7th Annual Undergraduate Research Day

Academic Core Building
May 5th
9-5pm

Research day is a celebration of undergraduate research and creative scholarship in all disciplines

Keynote Speaker
SAM KEAN

Sam Kean is an award winning science writer and author of several best-selling books including The Disappearing Spoon, The Violinist’s Thumb, and The Dueling Neurosurgeons.
Proceedings of the 7th Annual Undergraduate Research Day at York College of The City University of New York

Office of Undergraduate Research
York College of The City University of New York

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About York College

Mission

York College enriches lives and enables students to grow as passionate, engaged learners with the confidence to realize their intellectual and human potential as individuals and global citizens.

Vision

York College's hallmark academic programs in liberal arts and sciences will be recognized as centers of excellence within CUNY, attracting and graduating some of the best and most highly motivated students from New York City and the greater New York area. We will be the first choice for prospective CUNY students interested in the health professions, allied health sciences, and business, including aviation management. York College will also establish itself as a model for enabling first generation college students to earn an undergraduate degree, and will fulfill students' individual academic goals while preparing them for graduate education and the competitive marketplace. Students are at the center of their own learning at York College. We offer multiple opportunities for student engagement, inquiry and research-based scholarship, and experiential learning. York maintains a vibrant campus where students actively participate in extra-curricular programs and collaborate with faculty and academic peers whose backgrounds are distinctly different from their own. The College has a dynamic student life with athletic and visual/performing arts programs, special interest clubs and social organizations where students develop enduring relationships and refine interpersonal skills.

The College will enable faculty and students to pursue their highest goals and foster their development as individuals and professionals. York College will be an attractive place to work, which will draw highly qualified candidates for its academic, executive, professional and administrative positions. The multicultural nature of our sustainable academic and social environments enriches the collegiate experience for all students, faculty and staff.

York College will be a magnetizing institution within the Queens community where students and graduates are mobilized as advocates/participants in continuous civic engagement. Our strong alumni network supports our programs, serves as ambassadors and donates time, talent and capital to advance our mission. Our Continuing and Professional Education function attracts students, graduates, individuals and professionals in pursuit of continued personal and professional development. Our business outreach activities engage the business community to strengthen our town-grown relationships.
About the Office of Undergraduate Research

Program Mission

To promote and facilitate student engagement in research and other creative activities in order to demystify research, increase knowledge about its nature and methodologies, and secure competitive advantage for graduate and professional school and the workforce.

Getting Involved In Research

There are several ways to get involved with undergraduate research at York College. The York College Honors Program provides opportunities to enhance the intellectual development of motivated students. The Louis Stokes Alliance for Minority Participation (LSAMP) seeks to increase the number of underrepresented minority students in STEM. York College conducts a federally funded Summer Research Program. The CUNY Pipeline Program provides orientation to the academy through a six-week summer research institute at the Graduate Center and research projects conducted with a CUNY faculty member. The Systems Biology Center New York (SBCNY) Undergraduate Research Program offers summer research fellowships to City University of New York (CUNY) undergraduates who are planning to pursue PhD or MD/PhD degree programs after graduation and who are interested in incorporating systems biology approaches into the research that they pursue. The CUNY Summer Undergraduate Research Program (C-SURP) provides students with 10 weeks of hands-on research experience in a CUNY laboratory. Students are matched with a faculty mentor and research team based on their expressed interests. To find a mentor or program that suits you, contact the Office of Undergraduate Research at uresearch@york.cuny.edu. To contact the LSAMP program, e-mail Lyndon Haynes at lhaynes@york.cuny.edu. To contact the Honors Program coordinator, e-mail honors-program@york.cuny.edu. For scholarship opportunities and general announcements, follow us on Facebook© and Twitter©.

Student Research Day

Every year, York College students engaged in undergraduate research present their findings through poster and panel presentations. In 2011, the 2nd Annual Student Research Day involved more than 200 participants, including keynote speaker Staceyann Chin, performer and Co-writer of Russel Simmons Def Poetry Jam on Broadway, The Other Side Of Paradise. In 2012, the 3rd Annual Student Research Day involved more than 250 students, and featured award-winning novelist Hari Kunzru, author of "Gods Without Men." Participation continued to grow to nearly 300 students for our 4th Annual Research day, which featured Dr. Partha P. Mitra, Professor of Neuroscience and Theoretical Biology at Cold Spring Harbor Laboratory. In 2014, we celebrated our 5th year with Charles Duhigg, the Pulitzer Prize winning author of “The Power of Habit.”

Program History

The launch of a York College Undergraduate Research Program was first announced by Provost Ivelaw Lloyd Griffith at the CUNY Academic Council on January 6th, 2010. He subsequently named Dr. Rishi Nath, Assistant Professor in the Department of Mathematics and Computer Science at York College, as the first Director. The first annual Student Research Day was held on April 15th, 2010 with over 150 participants. The York College Office of Undergraduate Research, located in room AC-3E07b, was opened on September 30th, 2010. Dr. Robert O. Duncan, Assistant Professor of Behavioral Sciences, was appointed as the second director on July 1, 2013.
Keynote Speaker: Sam Kean

Sam Kean, award-winning author and a correspondent for Science Magazine.

Sam Kean is an award-winning author who earned his Bachelor's degree in Physics and English from the University of Minnesota, and a Master's degree in Library Science. His books *The Disappearing Spoon* and *The Violinist’s Thumb* were national bestsellers and appeared on several top-rated magazines including The New York Times, Slate, Psychology Today, and The Atlantic. Sam Kean previously worked at The Chronicle of Higher Education, The Chronicle of Philanthropy, and Search Magazine. He is currently a correspondent for Science Magazine and the recipient of numerous fellowships, including a Mass Media fellowship through the American Association for the Advancement of Science, and a Robert Bosch Stiftung Fellowship to cover science in Europe.
Featured Students

Each year, members of the Advisory Council select a representative sample of excellent students from various disciplines at York College to tell their story. Students participate in a panel where they speak openly about how they became interested in research, their experiences with conducting original research, and future directions for their work and careers.

Ality Aghedo is a Chemistry and Geology major and the Departmental Senator for Earth and Physical Sciences. His work with Dr. Nazrul Khandaker deals with regional geologic information coupled with magnitude for natural sediments, hydraulic properties and soil grain size distribution aspects of a facility site to be developed by New York City Agency in Maspeth (38° 40’ 46” East, 50° 59’ 10” North), Queens. Soil and sediment samples collected from depths close to the surface to over 50 m into the bedrock near the Maspeth site in Queens, consist of a zone of non-compact fill materials (5-9m thick), underlain by a wide range distribution and a partially decomposed highly plastic organic layer linked with calcareous clay and shell remains (2-5 m thick). The presence of the shell-bearing unit close to the surface may be indicative of a buried estuarine complex in this area. In preparation construction projects near waterways in older coastal cities, it is important to consider this possibility. The organic clay and pat layer were underlain by loose-to-firm glacial sand with gravels often intercalated with thin silt clay lenses. The recent upper soil horizons are not adequately solid to withstand the necessary loading, which is expected at near 1200 kips in some locations. The groundwork support system will therefore have to be estimated in the glacial sand, possessing N (blow count) around 60 and liquid limit close to 40 (low plasticity).

Zoya B. Hyman is a Psychology major, who works with Dr. Debbie Majerovitz. Born and raised on St. Maarten, a 37 square mile island in the Caribbean, Zoya moved to New York in 2012 to pursue higher education. She is a senior at York College CUNY and will be graduating this spring with her Bachelors of Arts in Psychology. She intends on continuing her education to achieve a Masters/PhD in Forensic Psychology. Her goal is to work for the Federal Bureau of Investigation (FBI). Zoya has been involved in active research at York College for the past year and has presented three posters: two for annual Research Days and one for Summer Research. She is currently working in two labs and enjoys every minute of it! She has a curious mind and is always willing to work and find answers that add knowledge to the scientific body.
Olayinka Oladipupo is a Biotechnology major who works with Doctors Ruel Desamero and Gerard McNeil. Olayinka Oladipupo, a graduating senior of York College, has displayed academic excellence with a passion for research. Olayinka was the founding president of the York College Undergraduate Research Club. From 2014, he worked as a Research Assistant in Ruel Desamero laboratory. He worked on the spectroscopic studies of human Islet Amyloid Polypeptide (hIAPP). hIAPP is a small protein that is cosecreted with insulin. Aggregation of this protein is responsible for amyloid aggregates observed in the pancreatic islet of people with type II diabetes. Olayinka is also working with other student under the mentorship of Dr. Gerard McNeil on a bioinformatics project in collaboration with the Washington University’s Genomic Education partnership. Amongst other things, the project aims to study the evolution of the dot chromosome of the fruit fly by comparing the dot chromosome of several Drosophila species using *Drosophila melanogaster* genome as a reference. The group is presently working on the finishing and annotation of *Drosophila ficusphila*. Olayinka is the vice president for Student Government, a member of the Honors program and is expected to graduate summa cum laude.

Ananta Sarker is an Earth and Physical Sciences major who works with Dr. Ratan Dhar. Ananta is a premed student who has worked on the presence of RCRA elements and fecal indicative bacteria in the soil and lake water. He participated in the York college summer research program and attended the national GSA conference and presented research work in that conference. He also presented at the CUNY and SUNY research study collaboration at Albany. He was recently selected to attend the American Chemical Society’s Middle Atlantic Regional Meeting (MARM) 2016. His research aims to study the chemical dynamics in NYC parks to understand their water and soil quality. The study was conducted in two of the city parks: 1) Corona Meadows Park, an intense recreational park in Queens and 2) Kissena Park in Queens. A wide range of elements including RCRA (Resource Conservation and Recovery Act) toxic metals in soils and nutrients dynamics in lake water were studied. The spatial distribution of fecal indicative bacteria (FIBs) including total coliforms, E. coli and enterococcus was also investigated in these two study areas to understand the microbial fate and transport in the lake environment. The soils were collected from different depths using GeoTech Environmental Soil sampler device and preserved them in the core at 4°C temperature until analysis done for the microbiology. Nitan handheld XRF (X-ray Fluorescence Spectrometry) was used to detect the array of elements in dried soil samples. Higher occurrences of FIBs in soil and water are very consistent with
the elevated level of nutrients including nitrate and phosphate in lake soil and water respectively.

**Denae Stallings**, an upper senior of York College, majoring in Psychology with special interest in Social Psychology. She has shown that she has not only passion for research but is in tuned with her ability to investigate the society we live in. Denae has worked under the mentorship of Dr. Ian Hansen for the past three semesters, focusing on social factors like morality, politics and aggressive social attitudes. She has presented research at the prestigious Society of Personality and Social Psychology at the 2016 San Diego Convention, Pace University, Hunter College and York College. Denae is currently working on a manuscript with Dr. Hansen that will examine the relationship between religiosity and social dominance orientation in two ideological frameworks. This project will look at both the independent and controlled relationship between these two factors. Denae plans continue working with her mentor in hopes of further exploring and building her interest in the field of social psychology.

**Sharon Vega** is an English major who works with Dr. Shereen Inayatulla. Sharon Vega is an English major, History minor who will be graduating with her Bachelor’s Degree in June 2016. She has been selected as the 2016 recipient of the award for Distinguished Achievement in Literature Studies. She will be attending Hunter College for her Master’s degree in English Literature beginning Fall 2016. Her research addresses the Ways in Which Feminism is Advocated through Written Works. She looks at the feminist interventions done by female writers such as Alice Walker and Jamaica Kincaid and the ways that they specifically target the gender injustices done to women of color. It looks at how feminism is advocated whether in theory or literature. It explores the portrayal of literary characters such as the protagonist in Kincaid's "Girl," and the female characters in Jhumpa Lahiri’s short stories. My research questions why feminism is advocated differently by white women and women of color, while also noticing the differences between white female characters and characters of color in feminist literature.

**Shantina Washington** - I recently graduated in January 2016. I was an English major with a minor in Sociology. Currently I am researching the ways gender and race affect the ways we perceive introversion, with a focus on black women. My mentors for this project are Professor Inayatulla, Professor Levey and Professor Zhang.
Awards

Each year, members of the faculty who participate in mentoring a significant number of students are recognized for their outstanding achievement. The Office of Undergraduate Research is proud of anyone who takes on the role of mentor, and we seek to broaden participation and quality of life for faculty mentors and those interested in becoming involved.

President’s Award
Awarded to mentors who support 15 or more research projects

Ian G. Hansen
Olajide Oladipo

Dean’s Award
Awarded to mentors who support 5 or more research projects

Elizabeth Alter
Kristin Davies
Ratan Dhar
Chun-Pin Hsu
Minhua Huang
Gerard McNeil
Daniel Robie

Director’s Award
Awarded for excellence in service and support of undergraduate research

Elizabeth Alter
Rose Deng
Program

Itinerary

8:00am  Registration Opens
9:00am – 5:00pm  Oral Presentations and Poster Presentations

Luncheon Session

11:30am  Lunch Service Commences
12:00pm  Opening Remarks
Robert Duncan, Program Director
President Marcia Keizs
Provost Panayiotis Meleties
12:10pm  Featured Student Panel
Moderators: Chun-Pin Hsu and Ian Hansen
12:45pm  Introductory Remarks to the Keynote Address
Elizabeth Alter
12:50pm  Keynote Address
Sam Kean
1:45pm  Awards, Acknowledgements, and Concluding Remarks
Robert Duncan
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<td>10:30 – 11:45am</td>
<td><strong>Session 1</strong>&lt;br&gt;<strong>Our Flight Through Time:</strong> The Past and Future of Aviation Travel and Safety</td>
<td>2B06a</td>
<td>Chun Pin Hsu</td>
<td>Amornpha Angsawothai, Jennifer Valencia, Michael Stankiewicz</td>
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<td><strong>Session 2</strong>&lt;br&gt;“All I Want is a Little Reaction: An Analysis of Trends in Modern Chemistry”</td>
<td>3A10</td>
<td>Emmanuel Chang</td>
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<td><strong>Session 3</strong>&lt;br&gt;You’ve Taken My Blues and Gone: Othello Comes to Harlem and Fiction in the Forest</td>
<td>2A15</td>
<td>Phebe Kirkham</td>
<td>Alexis Haynie, Ishnedd Ishmail, Joshua Alvarado, Jay Bratton, Karishma Sookraj</td>
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<td><strong>Session 4</strong>&lt;br&gt;New York Avenue Records Press Conference</td>
<td>3B04</td>
<td>Tom Zlabinger</td>
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<td>2:30 – 3:45pm</td>
<td><strong>Session 5</strong>&lt;br&gt;What's Trump Got to Do With It?: Psychoanalyzing the Political Right</td>
<td>3E07a</td>
<td>Ian Hansen</td>
<td>Mariame Soukoule, Denae Stallings, Aliyah Freeman, Kelvin Tyler</td>
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<td><strong>Session 6</strong>&lt;br&gt;Mamas, Sisters, and Girlfriends: Rhetorics of Feminist Solidarity</td>
<td>3B04</td>
<td>Shereen Inayatulla</td>
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<td><strong>Session 7</strong>&lt;br&gt;Talk To Me!: The Profitability of Communication and Respect in Aviation and Business</td>
<td>2B06a</td>
<td>Chun Pin Hsu</td>
<td>Michael Stankiewicz, Shayan Khan, Achesha Shields Miller, Sophia Wells</td>
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<td><strong>Session 8</strong>&lt;br&gt;Storied Photography and Written News: Multimedia Profiles of York LEADS Students</td>
<td>2A15</td>
<td>Tom Moore</td>
<td>Armand Eheverry, Cindy Hicks, Chizobam Atnaya, Brittany Scott, Rollin Colmenares</td>
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<td>4:00 – 5:15pm</td>
<td><strong>Session 9</strong>&lt;br&gt;“Honey I'm Runnin' a Temperature: The Science of the Public Health Landscape”</td>
<td>3E07a</td>
<td>Ratan Dhar</td>
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<td><strong>Session 10</strong>&lt;br&gt;Social Science Remix: Interdisciplinary Sites of Inquiry</td>
<td>3B04</td>
<td>Tania Levey</td>
<td>Reena Maharaj, Shantina Washington, Adolami Fasanya, Gurdit Rahour</td>
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<td><strong>Session 11</strong>&lt;br&gt;Our Language, Ourselves: Decolonizing Englishes</td>
<td>2A15</td>
<td>Matthew Garley</td>
<td>Melinda Maharaj, Sarah Tatgegrain, Brian Higgins, Tuka Al Sahlan</td>
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<td><strong>Session 12</strong>&lt;br&gt;China and Immunofluorescence: An Interdisciplinary Panel</td>
<td>2B06a</td>
<td>Michael Sharpe</td>
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# Overview of Poster Sessions

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Aviation Management (BS)

TURKISH AIRLINE FLIGHT 981
Nasren Akhtar
The airline industry is a dominant force in modern transportation. In the last forty years, the world has witnessed as commercial flight has swiftly expanded in both short- and long distance markets, regularly placing the lives of countless passengers in the hands of aircraft manufacturers. The advent of the jumbo jet carried with it an inherent fear of the massive loss of human life that would occur with virtually any mid-flight failure, and thus also an increased responsibility for conscientious design and ethical practices. In 1974, the worst fears were realized when Turkish Airlines Flight 981 experienced a mid-flight cargo door failure which led to the first total loss of a wide-bodied aircraft in history. The aircraft was a McDonnell Douglas DC-10, and this tragedy was compounded by the fact that sufficient corrective action had not been taken by the manufacturer after precursory failures had occurred over the four previous years. The purpose of this report is to evaluate the ethical nature of McDonnell Douglas' decisions throughout this crisis, discerning their priorities with regard to safety and financial gain, and to assess if these qualities have changed in response. As a case study, the story of Turkish Airlines Flight 981 stands as a classic example of the complex nature of most applications of ethics in engineering, for though McDonnell Douglas handled a challenge in what it perceived to be a fair manner, the company's lack of total focus on safety and ethics resulted in the death of hundreds. Thus this study finds that although the crisis involved many private and public factors, McDonnell Douglas bears primary responsibility for the disaster. However, the company's most crucial fault lay in that they were not ethically conscientious at every decision-making level throughout the life of their product.

AIRPORT AND AVIATION SECURITY AFTER 9/11
Amornpha Angsawothai
On September 11, 2001, terrorists hijacked four airplanes. The U.S government responded by creating two rapid response terms to make recommendations for both airport security and aircraft security to enhance aviation security. Airport Security Rapid Response Team issued a report containing five broad conclusions
and 16 specific recommendations for strengthening airport security. On the other hand, Aircraft Security Rapid Response Team issued a report containing six general conclusions and 17 specific recommendations for better protecting commercial aircraft against hostile threats. Right after that, the congress passed the Aviation and Transportation Security Act that formed the TSA organization to develop policies to U.S transportation, especially in airport security and the prevention of aircraft hijacking, but the TSA did not do well in the first few years. The congress passed the 9/11 Commission recommendations that helped the TSA works more effectively and efficiently such as improving screening checkpoint procedures and technologies, screening and securing air cargo, and in-flight training for airline crewmembers. Since 9/11 situation has come to shape U.S. policy and strategy of aviation security systems nowadays.

DEEP VEIN THROMBOSIS (DVT) AND AIRLINES RESPONSIBILITY

Tasmia Chowdhury

Deep Vein Thrombosis (DVT) is a condition in which a small blood clot develop in the deep vein, usually of the leg. Blood clots mostly form in legs during air travel because of immobile for long periods of time, often sitting in cramped spaces with little leg room. The danger occurs when the clots break free from the wall of the veins (they are then called emboli) and spread to other areas of the body. This causes blockages in blood vessels. Patients claim that seating configurations are dangerous and faulty in Airplanes. As a result DVT is commonly referred to as "economy class syndrome." The longer the flight, the more at risk for developing a clot. Flights lasting 8-10 hours or longer pose the greatest risk. In some cases, the DVT will dissolve and go away on its own. However, in more serious cases, it can cause pain, swelling and warmth of the affected leg. Or it can break off and travel to the blood vessels of your lungs, causing pulmonary embolism (PE). A number of deaths from PE caused by DVT have recently received considerable media attention. Especially after 28 years old Emma Christofferson and Alayna wake died for DVT. Although airplanes provide the most convenient means of long-distance travel, the aircraft environment can take a physical toll on passengers. The U.S. Surgeon General has issued a call to action on DVT and PE to raise public awareness of these blood conditions and increase research on the causes, prevention, and treatment. Some simple steps to avoid developing blood clot while flying. These steps are involve with food plan to dress up. In Warsaw Convention cases, plaintiffs claim that DVT injuries and the failure to warn constitute an "accident" within the meaning of Article 17 of the Warsaw Convention. However, Airlines in domestic cases mentioned that DVT is a naturally occurring condition and it is unrelated to air travel that claims of defective seating configuration or defectively designed seats.
THE ROLE OF NATIONAL TRANSPORTATION SAFETY BOARD IN AVIATION

Gloria Daniel

The research paper is about the National Transportation Safety Board (NTSB) and the agency's contribution to aviation safety in the United States. The NTSB is an independent government investigative agency that investigates and reports aviation accidents and incidents, ship and marine accidents, highway accidents, pipeline accidents and railroad accidents. This paper focuses on the role of the NTSB in plane crash investigations, reports and recommendations on how to avoid similar occurrences.

ROSCOE BROWN

Leslie Ennever

Introduction to my research will discuss about a Tuskegee Airman, Roscoe Brown. My research will establish about his early lifestyle growing up and the love he has for aviation. In this study I will also go into details about how Mr. Brown pursues his dream in the aviation field and the hard work he does to make himself a better person. This investigation will have additional information about Mr. Brown present life today and the recommendation he is issuing to the younger generation about going to school to become someone significant in life.

ROLES OF GLOBAL FINANCIAL INSTITUTIONS IN THE ECONOMIC SECTOR

Satjeet Kaur

The roles of global financial institutions are establishments that focus on dealing with financial transactions overseas such as investments, loans, deposits, etc. These financial institutions serve as intermediaries and perform an important role in the global economic development. The stakeholders of these public institutions are the governments and political figures themselves. A strong well-functioned financial sector is crucial for any economy, it determines the upturns and downturns that drive the economic status of a country. Many global issues arise within nations and they require International Corporation as well as political influences. Today, The United Nations and the International Financial Institutions are a key global institution and play an important role to mobilize and resolve issues within a nation. As series of events has created a financial boom within centuries and nations where these financial leaders have suggested reforms by setting regulations based on trend analyses over the years.

