



## 2005-2006 Academic Year Undergraduate Research Grants

Each grant list individual student researcher(s) with respective cooperating faculty member(s) in parenthesis.

### SCHOOL OF BUSINESS

- Jeremiah Riethmiller (James Kurre) - \$700  
"Identifying Individual Economic Indicators for a Leading Index for the Erie MSA"

### SCHOOL OF ENGINEERING AND ENGINEERING TECHNOLOGY

- Kyle Barry (John Roth and Russell Warley) - \$700  
"Predicting the Behavior of a Metal Rod under Tension Exposed to Electrical Current"
- Laura Bryan (Elisa Wu) - \$700  
"Mock Pulmonary Circulatory Loop with Left Ventricle Assist Device"
- William Cutter (Robert Edwards) - \$695  
"Analysis of the Effects of Close-Range Fan Obstructions on System Air Flow"
- Amanda Evans (John Roth) - \$700  
"Extending the Tool Life of Solid Tungsten Carbide Endmills using Cryogenic Treatment"
- Joshua Green (James Sonnenmeier) - \$700  
"Measurements of the Aerodynamic Performance of Twisted Wings"
- Marc Hoffman (Amir Khalilollahi and John Roth) - \$700  
"Temperature Evaluation of Metallic Bars Using a Multifield Finite Element Model"
- Scott Jackson (Shouling He) - \$700  
"Development of a Bootloader for PIC16F877 Microcontrollers"
- Thomas Kronenberger (John Roth) - \$700  
"Effects of DC Current on the Microstructure of Various Types of Steel"
- Kent McKee (William Lasher) - \$700  
"Aerodynamics of a Square-Rigged Sail"
- Terence Musho (William Lasher) - \$695  
"Stability and Performance of the U.S. Brig Niagara under Partial Sail"
- Mason Myers and Joseph Huegel (John Beaumont) - \$690  
"Controlling Warp of Molded Parts through Melt Rotation Technology"
- Carl Ross (John Roth) - \$700  
"Temperature Effects on the Material Properties of Metals under Short Soak Time Conditions"

- Nathan Russell (John Roth) - \$700  
"Cryogenic Treatment of Tungsten Carbide Tooling to Extend Tool Life"
- Kevin Sunealitis (Oladipo Onipede) - \$700  
"Vibration Analysis of Electrostatically Driven Micro-Beams"
- Michelangelo Vaccaro (Elisa Wu) - \$700  
"Design and Construction of a Mock Human Circulatory System for Left Ventricle Assist Device"

#### **SCHOOL OF ENGINEERING AND ENGINEERING TECHNOLOGY AND SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**

- Jonathan Hika, Gary Krugger, Ivan Lopez, Kristin Macha, and Jenna Beck (Kathy Holliday-Darr and Jennifer Trich-Kremer) - \$2,975  
"Refine Training Activities Developed Summer 2005 to Enhance Spatial Visualization"
- Teri Ritenour, Lauren Wagner, William Cutter, and Tim Heisler (Robert Weissbach, Dawn Blasko, and Jennifer Trich-Kremer) - \$1,465  
"Civic and Community Engagement: Primary and Secondary School Technology Classroom Experience"

#### **SCHOOL OF ENGINEERING AND ENGINEERING TECHNOLOGY, SCHOOL OF HUMANITIES AND SOCIAL SCIENCES, AND SCHOOL OF SCIENCE**

- Jonathan Hika, Robert Budden, and Adam Karki (Kathy Holliday-Darr, Jennifer Trich-Kremer, Ron DelPorto, and Gary Walker) - \$2,100  
"EnVision: Spatial Courseware - Helping Build Spatial Skills in Students"

#### **SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**

- Kevin Belknap, Pat Carver, Julie Elkins, Colin Haughey, Mike Long, Sabina Medilovic, Leslie Sargent, Chris Strayer, T. J. Veiger, and Josh Wilczynski (John Gamble) - \$2,900  
"Comprehensive Statistical Database of Multilateral Treaties"
- Kiyle Brosius and Stuart Daman (Dawn Blasko) - \$1,400  
"Audience Perception of Political Interviews"
- Justin Curry, Michael Johnson, and Jalise Velez (Derek Mace) - \$700  
"Exploring Gender Differences in In-Group Formation and Out-Group Attitudes"
- Chris Engelhardt (Dawn Blasko) - \$700  
"Leadership and Its Impact on a Multiple Goal, Multilevel Model of Individual and Team Performance"
- Gordon Greene, Joshua Hannold, and Crystal Willis (Derek Mace) - \$700  
"Implicit Stereotype Activation with Attractiveness"
- Sandra Grgic (Victoria Kazmerski and Dawn Blasko) - \$700  
"Emotion's Impact on the McGurk Effect: An ERP Study"

