



## *Adrian College*

Welcome to our annual Ribbons of Excellence Day Program.

I am pleased to welcome you to our sixth annual Ribbons of Excellence Day Program at Adrian College, a day dedicated to celebrating scholarly accomplishments of our students through presentations, exhibitions and performances. A tradition started in 2008 and developed out of a faculty initiative to create and support our academic culture, today is the culmination of at least one year of preparation by students and their mentors.

The Ribbons of Excellence form the foundation of our shared values at Adrian College and each presentation today is linked to at least one thematic ribbon. I would like to thank Professor Heather Schuyler and the team of faculty and staff who worked in support of this event. We are thrilled that you are joining us today to celebrate our students and their accomplishments.

Regards,

Agnes I. Caldwell, Ph.D.  
Vice President and Dean of  
Academic Affairs



### **Adrian College's Mission Statement**

*Adrian College, a liberal arts college in the United Methodist tradition is committed to the pursuit of truth and dignity of all people. Through active and creative learning in a supportive community, students are challenged to achieve excellence in their academic, personal, and professional lives, and to contribute to a more socially just society.*



## Adrian College

Welcome to the 2014 Ribbons of Excellence Day Program!

The history of the Ribbons of Excellence Program resides in the Cane Ceremony tradition of tying a ribbon with the names of graduates to the Shepherd's Crook. This tradition has been carried on since 1887; in 2007 the academic community at Adrian College developed its academic vision of the Ribbons of Excellence Program. The Ribbons of Excellence are what each and every member of our community strives for; the Ribbons of Excellence are what we want Adrian College to be known for: *caring for humanity and the world; learning throughout a lifetime; thinking critically; crossing boundaries and disciplines; and developing creativity.*

Through today's Program we strive to achieve this goal of making this vision a reality. Students embark in research and other projects to *think critically* and *creatively* and to tie these ribbons into their lives, not just to the Shepherd's Crook. We also strive to achieve *learning throughout a lifetime* and *caring for humanity* by inviting community members, faculty, staff, students and other visitors to attend the day's events. The day is also about *crossing boundaries and disciplines*, as we are trying to expose students, through their presentations, to other buildings and communities on campus. Please take the time to look around. The work you will see is outstanding!

On behalf of the Ribbons of Excellence Program Committee, I would like to thank all students, faculty, and staff for their participation, support, and assistance with the 2014 Ribbons of Excellence Day Program.

Once again, welcome to the Adrian College Ribbons of Excellence Day Program. We hope you enjoy today's programs and return next year.

Regards,

Heather Schuyler, MA  
Director, Ribbons of Excellence Program  
Department of ESPE and Athletic Training



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CODE	NAME	GRID	CODE	NAME	GRID
ADMS	Ward Admission House	5C	JONES	Jones Hall	3C
ADTO	Adrian Tobias Center	4B	LOWRY	Lowry Hall	3D
ATO	Alpha Tau Omega Housing	4B	MAHAN	Mahan Hall	3-4C
ARGL	Argyle Apts.	2-3D	MSFC	Merillat Sport and Fitness Ctr.	2C
ARRI	Arrington Ice Arena	2B	NICO	Nicolay Field	1A
CAINE	Caine Student Center	4C-D	PEEL	Peelle Hall	3C
CARGO	Cargo Hall	3D	PELL	Pellowe Hall	2B
CASC	Cascade Circle	4B	PIKE	Pi Kappa Alpha Housing	2-3C
CVSA	College View South Apts.	4A	PLANT	Plant Facilities	1E
CVNA	College View North Apts.	4D	POWL	Powell Hall	4B
CVWA	College View West Apts.	2-3C	FIEL	Practice Fields	1E
CPLZ	Commencement Plaza	4C	RTCH	Ritchie Marketplace	4B
CRAFT	Craft Tennis Complex	1C-D	RUSH	Rush Center	3B-C
DAVIS	Davis Hall	4B	SHIP	Shipman Library	3C
DAWS	Dawson Auditorium	3B	SAE	Sigma Alpha Epsilon Housing	5A
DEANS	Deans Hall	3D	SBALL	Softball Field	1E
PRAC	Dick Indoor Practice Facility	1E	SPNC	Spencer Hall	3B
DOCK	Docking Stadium	2C	STAN	Stanton Administration Bldg.	3-4C
DOWNS	Downs Hall	4C	STEV	Stevens Hall	4B
ESTES	Estes Hall	4D	TKE	Tau Kappa Epsilon Housing	4A
FACL	Faculty Housing	3D	TERR	Terrace	4C
FEEM	Feeman Hall	4B	THM	Theme Housing	2-3C and 3D
GOLD	Goldsmith Center	3B-C	THMM	Theme Housing/Michigan Ave.	3B
HERC	Herrick Chapel	3C	TC	Theta Chi Housing	5A
HERH	Herrick Hall	3D	THOM	Thomas Pavilion	2B
ICTR	Adrian Innovation Center	1E	TRACK	Track & Field	1D
INTR	Intern Housing	4A	VALA	Valade Hall	4C
JARV	Jarvis Hall	4D	WOW	WOW Wingery and Café	2B

PARKING

#	TYPE	NAME	GRID
1	Standard Residential	Adrian Tobias Lot	4B
2	Standard Residential & Guests	Alpha Tau Omega (ATO) Lot	4B
3	Standard Residential	Cargo Lot	3D
4	Standard Residential	College View S. Street Parking	4B
5	Standard Residential	College View West Lot	2C-D
6	Standard Residential & Guests	Dawson Lot	3B
7	Standard Residential	Jarvis Lot	4D-E
8	Standard Residential	Lowry Lot	3D
9	Standard Residential	Mahan Lot	4C
10	Standard Residential & Guests	Merillat Lot	2B
11	Standard Residential	Pellowe Lot	2B
12	Standard Residential	Powell Lot	3B
13	Standard Residential	Sigma Alpha Epsilon (SAE) Lot	2B
14	Standard Residential	Tau Kappa Epsilon (TKE) Lot	4A
15	Standard Residential	Theta Chi (TC) Lot	5A
16	Standard Residential	Valade Lot	4C-D

**PARKING KEY**

- Standard Residential
- Standard Residential & Guests
- Fraternity Members Only
- Faculty/Staff (7 am – 5 pm Only)\*
- Special Events Only
- College View South Residents

\* Students with valid parking permits may park from 5 pm – 7 am, weekdays and all day on weekends. Vehicles must be removed by 7 am to avoid being ticketed, booted and/or towed.



**RIBBONS OF EXCELLENCE CONFERENCE 2014****Plan Your Day****Tuesday, April 8, 2014****Adrian College Campus**

<b>Time</b>	<b>Agenda Topic</b>	<b>Presenter</b>	<b>Location</b>
<b>2:00</b>	<i>Sample Topic</i>	<i>John Smith</i>	<i>Athletic Training Lab</i>

**Session 1**

Rush 124

10:00-10:20

**Danielle MacFarlan, Christina Butler,  
Janaye Powers, Ryan DeLacy & Cristina Miller***American Advertising Federation Adrian College Chapter-Mary Kay***Mentor: Patrick Quinlan****Ribbon: Developing Creativity**

Advertising is a form of marketing communications, used to persuade consumers; it plays a huge role in everyday life. Not only does advertising reach so many individuals, but also provides a large number of jobs. The American Advertising Federation is a nation-wide organization that provides college students the opportunity to work together to create an advertising campaign for a well-known company and present the campaign in front of various executives, competing against other universities. This gives college students interested in the advertising industry actual hands on experience to prepare for the next level. Adrian College has had a chapter of AAF for many years, and this year is no different. As part of the 2014 case, the Adrian College chapter must develop a campaign for Mary Kay. This presentation will consist of the chapter's presenting team demonstrating their Mary Kay campaign.

10:30-10:50

**Meghan Barnes***Shopping from Experience: The Role that Retail Environment has on the  
Differentiation of a Brand and the Consumer Experience***Mentor: Marilyn Whitney****Ribbon: Developing Creativity**

With the competitive retail market and potential threat of online shopping, the consumer's physical experience is now more important than ever for the success of a retail store. It is so important to gain a customer's attention and loyalty through a store's environment and experience. The design of a store is not simply to display merchandise, but to capture the customer and shape the identity of the brand.

**Session 2**

Hickman Board Room

10:00-10:20

**Brian Lunn***Actual and Perceived Drug Use Among College Students***Mentor: Christie Boxer****Ribbon: Thinking Critically**

I use a social learning theory, specifically Sutherland's Differential Association Theory, to examine drug use patterns as a part of college students' social lives. I measure various components of drug use and the perceptions of drug use among students at Adrian College (N = 121) through a 25-item survey. My results suggest that 41% of students in my study report some form of recent drug use, with marijuana and illicit use of prescription pills being the most prevalent drugs reportedly used on campus. I also report on the common motives among drug users in my sample and the perceptions of drug use on campus in general. Dr. Boxer was the primary investigator for this research.