USING RADIO FREQUENCY IDENTIFICATION TECHNOLOGY TO IMPROVE CUSTOMER SAFETY AND SECURITY: A BAGGAGE HANDLING PERSPECTIVE

Shayan Khan

The Federal Aviation Administration (FAA) has two mandates that seek to promote commerce and improve safety in the field of aviation. This research aims to look at Radio Frequency Identification (RFID) tagging technology and assess the use and potential of this technology in airports. The research is supported by an Organization Risk Management (ORM) assessment and expert opinions to provide
evidence of its effectiveness. Expert opinions show that one of the most common problems faced by airport and airline professionals is baggage handling and associating bags with its true owners. A number of measures are used to determine the viability of the proposed solution and the impact Radio Frequency Identification will have on the overall safety and performance of Airports and airline baggage handling procedures. A thorough reading of peer reviewed literature shows that one of the most common problems the aviation industry faces is the lack of real time traceability of customer baggage. Bob Nygard, Director of customer operations at American Airlines at John F. Kennedy International Airport, has identified that lost baggage has cost the airlines an estimated $10 Million and he has identified the Radio Frequency Identification technology has a lot of potential in terms of improving baggage handling operations. The use of Radio Frequency Identification become a global trend as innovative use of this simplistic technology to solve complex logistical problems and keep track of baggage wirelessly throughout its transit. I have demonstrated an interdisciplinary approach to determine the feasibility of the Radio Frequency Identification technology that can result in a far more sophisticated use of this technology and therefore open new doors to bring Safety and customer service operations to climb to a higher standard.

BUILDING TRUST JUST BEFORE THE TAKE OFF

Yulissa Menendez

Trust is the heart of all operations in the Aviation Industry. In aviation we have to trust people with our lives and safety. We have to trust air traffic controllers to keep airplanes from colliding. We have to trust mechanics to keep aircraft's airworthy and we have to trust that the pilot in command has knowledge, skill, and experience to get passengers to a destination of their desire in a safely manner. This research will focus on defining honesty and dishonesty and exploring how sensitive trust is to the aviation industry. This paper will discuss the importance of trust and the levels of trust to ensure that the operational goals are being achieved. As well as looking at what employees said they would or would not do. Since the aviation industry is constantly growing in technology, this paper will focus on the reliability on the equipment we use for our daily activity for example, the autopilot during mid flight. Everything would be in vain if we did not have trusting passengers. Without trusting passengers there would be no business for commercial aviation. When the weather is good and everything goes well we forget about trust because it is that easy but when our stomach and hearts fall during turbulence we recall the trust we have on our pilots, air traffic controllers technology to communicate to the ground and so many other components that take to operate a flight.

THE IMPACT OF DeregULATION

Yulissa Menendez

Without any doubt after President Jimmy Carter signed the Airline Deregulation Act in 1978 the Aviation Industry went through a drastic transformation. The airline
industry today is very different than how it was prior to Airline Deregulation. Formerly, the Civil Aeronautics Board (CAB) regulated which routes the airlines could fly and the price the airline could charge the passengers. When the Airline Deregulation Act became a law the Civil Aeronautics Bored could not regulate the air routes the airlines selected, they could not regulate the airfares the airlines charged, the quality of service and the flight schedules. Today the passengers are who decide what and how much they want to spend therefore they control the levels of service and price in the airline. The purpose of this research is to describe how the airlines operated prior to deregulation and analyze the changes in airline operation due to deregulation. This research paper will also describe the incentives to deregulate the airlines, expectations for deregulation and the problems after deregulating the industry. Furthermore, describe achievements and several failures deregulation has had.

AVIATION SECTOR AND ITS ECONOMY DEVELOPMENT IN UNITED STATES

Karimot Olaleye

The laws implemented in aviation industry have increasingly grown towards the development of safety and security of United States. However, this development has brought about elevating the airline business with new technology in Air-ticketing and airplane reconstruction into creating more space in the aircraft for passenger comfort. Apparently, the industry has been looking forward to expansion in every sector of aviation from Law Enforcement, Managerial sector, Flying and Air traffic Control etc. Over the years, the aviation industry has been divided into three major parts; General Aviation, Commercial Aviation and Military Aviation. General aviation has fought tremendously against terrorism to secure safety and security in the country, as it takes the largest part of aviation operations with minimum requirements unlike other parts of aviation industry that generates more revenue. Commercial Aviation helps generates revenue to create more infrastructure that promotes the country economic growth, while the Military part of aviation industry serves as the keychain to security and safety to United States nation. By doing this, the aviation industry transform in cooperating with the law enforcement agency to reduce monopoly businesses by abiding to rule and regulations of the FAA (Federal Aviation Administration) and guidelines of IATA (International Air Transport Association). Every parts of aviation industry has significantly contribute some variables to the economy development of United States, either generating revenue, implementing rules and regulations for security, and innovations of new technologies.

THE ROLE OF INFORMATION COMMUNICATION TECHNOLOGY IN THE AVIATION INDUSTRY

Amanda Spruill

This research examines the significant role of Information Communication Technology (ICT) in the Aviation Industry. The Aviation Industry is one of the most vital industries in the world and the use of technology systems allows it to run
This research focuses on the different areas that ICT is involved in during the everyday travel process. Using numerous amounts of found sources, ICT’s role in air travel process is explained; highlighting important steps in the process. These steps start at the time a flight is purchased, continuously to the landing of the aircraft. Each air travel process is broken down and the significance of ICT is elaborated upon. This research shows that without the use of modern Information Communication Technology, the Aviation industry would be dysfunctional.

NEXTGEN AIR TRANSPORTATION
Michael Stankiewicz
The air transportation industry is the leading United States economic vehicle and holds the worlds greatest manufacturing companies that provide for airline businesses. We also manage one of the most complex air transportation systems worldwide with an average twenty-three thousand flights taking off and landing in a single day. However the industry is still constantly faced with late flight arrivals, aircraft turnover delays, cancellations and unsatisfied customers. Currently the United States Federal Aviation Administration is teaming with National Aeronautics and Space Administration to improve the way flight operations are being monitored and controlled with the introduction of Next Generation Air Transportation, or simply NextGen. This technology will change the way flight operations are carried out and I will examine how exactly that is being done. I will examine some of the United States outdated, but still utilized Air Traffic Control systems and see what type of systems are being developed to replace them. I will also discuss the monetary value associated from such a major switch, the issues that may arise with this new technology, and how exactly this NextGen technology will change the industry and environment for the better. I will examine how the global airspace system will be affected by this change and how the United States plans of sustaining such a technologically advanced air transportation system fit for the future.

THE IMPORTANCE OF EFFECTIVE COMMUNICATION IN AVIATION
Michael Stankiewicz
The aviation industry relies on communication between employees in order to perform safe and successful aviation operations because vital information is in constant exchange in this industry, especially between pilots and Air Traffic Control, effective communication could not be more important. This essay will bring to light what exactly it means to communicate effectively and efficiently and how to do it in different ways including speech and writing. We will continue to discuss the importance of communication in the aviation industry and what ways it affects operations in the field. This essay will also discuss the human and mechanical factors of aviation accidents and how effective communication is a means of preventing problems from occurring. We will discuss some accidents and incidents that have occurred in the past and perform case studies that investigate
the communication errors that caused them and what measures have been taken to ensure more effective communication. Furthermore, this essay will also discuss the remedies and solutions that have been implemented from past accidents and perform an overview of current measures the aviation industry and the Federal Aviation Administration have taken to ensure proper communication among employees and flight crews. Finally, we will discuss what are some future technologies that will help perform more effective communication and what plans are being written to prepare for situations that require communication.

AMERICAN AIRLINES: WORLD’S LARGEST AIRLINE
David Torres
This powerpoint shows the analysis of American Airlines and how it became the world's largest airline. Also, the review on how merging with U.S airways resulted for American Airlines and the airline industry as a whole. Gathering the results of this analysis, I concluded the impact of airline merging and the power of American Airlines in the airline industry. Data and articles was collected and used to show the performance of American Airlines as will for the airline industry.

TWA CRASH OF 1996
Jennifer Valencia
On July of 1996, Trans World Airlines Flight took hundreds of lives. The crew, which accounted for two pilots a few engineers and 14 flight attendants along with two hundred passengers killed. TWA flight 800 with destination to Rome from John F. Kennedy Airport, New York crashed twelve minutes after taking off. The National Transportation Safety Board report concludes that the fire started does to the ignition of the center wing tank by faulty wiring. One conspiracy theory documented that a missile form the US Navy brought down the plane. In this presentation we will discussed both theories and respective proof and compared them to achieve a personal conclusion.

IMPACT OF E-TICKET IN AVIATION INDUSTRY
Jihyun Yoon
Development of internet brought huge changes in general; especially aviation industry is one of the most impacted one. One of the most important outcome of the development of internet is Electronic ticket (E-ticket). This research will point out how the invention and the development of e-ticket impacted and reshaped aviation industry
Biology (BA-BS)

METAGENOMIC ANALYSES OF MICROBIAL COMMUNITIES FOUND IN JAMAICA BAY
Trevor Bridgepaul & Kimberly Sarmiento
Jamaica Bay is an important habitat complex in New York City with rich natural resources including wildlife and plants. Soil microbial communities were extracted from three different marsh sites in Jamaica Bay to identify the function of each community. The three marsh sites include two restored sites (East Egg (EE), Yellow Bar (YB)), and one unrestored site (Black Bank (BB)). Metagenomic analyses were used to identify the different species present and to infer the functions for each community.

METAGENOMIC ANALYSIS OF PROTEIN CODING GENES OF EAST EGG SOIL VS. YELLOWBAR SOIL
Maywattie Durbeej & Laurence Roberts
Metagenomics is the study of genetic sequences that have been obtained from environmental samples. In this study, we used soil from Jamaica Bay, particularly East Egg and Yellow Bar regions. By mapping our genetic data to reference databases, we are able to identify bacterial taxa and to infer functional proteins that are present in our soil samples. This information will shed light on the soil's taxonomic and functional diversity. To conduct this study, we isolated DNA from the soil using PowerSoil DNA Isolation Kit Protocol, obtained a sequence and BLASTed it against a reference database. We then utilized R Studio software to analyze the data to obtain species diversity metrics.

THE METAGENOMIC ANALYSIS OF JAMAICA BAY
William Gangaram, Ameer Hassan, Fatema Ali & Gabriel Rubinov
Metagenomics is a recent and efficient method to study and allow exploration of microbial communities including their compositions and functions. It is a quick and advanced technique that allows studying of microbial genes obtained from the environmental sample. Using soil samples from the areas Yellow Bar and East Egg in Jamaica Bay, New York, we used metagenomic analysis to obtain species richness, species diversity, and compositional similarity for both areas. Three soil samples from each site were obtained and isolated for their DNA. PCR was done to amplify the 16S region among the samples to identify the species found in the soil samples.

METAGENOMIC ANALYSES AND COMPARISON OF JAMAICA BAY’S SOIL MICROBIAL COMMUNITIES
Larissa Jean & Magno Mazzi
Jamaica Bay is a large natural area within New York City, which provides habitats for diverse ecosystems, and contains various natural resources. Since most of these
ecosystems depend on soil microbes, which are the dominant agents of life cycles, our experiment is focusing on examining and comparing the soil microbial communities by sampling three different marsh sites named East Egg (EE), Yellow Bar (YB), and Black Bank (BB). In order to investigate the diversity and function of these microbial communities, metagenomic analyses with the microbial DNA extracted from these sites were used.

LABELING CELLULAR STRUCTURES IN ORDER TO VISUALIZE THE FORMATION AND REMOVAL OF UNFOLDED PROTEIN AGGREGATES
Adriana Mediavilla, Mercedes Polanco, Adriana Mediavilla & Lesley Emtage
Aggregates of unfolded protein are the hallmark of many neurodegenerative diseases, including Alzheimer's Disease, Parkinson's Disease and Huntington's Disease (HD). We are interested in the mechanisms of aggregate formation and removal. For our studies, we use mutant Huntingtin protein expressed in the model organism S. cerevisiae (baker's yeast). Mutations in the Huntingtin protein that expand a stretch of glutamines in the N-terminal region cause the mutant protein to become inherently unstable and spontaneously unfold. Unfolding leads to large aggregates, seen as inclusions of dense protein inside cells. In humans, huntingtin protein (Htt) is expressed throughout the body and brain. Mutant Htt causes HD, a neurodegenerative disease in which striatal and cortical neurons are selectively lost. Yeast cells, like most human cells, tolerate mutant Htt aggregates without significant toxicity. Our ultimate goal is to characterize how cells successfully process and remove unfolded proteins and protein aggregates. We are tagging proteins with a red fluorescent reporter protein, mCherry, in order to visualize cellular structures that may play a role in determining the fate of unfolded protein aggregates. Preliminary observations lead us to believe that aggregates are dynamic, and may possibly move between locations in the cell. Our goal is to visualize Htt aggregates over long periods (12 hours) in individual cells, in order to understand the dynamics of aggregate maturation and removal.

TESTING ENVIRONMENTAL DNA TECHNIQUES TO ASSESS AMERICAN EEL POPULATIONS IN THE BRONX RIVER
Jessica Miranda, Elizabeth Alter & John Waldman (Queens College)
Conservation of species is important as we have seen many go extinct in the last years. One way to preserve species is to use their environmental DNA (eDNA), DNA that is left behind from shedding skin, hair, fur, and secretions, to determine their habitat and population size. eDNA can be collected from water, soil, or feces, and analyzed using molecular techniques. Applications of eDNA have been tested in mesocosms, closed water systems, and detection of invasive species. To determine unknown habitats of species in open water systems using eDNA techniques, first a known habitat and species is used to find how water flow impacts eDNA. American eels in the Bronx River, an open water system, are used in this experiment. The habitats used are from a previous study by Richard DeMarte, "The Effects of Dams on Densities and Sizes of American Eels in the
Bronx River. Water and sediment samples are taken from the known site, and from upstream and downstream. The use of PCR and qPCR on eel eDNA will help in determining the test sensitivity in estimating the density of eels in the field and lab samples compared to the known density, and if more eDNA can be found in sediment or water. If these eDNA molecular techniques prove to be useful, then these techniques may be applied to other species in other water systems, and help in the conservation of native species in other water systems.

EVIDENCE OF π-STACKING INTERACTIONS IN THE SELF-ASSEMBLY OF HIAPP22-29
Shukantha Zubayer, Ruel Desamero & Adam Profit
Human islet amyloid polypeptide (hIAPP), also known as amylin, is a 37 residue peptide hormone that is stored and co-secreted with insulin. hIAPP plays a pivotal role in type 2 diabetes (adult onset diabetes or diabetes mellitus) and is the major component of amyloid deposits found in the pancreas of over 95% of patients afflicted with the disease. The self-assembly of hIAPP and the formation of amyloid is linked to the death of insulin producing cells and hyperglycemia. One potential avenue of therapeutic intervention is the development of amyloid inhibitors that prevent the self-assembly of hIAPP. The 22-29 region of hIAPP, which corresponds to the sequence NFGAILSS, is known as the "amyloidogenic core" and has been demonstrated to self-assemble on its own. Our laboratory is pursuing an electrostatic repulsion approach to the development of inhibitors and modulators of hIAPP self-assembly. It is hypothesized that introduction of a series of charged amino acids to the N- or C-terminal of the NFGAILSS sequence may produce compounds capable of arresting amylin aggregation. These compounds will be prepared by solid phase peptide synthesis methods and their ability to inhibit hIAPP aggregation characterized using kinetic aggregation assays, vibrational spectroscopy and transmission electron microscopy.
AROMATICITY AND AMYLOID FORMATION: EFFECT OF Î2-ELECTRON DISTRIBUTION AND ARYL SUBSTITUENT GEOMETRY ON THE SELF-ASSEMBLY OF PEPTIDES DERIVED FROM HIAPP22-29

Shukantha Zubayer, Ruel Desamero & Adam Profit

The structural importance in the sequencing of certain amino acids, such as those found in the peptide, Human islet amyloid polypeptide, also referred to as amylin, can greatly vary the production of Î2-cell killing agents, amyloids, involved in the pancreas. This 37-residual peptide has a specific region of interest found in the 22-29th peptide known as NFGAILSS, contains a phenylalanine at the 23rd position, which has been subjected to great scrutiny over the interaction it plays with the rest of the peptide, in causing amyloid aggregates to formulate. Due to the aromaticity that phenylalanine possesses in the side group, it creates a hydrophobic environment, which can help promote the pi electrons to interact with electron donating groups, EDG, in amylin to create further stability of these aggregations through resonance and inductive effects. These pi interactions cause the connections between different aromatic groups in the form of pi stacking, which causes the positive charges from the dipole of the C-H bond to interact with the negatively charged electron clouds that arise from these interactions. In order to prevent such aggregations from occurring, adding on an additional chain of amino acids with highly polarized groups, could facilitate the inhibition of amylin from forming aggregates, preventing the death of Î2 cells. This lab will demonstrate the interaction of the synthetically produced amylin, with polarized groups attached at the C terminal end of the peptide, and charged groups placed on the N terminal. With the addition of these charged groups at the end of the terminals, it will promote great steric hindrance and repulsion from these newly attached groups, which will prevent amylin from creating these amyloid fibers. The main amino acids that will be used to attach onto the specified sequenced of NFGAILS, will be lysine, and glutamic acid, which was observed with Fluorescence and Raman spectroscopy.

Biotechnology (BS)

FINISHING THE DISTAL REGION OF THE DOT CHROMOSOME OF DROSOPHILA ELEGANS USING CONSED

Fahmida Aktar, Soe Min Su & Gerard McNeil

Bioinformatics is an interdisciplinary science that practices the use of information technology for analyzing genomic information. The fourth chromosome of Drosophila species has a unique distal region that has both heterochromatic and euchromatic features. Previous research has indicated that this region contains 80% repetitive elements. This in-class research was performed as a collaboration between York college and Genomics Education Partnership sponsored by Washington University in St. Louis, HHMI & NSF. Our research group aimed on finishing a 100kb distal portion of Drosophila elegans (Project name: 21
DELE8417002) to high quality sequence with 99.99% correctness. This region was sequenced originally by Roche/454 and then Illumina Next Generation sequencing platforms and aligned into a hybrid assembly using software tool named Consed. As finishers we looked at the regions with high quality discrepancies and regions with low depth coverage for assessing the errors with mononucleotide runs being incorrectly inserted in the consensus sequence because of errors in 454 reads that had incorrect numbers of bases caused by its inability to read bases in Homopolymer runs. We found 279 highly discrepant positions, 72 of them contained mononucleotide runs and 38 positions had incorrect numbers of bases and needed correction. We used Illumina sequence reads number of bases in those regions to correct the sequence. We also found 27 low quality regions and 8 of which were caused by mononucleotide runs. We also tagged regions that did not have enough reads in the hybrid assembly to correct the consensus sequence. We also found one region with polymorphism tagged it and no gap was found in the distal portion region and we did not require creating primers for additional data.

TARGETING LAMP1 WITH ANTI-LAMP1 USING IMMUNOFLUORESCENCE TECHNIQUE
Mandiola Lika, Khadijah Sinclair, Nelza Pierre-Louis, Mohammad Shari & Ivica Arsov

Immunofluorescence is a method that uses fluorescent-labeled antibodies to identify specific antigens of interest. It is a standard method used in clinical settings as well as in scientific research. In the clinical setting is used to identify cancer cells and it is a remarkable technique in investigating the autoimmune disease. Additionally, in scientific research is used to aid in localizing and quantifying the expression level of protein of interest. There are two types of immunofluorescence: direct and indirect. In this experiment, we used a direct immunofluorescence labeling method to identify intracellular localization of the LAMP1 protein. Using fluorescently-labeled anti-LAMP1 antibody, LAMP 1 was found to be localized in the membranes of vesicle-like structures in the cytoplasm. This is in agreement with other studies indicating that LAMP1 is localized in the lysosomal membrane.

SEQUENCE IMPROVEMENT ON THE FOURTH CHROMOSOME OF D. FICUSPHILA
Tachei Mangol, Arely Mayen & Gerard McNeil

The fourth, dot chromosome, of Drosophila melanogaster is almost entirely heterochromatic. However, a distal 1.2 Mb portion consists of approximately 80 genes that are transcriptionally active, making it also euchromatic. This research is based on a collaboration with the Genomics Education Partnership (GEP) along with other universities. The research problem we are dealing with is based on a comparative analysis on the dot chromosome between the whole genome sequence of D. melanogaster and D. ficusphila. The aim is to understand the characteristics of the genes on the unique heterochromatic, euchromatic region of the dot chromosome, and its evolutionary difference from D. melanogaster. The
analyses of whole genome sequences occur in three steps, preliminary sequencing where DNA is sequenced; finishing where improvements are made to the sequence; and annotating where important functional parts of the sequence are identified. Our research is based on making improvements to a 40 kb sequence of D. ficusphila called DFIC7360001, using a program called Consed. Roche 454 and Illumina are next-generation sequencing methods used to build the consensus in Consed, in a hybrid assembly which holds Illumina more credible than 454. Consed is the program where finishers enter to fix the genome and work on completing the genome. We as finishers fixed the mononucleotide runs (MNRs), the low quality regions and the gaps in a region of 40 kb. After inspecting all these problems within the consensus we found 18 MNRs, but only change 7 bases based on Illumina reads. For the low quality regions we encountered 8 regions where we search for string for all the four bases and we concluded that the consensus was correct based on the few Illumina reads available. Lastly the one gap we found we preceded into finding the best suitable primers to obtain more reads for that location.

