<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Poster Session</td>
<td>1:00 – 4:00 p.m.</td>
<td>Jordan Ballroom</td>
</tr>
<tr>
<td>Visual Art Display</td>
<td>1:00 – 4:00 p.m.</td>
<td>Art Gallery</td>
</tr>
<tr>
<td>Podium Presentations</td>
<td>1:00 – 3:30 p.m.</td>
<td>Ah Fong, Alexander, Barnwell, Boyington, Brink, Hatch A and Hatch B Conference Rooms</td>
</tr>
<tr>
<td>Performing Arts</td>
<td>2:00 – 3:15 p.m.</td>
<td>Grand Ballroom</td>
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<tr>
<td>Closing Program</td>
<td>3:30 – 4:00 p.m.</td>
<td>Jordan Ballroom</td>
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Mark Rudin, Vice President for Research
Sharon McGuire, Vice Provost for Undergraduate Studies
Welcome to Boise State University’s 7th annual Undergraduate Research and Scholarship Conference. One of the strengths of Boise State, and a source of pride for the entire campus community, is the prominent role that undergraduate students play in research. This conference continues to provide these students an opportunity to share their projects and be recognized for their exceptional work.

Congratulations to those who have been selected to present at this important event. Their work contributes to scientific knowledge, enriches our culture, enhances classroom learning, benefits the community and state, and has the potential to improve quality of life in the 21st century. Faculty sponsors who assist and support these students with their research should also be commended for their commitment to learning and their dedication to the personal success of our students.

We are fortunate to have such an impressive group of undergraduates who support our research mission. As Boise State continues to advance as a metropolitan research university of distinction, undergraduate research and creative activities will remain a critically important factor in our success. Research has a transformative effect on all of our students and the character of the university. Our ongoing commitment to this endeavor will enhance our university and help us prepare our graduates to make a difference in an increasingly complex world.

I hope you enjoy the conference and thank you for your support of this annual event.

Warm regards,
Mark Rudin
Vice President for Research

Welcome to the Seventh Annual Undergraduate Research and Scholarship Conference. With every passing year we see greater student participation and a continuation of the outstanding quality of their work. Our institutional strategic plan, Charting the Course, has defined student involvement in research as one of the hallmarks of Boise State University defining itself as a Metropolitan Research University of Distinction. This conference is a tangible example of progress on achieving this goal as well as demonstrating the importance that innovation and imagination play in solving problems and in the expression of ideas.

Our students participating in today’s conference represent the diverse range of academic disciplines at Boise State University. They have each demonstrated a drive and determination that exceeds that of the average student. Through their hard work, they have gained research and presentation skills that will prepare them for the world beyond academia. It is with great pride and enthusiasm that we congratulate these exceptional students and honor them for their outstanding work.

I would also like to extend my appreciation to our faculty sponsors. Their dedication to enriching the learning environment at Boise State University is another testament to our vibrancy and growth. We know they have countless demands on their time and we thank them for their commitment to our students and for creating opportunities for scholarly achievement.

For those of you joining us today, I encourage you to visit all of the venues represented and meet with our students to learn about the research and work they have conducted. You will not be disappointed. On behalf of Boise State University, I thank you for your support and hope that you enjoy this year’s conference.

Sona Karentz Andrews
Provost and Vice President for Academic Affairs
INNOVATE@BOISESTATE
2010 SPRING BREAK CHALLENGE

Innovation, imagination and creativity are essential skills for the 21st Century. To demonstrate and enhance these skills, 25 Boise State University students, engaged in interdisciplinary teams, competed during Spring Break in an intensive 5-day team contest to develop the most innovative solution to a downtown Boise challenge. The process students undertook was captured and broadcast on YouTube. The session will share the challenges, solutions and processes associated with innovate@boisestate. (Winners to be announced in early April.)

RUN

The 2009 – 2010 First Year Read selection is Run, a novel by Ann Patchett.

“Set over a period of twenty-four hours, Run takes us from the Museum of Comparative Zoology at Harvard to a home for retired Catholic priests in downtown Boston. It shows us how worlds of privilege and poverty can coexist only blocks apart from each other, and how family can include people you’ve never even met….Ann Patchett illustrates the humanity that connects disparate lives, weaving several stories into one surprising and endlessly moving narrative. Suspenseful and stunningly executed, Run is ultimately a novel about secrets, duty, responsibility, and the lengths we will go to protect our children.”

~From Ann Patchett’s website at www.annpatchett.com

In the Poster Session, students will be presenting examples of how this year’s First Year Read book was incorporated into their courses, examples of how the book inspired them to serve, an examples of student service to the community.
ART GALLERY
1:00 PM - 4:00 PM

PROGRAM COVER DESIGN
UNDERGRADUATE RESEARCH AND
SCHOLARSHIP CONFERENCE

Linsey Alexander, Brook Baldwin, Andrew Bennion, Kristin Beumeler, Nicole Cahill, James Campbell, Mathew Cook, TJ Eardley, Andrew Farrer, Conrad Garner, Brian Green, Beau Greener, Jessica Hale, Jen Hallyburton, Jared Hicks, Chrystal Hake, Tiffanie Hsu, Chrissy Kaiserman, Danielle Lovala, Corey Lewis, Concepcion Yeng Chi Martinez, Niki Mathews, Jayne Murray, Janet Oye, Daniel Plaat, Jen Sokoloff, Craig Tanner, Drew Tomseth, Kelly Ward, David Wilson, Jade Wong, Michael Wynkoop, Jared Wynn and Greg Young
College of Arts & Sciences, Department of Art
Faculty Sponsor: John Francis

Students in Art 204, Graphic Design Studio I were presented with a unique opportunity to design the program cover for the 2010 Undergraduate Research and Scholarship Conference. This is an example of a research project for a graphic designer. The student designers prepare themselves by researching the university colleges and many programs that are represented in the conference. Class instruction includes subjects in representation, semiotics and denotation of images as a way to present the concept for communication. Through use of peer and instructor review, each student developed their own design as a way to visually represent the conference. Some designers used metaphoric principles, others by use of a visual pun while some tried to capture the essence of the undergraduate research experience. This year’s cover design was selected by a jury of senior graphic design students, conference planning committee members, faculty, and staff. All cover design submissions are displayed in the Student Union Building for the duration of the conference.

Congratulations to Concepcion Yeng Chi Martinez, first place winner; Jared Wynn, second place; Conrad Garner, third place; and Niki Matthews, Graphic Design Students’ Choice winner.

GRAND BALLROOM
2:00 PM - 2:30 PM
2:50 PM - 3:15 PM

“THE MOMENT I SAID IT”
Miranda Forcier
Department of Theatre Arts
Faculty Sponsor: Marla Hansen

DICHOTOMY “THE SEPARATION”
MUSIC BY: BARAKA SOUNDTRACK AND COLDPLAY
Ali Landers
Department of Theatre Arts
Faculty Sponsor: Marla Hansen

“HEAR MY SOUL (OUT LOUD)”
Dirk Rapp and Miranda Forcier
Department of Theatre Arts
Faculty Sponsor: Marla Hansen
Factors Influencing International Political Rights: A Multiple Regression Analysis
Regan Charlton (Honors College)
College of Social Sciences and Public Affairs
Department of Political Science
Faculty Sponsor: Dr. Ross Burkhart

Influences on Abortion Rates in America: A Multiple Regression Analysis
Brindee Probst (Honors College)
College of Social Sciences and Public Affairs
Department of Political Science
Faculty Sponsor: Dr. Ross Burkhart

Perceptions of Discrimination: An Analysis of Four National Surveys of Latinos; Findings from the Pew Hispanic Center/Kaiser Family Foundation National Survey of Latinos
Jenny Gallegos (McNair Scholar)
College of Social Sciences and Public Affairs
Department of Political Science
Faculty Sponsor: Dr. Ross Burkhart