10:30-10:50

**Mikhail Murashov & Andrew Torey***Bodybuilding Supplement Myo-X: Testing Its True Nutritional Content***Mentor: David Bartley****Ribbon: Caring for Humanity and the World**

Myostatin is a protein produced in the human body that limits skeletal muscle growth for maximum efficiency. People with lower levels of myostatin have the ability to build and maintain greater muscle mass than those with normal levels. Until recently, there was not any fitness supplement available to regulate myostatin levels in the body. Myo-X, produced by the fitness company Maximum Human Performance (MHP), is the first product on the market that claims to do so. Specifically, it claims to reduce myostatin levels in 100% of test subjects by an astounding average of 46% within 12-18 hours with just one serving. This reduction allows the consumer to gain muscle mass beyond their normal physiological limit. While the supplement labels are designed to look exactly like the "Nutrition Facts" that the Food and Drug Administration (FDA) requires on all foods, the FDA does not regulate nutritional supplements. As a result, the claims and the nutritional content of the product are not verified and the manufactures can put anything they choose on the label regardless of whether it is accurate or true. This presentation focuses on our research effort to determine if the nutritional label of Myo-X is accurate.



**Session 3**

Knight Auditorium

10:00-10:20

**Elizabeth Golem, John Weishar,  
Ben Momon & Goodluck Mpeba***Twenty-Five Years of Journalism: Topics, Trends, and Testaments***Mentor: Renee Collins****Ribbon: Caring for Humanity and the World**

Over the last quarter century, journalists have reported, analyzed and debated the most important stories of our generation, captivating audiences while simultaneously influencing the course of our society. This multimedia presentation will focus on the last 25 years of journalism, exploring media coverage of super stories, including the OJ Simpson trial, September 11th, 2004 tsunami, Hurricane Katrina and the death of Michael Jackson, categorized by world events, natural and man-made disasters, sports and celebrity news. Each participant will take a comparative look at how these “super stories” were reported from 1989 paralleled by the social media dominated journalism of the present. The evolution of journalism analysis will help inform future implications for the sustainability of news, and what this means for our society. Furthermore, each category’s examination of the triumphs and failures of the “super stories” will expose the importance of journalism, and highlight the urgency for the continuing historical record journalism provides in a world characterized by the rise of social media.

10:30-10:50

**Emily Gesell***Robust Processes and Successful Trends of U.S. Social Movements***Mentor: James Hanley****Ribbon: Thinking Critically**

Social movements in the United States have become a functional instrument for change, however, many social movements have failed to reach their original goals or even break into the main political discourse. Scholars have attempted to identify necessary attributes of social movements, as well as distinguish the success or failure of particular tactics in specific movements. Research is noticeably lacking in comparisons between movements, the techniques they utilized and the overall success and failure of these techniques. I examine different processes in a multitude of social movements, with a main focus on the U.S. civil rights movement and the U.S. gay rights movement. I aim to use the comparison of tactics in successful and unsuccessful movements to identify processes that can be considered robust and trends in the success of a social movement. While I found evidence of some processes being successful in nature, more research is needed to thoroughly examine more processes throughout a larger number of social movements.

**Session 4**

Valade 202

10:00-10:20

**Loren Hayes***A Comparison of U.S. and European Adolescent Sexuality***Mentor: Al Craven****Ribbon: Caring for Humanity and the World**

Rates of adolescent pregnancy, STI and HIV infection will be compared and discussed. Is it a public health crisis or a political and moral issue? Is condom availability the answer?

10:30-10:50

**Lee Schriber***Shock Therapy: Post-Soviet Economic Transition in Eastern and Central Europe***Mentor: Philip Howe****Ribbon: Thinking Critically**

The purpose of this essay is to provide insight and understanding into the role of the Shock Therapy the model of transitional economics during the period directly following the collapse of the Soviet Union and to develop an understanding of key factors that help to make transitional economies more effective at achieving success. This essay focuses on a cross-section of countries that applied the Shock Therapy economic transition model, including Poland, Latvia, Belarus and Russia. This work attempts to evaluate each case study on size, preparedness of government, level of existing privatization at the collapse of the Soviet Union, and globalization and external assistance or opportunity available by powerful capitalist economies. Finally, this research suggests that in the future globalization and support from successful, thriving, and powerful economies will be required for an efficient economic transition in contemporary states with non-capitalist economic structures.

**Session 5**

Valade 107

10:00-10:20

**Jennifer Eisinger***Research of Siderophore Biosynthesis***Mentor: James Leslie****Ribbon: Caring for Humanity and the World**

Methicillin-resistant *Staphylococcus aureus* and *Bacillus anthracis* are two bacteria strains that are the causative agents for MRSA and anthrax infections, respectively. Both of these diseases currently do not have a cure. The Sherman lab in the Life Sciences Department at the University of Michigan are diligently working to refine a novel antibiotic seen to have siderophore inhibiting effects, disabling the bacteria from obtaining the necessary iron for survival. As a Perrigo Fellow in the Sherman lab, Jennifer Eisinger aided in the crystallization process in order to shed light upon the mechanics of this new antibiotic with the long-term goal of discovering a cure for these two fatal diseases.

10:30-10:50

**Matthew Konieczki***How Invasive Species Invade: A Comparison of Functional Traits of Native and Invasive Plants***Mentor: Jeffery Lake****Ribbon: Thinking Critically**

This project analyzed functional traits of native and invasive plants in southern Michigan in order to find the ways by which invasive species invade different environments. Seven functional traits were analyzed using the mean values and analysis of variance (ANOVA) implemented in the R statistical programming environment (R Working Group 2013). The three morphological traits measured were leaf dry matter content (LDMC), leaf laminar area (LA) and specific leaf area (SLA). The remaining four, leaf nitrogen content (Nmass), 15N concentration (measured as  $\delta^{15}\text{N}$ ), 13C concentration ( $\delta^{13}\text{C}$ ) and carbon to nitrogen ratio (C:N ratio) were chemical-related traits. Comparisons of these traits were made between native and invasive species, as well as the two research sites (Michigan International Speedway and Dawson Arboretum). The hypothesis set forth was that the invasive plant species in southern Michigan are using the empty niche method to invade by nitrogen fixation and decreased structural carbon input. This allows the invasive species to utilize niche space, which the native species are incapable of occupying.



**Session 6**

Downs Hall

10:00–10:20

**Amber Nethercott***Amber In Action***Mentor: Annissa Morgensen-Lindsay****Ribbon: Learning Throughout a Lifetime**

“Amber In Action,” (March 15, 2014) an acting recital, is intended to expand the student’s knowledge, understanding and experience in each era of theatre. Through preparing and performing an acting recital, an actor practices the skills necessary for success in the world of theatre. Besides gaining more experience on stage, the actor develops a strong basis for a repertoire, learns how to efficiently read plays and pick strong (and appropriate) monologues, as well as creates distinctly different characters. This recital promotes “Learning Through A Lifetime” because theatre is continually changing. As a student, Amber learns how to participate and grow within this art form so that she will have a basis for acting later in life. For the Ribbons of Excellence presentation, Amber speaks about the process she went through while picking her pieces, highlights the unforeseen challenges and the successes experienced, as well as performs two contrasting pieces from the recital.

**Session 7**

Rush 124

11:00-11:20

**Stephanie Boehringer***Tracking Synthesis Paths of P-Process Nuclei***Mentor: Greg Thompson****Ribbon: Thinking Critically**

The p-process nuclei are proton-rich nuclei heavier than iron and are an astrophysical abnormality because of the enigmatic nature of their synthesis. It is possible to trace the production of the p-process nuclei as a path that starts from 35 different p-nuclei to their seed nuclei composed of lighter isotopes. Data from NSCL's nuclear reaction network of a Type II Supernova explosion with a temperature shock front that passes through multiple zones of the O/Ne layer was used to make calculations on the change in abundance of seed nuclei. The flow rates involving p-nuclei were calculated accurately enough to continue calculations on the paths taken by seed nuclei.

11:30-11:50

**Rachel Johnson***Paleozoic Ohio: Environment and Ecology as Interpreted from Analysis of Fossils***Mentor: Thomas Muntean & Sarah Hanson****Ribbon: Thinking Critically**

Fossils are a fascinating window into an area's geologic past. They can provide insight as to a region's previous climate and environment, as well as the types, abundances and distribution of animals that used to inhabit the region. For this research project, fossils from selected sites in Ohio will be collected, identified and used to determine the paleoecology of the faunal assemblages and the age of sampled units. The faunal assemblages from each location will then be compared to one another in an effort to determine changes in the distribution of the fossil species with geographical distance. The changes in the faunal assemblages will be examined to determine if there is a correlation with changes in rock type. Paleocological findings will be used to create a paleoenvironmental model for the areas sampled. This model will be used to evaluate the Paleozoic depositional environment in Ohio and determine if species distribution shifts occurred with rock type changes. Through this project, I will be able to take a collection of fossils and create an interpretation of the animal life and environment in a time long before our species existed.

