Ninth Annual
Undergraduate Research
Symposium

April 17, 2014
3:30-5:00 p.m.
Health and Physical Fitness Center
Ninth Annual
Undergraduate Research Symposium

Agenda

3:30-4:00  Welcoming Remarks
Dr. Natalie A. van Breukelen
Chair, Undergraduate Research Committee

Greetings
President Tom Foley

Remarks on Research
Dr. Timothy Fulop
Vice President of Academic Affairs/Dean of Faculty

4:00-5:00  Poster Session
Refreshments
Announcements of Door Prizes

5:00    Closing Remarks
Dr. Natalie A. van Breukelen
The more you find out about the world, the more opportunities there are to laugh at it.” — Bill Nye, “The Science Guy”

Undergraduate research at Mount Aloysius College is a systematic outcomes-based integration of practices designed to develop critical reading, information literacy, research, and writing skills. The Undergraduate Research Symposium is organized by the Undergraduate Research Committee, which facilitates research experiences for students in all academic disciplines. The Committee accepts applications for grants to support research, and encourages research both within a course and through independent learning. Committee members for the 2013-2014 academic year include:

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<th>Name and Department</th>
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<tr>
<td>Dr. Natalie van Breukelen, Chair</td>
<td><a href="mailto:nvanbreukelen@mtaloy.edu">nvanbreukelen@mtaloy.edu</a></td>
<td>814-886-6534</td>
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<tr>
<td>Science &amp; Mathematics</td>
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<tr>
<td>Ms. Nicole Custer, Co-Chair</td>
<td><a href="mailto:ncuster@mtaloy.edu">ncuster@mtaloy.edu</a></td>
<td>814-886-6455</td>
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<td>Nursing</td>
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<tr>
<td>Dr. Merrilee Anderson</td>
<td><a href="mailto:manderson@mtaloy.edu">manderson@mtaloy.edu</a></td>
<td>814-886-6501</td>
</tr>
<tr>
<td>Science &amp; Mathematics</td>
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<tr>
<td>Ms. Margaret Bafile</td>
<td><a href="mailto:mbafile@mtaloy.edu">mbafile@mtaloy.edu</a></td>
<td>814-886-6431</td>
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<td>Medical Imaging</td>
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<tr>
<td>Mr. Robert Stere</td>
<td><a href="mailto:rstere@mtaloy.edu">rstere@mtaloy.edu</a></td>
<td>814-886-6450</td>
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<tr>
<td>Ms. Misti Smith</td>
<td><a href="mailto:msmith@mtaloy.edu">msmith@mtaloy.edu</a></td>
<td>814-886-6471</td>
</tr>
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<tr>
<td>Ms. Kim Garman</td>
<td><a href="mailto:kgarman@mtaloy.edu">kgarman@mtaloy.edu</a></td>
<td>814-886-6387</td>
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<tr>
<td>Ms. Megan Beaver</td>
<td><a href="mailto:mbeaver@mtaloy.edu">mbeaver@mtaloy.edu</a></td>
<td>814-886-6433</td>
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<td>Medical Imaging</td>
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<tr>
<td>Dr. Paula Scaramuzzino</td>
<td><a href="mailto:pscaramuzzino@mtaloy.edu">pscaramuzzino@mtaloy.edu</a></td>
<td>814-886-6553</td>
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<td>Medical Imaging</td>
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<tr>
<td>Dr. Laura Lansing</td>
<td><a href="mailto:llansing@mtaloy.edu">llansing@mtaloy.edu</a></td>
<td>814-886-6435</td>
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Students interested in becoming involved in research may contact any of the committee members or visit: http://www.mtaloy.edu/learning-programs/undergraduate-research/
There are nine categories for undergraduate research, representing subject matters encompassing the various majors of the College. The Creative category includes research that is presented using a “non-traditional” format including (but not limited to) film, video, sculpture, photography, and other media.

- Sciences
- Psychology
- Nursing
- Health Studies
- Education, ASL/English Interpretation
- Business/Innovation/Marketing/IT
- History/Political Science/Criminology/Legal Studies
- Religious Studies
- Creative and Fine Arts

Please Note:
All entries are listed by poster number.
Mentors are indicated in italics.
All abstracts are printed as submitted
1 **Fungus Infections**  
Jacob Roberts  
*Dr. Merrilee Anderson*  
*Sciences*

The purpose of this study is to explore the different types of fungus infections that are apparent, and the manner in which they are transmitted. The aspects include several distinct fungal infections (athletes foot, yeast infection, etc.) and the manner in which they are transmitted to the host. The causes, signs and symptoms, severity of the infection, and other aspects, will be explored as well as the most ideal method of treating such infections. Other information includes an overview of the natural habitat of each fungus, and their favorable conditions for survival. The intense research into the common fungal infections encountered has paved the way for great gains in the field of mycology. Fungi live in air, soil, on plants, and even in water. Some live in our own body. Only about half of all types of fungi are harmful. Those will be the main focus of address in this research study.

References:  
1. Dooley, E. E. Doctor fungus. Environmental Health Perspectives, 115(6), 1. (June, 2007)  

2 **Impact of Abandoned Mine Drainage on Populations of Diatoms in a Pennsylvania Stream**  
Chris Arena  
*Dr. Merrilee Anderson, Dr. J. Michael Engle*  
*Sciences*

Life in a healthy stream can be severely impacted by changes in pH. Our collection reveals the differences in diatom diversity from the effects of AMD on a healthy stream. Samples were collected from four areas near one AMD discharge. The first site is from a healthy stream, 40 m upstream of the AMD discharge with a pH of 6.9. The second site is at the Hughes Borehole, 5 m below the source of AMD discharge with a pH of 3.4. The third site is a naturally formed settling pond, 50 m below the discharge, where the flow of polluted water slows and has a pH of 2.7. The fourth site is 600 m below the AMD discharge where the healthy and low pH waters mix of pH of 5.3. In this poster we depict and identify diatoms from each of the four areas.
3 Personality and Perception of Relative Authority
J. Judi Craig; Erin Healy; Lindsay Sill; Denice Stoyanoff
Dr. Virginia Gonsman
Psychology

The Blair County Forensic Peer Support Project is designed to help high risk inmates with substance abuse disorder and co-occurring mental illness. The goal of the project is to assist these high risk inmates with community reentry by pairing them with a Peer Counselor, who has a history of incarceration, mental illness, and substance abuse. This study, conducted at a small, private school in Pennsylvania, seeks to assist in research for the Peer Support Program by examining a possible relationship between individuals’ personality types as per a five factor model inventory and the perception of the peer counselors in this program as authority, subordinate, or equal to the program participants.

4 Perceptions of Those Convicted of Drug Abuse Versus Rape
Johanna Conrad, Brian Hesley, Kelcie Heverly, and Logan Holbay
Dr. Virginia Gonsman
Psychology

The Blair County Peer Support Program is an association that helps prisoners readjust to society and start over after prison using support “peers.” In this study, we will use Likert Survey methodology. This survey will be conducted at a local college with students in various classes to determine if commuters or resident students are more accepting of someone who has been convicted of selling/abusing drugs or convicted of rape. We will be looking for the potential rank of student participants and criminal background.

5 The Relationship Between Empathy Levels and Cohabitation
Logan Bodenschatz, Tammi Collier, Emily Steberger, and Danielle Winkleman
Dr. Virginia Gonsman
Psychology

The Forensic Peer Support Pilot Program utilizes peer mentors for individuals who have been incarcerated, suffer from a mental illness, and have co-occurring substance abuse disorders. These mentors help individuals by using their past experience with the same characteristics to facilitate the individual’s reintegration to community living. A possible key factor to decrease the likelihood of recidivism is stable housing. We are investigating the possible relationship between empathy and the likelihood to cohabitate with individuals with these background characteristics.