Identifying Student Perceptions: The Effect of Parent-Child Relationships on Attitudes Towards Academic Abilities
Heather Gifford (McNair Scholar)
College of Social Sciences and Public Affairs
Department of Psychology
Faculty Sponsor: Dr. Elizabeth Morgan

Support for Success: An Exploration of the Support Networks of Latino Students in the College Assistance Migrant Program
Alexandra Ornelas Gonzalez (McNair Scholar)
College of Social Sciences and Public Affairs
Department of Sociology
Faculty Sponsor: Dr. Sergio Romero

Personality and Character Selection in World of Warcraft
Ian Mosley (McNair Scholar)
College of Social Sciences and Public Affairs
Department of Sociology
Faculty Sponsor: Dr. Steven Patrick

Linguistic Politics: Creating a Communication Canon Post WWII
Erin Miller (McNair Scholar)
College of Social Sciences and Public Affairs
Department of Communication
Faculty Sponsor: Dr. Ed McLuskie
**PODIUM PRESENTATIONS**

**ALEXANDER ROOM**

1:00 PM - 2:00 PM

Each podium presentation will be 10 - 15 minutes with a 5 minute transition between presentations.

**DO HIGH FREQUENCY OSCILLATION VESTS REDUCE VITAL CAPACITY IN NORMAL SUBJECTS?**

Brad Hughett, Colleen Monteith, and Vida Khaliki  
College of Health Sciences  
Department of Respiratory Care  
Faculty Sponsor: Jody Lester

**PEEP SETTINGS AFFECT EXPIRATORY RESISTANCE? A BENCH STUDY OF THE LTV® 1200 HOME CARE VENTILATOR**

James Matsuura (Honors College), Candice McClain, Andrea Young, Kady May, and Jody Lester  
College of Health Sciences  
Department of Respiratory Care  
Faculty Sponsor: Jody Lester

**EXAMINING THE CONNECTION BETWEEN ELEVATED TRIGLYCERIDE LEVELS AND RISK FOR DIABETES IN LATINO ADULTS**

Jonathan Glogowski, Dr. Leonie Sutherland, and Dr. Shawn Simonson  
College of Health Sciences  
Department of Nursing  
Faculty Sponsor: Dr. Dawn Weiler

**ALEXANDER ROOM**

2:00 PM - 3:00 PM

Each podium presentation will be 10 - 15 minutes with a 5 minute transition between presentations.

**PARASITE PREVALENCE STUDY AT THE IDAHO HUMANE SOCIETY**

Emilee Kottcamp, Hope Esplain, Lauren Troy, and Calista Deland  
College of Health Sciences  
Department of Community & Environmental Health  
Faculty Sponsor: Dr. Elizabeth Hannah

**BED BUGS: BEYOND THE NUISANCE**

Lea Duffin  
College of Health Sciences  
Department of Community & Environmental Health  
Faculty Sponsor: Dr. Dale Stephenson

Read the full project abstracts at [http://scholarworks.boisestate.edu/](http://scholarworks.boisestate.edu/)
BARNWELL ROOM
11:45 AM - 12:30 PM

Each podium presentation will be 10 - 15 minutes with a 5 minute transition between presentations. These presentations will be in French.

UNE CRÉATION ARTISTIQUE: MASCELIN FÉMININ

A WORK OF ART: MASCELIN FÉMININ

Betsy Venard
College of Arts and Sciences
Department of Modern Languages & Literatures
Faculty Sponsor: Dr. Mariah Devereux-Herbeck

RENDRE VISIBLE L’INVISIBLE : LE MONTAGE PAR DISCONTINUITÉ ET D’AUTRES TECHNIQUES DE LA NOUVELLE VAGUE DANS PIERROT LE FOU DE JEAN-LUC GODARD

SEEING THE INVISIBLE : DISCONTINUITY EDITING AND OTHER NEW WAVE TECHNIQUES IN PIERROT LE FOU BY JEAN-LUC GODDA

Rebecca Foster
College of Arts and Sciences
Department of Modern Languages & Literatures
Faculty Sponsor: Dr. Mariah Devereux-Herbeck

BARNWELL ROOM
1:00 PM - 1:45 PM

Each podium presentation will be 10 - 15 minutes with a 5 minute transition between presentations.

CUPPING THE SPARK IN OUR HANDS: DEVELOPING A BETTER UNDERSTANDING OF THE RESEARCH QUESTION IN INQUIRY-BASED WRITING

Bernice Olivas (McNair Scholar)
College of Arts and Sciences
Department of English
Faculty Sponsor: Dr. Heidi Estrem

THE UNRELIABILITY OF PHILOSOPHICAL INTUITIONS

Jordan Park
College of Arts and Sciences
Department of Philosophy
Faculty Sponsor: Dr. Tony Roark

BARNWELL ROOM
2:00 PM - 2:30 PM

INNOVATE@BOISESTATE 2010 SPRING BREAK CHALLENGE

Innovation, imagination and creativity are essential skills for the 21st century. To demonstrate and enhance these skills, 25 Boise State University students, engaged in interdisciplinary teams, competed during Spring Break in an intensive 5-day team contest to develop the most innovative solution to a downtown Boise challenge. This session will share the challenges, solutions and processes associated with innovate@boisestate.

Read the full project abstracts at http://scholarworks.boisestate.edu/
**PODIUM PRESENTATIONS**

**BOYINGTON ROOM**
1:00 PM - 2:00 PM

*Each podium presentation will be 10 - 15 minutes with a 5 minute transition between presentations.*

**IMPACTS OF REGIONAL COLD FRONT AND LOCALIZED WEATHER PHENOMENA ON AUTUMN MIGRATION OF RAPTORS AND LANDBIRDS IN SOUTHWEST IDAHO**

Robert Miller  
*College of Arts and Sciences*  
*Department of Biological Sciences*  
*Faculty Sponsor: Dr. James Belthoff*

**DEVELOPMENT OF BIOLUMINESCENT MAMMARY CANCER CELLS WITH KNOCKED DOWN EXPRESSION OF OSM FOR DETECTION OF BONE METASTASIS IN VIVO**

Caleb Sutherland (McNair Scholar), Ken Tawara, and Jeff Redshaw  
*College of Arts and Sciences*  
*Department of Biological Sciences*  
*Faculty Sponsor: Dr. Cheryl L. Jorcyk*

**BRINK ROOM**
1:00 PM - 2:00 PM

*Each podium presentation will be 10 - 15 minutes with a 5 minute transition between presentations.*

**CONTINUOUS AUTHENTICATION FOR SECURE MOBILE APPLICATIONS**

Team Members: Jason Christensen  
*College of Arts and Sciences*  
*Department of Mathematics*  
*Faculty Sponsor: Dr. Liljana Babinkostova*

**ELLIPTIC CURVE CRYPTOGRAPHY IN MAGMA AND ITS COMPUTATIONAL COMPLEXITIES**

Jonathan Donahue and Jang Hee (Eliot) I (Honors College)  
*College of Arts and Sciences*  
*Department of Mathematics*  
*Faculty Sponsor: Dr. Liljana Babinkostova*

**REPRESENTING PROPOSITIONAL CONNECTIVES WITH MODULAR POLYNOMIALS**

Shawn Davis (McNair Scholar)  
*College of Arts and Sciences*  
*Department of Mathematics*  
*Faculty Sponsor: Dr. Andres Caicedo*
BRINK ROOM
2:00 PM - 3:00 PM

Each podium presentation will be 10 - 15 minutes with a 5 minute transition between presentations.