**Session 8**

Hickman Board Room

11:00-11:20

**Jennifer Eisinger**  
*Antimicrobial Effects of Garlic***Mentor: Janet Salzwedel****Ribbon: Thinking Critically**

Garlic has been used for centuries as a means of combating microbial infections in the human body. Although it was known to be effective, the mode of action has been unclear. In order to address the question of how garlic is inhibiting the microbial growth, various forms of garlic were applied to two pathogenic bacterial strains. This process was able to help to determine which garlic form was most potent against the bacteria. Fresh garlic oil proved to be the most effective against the bacterial growth, both on agar plates and broth cultures. The garlic oil was even more potent when solubilized by a detergent, Tween. This enabled more garlic to bacteria contact to increase the rate of inhibition. Finally, in order to determine the physiological effects the garlic has on the bacteria, the bacterial cells were viewed under fluorescence microscopy.

11:30-11:50

**Erin Bisco***Impact of Precipitation Levels on Leaf Functional Traits in a Michigan Forest***Mentor: Jeffery Lake****Ribbon: Thinking Critically**

Leaf functional traits are critical to the growth and survival of plants and can indicate adaptation to particular ecological conditions, yet they are also subject to substantial environmental-driven plasticity. Drought, in particular, strongly affects water availability to plants, and may more indirectly affect photosynthetic carbon fixation. Acclimation through changes in leaf traits of deciduous trees may better allow trees to survive changing environmental conditions. In this study, I collected leaf functional trait data for the summers of 2012 and 2013 at Michigan International Speedway's Graves Campground. I sampled specific leaf area (SLA), leaf dry matter content (LDMC) and leaf laminar area (LA), all of which are related to photosynthetic carbon gain. I relate these traits to precipitation levels in the year of leafing, as well as in the year prior, to determine if there is a lag effect of precipitation on future leaf traits. This study fits within the "Critical Thinking" ribbon because it requires the identification of fundamental ecological stressors and potential plant responses, as well as the application of novel techniques to these problems.



**Session 9**

Knight Auditorium

11:00-11:20

**Nicole Fredrich**  
*The Math Behind Meanders***Mentor: Alia Khurram****Ribbon: Learning Throughout a Lifetime**

Exploring the mathematical explanation for the formation of meanders is a topic that reflects aspects of discovery and a search for deeper understanding that is an integral part of learning throughout a lifetime. My curiosity about meanders has led me to seek out knowledge pertaining to the mathematics behind meanders. Mathematical models are used to explain many phenomena that occur in nature. In this presentation, I will explain one such model that describes the formation and shape of meanders in rivers. In no way is this model the entire truth, for nature is unpredictable and no model can fully incorporate all possible situations and outcomes. This particular mathematical model uses integrals to describe a “sine-generated” curve that mimics the shape of real rivers to explain the formation of meanders in rivers. A sine curve minimizes the variation of the changes of direction along the curve. In other words, the curve is a curve of the minimum total work. The model reveals certain aspects of rivers that are useful in understanding the flow of rivers, and provides a list of characteristics of rivers that are revealed through the regular “sinuosity” of rivers around the world.

11:30-11:50

**Nicholas Oderio**  
*Exploring Results from Random Matrix Theory Using Maple***Mentor: Dorin Dumitrascu****Ribbon: Thinking Critically**

Most people are convinced that much of everyday life is ordered in some way, whether it is personally organized or left to professionals, like mathematicians, to work out the details. However, randomness constitutes a significant portion of reality and is often unavoidable. For instance, the traffic on a highway at 5:00 p.m. everyday will be different – even the weather we experience cannot be predicted with full certainty. Thankfully, there exist useful mathematical tools called eigenvalues and eigenvectors that help in exploring patterns. This presentation reports on analysis of some results of eigenvalues and eigenvectors associated with random matrices or matrices whose elements follow rules of randomness. The analysis was performed with the software Maple and statistical software SPSS. The process of modeling a real life situation governed by randomness and the use of programming in the analysis places this presentation under the “Thinking Critically” ribbon.

**Session 10**

Valade 202

**11:00-11:20** **Kyle Cordova**

*~~A Program Evaluation of Maurice Spear Juvenile Detention Center (MSC):  
Relating Family Factors and Rehabilitation Status to Recidivism Rates for  
Juvenile Offenders~~*

**Mentor: Christie Boxer** **Ribbon: Caring for Humanity and the World**

~~This study proposes a program evaluation of the Maurice Spear Juvenile Detention Center (MSC) Boys Division. I plan to examine the effects of variables associated with the delinquent youths and their families on recidivism rates among this population of juvenile offenders. Using a random sample of past residents at MSC, I plan to evaluate the MSC rehabilitation program's efficacy in reducing juvenile crime. Through Edward Sutherland's Differential Association Theory and Ronald Akers' Social Learning Theory, I plan to evaluate motives and understanding in comparison to the variables gathered in order to evaluate the program. I anticipate that my results will show a strong impact of family factors on recidivism among juveniles who participate in the MSC rehabilitation program, such that the program's efficacy is lower (and recidivism rates higher) when negative family factors (single parent homes, neglectful parents, etc.) are present in juvenile's environments upon release from the MSC. This proposal is the precursor to my graduate thesis research, which will conclude in December 2014.~~

**11:30-11:50** **Donna Dickerson**  
*Competency of Legal Process***Mentor: Christie Boxer** **Ribbon: Caring for Humanity and the World**

Juveniles' competency to stand trial is important because the concern is whether minors who are accused of crimes have the developmental capabilities to participate effectively in a trial held against them. The purpose of this research was to test legal competency among young adults. I surveyed college students at Adrian College using closed-ended questions to test students knowledge about their Miranda Rights, confidence in knowing their rights, when to waive their rights, rights of a trial, competency requirements, legal process and knowing the courtroom actors. I hypothesized that college students majoring in criminal justice would demonstrate more rational understanding of the legal process comparing to students not majoring in criminal justice. Criminal justice students are trained in the facts of cases, legal proceedings, constitutional rights, etc., therefore, they should score higher than non-criminal justice students on a competency to stand trial survey. My results show that criminal justice majors did not score more highly on the competency survey; non-criminal justice majors had a higher rate of correct responses among survey questions than criminal justice majors. In conclusion, this study questions whether juveniles' can be deemed competent to proceed in the legal process, even that educated college students (especially criminal justice majors) score low on questions regarding competence to stand trial. Juveniles lack life experiences and cognitive maturity, therefore, if college students had low averages on competency questions, minors would score lower than their young adult counterparts.

**Session 11**

Valade 107

11:00 – 11:20

**Joel Laurent Mbala Nkanga***Haiti Re-Imagined: A Solution to the Housing Crisis***Mentor: Marilyn Whitney****Ribbon: Caring for Humanity and the World**

Four years ago in 2010, a magnitude 7.0 earthquake hit the capital city of Port-au-Prince in Haiti. The ensuing devastation left an already poor and struggling nation with an incapacitated infrastructure and killed 316,000 people, injured 300,000 and displaced 1.3 million, along with 97,294 houses destroyed and 188,383 damaged. Four years later, despite the many relief efforts, Haiti is barely better off. As many as 400,000 people still live in tent cities. This research looks at and presents a housing method that is sustainable, easy to build and maintain, cost effective and mitigates the effects of earthquakes, hurricanes and floods. Because the topic covers a solution to a major crisis in a different country, it falls under the “Caring for Humanity and the World” ribbon.

11:30-11:50

**Jammie Woods & Alexandria Maxson***The Republic of Ireland and Northern Ireland***Mentor: Robin Bott****Ribbon: Crossing Boundaries and Disciplines**

Many people have gone on previous May Tours and many will continue to do so. However, the extra benefit Jammie Woods and Alex Maszon received from taking the Irish Heritage class that was offered prior to traveling on the 2013 May Tour really enhanced this wonderful experience. During this presentation, the audience will learn about the various places they went to, things they did, what they learned in class, as well as how the class benefited their experience abroad and what they took out of this experience that will continue to benefit them as students and as individuals.