6 The Potential Role of Biological Sex Differences in the Perception of People with Psychopathy
Ali O’Barto, Briana Cunningham, Kendi Seidel
Dr. Virginia Gonsman
Psychology

The purpose of this study is to determine if biological sex differences are related to perceptions of people suffering from psychopathy. A survey will be given to individuals of both sample groups to determine if there is a risk of stereotyping or fear potential. We will have participants from a small catholic college complete a survey to determine if they would be comfortable interacting with individuals with psychopathy at various locations. Also we will survey whether men and women differ on issues such as working with, socializing with, or having a relationship with individuals with psychopathy.
Atittudes of College Students Towards Police Officers  
Chelsea Esken, Courtney Walter, Katrina Sibis, Scott A. Shay  
Dr. Virginia Gonsman  
Psychology

We will examine the relationship between poor attitudes towards authority figures and the delinquency of college students. Participants will complete a survey measuring crime rates and campus citations given to college students from police or campus security officers for delinquent behavior defined by statutes or campus handbooks. We will measure each student by gender, major, age, and various criminal behavior ranging from alcohol related incidents to simple campus citations. Results should indicate a high correlation of negative attitudes towards authority, police and security and delinquent behavior.

Variance in Hiring Discrimination for Inmates with a Mental Illness Versus Substance Use Disorder  
Cassandra Lieb, Brittany Mazur, John Pisarcik, Laura Stahli, Ryan Sweet  
Dr. Virginia Gonsman  
Psychology

The purpose of this research is to show the variation of hiring discrimination between inmates who have a history of a substance use disorder and inmates who have been diagnosed with a mental disorder. The purpose of these findings will help indicate if there is a preference for hiring one group over the other. Students enrolled in a small, private, Catholic college will be selected for the sample study. The data collection process will be presented in a survey format that will be given to the group. We expect to find that those diagnosed with a mental disorder will have a higher hiring rate than those with a history of

Peer Versus Professional Tutoring: Perceived Benefits Study  
Brandie Mott, Megan Ruddock, Taylor Clark, Crystal Miller  
Dr. Virginia Gonsman  
Psychology

We are interested in determining whether peer or professional tutoring is perceived to be more beneficial for students seeking academic assistance. The research team will be surveying students from the Mount Aloysius College student body to determine which type of tutoring, peer or professional, students feel is more beneficial to academic success. The researchers expect to find evidence that peer tutoring is perceived to be the more beneficial of the two tutoring types.

Self-Reported Locus of Control and Acceptance of the Support Program  
Nicole Binnie, Bethany Bookheimer, Alice Wittmer  
Dr. Virginia Gonsman  
Psychology

The purpose of the current research is to investigate a potential link between locus of control and acceptance of the Blair County Forensic Peer Support Pilot Project Proposal as a whole, although we believe that internal locus of control will influence increased acceptance. The researchers hypothesize that participants who have a higher internal locus of control will be more accepting of the Blair County Forensic Peer Support Pilot Project Proposal. The participants of the study are undergraduate students and will be given Rotter’s Locus of Control Scale to measure their perceived locus of control. Previous research suggests that there is no relationship between locus of control and acceptance. Because of this, the researchers anticipate finding no relationship in the current study.
11  **Use of Aerial Diffusion Aromatherapy as an Intervention to Reduce the Prevalence of “White Coat Syndrome”**
Sharon Blter  
*Dr. Bonnie S. Noll-Nelson*  
*Nursing*

Many physicians refer to white coat syndrome as the reason for an increase in blood pressure and pulse while taken in the doctor’s office. The providers have recognized this and contribute it to an automatic response from the sympathetic nervous system, possibly from an experience in the past or from the anxiety of an unknown diagnosis, while a patient waits to be seen by the provider. The importance of an accurate blood pressure reading warrants the research into methods to decrease the prevalence of the condition called “white coat syndrome.” This syndrome can occur in all health care settings, including the acute, chronic, or long term care settings. There is strong evidence in the literature supporting the effectiveness of aromatherapy to decrease anxiety and promote relaxation. This is an inexpensive, safe, and nonpharmalogical method to help promote relaxation and decrease the activation of the sympathetic

12  **Medicinal Marijuana Use in Cancer Pain Management**
Laura O'Farrell, BSN, RN  
Wendi Nagle, MSN, RN  
*Nursing*

Cancer pain is a difficult condition to manage for both the nurse and other practitioners. Cancer pain is often inadequately managed with available opiates. In line with this, it is imperative to explore alternative medications that may deal with the problem at an adequate level. Medicinal marijuana presents with one such option. Nonetheless, the use of the substance for therapeutic options has been with a lot of controversy. This pertains to the known adverse effects, dependence and social stigma. From the literature reviewed, medicinal marijuana is effective in managing pain in cancer patients. In addition, the use of the substance has been shown to be safe, with insignificant adverse effects reported. These side effects can be avoided by proper titration of dose. Additionally, agents targeting CB2 receptors should be explored, since they have fewer side effects. This may serve to eliminate some of the politics behind the licensing of the drug. The positive effects of cannabis should push the use of the agent in the field of oncology. It is imperative to note that the agent also has other beneficial effects apart from pain reduction. Medicinal marijuana effectively combats nausea and vomiting associated with chemo-therapeutics. Additionally, the drug has been shown to increase survival. Overall, the desire of every healthcare provider is to find an option that improves the patient’s quality of life, and alleviates suffering. Medicinal Marijuana is an option, it is essential to research it fully and scientifically address all the benefits / controversies revolving around
When an occupation results in the employee being exposed to radiation inevitably, it is imperative for there to be safety precautions and procedures in place. Employees working in nuclear power plants may be exposed to radiation during their work day. Depending on how much that employee was exposed can lead to increased tissue damage. Severe radiation damage can cause problems such as thyroid cancer, chronic eosinophilic leukemia, cataracts, and cardiovascular disease. These all can be prevented however, through the use of proper safety protocols and protection. These safety measures implemented by organizations such as the Department of Energy, the Nuclear Regulatory Committee, and the Occupational Safety and Health Administration, make working in nuclear power plants a safe occupation.

Diffusion weighted imaging is one of the many scans performed during magnetic resonance imaging (MRI) on scanners of at least 1.5 Tesla. It works by using gradient pulse sequences to image the body’s molecules that spread out during the length of this sequence. The apparent diffusion coefficient (ADC) presents a map of the displacement of water molecules that spread out during the given scan time. Artefacts, which decrease image quality, are typically caused by patient motion during the acquisition. Although a sensitive sequence for MRI, diffusion weighted imaging is very beneficial in assessing patients who present symptoms of brain infarction. The different shades of gray can determine if the infarction is old or new. Newer studies are using diffusion weighted imaging in musculoskeletal imaging to assess malignant bone marrow and bone demineralization leading to osteoporosis.