SEQUENCE IMPROVEMENT OF THE DISTAL 1.2 MB PORTION OF DROSOPHILA FISCUSPHILA FOURTH CHROMOSOME

Olayinka Oladipupo & Gerard McNeil

The Genomic Education Partnership (GEP) is a program sponsored by Washington University, HHMI and NSF. The program is designed to expose undergraduate student to genomic research. Bioinformatics is an interdisciplinary field that is used to analyze and interpret biological data. Bioinformatics has become more critical to modern biological research, particularly in whole genome sequencing. The fourth chromosome is an amalgam of euchromatin and heterochromatin region. Next generation sequencing was used to sequence whole genome. Finishing and annotation of these sequences make it possible to study how the euchromatin region remains active and understand the evolution of the euchromatin region by comparing the euchromatin region of several Drosophila species using the D. melanogaster genome has a reference. The GEP project has finished and annotated some Drosophila species. Example of such species include D. erecta, D. ananassae. Drosophila ficusphila will be finished and annotated. 100k sequence from Drosophila ficusphila named DFIC7494002 was improved. The sequences obtained were from two different sequencing platforms: 454 pyrosequencing and illumina. A hybrid sequence was used because the 454 sequence which was initially used had some limitations primarily the high quality discrepancies within mononucleotide runs. Illumina sequencing was used to help address this problem. In other to finish this sequence, a software name Consed was used. The sequence obtained were successfully finished by resolving base errors at mononucleotide runs, resolving gaps and low consensus quality regions and also tagging polymorphisms.
LABELING CELLULAR STRUCTURES IN ORDER TO VISUALIZE THE FORMATION AND REMOVAL OF UNFOLDED PROTEIN AGGREGATES

Mercedes Polanco & Adriana Mediavilla

Aggregates of unfolded protein are the hallmark of many neurodegenerative diseases, including Alzheimer's Disease, Parkinson's Disease, and Huntington's Disease (HD). We are interested in the mechanisms of aggregate formation and removal. For our studies, we use mutant Huntingtin protein expressed in the model organism S. cerevisiae (baker's yeast). Mutations in the Huntingtin protein that expand a stretch of glutamines in the N-terminal region cause the mutant protein to become inherently unstable and spontaneously unfold. Unfolding leads to large aggregates, seen as inclusions of dense protein inside cells. In humans, huntingtin protein (Htt) is expressed throughout the body and brain. Mutant Htt causes HD, a neurodegenerative disease in which striatal and cortical neurons are selectively lost. Yeast cells, like most human cells, tolerate mutant Htt aggregates without significant toxicity. Our ultimate goal is to characterize how cells successfully process and remove unfolded proteins and protein aggregates. We are tagging proteins with a red fluorescent reporter protein, mCherry, in order to visualize cellular structures that may play a role in determining the fate of unfolded protein aggregates. Preliminary observations lead us to believe that aggregates are dynamic, and may possibly move between locations in the cell. Our goal is to visualize Htt aggregates over long periods (12 hours) in individual cells, in order to understand the dynamics of aggregate maturation and removal.

Business Administration (BS)

HOW HAS CREDIT CARD FRAUD AFFECT BUSINESSES IN THE U.S

Adam Burrell

I work at a Stop & Shop Supermarket, and it always annoys me how people come in, trying to pay for items with their 10 cards. The main thing I noticed was how they try to buy the Visa $500 gift cards. My annoyance turned into intrigue, and I wondered, how do credit-card scammers affect a business. Online and Counterfeit fraud takes up for 82% of credit card fraud in the U.S. Credit Card fraud not only affects families and banks, but it also has an affect on the businesses themselves. The purpose of my project is to explain what credit card fraud is, but to also analyze the long-lasting effects of credit-card fraud on businesses.

EFFECTIVENESS OF THE PERFORMANCE EVALUATION SYSTEM

Chandani Chandarbali

A well-organized performance evaluation system is a crucial component in any organization. It serves as a driving motivation to both the employee and employer within the workplace. While measuring the overall performance and contribution of employees on the job, the end goal is to instill an unstoppable, driven workforce surpassing the norm. Similar to many other business structures, performance
evaluation systems are recurrently seen as time consuming therefore various practices consisting of physicians for example, do not make this a priority. With the completion of the proper components such as developing a standard evaluation forms, identifying standard performance measures, setting guidelines for feedback, create disciplinary and termination procedures, and maintaining an evaluation schedule, performance evaluation systems pave the way for an effective and efficient working environment. The significant outcome of performance evaluations is providing effective and balanced feedback to employees to improve the work environment from within. Once these components are created and firmly established, setting a consistent evaluation schedule completes the system. Once administered fairly, this system promotes staff recognition and upgrades communication skills within the organization. Moreover, as many other organizations can agree, the benefits of instilling performance evaluation systems in companies exceed the challenges by far.

CROSS CULTURAL MANAGEMENT TRAINING

Sade Hurley

This research paper will provide a clear understanding of what workplace culture is, why it matters and how it impacts an organization. It will point out how cross culture can define an organization and distinguish it from others. Most importantly, it will illustrate a clear picture about how much an organization can benefit once cross culture is implemented in the workplace. Articles that show the role that the Human Resource Department has within cross cultural organization in an organization will be included. In addition to that, information on how this department creates efficiently cross cultural training programs. Lastly, it will show the differences of cross culture throughout the years, especially in the workplace and within organizations overall.

THE IMPORTANCE OF AVIATION IN THE US ECONOMY

James Jimenez

Aviation today is an essential part of the US economy for the opportunities it creates and the services that are provided. The product of aviation is not the flight, the seat, or the onboard services but "time." Aviation is in the business of transporting cargo and people which has the ability to expand the US market. Aviation saves time for many businesses that needs packages delivered or a person at a specific location. This presentation will mention what factors of aviation contribute to US economy with examples of events that occurred in the past such as the 9/11 attacks, the bailout of the airline industry, air traffic control strike of 1981 and the beginnings of aviation to what it has become today. Airlines such as Southwest, American, Delta, and Jet Blue will be presented and show the effects that they have on the market especially the effect of low cost carriers. Not only will this refer to airlines, but aviation in the cargo industry such as FedEx and the US postal office. This will also answer what the aviation is in relative to the Gross Domestic Product (GDP) of the US economy. This will refer to governmental laws
that surround aviation referencing the Federal Aviation Administration (FAA), the Department of Justice (DOJ), and the Department of Labor (DOL). Will also talk about how aviation is in today’s economy and what is expected of aviation in the future.

MINIMUM WAGE AND ECONOMIC DEVELOPMENT IN NEW YORK

Shanae Johnson
A minimum wage is the lowest remuneration that employers may legally pay to workers. The federal minimum wage has been in effect since The Great Depression, although the levels have changed. Recently, it has become a talked about issue in the news, especially in New York with the proposed raised wage increase of $15. I will discuss the effect minimum wage has on the U.S. economy over the years and the advantages and disadvantages of the increase in New York. The minimum wage is currently $9 in New York. If the minimum wage is raised to $15, how will it affect those industries where most low-income workers are employed? Will their jobs be replaced by technology? Studies show that raising the minimum wage would result in more money for low-income workers and increase the economy.

HUNTS POINT FOOD DISTRIBUTION CENTER AND IT'S CONTRIBUTIONS TO NEW YORK CITY'S ECONOMY

Stephany Llarch
The purpose of this research is to discuss the importance of Hunts Point Food Distribution Center to New York City and the local economy. The paper examines its contribution to New York revenue, employment creation, and the multiplier effects of Hunt Point Food Distribution to the economy at large. It also discussed some of the Hunts Point Food Distribution's challenges and opportunities for growth.

HEALTHCARE MANAGEMENT AND DIVERSITY IN HEALTHCARE

Ijeoma Nwosu
With the growing momentum toward hospital quality reporting by public payers, hospitals face increasing pressures to improve their medical record documentation and administrative data coding performance and management practices. Numerous literature has been put forth suggesting various strategies for improving the performance of professional organizations. In doing so, it has emphasized the importance of creating effective structures for knowledge sharing and organizational learning management. Within any population there are subgroups. These subgroups can be defined by race or ethnicity, socioeconomic status, gender or geography. In practicing population-focused health care, practitioners work to eliminate inequalities within these subgroups by proactively deciding on treatment based on the overall health of the community, regardless of any one person’s subgroup status. In doing so, they promote the elimination of any disproportions between subgroups thereby bringing the population together. The purpose of this
research is aimed at finding ways of creating more awareness about the more unpopular subgroups within the healthcare system in the United States.

FOREIGN DIRECT INVESTMENT IN INDIA

Carla Pacheco
Foreign Direct Investment is the immediate investment into a business in a selected country by either a company or an individual from a different country. This study is focused on FDI, primarily targeting India. In 2015, India had a drastic change in their FDI, where it nearly double, shocking the world, how such a poor country was able to take the lead as the primary destination for FDI. India took out China and the United States, which have always been the two countries to be on top for foreign businesses to invest in. India has been working on their FDI since 1991, when the prime minister during that time decided to focus more on FDI with the hope that it might help the country’s economy. Many data and charts show us how India surpassed both China and the U.S.A in 201, and the impact it is having on their economy, both good and bad. Although FDI has increased in India, it isn't always a good thing for the country, it brings consequences with it such as the impact it has on the retail market; like the insufficient number of jobs, farmers who don't get a benefit from FDI, it might also cause inflation and lower monetary value. It is hoped that this study not only informs but also makes people aware of the importance of FDI, specially the importance of investing in countries that are in need on it, but also note the consequences that it might bring to such country.

PERFORMANCE MANAGEMENT AND MEASUREMENT IN HUMAN RESOURCES

Beatrice Rice
Performance Measurement in Human Resource is very important for management to study. Performance appraisals can show the extent in which an employee is implementing within a company. Performance appraisals comes in many different forms, for example a checklist that lists if an employee has met the companies expectations. Although performance appraisals are used to measure exact performance from employees, there are many issues that performance appraisals incur. Some of the issues that can affect the quality of performance appraisals are: Management being biased towards employee, discrimination, unethical behavior from management. In this research, study show that “Evidence of potential bias in performance appraisals come from a variety of sources, Bretz and Milkoviz (1989) find that supervisors often provide performance ratings higher than those warranted by employee performance.” This proves that there are many issues in the performance appraisals.

DIVERSITY IN THE WORKPLACE

Atima Sarkar
The society people live in is based on a diverse culture. Diversity is the dimension of ethnicity, gender, sexual orientation, socio-economic status, age, physical abilities, religious beliefs, political beliefs, or other ideologies. Diversity is about
the acceptance and respect of the uniqueness contained within each individual in the society. Diversity in workplace brings advantages in a corporate by increasing creativity and problem solving, increasing productivity, market share, and can increase adaptability in the system for both employers and employees. Taking full advantage of diversity in the workplace does bring some complications and challenges within workers. The challenges include communication issues, resistance to change, failure to respect others, discrimination, competition rather than teamwork, and increase in cost of training. In order to prevent challenges, the government and corporations apply laws and regulations. Some of the laws include Title VII of the Civil Rights Act of 1964, The Equal Pay Act of 1963, The Civil Rights Act of 1991, The Age Discrimination in Employment Act of 1967, and The Americans with Disabilities Act of 1990. People should accept a diverse workplace and take advantage of the uniqueness of each individual to make a successful corporation.

IS WHISTLEBLOWING IMPORTANT TO BUSINESS ETHICS?

Maria Seminario

This paper targets whistleblowing- an ethical action if done for the right moral reason and reasoning. I will discuss why organizations should encouraging internal whistleblowing to prevent external whistleblowing, which results in a perilous activity for both, the employee and the employer/company. There is an ambivalent attitude to blow the whistle on a co-worker, boss, or company because it is so strenuous. They both have a legal obligation to report any unethical or illegal practices, and may face retaliation. Or blow the whistle due to the loyalty to one's own integrity, and are consider as "saviors" because they helped implement important changes in the organization. I will argue why it is important that all business engage in ethical behavior to eliminate potential need for whistle blowing. Also, how to eliminate negative consequences for whistleblowers by keeping communication flowing, and developing whistleblowing polices. These are necessary circumstances for the effective management of whistleblowing. Finally, I will discuss the consequences for an organization that does not support those that whistle blow and disobey or fail to comply with organizational ethics.

THE IMPORTANCE OF LOGISTICS ON THE ECONOMY:
THE CASE OF THE UNITED STATES

Duane Senior

The purpose of this research is to understand the importance of Logistics to the United States and its economy, challenges that logistics may face can vary and gauge from a simple flat tire to a natural disaster, which could postpone all logistical planning and hurt the U.S economy. Addressing the importance of logistics to the United States economy, will allows us to understand how logistics works, how logistics operates within the supply chain system an also its economic contributions to the United States of America.
DISCRIMINATION IN THE WORKPLACE
Geeta Timal
Discrimination has been around since the slavery ages and still is an issue in some places. There are many different ways people can be discriminated against. Discrimination also has been an issue in the work environment which makes it difficult for employees and applicants seeking a job to be treated fairly. Discrimination may not be as big of an issue as it was years ago. However, even after the EEOC laws were created there have been signs of unfair treatment in some work environments. This paper talks about some of the main different types of discrimination that takes place in the workplace and the affect it has on employees and applicants. There is a small literature review that shows how people feel and what is been said about workplace discrimination. In addition, this paper discusses the different laws that were created to protect employees and applicants from discriminated against and situations where employees were treated unfair and the results.

SMALL BUSINESS ADMINISTRATION (SBA) AND ENTREPRENEURIAL DEVELOPMENT IN THE UNITED STATES
Melanie Warren
Small businesses in both the developed and developing countries are often regarded as the bedrock for testing entrepreneurial talent and act as catalyst for economic growth. In recognition of this important contribution, the United States government created the Small Business Administration (SBA) to assist and promote small business development and growth. Thus, the paper examines the nature of support and assistance provided by SBA for small and medium enterprises in the United States. We found many small businesses supported by SBA have grown to become multinational companies and also the enabling environment provided by the SBA constitutes the seedbed for most businesses.

Chemistry (BA-BS)
VIBRATIONAL ANALYSIS OF CYSTEINE - COPPER INTERACTION
Michelle Abramova, Ruel Desamero & Jayson Vedad
Alpha-synuclein, a cytosolic protein mainly found in neural tissue, is of great interest to Parkinson’s research as it is a major component of Lewy bodies - the pathological characteristic of Parkinson’s disease. Studies have proposed a cysteine residue coordinating with a copper atom, initiating its aggregation, leading to the Lewy bodies. To confirm a cysteine can complex with a copper, both computational and experimental analysis of cysteine and copper solutions were executed, via DFT/B3LYP calculation and Raman spectroscopy, respectively. With the addition of metal to the cysteine solution, the S-H mode at 2690 cm-1 disappears and S-H mode at 1063 cm-1 shifts to 1044 cm-1-confirming thiol-metal complexing. Should this trend be observed with vibrational analysis of the alpha-
synuclein, its aggregation may be confirmed as being caused by same cysteine-metal coordination as observed.

**USING DIFFERENT COMPUTATIONAL AND EXPERIMENTAL SPECTROSCOPIES TO DEMONSTRATE PHOSPHATE AND METAL INTERACTION AT DIFFERENT PH’S**

*Roksana Azad, Mohamed Muhaned, Pamela Lebrón & Ruel Desamero*

Phosphate groups are unquestionably one of the most important components of living organisms, such as DNA, RNA, and NADP+. The negative charge of the phosphate interacts with protein (such as histones) and metal (such as K+, Mg2+, and Fe3+) in the biological systems. It is important to stabilize the structure of nucleic acid such as RNA and DNA and also plays important role in protein function and regulation. Given its importance in stabilizing the fundamental units of life, it is important to understand and monitor how phosphate groups interact with essential metals of the body. This project was established in order to observe the interactions between the metal and the nucleic acid. Two types of interactions are mainly discussed, pH effect and electron density substitution and how the concentration of the metal affect the change in interaction. Probing these interactions has been proven to be difficult to put in use in nucleic acids. Therefore, simpler system was employed to mimic the interaction of phosphodiester bonds with metals ions. This project focus was to build a model for this interaction by using both computational and experimental Raman and Infrared Spectroscopy. These experimental results combined with theoretical analysis, yield meaningful information about the interaction of phosphates with key metals. In both pH 4 and 8, the shifts in phosphate modes were monitored as the concentration of metal was increased. The results also showed that metal phosphate interactions are stronger for higher charged to smaller size ratio metal such as Mg2+. This result directly correlates between both the computations and the experimental results and the concentration of metal is directly proportional to the peak shifts.

**PHOSPHOPROTEOMICS OF HUMAN IMMUNODEFICIENCY VIRUS -1.**

*Manjeet Kaur, Lois Anti, Katerina Murtazaeva, Jennifer Michel, Meyr Yousupov & Pratik Kumar Rathod*

Novel strategies have been developed in the last few decades to counter the viral pathogenesis of HIV-1 in human T cells. My research focuses on post-translational modification of HIV proteins: TAT, REV and NEF and study their biological significance in HIV infection. The investigation requires identification and characterization of well conserved phosphorylated sites in these HIV proteins. This requires running CLUSTALW that provides amino acid sequences of HIV proteins from 12 different strains from which well conserved motifs in these proteins are extracted. Phosphorylation prediction tools such as NetPhosK, GPS and KinasePhos are used to predict potential phosphorylation sites in these proteins in order to predict the specific kinases responsible for bringing phosphorylation on specific
POST-TRANSLATIONAL MODIFICATIONS OF HUMAN IMMUNODEFICIENCY VIRUS-1 PROTEOME VIA PHOSPHORYLATION

Emeka Nnaji, Pratik Kumar Rathod, Lois Anti, Manjeet Kaur, Katerina Murtozaeva & Yousupov Myer

Biochemical research on HIV-1 has revealed many components of the structural biology of the virus. Comprehensive evaluation of phosphorylation of HIV proteins by host cell kinases is, however, lacking. This study aims to identify and assess possible phosphorylation sites in HIV proteins and determine their importance in viral infectivity. The amino acid sequence of HIV protein from 12 different strains of the virus is aligned and inspected for sequence conservation using alignment program CLUSTALW. Phosphorylation predictions of possible phosphorylation sites of the HIV proteins was obtained using phosphorylation prediction tools NetPhosK, GPS, and KinasePhos. In-vitro kinase assays are then run on peptides containing the possible phosphorylation sites and intact HIV proteins and analyzed by MALDI-MS and in-gel and MALDI-MS, respectively, for kinase specific phosphorylation. The biological importance of the phosphorylation sites and phosphorylated protein are finally determine using site-specific antibodies and sequence mutation.

AMYLOID FORMATION OF HIAPP12-18

Harunur Roshid, Gabriela Arias (CUNY Graduate Center) & Kendra Ceci (Queens College)

The formation of insoluble amyloid deposits formed by Human Islet Amyloid Polypeptide (hIAPP) has often been a source of controversy. In order to clarify the misconception, an investigation is ran on 12-18 region of hIAPP, evidence is shown that the pi-electron distribution plays a role in self-assembly of hIAPP. Various peptide analogs containing electron withdrawing groups (EWG) and electron donating groups (EDG) have been synthesized on PHE-15 and characterized largely using turbidity measurements. The unique peptide with various groups are run for approximately two weeks, to measure for aggregation. The aggregation of these peptides indicates the presence of large concentrations of Beta-pleated sheets. To confirm the formation of Beta-pleated sheets, circular dichroism is run with amylin for each of the various groups on PHE-15. The formation of amyloid is inhibited; is caused by various electron-donating groups on PHE-15, whereas electron-withdrawing groups cause aggregation in the terminal end of hIAPP.

CHEMICAL CHARACTERIZATION OF URBAN SOIL IN NEW YORK CITY

Ananta Sarker, Sunwoo Lee (Francis Lewis High School) & Ratan Dhar

This research aims to study the chemical dynamics in NYC parks to understand their soil quality. This study reports the spatial variability of chemical contaminants
in NYC park environment that was obtained from three months summer research in 2015. The study was conducted in two of the city parks: 1) Corona Meadows Park, an intense recreational park in Queens and 2) Kissena Park in Queens. A wide range of elements including RCRA (Resource Conservation and Recovery Act) toxic metals and fecal indicative bacteria (FIBs) in soils were studied. The spatial distribution of fecal indicative bacteria (FIBs) including total coliforms, E. coli and enterococcus was also investigated in these two study areas to understand the microbial fate and transport in the lake environment. The soils were collected from different depths using GeoTech Environmental Soil sampler device and preserved them in the core at 4°C temperature until analysis done for the microbiology. Nitan handheld XRF (X-ray Fluorescence Spectrometry) was used to detect the array of elements in dried soil samples. The data were generated for bulk samples and also for the fine fraction <0.25 mm). The standard reference materials (NIST) were run to maintain the QA/QC of the data. The preliminary data obtained from bulk samples showed elevated level of several RCRA toxic elements in NYC park soils. Higher occurrences of FIBs in soil are very consistent with the elevated level of FIBs in adjacent water bodies.

Computer Science (BS)

ANALYZE CABSPOTTING DATA TO SPARK ON MANHATTAN MOBILITY
MAHMUDUL HASAN
Thinking of network analysis, Mobility takes the first place. This is 2016 and we still can not think without TCP/IP. Computer scientist and researcher communities are working hard to get into a era where we do not have to bounce in between 0s and 1s. We are also a part of this "new era". In this paper, we are going to support our main project "Manhattan Mobility Model," which is the key to a new beginning. We come to consensus about how the mobility trace will look like. We use the Cabspotting Data to design a mobility trace format and write a program that generates a prototype mobility format. We parse the mobility trace to obtain statistics. We write a program to parse the trace and record occupancy differences, trip lengths, contact duration and inter-contact time with given landmarks. We use a graphing software such as Gnuplot, R or anything to Plot the mobility statistics. The main goal of this paper to develop the idea that we can apply and merge the same techniques into the Manhattan Mobility Model.

THE TALE OF TWO CITIES: TOLD BY THEIR TAXI-CABS
MAHMUDUL HASAN
We searched in the data repository of taxi trips provided by the taxi and limousine corporation of New York City and write the tale of the city as told by the taxi passengers. We analyzed distribution of trips, trip distance and trip duration to understand how passengers use Cabs and where they go during peak ours. We then obtained data for San Francisco yellow cabs from the cabspotting project to look
for the tale of this busy west coast city. We find similarities in the two stories. In this work we are interested in comparing and contrasting the two cities. Our main findings are that most trips taken in the peak time are short and when considered as a group, taxi-cabs seem to have a dense presence around transit hubs. There are around 80 taxi-cabs in the 0.1 mile radius of transit hubs during peak hours but 60-70% of taxis stay around the hubs for less than 10 minutes. However, 50% of cabs typically return to the same hub in less than 36 minute. The individual and group mobility characteristics are useful in several disciplines ranging from urban planning to wireless network infrastructure placement.