**Session 12**

Downs Hall

11:00 – 11:20

**Elisabeth Schrock***Lisa & Elisabeth***Mentor: Michael Allen****Ribbon: Developing Creativity**

Elisabeth Ann Schrock welcomes everyone to look into the world of musical theatre with "Lisa & Elisabeth" through scene work, song and dance. The first half of the show we look at Lisa: a simple small town girl. Then, there is Elisabeth: the diva. Some of the ways we will see these are in the song selections: Lisa chose songs that are simple and sweet that fit her romantic side; Elisabeth chose songs that are big and showy with lots of personality. At the Ribbons of Excellence presentation, Lisa shares a short explanation of her recital concept of "Lisa and Elisabeth" and how she chooses the songs, scenes and dances for her recital. She also demonstrates two of the pieces she worked on for the recital. Elisabeth's recital fits under the ribbon of "Developing Creativity." Over this semester, she has developed a creative representation of her talents in the field of musical theatre.

**Session 13**

Rush 124

**Breaking Bad Part 1**

1:30-1:40

**Jason Avromov***The Chemistry of "Breaking Bad": Crystal Meth Production***Mentor: Paul Rupert****Ribbon: Developing Creativity**

In season one, episode one, we are introduced to Walter White. He is a chemistry teacher who uses his chemistry background to make crystal meth, allowing him to make more money for his family. Today, the majority of crystal meth is produced using a chemical reaction to convert pseudoephedrine into methamphetamine. Pseudoephedrine can be extracted from the common cold medicine Sudafed. Due to the fact Sudafed can be purchased over the counter, there are many sales restrictions for purchasing it. At the end of season one, Walt and Jesse realize they are not going to be able to purchase enough Sudafed to extract a sufficient amount of pseudoephedrine to produce several amounts of crystal meth a week. Walter decides to switch to the "old school" method, using reductive amination to produce his meth. Using this method, Walt produces a crystal meth that is a striking blue color. Through further research, we are able to determine whether or not this blue color is realistic, and if his meth is as pure as he claims it to be.

1:40-1:50

**Justis Cummins***The Chemistry of Breaking Bad: Phosphine Gas***Mentor: Paul Rupert****Ribbon: Developing Creativity**

In season one, episode one of the show "Breaking Bad," main character Walt executes an example of his chemistry knowledge. Being one of the most intense situations, he escapes being held at gunpoint by two men by creating an explosion and gas release to kill the two men off. Walt later explains to his accomplice Jesse that he created phosphine gas from the ingredients he uses to make crystal meth and that risk of creating phosphine gas is a very potential danger when making crystal meth. The real question though, is would it be actually possible for Walt to create the phosphine gas and could he actually bring down the two men in the Winnebago? Under the right circumstances and with the proper heating and chemicals, it would be very much possible.



**Session 13**

Rush 124

**Breaking Bad Part 1**

2:00-2:10

**Derek McCoy***"The Chemistry of Breaking Bad": Hydrofluoric Acid***Mentor: Paul Rupert****Ribbon: Developing Creativity**

In season one, episode two of "Breaking Bad," Walter White instructs his partner Jesse to dispose of a dead body. He gives him specific instructions on how to do so using hydrofluoric acid, HF, which is a strong and highly corrosive acid. HF is so corrosive because the fluorine ion is highly reactive. Instead of using a plastic container to dispose of the body as instructed, Jesse uses the bath tub of his home and soon finds the tub, and everything in it, has fallen through the bathroom floor. Although HF is very corrosive, it is not considered a "strong" acid, because it does not completely dissociate in water, therefore, the truth was stretched a bit. It is shown that the HF decomposes the ceramic tub, the floor beneath it, along with the ceiling beneath that within a few hours. This would have actually taken closer to a few days to do so. In reality, a more feasible route would have been to use a highly concentrated base, such as lye. Lye would decompose of a body more efficiently; it is safer, easier to obtain and wouldn't have soaked through the tub as did the HF.

2:10-2:20

**Alex Anstett***The Chemistry of Breaking Bad: Mercury (II) Fulminate***Mentor: Paul Rupert****Ribbon: Developing Creativity**

In season one, episode six, Walter White visits a drug lord named Tuco to demand money for his crystal meth. When the meeting starts heading south, Walt slams the "meth" to the ground, resulting in huge explosion. What Tuco didn't know is that the "meth" Walt brought along was actually mercury fulminate, a powerful primary explosive. So is this feasible? Could mercury (II) fulminate really cause that large of an explosion? Or was this chemical reaction exaggerated for TV?

**Session 14**

Hickman Board Room

2:00–2:20

**Kathleen Labick***Energy Consumption between a Re-purposed LEED Commercial Structure and a New LEED Commercial Structure***Mentor: Marilyn Whitney****Ribbon: Caring for Humanity and the World**

As the environmental movement gains speed, there is a rising consumer awareness of business and corporate social responsibility. Sustainability in the built environment is the next step for environmentalists to conserve water and energy consumption as well as reduce toxic emissions. Recently, the saying, “the most sustainable building is the one that is already built” has grown in popularity. Yet, very little research has been conducted to confirm this supposition. Therefore, the purpose of this research is to see if there is any validity to the idea that an existing building is more sustainable than a newly constructed building. This research will either strengthen or take away the power of this popular statement and possibly change the type of projects architects design for. Existing buildings require upgrading to current code systems, so this project considers structures after this process.

**Session 15**

Knight Auditorium

1:30-1:50

**Emily Gesell, Amanda Adams, Devin Alexander,  
Katherine Bartlett, Colin Best, Drake Dailey-Chwalibog,  
Andrew Haring, Goodluck Mpeba & Jordan Zalenko**

*The Policies of Comoros and the Experiences of the 2014 Adrian College Model  
Arab League Delegation*

**Mentor: Philip Howe****Ribbon: Caring for Humanity and the World**

Participants in the 2014 National Model Arab League Conference will present their research on the positions and policies of the nation of Comoros. Students will also recount their experiences at the NUMAL Conference in Washington, D.C., and their meeting with the State Department's Africa liaison.

2:00-2:20

**Brian Diven**

*High-Velocity Transport in a Near Vacuum*

**Mentor: Greg Thompson****Ribbon: Thinking Critically**

My project examines the plausibility of a high-speed transport system that operates in a near-vacuum, similar to the Hyperloop concept proposed by Elon Musk. A small-scale model was constructed in order to explore potential engineering difficulties. This model utilizes a magnetically levitated capsule that is propelled inside a tube under high vacuum. Traditionally, high-speed transports run into difficulties due to air resistance and friction, both of which become substantial when vehicles approach high speeds. This mode of transportation would overcome both of these difficulties by operating in a near-vacuum, reducing friction and air resistance to negligible amounts. Such a transport system, in theory, could travel at speeds due to its high aerodynamic efficiency. Proposed designs call for the passengers to experience a maximum inertial acceleration of 0.5 g, well less than a commercial airliner on takeoff and landing. Ultimately, such a transport system could potentially cut travel times from hours to minutes and provide an energy efficient alternative to traditional modes of transportation.

**Session 16**

Valade 202

1:30-1:50

**Amy Van Gessel & Jennifer MacArthur***A Conversation on Preservation in Downtown Adrian***Mentor: Marilyn Whitney****Ribbon: Developing Creativity**

In the city of Adrian, Mich., the downtown business district has fallen on hard times with many buildings left vacant and lacking any upkeep. Storefronts and windows are boarded up. Decorative cornices, once part of the many beautiful architectural details of the buildings, have crumbled or simply been covered with steel siding. A nationwide trend of building commercial centers away from downtowns has led to the struggle of small business storefronts. Recent drifts toward unique boutiques and eateries have led to the beginning of a downtown revival across the country, and in Adrian as well. The restoration of the Governor Croswell Tea Room façade and adaptive reuses of the previous Lenawee County Savings Bank and Post Office have provided a strong base to start further preservation efforts in the downtown area. Utilizing historical and current photos, we hope to provide façade renderings of some of the more dilapidated structures in downtown Adrian, creating an image of “what could be,” while giving an introduction to the importance of local historic preservation. We plan to focus on the “Developing Creativity” ribbon.

2:00-2:20

**Chelsea Gordon***Maus: How Propaganda Affects Every Day Dehumanization***Mentor: Carman Curton & Michael Allen****Ribbon: Crossing Boundaries and Disciplines**

Maus may look like a comic book written by Art Spiegelman on the outside, one that focuses on his father's story during the pre-World War II life, but upon a closer look, it is much more than that. Spiegelman focuses on showing the reader how propaganda affects their everyday life. By showing the psychological affects through the use of dehumanization (a process of making someone feel less than human) through both art and history, Spiegelman creates a piece of propaganda that helps the readers understand how Germans used propaganda to classify the Jewish populations as "rats" and dehumanized them.