Radiation therapy is a well-known treatment for patients struggling with cancer. What has not been addressed as frequently as the positives of radiation therapy is the negatives that can also be associated with this treatment. Radiation therapy can have many negative side effects that are associated with the curing the body of cancer. The question is can radiation therapy be more of a threat than a cure to the patient? Radiation therapy has its benefits and its risks; the decision is whether the benefits outweigh the risks.
This research looks into a specialized area of radiology known as magnetic resonance spectroscopy (MRS). MRI uses powerful magnets and radio waves to record images of internal structures of the body. MRS provides the operator a line graph instead of images to give information about the chemical composition of tissues in an area of the body. General spectroscopy involves measuring emitted light energy from an object and recording it to describe the material. This concept is the basis of MRS except the information is used to diagnose a patient. The research also explores details on ways MRS works with tissue composition of atoms and magnetic energy waves. Once the spectroscopy scan in the MRI machine is completed, certain compounds are represented by the values on the graph produced. This research concludes with the purpose and use of MRS in modern medicine as well as looking into the future of spectroscopy.

Although MRI was one of the last modalities to be brought about to the world of medical imaging; developing roughly thirty years ago, there still have been many advances in MRI. One of the major technological advances for MRI has been the invention of Functional MRI, used to image the brain during activity, stimulus, and rest. Functional MRI can be used to better understand how healthy the brain works, and how a normal, diseased, or injured brain works. You can use other imaging modalities for the purpose of showing structures of the brain, but other imaging modalities do not show which part of the brain functions during particular tasks. Functional MRI is now one of the most recently developed forms of neuroimaging and has come to dominate the brain mapping field due to not being an invasive procedure, having no radiation, and having a wide range of availability.

Since the start of Magnetic Resonance Imaging, MRI, in the 1970's a more sophisticated means of the department emerged in the 1980's. Magnetic Resonance Angiography, commonly abbreviated MRA, is evolving rapidly in the medical imaging field. Magnetic Resonance Angiography has been compared to computed tomography angiography and came out as the better modality out of the two with use of its different imaging techniques. MRA is a non invasive, critical, and important imaging tool for assessing the extra cranial and intracranial vessel system. During MRA, there are unique sequences that are used: they are time of flight, phase contrast, and contrast enhanced MRA. In magnetic resonance angiography (MRA), a powerful magnetic field, radio waves, and a computer produce the detailed images. MR angiography also does not use ionizing radiation. MRA is also widely used today for numerous exams such as coronary artery disease, intracranial aneurysms, renal artery stenosis, and forensic radiology.
**MR Microscopy**  
Jenna Zetler  
*Dr. Paula Scaramozzino*  
*Health Studies*

Magnetic Resonance Microscopy (MRM) is Magnetic Resonance Imaging (MRI) at the microscopic level. These microscopy images show very small structures in great detail. While MRM and MRI are very similar, they have a few differences such as specimen size, resolution of the image, and strength of the magnet used to obtain the images. Parts of the body that can benefit by being imaged with MRM include veins, arteries, and the eye. While MRM has a few limitations, most can be overcome with the use of various technologies. Thanks to the new technologies, Magnetic Resonance Microscopy appears to have a promising future in

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**Overuse of Computed Tomography**  
Cody Smith, Tristen New, Samantha Sherry, Michelle Bradley  
*Dr. Paula Scaramozzino*  
*Health Studies*

Computed Tomography (CT) is a radiologic tool developed in the 1970’s. In 2009, it was estimated that 75 million CT scans were performed and 5-30% of those scans were medically unnecessary. Although CT has improved diagnosis's, limited unneeded medical procedures, and enhanced treatment, there are still harmful effects to CT. We examined common reasons that CT scans are performed along with how those reasons contributed to CT’s overuse. Why are doctors ordering these scans so much instead of utilizing other modalities? Also, we took a look at the risks and benefits of CT scans. One risk, due to excess amounts of radiation is an increase chance of developing skin burns, erythema, and hair loss. In proving how CT is overused and can in fact become dangerous, we took a look at dose charts to compare CT to other modalities. It was found that the radiation dose in CT is 100-500 times those of conventional radiography. Radiation safety is an important subject in the medical field, but also to the general public, who are the patients that receive these scans. It is important to educate individuals on the following matter so that they can realize what danger this can pose to them. Physicians and technologist all need to take the proper precautions to ensure that the overuse of CT stops and does not become a problem in our society anymore.

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**Forensic Radiology**  
Caitlin Roddy, Jenna Fleck, Ryan Poole  
*Ms. Amber Lenhard, MBA, BAS, RT (R)(CT)*  
*Health Studies*

Forensic radiology has become more than just an x-ray of a bullet; it the application of diagnostic imaging technology for more supportive evidence. Forensic radiology has become increasingly important in relation to forensics and the law. It is commonly used in the collection of forensic evidence and is especially useful in confirming cause of death, locating hidden foreign bodies, such as fragments of explosives and packages of illegal substance. Forensics may refer to anything from deoxyribonucleic acid (DNA) analysis, the use of an individual’s DNA to connect the to the scene of a crime; forensic anthropology, the recovery and identification of human remains; to forensic odontology, the study of teeth. Advances in forensic imaging has brought many new opportunities to the radiology world.
23 **Blood Substitutes in Transfusion Medicine**
Ben Carnahan
*Ms. Cathy Crawford, MT (ASCP)*
*Health Studies*

While not yet approved for hospital usage, the use of blood substitutes in transfusion medicine could become a reality in the near future. People have experimented with blood substitutes for centuries, with limited success. Blood substitutes are not meant to be a permanent replacement for human whole blood, but an emergency treatment to buy time until suitable blood is found. These products mimic the oxygen-carrying capabilities of erythrocytes, but cannot perform other functions of the cells. Blood substitutes have the potential to eliminate the need for time consuming cross-matching of donor and recipient blood, ultimately saving lives. There are pros and cons associated with each type, as well as human erythrocytes used for transfusion (i.e. oxygen-carrying capabilities, availability, cost, shelf life, and length of

24 **Umbilical Stem Cell Recovery and Storage: Potential Benefits, Criticisms, and Alternatives**
Eddie Benevich
*Ms. Cathy Crawford, MT (ASCP)*
*Health Studies*

Applications for stem cells continue to grow and the business of the storage of umbilical cord blood grows along with it. Stem cells are precursor cells with the ability to change into a variety of cells in the human body and they play a vital role in renewal and repair. Promising research has brought hope for sufferers of a variety of ailments. Media attention of this has benefited investors who have made it a business to collect and store umbilical cord blood. Companies boast the potential benefits and compare the efficiency between it and bone marrow derived stem cells. Criticisms of this costly storage business do exist, especially with current studies to discern whether there are advantages of cord blood over bone marrow stem cells. Additionally, there is research into deriving stem cells elsewhere, such as from a drop of blood, which would mean no need to store cord blood.

25 **Blood Transfusion Reactions**
Heather Gregori
*Ms. Cathy Crawford, MT (ASCP)*
*Health Studies*

When an individual goes to have a blood transfusion the last thing they are expecting to happen is a transfusion reaction. Yet, they do happen. The most common type of transfusion reaction is a febrile reaction. This is caused by the patient’s antibodies reacting with white cell antigens in the transfused blood. Fevers also occur in platelet transfusions. Commonly these types of reactions are not serious but as with any reactions should be taken seriously. Other more serious transfusion reactions are Acute Hemolytic Reaction (AHTR), Severe allergic (anaphylactic) reaction, Transfusion associated circulatory overload (TACO). This type is the second cause of death from a transfusion. TRALI is another reaction that can mimic TACO but can be related to a lung injury. Sepsis in a platelet transfusion is a frequent risk in a transfusion. SHOT is a website out of the UK which shows percentages of blood transfusion reactions.
Breast Biopsy
Nicole Russell, Rachel Harris, Elaina Winter
Ms. Felicia Holliday M.Ed. RT (R) (CT)
Health Studies

Mammography is a form of x-ray that images the breast. If there is a suspicion of breast cancer after the mammogram is taken, a biopsy is then performed. There are many advantages to receiving a breast biopsy. The methods to receiving a breast biopsy include stereotactic, Magnetic Resonance (MR) guided, and ultrasound guided. The most important issue dealing with biopsies is patient care and ensuring that the patient remains comfortable. Each of these types of biopsies has their advantages and disadvantages including effectiveness and cost. The benefits of a breast biopsy will always outweigh the risks when it comes to diagnosing a patient with breast cancer.