Economics (BA)

HOW INTERNING OPENED MY EYES TO A BRIGHTER FUTURE

Joshua Cabrera

The decision of choosing a career takes more than learning and having a 4.0 GPA to figure it all out. When you apply for a job, you potentially want to hold a position for a safe amount of time or enough time for you to move up the ladder. Most college students like myself struggle with the idea of choosing the wrong major and believe they will be miserable and regret having the job they may apply for in the future. I myself as a student started to see how my academics and social life were being affected my freshman year in college when I had zero to no idea on plans for the future. After failing my major class my first semester my eyes finally opened and I decided to put more effort into my studies in order to achieve higher grades. Through my ups and downs during my college years so far, I have learned that internships can prove to be quite helpful. As they provide you with a view of what you should expect in the near future. One of the many advantages of interning is that you are given the chance to connect with different people as well as develop new/old skills. As I interned during my freshman year as a life insurance agent for New York Life, my sophomore year as relationship intern for the ICM team at Dealogic, I developed my communication skills. Late last year I was offered to intern at Complex Magazine and 5 months into this internship I seem to have finally found the right place for me. Although some questions came to mind at first which I am slowly figuring out. What does my current internship at complex offer me that will help me decide if working here is what interests me? Would a job at a place like complex be the right fit for me? I am confident that with my diverse experiences in various internship fields, I can provide knowledge to students, with finding their future career paths. Specially for those students who are undecided or continue to struggle with the commitment that is picking a major to study.
English (BA)

FROM DESDEMONA TO BILLIE:  
THE DISCURSIVE POWER OF IDENTITY CONSTRUCTION  

Alexis Haynie  
This project examines the construction and resulting destruction of gendered identities in Djanet Sears' 1997 play Harlem Duet and William Shakespeare's 1604 play Othello. It uses an intersectional analysis of "womanhood" that positions race as the point of deviation from traditional feminist readings of these texts. This project argues that it is not the gender role itself, for black women, but the denial of a legitimized gender role that leads to dehumanization and social death.

THE WOODS  
Irshaad Ishmail  
"The Woods" is a short story about two brothers trying to survive in the woods. Their father takes them to a cabin in the woods as a hide out because they are running from some people that the older brother stole from. The short story is about relationships, man v.s man, and about the brothers surviving in the woods, man v.s nature. The brothers run through the woods after the cabin is ambushed and they suspect that their father died in the Ambush while staying back to buy them time to escape. However, by the end of the story, they realize Pa is still alive, but is being used as bait to lure them into a trap.

THE LIVING CONSTITUTION: IS LOOSE INTERPRETATION KILLING DEMOCRACY?  
Leandra Johnson  
The United States Constitution is known as the guardian of American democracy. The structure of the government, the duties of its leaders, as well as restrictions listed in the constitution are supposed to protect the rights of the citizens and ensure that power is distributed equally. Over the years, however, political scientists, like Robert Dahl and Sanford Levinson, have argued that the constitution is undemocratic. This paper will examine the following undemocratic features of the constitution: the electoral college, judicial review, and congressional power. The electoral college, judicial review and congressional power, have broad stipulations in the constitution. Therefore, the constitution itself is not undemocratic. Rather, the vague language of the constitution has left room for modifications that may not align with the constitution's original intentions. Based on the theory of loose constructionism, interpretation of the constitution is necessary, and it was constructed in a vague manner for that reason. Thus, the seemingly undemocratic features of the constitution are in fact democratic until interpreted otherwise. This paper will argue that the undemocratic features of the constitution are essential because they ensure that no branch of government rules
over the other; thus, these features are necessary to sustain the nation's democracy and ensure stability.

NOT SO DIFFERENT AFTER ALL: DE-EMPHASIZING THE POLARIZATION OF NATIONS

Kevaughn Powell
This paper engages a feminist critique of Jhumpa Lahiri's stories, "Hell-Heaven" and "Only Goodness." It examines the struggle of two Bengali-American daughters to meet certain gender expectations set by relatives, while concurrently trying to assimilate into a preconceived American lifestyle of normalcy. Usha, whose mother's bitter disposition has a direct impact on her rearing, finds a role model in Deborah. Deborah, a "typical American woman" serves as the antithesis of Aparna. Sudha, who plays the role of a supportive older sister, struggles to meet her parents' expectations, and life in America is overshadowed by her younger brother, Rahul's disposition and addiction. Characters within Lahiri's texts tend to polarize cultures by means of association; thus, creating the illusion of several inconsistent binaries within the text. However, Sudha and Usha are actually hybrids of the two nationalities they represent, and the text works against what the characters believe to show how Bengali and American culture are not so different after all.

THE USE OF CODE-SWITCHING IN BILINGUAL SOCIAL NETWORKING COMMUNITIES

Sarah Tattegrain
In this study, I analyze data from Spanish-English bilinguals on public Facebook groups and community pages from East Harlem, NY and Miami, FL who discuss their daily interests from music, fashion, media, and etc. The purpose of this research is to show how bilingual speakers respond to certain topics using different modes of code-switching to start or respond in a conversation. The research wants to prove how code switching is the "awareness that his own mode of behavior is only one of several possible modes, that interpretation of what a speaker intends to communicate depends on the style of communication" (Gumperz, 6). I will examine the ways in which code-switching on social networking serves to integrate two cultures and beliefs. I will show how the semantics of the context is expressed in ways that monolingual speakers cannot control or convey online. This research will show how these users build intimate connections because of this mode. This research will examine the common patterns within social context in regional urban bilingual communities in the U.S., demonstrating how their attitudes reflect linguistic behavior and to enlighten the already existing community about culture.

THE WAYS IN WHICH FEMINISM IS ADVOCATED THROUGH WRITTEN WORKS

Sharon Vega
My research looks at the feminist interventions done by female writers such as Gloria Anzaldúa, Alice Walker, and Jamaica Kincaid and the ways that they
specifically target the gender injustices done to women of color. It looks at how feminism is advocated whether in theory or literature. It explores the portrayal of literary characters such as the protagonist in Kincaid’s "Girl," and the female characters in Jhumpa Lahiri’s short stories. My research questions why feminism is advocated differently by white women and women of color, while also noticing the differences between white female characters and characters of color in feminist literature.

**MAKING INTROVERSION VISIBLE: HOW RACE AND GENDER INFLUENCE PERSONALITY PERCEPTIONS**

*Shantina Washington*

Recent studies on introvert personality focus on understanding why extroversion becomes the normal and ideal personality related to career success in the U.S. while trying to explore the power of introverts in the field of social psychology. These studies seldom bring in gender and race as influential factors in the perception of introvert personality. Even though some researchers try to apply intersectional analysis of race and gender to understanding personalities, their conclusions seem only to reinforce the stereotypes of black men and women. My research project intends to examine how introverted women themselves understand what introversion means, how they understand extrovert as the ideal personality linked to success, and what kind of dilemma women, especially black women, experience by using one on one and group interviews. I argue that although introvert is often perceived as a disorder, people have different definitions. Introversion is often confused with being shy and being anti-social, and being open and being aggressive, and being quiet and being obedient. The stigma associated with introversion does affect people's conflicting perceptions and expectations, which reflect the dominant cultural values in America.

**MENTAL ILLNESS (MANIA, PARANOIA, AND DEPRESSION) IN THE OTHELLO’S: THE RESULTS OF RACISM**

*Jamaar Watson*

Shakespeare's Othello, presents the concepts of jealousy, manipulation, and murder which are the most evident in Shakespeare's play. However, embedded in the shadows of the text the effects of racism in relation to mental illness can be uprooted from the racial conflict between the Othello and other characters. The reality of Othello’s madness was a direct result of the struggle of being a black man in a white society. Djanet Sears' Harlem Duet acts as a social commentary and further evaluation of race in Othello and the societies before her own characters as well. The affects of racism are equivalent to a disease which cripples esteem and the ability to consciously understand human emotions. This crippling creates mental instability rooted in mania, paranoia and depression, which have irreversible effects.
Environmental Health Science (BS)

LESSONS LEARNED FROM STORMWATER SURVEY IN FLOOD PRONE AREA OF SOUTHEAST QUEENS FUNDED BY NYCDEP (NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION)

Joseph Agbato, Monia Salam, Khadija Aslam, Leroy Brown, Sasha Heralall, Natifa Griffith, Marial Suriel, Kofi Halm, Urmi Das, Karen Gustave & Ratan Dhar

Storm water can pose challenges to the City in the form of combined sewer overflows and flooding. Historically, some communities throughout New York City have been prone to flooding. Sections of Queens, Staten Island, the Bronx and Brooklyn, for instance, have periodically faced this problem. In recent years, however, flooding has occurred more frequently than in the past, affecting a broader range of communities than ever. Local topography, including lengthy river and ocean coastlines, dense urban development patterns, the capacity of our aging sewer system and increasingly extreme weather due to climate change are some of the biggest causes. The survey presents a variety of questions to inhabitants of several South Jamaica neighborhoods, regarding the frequency of flooding, sewer back-up problems, and the severity of groundwater issues. We are additionally interested in how homeowners respond when these issues occur. Finally, we gather information about household metrics (gender, years of residency, etc.) as well as their general knowledge of the Department of Environmental Protection (DEP) and the area in which they live. This survey marks the first stage of the Department of Environmental Protection (DEP) Storm water Project, which will provide the DEP with preliminary data about the Jamaica area as well as specific predicaments homeowners are facing. This research primarily focus on the frequency of flooding and groundwater issues. We will be comparing the results from the survey with natural groundwater levels within this area. lastly, the impact of natural mitigation systems in terms of reducing the severity of storm water flooding.

DETERMINATION OF ELEMENTAL ARSENIC AND LEACHABLE ARSENIC IN AQUIFER SEDIMENT SAMPLES OF BANGLADESH

Tabassum Ahmed, Razoana Ferdous & Ratan Dhar

Groundwater aquifer is a principle source of drinking water and irrigation water for billions of people worldwide. Consequently, there is growing public concern about chronic exposure to geogenic contaminants in groundwater that pose a serious health risk to over hundred millions of people in several countries including Bangladesh, India, China, Myanmar, Pakistan, Vietnam, Nepal and Cambodia. In Bangladesh, arsenic (As) contamination of groundwater is threatening both drinking water supply and food production. Rice production in Bangladesh has more than doubled over the last decades to meet the rising food demand of the growing population. Aquifer sediments were collected from two sites of coastal city Chittagong, Bangladesh. Total 30 core samples at 1.5 meter intervals were collected from each site. The samples were packed in Chemplex XRF (X-ray
Fluorescence Spectrophotometry) sampling cups on site and carried to US laboratory to run by the optimized handheld XRF for elemental abundance particularly heavy metals including Pb, Cd, Cu, Zn, As, Fe, Mn. Dry samples were digested with 1.2M HCl at 100oC for 1 hour to detect the leachable arsenic. A digestion procedure was modified and optimized to detect the leachable arsenic in the sediment samples by using Econo-Quick testing arsenic field kits, a product of Industrial Testing Systems. The preliminary results obtained from the depth profile for sedimentary arsenic showed consistency with the groundwater arsenic profile, measured on site by ETS test kits in existing private wells at different depths. Interestingly, this modified method could be used to monitor the arsenic accumulation in paddy field caused by the irrigation with contaminated groundwater. It has great implication to evaluate fate and transport of arsenic in aquifers of Bangladesh and elsewhere which is one of the most important factor in assessment strategy.

AUTOMATED FEATURE EXTRACTION ALGORITHMS FROM MULTISPECTRAL SPACE BORNE DATASETS

Leroy Brown, Sunil Bhaskaran (Bronx Community College) & Ratan Dhar

Many current and future applications in spatial science will require proper management of resources demanded for spatial and temporal information about terrestrial targeted objects acquired from multiple sources. According to the literature, pace of urban development and consequent sprawls demands an analysis of the current spatial and temporal data that can lead to a better understanding of infrastructural needs, land use planning, imperviousness and monitoring of water and air pollution. Tremendous effort has to go into helping to monitor environmental changes in cities that has increasing population growth, which results into the expanding of urban sprawls such as newly develop housing facilities, more denser congestion of traffic, flooding, more commercial business areas that all leads to reduction in air and water quality. Urban environments are also dynamic and undergo rapid physical and socioeconomic changes. These environmental changes can only be accurately study and monitor by using satellite imagery data, which give real time results and provide a view over the area of interest. Managing resources demands spatial and temporal information about terrestrial target objects. The paper describes innovative methods of extracting target objects from worldview-2 MSS Dataset over the Bronx Borough in New York. Spatial and spectral attributes were computed to build algorithms that were used to extract different sets of target objects from the imagery. The algorithms were tested on a study area and the accuracy of the classification was estimated using the confusion matrix model. Results show that several target objects from urban areas such as the Bronx may be extracted in near-real time from satellite data. The approach described in the study may be applied to any geographic region that has similar characteristics to the Bronx.
OPTIMIZATION OF A SPECTROPHOTOMETRIC METHOD TO DETERMINE AMMONIA IN GROUNDWATER

Harpreet Kaur, Khadija Aslam, Sasha Heralall & Ratan Dhar

High concentrations of arsenic in groundwater have been reported from different regions in the world. Serious health effects due to elevated arsenic consumption have been documented in several South Asian countries. However, the link between arsenic and other ions in shallow aquifer waters containing much higher nutrients (TOC, TN, NH4 and P) remain poorly understood. In the study area of Chittagong, Bangladesh, the northern part of the city is a part of Anticline associated with Tertiary aquifers and the southern part of the city is plain land associated with Quaternary aquifers. Preliminary studies have reported elevated arsenic and manganese (Mn) in those aquifers. However, as to date, no study has been conducted to investigate the relation between arsenic and nutrients to understand the geochemical processes that control the As distribution in groundwater. This study reports the modification of a spectrophotometric inexpensive reliable method to measure the ammonia concentration in a set of several groundwater samples collected from both shallow and deep aquifers in Chittagong area. The preliminary results showed high level of ammonia is associated with elevated level of As and Mn, suggests that reducing condition may control the As and Mn release in groundwater. The results suggest that the role of nutrients on the microbial activity and the mobility of As in both aquifers warrant further investigation.

A SIMPLE EXTRACTION METHOD FOR DETECTING THE FECAL INDICATIVE BACTERIA IN URBAN SOIL

Lorena Pardo, Ace Aclantara & Ratan Dhar

Anthropogenic activities cause an increase of organic materials and nutrients and this poses a serious threat in urban environments. In an attempt to study temporal and spatial bio-geochemical dynamics of both fresh and brackish water lake environments, the study was done in two NYC lakes that vary in terms of recreational activities and different environmental settings. The study has been carried out on occurrence of Fecal Indicative Bacteria in two parks of Queens county: Flushing Meadow Park and Kissena Park with intense and less recreational activities respectively. EPA approved IDEXX method was used to detect the Fecal Indicative Bacteria (FIBs) including total coliforms, E. coli and enterococcus in water. We hypothesized that there would be more microbes found in water after raining due to movement of microbes from soil to water as runoff. A simple extraction procedure was optimized to mobilize the indigenous fecal indicative bacteria in the soil and to detect them reliably using EPA approved IDEXX method. This new approach provided the opportunity to identify the sources for FIBs in adjacent water bodies. FIBs concentration in soil is critical to understand the microbial variation in lakes and ponds both spatially and temporally. Variation in FIBs occurrence were investigated by capturing different weather conditions, activity level, soil type and water content of soil. Data from preliminary
investigation indicated elevated FIBs in soil and water of a NYC lake with intense recreational activities. Very few studies on mobilization of FIBs in natural water from surrounding soils were reported in NYC area. This study focused on environmental research to improve understanding of FIBs transport processes in the environmental system which is a critical aspect of decision-making in risk assessment, and remediation strategies. Preliminary results were found to exceed the EPA permissible limit for total Coliform, E. coli and Enterococci respectively.

**Marketing (BS)**

**THE CHANGING MEDIUMS AND STATISTICAL ANALYSIS OF ONLINE MARKETING**

*Enrique Moscol*

Online marketing began as one spam e-mail sent out many years ago and has now grown into its own unique and diverse category of advertising. This paper will discuss the rich history in online advertising, the different forms and shapes it has taken over the years and it will dive into the techniques used to connect the consumer and the business. Furthermore, we will evaluate the positive and negative traits of internet advertising - both from the perspective of the consumer and the perspective of the business owner. The evaluation will provide statistical references to divulge the popularity of internet advertising and how the numbers have changed over the years. Providing a window into the ever-growing wonders of online advertising.

**Movement Science (BS)**

**THE IMPACT OF A PEER-LED AEROBIC TRAINING PROGRAM ON CARDIOVASCULAR HEALTH AND ACADEMIC PERFORMANCE OF URBAN COLLEGE STUDENTS**

*Greg Klimaytis, Olga Berwid, Galila Werber-Zinn & Reinold McNickle*

The health benefits of physical activity as they relate to an individual’s risk of developing chronic diseases have been well documented. Exercise is beneficial to brain development and appears to enhance both effortful and more basic neurocognitive processing. Participating in school-based physical activity has been found to improve academic achievement and academic behaviors. Peer-based education is a common method used on college campuses to provide health information. Introducing physical activity to college students attending urban universities, and its effect on their physical activity behavior and academic performance, has been underexplored, especially in students representing York College's demographic. The main goal of this pilot study is to examine the impact of a peer-based 10-week aerobic-training intervention program on changes in cardiovascular health indicators and students’ physical activity behavior; secondary
analyses will determine if improvements in cardiovascular health correlate with pre- to post-intervention changes in academic performance.

Music (BA)

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: CHRIS ALLEN
Chris Allen
The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: CLAUDIA AYALA
Claudia Ayala
The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: JAY BRATTON
Jay Bratton
The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: RUTHANN CRAWFORD
Ruthann Crawford
The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: ESTER KHAIMOV
Khaimov Ester
The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: MARK FIORENTINO
Mark Fiorentino
The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.
NEW YORK AVENUE RECORDS COMPILATION VOL. 2: ADALE JACKSON

Adale Jackson

The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: ZAVIER JEAN-CHARLES

Zavier Jean-Charles

The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: ABRAHAM LOPEZ

Abraham Lopez

The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: ZEKE MEDRANO

Zeke Medrano

The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: ALEX THEODULE

Alex Theodule

The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

NEW YORK AVENUE RECORDS COMPILATION VOL. 2: BRIA VAN COOTEN

Bria Van Cooten

The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.
NEW YORK AVENUE RECORDS COMPILATION VOL. 2: ESTER KHAIMOV

Ester Khaimov

The poster will provide insight into the creation of an original piece of music written and produced by a York College student as part of the CD New York Avenue Records Compilation Vol. 2 to be released on May 17th.

Nursing (BS)

CAM AS AN EFFECTIVE TREATMENT MODALITY:
A REVIEW OF THE LITERATURE
Kristi Balkaran

Background: Complementary and Alternative Medicine (CAM) is defined as a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs (Little, 2013). They are treatments which are not the standard practice of Western medicine. CAM began in the early to mid-19th century where practitioners emphasized safe and natural therapies. Today, CAM is the source of many herbal and natural drugs that are used in conjunction with Western Medicine. CAM also includes many holistic practices such as acupuncture, yoga, meditation, and homeopathy; and is used among people of all cultural and ethnic backgrounds. Aim: The aim of this literature review is to summarize CAM therapy and pharmacological therapy, its uses, treatments, and viewpoints. Method: A search was performed using the Cumulative Index to Nursing and Allied Health Literature (CINAHL) using the words Complementary Medicine Alternatives and nursing care. Specific to Academic Journals 1995 to 2016. The search yielded 31 articles. Only 4 articles were selected for this review. A Google search was performed using the words CAM versus pharmacological therapy; only 2 articles were selected for this review. Findings: Many people have preferred using CAM therapies compared to pharmacological therapies over the years. CAM can be used in addition to pharmacological therapy or independently. Some CAM is used for specific conditions or to improve general health.

THE USE OF VIRTUAL LEARNING IN HEALTH PROFESSIONS:
A STATE OF THE SCIENCE
Caren Balram, Jeffery Kerr, Shellesdreen Bhola & Tania Sethi

Working in the health professions is known as "practice". The objective of this research was to identify the state of science in the area of the use of virtual learning in health professions and its effectiveness. Scientific literature from health professions published in peer-reviewed journals were reviewed. The review of the literature identified an overall acceptance of the virtual patient simulation amongst the participants. The virtual learning course enabled participants to transfer their knowledge acquired in the classroom to practice without inflicting harm on the patient. There was an increase in the confidence and motivation when the
participants were exposed to the course. The findings from this literature review suggests that the use of virtual learning is an effective strategy and is recommended to be incorporated into the health professions curriculum.

DENTAL HYGIENE TO PRESCHOOLERS IN CARRIES, HAITI
Pierre Andre Elmera & Jean Dickens Allonce
According to World Health Organization (2012), 60-90% of school age children have dental cavities. Oral health is essential to a person's general health. It consist of being free from oral infection, mouth and facial pain, tooth decay, tooth loss, or any other condition such as blood borne disease and heart attacks. Some of the risk factors consist of unhealthy diet, poor oral hygiene, and especially availability and access to dental care services. Before traveling to Haiti, we researched Haiti's history, healthcare system, and accessibility to services. In Haiti, children living in especially the rural communities lack access to dental health services. Furthermore, the water supply does not contain sufficient fluoride; which, according to the Center for Disease Control, plays a vital role in decreasing dental caries. We decided to conduct a project related to dental hygiene in the rural area of Carries, Haiti. In June 2015, as part of our elective nursing course which addresses assessment of healthcare services in a global underserved population; we traveled to Haiti to participate in a class project on dental hygiene. When we arrived in Carries, Haiti, we had the opportunity to meet with a group of preschoolers at the Mission of Grace orphanage. We presented our project on dental hygiene. Teaching was done by first assessing how the preschoolers brushed their teeth; followed by demonstrating to the preschoolers the proper techniques for brushing their teeth. To engage the preschoolers, we distributed packages that contain toothbrushes and toothpaste. Each of the preschoolers had the opportunity to practice following our teaching session. The preschoolers were very engaged and happy to participant in our session. The administration and staff of the orphanage also became engaged in our project, and planned to continue many of the steps that we used to engage the preschoolers. It is our hope to return and continue to work with the preschoolers.

EDUCATING RURAL TEENAGERS ON SELF BREAST EXAMINATION IN CARRIES, HAITI
Shanique Ivery & Michelle Muyibi
Breast cancer is a disease that is very detrimental to many people's lives. This disease crosses social, economic, and racial lines. Black women such as Haitians are the most prevalent group to encounter a higher mortality breast cancer rate over other races. This issue may arise primarily because Haitians are currently facing a financial burden and are unable to receive high-quality cost-effective care. Consequently, these women go undiagnosed and undetected. According to World Health Organization (WHO) (2014), breast cancer ranked 13.9% of cancer deaths amongst the female population in Haiti, top three of cancers reported. In an effort to educate and raise awareness to teenagers about breast cancer and breast health,
we developed a project to teach the teenagers at the Carries orphanage, Mission of Grace, on the appropriate way to conduct a monthly self-breast exam as well as normal and abnormal findings. Young ladies in Haiti may have a misperceived concept of their ability to acquire breast cancer because they may not have any known predisposing factor such as family history of breast cancer or failure to detect any visible signs or deformities. It is imperative to teach preventive strategies so that these young girls will be able to find any abnormal findings that pose as threats to their lives, become aware of lifesaving resources, and take preventive measures to reduce their risk of acquiring this life-threatening disease. Further, they can be able to teach their peers and family members on the correct way to perform self-breast exams. Emphasizing the importance of self-exams, and other appropriate interventions such as, clinical breast exams is essential to help liable individuals to see if they possess breast cancer early on. As a result, they will be able to control their stage of cancer by seeking early treatment and become a breast cancer survivor.