**Session 17**

Valade 107

1:30-1:50

**Nicole Harkness***The Sustainable Development of Antarctic Ecotourism***Mentor: Robin Bott****Ribbon: Caring for Humanity and the World**

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." That is the definition of "sustainable development," as given by the United Nations World Commission on Environment and Development (Brundtland Commission, 1987). Sustainable development encompasses the three principles of social, environmental and economic sustainability, as well as creative ingenuity to develop the three principles into a real-world solution to a problem. One component of sustainable development of a country or an ecological region is ecotourism, the visiting of relatively undisturbed natural areas, intended to be as low-impact as possible. From December 19-30, 2013, I took part in the field module of an academic course on Antarctica. The purpose of the field study to the Antarctic Peninsula and Ushuaia, Argentina was to evaluate the positive and negative impacts of Antarctic eco-tourism and determine the sustainability of it. Using an Antarctica excursion company to carry out research, 16 college students, including myself, were observant and vigilant eco-tourists, along with 67 other passengers.

2:00-2:20

**Austin Abbott, Braydon Gomes, Rachel Johnson,  
Michael Micallef, Samuel Spicer & Chelsea Strawser***Biostratigraphic Significance of an Unidentified Paleozoic Rock Unit from  
Northwest Ohio: Age and Paleoenvironment***Mentor: Thomas Muntean****Ribbon: Thinking Critically**

The Fall 2013 Biostratigraphy class collected, processed and identified fossils from an unidentified Paleozoic sedimentary unit located in Sylvania, Ohio as part of a term-long laboratory project. The goal of this project was to determine the age of the unidentified rock unit and its environment of deposition, as recorded by the fossil content. The fossils were identified to the generic, or, when possible, species level. Age ranges and known paleoenvironments for each fossil genera or species were determined from the Paleobiology Database. Age data were used to produce an assemblage biozone chart, which allowed for interpretation of a Middle Devonian age for the sampled unit. Analysis of paleoenvironmental data revealed that the common environment among all identified samples was shallow marine. This project drew upon all knowledge and skills developed throughout a semester long course to demonstrate the real life application of biostratigraphic concepts to solve a geologic problem.



**Session 18**

Downs Hall

1:30-1:50

**Matthew Pecek with actors Kellie Fisher,  
Dale White & Patrick Yee***Art Within Art in August Strindberg's "Creditors"***Mentor: Annissa Morgensen-Lindsay  
& Michael Allen****Ribbon: Crossing Boundaries and Disciplines**

August Strindberg, viewed by many as the father of modern Swedish literature, was a theatre playwright and director whose career spanned over four decades. One of the most powerful of Strindberg's works is "Creditors." As a small scale, three-actor play, "Creditors" delves deep into the psychology of human relationships. As director of the Adrian College production of this play, Pecek has organized the process of the production team and actors that creates theatre. This includes analyzing the play's themes, characters and language, blocking the play and working with many kinds of people in order to unify costuming, setting, properties, lighting and advertising. In the theatre world, a director observes the world and encourages his team to look for the more creative solutions possible for a problem, looking for the ideas that will best further contemporary society. In doing this, Pecek, as the director of "Creditors," crosses the boundaries of time by finding relevance in literature from the 19th century, while developing creativity in his entire production team. At the Ribbons of Excellence, Pecek will present on how to stay true to the words and meanings of a foreign playwright while finding contemporary wisdom in the philosophy of a late 1800s conservative.

**Session 19**

Rush 124

**Breaking Bad Part 2**

2:30-2:40

**Mikhail Murashov***The Chemistry of "Breaking Bad": The Thermite Reaction***Mentor: Paul Rupert****Ribbon: Developing Creativity**

In season one, episode seven of "Breaking Bad", Walter White and Jesse Pinkman need to increase their production capacity to comply with commitments they have made to their dealers. To do this, they must change to a new production process that requires methylamine as a raw material. They conclude that they must break into a secure warehouse to steal a barrel of methylamine. Walt takes inspiration from an Etch-A-Sketch toy in Jesse's garage. By harvesting aluminum powder from the Etch-A-Sketch toy, Walt decides to employ the thermite reaction, which dramatically burns through the warehouse's lock and helps them to steal the methylamine. This presentation explores the realism of the concept, what the thermite reaction really is, and its chemical correctness.

2:40-2:50

**Andrew Torey***The Chemistry of "Breaking Bad:" Ricin***Mentor: Paul Rupert****Ribbon: Developing Creativity**

In season two, episode one of "Breaking Bad," Walter White makes a batch of ricin. Walt produces this highly toxic substance to poison the infamous drug lord Tuco. He prefers this method because of its high potency, while leaving behind no trace in the victim. During the episode, Walt discusses the simplicity of ricin production and even shows a few general steps in the toxin extraction. Following research, valuable information was obtained describing this process. Two distinct ricin production methods were described in detail in published literature. These two methods would most likely need to be carried out in an analytical laboratory with up-to-date instruments. A third method, which was the method utilized by Walt, was discovered, describing the "street" method and can be executed almost anywhere with the proper materials. This presentation explains the chemistry and biochemistry involved in the production of ricin, illustrating how easy the process really is.

**Session 19**

Rush 124

**Breaking Bad Part 2**

3:00-3:10

**Nicol Parker***A Scientist's Perspective of Breaking Bad***Mentor: Paul Rupert****Ribbon: Developing Creativity**

In the hit series "Breaking Bad," the main character Walter White is a high school chemistry teacher who breaks bad and becomes a methamphetamine producer. In his transition into the treacherous world of methamphetamine drug production and distribution, he uses the alias Heisenberg, assumed to be after the theoretical physicist Werner Heisenberg. Beyond obvious similarities between the two men being of high intellect and applying their skills in the sciences, many other subtle similarities between the two men exist of which include each being family men, nuclear scientists, and the experiencing the diagnosis of chronic cancer. Also of marked interest is the entrenchment of Walter White into his Heisenberg drug lord character and the applications of his transformation to Werner Heisenberg's Uncertainty Principle. This principle states that there is a fundamental limit on the accuracy with which certain pairs of physical properties of a particle can be simultaneously known. Walter relates to this principle in the affairs of his diagnosis, family life, safety and character.

3:10-3:20

**Question & Answer Session for Breaking Bad**

**Session 20**

Hickman Board Room

2:30-2:50

**Lee Schriber***Strategies of Russian Orthodoxy in Post-Soviet Russia for Political and Social Development***Mentor: Deborah Field****Ribbon: Crossing Boundaries and Disciplines**

The purpose of the subsequent essay is to analyze the actions of the Russian Orthodox Church following the collapse of the Soviet Union. This research that supports the findings and conclusions asserted in this essay is based upon the thorough analysis of a number of prominent Russian news outlets between the years 1998 and 2002. Ultimately, this essay evaluates the actions of the Russian Orthodox Church during the post-Soviet era and shows how those actions translated to a number of strategies used by the Russian Orthodox Church to reassert themselves following the collapse of the Soviet Union. These strategies were designed to promote the reconciling of public attitudes toward the Church and religion and the redefinition of the Church as a Russian entity. Furthermore, there are strategies of the Church evident that show attempts to reclaim prominence in political affairs that were held during the Imperial Russian era. Additionally, this essay seeks to understand the press in the post-Soviet world and how it played a role in the success of the strategies of the Church.

3:00-3:20

**Colleen Grondin***Art History Pedagogy: Representations of Gender***Mentor: Carissa Massey****Ribbon: Thinking Critically**

My research was designed to streamline development of interdisciplinary art curriculum unit that builds on lessons of art history, as well as gender theory learning outcomes. The primary goal was to facilitate my application expertise obtained in courses of art education and apply those skills to create a curriculum for a secondary level art classroom grades nine through twelve. This curriculum integrates gender literacy and visual literacy in order to teach student how to recognize the art historical antecedents of gendered structures in visual representations. From the unit I created, I was able to present a lesson at the Michigan Art Education Association conference in Mackinaw Island this year and receive input and feedback; many veteran teachers thought it was a very progressive topic and were interested to hear more.

3:30-3:50

**Theodore Behling***"Why the United States Lost Laos"***Mentor: Terrence Jackson****Ribbon: Thinking Critically**

This essay researches how the United States lost the conflict in Laos in the 1960s. In order to understand the complexity behind this conflict, research concentrated on five factors that led to the failure of the United States to maintain a presence in Laos and direct political developments there. These factors included the diversity of peoples in Laos, the diversity of its geography, missteps by the Eisenhower administration, limitations dictated by the Geneva Accord and problems with the counterinsurgency doctrine. This study is unique in treating the combination of these factors and ultimately suggests that more research needs to be done on the conflict on Laos to fully understand its effect on the conflict in Indochina.

**Session 21**

Knight Auditorium

2:30-2:50

**Derek DeVee***Hip Hop as a Tool for a Critical Analysis of Contemporary Issues***Mentor: Carissa Massey****Ribbon: Thinking Critically**

Using contemporary theories from cultural, philosophy and hip hop studies, this presentation and performance will offer a critical analysis to the origins and misappropriations of topics in hip hop. This study will draw from past and current artists who demonstrate the true power of hip hop and how it can be used for social critiques among an array of other topics. This study will also draw on contemporary scholars who have literature on many topics that these hip hop artists focus on in their songs, such as racial oppression and inequality. Using the works offered in all of these fields, an original piece will be composed and performed to demonstrate how these theories can be synthesized into an example of how, such artists as Immortal Technique, KRS-ONE, Mos Def, Talib Kweli and many others, use hip hop as a means of teaching and identifying important issues in today's society.