CT Dose in Pediatrics
Hannah Smith, Alyssa Gallagher, Markelle Matthews
Ms. Felicia Holliday M.Ed. RT (R) (CT)
Health Studies

When using radiation and dealing with children, it is very important to pay attention to the dose a technician gives, the technique used, and proper shielding. With computed tomography (CT), the technique and dose are more involved than conventional x-rays. Children have a higher chance of receiving a long-term illness from radiation than adults, so taking the proper precautions is important. There are studies being performed to find a technique that would be appropriate for children, but there is not an actual dose that is used for children. The most important thing is to use small doses and shield. There are studies being performed to find a technique that would be appropriate for children, but there is not an actual dose that is used for children. The most important thing is to use small doses and shield.

Positron Emission Tomography
Lindsey Henry, Emily Oncay, Elizabeth Boyce, Brandi Ishman
Ms. Felicia Holliday M.Ed. RT (R) (CT)
Health Studies

Positron emission tomography (PET) is a technique used in several modalities. PET scanners create 2D or 3D images by computing the distribution of radioactivity of certain body parts by the annihilation of photons emitted from radiotracers. Combining PET with computed tomography (CT) is useful in finding lesions within the body while producing high quality images. PET with magnetic resonance imaging (MRI) allows for imaging soft tissue and understanding brain function. PET combined with the radiotracer, fluorodeoxyglucose, is essential in finding tumors, cancers and infections. Combining PET with all modalities provides better service to the patients and physicians.
29 **Cell Phone Effects**  
Julie Warner, Jordan Stahr, Ashley Eppley  
*Ms. Felicia Holliday M.Ed. RT (R) (CT)*  
*Health Studies*

Cell phones are a part of everyday life. Almost everyone in today's society has one, either for themselves or for work purposes. When looking around, most have a cell phone in their hand or attached to them somewhere. Researchers are looking at the effects on children, women, and men regarding cell phone usage and the levels of radiation that it transmits to the brain and reproductive organs. This research is important to the field of medical imaging because the radiation given off from cell phones can cause damage to the human body. In this field, the tissue absorption exposure is always a priority when it concerns the patient. The main concern in medical imaging is to keep a low absorption rate, which supports keeping the use of cell phone radiation at a minimal level. Research supports there is a potential for radiation damage to the brain and reproductive organs for cell phone use.

30 **Belimumab versus Standard Treatments**  
Nicholas Heister  
*Ms. Kathleen P. Hoyne, MS, MT (AMT)*  
*Health Studies*

Systemic Lupus Erythematosus (SLE), more commonly known as Lupus, is an autoimmune disease that produces antibodies that attack healthy human tissue. Belimumab, otherwise known as Benlysta, is a new drug that the FDA has approved for the treatment for SLE. In patients with SLE, the B-cells lymphocytes produce these antibodies that are believed to be involved in the autoimmune attack process. Belimumab blocks the action of B-cell lymphocyte stimulator (BLyS) protein, which B-cells require. By blocking BLys, Belimumab reduces the number of B-cells available to produce the antibodies that contribute to SLE disease progression. This research will compare and contrast the effectiveness of current standard treatments for SLE against the effectiveness of Belimumab.

31 **Factors Impacting the Future of Blood Transfusion Services**  
Naomi Rockwell  
*Ms. Kathleen P. Hoyne, MS, MT (AMT)*  
*Health Studies*

The main goal of blood transfusion services is to ensure and maintain a safe, efficient, and accessible blood supply for the community. Over the years the demand for blood has exponentially increased. In order to satisfy this requirement there has been ongoing research for effective and storable alternatives to the traditional donor blood supply. Artificial blood substitutes must meet stringent criteria. The solution must be able to carry oxygen throughout the body, be stable enough for prolonged storage under various conditions, be compatible with all blood types, be affordable for commercial use and be free of infectious diseases. The human body must also be able to breakdown and excrete the solution. This research will compare the benefits and risks of various artificial blood substitutes with the current health risks of using
Bloodless Surgery
Nicholas Carnabucci
Ms. Kathleen P. Hoyne, MS, MT (AMT)
Health Studies

Blood is a precious commodity that every physician must attempt to conserve. One way surgeons are reducing the use of blood products is through bloodless surgery. These techniques ensure that little donor blood is used during scheduled surgery. Physicians implement one of three procedures that help to manage the cost, scarcity, and the many risks associated with allogeneic blood transfusion. Preoperative stimulation makes use of hormones by prompting the body to make blood prior to operation. Autologous donation allows patient’s peace of mind with the knowledge that their own blood is being transfused into them. Intraoperative salvage redirects, reuses, and recycles the patient’s own whole blood during surgery to avoid using up the general blood bank supply. The focus of this research is to compare and contrast which of these three is best, and how hospitals are combining two or more to improve patient outcome and

3D and 4D Sonography
Madalyn Hubler
Ms. Sharon Miller, MS, RT (R)(MR)(CT)(M)
Health Studies

There have been incredible improvements in the sonography world especially, under three dimensional (3D) and four dimensional (4D) imaging. 3D and 4D sonography have made countless contributions toward obstetrics and gynecology, including early diagnosis and having the ability to give better treatment techniques ahead of time in order to give fetuses a better survival rate. Even though two dimensional (2D) imaging has always been able to aid in the diagnosis of many diseases, 3D and 4D give better quality images to ensure what in fact they are seeing and diagnosing. This type of imaging is called volume imaging where radiologist are able to see more of a block of tissue than only one slice of tissue. The new and upcoming technologies make it difficult for sonographers to keep up with, which is why hospitals should integrate

Non-Fetal 3D/4D Ultrasound
Stephanie Whitesel
Ms. Sharon Miller, MS, RT (R)(MR)(CT)(M)
Health Studies

3D and 4D ultrasound is mostly known for its use in fetal examinations. While it is very beneficial to use 3D and 4D ultrasound in fetal imaging, it is also extremely useful in visualizing other organs such as the heart, kidney, gallbladder, and breast. The first 3D ultrasound machine wasn’t launched until 1989. 3D imaging is a type of imaging that requires a skilled sonographer due to their steady hand and also their trained eye to process a 2D image into a 3D image. There are three ways to acquire a 3D image. 4D imaging is simply a 3D image that is in real-time. This method is relatively new to the ultrasound world and is still developing.
New Uses of Bone Densitometry
William Harris
Ms. Sharon Miller, MS, RT (R)(MR)(CT)(M)
Health Studies

Bone densitometry is one of the most overlooked modality in radiology. Most people think of dual energizing x-ray absorption (DEXA) and scanning elderly people for osteoporosis when they hear of bone densitometry. For years, there have been new uses of bone densitometry being used. The new uses were found on scholarly articles, journals, and websites that posted the studies that were used during the research. These new uses include: vertebral fracture analysis (VFA), abdominal aortic calcification (AAC), and using bone densitometry on pediatric patients. There are also benefits to using bone densitometry for these uses over standard x-ray exams and computed tomography (CT) scans. These benefits will lower radiation doses to patients and will also lower costs. With this being said, the new uses of bone densitometry will improve both the healthcare system and, more importantly, patient care.