HIGH FIDELITY SIMULATION: A LITERATURE REVIEW
Padmanabha Rao, Liji Rajan, Nawrin Shabnaz, Yen XIn Yoo & Carlos Velasquez
Background: High Fidelity simulation has played an important role in nursing education, where computerized manikins are utilized to mock real life scenarios. This type of simulation allows nursing students to train on their skills, increase knowledge, strengthen decision making and critical thinking, which builds confidence in a safe environment. Aims: The aim of the literature review was to see what research has been done in the area of High Fidelity Simulation. To investigate if High Fidelity Simulation Research addressed the six dimensions under investigation: Self-confident; competency; communication; decreased student anxiety; enhanced patient safety; and development of critical thinking skills. Method: After a search was performed in The Cumulative Index to Nursing and Allied Health Literature (CINAHL) on "High Fidelity Simulation Research" which included the search criteria included: 2010 to 2015; Academic journals; English Language. Thirty-nine articles populated. Not every article evaluated addressed the six dimensions that were under investigation: Self-confident; competency; communication; decreased student anxiety; enhanced patient safety; and development of critical thinking skills. Exclusion criteria were articles that were actual literature review, studies from associate degree in nursing programs, or clinical practicing nurses, and studies that only used low to medium fidelity mannequins. Findings: No one research article addressed all six dimensions. The majority of the articles stated that more research needs to be conducted to assess the effects of High-Fidelity simulation. Conclusions: One dimension that was not under investigation that was revealed, the use of High Fidelity Simulation as being cost effective.
DOES NAIL POLISH AFFECT PULSE OXIMETRY? A REVIEW OF THE LITERATURE
Julie Titus, Judd Costes, Diandra Duncan, Akilah Samuel, Omolara Adedimeji, Rushain Parker, Joanna Franco & Mariam Habib

Background: Pulse oximetry measures oxygen saturation (SpO2), which is the amount of oxygen carried by the hemoglobin molecules in the blood. Normal values range from 95 to 100 percent. Disease processes affecting perfusion and circulation can contribute to lower SpO2. Healthcare providers have been taught that nail polish alters SpO2 results. This literature review focused on the effects of nail polish on the accuracy of pulse oximetry readings.

Aim: To determine the effect of nail polish on pulse oximeter readings.

Method: A literature review was conducted using ProQuest and EBSCOhost databases. Articles selected ranged from the years 2006 to 2016. Fourteen articles on SpO2 and nail polish were reviewed. Selected research articles focused on how different colors and brands of nail polish affect SpO2 readings; articles omitted were those that accentuated other factors that didn't include nail polish. Only subjects with SpO2 at 95 to 100 percent were included. Results were grouped into factors studied, and were compared and contrasted with respect to their methodology and data.

Findings: The studies conducted found that some nail polish colors have reduced SpO2 readings by 5-10%; while other studies reported a decrease of less than 2%. (Yamamoto, 2008) In all studies, there were several variations, lessening the expectancy with findings.

Conclusion: It’s advised that nail polish be removed to get an accurate SpO2 reading. The conclusion from the literature reviews upholds this.

Pharmaceutical Sciences (BS)

TURBIDITY STUDIES ON THE EFFECT OF POLYMERIC INHIBITORS OF THE CRYSTALLIZATION OF PHARMACEUTICAL DRUGS
Ryane Benhassine & Daniele Musumeci

Poor aqueous solubility of active pharmaceutical ingredients (APIs) is a central problem in pharmaceutical development and is becoming increasingly more predominant among new drug candidates. The bioavailability of oral drugs depends on their solubility properties and their permeability through the epithelial cells of the gastro-intestinal (GI) tract. Current drug delivery systems aim to enhance the drug absorption by increasing the solubility and/or the dissolution rate to create a temporary state of supersaturation in the GI tract. Supersaturated solutions, however, are inherently unstable, and they tend to crystallize over time until the equilibrium solubility is reached. Therefore, to successfully enhance the intestinal absorption of poorly-soluble drugs, a drug delivery system must not only generate a state of supersaturation in the GI tract, but also maintain it for an extended period of time. Formulation excipients such as polymers can be used to maintain supersaturation and improve drug absorption in the GI tract, but their mechanism of action remains poorly understood, and the selection of polymeric inhibitors is mostly based on empirical criteria. In this work, the effect of 3...
commercial polymers on the crystallization of indomethacin (IMC), an anti-inflammatory drug, has been investigated in aqueous solutions using a near-IR turbidity technique. Our results show that, although all 3 polymers did not significantly affect the nucleation induction time of IMC crystals, the size of the crystals was reduced, suggesting that crystal growth was inhibited. This data will be combined with the results of optical and high-resolution microscopy crystal growth experiments to better understand the mechanism of action of the polymers.

Political Science (BA)

SHARING THE CONSEQUENCES OF A RISING POWER

Nisha Herrenberg

During the 21st century China has flourished into a leading nation in the world. Their economic power has risen due to their increased international trade and industrialization. These economic pursuits have left the environment in a state of degradation. China failed to create environmental policy at the start of their advancement. (Zhang, 2012, pg.4) In this research paper I will examine how the Chinese government’s efforts to be an economic powerhouse caused much of the global warming problems we face today. Their excessive use of coal at their factories created catastrophic gas emissions in turn creating a thick layer of fog in China’s busy cities. Not only is the environment suffering but the people of China as well. The Chinese people deal with health problems, food scarcity issues, water scarcity, water pollution, and contamination. China is already a major polluter in the world and holds the largest population next to India. (Adams, 2015, pg.1) In this paper I want to outline the correlation between the two ideas that their economic growth sparked an environmental downward spiral. I will also be looking at other bordering countries in East Asia such as Japan and South Korea. I want to look at how they have come up with effective and efficient environmental policy. In my research I aim to go through China’s history and examining their governmental systems and look at their economic growth and environmental policy. Sustainability and scarcity are two issues the world will face in the coming years. 1Adams, P. 2015, THE TRUTH ABOUT CHINA Why Beijing will resist demands for abatement, The Global Warming Policy Foundation, GWPF Report 19. 2Zhang, J. (2012), Delivering Environmentally Sustainable Economic Growth: The Case of China ; School of International Relations and Pacific Studies University of California, San Diego; Asia Society made possible by the Bertelsmann Founda

HOW DID THE MISCONSTRUED USE OF BLIGHT LEAD TO THE INVOCATION OF EMINENT DOMAIN IN BROOKLYN, HARLEM, AND WILLETS POINT?

Breanna Niranjan

Although there is not a set definition of the word "blight" when it comes to the Takings Clause of the Fifth Amendment, also known as Eminent Domain, city governments and land developers have used this to their advantage in order to
exploit a loophole in the Takings Clause. In Brooklyn, land developer Atlantic Yards deemed the area of Prospect Heights blighted due to cracked sidewalks, tall weeds, and the under-utilization of the space. In Harlem, Columbia University wanted to expand into Manhattanville and the land was deemed blighted due to poorly maintained, aging and outdated industrial buildings that had not been revitalized. Willets Point was deemed blighted due to the lack of sewers, sidewalks, and street lights. In each case, there was a lack of cohesiveness when deeming an area blighted, which lead to the exploitation of eminent domain in New York City. I will be using the critical race theory to exemplify the fact that minority neighborhoods are systematically targeted when invoking Eminent Domain by deeming the areas blighted.

**Psychology (BA)**

**SHARING MORE ONLINE LEADS TO BETTER RELATIONSHIPS**

*Ahmed Adam & Kristin Davies*

The current work examines how self-disclosing intimate and non-intimate information online between friends in a cross-groups friendship is highly associated with the quality of the friendship and its future. Previous research by Davies (2009) has found these variables related within an offline parameter, but it did not investigate frequency of online interactions. A survey was used to collect data through the SONA system from 287 college participants, where students received credit in exchange for their participation. The survey questions gathered data related to online and offline interaction within cross-groups friendships. Using regression analysis to predict cross-group relationship longevity, self-disclosure to outgroup friend was a significant predictor, while offline and online interactions were not.

**THE ROLE OF ONLINE AND OFFLINE CROSS-GROUP INTERACTIONS IN ENCOURAGING RESPECT AND UNDERSTANDING FOR THE OUTGROUP**

*Khursheda Alam & Kristin Davies*

Prior studies have found that individuals who have close cross-ethnic friends or increased exposure to different ethnic groups show greater empathy, reduced prejudice, and increased understanding of minority groups (Jugert, Noack & Rutland, 2013). The current study expands this prior work by investigating whether the frequency of online and offline interactions between cross-group friends increases understanding and respect for the outgroup as a whole. An online survey collected data from 287 undergraduates using the Sona Online Subject Pool Management program. Using regression, we found that frequency of both online and offline interactions predicted understanding for the outgroup. Interestingly, online but not offline interactions was a significant predictor of respect for the outgroup. Furthermore, when asking participants how they "got to know" their outgroup friend (online, offline, or both methods), communication type had no
impact on intergroup attitudes (understanding, respect, etc.), but it did have an impact on interpersonal factors (e.g. trust), such that more intimate feelings were reported for friendships developing offline. Results show that online interactions may allow for more frequent and interpersonal communication between cross-group friends, which in turn allows for greater improvements in intergroup attitudes.

CAN RELIGION TAKE THE WAR OUT OF YOU? RELIGIOSITY REMINDERS REDUCE SUPPORT FOR OPPRESSION AND MILITARIZATION
Abayomi Are, Ian Hansen, & Andrew Ryder (Concordia University)
Since religiosity and authoritarianism are correlated (Altemeyer, 1988), does this imply that stimulation of either type of conservatism will inevitably have identical effects? 157 York College students completed measures of religiosity (R), authoritarianism (A) and support for oppression and militarization (OM). Participants were randomly assigned to three question orderings: (1) R items first (then OM, then A), (2) A items first (then OM, then R) and (3) OM items first (then R, then A). There was a statistically significant experimental effect: participants supported OM most in the A first condition and least in the R first condition. Also, though R and A were correlated, they made opposing predictions of OM in the control condition. Results imply that religiosity and authoritarianism, despite their positive correlation, can have opposing effects on support for oppression and militarization.

HOW MORAL BEAUTY ENGAGEMENT BISECTS THE LIBERAL-LEFT VS. CONSERVATIVE-RIGHT DIVIDE
Gabriela Cedillo, Marlinda King, Abraham Dickey & Ian Hansen
Analyzing data obtained from a well-known political psychology survey website (yourmorals.org), we examined the political correlates of the Moral Beauty Engagement (MBE) subscale of Deissner et al’s (2008) Engagement with Beauty scale—an indicator of emotional responsiveness to moral excellence. Specifically, we correlated MBE to indices of religion, ideology (liberalism vs. conservatism), moral foundations (Graham et al, 2009), and the subscales of the Schwartz Value Scale (Schwartz, 1992), as well as selected "liberal" and "conservative" policy positions. MBE intersected idiosyncratically with ideology. High MBEs shared some values in common with both liberals and conservatives—specifically the values most central to the commonly-expressed moral worldviews of both. These findings suggest that narratives of people being either liberals or conservatives may underestimate the distinctive threat that high MBEs present to the current relations of power.
MORAL VS. AMORAL FRAMING CAN SIMULTANEOUSLY INCREASE AUTHORITARIANISM WHILE DECREASING SUPPORT FOR TORTURE

Nwenna Chisholm & Ian Hansen

Most research finds authoritarianism correlated with support for torture. Yet the same manipulation might stimulate authoritarianism while reducing support for torture. We randomly assigned 398 York College students to imagine one of two moral divides: (1) a broadly moralistic vs. non-moral divide (where people either simultaneously embraced Care, Fairness, Loyalty, Authority and Purity or none of these); or (2) a divide between a liberal moral-amoral mix vs. a conservative moral-amoral mix (Care-Fairness but not Loyalty-Authority-Purity vs. Loyalty-Authority-Purity but not Care-Fairness). We then assessed a variety of measures, among them Right Wing Authoritarianism (RWA) and support for torture. There was greater authoritarianism and less support for torture among participants assigned to Divide #1 than participants assigned to Divide #2. RWA was uncorrelated with support for torture in this sample, but predicted this support when controlling for experimental condition.

DO ADOLESCENTS EXPERIENCE HOUSEHOLD GENDER BIASES?

Shayna Corpas & Tania Levey

Through the years there has been an ongoing discussion of gender identity and the way in which it is formed. Many studies show that gender is conceptualized through social interaction, where men and women reinforce their own masculinity and femininity. Previous studies suggest that young adults are said to hold certain responsibilities and rules within the household that may be gender biased, showing a certain preference for gender display, that adolescent views on gender roles within the household are based on parental influence. While more relevant studies suggest that household gender attitudes are not reflective of parental influence. However, these studies didn’t consider weather gender influences parental discipline and rewards amongst adolescents. This can be problematic being that research suggests that parental discipline has a significant effect on children. This research will assess discipline in the household amongst both sex sibling youth, and can add to previous knowledge of how gender identity is formed. Data will be collected using qualitative research interviews. Interviews will follow a general interview guide approach using 6 adult participants; two being opposite sex only child adults and four with siblings of the opposite sex. Interviews will examine parental discipline and rewards during the adolescent period to determine if there are underlings of gender biases. It is important to understand and conceptualize the adolescent point of view and how adults shape the minds of young adults when it comes to gender.
COGNITIVE TASK PERFORMANCE IN STREPTOZOTOCIN-INDUCED RAT MODELS OF SPORADIC ALZHEIMER'S DISEASE

Rose Deng, Jose Reyes, Jonathan Lopez, Miriam Hernandez, Roberto Calderon, Sobia Ilyas, Aristeo Quíroz, Mikhail Ilyasov, Catherine Sanchez, Shakeina Maheia, Zoya Hyman, Kiran Persad, Kristina Damatova & Francisco Villegas

Alzheimer's disease (AD) is the most common neurodegenerative disorder. It is associated with cognitive deficits and behavioral disturbances. Epidemiological evidence has pointed to many potential risk factors for AD, one major factor being sleep. Circadian rhythm disturbances in the circadian regulation of sleep and wakefulness are often observed in AD patients. Similarly, diabetic patients also express these symptoms. Studies have found a correlation between AD and type II diabetes. While much work has been done to establish a connection between diabetes-like irregularities in Alzheimer's pathology, little work has been done to investigate sleep/wake abnormalities, typically present in AD patients. The present study assessed the effects of intracerebroventricular injections of Streptozotocin (ICV-STZ) in rats. The ICV-STZ induced cellular and behavioral abnormalities that mimicked sporadic AD. Preliminary analysis will assess working memory task performance between control and experimental groups. Additional analyses will be conducted in order to determine whether there are significant differences between groups on behavioral assessments. After behavioral assessments, all experimental animals will be perfused for histology to evaluate cell death, or undergo hippocampal removal and immunoblotting procedures to detect and identify various proteins.

A GAMES-BASED LEARNING APPROACH TO TEACHING AND ASSESSING STRUCTURE-FUNCTION RELATIONSHIPS IN FUNCTIONAL NEUROANATOMY

Rose Deng & Robert O. Duncan

At present, the education system in the United States is unable to compete with many countries on standardized assessments of performance in science, technology, engineering, and mathematics (STEM). Undergraduates in the United States are taking longer to graduate than before, and fewer students are completing degrees in STEM. Active learning, inquiry-based learning, undergraduate research, and other high-impact practices are known to increase student performance in STEM. Game-based learning is an active-learning pedagogy that provides opportunities for focused practice, self-paced learning, and just-in-time feedback. Consequently, we developed a game-based learning program to improve learning outcomes for students of functional neuroanatomy. Participants will either play an adaptive digital game that adjusts task difficulty according to performance, or they will play a non-adaptive game. Participants who play the adaptive version of our game are expected to outperform participants who play versions of the game that do not adapt to student performance. This game-based learning approach has implications for student success in STEM. While this game is designed to address structure-function relationships in physiological psychology, the core game mechanics can be adapted to any match-to-sample task in a variety of disciplines.
This quantitative games-based learning approach may contribute to closing the international achievement gap in STEM.

AROUSING TRANSCENDENT EMOTIONS POTENTIALLY ATTENUATES RIGHT WING TENDENCIES
Aliyah Freeman, Vi Ngo, Andrea Mendez (Brooklyn College), Shabana Khan & Ian Hansen
We examined a large online sample among whom some participants had been exposed to an experiment on transcendent emotions. We found that those exposed to videos arousing transcendent emotions (awe, elevation, admiration) were less likely to endorse Right Wing Authoritarianism than those exposed to videos arousing neutral or other positive emotions (cute, funny). Moral Beauty Engagement (MBE)—a relatively trait-based inclination to experience transcendent moral emotions—was negatively related to Social Dominance Orientation and support for war over peace. Among those intermediate on MBE, videos arousing transcendent emotions led to less support for Social Dominance Orientation and less support for war over peace. Among those low or high in MBE there was no effect, perhaps because of non-responsiveness to transcendence among low-MBEs and floor effects among high-MBEs. The effects of transcendence on some of these right wing tendencies appeared to be mediated by a lowering of Need for Closure, suggesting that transcendent emotions open people in some way, and that such openness reduces right wing inclinations.

INTERGROUP DISCUSSIONS, TRUST, AND UNDERSTANDING THE OUTGROUP
Sayedda George & Kristin Davies
The current work examined the roles of trust and cross-group discussions on intergroup attitudes among those in cross-ethnic friendships. Previous research by Davies (2009) investigated cross-ethnic friendships, but did not specifically compare the role of trust to that of specific types of group-related conversations. Data from 146 undergraduates was collected using Sona Subject Pool Management System software, where the participants received subject pool credit for participation. The online survey focused on interpersonal and intergroup variables, and questioned the participant about their closest (ethnic) outgroup friend. Using regression, we found that, in a first step, discussing differences and cultures explained 16% of the variance in understanding the outgroup, although only discussing differences was a significant, unique predictor. In a second step, feelings of trust were added to the model, although the additional variance predicted was not found to be significant. Results indicate that while conversations that specifically concern group differences lead to feelings of understanding an outgroup, more general interpersonal processes do not. Additional implications and future directions are discussed.
DOES RELIGIOSITY LOSE ITS RESISTANCE TO TORTURE IN A LIBERAL-VS-CONSERVATIVE FRAMEWORK?
Sayedah George, Mariame Soukoule, Denae Stallings & Ian Hansen
In three studies (n = 811), we randomly assigned participants to imagine either (1) a society divided between those embracing or rejecting the five moral foundations identified by Haidt (2012)—Care, Fairness, Ingroup, Authority, Purity [moral vs. immoral, or MvA]; or (2) a society divided between those embracing Care and Fairness but not Ingroup, Authority and Purity; or vice versa [liberal vs. conservative, or LvC]. In all studies, two indices of conservatism (intrinsic religiosity and authoritarianism) made significant opposing predictions of opposition to torture (OT) in the MvA condition, but both were null predictors in the LvC condition. The LvC condition had inconsistent potential with respect to torture attitudes—significantly increasing willingness to sign an anti-torture petition in two studies, and significantly decreasing OT in the third. We conclude that there may be a stable though paradoxical pattern of conservatism variables predicting OT, one potentially disrupted by liberal vs. conservative framing.

RELIGIOSITY AND AUTHORITARIANISM MAKE OPPOSING PREDICTIONS OF JUST ABOUT EVERYTHING
Najahwan Goode, Jesse Wynhausen (University of Sydney), Bennett Callaghan (Yale University), Abraham Dickey & Ian Hansen
In 3 studies, we examined the independent relationships of religiosity and Right Wing Authoritarianism (RWA) to Social Dominance Orientation (SDO), sexism, support for torture, and a host of right wing policy positions like support for the death penalty, opposition to regulating business, denial of global warming, and prejudice against atheists, LGBT individuals, and Muslims. Though religiosity and RWA are positively correlated zero-order, they generally make opposing predictions of measures suggesting support for violence, oppression, prejudice and inequality. RWA positively predicts such measures, while religiosity negatively predicts them.

PERCEPTIONS OF FIDELITY AND ADAPTATION IN EVIDENCE-INFORMED INTERVENTIONS BY WOMEN OF COLOR SEXUALITY HEALTH EDUCATORS
Tracy Harrison & Sara C. Flowers (CUNY Graduate Center)
Women of color sexual health educators (WOC SHEs) often tweak or adapt a comprehensive sexuality education (CSE) curriculum in order to meet the needs of their audience. When facilitating a CSE workshop, WOC SHEs take into account their professional expertise, socio-cultural understanding, and situational awareness at the same time. Each component operates concurrently, affects the way she facilitates her workshop, and may influence her decision to change or tweak a CSE curriculum. This study uses qualitative methods to analyze focus groups. Focus groups were used to understand WOC SHEs' point of view and experiences related to CSE curriculum implementation and adaptation. The focus groups in this study consist only of WOC SHEs and aim to better understand reasons why, possible
benefits of, and disadvantages to altering the curricula to meet the needs to their intended audience. The focus groups were video recorded, and audio recorded, transcribed, and then analyzed using grounded theory analysis. The Principal Investigator (PI) then codes and analyzes data using Dedoose. While analyzing the data, the PI scans for key themes, then assigns random sections of data to the undergraduate coder, who codes the data independently, scouting key themes. Intercoder reliability is established if both parties detect the same key themes (kappa > 0.07). This study is a work-in-progress, with analysis taking place during the spring 2016 semester.

SELF-TRANSCENDERS VS. SELF-ENHANCERS: A DIMENSION OF IDEOLOGICAL DIFFERENCE INDEPENDENT OF OPENNESS-TO-CHANGE VS. CONSERVATISM
Sarah Hoosein & Ian Hansen
Many political psychologists explain political divides in one dimensional terms: the liberal left vs. the conservative right. Yet ordinary people may intuitively resist one-dimensional thinking. We exposed 138 York College students to Schwartz's famous set of core values (which Schwartz visually presents as a two-dimensional circumplex). The sample expressed a preference for a 2-dimensional over a 1-dimensional way of understanding their own values. They also categorized a number of social-political issues as either more about openness-to-change (OtC) vs. conservation (Con) or more about self-enhancement (SE) vs. self-transcendence (ST). Their preferences formed thematically coherent categories. Participants classed matters of religion, gender, sexuality, and aesthetics as OtC vs. Con issues, and classed matters of war, oppression, violence, poverty, and the environment as SE vs. ST issues.

