</td>
<td>College of Engineering</td>
<td>Scott Wendt, Center for Nondestructive Evaluation</td>
</tr>
<tr>
<td>8</td>
<td>Are Low Nest Temperatures Related to Hatchling Painted Turtle Mortality During Hibernation?</td>
<td>Kyla Rand, Biology</td>
<td>College of Agriculture &amp; Life Sciences</td>
<td>Fredric Janzen, Ecology, Evolution &amp; Organismal Biology</td>
</tr>
<tr>
<td>9</td>
<td>Transmission of <em>Polistes</em> Vibrational Signals Across The Nest</td>
<td>Megan Harrison, Biology</td>
<td>College of Liberal Arts &amp; Sciences</td>
<td>Jennifer Jandt, Ecology, Evolution &amp; Organismal Biology</td>
</tr>
<tr>
<td>10</td>
<td>Effects of Resistant Starch on Colon Cancer Progression</td>
<td>Kacey Klemesrud, Animal Science</td>
<td>College of Agriculture &amp; Life Sciences</td>
<td>Diane Birt, Food Science &amp; Human Nutrition</td>
</tr>
<tr>
<td>11</td>
<td>Maneuvering Over an Obstacle in Dim Lighting: Joint Torque Distribution and Implications for Older Adults</td>
<td>Elizabeth Fry, Kinesiology &amp; Health</td>
<td>College of Human Sciences</td>
<td>Jason Gillette, Kinesiology</td>
</tr>
<tr>
<td>12</td>
<td>Ice is Nice - Save Energy! - Save Money!</td>
<td>Morgan Hassebroek, Pre-Medicine</td>
<td>College of Liberal Arts &amp; Sciences</td>
<td>Alan Murdoch, Kinesiology</td>
</tr>
<tr>
<td>13</td>
<td>Process Optimization for Fatty Acid Production in <em>Escherichia coli</em></td>
<td>Nicole Johnson, Chemical Engineering</td>
<td>College of Engineering</td>
<td>Jong Moon Yoon, Chemical &amp; Biological Engineering</td>
</tr>
</tbody>
</table>
P.14 Developing Methods for Enantioselective Hydroacylation on Inter- and Intramolecular Systems
   Adam Schmidt, Chemistry (College of Liberal Arts & Sciences)
   Mentor: Levi Stanley, Chemistry

P.15 Evaluating the Effects of Perennial Grass Filter Strips (PFS) on Eroded Carbon Fluxes in Agricultural Watersheds
   Alex Johnson, Environmental Science (College of Liberal Arts & Sciences)
   Mentor: Michael Castellano, Agronomy

P.16 Post-Synthetic Cell Wall Modifications and Their Effects on Abiotic Stress Resistance in Arabidopsis Transgenic Plants
   Lauran Chambers, Biochemistry (College of Liberal Arts & Sciences)
   Mentor: Olga Zabotina, Biochemistry, Biophysics & Molecular Biology

P.17 When Mother’s Milk Goes Bad: The Influence of Location on Breastfeeding Mothers Perceived Levels of Intelligence
   Leslie Dooley, Psychology (College of Liberal Arts & Sciences)
   Mentor: Robert Hessling, Psychology

P.18 Nutrition Analysis of Meals Served During the Free Meals Program by Food at First, and the Supports and Challenges of Providing These Meals
   Vemala Devi Balakrishnan, Dietetics (College of Human Sciences)
   Mentor: Rose Martin, Food Science & Human Nutrition

3:45 – 5:00 PRESENTATION SESSION VI

SESSION VI.A MOVEMENT & HEALTH
Room 3505 Moderator: Philip Martin, Kinesiology

VI.A.1 Examining the Utility of Disposable Activity Monitors
   Rachel Devick, Kinesiology (College of Human Sciences)
   Mentor: Gregory Welk and Youngwon Kim, Kinesiology

VI.A.2 Public Knowledge of the Federal Physical Activity Guidelines
   Nolan Gall, Kinesiology & Health (College of Human Sciences)
   Mentor: Panteleimon Ekkekakis, Kinesiology

VI.A.3 The Validity of an Online Tool for the Assessment of Physical Activity Behaviors in Youth
   Paul Hibbing, Kinesiology & Health (College of Human Sciences); Rachel Devick, Kinesiology & Health (College of Human Sciences)
   Mentor: Gregory Welk, Kinesiology

SESSION VI.B PSYCHOLOGY & GENDER
Room 3512 Moderator: Stephanie Madon, Psychology

VI.B.1 Gender Differences and Similarities in the Relationship of Emotional Intelligence with Impulsivity and Self-Control
   Charlotte Moser, Psychology (College of Liberal Arts & Sciences); Mackenzie Gibbons, Psychology (College of Liberal Arts & Sciences); Laura Hulsart, Psychology (College of Liberal Arts & Sciences)
   Mentor: Sara Prot, Psychology
VI.B.2  Gender Differences in the Relationship of Peer Pressure and Emotional Regulation with Antisocial Behaviors  
Zhihan Su, Psychology (College of Liberal Arts & Sciences)  
Mentor: Sara Prot, Psychology

VI.B.3  Relational Maintenance Tactics within Romantic Relationships During the Transition from High School to College  
Lauren Johnsen, Communication Studies and Environmental Studies (College of Liberal Arts & Sciences)  
Mentor: Racheal Ruble, Psychology

SESSION VI.C  SCIENCE & SPACE  
Room 3534  Moderator: Clayton Anderson, Aerospace Engineering

VI.C.1  Developing Explosion Models for Optimal Fragmentation of a Hazardous Asteroid  
Jacob Harry, Aerospace Engineering (College of Engineering)  
Mentor: Bong Wie, Aerospace Engineering

VI.C.2  A Glimpse into NASA Planetary Protection: Bacterial Communities Residing on Mars-Bound Spacecraft  
Garrett Smith, Microbiology and Genetics (College of Agriculture & Life Sciences)  
Mentor: J. Nick Benardini, NASA

SESSION VI.D  WRITER’S FORUM  
Room 3538  Moderator: James Coppoc, English

VI.D.1  The Wanderer  
Blake Engelby, English (College of Liberal Arts & Sciences)

VI.D.2  Seeing  
Alexis Nicholson, Advertising (College of Liberal Arts & Sciences)

VI.D.3  Rubies and Garnets  
Emily Nordstrom, Communication Studies and English (College of Liberal Arts & Sciences)

VI.D.4  Vanished  
Carrie Spring, English (College of Liberal Arts & Sciences)

VI.D.5  My Father’s Nurse  
Brenda Tyrrell, English and Classical Studies (College of Liberal Arts & Sciences)
VI.E.1 Designing High Thermal Conductive Materials Using Artificial Evolution
Michael Davies, Computer Engineering and Mathematics (College of Engineering)
Mentor: Baskar Ganapathysubramanian, Mechanical Engineering

VI.E.2 TMS Effect on Growth Rate of N27 Neuron Cells
Yiwen Meng, Electrical Engineering (College of Engineering)
Mentor: Ravi Hadimani, Electrical and Computer Engineering

VI.E.3 Modifying Compiler Parsing to Improve the Usability of Boa: A Domain-Specific Language and Infrastructure for Ultra-Large-Scale Software Repository Data Mining
Sambhav Srirama, Computer Science (College of Liberal Arts & Science)
Mentor: Hridesh Rajan, Computer Science