General Sonography
Hannah Peachey
Ms. Sharon Miller, MS, RT (R)(MR)(CT)(M)
Health Studies

Sonography is a type of medical imaging that produces pictures by sending sound waves into the body. More commonly called ultrasonography or ultrasound, this field differs from other imaging modalities because all the scanning is done in real time, meaning the sonographer can visualize bodily functions while they are happening. Sonography is widely used in clinical settings as a reliable tool to diagnose various pathologies. Ultrasound is able to assess patient conditions in a relatively painless and timely approach and produce accurate results for doctors. Common exams performed are abdominal, vascular, superficial, obstetrics, gynecologic, neonatal and pediatric examinations. Within these exams, there is constant growth and improvement. New ways are being found to apply ultrasound and make its uses more practical for a wider range of diagnosis and treatment. Ultrasonography is a fascinating field of study that is continuing to grow and has become a dependable form of imaging.

Elastography with Breast Sonography
Kelsey Drennen
Ms. Sharon Miller, MS, RT (R)(MR)(CT)(M)
Health Studies

AbstractElastography with breast sonography is an imaging technique that is helping the diagnosis of breast carcinoma. This diagnostic imaging technique uses compressions against dense breast tissue to determine benign from malignant masses. Breast sonography is often used to view breast tissue to help diagnosis patients with an imaging modality besides mammography. The compression technique of elastography can be combined with general sonography to provide the most accurate images side by side. Elastography is noninvasive and provides an in depth analysis of breast tissue with the use of color to dictate the elasticity of the tissue. Breast cancer is a growing problem among women in the United States and research has allowed new methods and modality techniques to be used for the diagnoses and treatment. The use of elastography is a growing technique that is being used along with breast sonography
The CARE bill and Sonography Licensure
Nicole Dipippo
Ms. Sharon Miller, MS, RT (R)(MR)(CT)(M)
Health Studies

My poster highlights important points and valuable information on the CARE bill act and sonography licensure. It gives some brief information on that background of what the CARE bill is and when it was first presented I also give a brief definition of what the CARE bill stands for. My poster will also discuss what kind of education will be needed if the bill is implemented. In my research I found valuable information on licensure and who the CARE bill will affect and just how it will affect these people I added this into my poster in hopes that it will help to clear any gray areas people may have with the CARE bill. I briefly list the states that have already at this time implemented the bill. My poster will list some of the sonography licensure coalitions that support this bill. I also added images dealing with the CARE bill to make such a hard topic

MQSA & Digital Mammography
Jenna Lindrose
Ms. Sharon Miller, MS, RT (R)(MR)(CT)(M)
Health Studies

Mammograms are considered the gold standard in terms of diagnostic breast imaging. Therefore, setting high quality standards in all mammography facilities is essential to ensure high quality care is given to all patients. The Mammography Quality Standards Act (MQSA) has established numerous rules and regulations to maintain the highest quality imaging in all accredited mammography facilities. This allows the mammographer to acquire essential medical information such as thorough medical histories for the reading radiologist, increasing the likelihood of obtaining a definitive diagnosis in a more efficient time period. Additionally, the MQSA includes information regarding accreditation, quality control, and continuing education requirements. As breast imaging continues to advance, mammography is being used in conjunction with other imaging modalities to create higher quality diagnostic images. Due to these advancements, the MQSA will be newly named the Breast Imaging Quality Standards Act (BIQSA) to encompass all breast imaging modalities, ensuring high quality care continues to predominate.

Advancements in Radiation Therapy
Cassandra Ruddock
Ms. Sharon Miller, MS, RT (R)(MR)(CT)(M)
Health Studies

With cancer being the leading cause of death in the world, healthcare professionals must keep up with the demand of current advances in treatments, particularly in the field of radiation therapy. The goal of radiation therapy is to stop cancer cells from dividing through cell division. It is important for the medical personnel in radiation therapy to understand the reactions of cancer cells to the radiation the patient’s body is receiving. Understanding these concepts will help to reduce side effects of the treatments and maximize the quality of life for these patients. Radiation therapy is a modality that has developed significantly since being discovered, with the latest advancement being Intensity-Modulated Radiation Therapy (IMRT). Its major strides in the breast, head, and neck have given patients more hope for the future in improvements such as increasing the cosmetic appearance of those treated with this radiation. IMRT is used as a treatment for many different kinds of cancer and its major advantage is a higher radiation dose being delivered to the patient, with less radiation being delivered to the normal cells around the cancer. Overall, advances are being made in radiation therapy that might one day result in the elimination of
Abstract
There has been a conflict over the use of ultrasound for entertainment purposes over the past ten years. Several professional and government organizations have made statements against the use of ultrasound for keepsake images of a fetus. Some of the organizations include the Society of Diagnostic Medical Sonography (SDMS), the American Institute of Ultrasound in Medicine, and the American Registry for Diagnostic Medical Sonography. These organizations have stated that although there are no known side-effects of ultrasound exposure, side-effects may still be discovered in the future. Since there aren't any known side-effects, keepsake facilities state that their services are safe. Many keepsake facilities also cater to the mother by creating a comfortable, soothing atmosphere. The facilities also provide large flat screen televisions in their examination rooms. However, until there are known side-effects or state and federal laws prohibiting the existence of keepsake facilities, there will continue to be conflict as to whether these services are beneficial to the mother and/or the fetus.
The Affect of Communication Technologies on the Deaf, Hard of Hearing, and Deaf-Blind Communities
Bethany J. Helsel
Dr. Julie Smith
Education and ASL/English Interpretation

The American deaf community is one that has suffered great oppression throughout history. This research examined the trials and tribulations of deaf, hard of hearing and deaf-blind individuals beginning in the year 1876 until present day and how technology has aided to bring the hearing and deaf communities closer. Research findings were split into three time periods: 1876-1964, 1964-2006, and 2006 and beyond. During each time period the following were explored: life experience as a deaf individual, technology used by deaf individuals throughout time, and the view on deafness from the hearing population. Language usage and communication has been at the forefront of subjugation from the hearing world concerning employment opportunities, education and rights, but with technology bridging the gap in communication, understanding can be achieved between the two cultures. Interviews were conducted of residents in the deaf community in Blair County, Pennsylvania to gain insight on the matter.

Teaching Evolution in the Early Elementary Classroom
Rachel Wagner
Dr. Marilyn Roseman
Education and ASL/English Interpretation

The purpose of this research is first to examine the fundamental role that early and accurate science education in the elementary curriculum plays on students’ future intelligence, overall success and entry into the science and technological fields of employment. Through a study of developmentally appropriate practice, the ideas with which children enter the classroom and state law and curriculum guidelines, we will discover how science instruction is presented to young children and the implications of its effectiveness. Specifically, then this research will consider the topic of evolution and how this sometimes controversial theory of creation can impact the later thinking and thought processes of early learners. The research is geared to the current or future educator and their role in providing young students with a solid foundation of science education, even if or when challenged by opposing, not scientifically supported views. Court rulings, position statements and thorough research, will provide a backdrop against which science education can be viewed as fundamental and imperative.