THE EFFECTS OF WEIGHT STIGMA, PERCEIVED STEREOTYPE THREAT AND SELF EFFICACY ON WOMEN'S EATING HABITS AND GROUP IDENTITY
Zoya Hyman
Past research has suggested that women who perceive themselves as overweight are susceptible to stereotype threat. Stereotype threat (ST) is the awareness of an aspect of identity that can spur discrimination or devaluation. In addition to this threat to identity, women who are high in self efficacy are not necessarily protected from the effects of ST. Self-efficacy can actually be reduced by ST's effects. Additionally, some trends have been observed where women group themselves together based on their weight; they form a "team" identity. This study uses an experimental design; women will be randomly assigned to see a video priming ST (or a control video). They will then complete a questionnaire with snacks before them and the amount they eat will be measured. We hypothesize that overweight women in the ST group will eat more than those who do not experience ST through weight stigma. Secondly, we hypothesize that women who identify with an overweight group will eat more than those who do not. Lastly, some research indicates that self-efficacy in regard to self-control and healthy eating is related to better eating habits, whereas other studies suggest that too much self-control can
lead to fatigue and a paradoxical effect of overeating. This study will test these alternatives, to identify the relationship between self-efficacy for eating control and eating habits. Preliminary results will be presented.

PERCEPTIONS OF TRUST AND CULTURE WITHIN ONLINE CROSS-GROUP FRIENDSHIPS

Jasmin Indardeo

Prior research on intergroup friendship has focused on interpersonal processes occurring within offline friendships, without inquiring about online interactions (e.g., Davies, 2009). Therefore, the current work focuses on cross-group friendship members having frequent online interactions. An online survey was administered to 288 undergraduates using the Sona Subject Pool Management Software in exchange for research pool credit, and survey items focused on intergroup and interpersonal processes. Using hierarchical regression we discovered that, in the first step, feelings of trust for the outgroup member was a significant predictor of closeness, explaining 54% of the variance. In the second step, discussing cultures and perceiving similar cultures were added to the model, a significant change. Despite this, only feelings of trust and discussion of culture were significant predictors of closeness in the final model. Implications and future directions are discussed.

CLOSENESS, PERSONAL SIMILARITY, AND TRUST AMONG CROSS-GROUP FRIENDS

Nicole James & Kristin Davies

The current work examined whether the more similar and closer one feels to the outgroup member in an online cross-group friendship the more likely one is to trust him or her. Previous research by Davies (2009) has found that these variables were associated within offline cross-group friendships. Data received from an online survey was collected from a subject pool administered using Sona Subject Pool Management System software from 287 college participants, where the participants received subject pool credit for participation. Survey items were about interpersonal and intergroup variables, and inquired about the closest outgroup member with whom the participant interacts with online. We discovered that feelings of closeness and personal similarity were significant predictors of trust for the outgroup friend, while cultural similarity was not. Results imply that interpersonal processes between members of different social groups can be facilitated online.

THE "LIBERAL" AND "CONSERVATIVE" CORRELATES OF LIFE SATISFACTION

Nicole James & Ian Hansen

How are personal values related to life satisfaction? Do these values have political implications, and if so do relationships between values and well-being vary by political orientation? Examining data obtained from a large online sample, we found Life Satisfaction (LS) weakly but reliably positively correlated with Schwartz
Value subscales suggestive of religious conservatism-Benevolence, Tradition and Conformity—but weakly negatively correlated with a value suggestive of "tough minded" or "elf-enhancing" conservatism: Power. Hedonism was also weakly negatively related to LS. Values considered particularly "liberal"-Self-Direction, Stimulation, and Universalism—were orthogonal to LS. Unexpectedly, all these relationships were similar within different ideology groups: liberal, moderate, and conservative. Life Satisfaction seemed most consistently related to values and inclinations whose fulfillment was more under one's personal control.

WITHIN-SUBJECTS AND BETWEEN-SUBJECTS, PEOPLE PREFER TORTURING THE APPARENTLY GUILTY OVER THE APPARENTLY WELL-INFORMED

Riva Kimatova, Katherina Parks, Fernando Blanco, Bennett Callaghan (Yale University) & Ian Hansen

In four studies (total n = 978), we found that after presenting vignettes for two detainees of contrasting backgrounds—one violent but unlikely to have critical information and one likely to have critical information but not violent—study participants, independent of ideology, supported inflicting more torture techniques on the former than the latter. Counterbalancing for order of presentation did not impact judgment preferences, nor did using specific detainee names and detailed scenarios or vague short descriptions. Torture recommendations for the detainee presented first depended on condition assigned between subjects: violent detainee first or informed detainee first (more support for torturing the violent detainee than the informed one). In fact, presenting the violent detainee first generally increased overall support for torture against both detainees, perhaps because being presented with the informed (but innocent) detainee first may have punctured stereotypes that those targeted for torture are guilty of something, thus reducing overall support for it. These results conceptually replicate and extend the findings of Carlsmith and Sood (2008), suggesting that the punitive motivation for torture is stronger than the informational motivation.

NARCISSISM AND INTER-RELIGIOUS HOSTILITY

Karen Longmore & Ian Hansen

Does narcissism predict religion-based intergroup hostility, and does individual or collective narcissism better account for this hostility? In a multicultural Canadian sample, both individual narcissism (the Narcissistic Personality Inventory or NPI) and religious narcissism (a scale based on the NPI but measuring defensive aggrandizement of one's chosen religious faith) were positively correlated with an overall index of religious hostility—encompassing measures of moral exclusion, political intolerance, aggressive antipathy and moral violence. Examined in isolation, each narcissism index remained at least a marginally significant predictor of inter-religious hostility even after controlling for intrinsic religiosity, "coalitional rigidity" (an average of scales measuring authoritarianism, dogmatism, fundamentalism and religious exclusivity) and demographic measures. In a comparison of individual and religious narcissism without added controls, religious
narcissism was the stronger predictor of intergroup hostility. With the added controls, however, religious narcissism disappeared as a predictor, but personal narcissism remained.

THE RELATIONSHIP AMONG PREMENSTRUAL SYMPTOMS, MINDFULNESS AND MENSTRUAL ATTITUDES

Reena Maharaj & Kathariya Mokrue

One study demonstrated that mindfulness mediates the effect of attitudes towards menstruation on the severity of premenstrual symptoms (PMSx). Furthermore, research suggests that mindfulness is inversely correlated with the symptoms of physical and psychological distress, and that negative attitudes towards a disorder can exacerbate symptoms of the disorder. The aforementioned study used a predominantly Caucasian sample of women. However, considering that studies have suggested that there are experiential differences of PMSx among various ethnic groups, the present study aims to examine the relationship amongst mindfulness, menstrual attitudes and PMSx in a predominantly ethnic minority sample of college students. We hypothesize that the relationship between menstrual attitudes and PMSx will differ between participants with high and low mindfulness scores. Preliminary results based on a sample of 93 students indicate that there were significant negative correlations between mindfulness and PMSx sub-scales of behaviour, water retention, negative affect and autonomic reactions. Menstrual Attitudes was correlated with pain, concentration, behaviour, water retention and negative affect PMSx sub-scales. Findings suggest that high and low mindful groups differed significantly. Thus, mediation analysis will be performed as additional data is collected. Implications of findings will be discussed.

THE RELATIONSHIP AMONG PREMENSTRUAL SYMPTOMS, RUMINATION AND CAFFEINE CONSUMPTION

Reena Maharaj & Kathariya Mokrue

Research suggests that health compromising behaviours such as caffeine consumption and coping styles such as rumination are associated with premenstrual symptom severity. However, few studies have examined the relationships among premenstrual symptom (PMSx) severity, rumination and caffeine consumption. The present study aims to determine whether rumination moderates the effects of caffeine consumption on PMSx severity, in college students. We hypothesised that the relationship between caffeine consumption and symptom severity will differ between participants with high and low rumination scores. Preliminary results based on 100 participants suggest that high/low ruminator groups differed significantly. Findings indicate that there were significant positive correlations between rumination and the PMSx sub-scales of behaviour, control and negative affect. Caffeine consumption was correlated to water retention, behaviour and control PMSx subscales. Thus, moderation analysis will be performed as additional data is collected. Implications of findings will be discussed.
PREDICTING RESPECT FOR THE LGBT COMMUNITY

Kelvin Mata, Kelvin Mata & Kristin Davies

The current study assessed cross-group friendships in order to determine whether learning something new about an outgroup, discussing culture, and discussing differences were predictors of respect for the outgroup. Prior work (Davies, 2009) investigated cross-ethnic friendships but not cross sexual-orientation friendships, or respect for members of the lesbian-gay-bisexual-transgender (LGBT) community. Data was collected from undergraduates at York College using an online survey in which students received research pool credit. Among 41 straight participants, we found that while the overall model predicting respect for LGBT individuals was significant, only feelings that one learned something new about LGBTs was a significant, unique predictor of respect; discussing culture and discussing differences were not significant predictors. This implies that quality, positive communication, rather than general communication, encourages positive intergroup attitudes. Future directions are also discussed.

INCREMENTAL THEORIES OF MORAL CHARACTER
AND SUPPORT FOR RELIGIOUS INTOLERANCE

Avita Morgan, Kaylinn Carreno & Ian Hansen

In this study we examined the role of implicit theories of moral character as correlates and independent predictors of religious intolerance. We found that an implicit theory that moral character was fixed (vs. malleable)-that is, an entity (vs. incremental) theory of moral character-was positively related to an aggregate measure of religious intolerance that encompassed moral antipathy, political intolerance, aggressive antipathy and moral violence. We found that this relationship remained even after controlling for religious devotion and various "coalitional rigidity" measures like Right Wing Authoritarianism, Dogmatism, Religious Fundamentalism and Exclusivity. When running a mediation analysis in which all steps in the analysis controlled for coalitional rigidity, we found that religious devotion mediated the relationship between an incremental theory of moral character and tolerance. In other words, among those who are equally rigid, incremental theory of moral character appeared to predict more openness to religious devotion and thus more religious tolerance.

A NOVEL METHOD FOR MEASURING AND FOSTERING GROWTH MINDSET USING GAMES

Ecem Olcum & Robert O. Duncan

Implicit theories of intelligence suggest that beliefs about intelligence influence one's behavior, goals, and success in challenging situations. According to this view, individuals who have a fixed mindset believe intelligence is a fixed trait that cannot be changed, while those who have a growth mindset believe intelligence is malleable. Digital games afford objective, real-time measurements of behavior that can be used to influence player attitudes. This exploratory study will use games to
collect online measurements of mindset. Participants will be recruited from an undergraduate research subjects pool at York College of The City University of New York, an ethnically diverse urban institution. Participants will be screened, and students with prior knowledge of physiological psychology will excluded from the study. Participants will be randomly assigned to one of two groups. In each group, participants will play a game designed to teach students about structure-function relationships in the human brain. Measurements of performance will be acquired using accuracy and reaction times for matching structure-function pairs. Measurements of mindset will be acquired using a two-alternative forced-choice paradigm (2-AFC) where participants must choose between a familiar challenge and a novel challenge. Affinity for novel situations is presumed to reflect a growth mindset. In the experimental condition, mindset data will be used to adjust task difficulty in a way that fosters growth mindset. The control condition will be identical to the experimental condition with the exception that mindset data will not be used to adjust task difficulty. Performance for subjects in the experimental condition is predicted to exceed that for control subjects. It is also predicted that these online measurements can be used to positively affect both performance and, in turn, mindset.

CUED MORAL TRANSCENDENCE, SUPPORT FOR TORTURE, AND CONSERVATIVE SELF-DEFINITION
Tam Persaud, McCoy Croston, Bennett Callaghan (Yale University) & Ian Hansen
Our study (N = 401) investigated the impact of priming Kohlbergian moral transcendence on attitudes towards torture. Participants were primed with Personal Interest, Norm Maintenance, or Postconventional moral schema and then evaluated interrogation scenarios. Participants also addressed questions about values and ideology. Those in higher-transcendence conditions supported using fewer coercive interrogation techniques overall. Conservative ideology did not mediate or moderate this effect, or independently predict the dependent variable. In addition, greater primed transcendence resulted in changes in conservative-self-definition. When cued with a Personal Interest schema, conservatism was positively related to Social Dominance Orientation (SDO) and Right Wing Authoritarianism (RWA), but not Intrinsic Religious Motivation (IRM). When cued with a Maintaining Norms schema, conservatism was positively related to RWA and IRM, but not SDO. When cued with a Postconventional schema, conservatism was positively related to IRM but not RWA or SDO. From Personal Interest to Postconventional, there were significantly lower correlations between conservatism and authoritarianism. Overall, exposure to moral transcendence changed the justificatory associations participants had with supporting torture and, regardless of ideology, generally reduced their support for it.
PERCEPTIONS OF CROSS-GROUP FRIENDSHIP IMPORTANCE AND LONGEVITY: ONLINE VERSUS OFFLINE FRIENDSHIP DEVELOPMENT

Christina Ramos & Kristin Davies

Past research has found that friendships that formed online and progressed to face-face interactions, along with purely offline friendships, seem to be superior in quality to those friendships that solely interact online (Antheunis, Valkenburg & Peter, 2012). Previous work has focused on the quality of online and offline relationships amongst same-sex and cross-sex friendships; however information on cross-group friendships is limited. Thus, the aim of this study was to compare perceived relationship importance and longevity among cross-group friendships that developed either online, in-person (face to face), or in mixed mode settings (equally online and offline). Surveys were administered using Sona online survey software to 286 undergraduates from a college subject pool. In line with prior work and predictions, perceived relationship importance and longevity were greater in cross-group friendships that developed in-person or via mixed mode as compared to those developing solely online. Furthermore, it was found that beliefs about relationship longevity were significantly predicted by knowing the outgroup friend and feeling that the cross-group friendship is important. These findings were consistent even after controlling for beliefs about relationship longevity at an earlier time point. Implications and future directions are also discussed.

TRUST FOR OUTGROUP AS A FUNCTION OF SELF-DISCLOSURE TO AN OUTGROUP FRIEND

Christina Rivera

Prior research has assessed the development of cross-group friendships based on intergroup and interpersonal variables such as trust and self-disclosure (Davies, 2009). However, this prior work did not identify whether intimate processes such as self-disclosure and trust were present among cross-group partners within an online friendship. Therefore, the current study predicted that measures of self-disclosure and knowledge of the outgroup member relate to high levels of trust for the outgroup member in cross-group online relationships. According to the results of an online survey administered to a total of 287 college students using Sona Subject pool Software, as predicted, both self-disclosure and feelings of knowing the outgroup member related to greater trust felt for the outgroup member. Thus, the current research findings imply that interpersonal trust can develop between members of differing social groups via the internet.

A VIOLENT DETAINEE INSPIRES AN INTEREST IN INTERROGATED INFORMATION, BUT ONLY BY INSPIRING A DESIRE TO PUNISH

Krista Smith & Ian Hansen

Do people claim an interest in getting information from detainees when they really just want to punish them? Three studies found that a detainee described as violent but uninformed elicited less support for seeking information from him, and more support for punishing him, than a detainee described as informed but nonviolent
(within group comparison). However, the order in which we presented detainee scenarios (between groups) impacted both of these variables in a revealing way—there was generally a greater interest in both punishing and seeking information from detainees when the scenario of the violent detainee was presented first (before the scenario of the informed detainee). However, scenario presentation order affected punitiveness even when holding informational concern constant, but there was no effect of presentation order on informational concern when holding punitiveness constant. This suggests that the difference in informational concern between conditions was due entirely to a difference in punitiveness, and not vice versa.

IS TRUMP A CONSERVATIVE, OR JUST LOW ON MORAL BEAUTY ENGAGEMENT? EVIDENCE FOR A DIMENSION OF POLITICAL CONFLICT INDEPENDENT OF LIBERALISM VS. CONSERVATISM
Mariame Soukoule & Abraham Dickey, Gabriela Cedillo, Marinda King & Ian Hansen
Donald Trump has become a problem for the Republican Party both because as front runner he is not a traditional conservative and also because he is so widely disliked that he is likely to lose a general election. If Trump is not a conservative, though, what political quadrant is he coming from? Analyzing data taken from a well-known political psychology survey website, we examined the relationship of (a) subclinical psychopathy, and (b) Moral Beauty Engagement (MBE) (Deissner et al, 2008) to indices of religion, ideology, moral foundations (Graham et al, 2009), and the subscales of the Schwartz Value Scale (Schwartz, 1992), as well as selected "liberal" vs. "conservative" policy positions. Psychopathy and MBE both intersected idiosyncratically, and in completely opposing ways, with these measures. Subclinical psychopaths and high MBEs shared some values in common with both liberals and conservatives. Psychopaths shared the values least central, and high MBEs shared the values most central, to the commonly-expressed moral worldviews of both liberals and conservatives. These findings suggest psychopathy vs. moral beauty engagement may be an independent dimension of political conflict, and one potentially relevant to understanding Trump’s candidacy.

STANDARD POLITICAL DISCOURSE OBSCURES RELIGIOUS SUPPORT FOR EQUALITY
Denae Stallings, Abraham Dickey, Bennett Callaghan (Yale University) & Ian Hansen
Does liberal vs. conservative framing of political conflict affect the egalitarian potential of religiosity? In five studies (n = 891), we randomly assigned participants to imagine either (1) a "moral vs. amoral" (MvA) divide: a society divided between those embracing or rejecting the five moral foundations identified by Haidt (2012)—Care, Fairness, Ingroup, Authority, Purity or (2) a "liberal vs. conservative" (LvC) divide: a society divided between those embracing Care and Fairness but not Ingroup, Authority and Purity, or vice versa. In all studies, intrinsic religiosity had a
negative independent relationship to Social Dominance Orientation (SDO) when controlling for Right Wing Authoritarianism (RWA), but only in the MvA condition. This negative independent relationship was never evident (all |t|s < 1) in the LvC condition. We conclude there may be egalitarian potential in religiosity, but it becomes obscured under conditions of liberal vs. conservative framing of political conflict.

MAKING SENSE OF TRUMP’S RELIGIOUS INTOLERANCE. IS IT HIS NARCISSISM?

Kelvin Tyler, Karen Longmore & Ian Hansen

Donald Trump has advocated a ban on Muslims entering the United States. This policy proposal is a concrete manifestation of religious intolerance, and yet Trump's advocacy of this policy is curious as he does not comport himself like a deeply religious individual, or even like a traditional conservative. Psychologists often treat Trump as a classic narcissist. Could narcissism motivate religious intolerance? We examined a survey of religious, psychological and political attitudes. We investigated how a measure of narcissistic personality was correlated with religious intolerance as well as with other indices of religious devotion or conservative "coalitional" rigidity. We found that narcissistic personality was correlated positively with support for religious intolerance (including intolerance against Muslims specifically) and narcissism had a positive independent relationship with intolerance even when controlling for religiosity and coalitional rigidity. Dogmatism appeared to best mediate the relationship between narcissism and religious intolerance.

Undeclared major

HOW MUCH DO TEACHER AFFECT STUDENTS WHEN THEY ARE ENGAGED IN GROUP ACTIVITY?

Jessica Alvarez

The Peer Enabled Restructured Classroom (PERC) is a program which give students the chance to act as teachers. These students are known as Teaching Assistant Scholars they have their own small groups which they are responsible for and at the same time they are learning new skills to become successful in college. The research project I am working on right now comes from this program. The question we are trying to answer is how much do teacher affect students when they come into contact with them? I have found some very interesting answers to this question. My job is to sit with a group of students and a TAS and observe their behavior before and after the teacher arrives. One of the things I found is that all children don't participate in a group discussion however, as soon as a teacher comes by this particular student begins to engage in the group discussion. Then I also found teachers aren't the only persons that affect students but also other adults that are in the room. Students are not comfortable when a person who they don't
know walks over to check what they are doing. I also found out that teachers can have both a positive and a negative effect when they come to interrupt them. For example, some students engage in other topics they are not suppose to be doing. Suddenly when the teacher comes by they all begin to discuss the lesson and go back to their work. On the other hand, there are also students who are very concentrated on what they are doing and as soon as the teacher comes to see they lose focus. I saw this when this student was writing something down and the teacher comes to see that what they are doing and this student looks up and start asking the teacher a question. As soon as the teacher leaves the student says "I don't even remember what I was writing about."

SEQUENCE IMPROVEMENT ON FOURTH CHROMOSOME FOR DROSOPHILA FISCUSPHILA THROUGH THE FINISHING TOOL CONSED

Dalila Campbell & Guillermo De Jesus Martinez

Bioinformatics is a partnership between biology and technology. It allows for there to be a technological stance in collecting and processing genomic data. Once processed, it is thoroughly sequenced using critical analytical skills. Through Sequence Improvement, or Finishing the fourth chromosome of Drosophila fiscusphila will be sequenced using Consed. Consed is a tool that utilizes both Phred and Phrap in order to better resolve data. In it data is viewable and can be edited to gain results. Consed uses a hybrid assembly with two Next Generation Sequencing Platforms: Roche/454, and Illumina. A hybrid assembly is a collaboration between these two systems. This was created due to 454 having issues with mononucleotide runs (MNR), and homopolymer errors. 454 is also unable to process a large volume, which is why Illumina was then used in addition to 454. Illumina is able to resolve MNR runs, and allows for larger projects to be sequenced and analyzed. In our project we used Consed to analyze D.fiscusphila fourth chromosome. We viewed and corrected MNR's, assessed areas requiring primers, closed gaps, and removed any unnecessary reads. Our research thoroughly discusses the results and processes we took in order to obtain them.
Classroom Projects

Classroom projects are defined as original writing that satisfies a classroom assignment but does not necessarily make an original contribution to the field.

Art-Studio (BA)

THE FOX
Joshua Alvarado

One day a modern-day nomad begins his trip to go another place. When he opens all of his door to air out the stuffy insides of his Ford truck, an injured fox kit runs into the truck. He spots the fox and tries to scare it away, but it doesn't leave. So, out of kindness he takes the fox; he assumed could be injured to the vet. Once arriving at the vet's office, the secretary tells him the address to a wildlife refuge, since they cannot take in wildlife. Heading to the refuge, the fox begins to cough up blood. The nomad begins driving fast and nearly crashing twice. In the end, he arrives with the fox and is injured. After waking and meeting the nurse and doctor, he was able to save the fox and is sent to the hospital to look after his injuries. When he leaves, weeks after the event, he comes back to the refuge to see the fox and hear about its recovery. Meeting with the nurse, they begin talk. Slowly they begin a new friendship.