3:00-3:50

**Bradley Smith***Effects of Ankle Bracing on Vertical Jump Performance***Mentor: Tina Claiborne & Victor Liberi****Ribbon: Thinking Critically**

The effects of ankle bracing on an athlete's performance has been studied at length in respect to speed, agility and jumping ability. Limited studies have explored the repercussions of ankle bracing and how it may affect the range of motion and muscular activity in the lower extremity. The current study specifically looks at the influence of ankle bracing on lower extremity kinematics and gastrocnemius/soleus electromyography (EMG) during the performance of a vertical jump. Participants that served in this study were 20 NCAA Division III college athletes, 10 males and 10 females with ages ranging from 18-22 years old. Participants performed a total of 10 vertical jumps throughout the study, five jumps with no brace and five jumps with an ankle brace – each condition was performed on separate days. The kinematics and range of motion were measured using Motion Analysis® hardware with Cortex® software, while the muscular activity of the gastrocnemius and soleus were measured with Delsys® hardware and EMGworks Acquisition software 3®.



**Session 22**

Valade 202

2:30-2:50

**Hayden Garlick, Alex Noelke & Carolyn Wirtz***Driving the Oxcart: Continuing to Navigate an Uncharted Identity***Mentor: Linda Learman****Ribbon: Developing Creativity**

Once more, the Oxcart editorial and graphic design teams were challenged to sculpt a newly-glossed issue that not only featured the most imaginative and ambitious works of Adrian College's writers and artists, but continued to 'drive the oxcart' toward a stable establishment. At heart, the publication's priority is still to continue navigating a unifying identity. Currently, we understand the identity of the Oxcart to be particularly influenced by the writing that is accepted from one year to the next.

It appears, more so than any previous year, the editorial staff had an exceptionally difficult task in accumulating a group of works from this year's submissions as they struggled to find some kind of unifying identity. This isn't due to inexperience – rather, it's a result of continuing to close in on better understanding the publication's identity. Therefore, this year's annual Oxcart Ribbon's of Excellence conference will illustrate the extensive challenges in matching the current issue as the journey to navigate a uniting identity continues. This year's 2013-2014 Oxcart panel consists of sophomore staff editor, Carolyn Wirtz; junior editor-in-chief, Hayden Garlick and senior editor-in-chief, Alex Noelke. Following introductions, the panel will first compare example publication identities to depict why it's important to have a unifying identity, before detailing what controls the outcome of each Oxcart issue's identity. Secondly, the panel will illustrate how the current issue's featured works presently define Oxcart's identity. Thirdly, the panel will spell out what current challenges predict for the future of the Oxcart's identity. To conclude, the panel will answer questions. As in years past, this Ribbons of Excellence presentation calls on the "Developing Creativity" ribbon as its cornerstone of conception. To encompass this ribbon, sample pages of the 2013-2014 issue will be displayed on the table of each audience member during the conference.

3:00-3:20

**Erika Scheu***America's "Intelligence": A Linguistic, Psychological, and Sociological Study of an Abstract Noun***Mentor: Linda Learman****Ribbon: Crossing Boundaries and Disciplines**

Scholars in the fields of linguistics, psychology and sociology are continually exploring the complex relationship between language and culture, asking questions such as how society impacts the way we use and understand language and, conversely, how does language impact our roles and activities within society? Stressing the ribbons of "Crossing Boundaries and Disciplines" and "Critical Thinking," this presentation concentrates specifically on exploring and examining the current usage of the abstract noun "intelligence," and by drawing on the writings and studies of multiple academic voices such as Michael Bahktin, Edward Sapir, Marcel Danesi and many others. My goal is to expose how "intelligence" reflects the mindset of America today. Through additional primary research in both news and social media, it is my hypothesis that "intelligence" in modern American society translates the nation's preoccupation with competition and comparison.

**Session 23**

Valade 107

2:30-2:50

**Candice Sires***African Footprint: The Cultural Connection to Africa, Past and Present***Mentor: Carissa Massey****Ribbon: Caring for Humanity and the World**

Throughout twelve years of secondary education in America, time is rarely spent studying Africa because of its lack of presence in textbooks and global economy. The only time many will ever be introduced to its history and cultures will be in college, typically a one-semester history course dwelling on its past traditional cultures. This cultivates many misunderstandings about Africa caused by a vagueness almost required by idea-conscious authors when writing about Africa on topics in relation to aspects of these communities that would propagate or propel negative opinions of Africa and her people. This restraint is used to build a positive awareness and respect for the historical richness of Africa's many cultures without reinforcing current negative stereotypes, but may lead to incomplete studies if issues are never addressed. The final key to an accurate study of Africa is allowing them to be described and seen as modern communities. This research will study the South African contemporary musical theater performance African Footprint to explore the relationship between what they present as African culture and what we study.

3:00-3:20

**Akintunde Oluwadare***Climate on Campus for African Americans***Mentor: Deborah Field****Ribbon: Caring for Humanity and the World**

This study closely follows the framework of the work of Idali Feliciano, who conducted a survey on the academic/social/emotional needs of African Americans students at another comparable institution. There will be minor changes done to make this same framework pertain to Adrian College and its African American student body. Based off of my findings, I will conclude that the institution is making the right efforts in accommodating African American students at Adrian College. If my findings show otherwise, I will come up with efficient ways of combating the issues that may be brought up from the study.

**Session 23**

Valade 107

3:30-3:50

**Danyelle Greene***A Comparison in Film: Directed by Black Men and Women***Mentor: Stephen Shehan****Ribbon: Thinking Critically**

The purpose of this research is to identify differences in films created by African American men and women. In this research project, two mainstream Black motion pictures are examined: "Love and Basketball," directed by an African American woman, and "Brown Sugar," directed by an African American man. The analysis of these films involves an examination of the characters used in the films, specifically the female characters and their relationship to the other characters within the narrative. It is also based on shot compositions, camera movements, angles and types of shots. Differences in these basic elements create variances in the overall presentation of the films. In general, films directed by African American females have a strong underlying feminist message supported through the use of point-of-view (POV) shots, giving the audience a specific perspective into the cognition of the female mind. Shots from the perspective of the female lead comprise 70 percent of the POV shots in "Love and Basketball," while these shots comprise 41 percent of the POV shots in "Brown Sugar." The higher number of POV shots demonstrate a more in-depth look into the female character's psychological reasoning and provide a more subjective understanding of the character.

**Session 24**

Downs Hall

2:30-2:50

**Kellie Fisher***Evolution of A Relationship***Mentor: Annissa Morgensen-Lindsay****Ribbon: Crossing Boundaries and Disciplines**

Through this presentation, Kellie shows how musical theatre crosses boundaries and disciplines. Since a musical theatre recital showcases potential audition material, she uses her business class strategies to sell herself to potential producers. Through marketing techniques, she focused on her competencies, strengths and capabilities, making her weaknesses seem miniscule in comparison to her strengths, as well as selling herself in ninety seconds. Kellie Fisher's senior recital focuses on telling the story of a relationship as it evolves through the eyes of the woman. This is presented through music, theatre and dance, featuring songs from the 1920s to today. She will perform songs from her recital including, "Even Though" from I Love You Because, "Ev'rything I've Got" from By Jupiter, and "Waiting for Life" from Once on This Island.

3:30-3:50

**Jaelinn Soeltner & Lauren Penfold***Matt and Ben: A Showcase Performance***Mentor: Annissa Morgensen-Lindsay****Ribbon: Learning Throughout a Lifetime**

Soeltner and Penfold use the two character play "Matt and Ben," by Mindy Kaling and Brenda Withers, as an outlet to combine their creativity and knowledge of theatrical elements gained throughout their time spent in the Adrian College Theatre Department. The two co-directed and performed the show March 14, 2013. The performance integrated the research and preparation from the previous semester. Soeltner and Penfold examined the inner workings of the play through research of references within the text, complex character analyses, combat work and accent preparation. A production plan was developed involving set, costumes, lighting and sound. The challenges that Soeltner and Penfold faced throughout this project encapsulated the principles of "Learning Throughout a Lifetime." Through this project, the two learned the importance of mastering collaboration, research techniques, and leadership skills, as well as growing as well-rounded performers. Soeltner and Penfold each developed a contact database for future references and possible collaboration. "Matt and Ben" required Soeltner and Penfold to plan and attack challenges strategically and creatively through the use of gathered resources and, at times, trial and error. Learning throughout a lifetime is essential for successful professional and personal growth. Soeltner and Penfold's experiences in the Adrian College Theatre Department have encouraged a hunger for continuation of lifelong education and development of one's craft. Soeltner and Penfold intend to present an excerpt from "Matt and Ben," as well as presenting some of the production plan.