New Teacher Evaluation
Allison Nadonley
Dr. Marilyn Roseman
Education and ASL/English Interpretation

This research explores the new teacher evaluation that was mandated with Act 82 by the Department of Education on July 1st of 2012. Throughout this exploration, multiple references and interviews are used to examine the effectiveness of the new teacher evaluations. The interviews and references direct the outcomes of this study. There are two focuses for this research. The first is to deem how clear the expectations are on the evaluation for educators. The second focus is to appraise how effective this new evaluation system is.
School Funding Reform is a Necessary Step for Public Education Success
Amy Oberholtzer
Dr. Marilyn Roseman
Education and ASL /English Interpretation

This paper explores school funding disparities and how this causes a major problems for high poverty schools in the United States. This paper focuses mainly on the disparities between different school districts in Johnstown, Pennsylvania. Charter schools as a solution are reviewed and evaluated. Alternative methods taken by states such as the model currently being used in Maryland are also reviewed and evaluated. Successful public schools are evaluated for possible funding differences. The solution to remove restrictions to state and federal funds is recommended as a remedy to the situation. The steps necessary to implement this solution are presented as a way to equalize the educational outcomes of all children.

Bullying and Social Support Groups
Jessica Deline
Dr. Marilyn Roseman
Education and ASL /English Interpretation

Bullying is an issue that is continuing to grow in the United States. There are a variety of prevention programs but few recovery programs. Bullying affects a student on many levels such as academically, socially, and emotionally. The idea of support groups for children who are involved in bullying situations is a controversial issue among local teachers. Support groups have been labeled as being beneficial to students in a variety of ways such as emotionally, socially and cognitively. While research has shown that support groups are beneficial, many people have different view on the idea of having support groups for students who are victims of bullying situations as well as the students who bully. Although the majority of teachers surveyed felt that social support groups would benefit the child, a few felt that this could create new

The Use of Technology in the Elementary Classroom
Jayme Eppley
Dr. Marilyn Roseman
Education and ASL /English Interpretation

The research conducted in this paper is on the use of technology in the Elementary classroom. The views of how to use it and different advantages and disadvantages are examined. There is research on pre-service teachers’ experience and views toward the use of technology in the classroom. There is also information about how to incorporate the technology in the most effective way possible. The methods used to explore this information include collecting data from different studies conducted on pre-service teachers and the views of professionals in the field of education. There has also been research conducted on the opposite side of this issue, detailing some of the downfalls of incorporating technology in the classroom. The results from this research show that there are many benefits to using technology and that there are resources available to all present and future educators.
The purpose of the current research examines the relationship between Head Start and early childhood academic achievement. Research from journals, books, and newspapers from the early 1960’s have indicated highly anticipated success because of the impact this program has on young children. Head Start started in the hopes of ending the War on Poverty, while giving poor children a foundation for learning early on. This program has improved children’s school performance, but has also provided nutrition, health care, parent education, and cultural enrichment for these underprivileged students. In addition, Head Start has been proven to increase attendance, homework completion, grades, and state test results, while holding a positive, encouraging place in their hearts. While shedding a light on community and high expectations for parent involvement, Head Start has made an immense impact on disadvantaged children.

This research paper on Selective Mutism will be examining the main objectives of how the school setting exacerbates the disorder. Another focus is to compare two ways of handling the disorder, which are through the school curriculum and cognitive behavioral therapy. In order to complete these objectives, the methods used will be peer-reviewed articles from scholarly educational and psychology journals. Additionally, this study will use case studies and a questionnaire given to teachers who deal with selectively mute students to guide accomplishments of objectives. Based off this extensive research, the intended results are to show which strategy of meeting the needs of the student is the most effective. The results will be given to professional teachers to improve their understanding and ability to meet the needs of selectively mute students. The research, writing, and results will be of great help for teachers who have to meet the needs of a selectively mute students in the classroom.

With all medications you run the risk of side effects. These side effects can range from common to life threatening and fatal. Pharmaceutical companies are always listing their full range of side effects wherever and whenever they can. The rambling hushed voice at the end of each medicinal commercial is usually telling you the risks and side effects of the medication. What they do not usually tell you about are the long term effects of the medication. How you can be affected in your later life with these medications. Our focus of medication here being those prescribed for ADHD.
Controversy over “Attention Deficit Disorder” and “Attention Deficit Hyperactive Disorder” is a very prevalent issue. Many question the existence of these disorders, and it is often not accommodated for because of this reason. This paper will address some of the controversies surrounding the disorders. The paper then states that the best way to eliminate misconception is to educate the public, and then the provides information through the history, symptoms, diagnosis, and treatment of these disorders. Also, it provides information on where individuals with this disorder may struggle and how to accommodate for

Within my research project, I plan on unveiling the facts about Asperger Syndrome, a type of autism spectrum disorder (ASD) that is considered to be a higher level form of autism. Individuals who have been diagnosed with Aspergers express difficulty with social skills and interactions and may display a restricted range of interests and also show a routine of repetitive behaviors. Motor development may be delayed which leads to inept movements. Although Aspergers is a form of autism, children and adults do not have delays or difficulties in language or cognitive development as seen with other forms. As a matter of fact, children and adults who have Aspergers syndrome may have a higher IQ and excel in certain fields of interests. Throughout this paper, I will discuss early warning signs of Aspergers, how to diagnose the syndrome, the research taken place to discover the causes, and accommodations that both parents, individuals who are diagnosed, and teachers can take to create a better living and learning environment

Inclusion is an essential part of American education. More and more teachers are making accommodations for gifted learners in the classroom. Accommodating gifted learners can be challenging and rewarding. This paper will discuss the different types of gifted learners (specifically math talented, artistic talented, and language talented) and ways to accommodate them in the classroom. Gifted learners can be twice-exceptional, meaning they can have other exceptionalities like Attention-Deficit Hyperactivity Disorder (ADHD), Autism, and Hyperlexia. Also, included will be identifying and misdiagnosing gifted learners.
Hearing Loss and Impairment in Secondary Students
Ashley Cullen
Dr. Sara Rutledge
Education and ASL /English Interpretation

The purpose of this research is to collect and examine existing scholarly literature pertaining to hearing loss and impairment in adolescents, its implications, its effects on formal education, and to discover and assess current teaching interventions and tools used in secondary education for the hearing impaired. First, I will provide an introduction to hearing loss and impairment as it pertains to adolescent youth. Next, I will discuss the effects of hearing loss in adolescents on physical and emotional well-being. I will also explore the effect that hearing loss has on education and the accommodations that must be made for the student by assessing teaching interventions and assistive technology tools that are currently used in classrooms. I will conclude by evaluating the effectiveness of such teaching interventions and tools and

Communication Disorders and Bilingual Children
Kayla Plazek
Dr. Sara Rutledge
Education and ASL /English Interpretation

This research paper defines communication disorders and how children who are bilingual tend to have a communication disorder. Research conducted assesses the different types of communication disorders and the causes of this impairment. How children are diagnosed with communication disorders depends on the behaviors the child exhibits based on the challenges. Bilingual children that have English as a second language and have a communication disorder develop other symptoms of behavior problems. Identification for symptoms of communication disorders leads to treatment and accommodations. This paper additionally discusses strategies that teachers can use in the classroom to accommodate these learners.