SEISMICITY ASSOCIATED WITH GEOTHERMAL SYSTEMS
Randi Walters (McNair Scholar)
College of Arts and Sciences
Department of Geosciences
Faculty Sponsor: Dr. Kasper Van Wijk

Ferroelectricity in Homoepitaxial Off-Stoichiometric SrTiO3 Films Studied by Ultraviolet Raman Spectroscopy
Andrew Farrar
Department of Physics
Faculty Sponsor: Dr. Dmitri Tenne

CORRELATION BETWEEN SATURATION MAGNETIZATION, BANDGAP AND LATTICE VOLUME OF TRANSITION METAL (M = CR, Mn, Fe, Co OR Ni) DOPED Zn1-xMxO NANOPARTICLES
Joshua Anghel
Department of Physics
Faculty Sponsor: Dr. Alex Punnoose

(This project has been accepted for publication in the “Journal of Applied Physics” with Joshua as the lead author.)

HATCH B ROOM
2:45 PM - 3:30 PM

Each podium presentation will be approximately 5 minutes and will be in Japanese.

JAPANESE SPEECH CONTEST
College of Arts and Sciences
Department of Modern Languages & Literatures

THE IMPORTANCE OF ASIA
Keegan Cothern
Faculty Sponsor: Mr. Tetsuya Ehara

SUMO
Aubrey Morris
Faculty Sponsor: Mr. Tetsuya Ehara

DO YOU THINK ANIME IS GOOD AT TEACHING JAPANESE?
Benjamin Reed
Faculty Sponsor: Mr. Tetsuya Ehara

私の家族の歴史
(MY FAMILY’S HISTORY)
Christopher Sower
Faculty Sponsor: Mr. Tetsuya Ehara

Read the full project abstracts at http://scholarworks.boisestate.edu/
Hatch a Room
12:45 PM - 2:30 PM

Each podium presentation will be approximately 5 minutes and will be in Chinese.

Chinese Speech Contest
College of Arts and Sciences
Department of Modern Languages & Literatures

My Chinese Teacher
Maggie Ooi
Faculty Sponsor: Ms. Zhen Ruan

Our Chinese Teacher
Casey Montgomery
Faculty Sponsor: Dr. Sharon Wei

Our Chinese Teacher
Janos Cserna
Faculty Sponsor: Dr. Sharon Wei

“Our Chinese Teacher”
Gib Birdsong
Faculty Sponsor: Dr. Sharon Wei

Our Chinese Teacher
Nicole Grey
Faculty Sponsor: Dr. Sharon Wei

Our Chinese Teacher
Adam Keener
Faculty Sponsor: Dr. Sharon Wei

Forgetting My First Language
Samantha Lee (Honors College)
Faculty Sponsor: Dr. Zhen Ruan

A Students Perspective My Chinese Instructor Zhen Ruan
Rachel Likins
Faculty Sponsor: Ms. Zhen Ruan

First Steps of Chinese
Melissa Long
Faculty Sponsor: Ms. Zhen Ruan

Why do I want to study the Chinese Language?
Huiying Wu
Faculty Sponsor: Dr. Sharon Wei

Why I Study Chinese
Karina Bashir
Faculty Sponsor: Dr. Sharon Wei

Why I am Studying Chinese
Paris Gaudin
Faculty Sponsor: Dr. Sharon Wei

Wo weishenme xue Zhongwen
Why I Study Chinese
Carli Visser
Faculty Sponsor: Dr. Sharon Wei

Women De Zhongwen Laoshi
Aubrey Brinton
Faculty Sponsor: Dr. Sharon Wei

Read the full project abstracts at http://scholarworks.boisestate.edu/
HATCH A ROOM
3:15 PM - 4:30 PM

Each podium presentation will be 10 - 15 minutes with a 5 minute transition between presentations. These presentations will be in Spanish.

Revisionismo y Justicia Ambiental en So Far From God de Ana Castillo

Revisionism and Environmental Justice in So Far From God by Ana Castillo

Rebecca Foster
College of Arts and Sciences
Department of Modern Languages & Literatures
Faculty Sponsor: Dr. Maria Alicia Garza
College of Arts and Sciences

La Civilización contra el Ecofeminismo: La Mártir Contemporánea en So Far From God de Ana Castillo

Civilization versus Ecofeminism: The Modern-day Martyr in So Far From God by Ana Castillo

Jennifer Larson
College of Arts and Sciences
Department of Modern Languages & Literatures
Faculty Sponsor: Dr. Maria Alicia Garza

Desamparo y Contaminación: Falta de Justicia Ambiental en Heroes and Saints por Cherríe Moraga

Neglect and Contamination: The Lack of Environmental Justice in Heroes and Saints by Cherríe Moraga

Jasmin Najera
Department of Modern Languages & Literatures
Faculty Sponsor: Dr. Maria Alicia Garza

Read the full project abstracts at http://scholarworks.boisestate.edu/
Recycled Robots/Sculpture Assemblage
Team Members: Jacqueline Nelson
Department of Art Education
Faculty Sponsor: Dr. Kathleen Keys

"Copious Floods of Eloquence": Melville's Reading of Dante's Divine Comedy
Team Members: Eric Austin, Nathan Spann (Honors College), Scott Clark, and Joshua Preminger
Department of English
Faculty Sponsor: Dr. Steven Olsen-Smith

Linguistic Features of Uzbek
Team Members: Emily Walton, Tyler Casperson, Michael Christensen, Anna Cox (Honors College), Janelle Derie, Zachary Espil, Claire Ivins (Honors College), Erin Lind, Larina Lynne, Monica Nesbitt, and Anneliese Satz
Department of English
Faculty Sponsor: Dr. Michal Temkin Martinez

Japanese Sequential Voicing - Rendaku
Team Members: Zachary Espil
Department of English
Faculty Sponsor: Dr. Michal Temkin Martinez

Pitch Differences in Bilingual Speakers
Team Members: Anna Cox (Honors College)
Department of English
Faculty Sponsor: Dr. Michal Temkin Martinez

The Phonology of Hiligaynon
Team Members: Tyler Casperson
Department of English
Faculty Sponsor: Dr. Michal Temkin Martinez

Examination of the Energy Usage by Computers and Associated Peripherals on the Boise State University Campus
Team Members: Diana Lynn Bartlett
Department of Environmental Studies
Faculty Sponsor: Dr. Scott Lowe and Dr. John Gardner

The Water's Fine: A Critical Look at the Quality of Idaho's Drinking and Ground Water
Team Members: Lori Gibbs
Department of Environmental Studies
Faculty Sponsor: Dr. Scott Lowe

Boise State University Landscape Applications Towards Energy Conservation
Team Members: Dakota Lynch, Camille Kirkpatrick, and Ajara Dias
Department of Environmental Studies
Faculty Sponsor: Dr. Scott Lowe

Feasibility Study: Vermicomposting at Boise State University
Team Members: Samantha Hobdey, Scott Sievers, and Chris Robison
Department of Environmental Studies
Faculty Sponsor: Dr. Scott Lowe

Night Class Redistribution to Reduce Energy Consumption
Team Members: Billie Laughtland
Department of Environmental Studies
Faculty Sponsor: Dr. Scott Lowe
Dendrochronological Reconstruction of Climate and Fire in a Ponderosa Pine Forest Near the Bogus Basin Area, Boise Front, Idaho
Team Members: Christiane Campbell
Department of Geosciences
Faculty Sponsor: Dr. David Wilkins

A Statistical Analysis of Average Temperatures in July and December in Boise, Idaho
Team Members: Kathryn Warner
Department of Geosciences
Faculty Sponsor: Dr. Jennifer Pierce

Past and Future Climate Change: Heat Stress Impacts on Southern Idaho Dairy Milk Production
Team Members: Matthew Wiggs
Department of Geosciences
Faculty Sponsor: Dr. Jennifer Pierce

Radiometric Dating of the Danskin Hills Rhyolites in Order to Constrain Geologic Activity Throughout the Western Snake River Plain.
Team Members: Austin Hopkins
Department of Geosciences
Faculty Sponsor: Dr. Mark Schmitz

Characterization of Salmonella Typhimurium AB5 enterotoxin
Team Members: Bradley Morris
Department of Biological Sciences
Faculty Sponsor: Dr. Juliette Tinker

First Documentation of the European Gut Fungus, Ephemereellomyces, and Other Insect Associated Endosymbionts in the Dry Creek Drainage, Boise, Idaho
Team Members: Prasanna Kandel, Daleesa Cole, Emma Wilson, Donavon Carrie, Eric Tretter, Yan Wang, Lance Steele, and Merlin White
Department of Biological Sciences
Faculty Sponsor: Dr. Merlin White

Blood Parasite Prevalence and Intensity in Migrating and Non-migrating Raptors
Team Members: Michelle Laskowski and John O’Keeffe
Department of Biological Sciences
Faculty Sponsor: Dr. Alfred M. Dufty, Jr.