- Eileen Haase and John Crane (Victoria Kazmerski and Charisse Nixon) - \$1,400  
"Marital Status and Relational Aggression Effects on Sibling Relationships and the Network of Their Relationships"
- Renee Jerge, Lauren Kessler, and Kerry Lope (Victoria Kazmerski) - \$2,100  
"Improving Spatial Abilities in Second Graders with Science Activities"
- Elizabeth Kiefer and Lisa Niebauer (Derek Mace) - \$550  
"The Effects of Physical Attractiveness on Memory in College Students"
- Tessa Mackey, Megan Miller, and Ashley Wassel (Dawn Blasko) - \$793  
"Implicit Gender Stereotypes in Animated Disney Films"
- Seraina Naef and Jory Giger (Charisse Nixon) - \$1,400  
"Peer Aggression in the Schools. What Have We Learned?"
- Greg Parker (John Fizel and Victoria Kazmerski) - \$700  
"Personality and Lifestyle Variables and Their Relationship to Academic Performance in College Students"
- Amber Rose and Kathleen Vanderkolk (Derek Mace) - \$700  
"Effects of Stereotype Threat on Performance between Genders"
- Melissa Schmidt (Dawn Blasko) - \$643  
"Reality Television and its Effect on Body Image"
- Charlotte Siemiatkowski and Erin Mathes (Derek Mace) - \$700  
"The Effect of Resiliency on Problem Solving and Peer Relations in Children"
- Lauren Wagner, Garrett McCloskey, and Courtney Hopkins (Dawn Blasko) - \$900  
"Individual Differences in Speech Production"
- Andrew Walker and James Morosky (Dawn Blasko and Victoria Kazmerski) - \$1,400  
"Analyzing the Influence of Directionality and Similarity on Meaningful Judgments of Metaphors Using ERP"

## **SCHOOL OF SCIENCE**

- Leann Bartomioli, Andrew Collins-Hed, Adam Rhodes, and Kaile Taylor (Yi-Hong Wang and Michael Campbell) - \$2,800  
"Amino Acid Profiling of Tomato Plants Generated by Activation Tagging and Insertional Mutagenesis"
- Robert Blanner (Martin Kociolek) - \$700  
"Investigating the Reactivity of the Isoxazole Carbon-Carbon Double Bond"
- Anita Brock (David Hunnicutt) - \$700  
"Nasal Carriage of Community-Acquired Methicillin-Resistant *Staphylococcus aureus* in a Healthy Population of College Students"
- Anthony Campitella (Jennifer Holt) - \$700  
"The Study of the Complexation of Brooker's Merocyanine in  $\alpha$ ,  $\beta$ , and  $\gamma$  Cyclodextrin"

- Paul Corbett, Daniel Sweet, and Katie Geiger (Meng Su, Youngjoon Byun, and Gary Walker) - \$2,100  
"ROADS: Representation of Abstract Data Structures"
- Dan Domanski, Mike Sansone, and Logan Stack (Gary Walker and Ron McCarty) - \$2,100  
"GRS: Geo-Science Research Station"
- Amanda Harmon (James Warren Jr.) - \$700  
"Analysis of the Activity of the Necdin-Like Gene in Zebrafish (*Danio rerio*) Embryology"
- Sara Hester (Margaret Voss and David Hunnicutt) - \$700  
"Identification of Bacterial Isolates from Nests and Eggs of *Parus atricapillus*, *Troglodytes aedon*, and *Turdus migratorius*"
- Matthew Jackel (Martin Kociolek) - \$700  
"Synthesis of Substituted 1-Benzoxepin Derivatives from Isoxazoles"
- Justin Kubas (Tracy Halmi) - \$700  
"Selective Oxidation of Alcohols for CHEM 036 Puzzle Experiment"
- Jeff Machusko (Blair Tuttle) - \$700  
"VPython Programs for Visualizing the Amorphization of Silicon"
- Josh Meyer (Michael Campbell) - \$700  
"Investigation of the Interaction of the Genes NDP1 and OHP in *Arabidopsis thaliana*"
- Stacey Olechowicz and Julie Miller (James Warren Jr.) - \$1,400  
"Investigating the *in vivo* Functions of the Zebrafish Fragile X Gene Family"
- Christopher Suprock (Lawrence Downey) - \$700  
"Image Compression using Quadrant Decomposition and Functional Compression"
- Peter Tagala (James Warren Jr.) - \$700  
"*In vitro* Characterization of the Zebrafish DHFR Gene"
- Malorie Winters (Joseph Previte) - \$700  
"Food Chains and Scavengers"
- Kala Wolfe (Margaret Voss) - \$700  
"The Effects of Clutch Volume on Heating and Cooling Rates of Eggs and Reproductive Implications in Black Brant"

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