Autism Spectrum Disorder
Tiffani Finnegan
Dr. Sara Rutledge
Education and ASL /English Interpretation

Autism is a widespread and diverse neurodevelopmental disorder that includes children on both ends of the spectrum; some very high functioning while others are severely impaired. In the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), autism is described as a condition that causes difficulties in social interaction, verbal and nonverbal communication, repetitive behaviors, and obsessive interests. Symptoms differ dramatically between children. Some researchers believe that causes of autism are biological while others propose that environmental factors influence this disability. In comparison, children with autism do share a similar trait that involves irregularities in certain areas of the brain causing symptoms to appear. Doctors typically diagnose children with autism by the age of three. Other common disorders that correlate with autism include: fragile X syndrome, tuberous sclerosis, epileptic seizures, Tourette syndrome, and other learning disabilities. Furthermore, autism is the fastest-growing serious developmental disability in the United States (Verhoeff, 2012).
Down syndrome is a genetic condition where a person has forty seven chromosomes compared to the usual forty six. Individuals with Down syndrome have noticeable physical characteristics as well as physiological and behavioral characteristics. Since there is no cure for Down syndrome, there are many treatment options that are available for individuals with Down syndrome. In addition to treatment options, there are many resources and services that are available for teachers and family members to support and accommodate for their loved one with Down syndrome.

Students that are gifted achieve at higher performance capability compared to the average student. These students exhibit a strong leadership ability, creativity, and intellectual abilities. Students who are gifted have a higher connectivity among regions of the brain, which enables tasks to be completed at higher speeds. Nurture plays a factor because many students are influenced from their families, teachers, and mentors. Comparable to students with learning disabilities, many gifted students struggle in school. Gifted students often become bored with school, because they learn content quicker than their peers. Instead of learning a concept by repetition these students should be challenged on a higher level of thinking. Peer pressure contributes to identity conflicts with many gifted teens, because giftedness can conflict with gender roles. Gifted adolescents may appear to be very successful in school, however they experience difficulties such as being under challenged, giving into peer pressure and identity conflicts.
Should U.S. Immigration be Limited?
Brenten Knott, Lindsay Layton, Will McCabe
Mr. Christopher Mingyar, CMA
Business/Information Technology

Immigration into the United States can be a touchy subject for many. This project is designed to inform people of the possible issues that come with immigration. In this paper, we address both the positive and negative aspects of the problem. While there are some positive points that come from allowing an unlimited number of immigrants into the country; we believe the evidence supports that it is far more detrimental to allow such unfettered access to residency, as to having a more methodical approach. We also propose a model policy for immigration that we believe should be in place to capture the benefits of immigration while simultaneously avoiding potential consequences.

How Bad was the Last Recession?
Sean Klapper, Jonathan Jones, Rachelle Klapper
Mr. Christopher Mingyar, CMA
Business/Information Technology

This project examines what happens to unemployment and employment during recession and recovery. With the use of economic data from authoritative government sources, we compare the latest recession to those that have occurred throughout the twentieth century. The Great Depression is included in this comparison of the effects of economic traumas. Our graphics compliment our written information to tell the story of the effects of economic downturns and recoveries on unemployment and employment.

Bush Era Tax Cuts
Jacob Biss, Matt Brady, Nathan Lester, John Moist
Mr. Christopher Mingyar, CMA
Business/Information Technology

Among the most contentious topics in our political spectrum, none arouse more differences than tax cuts. We’ll use various research techniques to approach the George W. Bush-era tax cuts from two directions—first, Jacob Biss and Matt Brady will source the work of Arthur Laffer and use it as a framework to distill real GDP numbers from the Bush Era. Their research will strive to demonstrate that cuts to tax rates can be linked directly to economic expansion in the mid-2000’s. Secondly, John Moist and Nathan Lester will source research from the Congressional Research Service to argue that, as congruent with research published by the Congressional Budget Office, the costs of these tax cuts were far too high, even when placed alongside the most favorable economic projections. Their research will focus on fundamentally different approaches to taxation structure, and will demonstrate the efficacy of two differing
Living Wage
Seth Bertram Anthony Rocco Josh Bonatesta
Mr. Christopher Mingyar, CMA
Business/ Information Technology

It is our intention to explain what the living wage is compared to minimum wage, what is called for in ordinances for living wage, who it helps and hurts, what justifies living wage, and long range impacts of it. That there is a large difference in the amount of pay in a living wage, compared to minimum wage, whether this discrepancy is from a failure of minimum wage to keep up with the costs associated with living or just a needed stopgap to slow the increasing gap between poverty and low-middle income classes.

Walmart: Competitive wonder or community nightmare?
Ricky Abbs, James Antonoplos, James Smith IV
Mr. Christopher Mingyar, CMA
Business/ Information Technology

The most successful firm in U.S. retailing during the last few years is Walmart. Our project takes a look into some of Walmart’s actions and their consequences. Walmart is a success, but has there been a cost of Walmart’s success? Our project answers this question by listing and explaining the problems allegedly caused by Walmart for its employees, local communities, consumers, and the environment. It also takes a look into the most serious charge against Walmart, as well as the most significant benefit provided by Walmart. We then offer an evaluation of our findings with a rather surprising conclusion.

Demand for Products During High Unemployment
Mackenzie Behe, William Burns, Christopher Hann, Lindsey Phillips
Mr. Christopher Mingyar, CMA
Business/ Information Technology

When there is high unemployment, consumer demand increases for certain products while it decreases for other ones. Examples of these products include foods, automobiles, clothing, and education. Our research project involves taking a further look into each of the categories listed, and determining their status in cases of high unemployment. Our research determines which types of foods, automobiles, clothing, and education are less in demand during high unemployment and which ones are more in demand. The results of each of these types of products are examined thoroughly in this poster. Understanding the patterns of products in situations of high unemployment could potentially be an advantage to consumers and
Economic Effects Resulting from Minimum Wage
Katie Reed, Aaron McGuire, Chase McGeary
Mr. Christopher Mingyar, CMA
Business/ Information Technology

Minimum wage, by definition, is the lowest possible amount required by law that an employer can pay his or her employees. It exists to maintain a standard of living and protect people from poverty. It affects the labor force, but it also modifies aspects in the economy. Just like all laws, rules concerning minimum wage are subject to change. Minimum wage has increased over the years, and it might be going up again soon. In his 2014 State of the Union Address, President Barack Obama mentioned changing minimum wage from $7.25 to $10.10. This poster will address the economic effects that this increased wage could have including changes in inflation and unemployment.

Vouchers to Pay Private School Tuition
Haleigh Ratosky, Kori Batdorf, and Jolene Houser
Mr. Christopher Mingyar, CMA
Business/ Information Technology

Our project is on vouchers to pay private school tuition. In our research, we are attempting to answer four different questions. These questions are as follows: Will potential exit by students with vouchers lead to improvement in public schools? Will vouchers cause the best students to leave public schools, worsening the education for the students left behind? Do the students who receive vouchers and leave public schools for private schools perform better in school as a result? Would a universal voucher system—one available to all the children in a city, for example—mostly benefit high-income families? In some of our research, we have already found that this is a highly opinionated, debated topic. We have also found that people tend to argue on two different sides when it comes to this topic.