Determination of Sulfated Glycosaminoglycan Binding Sites Within Collagen Type XI Using Surface Plasmon Resonance and Nuclear Magnetic Resonance Spectroscopy
Team Members: Luke Woodbury and Kendra Coonse
Departments of Biological Sciences and Chemistry and Biochemistry
Faculty Sponsor: Dr. Julia Oxford and Owen McDougal

Calcium Homeostasis Using an Immortalized Rat Chondrocytes (IRC) Cell Line in Culture
Team Members: Neda Shefa, Raquel Brown, and Prarthana Kashikar
Department of Biological Sciences
Faculty Sponsor: Dr. Julia Oxford

Read the full project abstracts at http://scholarworks.boisestate.edu/
Characterization of the Unfolded Protein Response in Chondrocytes

Team Members: Benjamin Davis, Linda Mercer, and Raquel Brown
Department of Biological Sciences
Faculty Sponsor: Dr. Julia Oxford

Purification of Novel Shiga Toxin Based Vaccine Adjuvants

Team Members: Herbert Pollard IV
Department of Biological Sciences
Faculty Sponsor: Dr. Juliette Tinker

The Effects of Inducible OSM on Metastasis in Breast Cancer

Team Members: Dollie Thompson, Hunter Covert, Joe Deaver, Jeff Walker, and Cheryl L. Jorcyk
Department of Biological Sciences
Faculty Sponsor: Dr. Cheryl L. Jorcyk

Compensation for Col11a1 Deficiency by Other Minor Collagens

Team Members: Jonathon Reeck, Prarthana Kashikar, Raquel Brown, and Linda Mercer
Department of Biological Sciences
Faculty Sponsor: Dr. Julia Oxford

Age Ratios, Productivity, Survivorship, Recruitment Patterns, and Longevity of Avian Species Breeding at Lucky Peak in Southwestern Idaho

Team Members: Heidi Ware
Department of Biological Sciences
Faculty Sponsor: Dr. Jay Carlisle, Idaho Bird Observatory

Analyzing Collagen alpha 1(XI) Using a Zebrafish Model System

Team Members: Dawn Mikelonis (Honors College), Ming Fang, and Raquel Brown
Department of Biological Sciences
Faculty Sponsor: Dr. Julie Oxford

The Aryl Hydrocarbon Receptor Forms a Complex with Cyclin-Dependent Kinase-2 as a Function of Cell Cycle

Team Members: Lauren Troy and Cheri Lamb
Department of Biological Sciences
Faculty Sponsor: Dr. Kristen Mitchell

Role of Monocyte Chemoattractant Protein (MCP)-1 During Priming Phase of Liver Regeneration

Team Members: Shawna D’Ingillo and Cheri Lamb
Department of Biological Sciences
Faculty Sponsor: Dr. Kristen Mitchell

Connections Between Aryl Hydrocarbon Receptor Activation and Induction of Carbonyl Reductase Expression

Team Members: Eva Amouzougan and Carrie Klocke
Department of Biological Sciences
Faculty Sponsor: Dr. Henry Charlier and Dr. Kristen Mitchell

Understanding the Small Molecule Recognition by Carbonyl Reductase

Team Members: Autumn White
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Henry Charlier
DEVELOPMENT OF A RECOMBINANT PROTEIN EXPRESSION SYSTEM FOR THE PRODUCTION OF HUMAN CARBONYL REDUCTASE
Team Members: Eric Baggs
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Henry Charlier

INVESTIGATION OF PUTATIVE METAL BINDING BY NPP-DOMAIN OF COLLAGEN XI
Team Members: Christopher Hondros (Honors College) and Luke Woodbury
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Henry Charlier and Dr. Julia Oxford

THE DEVELOPMENT OF AN ION MOBILITY SENSOR
Team Members: Nic Uhnak
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Dale Russell

DEVELOPMENT OF Zn(II) HYDROXIDE COMPLEXES CONTAINING N2S DONOR ATOM SETS: MOLECULAR MOTIFS OF THE ACTIVE SITE OF PEPTIDE DEFORMYLASE
Team Members: Nicholas Spiropulos
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Eric Brown

DEVELOPMENT OF A STREAMLINEd SYNTHESIS OF AZIRIDINOMITOSINE ANALOGS
Team Members: Cliff Csizmar (Honors College)
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Don Warner

PREPARATION AND OPTICAL CHARACTERIZATION OF PLASMONIC AND DIELECTRIC NANOPARTICLE FILMS
Team Members: Mike Davis
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Jeunghoon Lee

QUANTITATIVE COLORIMETRIC DETECTION OF DNA USING OLIGONUCLEOTIDE-FUNCTIONALIZED GOLD NANOPARTICLES
Team Members: Nathan Robinson, Elton Graugnard, William L. Hughes, William B. Knowlton, Bernard Yurke, and Jeunghoon Lee
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Jeunghoon Lee

PREPARATION AND CHARACTERIZATION OF WATER-SOLUBLE SEMICONDUCTOR QUANTUM DOTS (QDs) FOR BIOCONJUGATION
Team Members: Jennilee Claassen, Tabitha Ellis, and Nicholas Richie
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Jeunghoon Lee

PENTAPEPTIDE AND BETA-LACTAM ACTIVITY AGAINST RECOMBINANT PBP2A FROM METHICILLIN- RESISTANT STAPHYLOCCUS AUREUS.
Team Members: Clayton Fehringer and Eric Ponce
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Ken Cornell

BORRELLIA NUCLEOSIDASES AS TARGETS FOR SPIROCHETE SPECIFIC ANTIBIOTICS
Team Members: Meghan Fonken
Department of Chemistry and Biochemistry
Faculty Sponsor: Dr. Ken Cornell

Read the full project abstracts at http://scholarworks.boisestate.edu/
**Expression and Purification of West Nile Virus prM Candidate Antigen**
Team Members: Reece Knippel  
Department of Chemistry and Biochemistry  
Faculty Sponsor: Dr. Ken Cornell

**PKa Determination of Alpha Conotoxin MII and Analogs**
Team Members: Andrew Narver  
Department of Chemistry and Biochemistry  
Faculty Sponsor: Dr. Owen McDougal

**Cloning and Expression of the Envelope Protein from West Nile Virus for Oral Vaccine Development.**
Team Members: James Minick (Honors College) and Brittney Keber  
Department of Chemistry and Biochemistry  
Faculty Sponsor: Dr. Ken Cornell

**Synthesis of ZnO Nanoparticles with Tunable Surface Charge**
Team Members: Michael Jones, Aaron Thurber, and Dr. Jianhui Zhang  
Department of Physics  
Faculty Sponsor: Dr. Charles Hanna

**Using NMR Techniques to Find Partition Coefficients Across Biphasic Systems**
Team Members: Emily Drussel, Bryan Martin, Michael Hill, Gerry Chingas, and Owen McDougal  
Department of Chemistry and Biochemistry  
Faculty Sponsor: Dr. Owen McDougal