Aviation Management (BS)

THE IMPORTANCE OF AVIATION IN THE UNITED STATES ECONOMY
James Jimenez

Aviation today is an essential part of the US economy for the opportunities it creates and the services that are provided. The product of aviation is not the flight, the seat, or the onboard services but "time". Aviation is in the business of transporting cargo and people which has the ability to expand the US market. Aviation saves time for many businesses that needs packages delivered or a person at a specific location. This presentation will mention what factors of aviation contribute to US economy with examples of events that occurred in the past such as the 9/11 attacks, the bailout of the airline industry, air traffic control strike of 1981 and the beginnings of aviation to what it has become today. Airlines such as Southwest, American, Delta, and Jet Blue will be presented and show the effects that they have on the market especially the effect of low cost carriers. Not only will this refer to airlines, but aviation in the cargo industry such as FedEx and the US
postal office. This will also answer what the aviation is in relative to the Gross Domestic Product (GDP) of the US economy. This will refer to governmental laws that surround aviation referencing the Federal Aviation Administration (FAA), the Department of Justice (DOJ), and the Department of Labor (DOL). Will also talk about how aviation is in today's economy and what is expected of aviation in the future.

AIRCRAFT LEASING AND THE AVIATION INDUSTRY: THE CASE OF US
Ackesha Shields-Miller
This research will highlight the trends shown in the aircraft leasing within the airline business, as well as why airlines choose to lease aircrafts instead of finance the aircraft. The goal is to show that over the years airlines have started to lease more of their aircraft fleet than they are financing. The decision for various airlines in the US to lease or own creates great impact on their cashflow, so this is a big decision all airlines have to decide on. The following will be discussed in this research paper: definition of aircraft leasing and buying with examples of each, the trend on airlines leasing aircrafts in the United states, impacts to the United States and America's aviation system, and suggestion on improvement in the aviation financing department.

Biology (BA-BS)

SEQUENCE OF DROSOPHILA ELEGANS AND FINISHING THE GENOME USING CONSED
Diego Alvarado, Gerard McNeil & Camilo Iribarren
Bioinformatics focuses on analyzing, collecting, storing and allowing easy access to data of genomes by the use of computer technology. This is done by preliminary sequencing, finishing and annotation. GEP and the Biology Department at Washington University in St. Louis are dedicated to improve the whole genome of distinct organisms. Drosophila species are the appropriate model to study the effects of genetics, which aided in understanding chromosome 4 of Drosophila melanogaster that notably have euchromatin and heterochromatin characteristics. Next Generation Sequencing yielded a hybrid assembly, meaning the sequence underwent Roche/454 and Illumina data. Projects were developed to analyze, improve and finish the sequence of about 100 kb region of D. elegans using a software program called Consed. To improve the sequence, areas with high quality discrepancies and low quality of coverage were analyzed for mononucleotides runs (MNR's) based on Illumina data, and gaps were thoroughly analyzed. 454/Roche is problematic with homopolymer runs and were ignored. While analyzing and fixing high quality discrepancies, 62 MNRs were identified. As for the low quality of coverage regions, 9 out of 20 were MNR’s. There were a few gaps in the sequence, which can be resolved by designing PCR/Sanger primers. As a result, the
contributed progress of GEP in studying the Drosophila species and the 4 chromosome by improving the consensus sequence of D. elegans.

GENOME SEQUENCE EDITING OF DROSOPHILA ELEAGANS
Jagdish Gobin, Princess Raghunath & Gerald McNeil
Bioinformatics is a combination of mathematics, statistics, computer science and engineering used to understanding biological data. The Genomic Education Partnership is working on a project in collaboration with Washington University and undergraduate university student to solve a question. Drosophila melanogaster commonly know as the fruit fly exhibits a strange and interesting characteristic. Much like its ancestors D.melanogaster has a fourth (dot) chromosome and with this similarity to D.melanogaster's ancestors GEP wanted to know if the similarity is true for other fruit fly species and its evolutionary change. York College CUNY undergraduate students received the opportunity to analyze, edit and annotate the F element of some Drosophila species. The species we analyzed is Drosophila Elegans. The old way of sequencing a genome was by Sangar sequencing. In recent years Next Generation Sequencing allowed genomes to be sequenced by processing millions of fragment at once with accurate results. A program called Consed was used collectively align the reads from sequencing using two programs. The D.Elegans F element was sequenced using a NGS platform called 454/Roche. 454/Roche platform does not process homopolymers. So it was sequenced again using illumina platform. Using both 454/Roche and Illumina sequencing made it a hybrid assembly. Finishers (students) use consed and analyze, edit and annotate the hybrid assembly using Consed. Primary goal is to search and fix mononucleotide runs. Secondary goal is to find, solve any gaps in the sequence and designing primers. We found 329 high discrepant areas with 91 MNR's and 24 changes, 20 low coverage areas with 10 MNR's and 3 changes and one resolved gap.

GOT CATFISH?
Jagdish Gobin, Princess Raghunath, Kimbely Enriquez & Susan Alter
Catfish are very distinct due to their whiskers and flat face. Catfish are also a delicacy all around the world. Despite being a bottom feeder these remarkable creatures can grow to extreme sizes and highly marketable due to their low cost. The question still remains, the catfish we buy from the market where does it come from and what species are they? A team of York College Undergraduate student under the supervision and mentoring of Dr. Alter, set out on a mission to barcode catfish sold in all boroughs of New York City. NYC a city that never sleeps and the market is always open. Through the process of live sample collection, nano dropping, meta-barcoding, and DNA library reference we are able to learn what kind of catfish are sold. Samples are collected from each borough (Queens, Manhattan, Brooklyn, Bronx, and Staten Island) as well as the three big chinatowns in NYC. The catfish collected are of two groups, either they are caught from the wild or they are farmed. Furthermore we aim as a secondary goal to have a microbial extraction in order to see what kind of bacteria are brought to NYC.
THE EXAMINATION OF CHANGES IN FROG HEART FUNCTION IN RESPONSE TO A DIRECT APPLICATION OF CAFFEINE AND NICOTINE ON THE HEART.

Dupah Gobin, Diego Alvarado Mateo & Chevanie Bailey

The frog heart pumps fluids throughout the body, which contains oxygen and nutrients. It contains three chambers, these chambers are the right and left atria and the ventricle. Many factors can cause changes in the heart rate, especially if chemicals such as "caffeine" and "nicotine" are in the blood system. In this experiment one frog was dissected and drops of caffeine and nicotine were placed directly on the heart of the frog. The program LabScribe and IWX/214 were used to obtain and record our data. The results show that the heart rate remained constant when caffeine was directly applied but decreased when nicotine was placed. These findings are important because they show that these chemicals work differently when they are ingested or smoked versus when directly applied to the heart.

THE DIVERSITY OF JAMAICA BAY BETWEEN YELLOW BAR AND EAST EGG

Leslie Rivero, Gitangele Mahadeo & Jenifer Resal

Environmental pollution is caused by many sources such as factories, sewers, construction and many others. Jamaica Bay is one of the areas we will be looking at to see how species diversity differs in the two different areas of the bay. The areas we conducted research on were Yellow Bar and East Egg. Jamaica Bay is our choice of research because this area is affected greatly by combined sewer overflow. The experiment we conducted was to identify species diversity between the two areas and to understand the ecosystems available and function. We conducted this experiment by obtaining six samples, three for each area. Then we will proceed to collect DNA present in each sample through DNA extraction. After DNA extraction we sent the DNA through PCR and then ran gels. Based on the data we collect, we will analyze and compare species diversity and function between the two areas.

Biotechnology (BS)

FINISHING THE DISTAL REGION OF THE DOT CHROMOSOME OF DROSOPHILA ELEGANS USING CONSED

Fahmida Aktar, Fahmida Aktar, Soe Min & Gerard McNeil

Biotechnology is an interdisciplinary science that practices the use of information technology for analyzing genomic information. The fourth chromosome of Drosophila species has a unique distal region that has both heterochromatic and euchromatic features. Previous research has indicated that this region contains 80% repetitive elements. This in class research was performed as a collaboration between York college and Genomics Education Partnership sponsored by Washington University in St. Louis, HHMI & NSF. Our research group aimed on finishing a 100kb distal portion of Drosophila elegans (Project name:
DELE8417002) to high quality sequence with 99.99% correctness. This region was sequenced originally by Roche/454 and then Illumina Next Generation sequencing platforms and aligned into a hybrid assembly using software tool named Consed. As finishers we looked at the regions with high quality discrepancies and regions with low depth coverage for assessing the errors with mononucleotide runs being incorrectly inserted in the consensus sequence because of errors in 454 reads that had incorrect numbers of bases caused by its inability to read bases in Homopolymer runs. We found 279 highly discrepant positions, 72 of them contained mononucleotide runs and 38 positions had incorrect numbers of bases and needed correction. We used Illumina sequence reads number of bases in those regions to correct the sequence. We also found 27 low quality regions and 8 of which were caused by mononucleotide runs. We also tagged regions that did not have enough reads in the hybrid assembly to correct the consensus sequence. We also found one region with polymorphism tagged it and no gap was found in the distal portion region and we did not require creating primers for additional data.

IMPROVING THE GENOMIC DATA OF THE DOT CHROMOSOME OF DROSOPHILIA ELEGANS
Ace Vladimir Alcantara & Gerard McNeil
In order to understand the evolution of the dot chromosome, several Drosophilia species' genome is being sequenced and analyzed. A portion of Drosophilia elegans' dot chromosome genome data was obtained from 2 types of sequencing platforms namely: 454 and illumina. Using the 2 types of sequence data together with a genome editing tool, consed, the sequences were made to overlap to form a hybrid assembly of 100kb length of genome. As a finisher, the task was to ensure that all bases in the sequence are high quality. The first thing that was done was proofreading the highly discrepant position by comparing the consensus, sequence determined by consed to be correct, by the sequence data provided by both 454 and illumina. Special emphasis was given to mononucleotide runs, or repeated nucleotide bases. The consensus was then surveyed for Gaps, or parts of the sequence with unknown nucleotides, and low quality region, which are areas with a low number of sequence data. Depending on the presence of gaps or lack of high quality sequence in the region would warrant creation of a primer to get additional sequence data. Out of the 361 found highly discrepant position 85 was found to contain mononucleotide runs and 43 bases had to be fixed. There were no gaps found; therefore no primers had to be made to make additional data. Out of the 36 low quality regions, 15 were caused by the presence of mononucleotides. However, everyone had at least enough reads to not require additional data.

SEQUENCE FINISHING AND IMPROVEMENT OF 4TH CHROMOSOME ON DROSOPHILA FICUSPHILA
Steven Blanco, Kavita Prasad & Gerard McNeil
CUNY York College is currently in collaboration with the biology department at Washington University in St. Louis under the Genomics Education Partnership,
which involves many other universities working simultaneously. The joint effort was created to allow undergraduates to become involved in genomics research. This project involves using comparative analysis of several Drosophila species to analyze the characteristics of this distinctive domain of genes in the heterochromatic region located in the distal ends of the 4th chromosome (dot chromosome) of Drosophila. The more specific research problem in question is, will it be possible to tell euchromatic regions from heterochromatic regions based on sequence information obtained from technological intervention of these regions and if so, can we further distinguish transcriptional characteristics between these two regions? The process of genomic analysis generally involves three key steps, preliminary sequencing, finishing and gene annotation. This 100kb section of genomic DNA was obtained from the whole shotgun method fragmentation of the entire D. ficusphila genome. The resulting 100kb section of genomic DNA sequence was then sequenced using a combination of next generation sequencing methods and then assembled into a contiguous sequence by implementing a hybrid of Illumina and Roche/454 sequence read data. The assembly is therefore referred to as a hybrid assembly. Therefore for the primary goal of detecting MNR's, our group is mostly relying on comparative analysis of Illumina sequence data with that of the hybrid assembly of the consensus sequence. The parameters were set to include the search of both high and low quality discrepancies. This was done to properly navigate through regions of both high and low areas of coverage of sequence read data. Our group project yielded more than 80 regions with MNR's about 25% was corrected based on comparative analysis with Illumina sequence read data.

Business Administration (BS)

THE UNITED STATES FINANCIAL CRISIS
Ashley Deaza
The near collapse of the financial system in the United states was the most substantial economic crisis in the U.S since the Great Depression of the 1920s and 1930s. The purpose of this study is to define what Financial Crisis really is and to identify what caused it to occur here in the United States of America. This project also involves discovering the effects it has had in this country and what can be done to prevent this from occurring again in the future. This research helps the reader understand more in depth what the financial crisis consists of. It also provides quite useful information on how to prevent, prepare yourself, or deal with a financial crisis situation if it were to occur again.

CHINA: AN OPEN DOOR
Aaisha Joseph
A study abroad experience is critical to successfully propelling into the 21st century workforce. It is no longer an option for those hoping to take those careers to a
higher level; it is a must. The skills and tools involved when studying abroad makes a student more marketable.

COMPENSATION AND BENEFIT IN THE HUMAN RESOURCES SECTOR
GABRIEL OMOTAYO
compensation and benefits refers to the compensation/salary other monetary and non-monetary benefits passed on by a firm to its employees. Employee turnover is recognized as costly and disruptive. the cost of employee turnover often exceed 100 percent of the annual salary for the vacated position. Management is often unaware of the full range of tools and tactics available for effectively managing their employee compensation and benefits.

THE EFFECTS OF ABSENTEEISM ON THE WORKPLACE
Jasmine Ortiz
When an employee is not present at work no matter what the reason it is still an absence. Absenteeism is a challenging topic for many employers because there are a legitimate reasons why an employee can be out and some that are not as justifiable. When an employee is constantly absent it not only effects the employee directly but it effects the entire organization. Whether an absence is scheduled or unscheduled it is still costing the company money amongst many other things. The effects of one employee can impact the morale of the entire group especially if excessive callouts aren't addressed. The costs of an employee who is chronically absent can affect profits in many ways throughout the organization. According to a report, The Bottom Line Killer, produced by Circadian, unscheduled absences can cost a company up to $3,600 per hourly employee per year, and $2,650 per salaried employee per year. In my research my recommendations touches on several different resolutions to decrease workplace absenteeism. Measuring the exact costs a company spends on absenteeism yearly is the first step and implementing procedures and policies to combat chronic offenders. Successful attendance policies have resulted in low turnover rates, improved overall productivity thus improving customer satisfaction and in my opinion, most importantly - employee morale. Preventing and addressing attendance is an important topic to discuss because it effects everyone within the corporate structure it isn't just limited to supervisor and employees.

THE MATURATION OF NEW YORK STOCK MARKET 1970-2013
Prem Persaud
In today's society, the stock market is one of the most valid form of gauging an everyday economy. Over the years we've seen the influence of the stock market and how it affected our financial system both positively and negatively. The intention of this study is to reveal and narrate the purpose of the New York Stock market and its maturation through time. Doing so would help identify any trend in the market. Detecting a trend in the stock market would be essential in attempting to forecast the next stock market crash or boom. By analyzing and researching the
New York stock market we would be able to identify how secure the bedrock of our economy is today and how we can strengthen it for tomorrow.

ETHICS

Alyssa-Marie Prendergast

According to Anne T. Lawrence and James Weber, "is a conception of right and wrong conduct. It tells us whether our behavior is moral or immoral and deals with fundamental human relationships-how we think and behave toward others and how we want them to think and behave toward us." (69) Business ethics is the application of general ethical ideas to business behavior. (70) Many businesses fail because of unethical behavior. Operating within current laws may not completely prevent a company from breaking soon to be new laws. People have an idea of right and wrong but greed can drive people to find loopholes in the law. Although it may be unethical, it doesn't break the law so it's deemed safe until a court case is brought up and changes that. I propose the plan to make a list of standards that will shape the ethical laws of businesses. Businesses can still make up their own ethical code as long as it complies with the laws standards. Later in my project I will discuss the things that shape our understanding our ethical and unethical behavior, the reasons for unethical behavior, 4 methods of ethical reasoning and prevention of unethical behavior.

TRANSLOOP TRANSPORTATION

Ackesha Shields-Miller & Bill Robinson

Transloop transportation is a new transportation system that can change the way people get from one state to another. People will usually take a plane to travel domestically, but with the new design of transloop, things will change. This research will discuss the impact of Transloop transportation to the domestic airline transportation. Elon Musk's Hyperloop would go 700 mph, do LA to San Fran in 30 minutes, and cost 20 bucks (2013)', 'Leon Vanstone. Elon Musk's high-speed Hyperloop train makes more sense for Mars than California (2015)', 'In many cases Hyperloop is intrinsically safer than airplanes, trains, or automobiles (2015)'

SEXUAL HARRASMENT

Sophia Wells

It is evident that sexual harassment has been tamed by federal and state legislation. However, the heart of respect and professional courtesy still leaves a undercurrent of continued mores and norms that leave the workplace with confusion. Currently, every organization recognizes that sexual harassment and gestures are bad and can be costly. Costly is the operative word. There are many continued financial penalties that keep the culture punitive and with no solution. A qualitative research design will be used to illustrate the emotional impact on the family of the victim and how the experience shapes the occupational trajectory of the victim no matter how innocent of the episode may be. This study is intended to educate policy
makers, educators, managers, and employees. If all parties are aware of the business culture then the impact of unwarranted or unrecognized communication should be reduced.

Chemistry (BA-BS)

THE CONVERSION OF ARAGONITE TO CALCITE MEASURED WITH POWDER X-RAY DIFFRACTION
Bineta Diop
Calcite is the most stable crystal structure for calcium carbonate at room temperature and atmospheric pressure. Aragonite is a metastable crystal form of calcium carbonate. It is produced mainly by biological processes in the ocean. The solubilities of aragonite and calcite differ, and this has an effect on the carbon cycle in the ocean. Aragonite converts to calcite spontaneously at high temperatures in the atmosphere. We heated aragonite samples in a muffle furnace and monitored the ratio of aragonite to calcite with powder X-ray diffraction. From this data, we determined the rate of the phase change.

KETO-ENOL TAUTOMERISM IN ACETONE BY FOURIER-TRANSFORM NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY
Manjeet Kaur
Ketones are well known to interconvert with enols. This occurs relatively easily for diketones, but not for monoketones like acetone. The nuclear magnetic resonance spectrum of the keto tautomer differs significantly from that for the enol, as predicted by widely available software. We used the 500 MHz FT-NMR at York to search for the small concentration of the enol and either measure or place an upper limit on the equilibrium constant for the tautomerization. This is compared to the equilibrium constant predicted by molecular modeling software.

THERMODYNAMICS OF KETO-ENOL TAUTOMERISM IN ETHYL ACETOACETATE BY FOURIER-TRANSFORM NUCLEAR MAGNETIC SPECTROSCOPY
Jennifer Michel
A ketone can interconvert with its enol tautomer by a proton transfer. The reaction usually favors the keto tautomer at equilibrium. But beta-diketones are known to have unusually stable enols. We observed the FT-NMR spectrum of both the keto and the enol tautomers, as predicted by readily available software. The relative magnitude of the spectra was used to calculate the equilibrium constant. The equilibrium constant was combined with a precise temperature measurement to find the standard Gibbs free energy change for the tautomerization reaction. By repeated the determination of the equilibrium constant over a range of temperatures, we also measured the standard enthalpy change and standard
entropy change of the reaction. These were compared with the results of calculations from molecular modeling software.

THE EXTINCTION COEFFICIENT OF AQUEOUS NICKEL SOLUTIONS FROM A VARIETY OF NICKEL COMPOUNDS

Carla Pierre-Louis

Aqueous nickel solutions are green, as are hexaaquo nickel solids. This is consistent with the chromophore being the complex of Ni(II) with six water molecules. The intensity of the color is used to determine the concentration of nickel solutions made from a double salt of nickel, nickel ammonium sulfate hexahydrate. Student grades in two courses depend on the accuracy of the measurement. Measuring the extinction coefficient of these complexes to within 1% is surprisingly difficult, and only recently achieved in our laboratory. We extended the measurement to solutions made from a variety of nickel compounds, to ensure that the results are independent of the nature of the anion, and consistent with the state of hydration of the solids.

Communications Technology (BS)

"THE JOY OF EACH STEP"- A MINI DOCUMENTARY ABOUT AN ASPIRING DANCER

Donovan Mulholland & Karen Palacio

The Joy of Each Step is a mini documentary about Romina Cruz, a young woman who is striving to pursue her dream of becoming a professional dancer in America. Cruz was introduced to dance at a young age in her native Mexico. But financial hardship pushed her to seek opportunities overseas. After receiving a degree in hotel management as an international student, Cruz has been working at a hotel to support herself while taking dance lessons and practice at night. Through financial struggles, Cruz's determination has shaped her into the dancer she is today. She has performed at many conventions in New York City and participated in many competitions. Balancing school and dance, Cruz looks towards the future with optimism and faith.

Computer Science (BS)

EIGHT IS ENOUGH; SOLVING THE 8-PUZZLE USING THE A-STAR ALGORITHM

Irene Antoniazzi & Mahmudul Hasan

The 8-puzzle is a 3X3 grid with 8 numbered tiles and one empty space. The goal is to place the tiles into numerical order. This is a fairly easy task for a human because we can think several steps ahead, but a computer can only process one step at a time. In order to teach a computer to solve the 8-puzzle, we have to give it a means by which to evaluate all the possible moves and decide on the best way
forward. The A-star Algorithm does just this, assigning numerical values for each state of the board. Our goal was to create a program to take a starting state from the user, evaluate that starting state to be sure that it is valid and solvable, and then use the A-star Algorithm to find the most efficient path to the goal state.

IS IT POSSIBLE TO USE MACHINE LEARNING IN MARKET PREDICTIONS?

David Chan
It is without a doubt, the market's unforeseeable events and random prices makes predicting nearly impossible. However, with the advent of super-fast computers and sophisticated algorithms has made predicting the market a familiarity within Wall Street. This abstract introduces the basics of using machine learning techniques to help recognize patterns from stocks and then predicting the movement of stock prices. The goal of this project is design a system that can predict market patterns utilizing supervised learning. The supervised machine learning will be trained and use a predefined set of data and draws a statistical prediction. Ultimately, I would want to implement a trading system that will able to outperform the benchmark of the ubiquitous buy and hold strategy.