### Session 25

Chapel

4:00-4:50

**AX**

### *Induction Ceremony*

Alpha Chi is a national honor society that accepts only the top 10 percent of juniors, seniors and graduate students in all academic fields. Alpha Chi was founded in 1922 with the purpose of honoring academic excellence and exemplary character in college and university students. In addition to being an elite honors society, Alpha Chi also offers the opportunity for students to present annually at a national convention and awards \$60,000 a year in 26 scholarships and fellowships to individual members enrolled in full-time study.

Alpha Chi's name is derived from the initial letters of the Greek words *alethia*, meaning truth, and *xapakthp*, meaning character. The official shield bears a lamp of learning and the initials AX in raised letters. In the induction ceremony today, you will see these two virtues are symbolized in the Society's official colors – sapphire blue, depicting truth and emerald green, victory. Knowledge, the basis of truth and character, is symbolized by gold and candlelight. The motto of Alpha Chi is, "You shall know the truth, and the truth shall make you free." John 8:32.

Since its inception in 1922, over 400,000 members have joined this society nationally. The Michigan Alpha chapter here at Adrian College is the oldest chapter in Michigan, established in 1964. This year, we are celebrating our 50<sup>th</sup> Anniversary. Those being inducted today will join over 500 current and alumni members in the Michigan Alpha chapter of Alpha Chi.

Please join us in celebrating the accomplishments of these students as they are welcomed into this prestigious national honor society.





**Session 26**

South Caine Entrance

10:30-10:50

**Carly Tyson***The Art of Senior Exhibition of Intaglio***Mentor: Catherine Royer****Ribbon: Developing Creativity**

I will be using my senior year exhibition to push my work to a more resolved and mature product. My show will consist of one large self-portrait. The twist on this portrait is that it will consist of small ripped pieces of my intaglio prints. These prints are black and white and have the same self-portrait on them that the whole piece will comprise. The viewer will be able to tell that the whole portrait is made of smaller versions when up close, but from a distance the viewer may not be aware it is created from small self-portrait prints backed by fabric hanging on the wall. Since my exhibit will be very unique, I want the viewers to be strongly affected. I strive for the understanding of small pieces of art being brought together to make a larger statement of art. How a person reacts to small situations can shape how they handle more impactful situations. I am using repeated small images of myself to represent my experiences, good and bad, on many days.

**Session 27**

Stanton Administration Building

10:30-10:50

**Abby Doebel***An Artists Homage***Mentor: Pi Benio****Ribbon: Developing Creativity**

Abby Doebel's ceramic work pays homage to the simplicity in life and to the effortless interaction occurring not only in nature but between humans as well. She uses carvings and intricate surface designs, along with natural and elemental forms, to convey the chaos or calamity that can occur in the natural world within animal species and amongst us all. She sees these interactions as constantly evolving and affecting one another and uses their delicate balance as inspiration in her work. Her works vary from plate forms and boxes to sculpture. The contrasts in her work pushes viewers to evaluate both the form and design as separate interactions rather than one, which can result in a representation of people who don't live with the environment but merely inhabit it. Her work's purpose is to further play on the thin, yet critical, line of decisions we make daily regarding our future, the future of our planet and the resultant coalition of competing desires.

**Session 28**

Stanton Administration Building

10:30-10:50

**Josalyn Updegraff**  
*our bodies betray us***Mentor: Pi Benio****Ribbon: Developing Creativity**

Through a series of oil paintings the artist represents self-acceptance and the emotions inherent in body language. Ms. Updegraff does life-size nude fragmentation of the female body, feeling that it fits in the metaphoric way, that our words are often fragmented from what our bodies' true feelings are. Often, emotional body language is not something we can control; even when we say one thing, our bodies betray us. Different sized canvases will be arranged together to create life size nude forms from different poses. Nudity is used simply to show the simplest form of the figure without sexualization or objectification. The focal wall will be set up so that viewers have to walk around to see the complete painting, with the back view of a person on one side and the front view of the same person on the other side, a two-dimensional attempt at three-dimensionality.

**Session 29**

Valade Gallery

10:30 – 10:50

**Deanna Guetschow**  
*The Story Imagined***Mentor: Catherine Royer & Pi Benio****Ribbon: Developing Creativity**

Twelve to fifteen 15x10 inch acrylic paintings of friends, relatives and acquaintances will be installed around my space in the Valade Gallery as part of my senior exhibition. They will be hung at eye level and the room will have books scattered around to create an environment for reading and stories. I aim to inspire imagination in my viewers by painting portraits that hint at having a story behind it and to create a sense of whimsy through the short, loose brushstrokes I used to create the painting. The backgrounds will have an abstracted background to contribute to the emotion of the painting without leading the viewer's story in any particular direction. The viewers will be encouraged to think about each painting and what is happening to the person in that moment that was captured. One is a fireman. Is he resting after a fire? Is he mourning a lost patient? Is he gathering his strength before running into the fire? Another is a little boy, looking sorrowfully into the distance. Is he watching his father leave? Is he hoping for a better future? Each image has a story, but it's up to the viewer to decide what it is.

**Session 30**

Valade Gallery

10:30-10:50

**Ainsley Herrick**  
*Scripture and Symbol***Mentor: Pi Benio****Ribbon: Crossing Boundaries and Disciplines**

Ainsley Herrick's show is an examination of her own beliefs and a chance for others to consider religion in a way they haven't before. It addresses the similarities between religions throughout history and examines her belief that because God created the world, people throughout history have had a sense that there is some greater being out there. Unable to fully identify who He is because they lost touch with Him, they created their own religions to explain the world. This is why she believes religions are so similar. To demonstrate this, Ainsley has chosen the flood myth, which is nearly universal across cultures. This show depicts one story from each of the six populated continents. Each will be represented in a ceramic sculpture of a figure from that story and glazed to appear like art from that culture.

**Session 31**

South Caine Entrance

11:00-11:20

**Sydney Simpson**  
*The Abstract Journey***Mentor: Catherine Royer & Pi Benio****Ribbon: Developing Creativity**

Sydney Simpson's show will be an exploration of an abstract journey. Her art is about creating different conversations – conversations that deal with origin, extraterrestrial matter and general observations about how large our galaxy is. Through art, she wants to challenge people to open their minds and explore their thoughts. Sydney is inspired by subconscious ideas and thoughts. The idea that nothing will last forever is not only an inspiration in her work, but a daily reminder of how she lives her life. This exploration is important to her as an artist because it is the one thing she knows and understand; if Sydney can somehow find out who she is and her purpose here on Earth through my artwork, she has succeeded.

11:30-11:50

**Meredith Maniscalco**  
*Senior Exhibition: Fight or Flight***Mentor: Pi Benio****Ribbon: Developing Creativity**

Meredith Maniscalco's body of work represents the process of life, death and how humans are remembered after life. A ceramic artist, Meredith uses birds to represent a personal interpretation of the human spirit. Inspired by the loss of her brother, these works are the depiction of his ever-living spirit that remained on earth after his passing. Each body of work depicts a different interpretation of death; some pieces are uplifting, while others depict the morbidity of death and all that is left behind. In her presentation, Meredith will discuss and reveal her process and artwork of her senior exhibition.

**Session 32**

Stanton Administration Building

11:00-11:20

**Candice Sires***Photography: Creating and Disguising Identity***Mentor: Garin Horner****Ribbon: Developing Creativity**

In today's society, online or internet identity has become very significant to a person's social life, networking and job searching, as well as interviewing and online screening processes. It is has also become key to company and product identities. This exhibit will support a discussion of photography's role in creating online identities, including the many aspects of truths and mistruths embedded in photographic images.

11:30-11:50

**Christina Butler***The Art of Beauty***Mentor: Garin Horner & Pi Benio****Ribbon: Developing Creativity**

In an interesting hybrid of photography and graphic design, Christina Butler uses extreme makeup to reference glamour photography. The use of special effects within Photoshop incorporates graphic design as a significant part of the compositions. The overall idea behind the art is that it incorporates the ideas about perceived image, such as body image, presentation of one's self and personality, how society sees women and men, judgment in social stereotypes and the use of Photoshop manipulation. The art will be presented in large format, 16"x 20", to confront the viewer with something as large as or larger than life. The photos will just be encased behind a layer of Plexiglas, what is called a "floating frame." The forms will be glamorous and influenced heavily by famous magazines and advertising to confront the idea of presentation, beauty and judgment within our society today.