**Room Temperature Ferromagnetism Effects of Transition Metal (M=Ni or Co) Co-doping with Y in Ce1-x-yMxYyO2 Nanoparticles**
Team Members: Boone Beausoleil and Aaron Thurber  
Department of Physics  
Faculty Sponsor: Dr. Charles Hanna

**Pentapeptide Synthesis, Cleavage, and Purification**
Team Members: Scotia Gonzales  
Department of Chemistry and Biochemistry  
Faculty Sponsor: Dr. Owen McDougal

**Development of a High-Speed Atomic Force Microscope Combined with a High-resolution Optical Microscope for Biological Studies**
Team Members: Ryan Boehm  
Department of Physics  
Faculty Sponsor: Dr. Byung Kim

**Bioinformatics, Homology Modeling and Parkinson’s Disease**
Team Members: Chris Mallory  
Department of Chemistry and Biochemistry  
Faculty Sponsor: Dr. Owen McDougal

**Chiral Recognition of 4, 4′ Biphenyl-dicarboxylic acid on Pd(111) and Au(111) Studied by Electrochemical-Scanning Tunneling Microscopy**
Team Members: Joey Hanson  
Department of Physics  
Faculty Sponsor: Dr. Byung Kim
**Observation of Interfacial Water Chains Confined in a Nanoscale Space by Cantilever Based Optical Interfacial Force Microscopy**

Team Members: Jared Rasmussen  
Department of Physics  
Faculty Sponsor: Dr. Byung Kim

**The Uncoiling of Supercoiled Plasmid DNA over Time Observed by Atomic Force Microscopy**

Team Members: Reilly Clark, Tyler Clark, and Byung Kim  
Department of Physics  
Faculty Sponsor: Dr. Byung Kim

**Development of a Cantilever Based Optical Interfacial Force Microscope for Biological Studies in an Aqueous Environment**

Team Members: Edward Kim  
Department of Physics  
Faculty Sponsor: Dr. Byung Kim

**Optical Spectroscopy of Transition Metal Doped ZnO Nanoparticles.**

Team Members: Trevor Engman, Josh Angel, Aaron Thurber, Lydia Johnson, and Alex Punnoose  
Department of Physics  
Faculty Sponsor: Dr. Dmitri Tenne

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BUILDING ENERGY MODELING USING FEED FORWARD ARTIFICIAL NEURAL NETWORKING AND LINEAR REGRESSION
Team Members: Dustyn Deakins
Department of Campus Sustainability
Faculty Sponsor: Dr. John Gardner

REVITALIZE SECONDARY STUDENTS’ INTEREST IN STEM VIA LEGO ROBOT DEVELOPMENT ACTIVITIES
Team Members: Christie Donovan, Lora Volkert, Andrew Landoch, Stephen Stauts, and Nick Meyer
Department of Computer Science
Faculty Sponsor: Dr. Gang-Ryung Uh

PERSONAL FALL PROTECTION: A LOOK AT THE DIFFERENCES AMONG INDUSTRIES.
Team Members: Nathan Miller
Department of Construction Management
Faculty Sponsor: Dr. Kirsten Davis

RF STIMULATION OF AIR CHANNELS DURING AIR SPARGING
Team Members: Corinne Haase
Department of Civil Engineering
Faculty Sponsor: Dr. Arvin Farid

GARRITY BOULEVARD INTERCHANGE REDESIGN
Team Members: Crystal Grasmick, Wil Bake, Heath Perrine (Honors College), and Pat Conro
Department of Civil Engineering
Faculty Sponsor: Dr. George Murgel and Dr. Molly Gribb

GARRITY INTERCHANGE DESIGN
Team Members: Adam Bass, Tyler Noble, Kyle Rosenmyer, Collin Turbert, and Cory Dykema
Department of Civil Engineering
Faculty Sponsor: Dr. George Murgel and Dr. Molly Gribb

WAR EAGLE SHOPPING CENTER
Team Members: Megan Kautz, Jonathan Rocha, Peter McKenzie, Clemente Salinas, and David McClenna
Department of Civil Engineering
Faculty Sponsor: Dr. George Murgel and Dr. Molly Gribb

WAR EAGLE SHOPPING MALL DEVELOPMENT
Team Members: Hadi Mirsadeghi, Brett Jones, Alejandro Lorenzana, Adrian Rangel, and Jennifer Selders
Department of Civil Engineering
Faculty Sponsor: Dr. George Murgel and Dr. Molly Gribb

PRAIRIE SUN (2) SUBDIVISION
Team Members: Derrick Eisenbeis, Ernest Maiteri, Michael Banks, Josh Laramie, and Michael Steele
Department of Civil Engineering
Faculty Sponsor: Dr. George Murgel and Dr. Molly Gribb

PRAIRIE SUN SUBDIVISION I
Team Members: Mike Kumm, Andy Prince (Honors College), Chad Weaver, Eleni-Maria Kafourou (Honors College), and Jordan Harvey
Department of Civil Engineering
Faculty Sponsor: Dr. George Murgel and Dr. Molly Gribb

EXPLORATION OF PEDOTRANSFER FUNCTION PREDICTIONS ON SOIL MOISTURE RETENTION IN DRY CREEK EXPERIMENTAL WATERSHED SOILS
Team Members: Ashley Zumwalt
Department of Civil Engineering
Faculty Sponsor: Dr. Molly Gribb

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Measuring Soil Water Retention Curves with an Automated Multistep Outflow System
Team Members: Esther Contreras
Department of Civil Engineering
Faculty Sponsor: Dr. Molly Gribb

Descreening of Halftoning
Team Members: CJ Stanger and Thanh Tran
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Elisa Barney-Smith

Form Removal from Election Ballots using Image Processing
Team Members: Shatakshi Goyal and Robbie Scott
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Elisa Barney-Smith

Camera Based Image Acquisition for OCR and Other Uses.
Team Members: William Grover, Kris Burch, and Josh Johnson
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Elisa Barney-Smith

Development of a Shielded Cold Cathode Magnetron
Team Members: Tyler Rowe (Honors College), Geoff Groff, Sonya Shawver, and Brandon Wells
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Jim Browning

Field Emitter Array Driver and Measurement System for use in a “Smart” Crossed-Field Amplifier
Team Members: Sonya Shawver and Brandon Wells
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Jim Browning

Using Robotics to Automate New Memory Device Testing
Team Members: Kolton Drake
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Kris Campbell

DC/AC Power Inverter
Team Members: Keith Adams, Greg Ilk, and Steve Sjostrom
Department of Electrical & Computer Engineering
Faculty Sponsor: Mr. Mark Laverty

Two Way Automatic Communication System (TWACS) Filter Design
Team Members: Bryce Simpson, Hector Ocampo, and Jake Kofoid
Department of Electrical & Computer Engineering
Faculty Sponsor: Mr. Mark Laverty

Gravitational Effects on Water in Regolith
Team Members: Pamila Ward and Ron Pierce
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Robert Hay

Supervisory Control and Data Acquisition (SCADA) for a Wind Turbine Farm
Team Members: Pedro Cahuana, Jared Eby, and Leticia Maresca
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Said Ahmed-Zaid

Power System Protection Project – Power Engineers
Team Members: Drew Murdock, Jason Jaszkiwiak, and Tyler Smith
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Said Ahmed-Zaid

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OPTICAL TRANSMISSION PROPERTIES OF PLASMONIC CRYSTALS
Team Members: Lloyd Lowe
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Wan Kuang

SEPARATION OF FUNCTIONAL MEMORY DEVICES FROM MULTI-CHIP STACKED PACKAGES
Team Members: James Voelz and Liana Jackson
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Amy Moll and Dr. Chad Watson