8 PUZZLE PROBLEM

Ariña Hotaky, Ariña Hotaky & Wangchuk Dorjee
The research is the build software system to solve 8-puzzle problem with the most efficient running time. The 8-puzzle can be solved through 3 different Algorithms. The three algorithms are breadth-first search, depth first search, and the A* algorithm. In our case, we used the A* algorithm which is more efficient than the other two algorithms. We create a data structure by using vectors. In the first part of this project, we determined if the puzzle was solvable. If the puzzle was solvable, we then used Heuristic estimation to determine which states in the puzzle were expandable. Through expanding each state, we were able to arrive at the goal state.

USING THE A* ALGORITHM TO SOLVE AN 8 PUZZLE GAME, THEN USING OUTPUT TO TEST ITS INTELLIGENCE

Barindra Narinesingh, Anula Aleem, Barindra Narinesingh & Willy William
This research is to build an 8 puzzle solver that solves itself and outputs the process as it transitions between choices. Normally can build a starting puzzle and an ending puzzle then compare them as a simple game however we intend on building a puzzle that solves itself fast and efficiently. Our method of going about this is by the direct method of designing a matrix to hold the 8 puzzle then design a data structure to hold the matrix and use the A* algorithm to solve our puzzle, if it is smart it will be done fast.

SMART DECISION MAKER: 8 PUZZLE SOLVER

Miso Rhee
This research is designed to make a program which can solve 8 puzzle in the shortest path. The program should be able to avoid infinity loop and make a smart
guess to choose next steps. First, the program asks a user to choose a goal and a start state. If the start state is not solvable, it asks another start state until it is possible to reach the goal. Once all inputs are satisfied, the program will show the goal and the start state which were chosen by the user and calculate the shortest path from the start to the goal. A* algorithm was applied for a searching method. When it finds, it shows a sequence of the path. This research resulted nicely. For instance, the execution time differs by inputs but not more than 10 seconds. Moreover, the sequence which the program finds is not more than 40 steps no matter inputs.

**English (BA)**

MOVING CLOSER TO THE 44 PHONEMES AND ELIMINATING THE GUESS WORK OUT OF SPELLING

*Tuka Al-Sahlani*

As a language of international caliber, English should shift closer to a purely phonographic end of the writing spectrum to become manageable for more people to learn to read and write it. This transition is possible with an alternated English writing system that includes a practicable orthography of some new characters, diacritics, and an elimination of a few of the original 26 characters. There will be 21 consonants and 11 vowels to make up the new 32 alphabet English writing system will be easy to implement and addresses the major disparities of our current system. There are many silent characters and versatile characters that make spelling words and reading them for the first time a challenge. The additional characters seek to advance our current system to closely represent the 44 English phonemes. Moreover, this proposal is easily implemented in today’s technologies because there is only one created character and most other characters added are either from the IPA or have a horizontal diacritic, so a simple addition to a fall down menu could suffice to incorporate the changes. There remain some issues with this proposal. Homophones will become homographs, memorization of spelling will remain, and diphthongs would linger. With such changes, the aesthetic appeal of some words would be altered. Lastly, the etymology of the words and the root words may erode because the word has been streamlined into phonetic representations and not its prestigious past.

EVOLUTION OF SKINHEAD PERCEPTIONS THROUGH MEDIA FRAMING

*Afolami Fasanya*

In the 21st Century, the term "skinhead" carries with it connotations of Neo-Nazism. The original skinhead subculture originated in 1960's London as a result of the engagement between Jamaican Rude Boys and British Mods. These two groups bonded over fashion, music, and the angst of the working class. How then has media propagation led to the evolution of skinhead perception in today's public? "Evolution of Skinhead Perceptions Through Media Framing" notes that
although the climate that lead to the original skinhead subculture has been eroded by time, there are a plethora of skinhead sects that do not advocate bigotry. It investigates why media frames skinhead subculture as it does. Finally, it reflects on the power of dominant groups to reinvent the function of culture they share with subjugated groups. This presentation is oral, but can also be presented on a poster if a fitting panel is not found for it.

GENDERED NUTRITION
Afolami Fasanya

The stories "Hell-Heaven" and "Hema and Kaushik" by Jhumpa Lahiri, in her book, "Unaccustomed Earth" feature food as a motif. There is a focus on how food is prepared, how it is served, where it is eaten, who prepares it, and who serves it. "Gendered Nourishment" strings together an argument that gender roles and gender relations are constructed through the preparation, service, and consumption of food. In these Lahiri songs, mothers and daughters function as nutritionists for the men in their lives. These men, in turn, are unable to reciprocate this function for the women in their lives. "Gendered Nourishment" explores the implications of self-nourishment vs being nourished by another person, what compensation is useful for performing domestic work, and how nourishment (literally and figuratively) can be gendered.

INTERSECTIONS OF MOTHER/FATHERHOOD AND RACIAL/ETHNIC IDENTITY
Andrew Heerah

As motherhood (In Fun Home's case: fatherhood) and racial/ethnic identity intersect throughout the lives of Wil, Woo, Helen, Lorde and Alison, tension in the parent/child relationship begin to take shape. In "Letters to Ma", Woo explains why perfectly as she states "We are Asian American women and the reaction to our identity is what causes the chasms instead of connection" (309). These "reactions" are the feelings of shame, disapproval and sadness that the parents hold due to their child's resistance of societal norms. This cause a rift in the relationship as the child struggles to be accepted by the people that are suppose to love them the most. Each story shows the bond of motherhood (and fatherhood) being harmed by the lack of conforming to a forced ethnic identity. The pressures that society places on each character takes different forms and it leads to extreme circumstances. A truly heartbreaking form of this can be shown by Alison Bechdel's father in Fun Home. As fatherhood and ethnic identify intersect, Bruce represses his conflicted emotions instead of confiding in his daughter. He can relate to his daughter's lesbianism but can never openly let himself accept his homosexuality. His fear acts as a grim reaper to his life as he can never accept himself, never truly let himself bond with his daughter or family and eventually he ends up killing himself. Another form of this societal pressure is as Lorde states, "The Great American Double Think [which] is to blame the victim for the victimization" (61). What I mean by this is the mothers of the girls, the victim of their oppressive gender role, begin to help in the victimization/oppression of their daughter. They are unable to
see the oppression as they blindly double think and alleviate the responsibility of the ones who are actually responsible. It is an extreme double standard as chasms weakens the bonds between mother/father and child.

POSITIONAL ABJAD

Brian Higgins

The English language is probably the most irregular language to speak, write, learn, etc. There are complications when it comes to spelling and pronunciation. The vowel sounds are the most difficult, along with some of the consonants, when it comes to those aspects of spelling and speaking. The script that is used does not differentiate the sounds expressed in the words. If we changed the alphabet that is used to an abjad, we may be able to teach and speak the language more efficiently. One must, however, learn the Roman alphabet if this system is to work. I propose using a system that includes shapes and symbols to refine the English writing system. The basic idea is drawing shapes on a line in the place of corresponding letters. The shapes will correspond to the position of the consonant of the already existing alphabet. The different sounds we have for each vowel will be represented by these symbols, or diacritics. For example, if the word that is written starts with the letter "B" then the first shape, which is a square, would be on the very first hash (used as guidelines). If the next letter is a vowel then it corresponding diacritic will be inserted on the right of the consonant (the left if it comes before the consonant). This script is not without flaw. It is less convenient when writing and may take time for native speaking to adjust too. It also will consume more paper than the script used today. It does however solve the confusion with pronunciation.

REFORMING THE ENGLISH LANGUAGE

Melinda Maharaj

The English language is full of contradictions, full of several borrowed languages, and full of irregularities in its spelling and pronunciation. My system makes the English system more phonetic, representing vowels and consonants phonetically and fixing the common issue with homonyms and homographs by attaching pictographs to differentiate meaning. My system eliminates the problematic silent letters and double consonants, but keeps long and short vowel sounds to prevent confusion. The advantage of my system over our current writing system is that it would resolve the biggest issue that both native and second English language learners struggle with, which is that English is not written as it sounds. Under our current English language system words like spell for example, fails to match its phonetic sound, and adds an extra L as a silent letter, leading to confusion. Under my system, the word spell would be written down exactly as it sounds as spel. Here is an extended example of how my system works. Let's take the line from Harry Potter I solemnly swear that I am up to no good. Now when we apply the rules of my system we get I solemlee swer that I am up tuu no good. If there are words that are pronounced the same such as eye and I or two words that are spelt the same such as ball a pictograph would be added to clarify meaning. Overall, my system
would require adjustment, but also help both native and second English language learners, gain a better understanding of the English system, by forcing them to pay more close attention to how sounds actually work, something which is overlooked today.

Health Promotion Management (BS)

TEEN DATING VIOLENCE
Brittany Grissett
A relationship is expected to be loving, caring, protective and friendly with both parties showing respect. Adolescents entering into the world of dating need guidance to understand what healthy and unhealthy relationships consist of, the affect these relationships have on lives, and factors involving behaviors. Dating violence is something that plagues many relationships at all stages of life. Teen dating violence (TDV) has gotten national recognition, with more than 40% of adolescents undergoing this experience, resulting in long and short-term psychological, emotional and physical effects. Traditionally the primary focus of dating violence is put on women victimization and depicts men as the perpetrator. Although men face intimate partner violence at higher rates than men, men still feel victimized and need to be given the skill to properly handle a violent situation. This illustration of genders may help explain the gender inequitable perceptions among teens. The uses of current technologies are also a concern for teens, of whom, most experience cyber-dating abuse. The act of dating violence in any form is detrimental to healthy development especially in adolescence. During this stage of development it is important that youth have positive environments to express themselves and positive relationships to help with growth. In adolescence, teens are at higher risk for issues such as suicide, substance abuse, STDs and unplanned pregnancies. Dating violence amongst teens is an emerging public health issue causing serious health and safety issues. It has been shown that youths, who are engaged in positive youth development through avenues such as curriculum-based programs, have a greater chance of having a healthy well-being in the future. Questions will including How teens perceive dating violence? How are victims classified? Are there any differences between the male and females perpetrators/victims

Journalism (BA)

MULTIMEDIA PROFILES OF YORK "LEADS" STUDENTS: TELLING THEIR STORIES USING PHOTOGRAPHY AND WRITTEN NEWS REPORTING TECHNIQUES.
CHIZOBAM ATUANYA, Rollin Colmenares, Armand Echeverry, Cindy Hicks & Brittany Scott
Journalism majors, using their training in multimedia news production and news writing, are producing profiles of York students who are part of the LEADS
program. Professor Truett Vaigneur coordinated the project in Professor Tom Moore's Journalism class, by offering the names of LEADS students who volunteered to be profiled. Journalism majors are profiling these students using: (1) web-based computer displayed images and high quality printed digital photographic images and (2) accompanying in-depth news profile pieces written in journalistic newspaper feature style.

MULTIMEDIA, ONLINE NEWS PROFILES OF YORK "LEADS" STUDENTS: JOURNALISM STUDENTS USING PHOTOGRAPHY AND NEWS REPORTING & WRITING TECHNIQUES TO TELL THE STORIES OF YORK STUDENTS WITH DISABILITIES

Rollin Colmenares, Chizobam Atuanya, Rollin Colmenares, Armand Echeverry, Cindy Hicks, Ashley Martin & Brittany Scott

Journalism majors, using their training in multimedia news production and news writing, are producing online news feature story profiles of York students who are part of the "Linking Employment, Academics, and Disability Services" program known as LEADS. Professor Truett Vaigneur, part of LEADS, coordinated the project in Professor Tom Moore's Journalism class, by offering the names of students who volunteered to be profiled. Journalism majors are profiling these students using: (1) web-based computer displayed images and high quality printed digital photographic images and (2) accompanying in-depth news profile pieces written in journalistic, newspaper feature style.

MULTIMEDIA PROFILES OF YORK "LEADS" STUDENTS: TELLING THEIR STORIES USING PHOTOGRAPHY AND WRITTEN NEWS REPORTING TECHNIQUES

Armand Echeverry, Chizobam Atuanya, Rollin Colmenares, Armand Echeverry, Cindy Hicks, Ashley Martin & Brittany Scott

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MULTIMEDIA PROFILES OF YORK "LEADS" STUDENTS: TELLING THEIR STORIES USING PHOTOGRAPHY AND WRITTEN NEWS REPORTING TECHNIQUES

Cindy Hicks, Chizobam Atuanya, Rollin Colmenares, Armand Echeverry, Cindy Hicks, Ashley Martin & Brittany Scott

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MULTIMEDIA PROFILES OF YORK "LEADS" STUDENTS: TELLING THEIR STORIES USING PHOTOGRAPHY AND WRITTEN NEWS REPORTING TECHNIQUES

BRITTANY SCOTT, Chizobam Atuanya, Rollin Colmenares, Armand Echeverry, Cindy Hicks, Ashley Martin & Brittany Scott

Journalism majors, using their training in multimedia news production and news writing, are producing online news feature story profiles of York students who are part of the "Linking Employment, Academics, and Disability Services" program known as LEADS. Professor Truett Vaigneur, part of LEADS, coordinated the project in Professor Tom Moore's Journalism class, by offering the names of students who volunteered to be profiled. Journalism majors are profiling these students using: (1) web-based computer displayed images and high quality printed digital photographic images and (2) accompanying in-depth news profile pieces written in journalistic, newspaper feature style.

Nursing (BS)

ALZHEIMERS DEMENTIA: IT'S NOT A NORMAL PART OF AGING

Judd Costes, Nison Koenov, Meisha McIntosh & Gaitree Ramkellawan

Alzheimers and dementia are not a normal part of aging. Alzheimer's is a neurodegenerative disease with a slow onset. Approximately 5.5 million people within the United States and 24 million worldwide are affected by Alzheimer's. Alzheimer's disease (AD) is the most common form of dementia and causes problems with memory, thinking, and behavior. Dementia is a decline in cognitive function that can significantly interfere with a person's daily life. Dementia manifests itself as deterioration and persistent cognitive impairments. Dementia is diagnosed when at least two of the following core mental functions are impaired, such as memory, language, ability to pay attention, reasoning and judgment, and visual perception. It is a progressive disease that mostly affects people that are age 65 and older. There are various programs to assist affected individuals and families with this condition. Self-Help is one example of a program centrally located in Bayside, Queens that caters to individuals with varying stages of Alzheimer's and dementia. Our collaboration with the agency was a part of a service learning assignment. We worked with the Self-Help clients and as a result raised our awareness of the disease process. While working with clients in this program, student nurses gained new perspectives on the disease by directly interacting and assisting with activities to stimulate cognitive functions. Through these activities it
became evident that there are multiple stages of dementia. The disease does not affect people in the same manner. Nursing care is centered around the client and each client should be treated as individuals based on their needs. Our experience at Self-Help has influenced our future nursing practice by increasing our awareness of Alzheimer's dementia, the psychosocial and cognitive effects of the disease, and has improved our ability to interact with clients experiencing different stages of Alzheimer's.

EDUCATING RURAL TEENAGERS ON SELF BREAST EXAMINATION IN CARRIES, HAITI
Michelle Muyibi & Shanique Ivery
Breast cancer is a disease that is very detrimental to many people's lives. This disease crosses social, economic, and racial lines. Statistics have shown that African American women are the most prevalent group to encounter a higher mortality rate over other races. This is mainly due to less health maintenance and late diagnosis as a result. Many individuals in Haiti are facing a financial burden and are unable to receive high-quality cost-effective care. Consequently, women in this country go undiagnosed and undetected. In addition, education is a large factor in women seeking help. Haitians who are 25 years and older only received 4.9 years of education and only 29 percent attended secondary school. This could hinder the way of seeking help. Also, the individuals in this country may have a misperceived concept of their ability to acquire breast cancer because of failure to detect any clinical findings. Due to cultural stigmas these individuals may have of disease processes, they may not be as willing to seek medical care. For example, only people that are cursed may have such diseases. Individuals may also be hesitant to seek medical care if there are no visible signs or deformities. They may also believe that they are not predisposed to this disease because they may not have a known family history of the disease. It is essential to teach preventive strategies such as monthly breast self-examinations to people in developing countries so that they will be able to find any abnormal findings that pose as threats to their lives. Emphasizing the importance of breast cancer self-exams and other appropriate interventions such as, clinical breast exams is essential to help liable individuals control their stage of cancer, seek early treatment and become a breast cancer survivor.

HYPERTENSION ASSESSMENT AND EDUCATION IN CARRIES, HAITI
Med-Murielle Pierre & Solange Wilson
In June 2015, we traveled to Haiti as part of a travel abroad course to complete a clinical project involving the residents of Carries. During our stay, we provided nursing care and education to patients at the local clinic, the residents of an elderly home, and young adults at an orphanage. One of our main focuses was to teach about diet modification and lifestyle changes that can be done to prevent and control hypertension. Diet education consists of eating a low sodium, low fat diet that is rich in fruits and vegetables (CDC, 2015). We provided education about the
dangers of alcohol consumption and smoking, their relation to hypertension, and encouraged people to quit. The people with hypertension were prescribed anti-hypertensive medications and were educated on how to take them. They were also educated to not stop taking the medications abruptly and to go to the nearest free clinic to get more medication before they ran out. Education was also provided on the signs and symptoms of a heart attack and stroke, because hypertension is the main risk factor for both. This presentation is a description of the enormity of the hypertension problem in Haiti. It includes assessments, education, and behavior modification for high blood pressure in relation with culture and environment. One of our main focuses in Haiti was performing assessments and educating the public about hypertension. The main problem is that the people of Haiti are not seen by health care professionals on a regular basis, so they are not able to check their blood pressure regularly. Since medical resources are scarce, it was very important to focus on hypertension assessment and teach the public about the different ways that the condition could be prevented or controlled.

**Pharmaceutical Sciences (BS)**

**PRODUCTS OF THE ELECTRODEPOSITION OF NICKEL**  
*Victoire Fleuristal*

Water soluble nickel compounds are precisely assayed by electrodeposition of nickel from aqueous solution onto copper. The efficiency of the deposition is sensitive to concentrations of minor components of the electrolyte. When all the nickel is deposited out of solution, the electrolyte turns either yellow or black. We have explored the causes of the electrolyte color, and tried to determine the complete composition of the products.

**DISSECTING JAPANESE CULTURE THROUGH DIFFERENT PERSPECTIVES**  
*Kalu Udensi, Marius Akhter, Marta Arevalo, Celi Meiyin Hago & Edna Johnson-Wilson*

Japanese culture is a web of interrelated cultural components. These different components accentuate the beauty of the Japanese culture. However, embedded in the application of these cultures is prejudice. Prejudice exists in different forms. The aim of this presentation is to evaluate the accounting, gerontology, pharmacological and psychological components of the Japanese culture and to understand the role of prejudice in the application of these cultural components. This presentation will dwell on the Japanese culture, its origins, its practice and the different components of the culture. It will also evaluate prejudice, its origin and the given justification for prejudice as it relates to the different aspects of the Japanese cultures.
Psychology (BA)

TITLE: MICROBIAL DIVERSITY AND ECOSYSTEM FUNCTION IN ESTUARINE SEDIMENTS OF JAMAICA BAY, NY

Katherine Campoverde, Urusa Shakeel & Katherine Campoverde

In recent years Metagenomics has impacted modern science focusing in the field of microbiology by allowing the study of microbial genetic material coming directly from samples of the environment. The purpose of the experiment was to analyze the DNA of different microorganisms present in the soil of Jamaica Bay, a large urban estuary located in New York City. The DNA was isolated by using inhibitor removing technology to allow more successful PCR amplification of the organism by generating millions of copies of the DNA sequence. We used next-generation sequencing and R statistical software to compare microbial diversity across sites and relate it to measure of ecosystem function.

DIFFERENT COPING STYLES INFLUENCE THE LIKELIHOOD OF SEEKING HELP FOR HIGH LEVELS OF ANXIETY

Cara Knowles, Kathariya Mokrue & Reena Maharaj

This study examines the relationship between cognitive coping styles, anxiety and help seeking among college students. Past studies suggest anxiety is related to either reappraisal or suppression coping style, and that expressive suppression is related to a more favorable attitude toward help seeking. However, few have examined these three factors in one study. The current study examines whether favorable attitudes toward help seeking is associated with a particular cognitive coping style and whether or not college students who engage in cognitive reappraisal are more likely to experience greater symptoms of anxiety than those who engage in expressive suppression. Data for this study was collected via questionnaires administered to undergraduate college students for the screening process pre-evaluation which determines whether or not students are eligible to participate in the workshop study. Regression analysis and analyses of variance will be conducted to test our hypotheses. The findings and implications will be discussed.

Sociology (BA)

COLLEGE READINESS FOR YOUTH IN SCHOOLS

Tamara Dotson

This sociological study examines college readiness. College readiness refers to students who are considered to be equipped with the knowledge and skills deemed essential for success in university, college, and community-college programs. It also relates to the educational programs and learning opportunities that lead to improved preparation for these two- and four-year collegiate programs. College
readiness is preparation needed inside and outside of schools. The importance is based on the fact that high school is a key indicator for whether a student will graduate from high school and go to college to earn a degree. The research literature points to factors that can influence college readiness such as college advising for high school students and other motivational factors for college students to pursue higher education. In this study I examine whether youth received academic support in high school in order to be college ready. I am relying on convenience and snowball sampling for my data collection. A semi-structure interview method allows for in-depth qualitative data identifying major themes in college students' high school experiences. My hypothesis is that schools that have a system of college readiness that include such things as guidance counselors or college advising that will help students navigate a path through high school into college, and careers. Other components such as knowledge of college, focused assessments, personalized practice and the expansion of career opportunities will lead to greater student participation and success in and out of school and motivate others.
## General Statistics

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
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<tbody>
<tr>
<td>Registered Attendees</td>
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<tr>
<td>Participating Mentors</td>
<td>44</td>
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<td>Participating Students</td>
<td>264</td>
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<td>Total posters and oral presentations</td>
<td>177</td>
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<tr>
<td>Original Research Projects</td>
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<td>Posters</td>
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<td>Oral Presentations</td>
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<td>Classroom Projects</td>
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<td>Posters</td>
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<tr>
<td>Oral Presentations</td>
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## Projects by Discipline

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<tr>
<td>Aviation Management (BS)</td>
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<tr>
<td>Biology (BA-BS)</td>
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<td>Biotechnology (BS)</td>
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<td>Business Administration (BS)</td>
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<td>Chemistry (BA-BS)</td>
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<td>Undeclared major</td>
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