**Session 33**

Stanton Administration Building

11:00-11:20

**Ashley Kemerer***Growth***Mentor: Pi Benio****Ribbon: Developing Creativity**

I view flowers as a way of interpreting our lives as humans. If we look at the life cycle of a human and then at the life cycle of a flower, we can see the same basic characteristics: birth, growth, maturity and eventually death. I use porcelain clay to form large, wheel-thrown vessels that are either vase shaped sculptures or free-formed objects. These vessels and sculptures are all encrusted in handmade flowers that protrude outward, at the same time, negatives are carved throughout the piece to create illusions of depth. There is a message that not only comes from the pieces themselves, but also from the glazes that I use. Every piece is glazed in white, black or bronze leading to conclusions about life, death and morality.

11:30-11:50

**Taylor Bannister***The Thought Less Traveled***Mentor: Pi Benio****Ribbon: Developing Creativity**

With the contrast of black and white, one can create an incredibly strong feeling. I want to explore the idea of a mystery, the viewer questioning what the work is supposed to mean. I want the viewer to be emotionally affected, to feel that there is something they've been missing. All humans are created the same, but there are still so many unknowns. My project involves black and white nude images compiled in an abstract manner. The photos are going to have strong contrast and create their own narratives. The bodies will create landscapes and be shaped in ways that people will question what they are looking at. The human body is all around us, yet there is so much that is unseen.

**Session 34**

Valade Gallery

11:00-11:20

**Anna Kokmeyer***All is fair....***Mentor: Pi Benio & Garin Horner****Ribbon: Caring for Humanity and the World**

Anna Kokmeyer's show will be held in the Valade Gallery, and will be a representation of how war affects innocent children. The works explore the idea that humans are capable of doing unspeakable acts of violence towards each other as a means to an end. In war, it seems that atrocities – such as training child soldiers, and having a total disregard for the civilians' lives – are a form of "justified" evil. What lengths will humans go to in order to ensure victory, even if it costs children their lives in the process?

Photography will be the medium of choice, using both black and white and color photography. The photographs will center around aspects of child soldiers, child refugees, and children caught in the crossfire. The color saturation will be dark, representing the subject matter as a way of invoking an emotional response.

**Session 35**

Valade Gallery

10:30-10:50

**Alex Thompson***"There's a Certain Type of Energy in a Smile"***Mentor: Pi Benio****Ribbon: Developing Creativity**

Through the use of small-scale stone sculptures, Alex Thompson's show attempts to represent the constructs of hope. Optimism is an often-neglected trait in most social media, overlooked for negativity or doubt. These sculptures were crafted in stone in order to serve as challenges to the viewer – optimism can be hard to maintain in the face of distress. Abstraction is necessary for these pieces. Mr. Thompson's forms are meant to represent themes he feels are vessels or challenges to the notion of hope. As a result, imagery related to the subject is selected carefully and has deep significance behind its selection. This imagery is then broken down into very basic concepts and usually represented through an element – wind, fire, earth or water. When broken down to its very basic components, the viewer becomes aware of what makes up the object and reveals hope.



**Poster Session****5:00 –6:00****Adrian Tobias Room****James Crum***The Rational Emotive and Cognitive Behavior Therapy Diathesis-Stress Model of Anxiety: Effects of Priming Dialectic Rational Beliefs***Mentor: Stacey Todaro****Ribbon: Caring for Humanity and the World**

The present study attempted to extract empirical evidence for the idea that irrational beliefs are etiopathogenic mechanisms and investigated the effects of priming dialectic rational beliefs on irrational beliefs and state anxiety during experiences that varied in level of activation. Another aim of this study was to examine whether or not dysfunctional distress can be attributed to the mediating functions of specific secondary irrational cognitive processes and to overcome the methodological limitations of preceding research. Participants completed pre- and post-test measures, including the General Attitude and Belief Scale (GABS) and the State Trait Anxiety Inventory (STAI). Immediately following, participants were randomly assigned to either the prime or no prime condition. They also completed a speech task; some participants were randomly assigned to fail or not fail the task. Scores on the GABS and STAI will be analyzed using a 2 (Time: pre vs. post) X 2 (Prime: present vs. absent) X 2 (Activation: high vs. low) mixed-factorial ANOVA. Results are pending. The rationale behind this study is mostly in accordance with caring for humanity and the world, as it aims to identify some of the causal factors in the development of emotional distress and pathology.

**Hillary Waldron***Stage Management Personifies the Ribbons of Excellence***Mentor: Annissa Morgensen-Lindsay****Ribbon: Caring for Humanity and the World**

Imagine seeing a show, the lights come up and the play begins, all with one call from someone that the audience won't see unless they look up in the box: the stage manager. The job of a stage manager makes effective use of all of the Ribbons of Excellence, but there is one ribbon that fits better than the rest. They care for humanity and the world by being a positive person to be around for the cast, crew and production team of the show. The stage manager also makes sure that the show is something that their audience can enjoy and be drawn into. They do this by ensuring rehearsals are on time, having a positive attitude when working with others, ensuring that all aspects of the play, technical and human, are ready and working well together, and the technical direction is accurate to the production. In this presentation, Waldron details how the process of being an effective stage manager also lies in caring for humanity and the world, with examples of her process outlined in paperwork, and written communication displayed in a poster project.

**Poster Session****5:00 –6:00****Adrian Tobias Room****Michael Micallef & Jake Burt*****Influence of Agricultural Practices on Water Quality in the River Raisin Watershed*****Mentor: Sarah Hanson****Ribbon: Caring for Humanity and the World**

Water quality of the River Raisin may be affected by agricultural practices and Concentrated Animal Feeding Operations (CAFO's). Grazing animals and farming can negatively affect local water systems because of erosion and run off, through transportation of urine and fecal matter and fertilization practices used to grow local crops. The compounds of concern are nitrates and phosphates, which, when present in high levels, can be harmful to aquatic systems. Water samples will be collected weekly from the south branch of the River Raisin, located in Raisin Township, and Black Creek, located in a sub-basin in Ogden Township. These samples will be taken from both upstream and downstream of large agricultural areas. Each sample will be analyzed for phosphates, nitrates and pH levels in order to determine if the levels of these compounds are in the acceptable range for streams. These data will be used to assess whether or not phosphates and nitrates from local agricultural areas are entering the watershed in sufficient quantities to impact the environment and have a significant negative impact on the health of the stream. This is critical to evaluating the impact of agricultural practices to wildlife that play a key role in the environment.

**Holly Mykolaitis & Alexandria Maxson*****Tubulin Expression in *Xenopus laevis* Development*****Mentor: Marti Morales-Ensign****Ribbon: Learning Throughout a Lifetime**

Our work is based on illustrating the formation of key anatomical inner ear constituents in *Xenopus laevis* (the African clawed frog) development. Morphological data was collected from the inner ear of X.l. using immunohistochemical techniques with immunofluorescence and an acetylated-alpha-tubulin antibody. The acetylated-alpha-tubulin used in this research positively labels and detects the target protein, tubulin, a key protein found in the neuron processes, the cell bodies, and kinoclia of inner ear cells in X.l. Our work here will show the current and past efforts on applying immunohistochemical techniques and microscopy using the tubulin antibody to denote the anatomical formation of inner ear development. In all, such results have relevance for ongoing biomedical research that aims to identify disorders of hearing and balance (e.g., issues in mechanosensory inner hair cell dysfunctions, issues in neuronal connections, and other such developmental and functional inner ear issues).

**Poster Session****5:00 –6:00**

Adrian Tobias Room

**Caitlyn Cookenmaster***Separation of Cations for Waste Reduction***Mentor: Michael Claus****Ribbon: Thinking Critically**

Every year, the students in the CHEM 117, Introductory Chemistry Laboratory, at Adrian College perform a laboratory experiment that tests the rules of solubility by combining solutions dissolved ions. They record their observations regarding anion and cation displacement and dispose of their experimental materials in waste containers. This creates a large volume of liquid containing the metal ions, some of which are toxic or hazardous (lead, cobalt, chromium, etc.), anions and little solid waste. Liquid waste is expensive to dispose of, so it is ideal to treat the waste, reducing the liquid volume and isolating hazardous ions as solids. The purpose of this research was to develop a method to precipitate as many heavy metal cations as possible out of the liquid waste allowing for easier and less expensive disposal of the waste generated in the experiment. By utilizing a qualitative analysis scheme, different reagents were used to form the appropriate precipitates of heavy metal ions. These were separated from the liquid to be disposed of professionally, allowing the remaining material to be discarded efficiently and inexpensively.

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Influence of Agricultural Practices on Water Quality in the River Raisin Watershed	Micallef, M., Burt, J	P	37	5:00-6:00
Tubulin Expression in <i>Xenopus laevis</i> Development	Mykolaitis, H., Maxson, A	P	37	5:00-6:00
Separation of Cations for Waste Reduction	Cookmaster, Caitlyn	P	38	5:00-6:00