CHARACTERIZATION OF EMISSIONS OF WAX-BASED PRODUCTS DURING COMBUSTION
Team Members: Ben Albiston and Crystal Grasmick
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Chad Watson

SEQUENTIAL DEPOSITION OF GOLD AND POLYMER THIN FILMS ONTO CaF₂ AND BaF₂ SUBSTRATES
Team Members: Davis Daniel, Dr. Paul Davis, Becky Munoz, Tram Bui, Chad Watson, and Dr. William Hughes
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Chad Watson

MECHANICAL STRENGTH ENHANCEMENT OF LEAD ZIRCONATE TITANATE CERAMICS THROUGH SILICON CARBIDE NANOPowDER THERMAL TREATMENTS
Team Members: Jackie Forhan (Honors College), Daniel Osterberg, and Bryan Murphy (Honors College)
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Chad Watson

THE ROLE OF GRAIN BOUNDARY CHARACTER ON DYNAMIC RECRYSTALLIZATION
Team Members: Ben Albiston, Chris Stifter, Caleb Corolewski, and Tram Bui
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Megan Frary

KINETICS OF NITRIDATION OF DYSPROSIUM BY REACTIVE BALL MILLING
Team Members: Daniel Osterberg
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Darryl Butt

NOVEL MATERIALS FOR TRANSIENT LIQUID PHASE CERAMICS AND METAL JOINING
Team Members: Kyle Knori, Bryan Murphy (Honors College), Mike Hurley, Brian Jaques, John Youngsman, and Darryl Butt
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Darryl Butt

MICROSTRUCTURAL EVOLUTION DURING SINTERING OF LANTHANUM CALCIUM FERRITE PEROVSKITE CERAMICS
Team Members: Ellen Rabenberg, Patrick Price, and David Thomsen
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Darryl Butt

NUCLEAR OXIDE FUEL FABRICATION AND PROCESS MODELING
Team Members: Richard Reavis and Daniel Osterberg
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Darryl Butt

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Characterization of Ceramic Membranes Using Electrochemical Techniques
Team Members: Prativa Bhattarai, Ghimire Darryl, P Butt, Mike Hurley, and Pavankumarrao Chennapragada
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Darryl Butt

Investigation of Twin Boundaries and Magnetic Tongues Using AFM and MFM
Team Members: Dave Schenker
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Peter Mullner and Dr. William B. Knowlton

Mechanical Properties and Microstructural Evolution of ODS Alloys utilizing Solid State Welds
Team Members: James Carrillo and Evan Young
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Darryl Butt and Dr. Megan Frary

Grain Growth of Nickel-Manganese-Gallium
Team Members: Nikki Kucza and Ernest Maiteri
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Peter Mullner

Sample Preparation for the Transmission Electron Microscope
Team Members: Jeff Huntsinger and John Youngsman
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Darryl Butt

Actuation Frequency Dependent Power Generation via Inverse Magnetoopticality
Team Members: Kimo Wilson
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Peter Mullner

Reaction Kinetics of a DNA-Based Amplifier for use in Detection of Cancer-Related miRNAs
Team Members: Amber Cox (Honors College) and Jessie Minick (Honors College)
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Bernard Yurke

Crystallographic Characterization of (Sr$_{2-x}$Ca$_x$)(MgTe)O$_6$ Double Perovskite via Electron Diffraction
Team Members: Steven Letourneau, Sherin Thomas, Ganesanpotti Subodh, and Mailadil Sebastian
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Rick Ubic

Development of an Optical Device for Magneto-Mechanical Experiments
Team Members: Adrian Rothenbuhler, Markus Chmielus, and Cassie Witherspoon
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Peter Mullner

Multi-Scale Mechanical Property Evaluation of Soft Materials
Team Members: Jonathan Henderson, Chad Watson, William L. Hughes, Julia T. Oxford, and William B. Knowlton
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Bill Knowlton
Radial Dielectrophoretic Trap for Individual Nanostructures
Team Members: Stephanie Barnes (Honors College), Christopher Buu, Jason Brotherton, Hieu Bui, Austin Johnson, Mallory Yates, Wan Kuang, Jeunghoon Lee, William L. Hughes, William B. Knowlton, and Bernard Yurke
Departments of Materials Science & Engineering, Electrical & Computer Engineering, Chemistry & Biochemistry
Faculty Sponsor: Dr. Bill Knowlton

Characterization of ZnO Thin Films Grown by Spray Pyrolysis Using Various Chemical Precursors
Team Members: Jason Brotherton, Theron Fereday, Pamela Walker (Honors College), Dr. Jerry Harris, Aaron Thurber, and William B. Knowlton
Department of Materials Science & Engineering
Faculty Sponsor: Dr. Bill Knowlton

Agarose Gel Electrophoresis for Purification of DNA Origami Nanotubes + Quantum Dots
Team Members: Davis Daniel, Dr. William Hughes, Dr. Elton Graugnard, Dr. Wang Kuang, Dr. Jeunghoon Lee, Dr. Bernard Yurke, Glenn Purnell, and Hieu Bui
Department of Materials Science & Engineering
Faculty Sponsor: Dr. William Hughes

Towards Optimization of a Low Temperature Co-Fired Ceramic Catalyst Chamber for a Monopropellant Microthruster
Team Members: Andrew Vissotski (McNair Scholar)
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. Don Plumlee

Gravitational Effects on Water in Regoliths
Team Members: Andrew Vissotski (McNair Scholar), Mike Quinn, Jake Forsberg, Travis Dean, Pamila Ward, Ron Pierce, and David Connolly
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. Don Plumlee; Dr. James Ferguson; Dr. Bob Hay, Electrical & Computer Engineering Department; and Dr. Barbara Morgan, Distinguished Educator in Residence

Numerical Solution of the Wave Equation on Dual-GPU Platforms using Brook+
Team Members: Matthew Caylor
Department of Computer Science and Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. Inanc Senocak

Portable Solar Collector/Concentrator Design Project
Team Members: Rey DeLeon, Alex Calvert, and Mike Rippee
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. James Ferguson

Wind Turbine Blade Redesign Study
Team Members: Daniel Feeser and Ron Smith
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. James Ferguson

Thermal Environment Control of a Memory Module Tester
Team Members: Tyson McFall, Tom Wood, and Sean Drake
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. James Ferguson

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Discovery Center of Idaho Regenerative Braking Demonstration

Team Members: Cody Blevins, Jon Stanley, Mark McNew, and Derek Reis
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. James Ferguson

Boise State - ASME Human Powered Vehicle Team

Team Members: Joseph Hawks, Bob Marturello, Jaime Merideth, John Pasley, and Kimo Wilson
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. James Ferguson

Washing Machine Vibration Isolation

Team Members: Derek Miller, Dusty Byington, and Jarom Zimmerman
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. James Ferguson

Rooftop Ventilator Senior Design Project

Team Members: Gavin Moody, Nick Thompson, and Jon Flack
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. James Ferguson

A Thermal and Fluid System Design Built for a Mannequin Used in the Thermal Testing of Clothing

Team Members: Jonathan Henderson, Ian Morse, and Uwe Reischl
Department of Mechanical & Biomedical Engineering
Faculty Sponsor: Dr. James Ferguson

Development of Experimental Techniques for the Study of Negative Bias Temperature Instability in pMOSFET Devices

Team Members: Ross Butler, Richard G. Southwick III, Dr. Tibor Grassé, and Dr. Ben Kaczer
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Bill Knowlton

Cryogenic Characterization of Charge Trapping in MOSFET High-k Dielectrics

Team Members: Ross Butler, Richard G. Southwick III, and William B. Knowlton
Department of Electrical & Computer Engineering
Faculty Sponsor: Dr. Bill Knowlton
**Comparison of Combustion Emissions from Wickless- and Wick-based Candles**
Team Members: Jamie Minick (Honors College)
Department of Community & Environmental Health
Faculty Sponsor: Dr. Dale Stephenson