"Help me"
Matthew Crawford
Ms. Kimberly Lee-Asonevich
Business/ Information Technology

“Help Me” is an electronic medical alert product that can be accessed by EMS, Fire personnel, Police, and Doctors, as well as other medical employees. It will be a key chain or bracelet equipped with programing that will be accessed by a reader attached to a computer. Doctor’s and staff will update the patient’s files, so they will not have to worry about carrying paperwork from doctor to doctor. In case of an emergency EMS, Fire personnel and Police will be able to access the information in order to help treat the patient. The intended target market is primarily senior citizens or anyone who has a health problem, but anyone can use it. Marketing plans for the product will include: pharmacies, doctor’s offices, attending trade shows to show off the device and having meetings with doctors, fire departments, EMS personnel and police to demonstrate how it the product will assist with access to medical records. The product is simple, easy to use and helpful. The marketing environment would be very receptive to the "Help Me" product because of the growing retirement age population and the interests of medical communities around the country. Over the next five years, "Help Me" can increase its distribution, offer new products, and win new customers by expanding regional distribution.
Peary's Place
BriAnna Perry, Billy Burns, Ashley Heuston
Ms. Kimberly Lee-Asonevich
Business/ Information Technology

Peary’s Place is a friendly atmosphere to grab something to eat for lunch, dinner, on the go, studying, or just to sit down to relax from a busy day. The target market for Peary’s Place is college students and high school students in our area. The research demonstrates that, although there are various fast food establishments, there are very few businesses that cater to the younger crowd. Although our target market is younger adults, we also invite families of all ages to enjoy our atmosphere in order to expand the market. Peary’s Place will offer great taste, lower prices, and fast service which is the key to customer satisfaction and customer retention. We have RTO (ready to go) items such as cold subs, salads, and drinks for something quick. We have free Wi-Fi for students in school so they can have a different setting to do homework. A lounge area is available when customers need a break. There will also be a stage for musicians, poets and comedians to meet the younger target market needs. Based on the consumer market research, there is evidence to support Peary’s Place in the marketplace. In addition, Peary’s Place plans to explore opportunities for community sales by partnering with local schools, colleges, and small businesses. Over the next five years, Peary’s will increase its marketing efforts by using social media, giveaways on twitter, sharing their expertise and networking in the community.

EZ Tech Food Tech
Ian Brantner, Will McCabe
Ms. Kimberly Lee-Asonevich
Business/ Information Technology

Our project consists of the creation of a device or application that would allow someone to order food remotely from their stadium seat; this allows vendors to bring a customer’s food to their seat without missing any part of the game. Our goal is to create a buzz for EZ Tech Food Tech in the western Pennsylvania area by creating contractual agreements with colleges, small businesses, schools, and potentially hospitals. Our goal is to create 10 agreements within the first year of business and increase to 30 agreements by the 5th year of business.

Grocer-Ease
Kevin Hosley, Rachelle Klapper, Katelyn Wackerman
Ms. Kimberly Lee-Asonevich
Business/ Information Technology

Grocer-Ease is a warehouse based in Altoona, Pennsylvania that pre-packages and delivers groceries in temperature-regulated delivery trucks for a small fee. Customers also have the option to pick-up. Our warehouse allows us to cut costs by eliminating overhead, enabling us to sell goods at lower prices. We cater to the elderly and the disabled who suffer from limited mobility and lack transportation. We also serve busy individuals who don’t have the time to make lengthy trips to the grocery store.
According to Condé Nost Traveler, 26 million checked bags are lost every year. People pay great sums of money to check their luggage. BaggerTracker™ is revolutionary new way to locate and recover lost or stolen baggage. It can be used in a plethora of different items, including backpacks, purses, suitcases, laptop cases and duffle bags. When the product is purchased, it is registered in our secure BaggerTracker™ database. Upon purchase, you will receive a PIN number and access to our toll-free hotline and our smartphone application. If your bag is ever lost or stolen, simply use your PIN information in conjunction with the hotline or application to locate your belongings. In addition to the poster, we have included a sample commercial that promotes the benefits as well as the simplicity of use of our product.

Our project is centered on marketing the Mount Aloysius College Business Department. One of our main focuses when marketing the Mount Aloysius business program is stressing the intimacy of Mount Aloysius College compared to other larger schools. Our plan is to make sure that students realize the individual attention received here combines with the exemplary practicality of our courses. This ensures that students not only gain business skills, but also practical, real-world abilities that will transfer to everyday living.

Our project takes a look into a potential marketing plan for the apparel store that is supposed to open in the Athletic Convocation & Wellness Center. In order to completely examine a solid direction for the marketing of this store, we used Census Bureau data for the area as well as information the Mount Aloysius Admissions Office gathered on our enrolled student population. Using this data we have built our marketing plan using several categories including target market, marketing budget, goals, strategies, strengths, weaknesses, and competitors. Due to the fact that the store is on campus and the reach will be limited to students and surrounding community, we have centered our focus to a target market consisting of students, their families, and local Mount Aloysius sports fans. From this point we were able to build on the other categories to give the “Mountie Stables” a marketing plan that will allow it to thrive.
MAC Sports for Kids
Ashley Miller, Lindsey Mercer
Ms. Kimberly Lee-Asonevich
Business/ Information Technology

MAC Sports for Kids is a five day camp set up for children to learn and improve their skills in a variety of sports. This camp is for kids ages 5-15. There will be a different sport each day, including basketball, volleyball, soccer, tennis, and baseball. The Mount athletes will be volunteering their time to help the children. The athletes will offer one-on-one time and group time. This camp will cost $20 a day or $80 a week per child to cover snacks, refreshments, and other expenses. The camp will be offered from 1 pm to 4 pm Monday through Friday. The purpose of this camp is to meet new people, learn skills, and most importantly, have fun. The camp will take place in the Academic Convocation and Wellness Center and the outside fields. This camp will take place in the first week of August 2015.

LiveTrack
Seth Bertram, Cody Johnson, Andrew Noel
Ms. Kimberly Lee-Asonevich
Business/ Information Technology

It is our intent to market a live updating, mobile auditing system for use by auditing firms and manufacturers. This will be paired with a service providing modules that are loaded with the necessary data per business being audited, while being secured by several fail safes to increase security of the data to prevent confidentiality breaches through electronic leaks. The product itself will be a server, securely paired with only a set of handheld auditing devices for use in tracking the flow of inventories for manufacturers and tracking of financial data for auditors. The service provided will be the supply of the modules, preloaded with necessary data for the businesses, with maintenance of the product and its built

Nemos
Nick Moist, Ronnie Townsend, Joey Moxey, and Ronnie Townsend
Ms. Kimberly Lee-Asonevich
Business/ Information Technology

Our project is to market a stylish, eco-friendly, comfortable shoe to major league sports leagues and the general public. The target market for Nemos is young adults, college students, and teenagers. Our marketing goal is to make 50% profit in the first 5 years of business and to be sponsored and endorsed by major leagues in sports. We intend to market by the following avenues: 1) Pay athletes to wear our shoes; 2) Create various advertisements and contract with teens to wear the shoes to sporting events; and 3) Develop contracts with major league sporting teams in the first year of business.
Mount Aloysius College Baseball
Nicholas DiDiano and Jordan Campano
Ms. Kimberly Lee-Asonevich
Business/ Information Technology

Mount Aloysius College baseball has entered a new era of opportunities. Our project is to gain additional market share of individuals interested in playing college baseball. According to our market research from the surrounding area, there are a significant percentage of high school students interested in playing college baseball. The intent of the marketing plan is to increase awareness to high school students by using social media, direct marketing, viral campaigns, and testimonials as a key to recruitment.

Unbreakable Stix
Cory Dick and Ben Legath
Ms. Kimberly Lee-Asonevich
Business/ Information Technology

Unbreakable Stix is a company that is looking forward to excel in the field of baseball bats. The company will offer a bat that will be able to endure the toughest of conditions. The purpose of the new product is to decrease the number of broken bats a team needs to replace to save our consumers money. Based on market study, the company will gain market share by educating the sports industry on the amount of money saved over a year of team playing by reducing costs and increasing runs. Consumer studies have shown that particular colors are needed by teams, and the company will have hot colors available. Unbreakable Stix guarantees the best service in our field to gain market share and retain customers. Our goal is to create 5 agreements within the first year of business and increase to 15 agreements by the 5th year of business. The company will use word of mouth, social media and direct sales to gain market share.