**An Exploratory Study of Cell Phone Use While Driving**
Team Members: Angeline Adams, Barbara Lane Popadics, Jeff Martin, Ryan Morris, and Jennifer Roe
Department of Community & Environmental Health
Faculty Sponsor: Dr. Elaine Long

**Characterization of Cell Phone Use by Students and Faculty at Boise State University**
Team Members: Dolores Benavente, Billy Galligar, Molly O’Brien, Jared Rasmussen, and Philip Whipple
Department of Community & Environmental Health
Faculty Sponsor: Dr. Elaine Long

**Cell Phone Use and Psychological Correlates: An Exploratory Study**
Team Members: David Catchings, Lena Bush, Brent Copes, Amie Schaefer, and Eric Wixom (Honors College)
Department of Community & Environmental Health
Faculty Sponsor: Dr. Elaine Long

**Survey of Cell Phone Use Among College Students**
Team Members: Tabitha Ellis, Whitney Egbert, Tracy Hopkins, Gabriella Katana, and Shannon Tracy
Department of Community & Environmental Health
Faculty Sponsor: Dr. Elaine Long

**Use of Cell Phone Technology Among Fitness Trainers in the Treasure Valley**
Team Members: Sheri Latta, Melissa Funston, Kristin Heckenlively, Timothy Jones, and Vanessa Olmstead
Department of Community & Environmental Health
Faculty Sponsor: Dr. Elaine Long

**Does Class Participation in an Online Learning Environment Improve Student Learning Capability?**
Team Members: Christine Kollar
Department of Community & Environmental Health
Faculty Sponsor: Dr. Sarah Toevs

**Exploratory Study to Determine the Prevalence of Pain Associated with Use of a Cellular Phone (Text Messaging)**
Team Members: Angeline Adams
Department of Community & Environmental Health
Faculty Sponsor: Jaime Sand

**Evaluation of The Respironics Bipap® Auto SV™ and Resmed VPap™ Adapt SV To Lung Simulator Generated Central And Obstructive Sleep Apnic Episodes.**
Team Members: Grant Drake and Dawn Alverson
Department of Respiratory Care
Faculty Sponsor: Jody Lester

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Students’ Perceptions Regarding Essential Components of a Nursing Leadership Textbook
Team Members: Cari Cardoni and Diane Kenski
Department of Nursing
Faculty Sponsor: Dr. Cynthia Clark

Adapting Centering Pregnancy for Rural Practice: The Effect on Patient Satisfaction
Team Members: Kathryn Cooperstein
Department of Nursing
Faculty Sponsor: Dr. Jeri Bigbee

Comparison of Rural Providers and Consumers Regarding Community Health Assets and Deficits
Team Members: Diane Kenski
Department of Nursing
Faculty Sponsor: Dr. Jeri Bigbee

Mental Health of Caregiving Grandparents
Team Members: Barbara Vander Boegh
Department of Nursing
Faculty Sponsor: Dr. Jeri Bigbee

Factors Promoting Rural Nursing Recruitment & Retention
Team Members: Jessica Nelson
Department of Nursing
Faculty Sponsor: Dr. Jeri Bigbee & Molly Prengaman

The Growing Concern about Mental Health Services and Medications: A Comparison of Children on the Inside and the Outside of the Foster Care System.
Team Members: Meghan Cunningham
Department of Nursing
Faculty Sponsor: Max Veltman

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College of Business and Economics Poster Presentations

Estimating the Possible Environmental Costs of Carbon Capture and Storage
Team Members: Kija Hanson (Honors College)
Department of Economics
Faculty Sponsor: Dr. Sian Mooney

Crop Production, Irrigation Practices and Water Use in Idaho.
Team Members: Emil Huseynov
Department of Economics
Faculty Sponsor: Dr. Sian Mooney

The Future of Commuting Behavior in the Boise MSA
Team Members: Debra Bonkoski, Brian Amberg, Skylar Jett, and Kazuma Osugi
Department of Economics
Faculty Sponsor: Dr. Samia Islam

Can Light Rail be a Benefit to Boise, and at What Cost?
Team Members: Cecilia Jones, Danny Ryan, and Jared Shulsen
Department of Economics
Faculty Sponsor: Dr. Samia Islam

The Cost of a Free Ride
Team Members: Jacqueline Jansen, Ben Dalton, Derik Bagdon, and John Connor
Department of Economics
Faculty Sponsor: Dr. Samia Islam

Riding the Green Wave
Team Members: Lena Pierson, Ryan Jackson, and Melanie Palmer
Department of Economics
Faculty Sponsor: Dr. Samia Islam

Is Recycling Worth Your Money?
Team Members: Nathaniel Sutton, Adam Tvinnereim, Brian Parker, and Riki Sears
Department of Economics
Faculty Sponsor: Dr. Samia Islam

Boise’s Street Car: Investment or Flop?
Team Members: Dacey Carstensen, Hannah Vinson, Frank Gamma, and Matthew Coleman
Department of Economics
Faculty Sponsor: Dr. Samia Islam

A Light Rail for the Boise-Nampa MSA; an Inevitable Development
Team Members: Kayla Liehe, Daniel Fusselman, and Chris Mason
Department of Economics
Faculty Sponsor: Dr. Samia Islam

Estimating the Demand Function for the Trey McIntire Dance Group
Team Members: Kija Hanson (Honors College), Chris Gonzales, G. William Green, Ryan Jackson, Blair Vanderlugt, Jody Hilliard, Elden Stokes, Daniel Ryan, Dacey Carstensen, and Brian Amberg
Department of Economics
Faculty Sponsor: Dr. Don Holley

Forecasting Undergraduate Enrollment at Boise State University: 2015
Team Members: Kai Applequist, Kody Frederick, Justin French, Randy Goodrich, Trevor Stebbins, Tim Wilcox, and Adam Wolfe
Department of Economics
Faculty Sponsor: Dr. Don Holley

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ESTIMATING THE PRICE ELASTICITY OF DEMAND OF OUT-OF-STATE STUDENTS AT BOISE STATE UNIVERSITY
Team Members: Jennifer Daniel, Meghann Harrod, Christopher Hope, Rob Humphrey, Jeemoon Pak, and Lena Pierson
Department of Economics
Faculty Sponsor: Dr. Don Holley

FORECASTING THE MALE/FEMALE SPLIT IN UNDERGRADUATE ENROLLMENT AT BOISE STATE UNIVERSITY
Team Members: Sara Kriss, Nate Larsen, Dominick Longbucco, Logan Meyer, James Mwanthi, Kazuma Osugi, and Nancy Wong
Department of Economics
Faculty Sponsor: Dr. Don Holley

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COLLEGE OF EDUCATION POSTER PRESENTATIONS

CREATING AN EFFECTIVE CLASSROOM SEATING ARRANGEMENT: INFLUENCES AND FACTORS
Team Members: Samantha Brandel
Department of Curriculum, Instruction and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

WHAT DOES INFORMAL ASSESSMENT LOOK LIKE?
Team Members: Ashley Washburn
Department of Curriculum, Instruction, and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

ELEMENTARY STUDENT PERCEPTIONS OF SCHOOL
Team Members: Ashley Rowe
Department of Curriculum, Instruction and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

EFFICIENT AND EFFECTIVE COMMUNICATION FOR PARENTS AND TEACHERS
Team Members: Brenley Box
Department of Curriculum, Instruction, and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

DIFFERENTIATING INSTRUCTION TO MEET THE NEEDS OF ACADEMICALLY DIVERSE LEARNERS
Team Members: Sarah Teschler
Department of Curriculum, Instruction and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

BEYOND THE RUBRIC: PRACTICING ALTERNATIVE ASSESSMENT IN THE ELEMENTARY CLASSROOM
Team Members: Erin Kueneman
Department of Curriculum, Instruction, and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

HOW DOES CENTER-BASED INSTRUCTION INFLUENCE LEARNING IN KINDERGARTEN?
Team Members: Emily Blauer
Department of Curriculum, Instruction and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

BEHAVIOR ACCOUNTABILITY SYSTEMS
Team Members: Julie McGee
Department of Curriculum, Instruction, and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

MANAGING STUDENT TALK IN ELEMENTARY CLASSROOMS
Team Members: Lauren Fry
Department of Curriculum, Instruction, and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

STUDENT SELF REFLECTION
Team Members: Blossom Runa
Department of Curriculum, Instruction and Educational Studies
Faculty Sponsor: Dr. Jennifer Snow

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Geoarchaeology of Holocene Terrace Deposits Near Glenns Ferry, Idaho

Team Members: Christiane Campbell
Department of Anthropology
Faculty Sponsor: Dr. Christopher Hill

Youth Gangs in America: A Treasure Valley Comparison

Team Members: Kati-Maria Anderson
Department: Criminal Justice
My faculty sponsor: Dr. David Mueller

The History and Development of the Sino-Russian Pipeline

Team Members: Michelle Moqin Yu
Department of Political Science
Faculty Sponsor: Dr. Shelton Woods

Massive Multiplayer Online Role Playing Game and Personality

Team Members: Kanisha Morris
Department of Psychology
Faculty Sponsor: Dr. Elizabeth Morgan

Pornography Viewing Frequency: Associations with Sexual Preferences and Relationship Satisfaction Among College Men and Women

Team Members: Danielle Sloderbeck
Department of Psychology
Faculty Sponsor: Dr. Elizabeth Morgan

Living Options for Adults with Autism Spectrum Disorder

Team Members: Danielle Thomas (Honors College)
Department of Psychology
Faculty Sponsor: Dr. Elizabeth Morgan

The Role of Gender and Relationship Satisfaction in Partner and Self Ratings: Attractiveness, Intelligence, and Communication Abilities

Team Members: Jacqueline Corral, Jessie Frazier (Honors College), and Elise McCarthy
Department of Psychology
Faculty Sponsor: Dr. Elizabeth Morgan

Dating and Sexual Satisfaction: The Roles of Demographics, Self-perceptions and Sexual Attitudes

Team Members: Nicole Garvin and Camille Nichols-Blount
Department of Psychology
Faculty Sponsor: Dr. Elizabeth Morgan

Gender Differences in the Relationship Between Self-Worth and Romantic Relationship Attachment Styles

Team Members: Megan Luy and Tonne McCoy
Department of Psychology
Faculty Sponsor: Dr. Elizabeth Morgan

Sexual Satisfaction in Relationships: A Comparative Study

Team Members: Micah Crawford
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

Caucasians and Their Perceptions’ of Stereotypes: When Diversity Is the Minority

Team Members: Maria Tellez
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

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**Effects of Anxiety and Stress and How Individuals Cope**
Team Members: Jessica Beaver  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**Influence of Disney Films on Family and Romantic Relationships**
Team Members: Kara Biddle  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**Gossip Survival Not Specific to Gender**
Team Members: Cristina Bistricean  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**College Students and Sexual Health**
Team Members: Kelsey Bruch  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**Effects of Parental Discipline on Their Child’s Self-Esteem**
Team Members: Monica Del Toro  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**This Is a Man’s World, for Now: Examining the Elimination of Gender Stereotypes**
Team Members: Hannah Derrick  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**Help-Seeking Behavior: Willingness, Type, and Stigma**
Team Members: Denise Donato  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**Grade Point Average and Divorce**
Team Members: Carly Gintz  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**Effects of Parental Age and Marital Status on Adolescent Sexual Activity**
Team Members: Caitlin Goicoechea  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**Sexting: Self-Expression or Sexual Attention**
Team Members: Lori Henderson  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**The Effects of Past Sexual Experience on Current Romantic Relationships**
Team Members: Laura Hezeltine  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

**The Prevalence of Separation Anxiety in Undergraduate Students**
Team Members: Cade Hulbert  
Department of Psychology  
Faculty Sponsor: Dr. Eric Landrum

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Problematic Internet Use and the Effect on Academic Performance
Team Members: Jessica Kesler
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

Differences Between Racial-Ethnic Groups in Response to Discriminatory Acts
Team Members: Emily Lopez
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

Parental Closeness, Parental Knowledge, and Their Effects on Risky Behaviors
Team Members: Julia Miller
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

Self Perceived Religiosity and Risky Behaviors
Team Members: Samantha Schuele
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

Facebook a Students Link to Social Connections
Team Members: Ernesto Soto
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

Motives of Violence in Men and Women
Team Members: Catherine Thomas
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

The Influence of Movies on College Students Drinking and Smoking Habits
Team Members: Efren Velazquez
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

The Importance of Body Satisfaction
Team Members: Lindsey Ward
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

Heredity and Depression: The Effects of Genetic Attribution on the Public’s View of Individuals with Depression
Team Members: Sarah Watson
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

The Hidden Culture of Aggression in Girls: The Frequency of Alternate Aggressions
Team Members: Katie Wilson
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

Effects of Location on Alcohol Consumption and Social Norms
Team Members: Jonathan Lawson
Department of Psychology
Faculty Sponsor: Dr. Eric Landrum

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**The Effects of Parental Divorce on the Success of Romantic Relationships**

Team Members: Lilia Juarez  
Department of Psychology  
Faculty Sponsor: Dr. Mary Pritchard

**The Different Motivating Factors of Self Esteem, Disorder Eating, and Exercise Motivations Between Men and Women**

Team Members: Alli Nielsen and Chanel Parker  
Department of Psychology  
Faculty Sponsor: Dr. Mary Pritchard

**The Relationship Between Drive for Muscularity, Exercise Motivation, and Disordered Eating**

Team Members: Chanel Parker and Alli Nielsen  
Department of Psychology  
Faculty Sponsor: Dr. Mary Pritchard

**Sexual Behavior Among Students: An Examination of Participation in Bondage, Domination, Submission, Masochism (BDSM) Behaviors**

Team Members: Ian Mosley (McNair Scholar)  
Department of Psychology  
Faculty Sponsor: Dr. Mary Pritchard

**Factors in Academic Achievement**

Team Members: Michelle Harbst  
Department of Psychology  
Faculty Sponsor: Dr. M. Rose Barlow

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**Furry Friends, Neglect, and Social Support: An Examination of Pet Attachment and Its Predictors**

Team Members: Cory Hutchinson, Lindsey Ward, and Kelsy Newton  
Department of Psychology  
Faculty Sponsor: Dr. M. Rose Barlow

**Who Loves Fluffy Most? A Look at Gender Differences and Birth Order on Pet Attachment**

Team Members: Nik Silveira and Tess Grover (Honors College)  
Department of Psychology  
Faculty Sponsor: Dr. M. Rose Barlow

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Read the full project abstracts at http://scholarworks.boisestate.edu/
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Erin Miller  
Ian Mosley  
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Alexandra Ornelas Gonzalez  
Caleb Sutherland  
Andrew Vissotski  
Randi Walters

**Honors College:**

Craig Hemmens, Director  
Stephanie Barnes  
Regan Charlton  
Anna Cox  
Cliff Csizmar  
Jackie Forhan  
Jessie Frazier  
Tess Grover  
Kija Hanson  
Christopher Hondros  
Jang Hee(Eliot) I  
Claire Ivins  
Eleni-maria Kafourou  
Samantha Lee  
James Matsuura  
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Jessie Minick  
Bryan Murphy  
Heath Perrine  
Andy Prince  
Brindee Probst  
Tyler Rowe  
Nathan Spann  
Danielle Thomas  
Pamela Walker  
Eric Wixom